

# POTENTIAL OF DEVELOPING SCUBA DIVING TOURISM IN SRI LANKA: SCUBA DIVING OPERATORS PERSPECTIVE

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## Abstract

Scuba diving tourism is one of the fast-growing tourism activities globally. Therefore, it is identified as a potential adventure tourism segment. Sri Lanka Scuba diving tourism segment has been identified as a niche market segment with high potential to attract young individuals in all source markets. This study was conducted to determine the challenges of developing scuba diving tourism in Sri Lanka since the lack of information on recreational scuba diving development. The researchers conducted qualitative case study research to achieve the research objectives. Using semi-structured interviews, this study covered all 8 PADI registered diving centres in the Trincomalee district and four government institutions. The results reveal that less government support, lack of human resource development, and negative impact on fishing activities are highlighted issues to develop scuba diving in Sri Lanka. Furthermore, this study provides recommendations to mitigate those barriers to developing recreational scuba diving. Scuba diving tourism is a blooming adventure water sports segment in Sri Lanka. This study's findings are significant for tourism and other relevant authorities for developing, regulating, or making recreational scuba diving policies in Sri Lanka.

**Keywords:** *Diving operators, issues and challenges, scuba diving, Trincomalee, Sri Lanka.*

## 1.0 Introduction

### 1.1. Background of the Study

Scuba diving is one of the famous adventure sports among adventure lovers. UNWTO 2020 vision strategic report has highlighted an immense potentiality for underwater activities like scuba diving. Substantially scuba divers come from western countries with relatively high incomes, ranging from young to middle age groups, and most people travel alone (Kunthea, 2016). Since 1967, the Professional Association of Diving Instructors (PADI) has issued over 27 million diver certificates globally and issues around one million certificates annually. PADI has more than 137,000 professional members worldwide. According to PADI worldwide certification trend by gender in 2018 report recorded 38% female and 62% male divers and female participation gradually increased from 2013 (PADI, 2019). Scuba diving is reported as

the fastest-growing segment of the tourism industry, and it has earned between 4 to 6 billion US\$ dollars annually (UNWTO, 2001). Diving equipment and marketing association 2016 has reported that around 11 billion US dollars have been contributed to GDP in the United States of America' economy.

Furthermore, it has been estimated there will be 20 million scuba divers are globally operated. Scuba diving in Asia takes to locations where marine life is more diverse than anywhere else on earth. Divers can dive in the Indian Ocean, the South China Sea and the Pacific Ocean, or dive in the coral triangle's surrounding area. This kind of diverse sea experience cannot be experienced in other destinations. Furthermore, wreck diving on historical shipwrecks, wall diving on offshore pinnacles from a liveaboard or shore diving on a house reef can be experienced by diving in Asia (PADI, 2020). Southeast Asia as a region, generating over US\$ 4.5 Billion per year through Scuba diving tourism (Pascoe et al., 2014).

Scuba diving was identified as a niche market segment by the Sri Lanka tourism strategic plan 2017-2020. Scuba and wreck diving were noted as the most relevant source market segment, and experiential category for all markets also recommended to age under 35 years (SLTDA, 2017). According to a field survey conducted by National Aquatic Resources Research and Development Agency (NARA) in 2013, 23 diving centres and 164 total employee capacities are available to provide scuba diving services to tourists. Sri Lanka diving industry has potential for further growth, explicitly targeting wealthy visitors from developed countries if responsible authorities can provide more facilities and opportunities for further improvement of human capacities of the sector (Amaralal et al., 2013). Furthermore, they mentioned a barrier to effective marketing and product development decisions due to the lack of research on the recreational scuba diving segment in Sri Lanka.

Sri Lanka is an island geographically significant for marine-based tourism activities. Historical harbours, sunken shipwrecks and tropical marine biodiversity make it a unique recreational scuba diving destination. Understanding the issues and challenges of developing recreational scuba diving will help potential recreational scuba diving in Sri Lanka.

One of the studies conducted among the scuba diving operators in marine protected areas of Italy and Mozambique researchers identified a series of issues about their relationship with managing bodies, particularly taxation, poor law enforcement and patrolling in the marine protected areas (Lucrezi et al., 2017). According to Amaralal et al. (2013), it could not provide diving service for many tourists utilising the diving centres' existing Sri Lanka capacities. Recreational scuba diving is a growing tourist activity in Sri Lanka, but diving centre operators face serious issues and challenges. The researchers prove internationally, and locally scuba diving operators face many problems and difficulties; those challenges vary on the destination, government policies, human and extra environmental factors. Sri Lanka is a well-known tropical destination that caters to international and domestic tourists and is popular among international and domestic tourists. After thirty years, civil war tourism activities in Eastern provinces are gradually developing. Trincomalee is famous for scuba diving tourism destinations on the East coast (Nuskiya & Kaldeen, 2019), and most PADI registered diving centres are situated in the Trincomalee district. Diving centre operators in that area have to face many problems and challenges when operating diving tours. Prior researchers didn't touch on

these issues and challenges relating to scuba diving tourism. The main objective of the research is to identify how the scuba diving operators perceive the potential of scuba diving tourism practices in Sri Lanka and the issues and challenges faced by them.

Following are the research questions that can be derived based on the objectives of the study.

