REPORT ON

CONSERVING GENTLE GIANTS

Case study on the scope of illegal whale-swimming activities in Sri Lanka and its impact on sustainable tourism

October 2024

By The Pearl Protectors

Conserving gentle giants: case study on the scope of illegal whale-swimming activities in Sri Lanka and its impact on sustainable tourism

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The Pearl Protectors is a volunteer-based and non-profit marine conservation organisation in Sri Lanka. Established in 2018, The Pearl Protectors seeks to mitigate the impacts of anthropogenic activities on the marine environment, reduce plastic pollution and promote sustainable practices through youth engagement, volunteerism, awareness and advocacy.

Projects undertaken by The Pearl Protectors over the years entail launching of the 'Pearl Protector Approved' Accredited Standardization Certificate to promote a plastic-free dining culture; the annual construction of a Christmas tree out of discarded plastic bottles to highlight single-use plastic pollution; school education programs; eco-brick workshops; coastal cleanups including the Nurdle Free Lanka Initiative; Cleaner Seabeds for Sri Lanka underwater cleaning expedition; World Oceans Day through Art competitions; and social media campaigns to inspire action towards protecting the marine environment.

The report aims to highlight the detrimental effects of illegal whale-swimming activities in Sri Lanka and emphasise the need for better regulation and awareness-raising to protect both the cetacean species and the country's reputation as a sustainable tourism destination. This investigative research was prepared on a voluntary basis, with the authors contributing their time and expertise solely out of a commitment to the conservation of cetacean species in Sri Lanka. It is important to emphasise that the intention behind this publication is not to harm local businesses, but rather to raise awareness and promote sustainable practices that will benefit both the marine environment and the communities that depend on it. The authors hope that their work will contribute to the protection of these species while supporting the long-term viability of local businesses.

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Executive Summary

Sri Lanka has emerged as a leading whale-watching destination, offering substantial economic benefits from its diverse cetacean species. The presence of year-round blue whale populations in Sri Lankan waters makes these species especially vulnerable to tourism-related stressors. While regulations are meant to oversee whale-watching, many operators of various water activities participate in swim-with-whale practices, contributing to a surge in these unlawful activities. This trend is driven by the tourism boom post-2020, compounded by inadequate governmental enforcement of existing regulations and a lack of awareness among tourists.

This study investigates the impact of illegal swim-with-whale tours in Sri Lanka, focusing on the harmful effects of unethical practices. Key findings reveal widespread non-compliance, with 73% of surveyed operators in Mirissa and 83% of surveyed operators in Trincomalee engaging in illegal whale-swimming activities. Some operators encourage physical contact with whales. Despite regulations mandating a 100-meter distance, operators frequently approached within 2-3 meters, risking vessel collisions and behavioural disturbances. Offering to swim with whales has become a lucrative business as operators charge high prices while often evading taxes. Illegal operators focus on profit, charging significantly more and avoiding taxes, which leads to significant revenue losses for the government. Close encounters with whales endanger both wildlife and humans and compromise Sri Lanka's reputation as a sustainable tourism destination.

Addressing these issues requires robust regulatory measures, including stringent enforcement of permits and the promotion of sustainable tourism practices. Enhancing consumer awareness is critical to encourage support for eco-friendly options and conservation efforts. While governmental and industry stakeholders bear primary responsibility, tourists can contribute significantly by advocating for and supporting sustainable tourism practices. This collective effort can safeguard Sri Lanka's marine biodiversity and set a global standard for responsible whale-watching tourism.

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List of Abbreviations

DWC	Department of Wildlife Conservation
FFPO	Fauna and Flora Protection Ordinance
IWC	International Whaling Commission
NSTC	National Sustainable Tourism Certification
SLTDA	Sri Lanka Tourism Development Authority
UNDP	United Nations Development Programme

1. Introduction

Over the past three decades, Sri Lanka has risen as a premier whale watching hub globally, attracting enthusiasts and researchers alike (Sankalpa et al., 2021). In 2008 an estimated 620 people participated in whale-watching activities, while in 2014 this increased to almost 80,000 (Buultjens et al., 2016). Sri Lanka's unique geographical features, characterised by a narrow continental shelf and a steep underwater slope, create an ideal habitat for a diverse array of cetacean species (Sankalpa et al., 2021). Among these are nine distinct species, including the blue whale (*Balaenoptera musculus*) (Sankalpa et al., 2021). This abundance of marine life not only enriches Sri Lanka's natural heritage but also provides economic benefits to its population (Buultjens et al., 2016). Between 2008 and 2014, whale-watching tourism experienced a rapid expansion (Buultjens et al., 2016). Already then, concerns were raised about its impact on conservation efforts (Buultjens et al., 2016).

1.1. Sri Lankan legislation on swim-with-whale tours

Whale watching within the territorial waters of Sri Lanka is regulated by the Sea Mammals (Observation, Regulation and Control) Regulations, No. 01 of 2012. This set of regulations has also been further amended in 2019 under the Extraordinary Gazette No. 2108/40. These regulations are attached to section 30 (offences relating to mammals and reptiles not included in Schedule I - PART III VERTEBRATES AND INVERTEBRATES) and are read with section 71 (general regulations) of the Fauna and Flora Protection Ordinance (FFPO).

The regulations also attempted to accomplish the following:

1. "Every vessel being plied for the purpose of taking visitors to places which are the natural habitat of sea mammals, shall be so used only upon obtaining a licence specifically for such purpose from the Director General of wildlife conservation (hereinafter referred to as the Director General) or from an officer authorized by him in that behalf".
2. "Every person being an owner or operator of a vessel, who wishes to obtain a licence as specified in paragraph 01 authorizing him to ply a vessel for taking visitors to observe Sea mammals, shall submit an application to the director general substantially in the form as set out in Schedule I to these regulations along with the specified fee".
3. "Every vessel being plied for the purpose of taking visitors to observe sea mammals shall prior to obtaining a licence as specified in paragraph 01, be registered with the Department of Wildlife Conservation (hereinafter referred to as "the Department"). The registration fee payable shall be rupees five thousand per annum".

Effectively, the above regulatory provisions had the formal effect of operationalising the three sea mammal observation zones, by means of facilitating maritime boat safaris within the procedurally declared areas that the sea mammal observation zones covered.

