

**Barriers faced by hospitality businesses in the Southern Province
of Sri Lanka in adopting eco-friendly alternatives to single-use
plastic and achieving Level 1 of the ZeroPlastic Commitment**

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Abstract

The tourism and hospitality sector is one of the most significant contributors to single-use plastic consumption globally, generating large quantities of waste. While laws, regulatory frameworks and sustainability certification schemes have emerged as important instruments to address this challenge, their effectiveness remains limited, especially due to weak enforcement, structural constraints and institutional barriers.

This research study examines the barriers hospitality businesses in the Southern Province of Sri Lanka face in adopting eco-friendly alternatives to single-use plastic and in achieving Level 1 of the ZeroPlastic Commitment (ZPC) certification, a certification scheme that is currently developed by the NGO ZeroPlastic Movement in Sri Lanka. The study was conducted in collaboration with ZeroPlastic Movement and is motivated by my professional work experience in sustainability auditing.

An explanatory mixed-method research design was applied, combining three complementary datasets, a quantitative survey of 152 hospitality businesses (147 valid responses), 15 semi-structured interviews with management representatives of four- and five-star hotels and a structured ZPC Level 1 Readiness Assessment conducted with the same 15 businesses. The qualitative data were analysed through a thematic analysis. The quantitative data were analysed through SPSS, including descriptive statistics, multiple linear regression, Kruskal-Wallis and Chi-Square test.

The findings of the research show that the reduction of single-use plastic is not blocked by one single barrier but instead there are several interconnected constraints that interact and reinforce each other. The factors cost and limited access to sustainable alternatives came up as the most reported barriers across all business types, followed by hygiene and quality concerns. External conditions such as weak regulatory enforcement, fragmented waste management infrastructure and unsustainable supply chains have clearly dominated the discussion during the interviews. Sustainability certification schemes are currently perceived as too complex and resource intense, especially by smaller businesses. The ZPC Level 1 Readiness Assessment showed that only 2 of the 15 interviewed businesses would currently meet the “Level 1” of the ZPC certification scheme, while the majority would qualify for the entry level “Engaged” status.

The research findings of this thesis are discussed in relation to the ‘double bind’ between economic growth and sustainability, environmental certification schemes and the concept of sustainable tourism. The study shows that the transition towards plastic-free business operations in the hospitality sector in the Southern Province of Sri Lanka is connected to several structural and political issues rather than individual willingness or awareness.

Based on the research findings, this study provides practical recommendations for the NGO ZeroPlastic Movement, such as simplifying the certification process, building credibility, engaging with suppliers, providing support, advocating for stronger government regulations and piloting the ZPC certification scheme with selected hospitality businesses.

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List of Abbreviations

SUP	Single-use plastic
ZPC	ZeroPlastic Commitment
PRP	Plastic Reduction Plan
PMS	Plastic Management System
PRA	Product Risk Assessment
CB	Certification Body
UNEP	United Nations Environment Programme
UNWTO	United Nations World Tourism Organization
UNDP	United Nations Development Programme
CSR	Corporate Social Responsibility
EU	European Union
NGO	Non-Governmental Organisation
SDGs	Sustainable Development Goals
GDP	Gross Domestic Product
SME	Small and Medium-sized Enterprises
UiA	University of Agder
SIKT	Norwegian Agency for Shares Services in Education and Research
SPSS	Statistical Package for the Social Sciences
H1-H6	Hypothesis 1-6
n	Sample size
β	Beta coefficient
p	P-value

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Foreword

Over the past years, my academic and professional interests have very much focused on sustainability and environmental certification schemes. As an international auditor for sustainability compliance over the past decade, I have worked with a wide range of organisations and companies across different sectors and geographical contexts, assessing compliance regarding environmental, social and ethical standards. Through this work, I have directly observed how certification systems can drive tangible environmental improvements, enhance transparency and support organisation in systematically integrating sustainability into their daily operations. I have learnt that most of the challenges that organisations face when implementing those standards, go beyond technical requirements and include financial constraints, limited awareness as well as management resistance.

During my field trip with the University of Agder (UiA) to Sri Lanka in 2024, I was very inspired by my encounter with the NGO ZeroPlastic Movement and their ambition to develop a ZeroPlastic Certification Scheme, aimed at supporting businesses to become plastic free. After establishing contact and gaining deeper insights into their work, it was mutually agreed that I would conduct my master thesis together with them. ZeroPlastic Movement is currently in the process of developing a sustainable certification scheme and is piloting it with four companies in Sri Lanka. The organisation expressed an interest in gaining deeper insights into the hospitality sector and to understand what types of single-use plastic items are still used, what are the barriers in phasing them out and what are the challenges for hospitality businesses to achieve ZeroPlastic Commitment Certification.

This research is therefore motivated by my professional experience and academic interest. It seeks to better understand the gap between the ZeroPlastic Commitment certification scheme and its practical implementation in the hospitality sector in Sri Lanka.

The purpose of this research is to support the NGO ZeroPlastic Movement to understand the barriers faced by hospitality businesses in Sri Lanka in adopting eco-friendly alternatives to single-use plastic and in achieving ZeroPlastic Commitment Certification.

1. Introduction

The tourism industry is one of the world's most significant economic sectors and often serves as a key source of revenue for many countries, especially for countries located in the Global South (World Tourism Organization [UNWTO], 2019). In 2025, international tourism reached a new global record of 1.52 billion arrivals, representing a growth of roughly 4% compared to 2024. Europe ranked as the number one destination with a total of 793 million arrivals. Asia and the Pacific accounted for approximately 331 million arrivals, which is an increase of 6% compared to the previous year, recovering to 91% of pre-crisis levels, while the Americas gained 218 million tourists, Africa attracted 81 million visitors and the Middle East recorded a growth of 3% (UN Tourism, 2026).

Despite its economic importance, tourism also comes with huge environmental impacts, including high resource consumption and an intensive use of natural ecosystems (Gössling et al., 2015). The hospitality sector plays a central role within the tourism industry and contributes a lot to the overall waste generation. In particular, hotels and food services such as restaurants, cafes and bars produce large amounts of solid waste (United Nations Environment Programme [UNEP], 2019). Especially, single-use plastic items such as drinking bottles, food wrappers, plastic lids, straws and stirrers, packaging, and disposable toiletries, which are frequently used in daily business operations due to their low cost, convenience, availability and hygienic advantages (United Nations Environment Programme [UNEP], 2018). The plastic production, especially in regard to single-use plastic has skyrocketed since the 1950s and accounts for two thirds of the total plastic production globally (Barone et al., 2025). Although these single-use plastic items are typically used for a very short time, their environmental impact stays for decades when not managed properly, causing serious and long-term damage to nature (Ma et al., 2019). Consequently, plastic pollution has become a global environmental problem as large quantities of plastic waste enter the environment annually (United Nations Environment Programme [UNEP], 2021).

One of the most challenging aspects of sustainable transformation is the reduction of single-use plastic items and replacing them with eco-friendly alternatives, because it requires adjustments along the entire value chain, from procurement to operational use up to disposal (United Nations Environment Programme [UNEP], 2018). Often, this transition is associated with higher costs as well as uncertainties regarding availability and quality of products (Tunn et al., 2018).

Furthermore, organisational and cultural factors play an important role in this transition. The implementation of sustainable practices does not only require financial investments, but also structural changes within corporate structures, including staff training, and adjustments to workflows and procurement strategies (Bramwell & Lane, 2011). Additionally, employee awareness, organisational commitment, and customer expectations play an important role when it comes to sustainable measures being implemented in practice (Gössling et al., 2015).

In response to these challenges, many initiatives and policies targeting the elimination of single-use plastics have emerged globally in the last decades (Vimal et al., 2020). Next to government regulations, also voluntary and market-based instruments such as sustainability certification schemes and concepts like eco-tourism are gaining popularity and importance (Font, 2002).

Government regulations play a major role in promoting sustainable practices. Through laws and other legislative measures such as bans on single-use plastic items, waste management policies and economic incentives, governments can directly influence production and consumption patterns (United Nations Environment Programme [UNEP], 2018). One example is the EU Single-Use Plastics Directive, which prohibits for all member states certain single-use plastic items such as cutlery, plates, straws and cotton buds just to name a few. (European Parliament & Council of the European Union, 2019). Sri Lanka has introduced similar regulations on plastic management, including bans on selected single-use plastic items such as thin polyethene bags and other disposable plastic items, aiming to reduce environmental degradation and promote more sustainable consumption patterns (Ministry of Environment Sri Lanka, 2021).

However, research shows that laws and legal regulations alone do not automatically lead to the desired change. Their effectiveness largely depends on whether governments are able to enforce them continuously. In many countries of the Global South, challenges related to monitoring, enforcement and governance structures limit the effective implementation of environmental regulations (United Nations Environment Programme [UNEP], 2019). This is mostly due to limited financial resources, administrative burdens and informal economic structures that weaken regulatory effectiveness. This often leads to a situation where regulations exist on paper but are not implemented in reality. In order to achieve meaningful impact, laws and regulations need to be supported by complementary instruments and mechanisms such as voluntary initiatives and certification schemes (United Nations Environment Programme [UNEP], 2018).

Sustainability certification schemes define specific criteria and standards that companies are expected to meet. If implemented properly, they can strengthen sustainability efforts and improve environmental performance, while at the same time enhance competitiveness, reputation and market positioning (Font, 2002). In this regard, certification schemes can act as governance tools, as they influence internal processes within companies while shaping market behaviour and consumer expectations (Blackman et al., 2014). Sustainability benchmarks of certification schemes improve transparency, allowing companies to strengthen their credibility and give consumers better guidance when making purchasing decisions (Blackman et al., 2014).

In addition to that, certification schemes offer a structured framework that helps companies to systematically pursue environmental goals, document progress and implement continuous improvements (Bramwell & Lane, 2011). In this way, certification schemes can help to integrate sustainable practices more deeply into business operations (Bramwell & Lane, 2011). However, despite their potential, the implementation of sustainability certification schemes is associated with a set of challenges. Particularly in countries of the Global South, structural and institutional barriers such as limited financial resources, inadequate infrastructure and restricted access to sustainable alternatives hinder a proper implementation (Honey, 2008).

Next to the development of regulatory frameworks and sustainable certification schemes, the concept of eco-tourism has surfaced and established as an important concept within the tourism industry. It describes a form of tourism that aims to protect natural resources, strengthen local communities and minimise negative environmental impact during traveling (Honey, 2008). Growing environmental awareness among travellers has started to influence travel decisions (Gössling et al., 2015), which creates additional incentives for companies to adopt sustainable practices. However, a discrepancy remains between the increasing demand for sustainable tourism and the actual implementation of corresponding practices, especially in regions characterised by structural and economic challenges (Honey, 2008).

This research study is conducted in collaboration with the environmental NGO ZeroPlastic Movement from Sri Lanka, which is currently developing a sustainable certification scheme for companies aiming at reducing and phasing out (single-use-) plastic items in business operations. Although the certification scheme is still under development; ZeroPlastic Movement is already conducting pilot sessions with selected companies located in Sri Lanka in order to understand the feasibility and practicality of the certification scheme in a real business context. As a next step, the NGO wants to bring awareness of their sustainability certification scheme to the

hospitality sector. ZeroPlastic Movement wants to better understand the barriers faced by hospitality businesses in Sri Lanka in adopting eco-friendly alternatives to single-use plastic and achieving Level 1 of the ZeroPlastic Commitment Certification.

Despite the growing number of sustainable initiatives and academic studies in the tourism sector, there is still a research gap when it comes to the specific barriers hospitality businesses in the Southern Province of Sri Lanka face in reducing single-use plastic items and achieving Level 1 of the ZPC certification scheme. A better understanding of the hospitality sector and the barriers is therefore essential to realistically assess the effectiveness of the ZeroPlastic Commitment Certification scheme and to improve its design and implementation.

Therefore, this research study explores barriers faced by hospitality businesses in the Southern Province of Sri Lanka in adopting eco-friendly alternatives to single-use plastic items and in achieving Level 1 of the ZeroPlastic Commitment Certification. To answer this research question, the following sub-questions are formulated:

1. What types of single-use plastic items are currently used by hospitality businesses in Sri Lanka?
2. What factors influence the adoption of eco-friendly alternatives to single-use plastics in hospitality businesses?
3. What challenges do hospitality businesses in Sri Lanka face in reaching Level 1 of the ZeroPlastic Commitment Certification?

The objective of this study is to develop a comprehensive understanding of the barriers that influence the implementation of sustainable alternatives in the hospitality sector in the Southern Province of Sri Lanka, as well as identifying the readiness of hospitality businesses in regard to the Level 1 of the ZPC certification scheme. The results are expected to help close existing research gaps and provide practical insights for the NGO ZeroPlastic Movement.

The thesis is structured as follows: Chapter 2 presents the study area and research context. Chapter 3 outlines the literature review and theoretical framework, discussing concepts such as sustainable tourism and environmental certification schemes. Chapter 4 describes the methodological approach of this study. Chapter 5 presents the empirical findings and analysis. Chapter 6 discusses the limitations of the study and Chapter 7 concludes the thesis by

summarizing the most important findings and providing recommendations for the NGO ZeroPlastic Movement.

The next chapter will outline the research area and context for this study, introducing the geographical, socio-economic and political environment of Sri Lanka, as well as the partner NGO ZeroPlastic Movement.

2. Study Area & Research Context

2.1. Introduction

This chapter provides the research context for this study, highlighting the economic and socio-political environment and the development of the tourism sector in Sri Lanka. It examines the structure of the hospitality industry and tourism growth in Sri Lanka while outlining the increasing relevance of sustainability efforts within this sector. Additionally, the NGO ZeroPlastic Movement as well as the ZeroPlastic Commitment Certification will be introduced.

2.2. Geographical and Socio-economic & Political Context

Sri Lanka is an island in South Asia and is classified as a lower-middle-income country. It has approximately a population of 22 million people (Worldbank, 2026). Due to its strategic position, the country has historically played a significant role in terms of regional trade and cultural exchange (Central Bank of Sri Lanka, 2022). The economy was traditionally dominated by agriculture, but has over time gradually diversified into industrial, textile and service sectors (Central Bank of Sri Lanka, 2022). The country covers a total area of 65,610 km² and offers diverse landscapes, reaching from coastal areas, central highlands to tropical forests (Central Bank of Sri Lanka, 2022).

The country's economic development has been shaped by colonial extraction systems that created long-term social inequalities and economic dependencies (Abeyagoonasekera, 2023). In 1948, Sri Lanka gained its independence from the British empire and experienced periods of political instability, civil conflicts and uneven economic development, which continue to influence governance and institutional structures up until today (Sørbø et al., 2011). One of Sri Lanka's major socio-political challenges is the unequal distribution of wealth and infrastructure between urban and rural areas. While urban regions have experienced stronger economic development and access to public services, many rural communities still struggle with weak public infrastructure, lower income levels and limited governmental support (World Bank, 2023). Sri Lanka's recent economic and political crisis intensified these challenges even more. The country experienced severe inflation, shortages of fuel and imported goods, as well as a significant collapse of tourism revenues due to the COVID-19 pandemic and economic crisis in 2022 (World Bank, 2023). The crises also led to large public protests and political unrest,

and brought frustrations about corruption, economic mismanagement and weak governance structures to the surface (Abeyagoonasekera, 2023).

2.3. Tourism in Sri Lanka

The tourism sector in Sri Lanka has experienced a significant growth in recent years and has become an important pillar of the national economy. The country benefited from global tourism trends and the rising demand for tropical destinations. In 2025, Sri Lanka recorded 2,362,521 tourist arrivals, which is an increase of 15.1% compared to 2024, setting a new record in terms of tourists. Tourism is exceedingly concentrated in coastal areas (south & west), where natural resources, favourable climate conditions and accessible infrastructure attract high levels of visitors (Sri Lanka Tourism Development Authority, 2025). However, this spatial concentration leads to regional inequalities, as the economic benefits are unevenly distributed and concentrated in specific regions (Kumudhini & Vijesandiran, 2024).

Sri Lanka's tourism development grew together with its economic transformation and was strongly shaped by the political agenda and global tourism dynamics (Kumudhini & Vijesandiran, 2024). In the last two decades, the tourism sector has become a major backbone of the national economy and contributes significantly to employment, foreign exchange earnings and regional development (Kumudhini & Vijesandiran, 2024). It is estimated that it supports around three million jobs in the local labour market, making it one of the most important sources of employment (Kumudhini & Vijesandiran, 2024), endowed approximately US\$ 3.2 billion to the national GDP (Sri Lanka Tourism Development Authority, 2025).

One important aspect that needs to be considered within this development is how Sri Lanka's growing economy is depending more and more on the tourism sector. Kumudhini and Vijesandira (2024) point out that a certain dependence has developed in Sri Lanka, where economic stability is closely linked to continuous tourism growth and rising visitor numbers. However, this dependence leads to increased vulnerability. Political instability, natural disasters or global crises can lead to abrupt declines in the tourism sector and result in significant economic consequences (World Tourism Organization & United Nations Development Programme, 2018).

2.4. Tourism in the Southern Province of Sri Lanka

This study focuses on the Southern Province of Sri Lanka which is one of the nine administrative provinces consisting of the districts Hambantota, Matara and Galle. Size-wise it is the third smallest province in Sri Lanka but accounts for the third most populated one in Sri Lanka (Sri Lanka Tourism Development Authority, 2025).

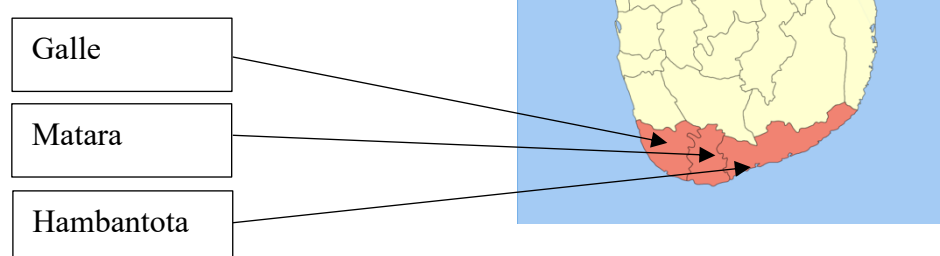


Figure 1: Map Southern Province of Sri Lanka

Source: Wikipedia, modified by Author.

The Southern Province is one of the country's most important tourist destination, offering roughly 15,722 rooms in tourist accommodations in 2025 (Sri Lanka Tourism Development Authority, 2025). The region offers pristine beaches, marine biodiversity, coastal eco-systems and a well-developed tourist infrastructure, which attracts both international and domestic visitors (Sri Lanka Tourism Development Authority, 2024). Beach tourism dominates this region, although eco-tourism and cultural tourism have also become more important (Sri Lanka Tourism Development Authority, 2025). Activities such as surfing, diving and whale watching contribute to the region's tourist appeal (Sri Lanka Tourism Development Authority, 2024).

Table 1: Total No. of Rooms by Province in Sri Lanka, 2024 & 2025

Province	Number of rooms 2025	Number of rooms 2024
Central Province	9,917	8,995
Eastern Province	2,727	2,620
North Central Province	2,609	2,424
North Western Province	2,314	2,138
Northern Province	1,169	1,063
Sabaragamuwa Province	1,528	1,455
Southern Province	15,722	14,122
Uva Province	3,159	2,869
Western Province	20,433	19,769
Total number of rooms	59,578	55,455

Source: Sri Lanka Tourism Development Authority (SLTD), Year in a Review 2025.

As seen in Table 2, the hospitality sector in this region is very diverse, it includes small locally owned guesthouses and homestays as well as international hotel chains and boutique hotels (Sri Lanka Tourism Development Authority, 2025). The coexistence of small local businesses and large international hotel chains creates very different conditions in terms of financial resources, operational capacities and access to sustainability knowledge (Blackman et al., 2014). This becomes especially relevant in regard to sustainability certification schemes, where the ability to comply with formal environmental standards often depends on exactly those factors (Blackman et al., 2014). Thus, the Southern Province of Sri Lanka serves as a useful case study for examining the barriers in regard to reducing single-use plastic and achieving ZeroPlastic Commitment Certification.

Table 2: Overview Tourism Accommodation and other Services in Sri Lanka

TOURISM ACCOMMODATION AND OTHER SERVICES

Table 10: SLTDA registered accommodation establishments, 2024 & 2025

Category	2025		2024	
	Number of establishments	Number of rooms	Number of establishments	Number of rooms
Boutique Hotel	39	877	38	835
Boutique Villa	50	353	49	345
Bungalow	1,268	5,432	1,052	4,390
Classified Tourist Hotel	170	18,308	167	16,808
1 Star	40	1,802	41	1,852
2 Star	39	2,123	40	2,431
3 Star	27	2,815	25	2,408
4 Star	31	3,835	31	3,834
5 Star	33	7,733	30	6,283
Guest House	1,862	21,463	1,647	18,445
Eco lodge	1	20	1	20
Heritage Bungalow	5	28	4	19
Heritage Home	2	2	2	2
Heritage Hotel	2	312	2	312
Home Stay Unit	1,160	3,416	1,112	3,308
Hostels	23	232	14	158
Rented Apartment	86	340	82	322
Rented Home	23	68	15	41
Themed Accommodation & Value-added Activities	1	11	1	11
Tourist Apartment Hotel	1	25		
Camp	16	150	-	-
Tourist Hotel	211	8,510	204	8,362
Other	7	31		
Total	4,927	59,578	4,390	53,378

* The registrations of Eco lodge and Heritage Hotels were started from 2023 onwards.

Source: Sri Lanka Tourism Development Authority (SLTD), Year in a Review 2025).

2.5. Plastic Consumption, Waste Management and Governance Challenges in Sri Lanka

Sri Lanka has experienced a significant increase in plastic consumption throughout the last decades, mostly driven by economic development, urbanisation and changing consumption patterns (United Nations Environment Programme [UNEP], 2018). This trend intensifies even more by a growing tourism sector contributing to a higher demand for convenience-based and single-use plastic items (Jayasinghe et al., 2023). A substantial share of plastic consumption comes from single-use plastic items such as packaging materials, bottled water, straws and disposable hygiene products. All these items are extremely widespread in the hospitality sector, where operational efficiency, cost considerations and hygiene standards favour the use of lightweight, inexpensive and readily available plastic products (United Nations Environment Programme [UNEP], 2018). Especially hotels and restaurants have a high resource consumption and produce a significant amount of waste (United Nations Environment Programme [UNEP], 2019).