1. What is the potential of developing scuba diving tourism in Sri Lanka?
2. What are the issues and challenges faced by Scuba diving centre operators?

## **1.2 Significance of the Study**

This study aims to enhance Scuba diving tourism in Sri Lanka while analysing the existing resources and capabilities to positively impact Scuba dive tourism in Sri Lanka. Tourism is valuable for industrial purposes, policy-making purposes and also academic purposes. Enhancing the industry means a kind of standardisation. It will have a proper system. Then, the demand for the industry will increase. It is a better opportunity for the operators and employees who work under the Scuba dive tourism. Sri Lanka Tourism Development Authority, Ministry of Tourism Development and Tourism Promotional Bureau, Coastal Conservation and Coastal Resource Management, National Aquatic Resources Research and Development Agency are government policy-making institutes responsible for developing and protecting and regulating the tourism industry and marine resources in Sri Lanka. According to the research objectives, the researcher evaluates challenges the diving centre operators face and provides recommendations through the identified challenges. The answers given by them can be considered as issues in the scuba dive tourism industry. Moreover, relevant authorities and organisations can identify issues in the industry and apply solutions to them. They can also determine any gap, solutions were taken by the government, and the industry's current situation by studying the research output.

## **2.0 Literature Review**

### **2.1 Marine Based Tourist Activities**

Marine tourism defines a person who involves recreational activities travel from the usual living place of residence to a particular destination where the host of focus is the marine environment setting (Orams, 1999). Marine and maritime financial industry activities are profound transitions such as traditional tourism, aquatic recreational, shipping and capture fisheries, larger-scale industries like offshore oil and gas, marine renewable energy and aquaculture-food productions (Rayner, Jolly & Gouldman, 2019). Marine-based tourism activities are a component of the blue economy that enlarge particular countries' economic growth—moreover, diversified activities of marine-based tourism open to more alternative recreational activities for tourists (Bandusena, Kaldeen & Silva, 2020). Where coastal tourism encompasses the full range of inshore and offshore tourism, leisure and recreational activities, marine tourism combines all these terms, as well as ocean-based tourism (Hall, 2001). The field of marine tourism includes adventure tourism, wildlife-based tourism, leisure or

recreational tourism and cruise ship tourism (Halpenny, 2002). Marine tourism covers a broader range of deep ocean activities, the most prevalent of cruising and sailing, other activities such as scuba diving, underwater fishing, water skiing, windsurfing, and tours of marine parks and wildlife mammal watching (Tegar & Gurning, 2018). Adventure-based activities included wildlife-based tourism, shark cage diving, scuba diving, whale watching, snorkelling, horseback riding, abseiling, white-water rafting, off-road driving, ballooning, mountain climbing, caving, cycling, bungee jumping and sky diving (George, 2014). According to George (2014), many marine activities include a category of adventure tourism. Geldenhuys, Merwe & Saayman (2019) defined marine adventure tourism activities as those in which the individual is exposed to high levels of actual or perceived risk, is a personal challenge, experiences or adrenaline rush. Orams (2013) introduced marine wildlife tourism as another vital component of marine adventure tourism; marine wildlife tourism illustrates the broader range of activities that aim at the marine animal as the primary attraction, such as whale watching, turtle tours and shark diving. Aquatic adventure and marine wildlife tourism activities, diving activities such as scuba diving and shark diving are highlighted in marine-based tourism.

## **2.2 Scuba Diving Tourism**

Many different tourism forms make up the tourism market, such as accessible tourism, agritourism, culinary tourism, dark tourism, ecotourism, health tourism, homestay tourism, honeymoon tourism, adventure tourism, etc. (Stainton, 2020). Adventure Travel Trade Association defines adventure tourism as a trip that consists of at least one feature of physical activity, environment and cultural immersion. Moreover, adventure tourism categories major two parts hard adventure and soft adventure; it classifies through the nature of activities (Arizmendi, 2014). Hard adventure is an outdoor activity typically considered unique and exciting, such as rock climbing and mountaineering, hang-gliding, white water rafting, and diving (UNWTO, 2002). According to the UNWTO 2020 Vision, the strategic report outlined the vast potentiality of adventure tourism, tourists willing to travel to high places (mountaineering), underwater (scuba diving), and the ends of the earth Antarctica trips (UNWTO, 2001).

Garrod & Gossling (2008) mentioned, "Diving tourism involves individuals travelling from their usual place of residence, spending at least one night away, and actively participating in one or more diving activities, such as scuba diving, snorkelling, scuba or the use of rebreathing apparatus". Over this time, scuba diving's popularity has grown from being a sport practised by hardy adventurers to being part of holiday activities or recreational activities in tropical, subtropical and temperate locations (Musa & Dimmock, 2012). Divers are now travelling to faraway places to see wrecks, coral reefs, and caves for the scuba diving holidays. Therefore, the Great Barrier reef on the Eastern seaboard of Australia, Fiji, the Solomon Islands, Vanuatu, and the Maldives have been created as dedicative dive tourism destinations (Tabata,1992). Furthermore, people who travel to warm tropical locations near the equator are well known and popular destinations such as Thailand and Malaysia (Musa & Dimmock, 2012). Tropical climatic conditions are a key factor that attracts diving tourists. Recreational diving is famous in tropical coastal and island nations, where warm and high visibility waters give enchanted

diversion with attractive biological characteristics (Inglis, Johnson & Ponte, 1999). Some Asian tropical diving sites are famous as the world best diving locations. Chaneace (2020) stated that Asia has the best diving sites, such as Thoddoo island in the Maldives, Komodo national park in Indonesia, Yaeyama island in Japan, El Nido in the Philippines Koh Lanta in Thailand.