The regulations also directly stated the following in terms of safari guides: “every vessel going out to sea taking passengers for observing sea mammals shall have on board an operator, an assistant operator and a guide. The guide shall be a guide trained by the Department. All guides shall be registered with the department”.

Regulations include the following conditions:

Condition No. 12 – “Persons engaged in observing sea mammals should not be allowed to get into the sea or do anything which is harmful to the sea mammals, other than for diving after obtaining the prior approval of the Director General”.

Condition No. 18 – “If anyone or several or all the conditions (this includes condition No. 12) are breached it will result in cancellation of the license issued to the vessel”.

These conditions prohibit persons engaged in observing sea mammals from getting into the sea, deeming such activities illegal, unless express written prior permission/ approval of the Director General of the Department of Wildlife Conservation needs to be obtained.

The provisions under the Fauna and Flora Ordinance deal with the breaching of these regulations. The ordinance includes cognizable offences; hence offenders can be arrested without a warrant.

By means of interpretation (Interpretation Ordinance (No. 21 of 1901), illegally swimming with cetaceans (whales, dolphins and porpoises) and chelonioids (sea turtles), can also be interpreted as harassing and/or potentially injuring/endangering such examples of marine biodiversity as per section 30:

1. Section 30, subsection 01, paragraph (a) – “Any person who in any area outside a National reserve or a wildlife sanctuary (i.e. a protected area), kills, wounds, injures or takes any mammal or reptile not included in Schedule I of this ordinance shall be guilty of an offence and shall on conviction be liable to a fine not less than twenty thousand rupees and not

exceeding fifty thousand rupees or to imprisonment of either description for a term not less than two years and not exceeding five years, or to both such fine and imprisonment"

2. Section 30, subsection 01, paragraph (c) – "Any person who in any area outside a national reserve or a wildlife sanctuary (i.e. a protected area), uses any boat or any lime, snare, net, spear, trap, gun, rod, line or hook with any accessory or bait, or explosives of any description or other instrument for the purpose of killing, wounding, injuring or taking any such mammal or reptile shall be guilty of an offence and shall on conviction be liable to a fine not less than twenty thousand rupees and not exceeding fifty thousand rupees or to imprisonment of either description for a term not less than two years and not exceeding five years, or to both such fine and imprisonment".

Therefore, engaging in strictly prohibited activities such as swimming with cetaceans (whales, dolphins and porpoises) and chelonioids (sea turtles), can not only result in the complete cancellation of the license issued to the maritime Safari boat operator but also (through interpretation) monetary fines and imprisonment depending on the scale of the violations caused by such illicit activities.

1.2. The impacts of human encounters

1.2.1. The impacts of human encounters, on whales

In swim-with-cetacean activities, humans enter the water with wild cetaceans. These activities are either "passive" where cetaceans are let to approach human swimmers at their will, or "active" where the swimmers are placed in the path of oncoming cetaceans, and/or the cetaceans are pursued (Parsons et al., 2006). Even though it is argued that both types of activity are more invasive than regular boat-based whale watching, especially the "active" form has raised discussion due to the potential risk to both humans and cetaceans involved in the activity (IWC, 2007). There are many concerns about the impact of this activity on the target species. An increasing number of empirical studies document examples of behavioural changes observed in cetacean species in response to whale-watching /swim-with-whales traffic and related human interactions which can further be discussed under the following key areas.

Changes in behaviour

Studies have shown an alteration in essential daily activities such as feeding or resting (Parsons, 2012). This effect could be detrimental to the overall strength of the animal, especially in cases where the exposure is prolonged and repeated (Parsons, 2012).

Several studies, encompassing a range of species and locations, recorded and confirmed stereotypical behaviours in whales when approached by whale-watching vessels. These behaviours are evidenced by the increase in swimming speed and the change of swimming direction (Au & Green, 2000; Bauer et al.,1986) as well as making longer dives to avoid vessels (Scheidat et al., 2004). Some cases of agonistic behaviour such as charging or tail slapping between whales as well as towards vessels were observed (Scheidat et al., 2004).

Studies investigating breathing synchrony and surfacing of cetaceans recorded an increase in respiration rate and surfacing, positively correlated with the increase in swim speed (Currie et al., 2021; Williams & Noren, 2009). These results indicate an increase in energy use of the animals arising from human activity, which has both individual and population-level consequences (Cartwright et al., 2019; Lusseau & Bejder, 2007). Whales in breeding grounds rely on fat reserves to survive breeding activities while maintaining enough energy to endure the lengthy migration back to the feeding grounds (Braithwaite et al., 2015). The avoidance behaviours of increased swim speed, increased respiration rate and change of paths in response to vessels are energetically demanding for animals already with high energy expenditure due to activities of mating, nursing and calving (Braithwaite et al., 2015). It has been suggested that even whale-watching activities already cause a distributional shift from near-shore towards further offshore areas (Ilangakoon, 2012).

The behaviour of cetaceans in a group is largely determined by age class, sex and reproductive status (Craig et al., 2003). While mother-calf pairs ideally prefer shallow waters close to the shore (Currie et al., 2018), long-term studies suggest that mother-calf pairs becoming less frequently close to shore is proportional to the increase in recreational boating (Glockner-Ferrari & Ferrari, 1985; Salden, 1988). It is suggested that mother-calf pairs may be especially vulnerable to disturbance, since some avoidance responses such as increased swim speeds and longer dive times are beyond the physiological limits of the calf (Scheidat et al., 2004). Additionally, calves may have less opportunity to feed if the mother is forced to increase her speed or to change her behaviour from resting to travelling (Scheidat et al., 2004).

Furthermore, a study by Stack et al. (2021) on the behavioural impacts of commercial swimming with whale tours on humpback whales (*Megaptera novaeanglia*) in Hervey Bay, Australia. revealed several important findings that would aid in understanding the amplified effects of "swim with whales" tours over regular whale-watching tours. Resting behaviour was observed less frequently during whale-swimming tours than during whale-watching trips, with the proportion of resting time during these tours being significantly lower (Stack et al., 2021). Resting times were significantly influenced by

distance from the whale-watching vessel, with the lowest resting times measured at distances greater than 100 metres (Stack et al., 2021). While diving behaviour was observed in most groups during both tours, there was no significant difference in the proportion of time spent diving between "swimming with whales" and whale-watching tours (Stack et al., 2021). However, the proportion of time spent diving decreased with increasing tourist group size and was significantly lower in 2020 compared to other years (Stack et al., 2021). The frequency of humpback whales changing direction varied significantly with distance from the vessel and increased with decreasing distance (Stack et al., 2021). This behaviour was observed in all phases of the tours (before, during and after the tour) (Stack et al., 2021).