It is estimated that Sri Lanka generates approximately 250,000 tonnes of plastic waste annually, which is a significant environmental burden for the country (Ministry of Environment Sri Lanka, 2021). Although 73% of plastic waste is collected through formal and informal systems, recycling rates remain low (Jayasinghe et al., 2023), indicating inefficient waste management processes. An extensive share of plastic waste is mismanaged or leaks into the environment, a total of 67.000 tonnes of plastic waste per year is not collected and enters the environment, is dumped or illegally burnt (Ministry of Environment Sri Lanka, 2021). These challenges become especially visible in coastal regions, where waste management infrastructures are unable to cope with increasing waste volumes generated by tourism activities (Jayasinghe et al., 2023).

In response to these challenges, the government of Sri Lanka has introduced several policies and regulatory measures in order to reduce plastic consumption. Those measures include bans on specific single-use plastic items, such as polyethylene bags, plastic straws and selected packaging materials (Ministry of Environment Sri Lanka, 2021). In addition to that, the government of Sri Lanka has launched the National Action Plan on Plastic Waste Management 2021 – 2030, which provides a strategic framework for addressing plastic pollution on national level (Ministry of Environment Sri Lanka, 2021). However, despite those regulatory frameworks being in place, their effectiveness remains limited, mostly due to weak legal

enforcement, poor coordination between governmental institutions, restricted availability of alternative products and a lack of recycling opportunities (Jayasinghe et al., 2023).

2.6. The Partner NGO ZeroPlastic Movement

***Note:** The information presented in this section is based on materials provided by the NGO ZeroPlastic Movement (such as the ZPC Certification Standard Pilot Version 1.0) and our initial meeting conducted in January 2026 in Colombo, Sri Lanka as part of this research.*

This research study was conducted in collaboration with the non-governmental organisation (NGO) ZeroPlastic Movement, an environmentally focused organisation, specialised in the reduction of plastic waste. The NGO strives to promote sustainable alternatives to single-use plastic, supporting businesses to implement concrete measures to reduce plastic waste while transitioning to plastic-free operations and improving their environmental performance. The organisation's activities concentrate mostly on regions with high level of tourism, where environmental impacts from plastic waste are extremely visible. In these regions, ZeroPlastic Movement works closely with local businesses, communities and other stakeholders to promote sustainable practices and drive long-term change. The organisation's mission is to reduce the negative environmental impacts of plastic pollution by raising awareness, developing practical solutions and actively involving businesses in transformation processes. ZeroPlastic Movement acts an interface between international sustainability goals like the UN Sustainable Development Goals (SDGs) and local implementation in Sri Lanka, offering training, advisory services and certification programmes.

2.7. The ZeroPlastic Certification Scheme

A key instrument of the NGO is the so-called ZeroPlastic Commitment (ZPC) certification, a structured certification scheme designed to support businesses in the systemic reduction of (single-use-) plastics. The ZPC scheme places its main emphasis on the active reduction and substitution of plastic use, especially conventional single-use plastic items (SUPs).

The ZPC certification consists of two central parts that businesses are required to fulfil throughout the certification process. The first part is a self-assessment to identify and map all plastic use within the organisation in order to establish a baseline. The second part is the Plastic Reduction Plan (PRP), which outlines clear timelines, reduction targets and concrete actions,

including the substitution of SUPs, as well as recycling and waste disposal methods. Together these two parts form the Plastic Management System (PMS), a structured framework that translates plastic reductions commitments into daily business operations.

The certification process consists of four different levels: Engaged, Level 1, Level 2 and Level 3, each building onto the previous one. Organisations that are not yet ready to apply for the full certification can start with the ZPC Engaged status, which demonstrates their willingness to reduce plastic. A Certification Body (CB) verifies the baseline assessment, reviews the PRP and conducts audits before each (re-) certification. By design the ZPC certification combines technical criteria with management and governance requirements, making it a hybrid instrument that goes further than technical sustainability requirements only.

Table 3: Overview different Levels of ZPC Scheme

Levels	Requirements
Engaged (Entry-level commitment)	Conduct initial self-assessment, start mapping plastic use, demonstrate commitment to begin the certification journey.
Level 1	Eliminate or substitute conventional SUPs, implement a PMS with PRP, divert at least 50% of plastic waste through recycling or recovery.
Level 2	Maintain Level 1 for at least one year, achieve an additional 50% reduction in non-SUPs, implement advanced PRP strategies, divert at least 70 of plastic waste.
Level 3	Fully substitute or eliminate operational plastic with lower-impact alternatives, implement a comprehensive waste management plan, ensure full stakeholder engagement and continuous improvement.

Source: Overview by Author

2.7.1. Engaged and Level 1 Requirements of the ZPC Certification Scheme

The Table 4 summarizes the central requirements that apply to organisations that want to reach the ZPC Engaged or ZPC Level 1 certification. While the full ZPC standard includes additional dimensions such as water and energy footprints, support for local businesses as well as health and safety criteria, the requirements listed form the core dimension up to Level 1, which serve as the basis for the ZPC Level 1 Readiness Assessment conducted in this study.

Table 4: Overview ZPC Levels & Requirements

ZPC Requirement	ZPC Engaged	ZPC Level 1
Initial plastic baseline assessment (Section 1.1)	Required	Required
Written Plastic Reduction Plan (PRP) with clear targets and timelines (Section 1.2 / 2.2)	In preparation	Required
Plastic Management System (PMS) with designated responsible person (Section 2.3.1)	In development	Required
Elimination or substitution of conventional Single-Use Plastics (SUPs) (or documented substitution plan) (Section 2.4.1.1.1)	–	Core L1 Requirement
Implementation of PMS + PRP with strategies for reduction, segregation, reuse and recycling (Section 2.4.1.1.2)	–	Core L1 Requirement
Minimum 50% plastic waste diversion through verified recycling or recovery (Section 2.4.1.1.3)	–	Core L1 Requirement
Procurement procedure supporting plastic reduction and sustainable alternatives (Section 2.3.4)	Recommended	Required
Employee training and awareness on plastic reduction (Section 2.3.5)	Recommended	Required
Stakeholder communication of PMS policy and performance (Section 2.3.3)	–	Required
Legal compliance with local, national and international environmental regulations (Section 2.3.2)	Required	Required
Continuous improvement mechanism and feedback loop (Section 2.3.1.6 / 2.4.2)	–	Required

Source: Overview by Author based on ZPC Standard Pilot version 1.0

The empirical analysis in Chapter 5 will return to these criteria to discuss how the barriers identified in the interviews relate to the specific requirements of the ZPC certification, and to assess at which commitment level the interviewed businesses currently are. The next chapter highlights the literature review and theoretical framework used for this study.

3. Literature Review & Theoretical Framework

3.1. Introduction

This chapter reviews the relevant academic literature on sustainable tourism and sustainability certification schemes. It discusses theoretical concepts such as eco-tourism, greenwashing, multi-level governance and the ‘double bind’ between sustainability and economic growth.

3.2. Sustainable Tourism

3.2.1. Sustainable Tourism as an Instrument of Economic Development

Sustainable tourism can be seen as an instrument of economic development, because it can contribute to the diversification of economic structures and create alternative sources of income (Bramwell & Lane, 2011). Also, Gössling et al. (2015) highlight that sustainable tourism can promote economic development while reducing environmental damage. Nonetheless, academic literature shows that this potential is not automatically realised, because regions that heavily depend on tourism, often remain reliant on international demand which in turn can lead to structural dependencies (Kumudhini & Vijesandiran, 2024). Therefore, sustainable tourism can actually reinforce existing dependencies rather than reducing them.

The tension between sustainable tourism as a tool for economic development and a concept that depends on growth reflects a critical perspective within the discussion of sustainable development. Eriksen and Schober (2018) point out that the current concept of sustainable development is still based on continuous economic growth, consumption and international mobility even though the ecological damage is caused by it. They describe this contradiction according to Bateson as a ‘double bind’, where the structures of global capitalism continuously reward growth, consumption and mobility, while ecological survival requires the opposite (Eriksen & Schober, 2018). Tourism is a solid example of this ‘double bind’, because it depends on exactly these factors (economic growth, international mobility and the consumption of resources). Sustainable tourism, especially in the Global South is therefore caught in a contradiction. On one hand it is expected to reduce poverty and to boost economy, while on the other hand it needs to protect the ecosystem which is degraded by the growth it relies on (Eriksen & Schober, 2018).

Sri Lanka has positioned sustainable tourism as a strategic development goal and integrated it into their national policy frameworks and strategies, emphasising the need to combine

economic development with environmental protection and to establish tourism models that are sustainable in the long-term (Ministry of Environment Sri Lanka, 2021). In this matter, sustainable tourism is viewed not only as an ecological concept but as an integral part of economic modernisation and international competitiveness (Eriksen & Schober, 2018). This is important, because it reflects a broader pattern where sustainability is often closely tied to economic growth strategies and global market integration (Eriksen & Schober, 2018). The implementation of sustainable tourism in Sri Lanka is heavily influenced by structural conditions and is often not carried out systematically, but rather fragmented and heavily dependent on international organisations, NGOs and pilot projects (Kumudhini & Vijesandiran, 2024). Especially, the dependence on externally funded projects and international development initiatives, lead to the issue that sustainable measures are often implemented only for a limited period of time (Kumudhini & Vijesandiran, 2024). Resulting in a lack of long-term institutional investment as sustainable tourism approaches are not systematically integrated into national structures (Kumudhini & Vijesandiran, 2024).

3.2.2. Fragmentation and Lack of Institutional Integration

The problem is that the concept of sustainable tourism is often integrated into vulnerable governance structures. Often there are multiple activities by several actors that are not well coordinated with each other, and responsibilities are spread across various institutional levels, including private businesses, NGOs, international organisations and national governments (Bramwell & Lane, 2011). Eriksen (2016) places such governance gaps in the context of ‘overheated’ globalisation, where the rapid intensification of economic and material flows often outpaces the regulatory capacities of countries, distributing environmental responsibilities more and more away from the state and onto private businesses, NGOs and international actors. This fragmentation leads to inconsistencies in implementation, coordination failures, inefficient use of resources and hinders the development of uniform standards and long-term transformation processes (Bramwell & Lane, 2011). In reference to the tourism sector Gössling et al. (2015) further highlight that sustainability governance often lacks coherence with overlapping initiatives, competing standards and limited alignment between policy objectives and implementation mechanisms. Especially, sustainability strategies often set out ambitious targets without corresponding implementation mechanisms or monitoring structures, which intensifies the discrepancy between policy objectives and practical implementation (Gössling et al., 2015).

3.2.3. Governance as a Systemic Challenge

Although environmental laws and tourism-related guidelines exist in many countries, including Sri Lanka, there is a clear governance problem between formal policy and actual implementation (Bramwell & Lane, 2011). This governance gap highlights a fundamental limitation of regulatory frameworks, showing that policies and regulatory measures do not lead automatically to behavioural and systemic change, but what matters is how well they are enforced and coordinated between each other (Bramwell & Lane, 2011). Bramwell & Lane (2011) highlight this gap, where regulatory frameworks are in place, but their effectiveness is limited due to restricted institutional capacity, weak oversight and a lack of resources (Bramwell & Lane, 2011).

The regulatory landscape is often characterised by institutional fragmentation which complicates governance and management of sustainable development (Bramwell & Lane, 2011). On one hand it is argued that sustainable development cannot be achieved through regulatory measures alone, but require a coordinated governance structure that integrates state, private and civil society actors (Bramwell & Lane, 2011). On the other hand, Eriksen (2016) has a more critical view on this development and argues that under neoliberal conditions, states have gradually withdrawn from active environmental regulations in favour of deregulations, privatisation and market-based solutions, which in turn has weakened public institutions and gives states only limited steering role.

3.2.4. Eco-tourism

One of the main concepts within sustainable tourism is the concept of eco-tourism. Martha Honey (2008) defines eco-tourism as a responsible form of travel to natural areas that focus on environmental education and awareness, the protection of ecosystems as well as the active engagement of local communities. This concept assumes that tourism should not only cause less harm but should actively contribute to the ecological and social improvement of destinations (Honey, 2008). Bramwell & Lane (2011) understand eco-tourism as a governance concept that aims to align tourist activities with environmental conservation while reducing negative environmental impacts in the process. Researchers often describe eco-tourism as a sustainable alternative to mass tourism. It combines ecological objectives with the promise of socio-economic development, particularly in countries of the Global South, where natural

resources form the central basis for tourism (World Tourism Organization & United Nations Development Programme, 2018).

In theory eco-tourism focuses on minimal environmental impact, educational benefits and local participation, however in reality it gets more and more absorbed into existing commercial tourism structures (Gössling et al., 2015). Important aspects like resource consumption, waste management or supply chains which need to be addressed structurally, often remain unchanged, and sustainability is reduced to visible or marketing elements only (Honey, 2008). Similarly, Bramwell & Lane (2011) argue that environmental responsibility becomes more of a marketing tool and is reduced to reputational assets rather than an essential driver for systemic environmental change. Gössling et al. (2015) describe this sensation as an implementation gap, where sustainable principles are adopted in theory but only partially or superficially put into practice. This leads to a situation where eco-tourism is rather understood as a competitive factor than ecological ambition. The result is that sustainability often looks good on the surface but is not deeply embedded in the operational and organisational structures of the business. In that sense, eco-tourism is often critically discussed as a potential tool for greenwashing, where companies communicate sustainable practices without necessarily creating profound structural changes, forming a tension between actual environmental performance and perceived sustainability (Honey, 2008).

In the Global South, eco-tourism is often used as a development strategy to boost incomes and to protect nature. But the implementation depends to a large extent on external actors, which act as major drivers of sustainable initiatives by providing funding, expertise and technical support (Honey, 2008). While these actors enable many projects that could not be realised otherwise, they also limit local control and create dependencies on externally funded projects.

3.3. Sustainability Certification Schemes

Sustainability certification schemes function as market-based instruments that organisations use to promote and monitor environmental standards (Font, 2002). Most certification schemes follow a similar process, where businesses need to implement standards, document actions and complete external verification (Blackman et al., 2014). This process fulfils several functions simultaneously, on one hand it creates transparency regarding the companies' environmental performance and on the other hand it facilitates comparability (Font, 2002). Further, it acts as an internal management tool, as companies are required to systematically analyse, document

and continuously improve their processes (Bramwell & Lane, 2011). The general idea of certification schemes is to contribute to the standardisation of sustainable practices by defining comprehensive requirements and to provide clear guidance for companies (Blackman et al., 2014). However, their actual impact depends heavily to what degree these standards are implemented and verified (Honey, 2008).

A fundamental feature of sustainability certifications is their high degree of diversity. There is a large variety of different labels, programmes and initiatives that differ in terms of criteria, objectives and geographical scope (Font, 2002). This diversity covers both, global certification systems and regional or topic specific programmes. Also, digital platforms are becoming increasingly important by integrating sustainability certifications into their rating systems, which in turn can influence consumer decisions (Gössling et al., 2015). One example is Booking.com, which integrates sustainability indicators into the presentation of accommodation, and therefore roots sustainability directly into the decision-making process of the customers (Gössling et al., 2015). This development illustrates that certification systems are more and more merging with digital market structures, giving rise to new forms of governance. However, a large number of different certification schemes can create confusion and uncertainty for businesses as well as consumers (Font, 2002). Different standards and criteria make comparisons difficult and can undermine the credibility of individual certifications (Honey, 2008).

Certification schemes have become part of a governance structure that goes above traditional state regulation and integrates private and civil society actors (Bramwell & Lane, 2011). Therefore, certification schemes can also be understood as part of ecological modernisation, in which environmental problems are being addressed through market-based, technical and managerial solutions (Eriksen & Schober, 2018). Unlike state regulations, certification schemes are mostly based on voluntary participation, which means their effectiveness depends heavily on market mechanisms, incentive structures and the overall demand (Blackman et al., 2014). This makes certifications a dual instrument performing both regulatory and economic steering functions (Bramwell & Lane, 2011). It can be said that certification schemes bridge market demand to regulatory control, helping to fill the gaps that state regulations alone cannot address (Bramwell & Lane, 2011).

3.3.1. Advantages of Certification Systems

Certification schemes can offer important advantages for businesses that exceed regulatory compliance. They provide a structured framework for implementing and documenting sustainability measures and serve as a base for continuous improvement and systematic goal setting (Bramwell & Lane, 2011). Also, certifications can strengthen a company's competitive positioning by demonstrating environmental commitment to consumers and business partners, which supports distinction in a sustainability conscious growing market (Font, 2002).

Blackman et al. (2014) argue that certification schemes can encourage businesses to improve their environmental practices by creating clearer benchmarks and accountability mechanisms that motivate companies to go past minimum regulatory requirements. For smaller businesses in particular, certification schemes can provide access to sustainability knowledge and best practices that they might lack otherwise, making them function not only as a governance tool but rather as a capacity building tool (Honey, 2008). Certification schemes can also facilitate access to international markets and platforms that reward sustainability efforts and performance, creating additional market-based incentives for participation (Gössling et al., 2015).

3.3.2. Criticism of Certification Schemes

Despite this potential, certification schemes are critically discussed, one of the main concerns is the complexity and bureaucratisation of the certification process (Blackman et al., 2014). Companies are required to fulfil extensive documentation requirements, adapt internal structures and undergo regular audits, which places a considerable onus, especially on smaller businesses (Blackman et al., 2014). Implementing certification requirements requires specific expertise in areas such as environmental management, monitoring and reporting. However, many companies lack these skills, which leads to increased reliance on external consultancy (Bramwell & Lane, 2011).

While certification schemes are often presented as useful tools for improving environmental performance, empirical studies show that their impact heavily depends on design, enforcement and market context (Blackman et al., 2014). Certification schemes which are originally designed to improve environmental performance and to enhance transparency, actually pose a risk to contribute to greenwashing, because if certification schemes are weakly designed, poorly enforced or predominantly driven by marketing incentives without proper implementation, the

sustainability certification can lose its value and credibility (Blackman et al., 2014; Font, 2002). Also, Honey (2008) highlights the risk that certification schemes can lead to rather symbolic compliance than real effective change, especially when monitoring and verification processes are weak.

3.3.3. Certification Schemes in the Global South

Honey (2008) argues that barriers such as limited financial resources, inadequate infrastructure and restricted access to information create conditions in which smaller businesses in the Global South are systematically disadvantaged when engaging with certification processes. Unlike larger internationally networked hotels, smaller locally owned businesses often lack the organisational capacity, dedicated staff and financial means to navigate complex certification requirements (Blackman et al., 2014).

Another important aspect is the role of market incentives. While in high-income environments, consumer demand for certified sustainable services often drives certification demand, these incentives are much weaker, nearly absent in the tourism industry in developing countries. This reduces the motivation for businesses considering sustainability certifications (Font, 2002). Consequently, certification schemes in developing countries often reach a relatively small group of businesses (Honey, 2008). These inequalities are relevant for the Sri Lankan hospitality sector, where the majority of businesses are small, locally owned and operating with limited financial and organisational resources (Bandara et al., 2018). With this in mind, certification schemes need to be carefully designed to ensure accessibility and relevance to businesses at different stages of their sustainability agenda (Blackman et al., 2014).

3.4. Barriers to Sustainable Tourism & Certification Schemes

Businesses in the tourism sector face several interconnected barriers when trying to adopt sustainable practices. Rather than acting independently, these barriers are often interrelated and reinforce each other, creating conditions that make sustainable transformation very difficult (Bramwell & Lane, 2011).

Economic and market-related barriers

For many businesses, financial pressure remains one of the biggest obstacles to adopting sustainable practices (Blackman et al., 2014). The availability and pricing of sustainable alternatives often represent a major economic challenge for many companies, particular for

small and medium sized businesses (Blackman et al., 2014). Studies show that environmentally friendly alternatives are often more costly than conventional plastic products, mostly because they increase operational costs (Tunn et al., 2018). The financial burden of implementing sustainable practices occurs immediately, while potential economic benefits, such as improved reputation, increased customer demand, or operational efficiencies are often uncertain and visible results are more likely to materialise only in the long-run (Gössling et al., 2015).

Organisational barriers

Besides external market conditions, internal factors, such as structural and managerial limitations also play an important role whether businesses act on their sustainability intentions. Especially, insufficient management commitment, limited knowledge and a lack of internal capacity hinder the implementation of sustainable practices (Bramwell & Lane, 2011). Sustainable transformation require deep organisational changes, businesses need to adjust procurement strategies, operational workflows and clear decision-making processes (Bramwell & Lane, 2011). Gössling et al. (2015) add that it requires long-term strategic commitment, which may be lacking in companies focusing on cost efficiency and short-term performance. Another important aspect to mention is about established routines and existing hierarchical structures, which can cause resistance to change and prevent the adoption of new practices, especially when sustainability is not anchored in the core business strategy (Bramwell & Lane, 2011). Lastly, knowledge gaps can also act as a significant barrier, as many businesses lack the competence to navigate through complex sustainability requirements, which in turn can lead to reliance on external consultants, introducing additional financial costs and organisational dependencies (Bramwell & Lane, 2011).

Cultural and behavioural barriers

Cultural and behavioural factors strongly shape how well sustainable practices are realised. For example, when the use of single-use plastic items is deeply integrated in operational routines and is frequently associated with hygiene, convenience and efficiency, it can become very difficult to change (Gössling et al., 2015). Gössling et al. (2015) highlight that established routines, employees behaviour and customer expectations can lead to resistance to change, especially when employees or managers believe that sustainable alternatives might reduce efficiency or service quality (Gössling et al., 2015). As a result, even though sustainable alternatives are available, their adoption remains limited due to behavioural norms.

Institutional barriers

While environmental regulations and sustainability strategies are often in place, effectiveness is rather limited due to insufficient enforcement and a lack of institutional capacities (Bramwell & Lane, 2011). When regulations are not effectively enforced on ground, businesses face limited pressure to comply with environmental standards, which leads to a situation where sustainability practices remain largely “voluntary” rather than mandatory. In addition to this, institutional fragmentation poses a substantial challenge, because if multiple regulatory bodies overlap in responsibilities, it creates inconsistencies and inefficiencies in policy implementation (Bramwell & Lane, 2011). This lack of coordination complicates sustainable compliance processes for companies and reduces the overall effectiveness of governance frameworks. Concluding it can be said that weak governance structures, fragile laws and failing policy implementation create additional challenges for businesses trying to adopt sustainable measures.

Supply chains and operational barriers

Another barrier of implementing sustainable practices is heavily influenced by supply chain structures and operational constraints. In many cases, sustainable products are either not locally available or fail to meet required quality standards, which limits practical applicability (Ma et al., 2019). Tunn et al. (2018) confirms this argument and notes that if sustainable alternatives are not easily available, accessible or affordable within these supply chains, individual businesses have limited ability to implement sustainable alternatives. However, hospitality businesses depend on external suppliers for many products, including packaging, food and operational material, which highlights the nature of sustainability challenges, even if internal commitment is high and businesses are willing to adopt environmentally friendly practices, they may be constrained by external market conditions and supplier networks (Bramwell & Lane, 2011).