Scuba diving tourism is an economically valuable adventure segment. It is proved by most locations promoting their marine resources to become scuba diving destinations and scuba diving hotspots (Dimmock & Musa, 2015). Lück (2017) stated that diving is a significant element of marine tourism. Scuba diving generates income for Marine Protected Areas (MPA) set up in several parts of the world as a safe place for overfished or otherwise threatened in their breeding habitats (Roberts & Hawkins, 2000). Generally, diving tourists travelling to particular destinations for basically complete fill their holiday and recreational purpose. Specially diving tourists consider required diving facilities and destinations when they select holiday destinations off to the diving holidays. During the dive trips, the diving tour operator can significantly affect satisfaction by providing activities such as offering clients the opportunity to relax, swim, snorkelling and learn about the marine environment through the instructions and slide shows (Aiello, 1998).

### **2.3 Scuba Diving Tourism in Sri Lanka**

The survey of departing foreign tourists 2015 shows that most international tourists to Sri Lanka engage in mainstream activities, categorised as sun and beach, historical sites and wildlife viewing (Sri Lanka Tourism Development Strategic Plan, 2017). According to the geographical formation of Sri Lanka is an ideal destination for sport tourism activities that include rock climbing, surfing, diving, snorkelling, rafting, fishing, hiking, tracking, white water rafting and cycling (Perera, 2017). Most visitors travel to Sri Lanka mainly focusing on leisure, recreational or holiday purposes; scuba diving is a significant sport and adventure category.

Sri Lanka's recreational scuba diving has a long history and gradually developed to the present situation (Amaralal et al., 2013). In the Portuguese era, Reberio published the first historical proof of diving in Sri Lanka (Ceylon), and subsequently by the Robert Percival and Immersion Tennent during the early British colonial time, and it's noted about pearl diving and Chank shellfishing of Gulf of Mannar (De Silva, 2011). In the 1950s, Arthur C Clarke, Rodney Jhonklass and others introduced scuba diving in Sri Lanka and, in 1947, started "Reefcombers of Ceylon " as the first enthusiast diving circle. Moreover, in the 1980s, with the development of the tourism industry, tourist arrivals gently increased and opened the way to boost recreational diving in Sri Lanka (Amaralal et al., 2013). Sri Lanka is a fantastic diving destination with plenty of great places to explore, including great wreck dives scattered off the shore. Local divers are still discovering new wrecks by exploring the Sri Lankan water (PADI, n.d.).

## **2.4 Challenges of Scuba Diving Tourism**

The scuba diving market segment depends on the profession and the income of tourists. So, in that case, scuba diving is a reasonably expensive leisure activity due to diving equipment, broad training and the cost of diving. Furthermore, people who earn a high average income usually choose diving as a leisure activity (Lemke & Olech, 2011). Scuba diving is mostly a male-oriented activity due to the need for high physical demand, heavy equipment handling and courage to explore unknown underwater worlds (Garrod & Gössling, 2008). The above statements prove that scuba diving is a costly adventure tourism activity. Diving travellers' holiday decisions depend on their income level. Therefore, divers' economic decisions negatively affect diving service-related communities. Due to the global financial crisis, people have cut down on useless expenses like leisure activities, adversely affecting destinations, scuba diving charters and diving schools (Lucrezi, 2016). Coastal tourism is not always pleasant in the area of coral reefs. Some negative impacts can occur, including pollution and marine life loss through diving and snorkelling (Lamb, True, Piromvaragorn & Wills, 2014). A growing number of divers are threatening the ecosystem of many animals and aquatic plants, such as coral reefs and algae (Lemke & Olech, 2011). One of the case studies conducted in the Sihanoukville province of Cambodia shows that illegal fishing, such as dynamite fishing, has been close to the dive sites and remarkably affects the scuba diving experience (Kunthea, 2016). A study conducted based on the scuba diving operators in East African Ecoregion, Dimopoulos, Queiros & Zyl (2019) stated that diving operators are feared that overfishing and destructive fishing are the reason for the degradation of coral reefs. Their surrounding ecosystem would impact the destination's reputation for the dive tourists' and endanger potential tourism opportunities for scuba diving operators. Naber et al. (2019) mentioned that the government did not conduct marine protection programs, and failure to enforce fishing activities directly impacted recreational diving.

Amaralal et al. (2013) identified the capacity of recreational diving in Sri Lanka, highlighted a series of issues in the recreational scuba diving segment in Sri Lanka. Those issues are described below; one of the sector limitations is its lack of adequate dive instructors and divemasters. As a reason for that, training courses are costly and local people cannot afford them. Without proper investigation, Diving centre operators suggest removing ships' wrecks because of their worth of recreational, archaeological and explorations. Moreover, illegal fisheries, such as dynamite, are critically affected by diving centre operators. Some illegal fishing activities destroy marine life, such as coral reefs and negatively impact Sri Lanka's reliability as a safe diving destination for tourists. Also, they mentioned the decompression chamber facility is needed to treat divers who get sick from decompression. Thus, issues and challenges are barriers to developing this niche tourist activity and previously didn't touch factors that influence the identification of issues and challenges of scuba diving tourism in the Sri Lankan context.