Even though the proportion of time spent socialising did not differ significantly between "swim with whales" tours and whale-watching tours, the time spent socialising increased significantly with increasing group size (Stack et al., 2021). The whales spent more time swimming with whales when the vessels were further away (Stack et al., 2021). The results highlight the complex interactions between humpback whales and tour vessels and demonstrate the importance of considering factors such as distance, group size and tour type to understand cetacean behavioural responses to tourism activities (Stack et al., 2021). It has been suggested that long-term behavioural disruption may eventually lead to reduced reproductive rates (Bejder et al., 2007).

Hindrance to acoustic communication

Additionally, the noise generated by (small) vessels is considered one of the primary anthropogenic disturbances towards whales (Arranz et al., 2021). Research has shown that sound emissions from boats can guise cetacean vocalizations (Jensen et al., 2008). This may cause animals either not being able to communicate (which could hinder vital communication related to mating or danger) or the animals having to increase the volume of their vocalizations, which may cause an additional energetic cost (Foote et al., 2004). Other harmful effects of noise include behavioural changes such as avoidance, reduced foraging and changes in vocalization such as alternation of song patterns (Arranz et al., 2021). The effect of anthropogenic noise from whale-watching traffic and its population-level impacts are identified as severe issues that need more attention (Martinez & Orams, 2011; Wright et al., 2007). It was suggested that the noise level generated by a vessel, measured in the third-octave band, should be below 120 decibels (dB) relative to a reference pressure of 1 μPa to minimise the impact of noise on the marine environment (Arranz et al., 2021). Noise reduction could easily be achieved through reduced speed, avoidance of gearshifts and increasing the distance to the whales (Arranz et al., 2021). Other noise-reducing measures could also be applied but need some investments (Arranz et al., 2021).

These measures include slower-moving propellers, quieter or electric engines and noise absorption gear (Arranz et al., 2021).

Pernicious stress levels

Exposure to boat traffic and human interaction can increase an animal's energy expenditure or result in chronic levels of stress, which might have negative health effects. Disturbance has also been linked to cetaceans temporarily or permanently abandoning habitats (Bejder et al., 2007; Carrera et al., 2008; Lusseau, 2005). In addition to the energetic costs of moving to a new location and potentially establishing a new territory, animals are forced to be displaced to below-optimal habitats, i.e. areas with higher predator abundance, lower quality or poorer access to food sources (Parsons, 2012).

When investigating the reactions of whales to humans, researchers rely on noticeable and measurable behaviour, treating those as an indicator of any significant impact. It is noteworthy that some studies (Bejder et al., 2009; Scheidet et al., 2004) highlighted that some Cetacean reactions may not be obvious to human observers. Long before whales show responses that are obvious at the surface, they are likely to be suppressed at a physiological or psychological level. Thereby suggesting that the absence of an observable reaction to whale-watching should not be interpreted as the absence of an effect on cetaceans (Bejder et al., 2009; Scheidat et al., 2004). Several reasons were identified for why cetaceans may remain in the area and continue certain behaviours despite disturbances (Scheidat et al., 2004). These include the area's importance as a source of prey, higher predation rates outside the area, and some animals' lack of foraging skills for species outside this region (Scheidat et al., 2004). Additionally, lower energy levels might cause cetaceans to tolerate disturbances (Scheidat et al., 2004). However, it was emphasised that a lack of obvious reactions does not mean the animals are not stressed or impacted (Scheidat et al., 2004). The aggregated effect of changing behaviours, displacement, and the chronic stress induced by whale-watching-related activities may result in declines in health and vitality (Parsons, 2012; Wright et al., 2007).

Collision and entanglement

Studies also pointed out more immediate and undeniable impacts of whale-watching activities on the target species as well, such as the risk of collisions with vessels and entanglement (Donaldson et al., 2010; Rockwood et al., 2017). Also, studies highlighted that humpback whales are not likely to take sufficient avoidance action when there is a potential for a vessel-whale-collision (Dunlop, 2024).

Risk of pathogens

Several studies confirm that cetaceans may carry parasites or other pathogens that could be transferred to humans, and vice-versa (Geraci & Ridgway, 2006; Raverty et al., 2017). Compared to traditional whale-watching, swimming-with-whale activities can be seen as of greater potential risk of transmission, evidenced by two factors; closer proximity between humans and cetaceans, as well as extended time of exposure (Rose et al., 2005; Samuels & Bejder, 2004).

1.2.2. The impacts of whale encounters, on humans

Stamation (2008) aimed to understand the interactions between humans and whales and has shown that the satisfaction of whale watchers depends on several factors, including

(i) the degree to which their expectations were met
(ii) proximity to whales
(iii) number of whales
(iv) whale's behavioural displays
(v) amount of learning that they experienced

The study documents how boat-based whale watchers were significantly more satisfied than the land-based whale watchers notably in the areas of proximity to whales, seeing whales in the natural environment, and experiencing the natural behaviours of whales (Stamation, 2008). In a swim-with-whale activity, due to the close and immediate nature of the encounter with whales, it may be presumed that there is a chance for a higher level of satisfaction. On the contrary, studies suggest that increased and long-term exposure to anthropogenic activity may lead to habituation and sensitization (Bejder et al. 2007; Stamation, 2008; Tardin et al., 2019). It is evident that sensitisation through repeated and consistent exposure to vessels can result in higher avoidance of vessels, which may lead to a shift in their distribution (Stamation, 2008; Tardin et al., 2019). The abundance of cetacean populations relative to increased human activity has been recorded (Bejder et al., 2007; Tardin et al., 2019). Considering these factors, it can be argued that avoidance behaviours and shifts in the distribution of whales can lessen the overall quality of whale-related experience of humans, since the expectations might not be met in terms of the no. of whales seen, proximity to the whales and not being able to witness the natural behaviours of whales.