Certification barriers

While certification schemes are intended to facilitate sustainable practices, they are often associated with additional barriers. One of the most frequently cited challenge relates to the complex administrative process that businesses are required to comply with, usually including extensive documentation, monitoring procedures and regular audits (Blackman et al., 2014; Font, 2002). Managing those certification processes effectively becomes very heavy for small

and medium sized businesses, while in contrast large, internationally networked companies often benefit from certifications, as they have greater resources, knowledge and organisational capacity (Blackman et al., 2014). Bramwell and Lane (2011) highlight this disadvantage and add that certification systems have the potential to worsen existing inequalities (Bramwell & Lane, 2011). Further, Bandara et al. (2018) point out that it is difficult for hotels in Sri Lanka not only to achieve certification but to also sustain and maintain it over time (Bandara et al., 2018).

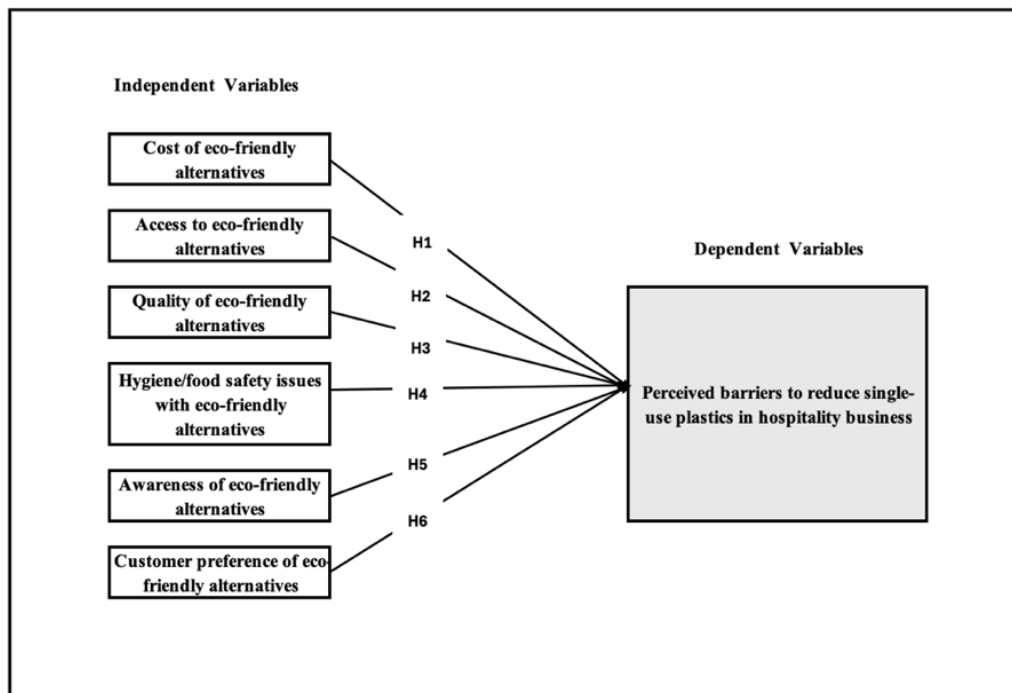
Next to direct costs such as certification fees and audit costs, there are also many indirect costs for training, process adjustments and time investment (Blackman et al., 2014). Studies show that companies often link their participation to expected market benefits, meaning if certifications do not lead to increased demand or better pricing, the motivation to participate decreases (Font, 2002). In addition, Honey (2008) states that the perceived market value of certification schemes plays an important role. If time and resource investment outweighs the perceived benefits of the certification scheme, businesses become more hesitant to participate (Honey, 2008). Therefore, certifications need to lead to tangible benefits, such as economic returns, increased customer demand or improved reputation, otherwise businesses are less willing to invest in such processes (Blackman et al., 2014). Bandara et al. (2018) confirm this dynamic for the Sri Lankan context, where the lack of clear market incentives is one of the central reasons why hotels disengage from certification after initial enrolment.

Moreover, the complexity and diversity of certification schemes can create confusions and uncertainty. Different standards, requirements and evaluation processes make it more challenging for businesses to identify the most appropriate and suitable certification (Font, 2002). This reflects what Bandara et al. (2018) describe as a recurring social and cultural challenge in the Sri Lankan hotel sector, namely a lack of user awareness and understanding of certification requirements.

3.5. Influencing Factors: Six Hypotheses

As part of the literature review, this section develops a framework that will later guide the empirical analysis of this study. Six factors are identified and expected to influence the reduction of single-use plastic in the hospitality business in the Southern Province of Sri Lanka. Each factor is translated into a hypothesis that will be tested through the quantitative data collection.

Table 5: Hypotheses Framework



Source: Overview by Author

3.5.1. Cost of Eco-friendly Alternatives

When it comes to barriers regarding the adoption of sustainable practices, particularly for small and medium sized businesses economic constraints are identified as one of the primary barriers (Blackman et al., 2014). Higher procurement costs are frequently associated with sustainable alternatives in comparison to conventional plastic products, as it directly increases operational expenses (Tunn et al., 2018). The cost factor is highly relevant in competitive and price sensitive markets, where profit margins are already low and businesses are hesitant to create additional costs (Gössling et al., 2015).

⇒ **H1: The perceived costs of eco-friendly alternatives is a significant barrier to reducing single-use plastic in hospitality businesses in the Southern Province of Sri Lanka.**

3.5.2. Access to Eco-friendly Alternatives

Hospitality businesses are strongly embedded in existing supply chains structures and depend on suppliers for operational materials (Bramwell & Lane, 2011). When sustainable alternatives are not easily and readily available within in these supply chains, businesses are facing limitations that are outside their control (Tunn et al., 2018). In many tourism depending regions, especially those in developing countries, sustainable alternatives are either not consistently accessible or only available through fragmented distribution channels (United Nations

Environment Programme [UNEP], 2019), which means that even if businesses that are willing to reduce plastic may find themselves constrained by the market environment in which they operate in.

- ⇒ **H2: Limited access to eco-friendly alternatives is a significant barrier to reducing single-use plastic in hospitality businesses in the Southern Province of Sri Lanka.**

3.5.3. Quality of Eco-friendly Alternatives

Literature points out that hospitality businesses tend to prioritise service quality and operational reliability when choosing materials for daily business operations (Gössling et al., 2015). If sustainable alternatives are perceived less functional or less durable than conventional plastic products, or if they negatively affect customer satisfaction, then it can create resistance in adopting sustainable alternatives, as businesses aim to deliver and maintain a good level of service standards (Gössling et al., 2015). Uncertainty regarding the performance of new operational material increases the perceived operational risks, particularly in highly competitive environments where customer satisfaction is directly linked to business reputation (Bramwell & Lane, 2011). Therefore, quality concerns can act as a significant barrier.

- ⇒ **H3: Perceived quality of eco-friendly alternatives is a significant barrier to reducing single-use plastic in hospitality businesses in the Southern Province of Sri Lanka.**

3.5.4. Hygiene and Food Safety Issues with Eco-friendly Alternatives

In the hospitality sector, single-use plastic items are commonly perceived as the more hygienic for food handling and takeaways services. Gössling et al. (2015) argue that this perception is constantly reinforced by customer expectations as well as industry norms, prioritizing visible cleanliness and food safety. Transitioning to eco-friendly alternatives may therefore be perceived as a contamination risk or requires more complex hygiene management processes, hindering businesses to make the switch (Bramwell & Lane, 2011). Therefore, hygiene and food safety concerns are expected to play an important role in shaping business decision regarding plastic reduction.

- ⇒ **H4: Hygiene and food safety concerns related to eco-friendly alternatives are a significant barrier to reducing single-use plastic in hospitality businesses in the Southern Province of Sri Lanka.**

3.5.5. Awareness on Eco-friendly Alternatives

The implementation of sustainable practices requires specific knowledge, awareness and managerial commitment (Bramwell & Lane, 2011). However, many businesses, especially smaller sized businesses lack the competence and technical expertise to identify, evaluate and implement sustainable alternatives to single-use plastic products (Blackman et al., 2014). A lack of awareness and knowledge often results in lower levels of sustainability engagement, hence a limited exploration of available alternatives (Bramwell & Lane, 2011). It is argued that if sustainability is not integrated into the core business strategy, it tends to receive rather low priority in the decision-making processes, which means that businesses may not actively engage with eco-friendly alternatives simply due to organisational constraints rather than a lack of knowledge (Gössling et al., 2015).

⇒ **H5: Limited awareness of eco-friendly alternatives is a significant barrier to reducing single-use plastic in hospitality businesses in the Southern Province of Sri Lanka.**

3.5.6. Customer Preference on Eco-friendly Alternatives

Gössling et al. (2015) argue that hospitality businesses are highly responsive to market demands and customer expectations, because customer satisfaction is directly linked to business performance and competitiveness. If businesses perceive that customers prefer plastic products, due to convenience, hygienic factors or familiarity, businesses may be reluctant to introduce alternatives that could potentially affect the customer experience (Bramwell & Lane, 2011). This barrier reflects a market dynamic where sustainability efforts are influenced not only by internal organisational factors but also by external demand conditions. Hence, weak customer pressure can reduce the incentive to change (Bramwell & Lane, 2011).

⇒ **H6: Perceived customer preference for eco-friendly alternatives is a significant barrier to reducing single-use plastic in hospitality businesses in the Southern Province of Sri Lanka.**

Building onto this theoretical foundation, the following chapter outlines the methodological approach used to empirically investigate the identified barriers.

4. Methodology

4.1. Introduction

This chapter outlines the methodological framework employed during the research to investigate the potential barriers hospitality businesses face in phasing out single-use plastic items as well as understanding the challenges they encounter when it comes to reaching ZeroPlastic Commitment Certification. To capture these research questions from different angles, this study combines three complementary datasets. Firstly, a quantitative online survey was conducted with 152 hospitality businesses (147 valid responses) across the Southern Province of Sri Lanka to provide a broad picture of perceived barriers to single-use plastics reduction. Secondly, 15 semi-structured face-to-face interviews were carried out with management representatives of four- and five- star hotels in the same study area to gain a deeper understanding of the underlying practices, dynamics and perspectives. Thirdly, the same 15 interviewed businesses completed a structured ZPC Level 1 Readiness Assessment, allowing a systematic comparison of their current operational practices against the requirements of the ZeroPlastic Commitment Standard. The combination of these three databases creates the empirical basis of the research data.

4.2. Research Design

For this research study an explanatory mixed-methods research design was applied, combining qualitative and quantitative research methods. This approach allowed the researcher to discuss context-specific experiences and perceptions as well as collecting measurable patterns (Bryman, 2016). Bryman (2016) states that both methods together are well used for complex research questions and should serve complementary purposes as well as increasing the validity and robustness of the research findings. The quantitative data collection serves to identify general patterns and relationships across a larger sample, while the qualitative data collection aims to explain and contextualise these findings in greater depth (Bryman, 2016). While quantitative data allows for the identification of statistically relevant relationships between variables, the integration of qualitative data enables deeper exploration of the identified patterns (Bryman, 2016). The research design follows a sequential logic, which means that quantitative findings were integrated into the development of the qualitative interview guide, which ensures coherence between both research phases.

4.2.1. Quantitative Research Method: Survey Design

A quantitative research method in form of a cross-sectional survey was carried out. This design was chosen due to its effectiveness in gathering standardized information across a large population (Bryman, 2016), allowing for statistical testing of hypotheses.

The survey design allowed the researcher to:

- Understand the current use and disposal of single-use plastic in business operations
- Measure willingness to reduce plastic use
- Identify perceived barriers to reduce or phase out single use plastic

The survey consists of ten standardized questions, it was designed to be user-friendly and administered via mobile devices using Google Forms, making it easily accessible. This mode of distributions allows real-time data collection and minimizes paper-based errors. All questions of the survey were asked as closed questions, where respondents could tick one or multiple answers, which amplifies a systematic evaluation.

4.2.1.1. Hypotheses Formulation

Table 6: Overview Hypotheses of the Research Study

H1	H01	There is no significant relationship between the cost of sustainable alternatives and the use of single-use plastic items
	Ha1	There is a significant relationship between the cost of sustainable alternatives and the use of single-use plastic items
H2	H02	There is no significant relationship between the accessibility of sustainable alternatives and the use of single-use plastic items
	Ha2	There is a significant relationship between the accessibility of sustainable alternatives and the use of single-use plastic items
H3	H03	There is no significant relationship between the quality of sustainable alternatives and the use of single-use plastic items
	Ha3	There is a significant relationship between the quality of sustainable alternatives and the use of single-use plastic items
H4	H04	There is no significant relationship between the hygiene/food safety aspects of sustainable alternatives and the use of single-use plastic items
	Ha4	There is a significant relationship between the hygiene/food safety aspects of sustainable alternatives and the use of single-use plastic items
H5	H05	There is no significant relationship between the awareness of sustainable alternatives and the use of single-use plastic items
	Ha5	There is a significant relationship between the awareness of sustainable alternatives and the use of single-use plastic items
H6	H06	There is no significant relationship between the customer preference of sustainable alternatives and the use of single-use plastic items
	Ha6	There is a significant relationship between the customer preference of sustainable alternatives and the use of single-use plastic items

Source: Overview by Author

4.2.1.2. Operationalization of Variables

Table 7: Operationalisation of Variables

Variable Type	Variable	Operationalisation	Rationale (Why this question)	Literature Reference	Measurement Scale	Analysis Method
Independent	Business Type	Categorised (Hotel, Restaurant, Café, etc.)	To examine whether structural differences across business types influence sustainability barriers	Blackmann et al. (2014); Bramwell & Lane (2011)	Nominal	Chi-square, Kruskal-Wallis
Independent	Economic Barriers	Perceived cost of alternatives	To assess whether cost-related constraints limit the adoption of sustainable practices	Tunn et al. (2019); Blackmann et al. (2014)	Binary / Multiple Response	Regression, Frequencies
Independent	Organisational Capacity	Knowledge, internal resources	To assess whether internal capabilities enable or hinder sustainability implementation	Bramwell & Lane (2011); Gössling et al. (2015)	Binary / Likert	Regression
Independent	Customer Pressure	Perceived customer expectations	To analyse whether market demand influences sustainability decisions	Font (2002)	Ordinal	Regression
Independent	Certification Awareness	Awareness/participation in schemes	To understand whether exposure to certification frameworks influences behaviour	Font (2002); Blackmann et al. (2014)	Binary	Regression
Dependent	Willingness to Reduce Plastic	Yes/No or scale	To measure behavioural intentions towards sustainability	Gössling et al. (2015)	Binary	Logistic Regression
Dependent	Implementation of Measures	Adoption of alternatives	To capture actual behavioural outcomes beyond intention	Gössling et al. (2015); Tunn et al. (2019);	Binary	Regression

Source: Overview by Author

4.2.2. Qualitative Research Design: Semi-structured Interviews & ZPC Level 1 Readiness Assessment

Semi-structured Interviews

Next to the quantitative survey design, which was used to get a holistic overview and to recognize potential patterns, 15 semi-structured interviews have been carried out to discuss more in depth some of the identified patterns that were brought up during the quantitative data collection. According to Bryman (2016) a semi-structured interview has the advantage that it generates trust, queries are possible and non-verbal communication can be taken into consideration during the interview. The semi-structured interviews were conducted face-to-face with management representatives of four- and five-star hotels in the defined study area. No recording took place, as the first few respondents that participated did not want to be recorded. Therefore, the researcher decided not to record any interviews to have a coherent way of data collection. To secure all the data in a good way, the researcher sat down right after the interview and documented all the statements, while the information was just given and fresh in the memory. The length of the interview varied between 40 to 60 minutes. The interview guide helped to secure a certain structure to the topic but gave enough room for individual perspectives.

The interview focused mainly on the following topics:

- Perceived barriers when reducing/phasing out single-use plastic
- Expectation from customers, suppliers, staff
- Experiences with certifications

ZPC Level 1 Readiness Assessment

In addition to the semi-structured interviews, all 15 interviewees were asked to complete a structured ZPC Level 1 Readiness Assessment a complementary questionnaire, which was designed by the researcher together with ZeroPlastic Movement. The questionnaire is in alignment with the central requirements of the ZPC Standard Level 1, with the aim to map each interview systematically against the core elements of Level 1. The questionnaire consisted of 21 closed questions, organised into three categories covering business information, current plastic use and reduction practices, as well as waste management practices and operational systems. The full questionnaire can be found in Appendix 1. This approach allowed for a more standardised and comparable assessment of each business than it would have been possible through the open interview format and provides the empirical basis for the ZPC Readiness Assessment. The questionnaire was completed shortly after the interview through Google Forms, ensuring that the responses could be linked back to the interviews in order to assess them.

The Table 8 maps the central requirements of the ZPC Standard Level 1 against the 21 questions of the Readiness Assessment used in this research. It shows which of the questions covers which ZPC requirement and makes the methodological alignment between the questionnaire and ZPC framework transparent. Most central requirements are covered by one or more questions. Two ZPC criteria, namely stakeholder communication and documented legal compliance were not directly addressed by the questionnaire design. These scope decisions are further discussed in Section 6.6.

***Note:** The ZPC Certification Standard Pilot Version 1.0. forms the base for this study.*

Table 8: ZPC Requirements in relation to ZPC Readiness Assessment

ZPC Requirement	ZPC Engaged	ZPC Level 1	Questionnaire Readiness Assessment
Initial plastic baseline assessment (Section 1.1)	Required	Required	QB.1
Written Plastic Reduction Plan (PRP) with clear targets and timelines (Section 1.2 / 2.2)	In preparation	Required	QB.5
Plastic Management System (PMS) with designated responsible person (Section 2.3.1)	In development	Required	QA.4, QA.5, QD.8
Elimination or substitution of conventional Single-Use Plastics (SUPs) (or documented substitution plan) (Section 2.4.1.1.1)	–	Core L1 Requirement	QB.2, QB.2.1, QB.3
Implementation of PMS + PRP with strategies for reduction, segregation, reuse and recycling (Section 2.4.1.1.2)	–	Core L1 Requirement	QB.5, QD.2, QD.3
Minimum 50% plastic waste diversion through verified recycling or recovery (Section 2.4.1.1.3)	–	Core L1 Requirement	QD.4, QD.5, QD.6
Procurement procedure supporting plastic reduction and sustainable alternatives (Section 2.3.4)	Recommended	Required	QB.4
Employee training and awareness on plastic reduction (Section 2.3.5)	Recommended	Required	QD.1
Stakeholder communication of PMS policy and performance (Section 2.3.3)	–	Required	<i>Not covered</i>
Legal compliance with local, national and international environmental regulations (Section 2.3.2)	Required	Required	<i>Not covered</i>
Continuous improvement mechanism and feedback loop (Section 2.3.1.6 / 2.4.2)	–	Required	QD.7

Source: Overview by Author

4.3. Data Collection

To answer the research questions and to achieve the objective of this study, primary and secondary data were used. Through the quantitative approach, hence the structured questionnaire, data were obtained from 152 hospitality businesses (147 valid responses) within the study area (Southern Province, Sri Lanka). A copy of the questionnaire can be found in the Appendix 2. In addition, 15 semi-structured interviews have been carried out. A copy of the interview guide can be found in Appendix 3. After evaluating different methods of data collection, the combination of a structured questionnaire and semi-structured interviews deemed appropriate, because it covers the required types of data variables, which are ownership structure, use and waste of single-use plastic items as well as barriers in relation to phasing out single-use plastic items and achieving ZeroPlastic Commitment Certification, while the semi-structured interview allowed the researcher to gain a deeper understanding on the identified patterns. To ensure a comprehensive analysis of the barriers hospitality businesses face when phasing out single-use plastic and reaching ZeroPlastic Commitment Certification, both

primary and secondary sources were used. In addition, background information on the ZeroPlastic Movement and ZPC Certification scheme presented in Chapter 2 was gathered through an initial collaboration meeting with ZeroPlastic Movement. This meeting provided contextual information about the organisation itself and the development of the certification scheme.

4.3.1. Primary Data

Primary data refers to first-hand information that is directly collected from the survey and interview participants (Bryman, 2016). For this research primary data collection involved a Google Forms-based survey to 152 randomly selected hospitality businesses (147 valid responses), including bars, cafes, restaurants, hotels and guesthouses on the main tourist strips as well as 15 semi-structured interviews with four- and five-star hotels in the defined study area, each of which was complemented by a structured ZPC Level 1 Readiness Assessment. The basic questionnaire was designed to be mobile-friendly consisting of a set of 10 standardised questions focusing on the barriers hospitality businesses face when phasing out single-use plastic items from business operations while the semi-structured interviews and the supplementary ZPC questionnaire captured a more in-depth discussion about the identified patterns from the survey.

4.3.2. Secondary Data

Secondary data consist of information that has already been collected, analysed and published by other sources (Bryman, 2016). This research study utilized secondary data to support the development of the framework, to understand contextualized dynamics and to validate primary findings. The main sources of secondary data included:

- Academic books related to sustainable tourism and sustainability certification schemes.
- Reports published by the Ministry of Environment and Sri Lanka Development Tourism Development Authority.
- Peer-reviewed journals focusing on single-use plastic, tourism and certification schemes.
- Online resources and databases including the UN, World Bank and World Tourism Organisation.
- Credible market reports and news articles relevant for this study.

4.3.3. Study Area

The data collection took place in the Southern Province of Sri Lanka, which belongs to the main tourist areas of the country (Sri Lanka Tourism Development Authority, 2025). More specifically, the research took place in the following three areas: Weligama, Unawatuna, Ahangama. Based on the researcher's observation during the field research, all three places are affected by a lot of international tourism and a high density of hospitality businesses. During the field research, plastic waste was visible in all three locations, especially in form of plastic bottles and packaging.

Weligama is a major hub surfing, it attracts beginner and experienced surfers, resulting in a continuous flow of international visitors, offering many established surf camps, boutique hotels, cafes, and restaurants. Unawatuna, located near the historic city of Galle is one of the most established beach destinations in Sri Lanka, characterized by a lot of hotels, guesthouses, and tourism-oriented services. Ahangama, is slightly less commercialized but experiences a rapid growth in tourism, particularly with the unfolding of upscale boutique accommodations and lifestyle-oriented hospitality businesses.

Due to the intense tourism industry in those areas, the usage of single-use plastic is a relevant topic here. At the same time there is a lot of pressure, legally as well as by the hospitality industry to implement sustainable business practices, which makes those areas very interesting and relevant as a study area (Bandara et al., 2018).

4.4. Sampling Strategy

Based on the large numbers of hospitality businesses in Sri Lanka, this research serves a sequential explanatory mixed-method design, which means that findings do not represent all hospitality businesses in Sri Lanka, but rather serve as indicative and exploratory (Bryman, 2016).