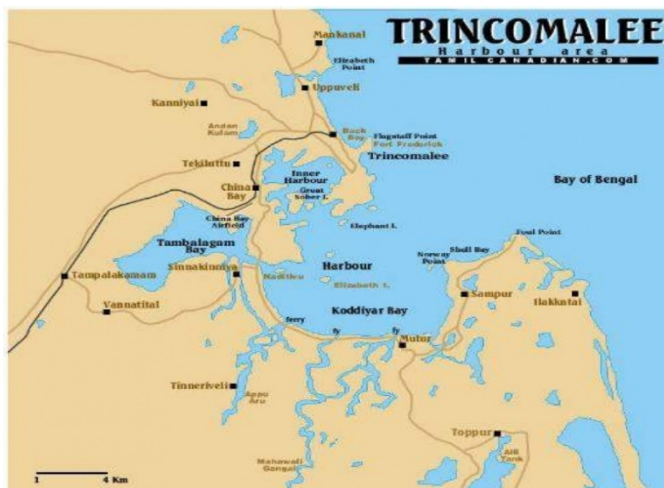
### 3.0 Methodology

#### 3.1 Research approach

The researcher has used the inductive approach for this study. The researcher should use an inductive approach to provide a convenient and efficient analysis of qualitative data (Thomas, 2006). This research has been conducted as qualitative research as it is more suitable to study the challenges of developing scuba diving tourism in Sri Lanka. Creswell (2009) stated that "qualitative research is a means for the exploring and understanding the meaning individuals or groups ascribe to social or human problems" (p.4).

#### 3.2. Research Site Selection Rationale

Trincomalee district was selected as the researcher's research site due to the majority of diving centres and the Southwest monsoon. According to the PADI and National Aquatic Resources, Research and Development Agency (NARA), most diving centres of the East Coast are located in the Trincomalee district. But it depends on the Southwest monsoon. Southwest monsoon activates during May to September, then the southwest sea belt becomes cruel, and water visibility decreases. Therefore, most diving operators are shifted to the East coast to survive the seasonality, which is the tourism industry's case.



Map 3.1: Trincomalee harbour and sea area

Source: <https://www.news.lk/news/business/item/19171-trincomalee-port-developed-to-enhance-the-export>

#### 3.3 Research Design

The research population was identified from registered diving centres of the Professional Association of Diving Instructors (PADI) operating in the Trincomalee district. According to PADI registration, there are eight diving centres available in the Trincomalee district. The researcher interviewed Sri Lanka Tourism Development Authority officers, Sri Lanka Tourism Promotional Bureau, Marine Environment Protection and Authority, National Aquatic Resources and Development Agency and eight PADI registered diving centre officers in

Trincomalee district. The interviews were used to identify the recommendations and contributions to develop recreational scuba diving in Sri Lanka.

The researcher selected the convenience sampling technique, which comes under the non-probability sampling method for this study. Convenience sampling helps meet the functional requirements, such as easy accessibility, geographical proximity, availability at a given time, or willingness to participate in the study (Dörnyei, 2007). Semi-structured, face-to-face interviews were conducted in the survey to collect primary data from the diving centre operators and government institutions. The advantage of conducting semi-structured interviews is the interviewer's ability to clarify the question and investigate the answer (Babbie, 1990). Since the study is based on a qualitative approach, the raw data gathered through semi-structured in-depth interviews would not have numerical values and more described information. Thus, the descriptive analysis method would be better than other statistical analysing methods to analyse the data.

### **3.4. Data Management and Analysis**

Coding, concept development, constant comparison between the data and the emerging concepts, and the theoretical model's formulation as a figure are used to conduct qualitative data analysis (Creswell, 2007). The researchers used a descriptive study in the research. Descriptive analysis is a process by which qualitative information is coded.

## **4.0 Data Analysis**

### **4.1 Issues and challenges faced by Scuba diving centre operators**

#### ***4.1.1 Environment destruction by the fishing sector***

After studying all the respondents' answers well, all respondents have mentioned that significant issues and challenges come from fishermen doing illegal fishing activities near the diving sites. Diving operators said the fisherman uses different prohibited fishing techniques for the fishing activities. Diving centre operators see dynamite fishing activities directly threaten scuba diving tourism, and also fishermen are destroying their fishing resources on themselves. Diving operators mentioned as dynamiting are critical issues that affect scuba diving and the fishing industry in the long term. Five years ago, a big school of Tunas came with their family and lived the whole Tuna season. Twenty thousand kilos of tunas died due to the dynamite fishing by a group of fishermen. Usually, Tunas come back to breeding where ever they are born. Every fish species' breeding pattern has come back to the same place they are born and reproduce. Because of dynamite, all Tunas died. Therefore, no Tuna remained to breed again. According to the respondents fishing, people haven't idea about the biological process of marine life. Fishers know everything about the fishing industry because they have been doing this industry from their ancestors. People should be concerned about sustainable fishing, but fishing is not affected sustainably, but some cories regulate fishing activities.