Whales represent the largest animals on the Earth, with some species weighing as much as 200 tons and measuring up to 100 feet in length (Britannica, 2024; Lockyer, 1976). Swimming with such massive animals can be intimidating as accidental contact with a whale's body or appendages, such as flukes or fins, can lead to serious physical injuries (Britannica, 2024; Lockyer, 1976). It is undeniable

that wild animals, including whales, can display unpredictable behaviours when triggered (NOAA Fisheries, n.d.). A study investigating agonistic behaviours of humpback whales in response to swim-with-whales activities off Réunion Island documented a high rate of the agonistic whale behaviours during 42.1% of all observations (Barra et al., 2020). Seven types of agonistic behaviours including threat, attack, or defence behaviours were predominantly exhibited by mother/calf groups (73.8%; n = 121) and by singletons (16.5%; n = 27) (Barra et al., 2020). Pectoral shears (27.4%) and fluke thrashes (23.2%) were identified as the most exhibited agonistic whale behaviours aimed towards swimmers, posing a risk of serious injury to swimmers (Barra et al., 2020). During swim-with-whales attempts, whales drastically changed their behavioural state by 82.3% (n = 159) (Barra et al., 2020). As recorded, humans being too close to whales breaching, agonistic behaviours, as well as accidental colliding with humans and vessels carrying humans can have detrimental effects (BBC, 2015, 2020; Vorsino, 2004). Many cases of such physical injury during swimming with whales as well as while approaching whales with vessels have been recorded (BBC, 2020; Vorsino, 2004). Other than accidents that involve whales, poor knowledge, recruitment and maintenance in parties organising the whale-related activities focused on monetary gain, has also led to accidents such as sinking and capsized vessels, accounting for lost human lives (BBC, 2015).

1.3. Whale encounters in Tonga

Contrarily to Sri Lanka, Tonga is one of the few places in the world where swimming with whales is allowed, with a particular focus on pods with mothers and calves which are often found in shallow water (Kessler et al., 2013). These activities however need precautionary management to ensure the well-being of the whales, especially mothers and their young. Therefore, the Tongan Whale Watching Operators Association has created a code of conduct for behaviour around whales and the Tongan Government implements regulations aimed at minimising the impact of whale watching and swimming activities (Kessler & Harcourt, 2012).

To control the number of whale-watching operators, Tonga has issued a limited number of licenses with 13 licenses issued in 2007 (Kingdom of Tonga, 2013). No further increase in licenses is recommended until research provides a better understanding of an appropriate number (Kingdom of Tonga, 2013). These licenses are valid for 3 years and can be suspended or cancelled for various reasons including for instance prohibited activities, incorrect application information, causing major disturbances to whale populations, serious injury or death of a whale watcher, swimmer or whale, or the involvement of a licensed vessel in a serious accident (Kingdom of Tonga, 2013).

Special conditions apply to all service providers and individuals coming into contact with whales (Kingdom of Tonga, 2013). These include maintaining a minimum distance of 10 meters from whales and 50 meters from pods with a calf, prohibiting touching of whales and limiting the number of swimmers to no more than 4 clients plus one trained guide per certified vessel (Kingdom of Tonga, 2013). Swimmers must also keep a minimum distance of five meters from the whales (Kingdom of Tonga, 2013). Penalties for non-compliance range from $1,000 to $50,000 depending on the weight of the offence (Kingdom of Tonga, 2013).

Despite these regulations, there still have been observed changes in whale behaviour related to stress, such as avoidance responses where whales move away from boats or swimmers (Kessler et al., 2013). On top of this, although these guidelines and regulations exist, compliance with these rules varies among operators and there is no regulatory mechanism for enforcing appropriate behaviour around whales Kessler & Harcourt, 2010). The Tongan Government faces constant pressure to increase the number of whale-watching licenses, but the science on the impact of swimming with these whales is still in its early stages (Kessler & Harcourt, 2010). With an estimated 9,800 whale-watching trips in Tonga each year, a fee of TOP$10 per passenger trip could potentially raise nearly TOP$100,000 annually (Kessler et al., 2013). If allocated to a dedicated fund, this money could significantly contribute to an annual monitoring and compliance program for the swim-with-whales industry (Kessler et al., 2013).

1.4. Whale watching in Sri Lanka

1.4.1. Unique whale populations

The blue whale populations in the northern Indian Ocean are thought to be a subgroup of the pygmy blue whales (*Balanoptera musculus*) with some unique features compared to their Antarctic counterparts including a shorter length and different acoustic calls (de Vos et al., 2013). More importantly, unlike blue whales in other ocean basins, the Sri Lankan population is largely resident in these waters and does not undertake poleward migrations to feed (Branch et al., 2007; de Vos et al., 2013). This makes them particularly susceptible to stressors including tourism activities such as whale-watching and snorkelling. While the guarantee of seeing whales has increased visitor satisfaction with whale-watching tourism in the past, the unplanned development of the industry has led to negative impacts on whale conservation and diminishing tourist satisfaction scores (Perera et al., 2023).

1.4.2. Increasing tourist numbers

Sri Lanka is undergoing an economic recovery after experiencing its most severe crisis since gaining independence (SLTDA, 2024). In 2023, the country reached a noteworthy milestone in tourism, with arrivals surpassing the previous year, totalling 1,487,303 tourists (SLTDA, 2024). Forecasts indicate that Sri Lanka's tourism sector will continue to expand significantly, with projected arrivals ranging between 2,180,000 and 2,363,475 tourists in the near future (SLTDA, 2024). By 2025, the country anticipates a further increase to approximately 3,375,787 tourists (SLTDA, 2021). An increase in tourist numbers will mean that popular whale-watching destinations such as Mirissa will be affected by excessive tourism (Perera et al., 2023).

In response to increasing tourist numbers, the Sri Lanka Tourism Development Authority (SLTDA) prioritises sustainability to preserve the island's natural and cultural heritage (SLTDA, n.d.). Sustainable tourism is identified as a fundamental long-term objective for Sri Lanka, aiming to achieve a positive balance across environmental, socio-cultural, economic, and experiential domains for both visitors and residents. The United Nations Development Programme (UNDP) collaborates with SLTDA to cultivate a competitive and resilient tourism sector through the promotion of sustainable tourism experiences (SLTDA, n.d.). This collaboration includes the National Sustainable Tourism Certification (NSTC) as a key component of the BIOFIN project (SLTDA, n.d.). The NSTC initiative is designed to enhance the policy and institutional framework at both national and provincial levels and to support the development of innovative tourism products, services, and communication strategies, ensuring long-term sustainability and economic growth for the sector (SLTDA, n.d.). The objectives align with the expressed desire of 76% of tourists who want to travel sustainably in the future (GSTC, 2023).