As no official or complete registry of all hospitality businesses was available at the time of the field research, the researcher carried out a more practical approach regarding the sampling size.

4.4.1. Sample Selection & Method: Survey Design

For the quantitative part of the research study a total of 152 hospitality businesses (147 valid responses) participated in the questionnaire, including bars, cafes, restaurants, hotels and guesthouses located on the main tourist strips. The selection of the respondents took place randomly within the defined research area. The aim was to get a large and heterogenic sampling activity to display different types of businesses and perspectives. Therefore, the selection follows a field-based, pragmatic random selection method, which ensures a high degree of diversity in the sample, but lacks full statistical representativeness. A minimum sample size of 100-150 respondents is generally considered sufficient for regression analysis in social science research (Field, 2018).

4.4.2. Sample Selection & Method: Semi-structured Interviews & ZPC Level 1 Readiness Assessment

For the qualitative research 15 semi-structured interviews with hotel managers from four- and five-star hotels took place. The selection follows the purposive sampling approach, which according to Bryman (2016) is used when there is specific qualitative input relevant for the research study. The respondent selection took place through booking.com, all four- and five-star hotels have been listed and visited, of which 15 out of 84 have participated in the interview. The study focused on four- and five-star hotels because during the pilot sessions of the quantitative survey, the researcher realized that those types of hotels showed greater awareness, engagement as well as management processes in regard to sustainability topics compared to smaller local cafes, bars, hotels. Therefore, selecting these businesses for semi-structured interviews allowed for more in-depth discussion of operational sustainability.

For the semi-structured interviews, the researcher firstly needed to get a reliable overview on all four- and five-star hotels in the selected areas that could potentially participate in the research study. Therefore, the researcher used booking.com, set the filters on the location and star rating. The researcher mapped all of the hotels that showed up on the listings, rented a scooter and drove to all of the different properties to ask if they like to participate in the research. Out of 84 potential interview participants, only 15 participated. Some of the properties did not exist, some have changed ownership, and some were not interested in participating.

4.5. Data Analysis Method

4.5.1. Quantitative Data Analysis

As a first step, the collected information needed to be transferred into data, meaning the information was cleaned up and prepared in such way that it can be quantified. As a second step all information had to be coded. Bryman (2016) says codes act as tags that allows computers to process the information. Thirdly, the analysis took place, where relationships were tested between variables.

The quantitative data were analysed using the Statistical Package for the Social Sciences (SPSS). Following data cleaning and coding, descriptive statistics were used to summarize the main characteristics of the dataset, providing an overview on the key variables such as business type, plastic usage and perceived barriers. The reliability of the survey instrument was assessed using Cronbach's alpha to ensure internal consistency of the measurement scales. To examine relationships between variables, correlation analysis and Chi-Square tests were conducted for categorical data. This is used to analyse whether perceived barriers differ significantly across different types of hospitality businesses. A multiple linear regression was applied to identify the willingness in regard to the reduction of single-use plastics. Where data were non-parametric, the Kruskal-Wallis test was used to compare plastic usage levels across different business types (Field, 2018). This combination of statistical techniques enabled a comprehensive and reliable analysis of the quantitative data in line with the research objectives.

4.5.2. Qualitative Data Analysis

The qualitative data collection took place through semi-structured interviews, which was analysed using the thematic analysis, a commonly used method that allows systematic identification and interpretation of recurring patterns within qualitative dataset (Bryman, 2016).

The analysis process consisted of several steps:

- Familiarisation with the data: Immediately after each interview, detailed notes were documented to ensure accuracy and completeness of the collected data.
- Statements were identified and analysed if patterns reoccur.
- The identified themes were analysed in relation to the quantitative findings to provide deeper insights and explanation for observed patterns.

To ensure the quality and trustworthiness of the qualitative analysis, the study followed established criteria:

- **Credibility:** Ensured through detailed documentation and consistency in data collection.
- **Dependability:** Achieved through a transparent and structured analysis process.
- **Transferability:** Provided by contextual information about the study area.

4.5.3. Readiness Assessment Analysis

The structured ZPC Level 1 Assessment was analysed by mapping the responses of the 15 hospitality businesses against the central requirements of the ZPC Standard. For each business, two readiness scores were calculated. The first score covers the three Level 1 core requirements (elimination/substitution of conventional SUPs, existence of a written PRP, and waste diversion through recycling or recovery). The second score covers the general Plastic Management System (PMS) requirements (sustainability officer, written policy, documented procedures, procurement protocol, formal training, systematic waste segregation, management support and record-keeping). Based on the combination of both scores, each business was classified into one of five categories ranging from Level 1 Ready to Not Ready.

Each criterion scores on either (fully met = 1; or not met=0) and the final score per business is calculated as the percentage of criteria met within each group. Based on the combination of both scores, each business is classified into one of the five categories. Businesses that report partial or in-development practices are scored as half-points to reflect ongoing efforts.

- **Level 1 Ready:** Core Level 1 Score $\geq 66\%$ and PMS Score $\geq 70\%$
- **Level Engaged Ready:** Moderate to good scores indicating that the basic foundations for the ZPC Engaged Status are in place
- **Engaged with Major Gaps:** Low scores indicating that even basic ZPC requirements are not yet fully met
- **Critical Gap:** Include practices that are fundamentally incompatible with ZPC Standard
- **Not ready:** Cases that do not meet the basic preconditions for ZPC Certification

4.6. Pilot Studies

Prior the main data collection three pilot sessions have been carried out to test whether the questionnaire and interview guide is understandable, relevant, culturally appropriate and technically feasible. During the pilot session adjustments to the questionnaire as well as the

interview guide have been made. Feedback based on the respondents have helped to improve and develop a more robust questionnaire and interview guide. As Bryman (2016) describes how piloting session contribute to less misunderstanding and to improve quality of data when collecting. The data from the pilot study were not included in the final analysis, only serving the purpose for improving the data collection process.

Pilot session 1: During the first pilot session only one questionnaire existed with in-depth sustainability questions in English. The targeted population were random hospitality businesses located on the main tourist strips. Very quickly two main issues came to surface. Firstly, the researcher assumed that most of the Sri Lankans were familiar with the English language but realized quickly that there is a language barrier when it comes to answering these questions. Respondents asked the researcher very often what a certain word means. Secondly, the questionnaire was too long, while staff was busy with daily work, it needed to be much shorter. The researcher observed how they scrolled to the bottom of the questionnaire to see how many more questions were coming. The first pilot session was conducted in Mirissa and eight participants from different hospitality businesses including guesthouses, restaurants and hotels have participated. After the verbal and non-verbal feedback of the respondents, the questionnaire has been adjusted in the following ways. The researcher shortened the questionnaire and translated the questionnaire with ChatGPT into Sinhalese.

Pilot session 2: Also, during the second pilot session, the researcher targeted random hospitality businesses along the main tourist strip. In the first piloting session the researcher thought that the main issue of the respondents was the language barrier, but it turned out that the topic as such was too complex for regular staff to answer. While the majority of hospitality businesses had no management representative available on site, the staff was more focused and trained on running daily business and were not familiar and knowledgeable with management processes regarding sustainability. Another issue that came up was that the respondents gave the researcher feedback that not all of the Sinhalese words and grammar made sense. Also, the second pilot session was conducted in Mirissa and seven participants from different hospitality businesses including guesthouses, restaurants and hotels have participated.

At this point the researcher had a consultation meeting with ZeroPlastic Movement to discuss how to move efficiently forward. Due to the experiences the researcher made on the field, a new strategy was needed; therefore, together it was agreed how to move forward. Firstly, the

questionnaire needed to be adapted to a set of maximum ten basic questions for the hospitality businesses on the main tourist strips, which are easy to understand and focus only on very basic processes regarding single-use plastic use and waste. Also, Nish from ZeroPlastic Movement has translated all the questions into proper Sinhalese. As a second step, an in-depth interview guide regarding sustainability was developed and it was agreed to target only four-to-five-star hotels, assuming those properties have a better understanding on sustainability related topics.

Pilot session 3: For pilot session number three, the researcher again went randomly to hospitality businesses in Mirissa, ten respondents participated. This time, the process was very smooth, the questionnaire was bilingual, very efficient as it was only a set of ten questions, and everyone could answer these questions as it was very easy and understandable for regular staff. The in-depth interviews were conducted with three management representatives from four- and five-star hotels after arranging an appointment. The interviews worked well during the piloting session; no further adjustment was needed.

The ZPC Level 1 Readiness Assessment, which was introduced after the main piloting phase as a complementary instrument for the interviews was not part of the formal piloting process. The questions were based directly on the structure of the ZeroPlastic Commitment Standard (Pilot Version 1.0). The questions were reviewed together with ZeroPlastic Movement team to ensure that the questions reflect the relevant requirements.

4.7. Ethical Considerations

Ethical considerations were consistently made throughout the research process to ensure the protection of participants as well as the scientific integrity of this study. Before data collection began all participants were fully informed about the aim, content and procedure of the study. All respondents were given the opportunity to ask questions and only took part in the study after giving the explicit consent. Participation in the study was entirely voluntarily, and it was explained that questions can be left unanswered if wished or withdraw from the study at any time without facing any negative consequences. To ensure anonymity and confidentiality, no personal data were collected. The information gathered was coded so that no conclusions can be drawn back to the individual person participating. All data were treated confidentially and used exclusively for scientific purpose within the scope of this master thesis. The research design was structured in such way to no participant is harmed, whether psychological, social or

economically. The questions were deliberately formulated in a neutral and respectful manner to avoid bias and to enable open and trustworthy responses.

Data storage and processing were carried out in compliance with applicable data protection regulations, hence the General Data Protection Regulation (GDPR). The data were stored securely and only accessible to the researcher. The study adheres to the ethical guidelines of the Norwegian Agency for Shared Services in Education and Research (SIKT), where appropriate ethical approval was obtained before the study was conducted. These measures ensured that the rights, dignity and privacy of the participants were always safeguarded and that the results of the study meet the requirements of scientific quality and credibility.

4.8. Limitations

One of the limitations draws back to the chosen research methodology. As part of the study is based on a standardised survey designed to systematically capture the perceptions and experiences of businesses, these standardised surveys offer the advantage of generating comparable data, however they are also associated with limitations regarding the depth of content (Bryman, 2016). Standardised surveys allow only limited insights into complex decision-making processes and internal company dynamics, as they rely on predefined responses (Bryman, 2016). Particularly on topics such as sustainability, organisational change or the perception of certification systems, relevant nuances may be lost (Bryman, 2016).

There is a risk of response bias due to so-called social desirability bias, as respondents provide answers that appear socially acceptable rather than fully disclosing their actual attitudes or practices (Bryman, 2016). This is relevant in the context of environmental and sustainability issues, as these are highly normatively charged (Gössling et al., 2015). Also, in this research study, businesses may express strong support for reducing single-use plastics while practical implementation remains limited due to financial, operational or contextual constraints. The study captures perceptions and self-reported actions.

The research study focuses on hospitality businesses in the Southern Province of Sri Lanka. Although this region is particularly relevant due to tourism, this geographical focus limits the generalisability of the results. Regional differences within Sri Lanka, e.g. regarding the infrastructure, tourism intensity or institutional frameworks mean that the identified barriers

cannot be fully transferred to other regions. It cannot be ruled out that the sample over- or underrepresents certain groups of companies, voluntary participation in surveys often lead to self-selection bias, as stakeholder with a greater interest in the topic are more likely to participate than others (Bryman, 2016).

5. Empirical Findings & Discussion

5.1. Introduction

This chapter presents the empirical findings of this study and discusses them in relation to the research questions and theoretical framework developed in Chapter 3. The findings are structured around the three datasets (Survey, Interview, Readiness Assessment). Firstly, the quantitative findings from the survey of the 152 (147 valid responses) hospitality businesses are presented, providing an overview of perceived barriers to reducing single-use plastic. Secondly, the qualitative findings, present the main themes that emerged across the 15 semi-structured interviews and the results of the ZPC Level 1 Readiness Assessment conducted with the same 15 businesses are presented. Throughout the chapter, the quantitative survey results, the qualitative interviews and the structured readiness assessment are integrated to provide a comprehensive picture of the barriers to reduce single-use plastics and to achieve ZeroPlastic Commitment Certification in the hospitality sector in the Southern Province of Sri Lanka.

5.2. Quantitative Findings

This section presents the main findings gained from the survey data collected from hospitality businesses in the Southern Province of Sri Lanka. A total of 147 valid responses were collected and analysed using SPSS. The results are organized in line with the defined research objective and hypotheses and are graphically supported by tables and charts to illustrate the findings. The quantitative findings are later combined with the qualitative interview data and the ZPC Level 1 Readiness Assessment in the discussion part, where all three datasets provide a more comprehensive understanding of the barriers in regard to plastic reduction in the Sri Lankan hospitality sector.

The section is structured as followed: First the data screening and normality test are presented, followed by the demographic characteristics of the survey sample. Afterwards, the reliability and regression analysis are presented to test the relationship between the six hypothesised

variables and the willingness to reduce single use plastic, complemented by the Kruskal-Wallis and Chi-Square tests to examine group differences.

5.2.1. Data Screening & Normality Test

A normality test was carried out to assess whether the data follows a normal distribution, which is an assumption for parametric statistical methods such as the regression analysis (Field, 2018). To evaluate normality, skewness and kurtosis values were examined for the six main variables (Cost, Access, Quality, Hygiene, Awareness and Customer Preference). Values of +/-1 are generally considered as normal distribution (Field, 2018). The results indicate that the data does not follow a normal distribution, as all variables showed skewness and kurtosis outside of the acceptable range. In this study, testing for normality was essential to justify the use or parametric methods in analysing the relationship between perceived barriers and the willingness reduce single-use plastic. As a sample of 147 hospitality businesses are used in this survey, the Kolmogorov-Smirnov test is suitable (Field, 2018). According to Field (2018) the use of non-parametric statistical methods is appropriate and methodologically justified when the data set is not normally distributed.

Table 9: Case Processing Summary

Case Processing Summary						
	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Cost	147	96,70%	5	3,30%	152	100,00%
Access	147	96,70%	5	3,30%	152	100,00%
Hygiene	147	96,70%	5	3,30%	152	100,00%
Quality	147	96,70%	5	3,30%	152	100,00%
Preference	147	96,70%	5	3,30%	152	100,00%
Awareness	147	96,70%	5	3,30%	152	100,00%
Willingness to be zero plastic	147	96,70%	5	3,30%	152	100,00%

Source: SPSS Analysis by Author

Table 10: Test of Normality

Tests of Normality						
	Kolmogorov-Smirnova			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Cost	0,447	147	0	0,571	147	0
Access	0,381	147	0	0,627	147	0
Hygiene	0,532	147	0	0,333	147	0
Quality	0,523	147	0	0,383	147	0
Preference	0,537	147	0	0,123	147	0
Awareness	0,515	147	0	0,416	147	0
Willingness to be zero plastic	0,533	147	0	0,093	147	0

a. Lilliefors Significance Correction

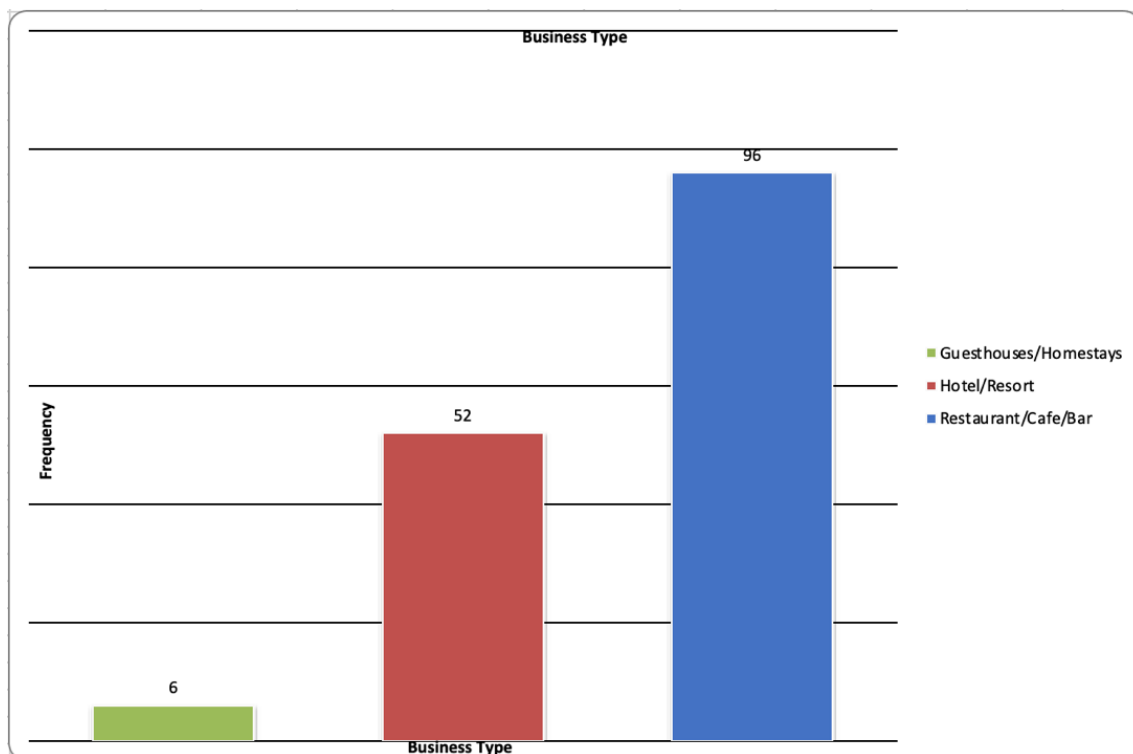
Source: SPSS Analysis by Author

5.2.2. Demographic Factors

Before presenting the main findings, it is important to understand the composition of the sample, as the demographic characteristics of the participating businesses provide important context for interpreting the result.

The bar chart (Figure 2) illustrates the distribution of business types that have participated in the survey. The majority of respondents are from restaurants, cafes and bars (n=96), followed by hotels and resorts (n=52), while only a small number of guesthouses and homestays participated in the survey (n=6).

Figure 2: Overview on Sample size in regard to Business Type and Frequency

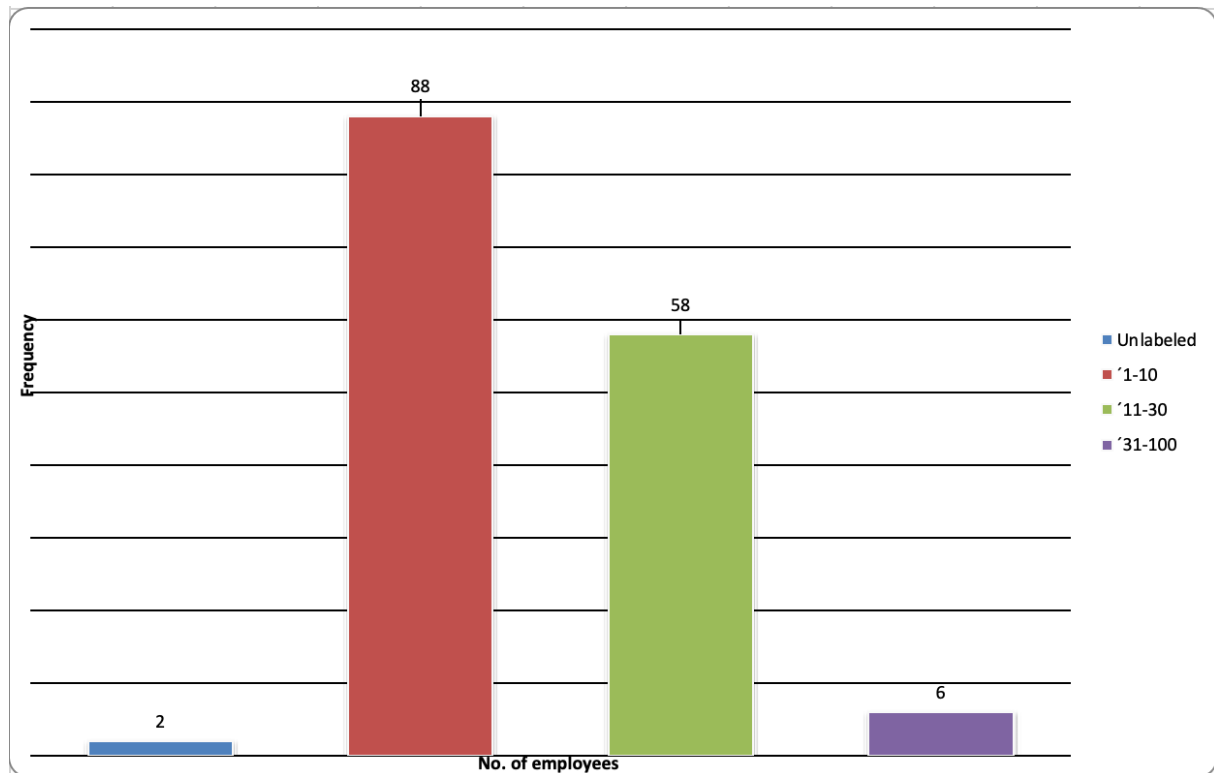


Source: SPSS Analysis by Author

The distribution reflects the actual composition of the sample that has participated in the survey. Restaurant, cafes and bars outnumber accommodation providers, which means that the sample is not evenly distributed across all business types, which should be kept in mind when interpreting the results. The small group of guesthouses and homestays (n=6) limits the generalisability of findings for this business type.

The bar chart (Figure 3) presents the number of employees. The majority of businesses that participated in the questionnaire employed between 1-10 employees (n=88), followed by businesses with 11-30 employees (n=58) and only a small number of businesses have 31-100 employees (n=6). Two Respondents did not provide any information regarding their number of employees (n=2).