Since that day, fishing activities have been regulated because the extensive schooling of Tuna never come back to the Trincomalee ocean zone. Even diving centre operators are also frustrated about the degradation of marine life from dynamite fishing. When they were diving, they heard the sound of dynamite explosions. Explosion sound is strong underwater than the land because of that high pressure. Therefore, it is a severe problem that may arise for scuba divers when they are diving. Sometimes divers can be embarrassed with that incident, and if they spread a negative image on social media or any online platform, negativity impact the future diving industry. Some diving operators stated that Sri Lankan Navy involved preventing dynamite fishing up to some extent but can't stop this problem. According to the diving centre operators, the fishermen destroy live corals and fish species in diving sites through fishing activities. Operators believe fishermen haven't any idea about the impact of fishing activities in the sensitive marine ecosystem. Because of that, diving operators see environmental settings underwater while diving, but fishermen are concerned only about the fluctuation of their fishing harvest. Even newly emerging corals are destroyed due to using fishing nets in diving sites. Coral reefs may be destroying and breaking because fishing nets are entangled when fishing near the coral reefs. Most of the time, fish species lay eggs in the coral reef, but when fishermen use nets, thousands of fish eggs are destroyed through coral reefs' degradation. Divers cut fishing nets because edible and also inedible fish are entangled in the nets. When divers are taken to diving sites for diving, divers are sometimes somewhat unhappy that fishing boats are fishing near the diving sites. Operators mentioned those reasons that cause conflict among divers and the fishing community.

The researcher identified the impact of scuba diving from illegal fishing activities. The issues mainly pointed out here are dynamite fishing and the effect of fishing near the diving sites. The researcher opinion is, these activities are a significant impact on diving operators to run their industry.

#### **4.1.2 Less Government Contribution**

##### *4.1.2.1 Lack of monitoring and evaluation*

The researcher identified government must contribute to developing scuba diving in the Trincomalee district. Because of that, diving centre operators have stated that government intervention is not substantial to recreational scuba diving. The government has significant attention to protecting Pigeon Island and its surrounding area due to the government earning income from the park entrance fee. Furthermore, respondents stated that many corals are available in diving sites of the surrounding area in Trincomalee district to protect. Still, the government takes a significant effort to protect only Pigeon Island. Respondent three also mentioned the same matter, not adequate support from the government to recreational scuba diving. For example, diving operators have been engaging in reef cleanup, especially cleaned nylon fishing nets in corals twice a month over the past two years. Diving operators voluntarily involve reef conservation without expecting government intervention because diving operators know the underwater environment's degradation due to fishing activities. Furthermore, to some

extent, operators will expect support from the government, but they stated that the government does not support conservation corals and things.

#### *4.1.2.2 Confusing business regulations*

There is some government intervention, but it does not add practical value to recreational scuba diving because the lack of knowledgeable people responsible for scuba diving is not in government. Moreover, government officers know about diving, but they didn't show it or appointed people didn't know about diving. Diving operators have problems registering their diving boats when the Navy checks and says; you don't register. Operators mentioned that a fishing license is necessary for operating a diving boat, but after registration as a fishing boat, they say this is not a fishing boat. Therefore, Operators are confused about how to register and where to register.

Moreover, one of the shortcomings of scuba diving tourism development in Sri Lanka is the contribution of government and tourism development institutions.

#### *4.1.2.3 Lack of marketing support for the diving sector*

The researcher identified that tourism-related government institutions' contribution does not substantially promote the scuba diving industry in Sri Lanka. Maldives and Thailand are mainly focusing on the scuba diving market segment. Sometimes tourists do not even know there is recreational scuba diving in Sri Lanka when they come to Sri Lanka. The government pay attention to common diving sites such as Trincomalee and Hikkaduwa, but Colombo also has potential diving sites. Respondents emphasised that responsible institutions do not pay attention to promotion and marketing diving through this statement. If the government can provide facilities, operators can individually promote scuba diving.

#### **4.1.3 Development of Infrastructure**

Operators faced issues and challenges in the scuba diving industry due to the minor development of infrastructure facilities needed for Scuba diving tourism. Operators expressed that if those barriers could be removed, it would develop as a renowned diving destination. Issues in infrastructure development cannot be specific to the Trincomalee; they can apply to the whole county. Some countries do not allow anchoring near the diving site for their diving boats to be evident for less infrastructure development. There is massive damage to coral reefs when using the anchor, but Sri Lanka hasn't a proper mechanism or option to minimise it. Some countries have perfect infrastructure facilities for scuba diving, so it is much better to provide some facilities, such as a suitable diving boat that accommodates a comfortable seat. The fishing boats were converted into diving boats. It's not comfortable, not enough space to carry equipment on this type of boat. Legal provisions available to transform into the diving boat but narrow and uncomfortable are not suitable for the diver's satisfaction. Sri Lanka is unable to give better service to diving tourists by using modified fishing boats. The government did not create a legal environment to develop infrastructure facilities in scuba diving tourist activities. Visitors are facing some difficulties due to the inadequate infrastructure facilities surrounding the area of Pigeon Island. Pigeon Island, as a marine sanctuary, has rich marine biodiversity.

When tourists visit there, they can be seeing Turtles and Sharks through Snorkeling and Scuba diving. The government charges 30-35 dollars for the national park ticket fee, but there are no washrooms and a resting place.