1.4.3 Whale watching as a tool for conservation efforts

Whale watching can help to raise awareness of these creatures. García-Cegarra & Pacheco (2017) demonstrated that whale-watching trips stimulate pro-conservation intentions and tourist concern for the impacts of whale-watching on humpback whales. However, the same study reveals that most whale watchers do not feel responsible for the consequences of their actions and instead believe that authorities must take responsibility for marine conservation (García-Cegarra & Pacheco, 2017).

2. Methodology

This qualitative case study incorporated a range of qualitative research methods to explore the whale-watching and swimming-with-whales industry in Sri Lanka. The study was conducted over a period from September 2023 to August 2024. The study primarily focused on Mirissa, a known whale-watching hotspot in Sri Lanka (Perera et al., 2023), with six operators from Trincomalee included for a broader perspective. Besides whale-watching operators, tour operators offering various other water sports such as diving, snorkelling and fishing were contacted. Operators were chosen randomly based on their advertisements on social media and their on-site presence in Sri Lanka (Annex 1).

Data collection began with an initial survey, where a comprehensive list of tour operators was compiled using online directories, tourism websites, and local tourist boards. Approximately 35 tour operators were contacted, out of which 21 provided information on their whale-watching and swimming-with-whales tours. This sample size was considered adequate to represent the industry due to saturation.

The ethnographic study involved hidden participant observations conducted through various channels such as email, social media, telephone, and personal visits. Information on tour packages, including prices, group sizes, accommodation options, expected cetacean species, trip distances, and durations, was gathered through detailed inquiries. Field notes were meticulously recorded after face-to-face interactions, and social media chats were saved and transferred for analysis. The responses were analysed to identify trends, differences in approaches among operators, and compliance with Sri Lankan regulations. Key findings and insights from the interviews and observations were documented for further analysis and reporting.

During the second part of the study, in-depth interviews with boat captains, marine biologists, and business owners who run ethical whale-watching tours were conducted. Semi-structured interviews with open-ended questions allowed for the exploration of different perspectives and to describe the current landscape of the industry in more detail from an insider perspective. These interviews were conducted online and via telephone, with consent obtained for recording, and all interviews were transcribed for analysis. The names of the operators and participants are not disclosed in this report to maintain ethical standards and protect the confidentiality of the individuals.

3. Findings

3.1. Contacting tour operators

Over thirty tour operators (including whale-watching, diving, snorkelling and fishing operators) in Trincomalee and Mirissa were contacted via WhatsApp, Instagram, email or phone call. Three dive centres that were contacted did not offer any whale-watching or whale-swimming activities at all. Several tour operators did not respond to the enquiries. Responses from 21 tour operators were suitable, with the majority (15) based in Mirissa. Of the 21 tour operators, 16 offered whale-swimming tours, while 5 offered a whale-watching tour. Of the operators contacted in Trincomalee, 83% offered illegal whale-swimming activities (Figure 1). Of the operators contacted in Mirissa, 73% offered swimming with whales (Figure 2). Most whale-watching tour operators stated that swimming and snorkelling with whales is illegal in Sri Lanka and admitted that they do not hold the necessary permits to conduct whale-swimming tours. However, two operators from Trincomalee informed us that they are in possession of a governmental permit that allows them to carry out whale-swimming activities. Upon request, the Department of Wildlife Conservation (DWC) informed us it "has not issued any license to any individual, company or organization based in Mirissa and Trincomalee to swim or snorkel with whales". Furthermore, six operators did not refuse the request to touch the whales during these tours. One operator offering to swim with whales emphasised that it was important to book in advance due to the high demand. Many operators provided photo or video footage of their experiences on request. One provider admitted to bribing government officials to conduct illegal whale-swimming activities.

Prices for whale watching ranged from USD 50 to USD 70 (including taxes) (Table 1). Two whale-watching operators mentioned a tax of USD 20 per tourist, while two others included this tax in their price offer. On average, operators offering whale swimming charge over 230% more than operators offering whale-watching activities (Figure 3). Prices for swimming with whales ranged from USD 70 to USD 250 per person (Figure 3), with group bookings often offered at discounted prices. It was noted that it has become increasingly difficult to obtain a government permit to snorkel with whales.