Figure 3: Overview on Sample size in regard to Business Size (No. of employees) and Frequency

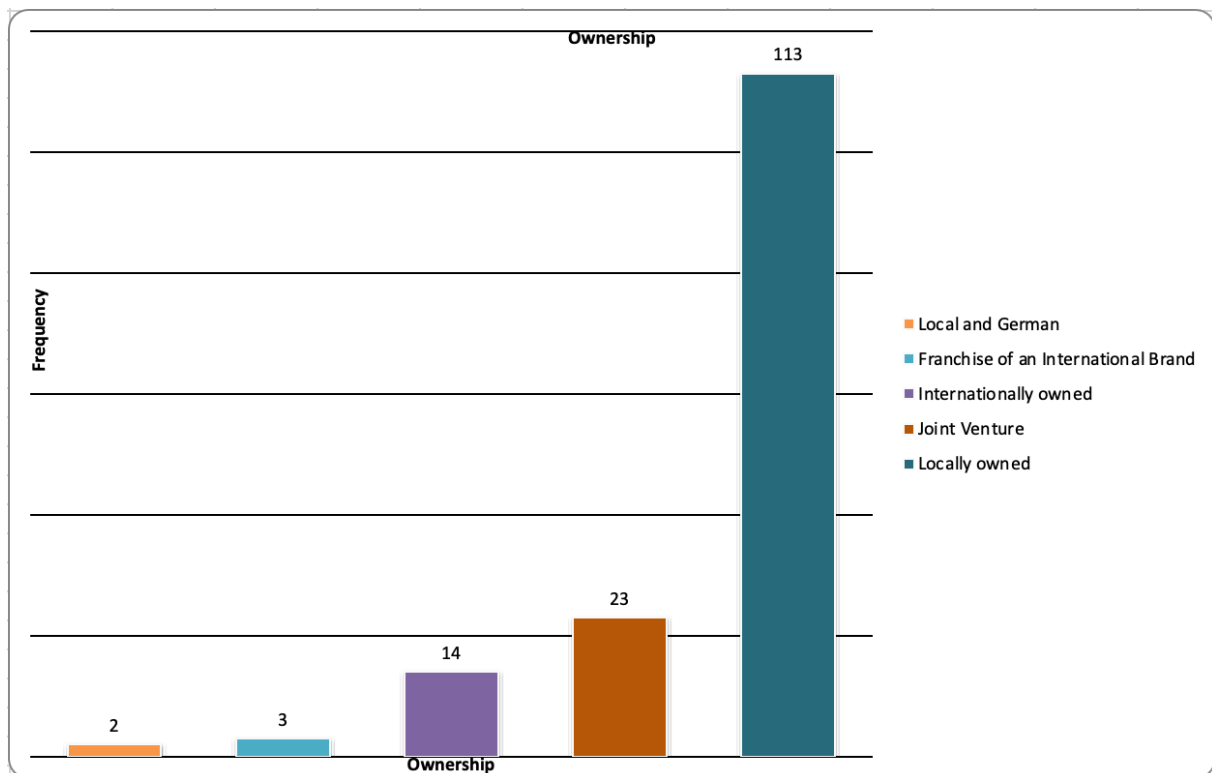


Source: SPSS Analysis by Author

The dominance of small businesses in the sample is a relevant finding in itself. As discussed in the literature review, smaller businesses typically have more limited financial resources and less organisational capacities when it comes to implementing sustainability practices (Blackman et al., 2014).

The bar chart (Figure 4) illustrates the ownership structure of participating businesses, the vast majority were locally owned (n=113), while a smaller number of respondents representing joint ventures (n=23) and 14 businesses were internationally owned (n=14). Only very few participating businesses were franchises of international brands (n=3) or jointly owned by local & German ownership structures (n=2).

Figure 4: Overview on Sample size in regard to Ownership Structure and Frequency



Source: SPSS Analysis by Author

The high proportion of locally owned businesses also reflects what was observed during the field trip. As the qualitative findings later confirm, international ownerships often play an important role when it comes to sustainability, as several interviewees directly linked their sustainability commitment to the values and expectation of their international owners. The dominance of local ownership in the survey sample may therefore partly explain the relatively limited sustainability engagement across the quantitative data set.

5.2.3. Reliability Analysis

A reliability analysis was conducted using Cronbach's Alpha to assess the internal consistency of the measurement scales used for the independent variables: Cost, Access, Quality, Hygiene, Awareness and Customer Preference. It checks whether multiple items that are supposed to measure the same concept are giving a consistent result. Cronbach's Alpha values above 0.7 are considered acceptable to social science research (Field, 2018). For this research the value is 0.603, which falls slightly below the commonly accepted value, which means that the reliability is marginally acceptable, indicating a rather low level of internal consistency among the items used in the questionnaire. However, values between 0.6 and 0.7 are not uncommon in

exploratory research contexts but should be kept in mind when interpreting the results, as it may explain why some relationship between variables did not reach statistical significance (Field, 2018).

Table 11: Case Processing Summary

Case Processing Summary			
		N	%
Cases	Valid	143	94,1
	Excluded	9	5,9
	Total	152	100
a Listwise deletion based on all variables in the procedure.			

Source: SPSS Analysis by Author

Table 12: Reliability Statistics

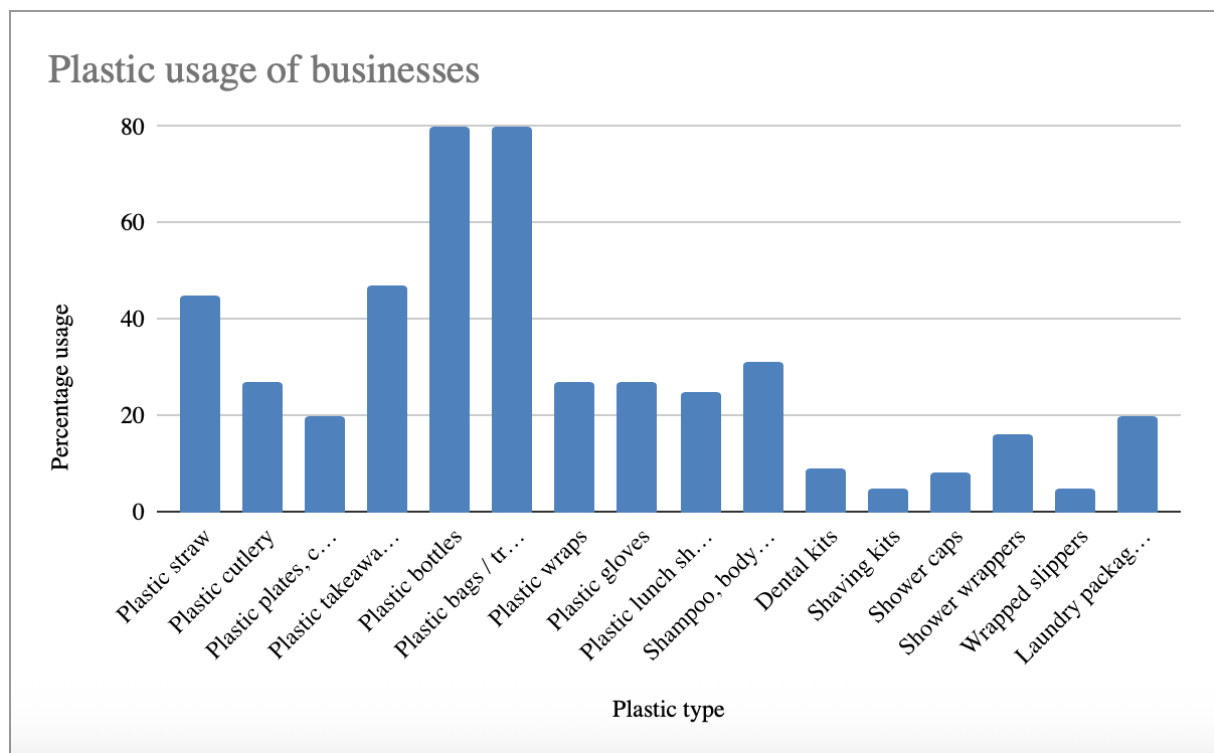
Reliability Statistics	
Cronbach's Alpha	N of Items
0,603	16

Source: SPSS Analysis by Author

Before diving deeper into the hypothesised barriers, it is useful to take a closer look at the most commonly used single-use plastics items, which directly addresses the first sub-questions of this study: What types of single-use plastic items are currently used by hospitality businesses in Sri Lanka?

The data in Figure 5 illustrates the frequency and types of single-use plastic items used by the participating hospitality businesses. Particularly striking is the high usage of plastic bottles and plastic bags/trash bags, of which 80% of the businesses have stated to still use those items frequently. Also, plastic straws (45%) and takeaways boxes (47%) are used with comparative high frequency. In contrast other items, such as dental and shaving kits, shower caps, wrapped slippers or plastic plates/cups/lids show very low values, ranging between 0,05% and 0,20% demonstrating infrequent use.

Figure 5: Plastic Usage of Business per Plastic Type



Source: SPSS Analysis by Author

These values show that everyday products such as bottles, bags and packaging contribute significantly more to plastic consumption in hospitality businesses than hygiene related items do, where usage remains comparatively low. Plastic reduction efforts should therefore target procurement and packaging practices rather than guest amenity products. This finding is revisited in the discussion section, where it is connected to the qualitative evidence on supply chain dependencies and cost barriers.

5.2.4. Regression Analysis

A multiple linear regression analysis was conducted to assess the combined effect of the independent variables (Cost, Access, Quality, Hygiene, Awareness, Preference) on the dependent variable, which is the willingness of hospitality businesses to become zero plastic. The significance of each variable is determined using the p-value. If the p-value is less than 0.05, the variable is considered significant. If the p-value is greater than 0.05, the variable is considered not significant (Field, 2018).

Table 13: ANOVA Table

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	0,051	6	0,008	0,617	.717b
	Residual	1,922	140	0,014		
	Total	1,973	146			
a Dependent Variable: willingness to be zero plastic						
b Predictors: (Constant), preference, hygiene, quality, access, awareness, cost						

Source: SPSS Analysis by Author

Table 14: Regression Analysis

Coefficients ^a								
Model		Unstandardized Coefficients		Standardized Coeff t	Beta	Sig.	95.0% Confidence Interval for B	
		B	Std. Error				Lower Bound	Upper Bound
1	(Constant)	0,98	0,03			32,941	0	0,921
	cost	0,02	0,034	0,08	0,605	0,546	-0,046	0,087
	access	-0,019	0,03	-0,079	-0,629	0,531	-0,077	0,04
	quality	0,022	0,034	0,063	0,664	0,508	-0,044	0,089
	hygiene	0,028	0,035	0,071	0,794	0,429	-0,041	0,097
	awareness	0,02	0,036	0,061	0,562	0,575	-0,051	0,091
	preference	0,02	0,074	0,025	0,277	0,782	-0,126	0,167
a Dependent Variable: willingness to be zero plastic								

Source: SPSS Analysis by Author

H1: Cost is not significant because the p-value is 0.546, which is greater than 0.05. The beta value ($\beta = 0.080$) indicates a very weak positive relationship with willingness to be zero plastic.

H2: Access is not significant because the p-value is 0.531, which is greater than 0,05. The beta value ($\beta = -0.079$) indicates a very weak negative relationship with willingness to be zero plastic.

H3: Quality is not significant because the p-value is 0.508, which is greater than 0,05. The beta value ($\beta = 0.063$) indicates a very weak positive relationship with willingness to be zero plastic.

H4: Hygiene is not significant because the p-value is 0.429, which is greater than 0,05. The beta value ($\beta = 0.071$) indicates a very weak positive relationship with willingness to be zero plastic.

H5: Awareness is not significant because the p-value is 0.575, which is greater than 0,05. The beta value ($\beta = 0.061$) indicates a very weak positive relationship with willingness to be zero plastic.

H6: Preference is not significant because the p-value is 0.782, which is greater than 0,05. The beta value ($\beta = 0.025$) indicates an extremely weak positive relationship with willingness to be zero plastic.

None of the independent variables are statistically significant factors in regard to the willingness to be zero plastic, because all p-values are greater than 0.05 and all beta values are very small indicating weak relationships with the dependent variable.

The fact that none of the variables reached statistical significance is an important finding. Rather than concluding that these barriers are irrelevant, this result more likely reflects the complex and interdependent nature of barriers, showing no single variable is sufficient on its own. This is strongly supported by the qualitative findings, which prove that barriers do not operate in isolation but interact and reinforce one another.

5.2.5. *Kruskal-Wallis test*

To examine whether plastic usage differs across business types, a Kruskal-Wallis test was conducted. This non-parametric test is suitable here due to the ordinal nature of the data set and the unequal sample size across the business types (Field, 2018).

The results demonstrated in Table 15 indicate that the business type has a significant effect on plastic usage. The Kruskal-Wallis test shows a meaningful difference between the different groups, hence business types (1=Restaurants/Cafes/Bars, 2=Hotel/Resorts, 3=Guesthouses/Homestays). The result demonstrate that business type 1 (Restaurants/Cafes/Bars) and business type 2 (Hotel/Resorts) show similar mean ranks between 68-95, which shows comparable levels of plastic usage. In contrast, business type 3 (Guesthouses/Homestays) show a notably lower mean rank of 57,3 indicating considerably lower plastic usage than the other two groups.

Table 15: *Kruskal-Wallis Test*

Kruskal-Wallis H test			
Ranks			
	bsns_type	N	Mean Rank
Plastic usage index	1	96	67,86
	2	51	94,65
	3	5	57,3
	Total	152	
Test Statistics a,b			
	Plastic usage index		
Kruskal-Wallis H	13,564		
df	2		
Asymp. Sig.	0,001		
a Kruskal Wallis Test			
b Grouping Variable: bsns_type			

Source: SPSS Analysis by Author

The main takeaway is that business type is a meaningful factor when it comes to plastic usage. The low plastic usage among guesthouses and homestays indicate that smaller more informally operated businesses rely on simpler and less plastic intense business operations. Given the very small sample size of this group (n=6), this finding should be interpreted with caution and would benefit from further investigation.

5.2.6. Chi-Square Test

The Chi-Square test was conducted to evaluate whether the reasons businesses continue to use plastic differ across business types. It compares the observed frequencies in each category with the frequencies that would be expected if no relationship existed. When the p-value is greater than 0.05 it indicates that differences between groups are most likely due to random variation rather than a meaningful statistical relationship (Field, 2018).

Table 16: Chi-Square Test

Chi-Square Tests			
	Value	df	p-value
Pearson Chi-Square	25.847 ^a	34	0,841
Likelihood Ratio	26,745	34	0,808
N of Valid Cases	152		

Source: SPSS Analysis by Author

The results show that there is no statistically significant association between business type and the reasons given for continuing plastic use. Both, the Person Chi-Square value (p= 0.841) and the Likelihood ratio test (p= 0.808) confirm this. Since both p-values are far above 0.05, it can be concluded that the business type does not meaningfully influence why businesses still rely on plastic in business operations.

Even though no significant differences were found across business types, the data still shows important patterns in the overall distribution. The top concerns across hospitality businesses are that alternatives are perceived as low quality (29,6%), followed by 15% that find it difficult to find suitable alternatives. Some businesses report plastic use only for takeaway (12,5%), while others highlight that alternatives are too expensive or too difficult to source (5,3%). Customer preference for plastic (5,9%) plays a minor role. These patterns suggest that practical barriers related to cost and quality persist, regardless of the business type.

Table 17: Overview Perceived Barriers

Reason	Respondents
Alternatives are low quality	29,60%
Alternatives are difficult to find (alone or combined)	~15% combined
Only using plastic for takeaway	12,50%
Alternatives are expensive / difficult to find	5,30%
Customers prefer plastic	5,90%

Source: SPSS Analysis by Author

5.3. Qualitative Findings

This section presents the qualitative findings of this study, which were collected through two complementary instruments with the same group of 15 hospitality businesses. The semi-structured interviews provided in-depth insights into the perceptions, experiences and practical challenges of the management representatives, while the structured ZPC Level 1 Readiness Assessment allowed a systematic mapping of each business against the central requirements of the ZPC Standard.

5.3.1. Overview on Interview Participants

The qualitative data were collected through 15 semi-structured interviews with management representatives of four- and five-star hotels in the Southern Province of Sri Lanka. The participating businesses varied in terms of ownership structure and level of sustainability engagement, which provided diverse and informative perspectives.

As shown in Table 18 and Table 19 below, the sample reflects a balanced distribution between locally owned (47%) and internationally owned (40%) hospitality businesses, with one joint venture and one business that did not specify its ownership structures. In terms of size, 40% of the interviewed businesses fall into medium-sized category (31-100 employees), 33% are small businesses (1-10 employees) and 20% have between 11 - 30 employees. Only one business has more than 100 employees. This distribution allows the analysis to capture perspectives from small to larger hotel as well as locally owned and internationally owned hotels.

Table 18: Ownership Structure

Ownership Structure:	Quantity	Share in %
Locally owned	7	47%
Internationally owned	6	40%
Joint venture	1	7%
Not specified	1	7%

Source: Overview by Author

Table 19: Business Size (No. of Employees)

Business Size (Number of Employees):	Quantity	Share in %
1–10	5	33%
11–30	3	20%
31–100	6	40%
100+	1	7%

Source: Overview by Author

In terms of ownership, the majority of interviewed businesses were either locally owned or had international (co-) ownership, often from European countries such as Switzerland, UK, Serbia and Germany. The international ownership connection appeared to be an important factor in shaping the sustainability engagement, as several interviewees directly attributed their sustainability efforts to the values and expectation of their international owners. In terms of size, the businesses ranged between small boutique hotels with only 10 rooms up to larger hotel chains with 100+ rooms and dedicated sustainability departments. This diversity is relevant for understanding the variation in sustainability engagement observed across all interviews.

In regard to sustainability engagement, the 15 interviewed businesses can be grouped into three categories (highly engaged, moderately engaged and low engaged):

1. Highly engaged businesses (Interviewees 3,4,7,9,14): These businesses have fully integrated sustainability practices into their core business model from the beginning, operating with near to zero plastic policies, own water filtration systems, composting processes, solar energy a structured staff training.
2. Moderately engaged businesses (Interviewees 1,2,5,8,10,11,12,13,15): These businesses have implemented selected sustainability measures such as replacing plastic water bottles, separating waste or reducing single-use plastic, but have not fully eliminated plastic across all operational processes.

3. Low engagement business (Interviewee 6): This business showed minimal sustainability engagement with no active initiatives in place and decisions mainly driven by cost and availability rather than environmental considerations.

5.3.2. Key Themes from Interviews

The thematic analysis of the interviews identified seven themes that have been consistently mentioned during the data collection.

The interviewed businesses differ significantly in how sustainability is integrated into their business operation, ranging from businesses that have established a near to zero plastic policy from the beginning to businesses where sustainability almost plays no role at all. On one hand, Interviewees 4,7,9,14 and 15 describe sustainability as a core element for their business concept from day one, describing measures such as zero-plastic policies, own water filtration systems, organic and local sourcing, solar energy etc. Several Interviewees (3, 5, 12 and 15) explicitly link their sustainability efforts to the personal values of their owners, often from international backgrounds. In the middle of the spectrum, businesses such as Interviewees 1,8,10,11 and 13 describe a more incremental approach. While sustainability is recognised as an increasingly important measure, a few solar panels, water dispensers and trash separation have been implemented, the overall integration of sustainability into the business model remains selective. On the other hand, Interviewee 6 represents a contrasting case, stating openly that there are no sustainability initiatives in place and that “nothing comes from management”. This wide range across only 15 businesses illustrates that sustainability engagement in the hospitality sector in the Southern Province in Sri Lanka is not driven by sector-specific norms, but rather shaped by values and individual commitment of the business.

Theme 1: Cost and financial constraints

Cost emerged as the most consistently mentioned. Barriers across all interviews, regardless of business size or sustainability maturity. Businesses repeatedly described the price gap between conventional plastic products and sustainable alternatives as a decisive factor in the decision-making process. A concrete example was given by Interviewee 10, who described in detail the cost difference between plastic and glass water bottles, explaining that the price of glass bottles makes it nearly impossible to remain profitable, because customers are not willing to pay that price for water. Interviewee 12 similarly argued that customers are not willing to pay more for

sustainable products, while Interviewee 8 shared the intention to transition to glass bottles, but explained that the upfront investment related to this was so high that implementations is still discussed at management level. Interviewee 6 represented the most extreme case, where cost sensitivity has led to a complete lack of sustainability initiatives.

Theme 2: Hygiene and quality constraints

Hygiene and quality concerns came up in almost every interview, especially in relation to kitchen operation and food preparation. Interviewees 1,14 and 15 described specific areas where plastic alternatives are either unavailable or perceived as unsuitable solution in terms of safety and hygiene. But not all businesses experience this the same way, businesses 4,7 and 9 demonstrated that this barrier is possible to overcome, but explained that it requires time, effort and willingness to test and adopt new solutions. This contrast between perceptions and practice implies that hygiene and quality concerns are partly rooted in unfamiliarity with alternatives rather than actual product limitations.

Theme 3: Supply chain dependencies and limited access to alternatives

Supply chain constraints were identified as a major barrier by nearly all interviewees. What has been brought up consistently is how businesses receive most of the plastic through supplier packaging, which they have limited power and control to influence. Interviewee 1 and 2 described how suppliers deliver goods wrapped in plastic even though the purchased product is meant to be sustainable itself. Interviewee 10 and 13 highlighted their inability to influence supplier practices given their limited purchasing volumes. Interviewees 3 and 7 noted that for some products no plastic-free alternatives exist on the market and the closer they get to zero plastic, the more difficult it becomes.

Theme 4: Customer feedback

Although Q4 received limited feedback from the interviews, the consistency is an important finding. Almost all Interviewees reported that they receive little to no feedback from customers regarding their plastic reduction or other sustainability efforts. Interviewee 1 noted that there is “no such thing as direct feedback when it comes to plastic”, while Interviewee 3,5,6,10,11 and 13 explicitly stated that customers do not comment on sustainability practices. On the contrary, a few interviewees described more positive feedback (Interviewees 7,9 and 14) all of them are operating eco-concepts where sustainability is highly visible and fully integrated into the guest experience. Interviewee 14 explained that guests appreciated the community engagement

projects especially because “the customer can directly see that they invest their money into something meaningful”. Interviewee 14 pointed out that for eco-concept hotels, sustainability is part of their regular marketing promise and therefore expected by customers rather than perceived as something special that needs to be commented on. The little feedback does not mean that customers are not appreciating sustainability efforts, but it shows that the customer pressure on businesses to reduce plastic remains weak.

Theme 5: Staff awareness and organisational culture

Staff awareness came up as an uneven factor across all interviews. While management level awareness was generally high, several interviewees describe significant gaps at the operational level. Interviewees 1 and 2 described how sustainability practices barely reach regular working staff, while Interviewee 11 reported catching employees handling waste incorrectly despite training. In contrast, businesses with structured and ongoing training programmes have meaningfully increased staff awareness and engagement. Interviewee 6 represents the opposite extreme, where a lack of management interest has resulted in no sustainability awareness among staff.

Theme 6: Certification

The majority of Interviewees (1,3,4,6,7,10,11,12 and 13) reported that they do not have any voluntary sustainability certification. Several Interviewees (7, 11 and 13) explicitly stated that they are not aware of any relevant certification schemes. Another group of Interviewees explained that they hold government-required environmental permits, but these are mandatory permissions to operate rather than voluntary sustainability certification. Interviewees 1 and 10 explained that their “business is too small” to implement any certifications. Interviewee 7 highlights that “there is no guidance or streamlined process” which makes the certification landscape difficult to navigate in. Interviewee 4 raised credibility concerns, stating that “in the end of the day, I just need to fill in some sort of questionnaire, and everyone can fake this”, which highlights a perception that certification can be more about paperwork than actual environmental performance. Interviewee 6 stated there is simply no interest from management to look into this type of certification. Only Interviewee 14 reported clear benefits from holding a voluntary sustainability certification, such as clear guidance on sustainability related topics, improved internal structures and accountability, as well as increased awareness of the staff. It shows that certification can be effective once they are fully integrated into business and supported by management.