#### ***4.1.4 Unlicensed diving operators***

Evidence proved some diving centres are operating without a license, and sometimes even owners haven't licensed. Sometimes divers in diving centres guide as divemasters for divers without even an open water diving license. Diving centres use 10-15 years old equipment that can be fatal, and some diving centres do not have the necessary equipment for the operations. Many diving centres and operators in the Trincomalee district do not have proper licenses, and that the diving centres operate informally. Hence, any incident can impact the excellent image of recreational scuba diving in Sri Lanka. Some diving centres operate without a license and charge less price even from foreigners in case of a severe incident that will be affected by the whole scuba diving industry.

#### ***4.1.5 Restrictions***

The researcher identified some limitations coming from the Sri Lankan Navy due to the Trincomalee naval base. Hence, some restrictions are imposed by the Navy for diving operators restricting diving activities in the Trincomalee area. Many ships are sunken in Trincomalee harbour, but the problem is not allowing for diving. Therefore, the researcher is identified as not permit for diving operators due to security reasons. Furthermore, night diving is prohibited by Sri Lankan Navy in Trincomalee, but another coast in Sri Lanka allows to do the night diving. Eventually, the researcher identified that the Navy bans several numbers of diving sites due to security reasons. That's the obstacle faced by the diving centre operators to expand their visitors experience through diving in the Trincomalee District water. It is obvious to have some restrictions to dive due to security reasons. It can be acceptable to restrict diving closer to the naval base. However, unnecessary involvement of the Navy to stop diving activities in other areas should be re-considered.

#### ***4.1.6 Lack of local dive instructors***

The researcher identified some diving centre operators' problems due to inadequate certified instructors in recreational scuba diving. This issue is not limited to the Trincomalee district. Divemaster's and instructors are not enough in Sri Lanka. Therefore, diving operators are hired from foreign countries. Diving is new to Sri Lanka; therefore, one reason is inadequate instructors here. In past times divers have to go abroad for instructor exams, but now instructor courses are available in Sri Lanka. Still, instructors are not enough in recreational scuba diving when considering the demand. Sri Lankan instructors immigrate to other countries due to the not enough salary, not caring employees, insufficient facilities, and work contracts. And that cause thousands of dollars leakage to foreign countries due to the hiring of foreign instructors.

The researcher identified unique challenges faced by the employees who are working in diving centres. Some barrier comes from the close community about negative understanding about recreational scuba diving. Scuba diving helps to educate, explore new things, meet different people from different countries, etc. But the close community, especially Sri Lankans, have narrative perception. They pointed out that local communities' attention and awareness are lower about recreational scuba diving. Most of the instructors speak only English and Sinhala, so that is the main issue they face.

Often diving travellers come from different countries, especially Europe. Suppose instructors are fluent in other languages except English, a significant marketing advantage from diving centre operators. Sri Lankan monsoon patterns diving operators are moving to the Southwest coast or East coast. Employees have faced family conflict because they have to stay away from their families. Employees are hiring for the Colombo diving centre from Dehiwala Area, but it's difficult for them for the Trincomalee. As owners many problems in spending extra money on salaries and rents to accommodations. And they have to leave their families for six months, so employees are reluctant to go to Trincomalee.

## **4.2 Recommendations to Minimise the Issues and Challenges**

When analysing the study's second objective, "To provide recommendations that can minimise the issues and challenges", the researcher interviewed diving centre operators in Trincomalee district, government institutions directly involved in the tourism sector and marine resource management and protection institutions in Sri Lanka. According to the interviews' details, the researcher identified some recommendations to prevent issues and challenges faced by diving centre operators in the Trincomalee district.

### **4.2.1. Recommendations by the Diving Center Operators**

Mainly diving operators strongly believe that they can overcome the issues and challenges if they receive government support. They need a lot of help from the government and wish to have a special place with a responsible government person to discuss their Trincomalee's scuba diving problems. Government agencies such as the Navy and Coast Guard should involve in monitoring and regulating coastal based activities. Officers with a proper understanding of scuba diving can enforce laws and regulations related to scuba diving. The researcher identified the capability to utilise government institutions powers and resources to develop and regulate the scuba diving industry. Therefore, SLTDA could take those opportunities to build recreational scuba diving better, which will help solve problems raised by recreational diving operators. Legal boundaries are available for fishing activities, but anyone didn't inspect. Therefore, legislation is not enough, and laws must be enforced. Illegal fishing activities such as dynamite fishing and usage of illegal fishing nets happen in Trincomalee. Respondents suggested that they need a proper way to inspect those activities, and the government should declare the tourism zone and commercial zone. Government authorities should regularly attend to monitor prohibited and permitted fishing net activities near the coral reef. Because of that, fishermen are misuse even legal things. Fishermen can fish everywhere, but they come near diving sites because they know that big fish schools live in coral reefs. Usually, fishers come

to the diving sites, and operators cannot protest fishing activities because the government does not declare it a marine protection zone. Pigeon Island is a marine sanctuary with better government regulation and attention, so operators emphasise that at least two or three places should be gazette as protected diving sites.