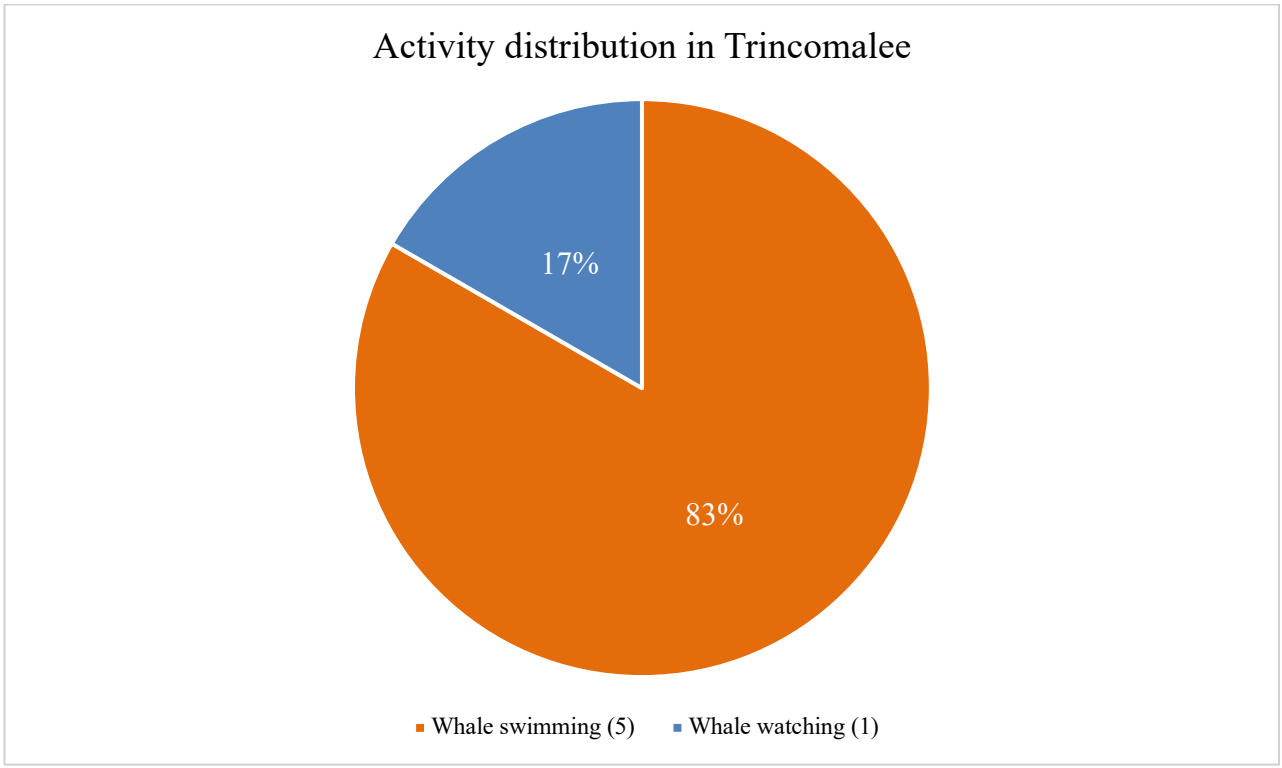

Figure 1: Activity distribution between whale watching and swimming in Trincomalee