Theme 7: Government regulations and institutional support

Government regulation and institutional support surfaced as one of the most prominent themes across all interviews, even though it was not part of the original hypothesis. Nearly all interviewees expressed that individual business efforts are insufficient without stronger regulatory frameworks and better enforcement. Interviewee 1,6,8,11 and 12 called for stricter laws, while Interviewee 4 and 13 highlighted critical waste management infrastructure, particularly for businesses in more rural areas. Interviewees 9,10 and 12 highlighted the introduction of charges on plastic bags in supermarkets as positive example on how consistent government interventions can drive behavioural change and that policies and regulations can work once properly implemented and enforced.

Table 20: Key Themes Qualitative Data

Question	Key Themes	Supporting Evidence (Interviewees)	Key Takeaway
Q1: Role of sustainability	Wide variation in implementation; from no engagement to fully embedded eco-concepts	High integration: Interviewees 3, 4, 7, 9, 14, 15; Moderate: 1, 2, 5, 8, 10, 11, 12, 13; Low: 6	There is a clear divide between proactive sustainability leaders and reactive adopters
Q2: Reduction efforts & barriers	Cost, lack of alternatives, hygiene, management commitment and convenience as key barriers	Cost: 5, 8, 10, 12; Alternatives: 1, 3, 5, 7, 11, 13, 14, 15; Hygiene: 1, 14, 15; Convenience: 2 Management commitment: 6	Barriers intensify as businesses move closer to full elimination of plastic.
Q3: Supplier influence	Strong external constraint; packaging largely uncontrollable	Supplier limitation: 1, 2, 3, 7, 10, 12, 13, 15, 9, 14; Reduced impact via local sourcing: 4, 11 Self sustaining: 4 No idea: 8	Plastic reduction is system-dependent, not fully controllable at business level.
Q4: Customer reactions	Limited direct feedback; sustainability rarely a decision driver	No/low feedback: 2, 3, 5, 6, 8, 10, 11, 12, 13, 15; Positive but indirect: 1, 4, 9, 14; Strong positive: 7	Customer demand is implicit rather than explicit.
Q5: Staff responses	Awareness varies; training is critical but not always effective	Low awareness: 1, 2, 3, 4, 5, 6; Training impact: 7, 9, 10, 12, 14, 15; Behaviour gaps: 11, 13	Staff engagement depends heavily on training and organizational commitment.
Q6: Certification	Low adoption due to complexity, cost, and lack of awareness	Barriers: 1, 2, 4, 6, 10, 12, 15; Lack of awareness: 3, 5, 7, 8, 9, 11, 13; Positive case: 14	Certification is perceived as costly, complex, and often unnecessary.
Q7: Needed support	Strong demand for government action and infrastructure improvements	Regulation & Law Enforcement: 1, 2, 3, 8, 11, 12, 15; Waste system: 4, 10, 13; Education/tax: 6	Plastic reduction requires institutional and infrastructural support beyond business level action.

Source: Overview by Author

5.3.3. ZPC Level 1 Readiness Assessment

To assess how the interviewed hospitality businesses would perform under the current version of the ZPC certification scheme, each of the 15 businesses was systematically mapped against the Engaged and Level 1 criteria. The mapping is based on a structured questionnaire for self-assessment, covering the core elements of the ZPC framework. This includes the existence of a sustainability officer and written policies (PMS), a baseline plastic assessment and

implementation of a written Plastic Reduction Plan (PRP), procurement controls, staff training, waste segregation, recycling and recovery practices, record keeping and management support.

During the assessment, two readiness scores were calculated. The first score covers the core Level 1 requirements (elimination or substitution of conventional SUPs, existence of a written PRP and waste diversion through recycling or recovery). The second score covers the broader PMS requirements (sustainability officer, written policy, documented procedures, procurement controls, formal training, systematic waste segregation, management support and record-keeping). Based on the combination of both scores, each business was classified into one of the following categories:

- ⇒ Level 1 Ready (13%, 2 businesses)
- ⇒ Level Engaged Ready (53%, 8 businesses)
- ⇒ Engaged with major gaps (20%, 3 businesses)
- ⇒ Critical Gap (7%, 1 business)
- ⇒ Not Ready (7%, 1 business)

Table 21 shows that only 2 out of the 15 businesses (Interviewee 9 and Interviewee 14) currently meet Level 1 of the ZPC Certification scheme. The majority of businesses (8 out of 15) qualify for the entry level ZPC Engaged status, indicating that they completed an initial plastic assessment, have management support and are willing to begin the certification journey, however, lack the formal structures that are required for Level 1. Three businesses fall into the Engaged with major gaps category, showing that even the basic ZPC requirements are not yet in place. One business (Interviewee 5) was classified with a critical gap because plastic waste is partially burned on site, which is incompatible with ZPC certification. Another business (Interviewee 6) was classified as Not Ready due zero sustainability initiatives and lacking management support, which is a fundamental precondition for the ZPC certification.

Table 21: Results ZPC Level 1 Assessment

Interview No.	Ownership	Size	L1 Core	L1 PMS	ZPC Level
1	Internationally owned	`11-30	33%	57%	Engaged Ready
2	Joint venture	`31-100	0%	14%	Engaged with major gaps
3	Internationally owned	`11-30	33%	14%	Engaged with major gaps
4	Internationally owned	`31-100	33%	71%	Engaged Ready (Strong)
5	Internationally owned	`11-30	67%	57%	Critical Gap (burns plastic)
6	Locally owned	`31-100	0%	29%	Not Ready (no mgmt support)
7	Locally owned	`31-100	67%	43%	Engaged Ready
8	Locally owned	`11-30	0%	43%	Engaged Ready
9	–	`1-10	67%	71%	Level 1 Ready
10	Internationally owned	`11-30	0%	43%	Engaged Ready
11	Locally owned	`1-10	33%	29%	Engaged Ready
12	Locally owned	`31-100	33%	71%	Engaged with major gaps
13	Locally owned	`1-10	67%	29%	Engaged Ready
14	Locally owned	`100+	100%	86%	Level 1 Ready
15	Internationally owned	`31-100	33%	29%	Engaged Ready

Source: Overview by Author

Looking at the data more in detail (see Table 22), several common gaps appeared throughout the sample. The most common barrier is the lack of a Plastic Management System (PMS) in the formal sense required by the ZPC standard. Although 13 out of the 15 businesses report that senior management is supportive of plastic reduction effort, only 4 of them have a written Plastic Reduction Plan (PRP), which is a core requirement for Level 1. Only 4 out of 15 have a designated sustainability officer and only 6 have a written sustainability policy, which indicates that many businesses already act in a sustainability-oriented way at the operational level, but have not formalized these efforts into structured management systems. Another gap that is important to highlight is the limited integration with the recycling sector, only one business (Interviewee 14) maintains a direct relationship with a recycler, while almost all others rely on municipal collection, which does not necessarily ensure that plastic waste is actually recycled. Only 3 out of 15 businesses keep records of plastic waste sent for waste disposal, which makes it impossible to track and verify and reduction targets, which is an essential element of the ZPC certification scheme.

11 out of 15 Interviewees have already carried out an assessment on plastic usage, which is one of the first steps for the ZPC certification. 13 out of 15 businesses report systematic or partial waste segregation at source, and 14 out of 15 are willing to improve their plastic management systems if guidance and support is available. These findings indicate that the foundation of the ZPC certification exists in most businesses, however what is missing is the structured

management framework, proper documentation as well as a formal connection to recycling infrastructures.

The results of the ZPC Level 1 Readiness Assessment confirm that the transition towards plastic free business operations is not so much a question of willingness or awareness, but rather a question of structural and institutional support. Most of the interviewed businesses are already moving into the right direction, but need practical tools, documentation templates, training and access to reliable recycling facilities in order to translate their operational efforts into formal ZPC compliance.

A detailed overview of how each business performs against the thirteen central ZPC 1 Level criteria can be found in Table 22. It gives a clear overview which criteria are met, and which represent the main barriers to the ZPC certification.

(**Green** – meet criteria; **Yellow** – in progress/under development; **Red** – not meet criteria).

Table 22: Heatmap ZPC Level 1 Requirements

ZPC Criterion	I1	I2	I3	I4	I5	I6	I7	I8	I9	I10	I11	I12	I13	I14	I15	% Fully Met
Sustainability Officer	X	X	X	X	✓	X	✓	X	✓	X	X	X	X	✓	X	27%
Written Sustainability Policy	X	X	X	X	✓	X	X	✓	✓	X	X	X	✓	✓	X	33%
Baseline Plastic Assessment	✓	~	X	✓	~	✓	✓	✓	✓	✓	✓	~	✓	✓	✓	73%
No SUPs in Operation	✓	X	X	✓	✓	X	✓	X	X	X	X	✓	X	✓	✓	47%
Procurement Controls	✓	~	X	✓	✓	X	~	~	✓	~	~	~	~	~	~	27%
Written Plastic Reduction Plan	~	~	~	~	✓	X	~	~	✓	~	X	~	✓	✓	~	27%
Self-Rated Efforts	✓	~	~	✓	✓	X	X	~	~	X	✓	✓	~	✓	~	40%
Staff Training	✓	~	X	✓	~	✓	✓	~	~	✓	~	✓	~	✓	~	47%
Documented Procedures	~	~	X	✓	X	~	~	✓	✓	~	X	✓	X	✓	~	33%
Waste Segregation at Source	✓	X	~	✓	✓	✓	~	~	✓	✓	✓	✓	X	✓	✓	67%
Recycler / Recovery Partner	X	X	✓	X	X	X	✓	X	X	X	✓	X	X	✓	X	27%
Records Kept	X	X	X	X	X	X	~	~	X	X	X	✓	X	✓	X	13%
Management Support	✓	✓	✓	✓	✓	X	✓	✓	✓	✓	✓	✓	✓	✓	✓	93%

Source: Overview by Author

The readiness assessment used in this study covers the central plastic-related criteria of the ZPC Level 1 standards but does not represent a full ZPC Audit. The design of the questionnaire focused on plastic specific operational and management dimension that are most relevant for this research study, including the PMS, PRP, procurement, training, waste segregation, recycling and management support. The findings presented above should therefore be understood as an indicative rather than a formal certification assessment.

5.4. Discussion of Findings in Relation to Hypotheses

The following discussion of the six hypotheses integrates the quantitative results from the survey and the qualitative insights from the interviews. The complementary use of the two datasets allows for triangulation of the findings and helps to develop a deeper understanding of how the identified barriers operate in practice. Where relevant, references to the ZPC Level 1 Readiness Assessment are included to show how individual barriers translate into the concrete operational gaps with regard to the ZPC Certification.

H1: Cost of sustainable alternatives

Cost was the barrier that came up most often, both during the survey and the interviews, even though the regression analysis did not show a statistically significant relationship between perceived costs and the willingness to become zero plastic ($\beta=0.080$, $p=0.546$). At first, this seems controversial, but the value ($p=0.841$) of the Chi-Square test shows that the reasons for using plastic do not differ much between cafes, bars, restaurants, hotels and guesthouses, which means that the factor cost is felt across the entire sector and is not specific to one type of business, making it less visible statistically, but more important in reality.

The qualitative findings support this argument. Interviewee 10 talks about a substantial price gap between plastic and glass water bottles, where the cheaper option is chosen because of profitability. Interviewee 12 puts it even more directly: “Customers are not willing to pay a penny more.” Both statements confirm the same problem; the market does not reward businesses for sustainability effort, which connects exactly to what Eriksen and Schober (2018) describe as the ‘double bind’, meaning hospitality businesses are expected to act sustainably, but the market they operate in does not want to compensate for it. This ‘double bind’ is not unique to Sri Lanka, but this research shows that it is also a pressing issue here. Also, Gössling et al. (2015) confirm that economic constraints are one of the main barriers to sustainability transitions, especially in price-sensitive markets, where short-term costs often outweigh long-term environmental benefits. Bandara et al. (2018) confirm this specific issue for the Sri Lankan hotel sector, where resource limitations and budget constraints are among the most reported challenges in adopting sustainable practices. It shows, as long as sustainable alternatives are more expensive than conventional plastic products, businesses will most likely continue to choose the cheaper option in order to stay competitive and profitable.

In addition to that, Interviewee 8 explains that the business wants to switch from plastic to glass bottles in future, but the transition keeps delaying. Mostly due to two reasons, higher direct costs upfront and the necessary investments to changing workflows and connected procurement strategies. This shows that the cost for alternative products is much higher than the visible price tag, it includes the cost of changing internal processes, training staff and adjusting supplier relations. Bramwell and Lane (2011) describe this as a structural challenge that requires more than isolated adjustments, while Honey (2008) highlights that higher upfront costs can discourage sustainability adoption, especially among smaller businesses. It outlines the imbalance between the point of time when costs occur vs. when benefits materialise. While the financial liability of switching to alternative products shows up immediately, the potential benefits only develop over time. For businesses that operate on thin profit margins, this time mismatch makes the decision to invest much more important, even if they recognize the long-term value of sustainability.

However, not all businesses experience cost in the same way. Interviewees 4 and 7 operate under similar external conditions but have nevertheless implemented near to zero-plastic business models, which shows that environmental performance depends not only on external conditions but also on internal organisational factors, as argued by Blackman et al. (2014). The main difference between those hotels is that sustainability was built into the business concept from the very start and is strongly anchored in the personal values and beliefs of the owners. It shows that there is an important distinction between cost perceived as financial burden and cost perceived as investment. For Interviewees 4 and 7, sustainability is part of the core identity of the business, which means that costs are accepted as an investment in reputation and long-term positioning. While for the other businesses, sustainability is rather an external requirement, where extra costs feel like an additional impediment rather than something meaningful to invest in. It demonstrates that cost is not only an economic factor but also depends on how businesses understand themselves and their positioning in the market.

Tip: Initiatives like a preferred supplier network or shared procurement strategy could help to lower these costs, even though it does not address the root cause of the problem, that single-use plastic is cheaply and too easily available on the market.

Result: The findings strongly support H1a and confirm that cost is one of the most consistently perceived barriers across all business types. But the lack of statistical significance in the

regression analysis adds an important insight that cost alone does not determine behaviour. In order to influence change, it needs to work together with customer demand, supplier dependencies and management commitment.

H2: Accessibility of sustainable alternatives

The regression analysis did not confirm a statistically significant relationship between accessibility and willingness to be zero plastic ($\beta=0.531$, $p=-0.079$). However, similar like the cost factor, the lack of statistical significance for accessibility of sustainable alternatives rather points to a challenge across the sector rather than an issue specifically to one type of business.

During the interviews, accessibility of sustainable alternatives came up several times and arose as a common barrier experienced by nearly all interviewees, mostly linking back to supply chain limitations. This shows that the problem is not internal to the businesses themselves but rather shaped by external market conditions over which they have little to no control. Constraints in external supply chains can strongly influence the environmental performance, as described by Blackman et al. (2014). This is consistent with Bandara et al. (2018) who identify supply chain dependencies as a recurring operational challenge for Sri Lankan hotels. Similarly, Interviewee 1 stated that even when businesses aim to reduce plastic, suppliers continue to deliver goods wrapped in plastic, and Interviewee 2 validates this statement by saying “suppliers bring a lot of plastic from the outside”, demonstrating that infrastructure and market availability are very important when it comes to enabling sustainability transitions (Gössling et al., 2015)

What is important to highlight here is that supplier dependency reveals a clear power imbalance. Interviewees 10 and 13 emphasized that businesses have limited power to influence supplier practices when purchasing in small quantities, as Interviewee 13 noted, “who am I to change this”, reflecting a lack of bargaining power and indicating that businesses have limited control over packaging practices within the supply chain. Interviewee 12 describes the same situation, explaining that even if products are environmentally friendly, they are often delivered in plastic packaging, which reduces the effectiveness of sustainability efforts and leads to frustration among businesses that aim to be more sustainable. This connects to Eriksen’s (2016) argument that environmental responsibilities have been increasingly shifted onto private actors who often lack the leverage to change the systems they depend on. In other words, businesses are expected to act sustainably, but the conditions under which they operate are not within their control. Some of the businesses attempt to mitigate the inflow of plastic by sourcing their products

through local suppliers (Interviewee 11, 14), but these strategies remain limited and do not eliminate the problem at its root. Local sourcing can be part of the solution, but it does not address the actual issue within supply chains.

An interesting pattern comes to surface when looking at how accessibility changes in regard to the level of plastic reduction. The interviews showed that accessibility becomes more critical at higher levels of plastic reduction. Interviewee 3 highlights the limited accessibility of sustainable alternatives by stating that “there are simply no alternatives for some products on the market, confirmed by Interviewee 7, stating that “95% of single-use plastics has been phased out, but for the remaining 5% it becomes very challenging, because there are simply no good alternatives out there”. This illustrates that the closer a business gets to zero plastic, the more difficult and complex the transition becomes. The first 95% of plastic can be reduced through individual business decisions and efforts, whereof the remaining 5% depend on structural conditions of the market itself, meaning whether sustainable alternatives even exist and if yes, are they accessible through existing distribution channels. This aligns with Tunn et al. (2018) describing that the availability and accessibility is one of the most decisive factors when it comes to plastic reduction efforts.

It can be said that accessibility of sustainable alternatives is not just about whether alternatives exist, but rather if businesses can actually reach them through their supply chains. Even though businesses may be willing to adopt sustainable practices, they are often limited to do so due to lacking access. This shows that businesses are not operating independently but they are embedded in complex systems that go beyond their control (Gössling et al., 2015).

Tip: For ZeroPlastic Movement it could be a great step forward, if they address the plastic problem at the root cause or at least where it actually enters the system, namely at the supply chain level.

Result: H2a is supported by nearly all interviews. The absence of statistical significance in the regression analysis supports this conclusion rather than weakening it. Accessibility is one of the most fundamental barriers identified in this study, representing a condition that affects all participating business types equally, leaving little statistical variation to detect. Sustainability transitions cannot be achieved through individual business efforts but requires coordinated changes across the entire supply chain and market environment (Blackman et al., 2014).

H3: Perceived quality of alternatives

Quality came up as the single most frequently mentioned reason in the quantitative survey for continuing the use of single-use plastic, highlighted by 29,6% of the businesses. At the same time, the regression analysis did not show a significant relationship between perceived quality and willingness to be zero plastic ($\beta=0.063$, $p=0.508$). The Chi-Square test confirms that quality concerns are mentioned across all business types ($p=0.841$), which shows that quality is therefore a widely shared concern across all business types, which makes it less graspable statistically but again even more relevant in real business context.

While it is not a consistently mentioned barrier across all interviews, it becomes important in specific operational contexts where functionality, safety and reliability are perceived as more important than sustainability. Interviewee 15 highlights that some alternatives are “not as good”, especially in regard to durability and functionality. Interviewee 14 points out that certain materials used in food preparation and hygiene are difficult to replace due to safety concerns. Ma et al. (2019) describes that perceived performance gaps and uncertainty about durability are among the most frequently cited barriers to plastic elimination, even in industries where alternatives are technically available. This shows that risk perception also plays a crucial role in the decision-making process about sustainable alternatives, as businesses are much more cautious about introducing unfamiliar alternatives where performance has not yet been proven in their operational setting. Gössling et al. (2015) argue that perceived barriers in sustainability contexts are often shaped by existing routines and risk avoidance rather than by actual product limitations.

However, some interviews also show a different pattern. Several businesses (Interviewee 4, 7, and 9) demonstrate that plastic reduction in those areas is achievable, explaining that feasible alternatives do exist, but that effort, time and financial resources have to be invested. This contrast shows that businesses that have invested in testing and adopting eco-friendly alternatives are less concerned with quality and hygiene, while those with limited engagement rely more on assumptions than on actual experience. Therefore, the barrier can be considered as rather informational than purely about the material itself, because businesses that have tested and used alternatives know whether they actually work, while businesses without that experience only rely on assumptions or general industry perceptions. This creates a paradigm where experienced businesses become more confident in using alternatives, while inexperienced businesses stay locked in their concerns.

What can be seen from the interviews is that the meaning of “quality” itself is very context-dependent and varies between businesses. For some Interviewees (Interviewees 4 and 7) quality is mostly understood as durability and reusability, whereas others (Interviewee 1 and 12) connect quality directly to hygiene and food safety. This shows that quality is not objective, but a perception shaped by the operational priorities of each business.

Tip: For the ZeroPlastic Movement, this finding has very practical implications. It shows that it is not enough to simply make more alternatives available but to demonstrate to businesses that those alternatives actually work. Sharing best practices and examples, running pilot sessions with eco-friendly products and providing transparent information about product performance could help to reduce quality related concerns in the hospitality sector.

Result: H3a is partially supported. Quality concerns are real and consistently reported, but the findings show that they are largely context specific and perception driven rather than reflecting actual product limitations. They could be reduced through better information sharing and demonstration of eco-friendly alternatives that can meet required standards.

H4: Hygiene and food safety considerations

The regression analysis found no significant relationship between hygiene and willingness to be zero plastic ($\beta = 0.071$, $p = 0.429$), but the Chi-Square test shows that hygiene related concerns appear consistently across all business types ($p = 0.841$), which illustrates that this barrier does not affect only certain types of hospitality businesses. Again, even though it does not show up as statistically significant, actually makes it more significant from a practical perspective and not less.

From the qualitative interviews, hygiene and food safety considerations represent one of the most fundamental barriers to reducing single-use plastic, as the interviews show, these factors are directly linked to core operational requirements on where businesses are hesitant to compromise on. For many businesses these factors are non-negotiable. Interviewee 1 explains that certain plastic items remain necessary due to “hygiene and food safety standards”, while Interviewee 14 highlights challenges in replacing some kitchen and sanitary products, especially in areas where strict cleanliness and hygiene are legally required. The interview responses indicate that plastic is still perceived as essential in ensuring safe operations, mainly because it is associated with reliability, standardisation and compliance with existing

regulations. These findings align with Gössling et al. (2015) who note that operational requirements in tourism can limit the adoption of sustainable practices, especially when they conflict with health and safety standards. They further notice that hygiene perceptions in tourism are reinforced by industry norms and customer expectations, making them resistant to change even when alternatives are technically feasible. Also, Honey (2008) emphasizes that sustainability initiatives must align with core hygiene and safety requirements, which often traps businesses into existing material choices.