Trincomalee has many beautiful diving sites. Someone's located a high-security zone but couldn't access it. The government can provide permission to access at least tourism boats that would be an opportunity to show shipwrecks, ornamental fish species and other things. Only registered boats are allowed to enter Pigeon Island but prohibited to access to diving boats. There are many sharks for people who prefer to dive with sharks. If a permit to access diving boats to Pigeon Island, that will be an excellent opportunity for them. Diving operators are stated that diving centres and their activities should be regularised.

Furthermore, operators hope to develop recreational scuba diving through proper regulations and supervision by government institutions. Moreover, they need an exact coordination system to identify who are the registered and unregistered operators. If they have the right people, equipment, tools, and proper certification, they can build trust in divers. When they meet one or two diving centres without a license, they predict that whole recreational scuba diving centres be like this. Diving operators' point of view is this recreational scuba diving should be regulated because the negative perception of recreational divers affects the future development of the scuba diving industry.

The researcher identified recommendations to overcome minor development of infrastructure facilities faced by scuba diving operators. Before developing infrastructure facilities, first should understand what type of infrastructure need. Such as what type of hotels would need for tourists and harbour for big diving boats etc. They need many things such as proper boats, a place to organise their items and the right equipment to develop this recreational scuba diving—furthermore, they pay 38% tax on diving equipment when imported. The operator said that if implementing the fair tax method will help them, that will help provide quality service. According to Diving operators' views, promotion must come from responsible government institutions in tourism and scuba diving should be promoted like the existing promotion of surfing in Sri Lanka. Individually operators promote their diving centres, but they emphasise government should be market Sri Lanka as a diving destination. Scuba diving is promoted not only by foreigners but also among the locals. Usually, diving is a much expensive sport, but the operator said that if local people come, they can reduce prices. Most writers and underwater photographers coming to dive with them. When they are published articles and photographs, the diving centre automatically promotes foreign divers.

Moreover, the operator mentioned those recreational divers concerned about recommendations of reference groups such as bloggers, underwater photographers, or diving writers. Therefore, mostly diving tourists believe reference group information rather than a description of diving centres web site or diving centre owners' recommendations. Operators expect support from Sri Lanka Tourism Promotion Bureau (SLTPB) to utilise their existing promotional tools for scuba diving tourism. Furthermore, the researcher identified recommendations about promotion, attracting high expending foreign tourists, promoting all-inclusive diving packages, and promoting among the locals.

#### **4.2.2 Recommendations from Government Institutions**

The recommendations were identified through the detail obtained from recreational government institutions; Sri Lanka Tourism Development Authority, Sri Lanka Tourism Promotional Bureau, Marine Environmental protection Authority and National Aquatic Resources Research and Development Agency (MEPA). MEPA works for marine protection. They work with several government institutions like; Coastal Conservation Department, Sri Lanka Coast Guard, Civil Defense Force, Sri Lanka Tourism Development Authority, Urban Development Authority, Sri Lanka Port Authority and Central Environment Authority. They discuss matters regarding projects based on the marine environment among these institutions. Those institutions can get involved to develop and regulating recreational scuba diving in Sri Lanka. SLTDA regulates recreational scuba diving and the fisheries' department handling aquatic resources and diving spearfishing activities. Hence, MEPA can contribute to developing recreational scuba diving in Sri Lanka.

As a government institution, the National Aquatic Resources Research and Development Agency conducts research and development studies in fishery and aquatic resources. As a research institution, they conduct research studies involving parties and status in the scuba diving industry. Moreover, they work as independently, but they also conduct researches at the request of other institutions. According to SLTDA guidelines, twelve water sports are under the water sports category. But do not have a specific policy for scuba diving. The Officer of SLTDA stated that legal provisions are still preparing for recreational scuba diving in Sri Lanka. According to the officer of MEPA mentioned that there are many irregularities in recreational scuba diving, such as leakage through the training courses, fishermen are involved in diving without training, underwater injuries (decompression sickness), and no price regulation and dynamite fishing. Officer stated that scuba diving should be regulated due to those irregularities. Moreover, the respondent noted that no institution handles recreational scuba diving in Sri Lanka. They have proposed a new program to standardise every scuba diving centre but under discussion level.

Officer in SLTPB mentioned conducting different marketing and promotional campaigns such as trade shows and roadshows to promote scuba diving. Furthermore, they provide information from booklets and especially implement strong online marketing through several social media platforms. Officer motioned that those promotional tools can be to apply to promote scuba diving in Sri Lanka. Resources are available for marketing recreational scuba diving in Sri Lanka. It also can attract a smaller number of tourists at a high price. It is a solution for carrying capacity and getting maximum revenue per head. Fisheries Research Vessels (FRV) boats and typical fishing boats are used in Eastern provinces but could not provide a better tourist experience.

Furthermore, the officer stated that these types of infrastructure shortages strongly exist in Eastern provinces. And also, some infrastructure facilities are not available even Down South to provide better tourism service. The immense potential is available in the East coastal belt for recreational activities, especially scuba diving, Batticaloa to Nilaveli side, Batticaloa to Vakarai and Kirinda. There is a significant potential to develop recreational scuba diving in

Trincomalee, but the officer mentioned that the infrastructure facility is not well established and is still growing.