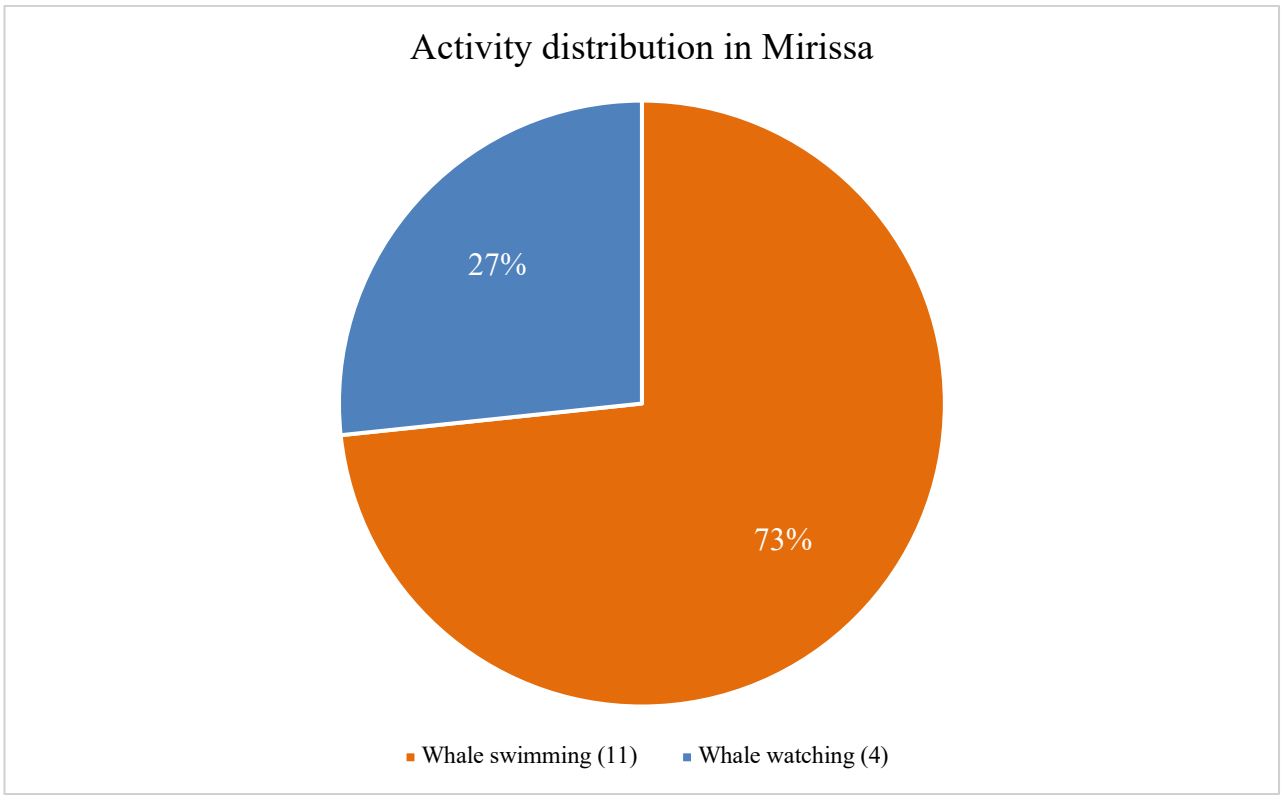

Figure 2: Activity distribution between whale watching and swimming in Mirissa

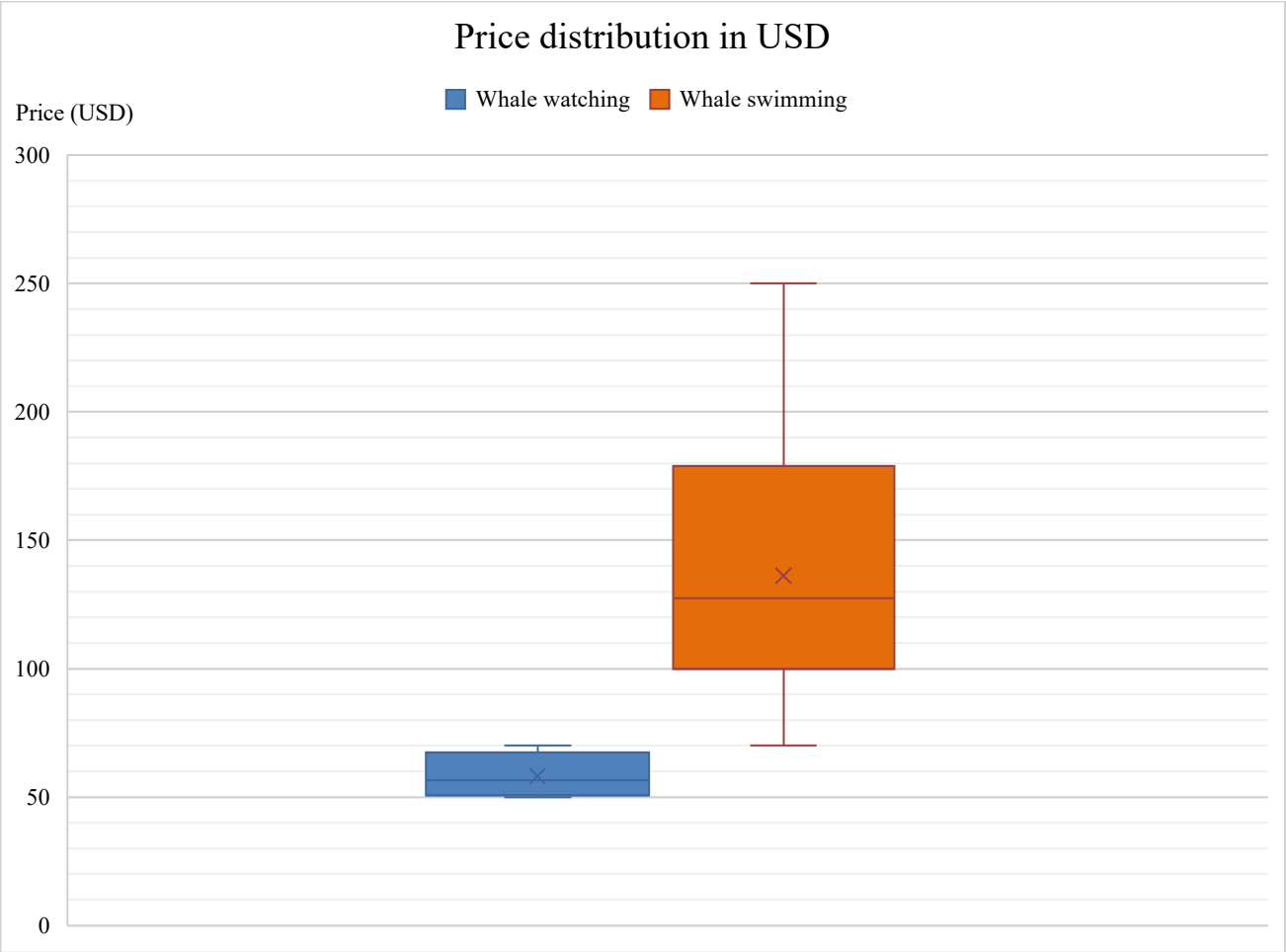

Figure 3: Price distribution in USD for whale watching and whale swimming

3.2. In-depth interviews

The whale-watching tourism industry has experienced significant changes in recent years. According to Interviewee 1, the introduction of whale-swimming tours has impacted traditional whale-watching businesses. Despite the profitability, these practices have led to the disturbance and potential harm to whales. Operators note that the increasing number of swimming-with-whales tours has affected the business, and it was highlighted that effective measures to stop these activities are lacking. Interviewee 2 pointed out that swimming activities do not chase whales away. However, the occurrence and behaviour of whales have changed, with sightings drastically reduced due to factors like climate change and harassment. It is emphasised that the industry is unsustainable, with whales moving away from Sri Lanka and sightings of species like blue whales dropping significantly. Interviewee 3 claimed that whale behaviour has been altered due to these practices, with whales now travelling faster and avoiding traditional whale-watching boats. The number of boats in operation has fluctuated, and while efforts to raise awareness among tourists have been made, real action to curb illegal activities is minimal. Solutions like stricter regulations and licenses to control the number of boats and enforce ethical practices are proposed. Interviewee 4 noted that illegal whale-watching activities, especially those

involving small fishing boats, have significantly impacted whale populations in Mirissa. Despite informing government agencies about the issue, no significant action has been taken. They observe frequent injuries to whales from fishing nets and ship collisions.

4. Discussion

The findings indicate that the whale-watching industry is experiencing a shift towards swimming and snorkelling with whales, despite being illegal. The reasons for this shift are multifaced: for the first time since 2020, the tourism industry is booming again. After having experienced a severe economic crisis that hit the tourism industry especially hard, tour operators found a lucrative business in swimming with whales and many tour operators have entered the market in recent years. The high density of tour operators in Mirissa puts great pressure on operators in this location to remain competitive. Therefore, a shift towards illegal whale-watching activities is likely, especially on the south coast of Sri Lanka. The whale watching industry in Trincomalee is smaller than on the south coast, but also on the east coast most tour operators offer illegal whale-swimming tours. The in-depth interviews revealed that tourists in Sri Lanka are unaware that swimming with cetaceans is illegal. Especially operators who present themselves as licensed and authorised give tourists the impression of legitimacy, which can inspire confidence in potential customers who may otherwise have concerns about the ethical and legal aspects of such interactions with marine life. This strategy may be a deliberate attempt to capitalise on the lucrative market of whale watching and swimming tourism by presenting themselves as trustworthy and compliant with the law, despite the DWC having explicitly refused to issue such permits. As a result, operators offering whale-watching activities are being forced out of the industry as they are unable to meet the demand from tourists who want to swim with whales. Furthermore, online travel research companies such as TripAdvisor promote and facilitate bookings for illegal whale-swimming activities in Sri Lanka. These activities are marketed through user-generated content, including photos and videos uploaded by both tour operators and customers, attracting potential tourists. Despite the illegality of swimming with whales in Sri Lanka without a special permit, these offers continue to appear on the platform, often in defiance of legal restrictions. TripAdvisor's search function allows users to filter for specific activities, such as whale watching, and search in broader categories such as 'Dolphin & Whale Watching', further promoting these activities.

The Sea Mammals (Observation, Regulation and Control) Regulations, No. 01 of 2012 are in place but there is a lack of enforcement as 73% of the questioned operators in Mirissa and 83% of operators in Trincomalee offered to swim with the whales without authorisation (Figure 1 & 2). Six even encouraged us to touch the whales, increasing the risk of pathogen spread between whales and humans. Only five operators emphasised the illegality of this practice. When swimming with whales, some operators emphasised that they get within 2-3 metres of the whales and then let the tourists jump into the water. This is despite the provisions of the Marine Mammal Regulation, which states that vessels

may not approach whales closer than 100 metres at any time. As one operator stated that the government is being bribed, it can be assumed that the authorities are aware that swimming with whales is taking place.