Some interviewees (Interviewee 4 and 7) demonstrate that it is possible to operate with very low or nearly zero plastic use, even in operationally sensitive areas. This shows that hygiene concerns are not only a technical limitation but also perception-based, often shaped by familiarity with existing materials rather than by a lack of alternatives. Businesses may prefer plastic items because they are perceived as safe, even when alternatives exist that could meet the same requirements.

What makes the factor hygiene such an interesting barrier is that it is constantly reinforced by three sides at the same time. First, the business itself prefers familiar products, secondly, existing regulations are largely written around plastic as the default for hygienic handling and thirdly, customers expect a visible standard of hygiene and cleanliness, which is often associated with plastic. As a consequence, businesses that are open to change to sustainable alternatives, cannot simply make the switch by themselves, because the alternatives need to be accepted by regulators and customers as equally safe. Bandara et al. (2018) make the identical observation for the Sri Lankan hotel sector, where uncertainty about the performance of sustainable alternatives is one of the most pressing challenges in sustainable transitions. This connects directly back to the discussion of perceived quality in H3 and points to risk avoidance, which is discussed by Gössling et al. (2015) describing how established routines and familiarity with existing products can create resistance to change even if better alternatives are available.

Tip: This is an important finding for ZeroPlastic Movement, because it implies that the hygiene barrier cannot be fully addressed through better alternatives alone. Clear guidelines and real examples of certified businesses that have successfully implemented eco-friendly alternatives in sensitive areas need to be openly communicated and demonstrated, proving how these alternatives meet hygiene and food safety standards to reduce hesitation and to build trust over

time. Information sharing around alternative products seems to be a very important and relevant driver when it comes to achieving zero plastic.

Result: H4a is supported, because hygiene acts as a non-negotiable barrier in many cases. What the findings also reveal is that this barrier is partly driven by risk perception and familiarity with existing products rather than by actual product limitations. Addressing this barrier does not require better alternatives but could be reduced through better transparency and sharing of proven eco-friendly alternatives that meet required safety standards.

H5: Awareness of sustainable alternatives

The regression analysis did not show a significant relationship between awareness and willingness to be zero plastic ($\beta=0.061$, $p=0.575$). One would expect businesses that are more aware of sustainable alternatives would also be more willing to adopt them. The fact that the data does not show this relationship demonstrates that awareness by itself is not enough to drive behavioural change, which the qualitative findings confirm in a more detailed way.

The interviews show that awareness is unevenly distributed within the businesses themselves, mainly between management and operational staff. While the level of management awareness is generally high, several interviewees highlight clear knowledge and awareness gaps among the staff. Interviewee 1 noted that “sustainability barely reaches the regular working staff”, Interviewee 2 emphasizes that employees often lack the understanding of sustainability issues, and Interviewee 6 highlighted zero awareness in regard to sustainability due to limited management focus. Interviewee 11 added an interesting observation, namely that the staff continue to handle waste incorrectly, despite trainings, which indicates that awareness does not automatically lead to correct behaviour. This habit reflects what Gössling et al. (2015) describe as the attitude-behaviour gap, where knowing about sustainable practices does not necessarily mean that businesses or staff will adopt them, especially when other barriers such as cost, access or hygiene concerns are still in the way. Awareness seems to be necessary, but not a sufficient factor by itself to drive sustainable change. In addition, one of the issues here is how awareness is distributed within the organisation, it seems that awareness exists at management level but rarely trickles down to operational level.

A different picture is presented by businesses where awareness is actively developed and implemented in daily business operations. Interviewees 7,9, and 14 actively run structured

trainings, and regular awareness sessions such as hands-on beach clean ups that have led to real improvements in terms of awareness and engagement among staff. It shows that awareness can clearly be improved through organisational efforts. What these cases have in common is that awareness is not treated as a one-time activity, but as an ongoing process that is supported by management, organisational structures and strongly integrated in daily business operations.

This connects directly to the regression findings, if awareness was simply about the availability of information, the statistical relationship with willingness to be zero plastic would be much stronger. However, the weak relationship proves that awareness without supporting systems has limited impact on actual behaviour. In businesses where sustainability is actively promoted and integrated into daily routines, the awareness level is much higher and more consistent, whereas in businesses where management shows little to no interest, awareness among staff remains low regardless of trainings that may have taken place. This reinforces Honey's (2008) argument that awareness by itself is insufficient without supporting systems, structures and incentives, and confirms Blackman et al. (2014) who point out that knowledge is critical for improving environmental performance. Their findings reinforce the observation that awareness alone, even when present at management level, often fails to translate into consistent behavioural change at the operational level without structured supporting mechanisms. The qualitative findings imply that organisational culture and leadership play a much bigger role in determining whether awareness actually leads to change.

Tip: Awareness campaigns and information materials alone are unlikely to drive meaningful change. Instead, awareness efforts need to be combined with concrete tools, clear implementation guidance and ongoing support, supporting businesses to implement sustainable practises within their existing operational structures.

Result: H5a is moderately supported, as awareness influences behaviour but the actual impact is rather indirect and depends on organizational structures, management commitment and consistent reinforcement. Without these elements, awareness is unlikely to lead to lasting behavioural change.

H6: Customer preference

Customer preference was the weakest factor in the regression analysis ($\beta=0.025$, $p=0.782$). This shows that the perception how businesses perceive customer preferences has no statistical

relationship with their willingness to reduce plastic use. This is contrary to what has been described in the reviewed sustainability literature, which often assumes that customer demands play an important role in driving sustainable practices on the hospitality sector. Also, the qualitative data supports the findings of the regression analysis and shows why this assumption may not hold in the Sri Lankan context.

Most interviewees reported little to no direct feedback from customers regarding sustainability efforts. Interviewee 5 states “there is not really feedback”, while Interviewee 13 says “there is nothing really to talk about” and Interviewee 3 reinforces that statement by saying “there is no feedback regarding sustainability”. This consistent and reoccurring pattern across all interviews shows that sustainability is not a major decision criterion for most customers traveling to the Southern Province of Sri Lanka. Even businesses that showed strong sustainability practices noted that customers rarely chose their hotel based on environmental considerations but rather prioritize comfort and location over sustainability (Interviewee 2), indicating that functional factors dominate the decision-making process when it comes to choosing accommodation.

This finding aligns with the result of the regression analysis, if customers are not actively demanding sustainability efforts, businesses have little market-based incentives to reduce plastic. This means that customer preference as a barrier works very differently here than highlighted in the reviewed literature. Instead of being an important driver for sustainable development, weak customer demand rather removes one of the potential drivers.

However, some exceptions exist, Interviewee 9 stated that guests appreciate their eco-friendly concept, but explains that it is rather linked to the overall experience than specific sustainable or plastic reduction practices. Interviewee 14 similarly highlights that guests appreciate sustainability when it is meaningful and visible, such as community engagement, highlighting that sustainability is valued more as an extra experience rather than a primary selection criterion. This creates an important distinction between passive appreciation and active preference. Customers may positively perceive sustainability when they encounter it, but it does not necessarily influence their booking decision or willingness to pay more. It is rather a “nice to have” than a deciding factor. These findings also align with Gössling et al. (2015), who highlight the persistent gap between environmental attitudes and actual customer behaviour. Similarly, Bramwell and Lane (2011) argue that even though sustainability awareness is increasing among tourists, it does not always translate into the decision-making process,

especially when other factors such as price, comfort and convenience are more important for customers. It shows that customer perception alone is not sufficient enough to drive sustainability transitions in the hospitality sector. Even if awareness exists, it does not create pressure on businesses to change towards more sustainable practices. This means that the main driver for sustainability change is not demand driven but more likely to be supply driven, pushed by regulations and internal business values rather than customer expectations.

The combination of low customer demand and higher costs of sustainable alternatives reflects the ‘double bind’ described by Eriksen and Schober (2018), hospitality businesses are expected to act sustainably, while the market does not reward sustainable behaviour with higher prices or stronger demand. The result is that environmental knowledge does not automatically translate into action, not because businesses are unwilling, but because the incentives in the market point into a different direction. This is in line with Eriksen’s (2016) argument that systemic problems cannot be solved through isolated, individual or market-based responses, but require coordinated changes across all actors and institutions.

Tip: If customer demand for sustainability is weak, then the market-based argument for certifications improving competitiveness and attracting more customers, may be less convincing for hospitality businesses in Sri Lanka to participate. This could partly explain the low engagement with certification schemes that have emerged across all interviews. If businesses do not see a clear market benefit from certification schemes, the motivation to invest time and resources decreases significantly as Font (2002) and Honey (2008) have highlighted. For ZeroPlastic Movement it means that the certification cannot rely on market demand alone, but the certification needs to actively create additional value for businesses, for example through visibility on booking platforms, guest-facing communication material or partnerships with international tour operators that increasingly prioritise sustainable accommodation.

Result: H6a receives limited support, because customers preference appears to be only a secondary driver, implying that sustainability transitions in hospitality businesses are more likely to be supply driven rather than demand driven. The lack of customer pressure reinforces the need for stronger external drivers, such as government regulations, institutional support and certification frameworks that actively help businesses to translate sustainability efforts into market value.

5.5. Additional Findings

Government and institutional support

Although not part of the hypotheses, government support emerged as one of the most critical external factors influencing plastic reduction. Almost all interviewees referred to the role of government institutions when discussing the challenges of reducing single-use plastics, indicating that businesses do not view sustainability transitions as something that depends on businesses alone, but as something where government should step in and take a more active role as a reliable stakeholder. Nearly all Interviewees highlight the need for stricter regulations, improved law enforcement and better waste management infrastructures. Interviewee 1 and 12 called for stronger legal frameworks and policies while interviewee 6 suggested taxation on plastic products and education incentives, which shows that many businesses believe that external pressure and formal regulations can contribute to driving sustainability related issues forward more effectively.

Interviewee 4 and Interviewee 13 point out significant weaknesses in waste management systems, including unreliable waste collection processes and lack of waste management services in rural areas. Interviewee 4 described the current waste management system as “a disaster”, explaining that waste collection services often do not reach rural areas, while Interviewee 13 reported that waste is sometimes left uncollected for long periods. These are not minor operational complaints, but they point to a fundamental infrastructure gap that undermines the sustainability efforts of individual businesses. This shows that even if a hospitality business successfully reduces its plastic use internally, the lack of functioning waste collection and recycling systems leads to unsustainable business practices, creating a deeply frustrating situation for businesses that are trying to improve their environmental performance.

Interviewee 3 and 11 emphasized the need for more consistent inspections and enforcement mechanisms, arguing that regulations and policies do already exist, but are often poorly implemented. This reflects a clear gap between the policies on paper and the implementation in practice. Sri Lanka has introduced regulatory frameworks, such as the National Action Plan on Plastic Waste Management targeting single-use plastics including bans on selected plastic items. However, as the interviews show, these frameworks have limited practical impact due to weak enforcement, poor intergovernmental coordination and insufficient monitoring capacity. This finding aligns with Bramwell and Lane (2011) describing a situation where laws and regulatory frameworks exist, but their effectiveness is limited by restricted institutional capacity

and weak oversight and reinforces the argument that without consistent and reliable public sector support, voluntary sustainability initiatives reach their limits in the Sri Lankan hospitality context. This is a typical feature of neoliberal globalisation, where states have gradually withdrawn from active regulations, leaving environmental responsibilities more to private actors and NGOs that often lack the authority or resources to enforce systemic change (Eriksen, 2016).

Several interviewees (9,10 and 12) highlighted that once the government takes proactive measures, like the introduction of charges on plastic bags in supermarkets, people started to reuse their own bags instead of asking for new ones. This clearly demonstrates that if policies are implemented in a consistent way, they can create behavioural change. It shows that government intervention does work when it is actually enforced. The problem is not that regulations are ineffective, but that inconsistent and fragmented enforcement prevents sustainable change from reaching its full potential. Bramwell and Lane (2011) highlight the importance of reliable governance structures and policy enforcement when achieving sustainable tourism. The interviews strongly support this perspective, as many businesses expressed the willingness to reduce plastic but at the same time describe limitations that are not within their reach. They say, even if they reduce plastic internally, the issue cannot be solved at the individual business level, because impactful changes require functioning waste management systems, supplier regulations, and stronger environmental governance. Similarly, Gössling et al. (2015) argue that voluntary business actions by itself are insufficient without institutional support.

Tip: This finding has direct relevance for ZeroPlastic Movement, because it shows that certification schemes that are operating in contexts of weak legal enforcement and governance need to compensate by providing businesses with structured frameworks, clear criteria and external accountability that the government or state regulation currently fails to deliver.

Sustainability certifications

The findings on sustainability certifications are particularly relevant for this study, given that the research was conducted in collaboration with the NGO ZeroPlastic Movement, which is currently developing its own certification scheme. Understanding how hospitality businesses in Sri Lanka currently perceive and engage with certification schemes has therefore direct implications for the design and implementation of the ZeroPlastic Commitment Certification.

Overall, the majority of interviewees reported low engagement with certification schemes. Some of the most common barriers that have been mentioned include perceived complexity, lack of resources, credibility and limited awareness. Across the interviews, certifications were often perceived as difficult to access, resource intense or lacking practical value for smaller hospitality businesses.

Interviewee 1 and 10 emphasized that certification processes are too demanding for small businesses, explaining that they lack time, manpower or operational capacity to fulfil complex certification requirements. These findings directly reflect the disadvantages of smaller businesses that Blackman et al. (2014) describe, where larger, internationally networked businesses have greater resources, dedicated sustainability teams and established management processes that make engagement with certification schemes much more easy and accessible, whereas smaller local businesses, which make up the majority of the hospitality sector in the Southern Province of Sri Lanka, are structurally disadvantaged from the beginning. This creates a risk that the ZeroPlastic Certification becomes a tool that benefits those, who already have capacity and resources rather than those who need support. These observations are consistent with Bandara et al. (2018), whose study of sustainability certifications in the Sri Lankan hospitality sector identifies managerial constraints, resource limitations and insufficient budget allocation as recurring challenges in maintaining the sustainability certification. They argue that without structured support, smaller hotels are at risk of disengaging quickly from certification schemes after enrolment (Bandara et al., 2018).

Interviewee 12 criticised the rigidity of certification schemes and the fact that there is no room for businesses that already implement sustainability practices but cannot meet every formal requirement, stating that there is “no room in between”. This is an important viewpoint and perceived barrier when it comes to sustainability certification schemes. ZeroPlastic Commitment offers four different levels (Engagement, Level 1, Level 2, Level 3) within the certification scheme which shows to be the right approach, addressing hospitality businesses that might be at different stages when it comes to sustainability transitions. A more flexible and tiered approach that recognises and rewards progress may therefore be more effective in the Sri Lankan hospitality sector, particularly for smaller businesses with limited resources.

Several respondents (Interviewees 11 and 13) were not aware of any certification schemes, showing a gap in awareness and communication, when it comes to reaching hospitality

businesses. Interviewee 4 also expressed scepticisms regarding the credibility of certification schemes, explaining that such systems lack accountability and transparency, as businesses can simply complete questionnaires without proper verification. This concern reflects what the literature describes as greenwashing, where sustainability claims become more of a marketing tool, rather than a reliable indicator of environmental performance. The credibility concern is very important, because if businesses perceive certifications as a marketing tool rather than a genuine indicator for environmental performance, it undermines the entire value proposition of the scheme. For the ZeroPlastic Movement, it is very important to build credibility and to gain trust of the hospitality businesses, which can be supported through rigorous and transparent certification processes. The interviews make clear that sustainability certifications are not automatically seen as valuable or achievable, and that their effectiveness depends rather on accessibility, credibility, organisational capacity and practical relevance to the local business environment.

Interviewee 14 is the clearest exception here, reporting tangible benefits, including better organisational structures, improved processes, clearer guidance and accountability as well as a stronger integration of sustainability related topics into daily business operations. Interviewee 14 explained that continuous auditing and sustainability programmes increased staff awareness and competence about sustainability related topics. This positive example is worth highlighting, because it demonstrates what certification schemes can achieve when they are well designed, properly implemented and actively supported by management. The difference between Interviewee 14 and the other businesses with rather low engagement in regard to sustainability certifications, refer back to a lack of organisational commitment rather than effectiveness of sustainability schemes. In other words, the question is not whether certification work, but whether they are taken seriously enough by management to be allowed to work. It clearly shows that certification schemes can create organisational change and effective sustainability integration when supported by management and organisational structures. These findings support Honey (2008), who highlights that certification schemes can enhance sustainability performance when effectively implemented and supported through ongoing monitoring and organisational commitment.

Tip: The findings on certification schemes indicate that the ZeroPlastic Commitment Certification may face a number of design and implementation challenges in the Sri Lankan hospitality sector. The challenges include the need to keep the certification process accessible

and manageable for smaller businesses, to build credibility through transparent and rigorous verification, to actively communicate the scheme to businesses that are currently unaware of it and well as to demonstrate the tangible benefits. The findings confirm that the tiered structure of the certification scheme, offering different levels of engagement is well suited for the Sri Lankan context, as it allows businesses to start with achievable steps rather than requiring full compliance from the beginning.

5.6. Summary of Discussion

This section summarises the findings from the discussion in regard to the quantitative survey of 152 hospitality businesses (147 valid responses), the 15 semi-structured interviews and the structured ZPC Level 1 Readiness Assessment.

All three datasets show a consistent picture: The reduction of single-use plastic in hospitality businesses in Southern Province of Sri Lanka is not blocked by one single dominant barrier, but rather by a combination of interconnected constraints that reinforce each other. Looking at the regression analysis, none of the six hypothesised variables (cost, access, quality, hygiene, awareness, customer preference) showed a statistically significant relationship with the willingness to reduce plastic. At first this might seem like a negative result, but together with the qualitative findings, it supports that main finding of this study that no single barrier is the decisive factor alone, but instead businesses are caught in a system where multiple barriers operate simultaneously, making it difficult to isolate one variable from the other. This finding is consistent with the arguments made by Gössling et al. (2015) that sustainability barriers in tourism do not occur in isolation but interact and reinforce one another and Eriksen (2016) who argues that overheated systemic problems cannot be solved through isolated, individual or market-based responses, but require coordination across different actors and levels. When the challenges are interconnected, individual solutions reach their limits and a systemic response that addresses the underlying condition is needed (Eriksen, 2016).

The qualitative findings show that cost and access are the most consistent mentioned barriers across all interviews, businesses cannot afford sustainable alternatives, and even if they can, they are not easily available through existing supply chains. Hygiene and quality concerns add another dimension, demonstrating operational as well perception-based barriers rooted in familiarity with plastic and risk avoidance. Awareness alone does not drive change but plays a role when it is actively integrated in organisational structures and supported by management.

Customer preference is a rather absent driver, where businesses see little incentive to reduce plastic.

These findings show that efforts by individual businesses are limited by factors that go beyond their control. Weak governance, inconsistent enforcement of existing regulations, fragmented waste management infrastructure and unsustainable supply chains leave motivated businesses with limited ability to improve their environmental impact. It strongly supports Bramwell and Lane (2011) describing sustainability governance as a multi-level challenge that cannot be solved through individual action alone.

The ZPC Level Readiness Assessment reinforces this picture by showing that only 2 out of 15 interviewed businesses currently meet Level 1 of the ZPC Standard, while the majority of businesses qualifies only for the entry level “Engaged Status”. It is not so much a question of willingness but more of formal management structures, proper documentation processes and recycling infrastructure required by the ZPC Standard. The findings also show that in order for the certification to be effective, it needs to be accessible to smaller businesses, credible in its verification processes and integrated into a larger support system that addresses the barriers. The transition towards a plastic-free hospitality sector is not a question of willingness but rather structural conditions that make this transition difficult, costly and complex for businesses. Addressing these conditions systematically requires institutional support and coordinated actions across businesses, suppliers, government institutions and NGOs like the ZeroPlastic Movement.

The next chapter outlines the limitations of this study, which should be considered when interpreting the result.

6. Limitations

6.1. Introduction

This chapter outlines the limitations of the research conducted that may affect the validity, reliability, and generalisability of the findings. Next to methodological limitations, which have been outlined in the methodology chapter every empirical study is subject to contextual and conceptual limitations that influence the validity and generalisability of the results (Bryman, 2016). This study is also subject to a number of practical limitations in terms of data collection, researcher bias and the research context. By critically reflecting on these aspects, this chapter aims to provide transparency in regard to the interpretation of the results.

6.2. Conceptual Limitations

The research study is based on the analytical separation of barriers into categories such as organisational, financial, cultural or institutional factors. In reality these factors are closely interlinked with each other and influence each other (Gössling et al., 2015). These interdependencies can only be captured to a limited degree through a standardised survey, as complex interactions need to be simplified (Bryman, 2016), which creates a risk of not fully capturing the connection between different barriers. To compensate for this, 15 semi-structured interviews were additionally conducted.

6.3. Time Limitations

The research phase was limited to 6 weeks and is therefore based on a snapshot of the current situation. Regulatory frameworks, market requirements and technological developments can change over time and influence conditions (World Tourism Organization & United Nations Development Programme, 2018). The findings of this study are therefore timebound and capture the situation as it was during the data collection.

6.4. Contextual and Language Limitations

Another limitation that occurred during the field research is in regard to language, even though the survey was conducted in English and Sinhalese, which are widely spoken in Sri Lanka, there may be differences in interpretations. Even if respondents have sufficient language skills, there

is possibility that individual terms or concepts may not carry the same meaning across cultural settings, which affects how questions of the survey are interpreted, hence influences the validity of responses (Bryman, 2016). This applies often to abstract or conceptually complex topics such as sustainability, certification or environmental management, where the meanings can vary culturally and contextually (O'Reilly, 2012).

6.5. Partnership Bias

Also, the collaboration with an external organization (ZeroPlastic Movement) involved adds limitations. While such partnerships provide valuable access to practical insights and information, they may also influence the responses of participating businesses. Respondents may perceive the research as being linked to future certification opportunities and may therefore provide strategically favourable or rather cautious answers (Bryman, 2016), which may lead to response bias in relation to attitudes towards sustainability and certification schemes. Also, in regard to the researcher, a certain proximity to the organisation (ZeroPlastic Movement) is given and may shape the framing of the research itself, potentially even influencing the interpretation of findings.

6.6. Scope Limitations

The ZPC Level 1 readiness assessment was based on a self-designed questionnaire focusing on the plastic specific criteria of the ZPC standard. More dimensions of the standard, such as waste diversion, water and energy footprints as well as formal compliance documentation were not included in the assessment.

6.7. Cultural Bias

In some cultural settings, respondents may avoid expressing critical views or risky answers, as they may fear potential negative consequences for business relationships or reputations (O'Reilly, 2012). This introduces a form of cultural response bias, where answers may reflect socially acceptable positions rather than actual practices or beliefs. Those dynamics may affect the validity of self-reported data and need to be considered when interpreting the findings.