## 5.0 Conclusion

According to the SLTDA 2017-2020 Tourism Strategic plan, recreational scuba diving was identified as a niche experience segment. The desk survey proved that young foreign travellers whose age is below 35 years involve recreational scuba diving activities. As a developing water sport and adventure activity in Sri Lanka, operators have faced many issues and challenges when operating recreational scuba diving activities. The diving operators are playing an intermediate role; diving operators have faced issues and challenges differently. Mainly, human activities such as illegal fishing activities gravely impact scuba diving operations. Other hand, government institutions are not paying adequate attention to managing marine protected areas, poor law enforcement, government taxation policy on diving equipment. These factors can be summarised in a summary table as follows.

*Table 5.1: Summary Table*

<b>Issues and challenges</b>	<b>Solutions/Recommendations</b>
Environment destruction by the fishing sector	Legislation is not enough, and laws must be enforced to discourage illegal fishing activities such as dynamite fishing. Government should declare the tourism zone and commercial zone.
Less Government Contribution	Responsible government institutions such as Sri Lankan Tourism Promotion Bureau (SL TB) and SLTDA should promote recreational scuba diving like the existing promotion of surfing in Sri Lanka. Proper regulating and monitoring bodies can be appointed. Tax on imported diving equipment can be reduced.
Development of Infrastructure	Proper boats, a place to organise the scuba diving equipment and the right equipment to develop recreational scuba diving should be provided.
Unlicensed diving operators	Need an exact coordination system to identify who are the registered and unregistered operators.
Restrictions	Navy and Coast Guard should involve in monitoring and regulating coastal based activities. Officers with a proper understanding of scuba diving can enforce laws and regulations related to scuba diving. This will be important to reduce misunderstandings about scuba diving operations in the area and encourage more compromised decisions.
Lack of local dive instructors	Need to promote diving, and there should be a professional certificate programme for training scuba divers and operators. Government can combine these programmes with public, private universities, private companies and Sri Lankan Navy. Then it will give more value and recognition to the programme.

## 5.1 Implications

According to the TDA 2017-2020, the Tourism Strategic plan mentioned that research studies must need scuba diving and wreck diving in Sri Lanka to take marketing and product development decisions. Through this research study, TDA could identify challenges faced by the diving centres, their contribution, and the potentiality of developing as a recreational scuba diving destination in both Trincomalee district and Eastern province. Moreover, it can be

marketing and promotion strategies focusing on the foreign and local tourists willing to recreational scuba diving. This study is probably helpful for understanding and developing recreational diving services within the area. According to the SLTDA, they proposed a resort region in the Trincomalee district mainly based with Kuchchaveli. For that resort, these research findings will be essential for further developments and to increase recreational activities.

Moreover, as a niche market segment, this study is most significant to SLTDA and SLTPB for future marketing and service development. SLTDA can better understand the areas that want proper regulation as a tourism activity: ex- unregistered diving centres, equipment, staff qualifications, etc. Through this study, government institutions such as NARA and MEPA can understand the degradation of the marine environment because diving operators are daily engaging in diving activities. As marine protection and aquatic resources research institution, they could study marine degradation in the Trincomalee district. Hence, the government can establish fair laws and policies for the survival of marine and recreational diving. As recreational diving service providers, diving centre operators can understand the holistic idea about existing challenges and barriers to developing recreational scuba diving in the Trincomalee district. Based on the finding of this study, operators can propose and request development projects or programs from the government. The current registration procedures and government institutions should be centralised to establish one institution to register all scuba diving activities. Regulating and monitoring are essential for illegal fishing activities and monitoring legal fishing nets' impact on the coral reef.

Furthermore, relevant institutions involve regular reef cleanup programs. Infrastructure facilities should be developed for recreational scuba diving activities; it will help diving operators, employees work in diving centres and divers. And also, legal provisions should be provided to develop infrastructure facilities. Ex- diving boats. Availability to provide research facilities for foreign and local students affiliated with foreign and local universities. Local universities such as the University of Ruhuna and Eastern University can combine and conduct diving courses. When marketing and promotional must be boosted by the TPB and primarily focus on upmarket and attract the local market.

In Sri Lanka, there are many shallow places so that Sri Lanka can promote disabled scuba divers. Can promote Scuba diving in newly opened underwater museums in Gall and Trincomalee. According to specialists in Diving and Hyperbaric, diving is a meditation for cancer and many other diseases. Then it can be promoted as a meditation activity. Recreational scuba diving can be promoted as a sport among school students with the support of the government. As a sport, it would be helpful to be famous among the local youths. Sri Lanka can use celebrities to promote scuba diving, focusing on the local market. Other than the current diving sites, there are many sunk ships and coral reefs in Batticaloa and Kayankani areas for diving centre operators to expand their operations. The government financial institutions can introduce new loan systems to the people willing to enter and start diving sector operations as professionals. That may be a solution for shortage and inadequate dive instructors, and also it may reduce the import of foreign diving instructors to Sri Lanka. This scuba diving tourism can be expanded not only with saltwater but also with fresh water. Because in Sri Lanka there



were many legendary places and underwater hidden places like "Rawan Cave - Nildiya Pokun" in Ella.

## 5.2 Suggestions for Future Researchers

Future researchers can explore divers' satisfaction level and service quality of recreational scuba diving, community perception of employment in diving centres, women participation in recreational scuba diving, local participation. Further, the researchers can select other scuba diving areas, such as the southwest coast Kalpitiya coastal zone in Sri Lanka.

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