Research shows that the proximity of ships affects whale behaviour. Although there is an existing risk of whales being displaced from nearshore areas to more distant areas by whale-watching activities, the risk is likely to increase if many small vessels chase whales to satisfy tourists who wish to swim with whales. On the south coast of Sri Lanka, where whale watching is most widespread and where many operators offer swimming with whales, this means that whales will be chased towards shipping lanes and collisions with large vessels may occur more frequently. These close encounters could increase the likelihood of ship collisions in a region where blue whales are already regularly harmed due to the overlap of their habitat with major commercial shipping routes (IWC, 2024).

As pointed out earlier, previous studies have shown that swimming with whales causes behavioural changes in humpback whales. Significant behavioural changes were observed during and after interaction with swimmers. The whales changed direction more frequently and shortened their resting times by 50% compared to whale-watching tours. Given the high percentage of illegal whale-swimming activities in Sri Lanka, these results are worrying as the welfare of the animals is not taken into account, especially during unregulated whale encounters. The interview results show that whale sightings in Sri Lanka have declined in recent years. Although the cause of this has not yet been investigated, harassment of animals is likely contributing to the decline in whale sightings.

On the bright side, whale watching has the potential to serve as a tool for conservation and education measures. From the interviews conducted, it became clear that the operators offering whale-watching activities are generally committed to the protection of whale species. However, the operators offering to swim with whales did not mention any efforts to protect the species. This suggests that the current activities where tourists can swim with whales are mainly for sensationalism rather than the potential for education and conservation efforts. Therefore, unethical operators are jeopardising animal welfare for financial gain. Research into the pricing of these activities found that unethical tour operators offering whale-snorkelling tours charge on average 230% more than sustainable operators who limit themselves to whale watching. The lucrative nature of the industry often means that operators do not pay taxes and are not adequately monitored by institutions, resulting in a significant loss of tax revenue for the Sri Lankan government.

4.1. Should Sri Lanka legalise swimming with whales?

So why not legalise swimming-with-whales activities in Sri Lanka as is done in the kingdom of Tonga? First of all, humpback whales in Tonga are migratory and migrate from the Antarctic to nurse their calves in the tropical water, while the blue whales of the Sri Lankan coast are resident. This makes the whales more susceptible to stressors when their habitat is under pressure. Furthermore, Sri Lanka already struggles with enforcing existing whale-watching regulations and the prohibition of snorkelling with whales. To ensure regulations regarding swimming are correctly observed, the country first must do something about the lack of enforcement and prevalent corruption. In contrast, Tonga has a well-established framework with guidelines, limited licenses and a focus on protecting mothers with calves. However, even though their approach is supported by research and clear guidelines, the enforcement of these guidelines is still difficult.

Therefore, rather than legalising swimming with whales, Sri Lanka should enhance its already existing whale-watching regulations and promote sustainable tourism. While the rules in Tonga should not be followed blindly, they are a good example of enforcement and regulation as they prioritise animal welfare and human safety and show that economic interests and environmental protection can coexist.

4.2. Risk of reputational damage

Rising tourism numbers, paired with a lack of regulatory oversight will further increase the shift towards unethical practices of swimming with cetaceans. The increase in operators offering swimming with whales is damaging Sri Lanka’s reputation and goal to become a sustainable tourism destination and contradicts the country's current policies. This trend compromises animal welfare for financial gain and penalises operators committed to sustainable tourism due to financial losses. Studies and reports show that swimming with whales endangers both animals and humans. The practice has been reported to disturb whales' natural behaviours, with instances of harassment and chasing documented. The importance of sustainable tourism cannot be underestimated for Sri Lanka to work towards a positive overall balance in environmental, socio-cultural, economic and experiential impacts for tourists as well as locals (SLTDA, n.d.).

5. Conclusion

The whale-watching industry in Sri Lanka is currently facing significant challenges due to the emergence of unregulated and unethical whale-snorkelling tours. This conflict between traditional and ethical whale watchers and those offering whale-snorkelling experiences has created an industry that is both harmful to marine life and increasingly lucrative due to rising tourism. The issue is however multifaceted, involving economic incentives, lack of governmental enforcement, insufficient consumer awareness and the international promotion of these illegal activities.

While whale watching and snorkelling are both popular methods of observing these majestic creatures, both have an impact on wildlife. However, the latter poses severe risks through disruption of cetacean behaviour and an increase in the likelihood of harmful encounters between whales and vessels. If not regulated, the trend towards more frequent and closer whale encounters is therefore likely to increase, placing even more pressure on whale populations. Combined with increased competition among tour operators, it will likely lead to a decline in conservation efforts if the government does not enforce regulations and officials continue to accept the alleged bribes. The whale-watching industry in Sri Lanka is increasingly catering to the demand for close encounters with whales, which is driven by an increase in tourism over the past 20 years. Governmental enforcement is not taking place. Corruption seems to be present in this business. Therefore, the trend that is currently being observed in this industry is moving Sri Lanka away from the goal of becoming a sustainable tourist destination.

Governmental enforcement needs to be strengthened. Policy actions must be implemented to address unethical practices including issuing permits for diving centres and tour operators to ensure they operate sustainably. By doing so, whale-watching operators can unite people and nature in a way that benefits both. Therefore, consumer awareness is another crucial component which is currently lacking. Tourists must be educated about the impacts of their choices and encouraged to support eco-friendly tourism options. Although ultimately the responsibility for addressing these issues lies with the government and the industry, tourists can aid in this shift by travelling more consciously and demanding sustainability above sensation. It is important to emphasise that the intention behind this publication is not to harm local businesses, but rather to raise awareness and promote sustainable practices that will benefit both the marine environment and the communities that depend on it. The authors hope that their work will contribute to the protection of these species while supporting the long-term viability of local businesses. By raising awareness, demanding accountability, promoting

collaboration, and sustaining commitment, Sri Lanka has the opportunity to set a benchmark for conservation efforts and responsible tourism practices.

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Annex

Annex 1: Example of on-site marketing of snorkelling with whales