6.8. Researcher Bias

The researcher's positionality may also have influenced the data collection process. As a European researcher conducting questionnaires and interviews in Sri Lanka, participants may have associated the researcher with Western sustainability values and expectations, which may have encouraged some interviewees to present their sustainability efforts more positively than in reality. Throughout the data collection and interpretation, the researcher was trying to reflect all times on potential biases, cultural dynamics and power relations. Reflexivity is therefore an important methodological principle in qualitative research (O'Reilly, 2012).

The final chapter sums up the findings of this study and provides practical recommendation for ZeroPlastic Movement.

7. Conclusion

7.1. Introduction

The final chapter brings together the key insights gathered during the research study and translates them into practical recommendations for ZeroPlastic Movement. This research aimed to identify the perceived barriers that hospitality businesses in the Southern Province of Sri Lanka face in adopting eco-friendly alternatives to single-use plastic items and achieving ZeroPlastic Commitment Certification. Through qualitative and quantitative analysis, the study examined these barriers from different angles and analysed them in the light of the theoretical framework developed in this study. Throughout, the findings are discussed in relation to the research objective and hypotheses. Lastly, this chapter discusses implications and next steps for the NGO ZeroPlastic Movement regarding the ZeroPlastic Commitment certification scheme.

7.2. Answering Research Questions

This research study was conducted to answer the following research question: What barriers do hospitality businesses in the Southern Province of Sri Lanka face in adopting eco-friendly alternatives to single-use plastic items and achieving ZeroPlastic Commitment Certification? To structure the analysis, three sub-questions were formulated. The answers presented below draw on the combined evidence from the quantitative survey, the semi-structured interview and the ZPC Level 1 Readiness Assessment.

Sub-question 1: What types of single-use plastic items are currently used?

The quantitative findings show that plastic bottles and plastic bags are by far the most commonly used items, with roughly 80% of the businesses still using them regularly in their business operations. Plastic straws and takeaway boxes follow at around 45% and 47%. Hygiene related products such as dental kits or shower caps are used much less. The qualitative findings confirm this pattern and add that businesses that describes themselves as nearly plastic-free, some operational items, particularly in kitchen and packaging remain difficult to eliminate. This indicates that plastic reduction efforts should focus on procurement and packaging rather than on individual guest amenity products.

Sub-question 2: What factors influence the adoption of eco-friendly alternatives?

The adoption of eco-friendly alternatives is influenced by a combination of interconnected factors, rather than by one single decisive variable. Cost and limited access to sustainable alternatives came up as the most reported barriers across the survey and interviews, followed

by hygiene concerns, perceived quality limitations, awareness gaps and weak customer demand. While none of the hypothesised variables reached statistical significance in the regression analysis, these quantitative findings make it clear that this is not a sign of irrelevance, but rather show that no single barrier acts alone, but all interact with each other.

Sub-question 3: What challenges do businesses face in reaching ZeroPlastic Commitment Certification?

The interviews, complemented by the ZPC Level 1 Readiness Assessment portray that the main challenges do not lie in the willingness of businesses to engage with certifications, but rather in the formal management structures required for it. The Readiness Assessment of the 15 interviewed businesses revealed that only 2 out of 15 businesses would currently meet Level 1 certification, while the majority would qualify for the Engaged status. Mainly due to a missing written Plastic Reduction Plan, a designated sustainability officer, formal record keeping and an established recycling infrastructure. In addition, the interviews highlighted that certifications are often perceived as too complex, resource-intensive and not always practical for smaller businesses. Limited awareness and credibility as well as a lack of market-based incentives further reduce motivation to engage. The findings show that certification can work well when it is properly designed, implemented and actively supported by management.

Answering the main research question: **What barriers do hospitality businesses in the Southern Province of Sri Lanka face in adopting eco-friendly alternatives to single-use plastic items and achieving ZeroPlastic Commitment Certification?** The key takeaways of this research study is that the reduction of single-use plastic and the achievement of ZPC Certification in the Sri Lankan hospitality sector are mainly structural and institutional challenges rather than individual business decisions. Most businesses express a willingness to reduce plastic, but the conditions they operate in, including fragmented supply chains, weak regulatory frameworks, limited access to sustainable alternatives, absent customer demand and lacking management systems create an environment where motivation by itself is not enough to drive system change.

7.3. Theoretical Synthesis and Contribution

This research study contributes to the sustainability discussion in the hospitality sector in two ways:

1. Hospitality businesses in the Southern Province in Sri Lanka operate in a market that rewards growth and low prices, while at the same time they are expected to reduce material consumption, eliminate plastic and adopt sustainability practices. The empirical findings of this study show that the contradiction is not abstract but plays out in everyday business decisions. It is particularly interesting that 13 out of 15 interviewed businesses report management support for sustainability, but only 2 out of 15 would actually meet Level 1 of the ZPC Standard. This makes the ‘double bind’ very tangible. The willingness is there, but the conditions to act on it are not.
2. The findings support the argument by Bramwell & Lane (2011) that sustainable tourism in the Global South is shaped by weak and fragmented governance. The interviews consistently show that hospitality businesses experience environmental responsibility as something that has been shifted onto private actors and NGOs, while the regulatory capacity of the government remains rather limited. Eriksen (2016) places this development within the context of neoliberal globalisation.

These two contributions reinforce the main finding of this thesis: The transition towards a plastic-free hospitality sector in the Southern Province of Sri Lanka is a structural and political challenge, rather than of individual willingness or awareness.

7.4. Practical Recommendations for ZeroPlastic Movement

I propose the following seven recommendations for ZeroPlastic Movement for the Sri Lankan hospitality sector:

1. Simplicity

Keep the certification process simple and accessible, especially for smaller businesses. The ZPC Readiness Assessment showed that 8 out of 15 interviewed businesses qualify for the entry level “Engaged status”, mainly because they lack formal documentation, written policies and structured management systems. Interviewee 1 and 10 explicitly stated that they consider their business as “too small” for certification. The entry level of the certification scheme should

therefore be as simple and manageable as possible, e.g. providing templates for the PRP and the PMS, so that smaller locally owned businesses can get started without being overwhelmed by cost and administrative requirements.

2. Credibility

Several interviewees expressed scepticism about credibility of certification schemes. To build trust and credibility among the hospitality businesses, the ZPC scheme should incorporate transparent and rigorous verification mechanisms, this could include on-site visits and third-party auditing.

3. Preferred supplier network

Across nearly all interviews, supply chain dependencies emerged as a major barrier. Therefore, it is important to engage with suppliers directly, given the fact that many of the interviews stated that most of the plastic flows in from their supplier through packaging. ZeroPlastic Movement should consider developing a preferred supplier network of businesses that are committed to plastic-free packaging.

4. Sharing best practices

Quality and hygiene concerns are frequently perceived as barriers rather than actual product limitations. ZeroPlastic Movement should demonstrate businesses that eco-friendly alternatives actually work. Quality and hygiene concerns seem to be perception-based and could be reduced through better information sharing. A product guide or platform that shows alternatives that have been successfully tested by certified businesses could be a very practical tool.

5. Support

Awareness alone does not drive behavioural change. ZeroPlastic Movement should combine certification processes with ongoing support and capacity building. Practical workshop, peer-learning session, round tables and mentoring programmes would help businesses to navigate through the processes.

6. Government Stakeholders

Across the interviews, businesses repeatedly emphasized that their individual efforts are constrained by weak regulatory frameworks, fragmented waste management infrastructure and inconsistent enforcement. Therefore, ZeroPlastic Movement should advocate for stronger

government regulations and infrastructure. As civil society actor, ZeroPlastic Movement is well positioned to partner up with government stakeholders and international partners to advocate for stronger regulatory enforcement and infrastructure.

7. Pilot Sessions

During the research study, two hospitality businesses expressed their interest and willingness to participate in a pilot session in regard to the ZPC Certification. This could be a great opportunity for ZeroPlastic Movement to receive detailed feedback and conduct a reality check in the hospitality business.

Lastly, as an experienced sustainability auditor, I would like share one of my learnings from my professional career: A certification scheme can either work as a proof to recognize and reward businesses that already meet certain standards or serve as a process, that guides and supports businesses through the steps required to reach that standard. The two roles attract very different types of businesses and serve very different purposes. The first rewards leaders, the second supports learners. For the Sri Lankan hospitality sector, where many businesses operate with limited resources and informal sustainability practices, primarily the second role is needed.

List of References

- Abeyagoonasekera, A. (2023). Sri Lanka's political-economic crisis; corruption, abuse of power and economic crime. *Journal of Financial Crime*, 30(6). <https://doi.org/https://doi.org/10.1108/JFC-03-2023-0069>
- Bandara, C., Dissanayake, D. M. P. P., Karunasena, G., & Madhusanka, N. (2018). Mitigation of challenges in sustaining green certification in the Sri Lankan hotel sector. *Built Environment Project and Asset Management*, 8(5), 515-527. <https://doi.org/10.1108/BEPAM-10-2017-0102>
- Barone, A. S., Maragoni-Santosa, C., Farias, P. M. d., Cortat, C. M. G., Maniglia, B. C., Ongarattoe, R. S., Ferreira, S., & Fai, A. E. C. (2025). Rethinking single-use plastics: Innovations, policies, consumer awareness and market shaping biodegradable solutions in the packaging industry. *Trends in Food Science & Technology* 158, *Trends in Food Science & Technology*. <https://doi.org/https://doi.org/10.1016/j.tifs.2025.104906>
- Blackman, A., Naranjo, M. A., Robalino, J., Alpízar, F., & Rivera, J. (2014). Does Tourism Eco-Certification Pay? Costa Rica's Blue Flag Program. *World Development*, 58, 41-52. <https://doi.org/https://doi.org/10.1016/j.worlddev.2013.12.002>
- Bramwell, B., & Lane, B. (2011). Crises, sustainable tourism and achieving critical understanding. *Journal of Sustainable Tourism*, 19(1), 1-3. <https://doi.org/10.1080/09669582.2010.535743>
- Bryman, A. (2016). *Social Research Methods* (4 ed.). Oxford University Press.
- Central Bank of Sri Lanka. (2022). *Economic, Price and Financial System Stability, Outlook and Policies*. C. B. o. S. Lanka. https://www.cbsl.gov.lk/sites/default/files/cbslweb_documents/publications/annual_report/2022/en/5_Chapter_01.pdf
- Eriksen, T. H. (2016). *Overheating: An Anthropology of Accelerated Change*. Pluto Press, London.
- Eriksen, T. H., & Schober, E. (2018). Economies of Growth or Ecologies of Survival? *Ethnos: Journal of Anthropology*, 83(3), 415-422. <https://doi.org/10.1080/00141844.2016.1169201>
- European Parliament & Council of the European Union. (2019). Directive (EU) 2019/904 of the European Parliament and of the Council of 5 June 2019 on the reduction of the impact of certain plastic products on the environment. *Official Journal of the European Union*, L-155, 1-19. <https://eur-lex.europa.eu/eli/dir/2019/904/oj/eng>
- Field, A. (2018). *Discovering statistics using IBM SPSS Statistics* (5 ed.). SAGE Publications.
- Font, X. (2002). Environmental certification in tourism and hospitality: Progress, process and prospects. *Tourism Management*, 23(3), 197-205. [https://doi.org/https://doi.org/10.1016/S0261-5177\(01\)00084-X](https://doi.org/https://doi.org/10.1016/S0261-5177(01)00084-X)
- Gössling, S., Ring, A., Dwyer, L., Andersson, A.-C., & Hall, C. M. (2015). Optimizing or maximizing? A challenge to sustainable tourism. *Journal of Sustainable Tourism*. <https://doi.org/10.1080/09669582.2015.1085869>
- Honey, M. (2008). *Ecotourism and sustainable development: Who owns paradise?* Island Press.
- Jayasinghe, R. R., Abeyrathna, W. P., Hendawitharana, M. P., Bandara, h. S., & Williams, K. S. (2023). Exploring the Plastic Collection and Recycling Trends in Sri Lanka. *Recycling*, 8, 16. <https://doi.org/https://doi.org/10.3390/recycling8060094>
- Kumudhini, K., & Vijesandiran, S. (2024). Tourism Development in Sri Lanka: A Review of Literature. <https://doi.org/https://dx.doi.org/10.47772/IJRISS.2024.8100271>

- Ma, X., Park, C., & Moultrie, J. (2019). Factors for eliminating plastic in packaging: The European FMCG experts' view. *Journal of Cleaner Production*, 256, 20. <https://doi.org/https://doi.org/10.1016/j.jclepro.2020.120492>
- Ministry of Environment Sri Lanka. (2021). *National Action Plan on Plastic Waste Management 2021–2030*. S. L. Ministry of Environment. https://resolutions.unep.org/resolutions/uploads/national_action_plan_on_plastic_waste_management.pdf
- O'Reilly, K. (2012). *Ethnographic methods* (2 ed.). Routledge.
- Sørbo, G. M., Goodhand, J., Klem, B., Nissen, A. E., & Selbervik, H. (2011). *Pawns of peace: Evaluation of Norwegian peace efforts in Sri Lanka, 1997–2009*. N. A. f. D. C. (Norad). <https://www.norad.no/en/toolspublications/publications/2011/pawns-of-peace-evaluation-of-norwegian-peace-efforts-in-sri-lanka-1997-2009/>
- Sri Lanka Tourism Development Authority. (2024). *Sri Lanka - The Heart of the Eastern Hemisphere*. S. L. T. D. Authority. https://www.sltta.gov.lk/storage/common_media/Invest_in_SL_Tourism_Final_Brochure.pdf
- Sri Lanka Tourism Development Authority. (2025). *Year in Review 2025*. S. L. T. D. Authority. https://www.sltta.gov.lk/storage/common_media/Year_in_Review_2025_Final_updated_Report_2026_04_02-1.pdf
- Tunn, V. S. C., Bocken, N. M. P., Hende, E. A. v. d., & Schoormans, J. P. L. (2018). Business models for sustainable consumption in the circular economy: An expert study. *Journal of Cleaner Production*, 212, 10. <https://doi.org/https://doi.org/10.1016/j.jclepro.2018.11.290>
- UN Tourism. (2026). *World Tourism Barometer*. <https://www.untourism.int/un-tourism-world-tourism-barometer-data>
- United Nations Environment Programme [UNEP]. (2018). *SINGLE-USE PLASTICS: A Roadmap for Sustainability*. UNEP. <https://wedocs.unep.org/rest/api/core/bitstreams/79b73273-3fda-49d1-b6d9-8ee72e86fa78/content>
- United Nations Environment Programme [UNEP]. (2019). *Environmental rule of law: First global report*. UNEP. <https://www.unep.org/resources/assessment/environmental-rule-law-first-global-report>
- United Nations Environment Programme [UNEP]. (2021). *From pollution to solution: A global assessment of marine litter and plastic pollution*. UNEP. <https://www.unep.org/resources/pollution-solution-global-assessment-marine-litter-and-plastic-pollution>
- Vimal, K. E. K., Mathiyazhagan, K., Agarwal, V., Luthra, S., & Sivakumar, K. (2020). Analysis of barriers that impede the elimination of single-use plastic in developing economy context. *Journal of Cleaner Production*, 272, 18. <https://doi.org/https://doi.org/10.1016/j.jclepro.2020.122629>
- World Bank. (2023). *Sri Lanka development update*. W. B. Group. <https://openknowledge.worldbank.org/server/api/core/bitstreams/e8702694-0c68-4a7b-8cd2-006a821463d0/content>
- World Tourism Organization [UNWTO]. (2019). *International Tourism Highlights*. 23. <https://doi.org/https://doi.org/10.18111/9789284421152>
- World Tourism Organization & United Nations Development Programme. (2018). *Tourism and the Sustainable Development Goals – Journey to 2030*. UNWTO.
- Worldbank. (2026). *Overview Sri Lanka*. Retrieved 10.04.2026 from <https://www.worldbank.org/ext/en/country/srilanka>

Appendices

Appendix 1 – ZPC Level 1 Readiness Assessment

QA.1 Ownership Structure

- ☐ Locally owned
- ☐ internationally owned
- ☐ Franchisee of an international brand
- ☐ Joint venture
- ☐ Other

QA.2 Number of employees

- ☐ 1-10
- ☐ 11-30
- ☐ 31-100
- ☐ 100 +

QA.3 Do you have an appointed sustainability officer?

- ☐ Yes
- ☐ No

QA.4 Do you have a written sustainability / environmental policy?

- ☐ Yes
- ☐ No

QB.1 Have you previously conducted any assessment of plastic use or plastic waste generation?

- ☐ Yes
- ☐ No
- ☐ Partially/Informally

QB.2 Are single-use plastic items (SUPs) currently used within the facility?

- ☐ Yes
- ☐ No

QB.2.1 Which of the following single-use plastic items do you currently use in your hotel operations? *(tick all that apply)*

- ☐ None
- ☐ Packaging Plastic
- ☐ Food Service Items
- ☐ Office or service-related disposables
- ☐ Operational or process-related plastics
- ☐ Other:

QB.3 What are the main reasons some single-use plastics are still used in business operations? (tick all that apply)

- ☐ We do not have single-use plastics in operation
- ☐ I haven't looked at alternatives yet
- ☐ Not interested in switching to alternatives
- ☐ Alternatives are more expensive
- ☐ Alternatives are difficult to find
- ☐ Alternatives are of low quality
- ☐ Hygiene or Food safety concerns
- ☐ Customer prefer plastic
- ☐ Other:

QB.4 Does your purchasing process prevent re-ordering eliminated plastic items?

- ☐ Yes (approved supplier list / rules exist)
- ☐ Partially (informal control)
- ☐ No controls
- ☐ Not sure

QB.5 Do you have a written plan to reduce plastic use?

- ☐ Yes, written and used
- ☐ Informal ideas only
- ☐ No plan

QB.6 How would you rate your current efforts to reduce single-use plastic?

- ☐ None
- ☐ Rather limited
- ☐ Some efforts
- ☐ Significant efforts

QD.1 Is staff trained on waste management

- ☐ Yes, formal training
- ☐ Informal awareness
- ☐ Training planned but not yet implemented
- ☐ No training

QD.2 Are there documented procedures or instructions in place for plastic waste handling and segregation?

- ☐ Yes
- ☐ In development
- ☐ No

QD.3 Is plastic waste segregated at source within the facility?

- ☐ Yes, systematically
- ☐ Partially
- ☐ No

QD.4 What happens to separated plastic waste? (tick all that apply)

- ☐ Municipal collection
- ☐ Private waste contractor
- ☐ Direct recycler
- ☐ Informal collectors
- ☐ Co-processing / recovery
- ☐ Other:

QD.5 Do you keep any records for plastic waste that was collected (receipts, logs, weights)?

- ☐ Yes
- ☐ Partially
- ☐ No

QD.6 Is the organisation willing to explore direct contracts with recycling or recovery facilities?

- ☐ Yes
- ☐ Maybe
- ☐ No

QD.7 Is the organisation willing to improve or introduce plastic segregation and tracking systems if guidance is provided?

- ☐ Yes
- ☐ Maybe
- ☐ No

QD.8 Is senior management supportive of initiatives aimed at reducing plastic use and improving plastic waste management?

- ☐ Yes
- ☐ Not yet discussed
- ☐ No

QD.9 Is senior management supportive of initiatives aimed at reducing plastic use and improving plastic waste management? (tick all that apply)

- ☐ lack of recycling facilities
- ☐ Cost constraints
- ☐ Space or infrastructure limitations
- ☐ Hygiene requirements
- ☐ Lack of awareness or training
- ☐ Operations become more complex
- ☐ Government guidance on plastic is rather unclear

Appendix 2 – Basic Survey

Q1 Type of hospitality business

- ☐ Hotel /Resort
- ☐ Guesthouse / Homestay
- ☐ Restaurant / Café / Bar

Q2 Number of employees

- ☐ 1-10
- ☐ 11-30
- ☐ 31-100
- ☐ 100 +

Q3 Ownership Structure

- ☐ Locally owned
- ☐ Internationally owned
- ☐ Franchisee of an international brand
- ☐ Joint venture
- ☐ Other:

Q4 What motivates your business to reduce plastic use?

- ☐ Environmental protection
- ☐ Customer demand
- ☐ Cost reduction
- ☐ Business reputation
- ☐ Legal or certification requirements

Q5 Which of the following plastic items do you currently use in your business operations? (Tick all that applies)

- Plastic straws
- Plastic cutlery (forks, knives, spoons)
- Plastic plates, cups, lids
- Plastic takeaway containers
- Plastic bottles (water, etc.)
- Plastic bags / trash bags
- Plastic wraps
- Plastic gloves
- Plastic lunch sheets
- Shampoo, conditioner, and body wash bottles
- Dental kits
- Shaving kits
- Shower caps
- Soap wrappers (plastic-coated)
- Packaging for laundry items

Q6 What are the main reasons you still use single-use plastics in your business operations?

- ☐ Alternatives are expensive
- ☐ Alternatives are difficult to find
- ☐ Alternatives are low quality
- ☐ I haven't looked at alternatives
- ☐ Hygiene or Food safety issues
- ☐ Customers prefer plastic

Other: _____

Q7 If support was available, would you switch to plastic-free alternatives?

- ☐ Yes
- ☐ Maybe
- ☐ No

Q8 Do you separate waste by type (organic, plastic, paper, metal, etc.)?

- ☐ Yes
- ☐ Partially
- ☐ No
- ☐ Other:

Q9 How do you dispose plastic waste?

- ☐ Sent to recycling
- ☐ Local authority or private collectors pick it up
- ☐ Dump it
- ☐ Burn it
- ☐ I don't know
- ☐ Other:

Q10 Do you track the quantity of waste?

- ☐ Yes
- ☐ No

Appendix 3 – Semi-structured Interview Guide

OQ.1 What role, if any, does sustainability (plastic) play in your daily business operation? How has this changed over time, and what would you say has influenced this change the most?

OQ.2 Have you tried to reduce plastic in the past? What worked well, what did not work well? What makes it difficult for your business to reduce or remove plastic?

OQ.3 How do your suppliers influence what you can or cannot change regarding plastic?

OQ.4 How do customers react when plastic is reduced or removed? Any feedback?

OQ.5 How do staff respond to plastic-free practices in daily operations? Any feedback?

OQ.6 Do you have any type of sustainability Certification?

OQ.6.1 If yes: Which one:

OQ.6.1.1 If yes: In what way do you think this certification process has influenced your internal processes and management systems?

OQ.6.2 If no: What are the main reasons why your business has not applied for any sustainability certification? **Prompts:** *Lack of guidance, High cost, Time invest / workload, Size of business (too small / too big), Documentation and record-keeping too intense, Complexity of certification requirements, Integration with existing systems / operations, Technical complexity, Low priority, no initiative yet.*

OQ.7 What kind of support would make it easier for you to phase out plastic?