Feasibility Report

Ship / Boat Building
Nautical Tourism
Marina Development

EDB

Prepared by

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Maritime Services including Ship & Boat Building, Ship Repair and Maintenance, Bunkering Services, Nautical Tourism and Marina Development has been recognized as a leading industry and an emerging export sector, with the potential to become a key component of the country's manufacturing and services sector. The industry offers a wide range of products and services to international markets. The SLEDB has identified the industry as a key product sector which could contribute significantly to achieve the country's national export targets.

The purpose of this Feasibility Study is to establish Sri Lanka's export manufacturing/ service capability and readiness of key support structures to achieve the above objective. The report includes the status of the global and local industry, level of local infrastructure facilities and government policies and initiatives along with the salient growth opportunities for the industry and salient constraints, risks and mitigating strategies.

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Acronyms

ATM	Automatic Teller Machine
AWPLR	Average Weighted Prime Lending Rate
BOI	Board of Investment of Sri Lanka
BOO	Build Operate Own
BOT	Build Operate Transfer
BTI	Boat Building Technology Improvement Institute Lanka (GTE) Ltd
CBSL	Central Bank of Sri Lanka
CDPLC	Colombo Dockyard PLC
CeyNor	Ceynor Foundation Ltd
CFHC	Ceylon Fishery Harbours Corporation
CGT	Compensated Gross Tonnage
CHEC	China Harbour Engineering Company
CIFC	Colombo International Financial City
CSE	Colombo Stock Exchange
DNV	Det Norske Veritas
DWT	Dead Weight Tonnage
EU	European Commission
FDI	Foreign Direct Investment
FOB	Free on Board
FRP	Fiberglass Reinforced Plastic
FTA	Free Trade Agreement
GDP	Gross Domestic Product
GRP	Glass Reinforced Plastic
IRS	Indian Register of Shipping
IUU	Illegal, unreported and unregulated fishing
PPP	Public Private Partnership
R & D	Research and Development
Rs	Sri Lanka Rupees
SLEDB	Sri Lanka Export Development Board
SLTDA	Sri Lanka Tourism Development Authority
SLN	Sri Lanka Navy
SME	Small and Medium Enterprises
Sq.km	Square kilometers
SEC	Securities and Exchange Commission of Sri Lanka
TEU	Twenty-foot equivalent unit in containerized cargo
WRMPP	Western Region Megapolis Planning Project

Executive Summary

FDI and foreign exchange earnings being vital for Sri Lanka's economic growth, the country's integral focus is on attracting the global business and tourist communities, given the host of unprecedented opportunities unfolding amidst the peace dividend, post a three decade war. Sri Lanka has long been acknowledged as an important link in the East-West nautical route and the SLEDB and the BOI are focused on capitalizing on this prospect by implementing the Governmet's vision of positioning the country as a Maritime Trade Hub of Asia. Ship and boat building, repairs, bunkering services and nautical tourism are identified as growth sectors, that would also create indirect potential through the spin off of auxillary industries and job opportunities.

Globally, shipbuilding has been dominated by China, South Korea and Japan, together accounting in excess of 90% of the industry in 2015. These countries rose to spectacular heights mainly due to supportive government policies, including capital funding, measurers to promote FDI as well as joint venture facilitation with overseas companies to access latest technology. These global giants, especially South Korea and Japan, that mainly build commercial shipping vessels, experienced a set-back from the recent weak global trade and the downturn in oil prices resulting in overcapacity. European shipyards focused on the leisure shipbuilding sector, however continue to thrive, signifying greater potential for this sector. Nonetheless, shipbuilding, is forecast to regain momentum after 2017, with anticipated global upturn. Meanwhile, the increasing popularity of nautical tourism and nautical sports is expected to propel demand for recreational boats including sail boats, yachts, luxury yachts, and catamarans. There is also great potential for companies engaged in ship repair and maintenance as much of the world's fleet is under 20 years of age and will require maintenance. Industry giants, China and Korea (for shipping vessels), European yards (for pleasure vessels and fishing boats), Singapore & Dubai (for ship repairs and bunkering) have been among Sri Lanka's key competitors.

Sri Lanka has a long established ship building sector and a fast emerging boat building sector. The latter has its origin in building fishing vessels for the fisherfolk around the island. Nevertheless the industry has not reached its full potential to be an internationally recognised nation in this sphere.

The portfolio of ships produced by CDPLC, the main shipbuilder, includes offshore support vessels, passenger ships, harbor tugs, rescue and coast guard vessels, among others, to international markets such as India, Singapore, Maldives and Saudi Arabia. WCS, the only other ship builder, too has already penetrated into the export market despite its short history. Ship repair and maintenance facilities within and outside port limits are provided by both CDPLC and WCS as well as several smaller players. Approximately ten licensed bunker holders provide bunkering services, with two players dominating this market.

The portfolio of boats manufactured by local players includes a wide range of vessels from small kayaks, canoes and paddle boats to large yachts and vessels of over 80'- 90' in length as well as a range of luxury yachts, pleasure and leisure craft, commercial vessels, naval, coast guard, surveillance vessels and other vessels for international markets. These companies operate with foreign collaboration as joint ventures or with technical collaboration, which also facilitates access to global markets. Main export destinations include Asian, USA, Scandinavian and other European markets as well as the African continent.

The supply chain for the industry consist of local importers/agents and overseas suppliers, although limited component manufacturing is being done locally.

Sri Lanka's tourism sector is experiencing rapid growth, with a record number of tourist arrivals in 2016, primarily for pleasure purposes. Most tourists are beach and ocean based, given the country's favourable marine climate. However, despite its many advantages, the country is yet to realize the full potential as a nautical tourist destination. Immense opportunities exist to further coastal and inland water based potential.

The country has hardly any marinas other than a few mooring facilities confined to the southern coast. None of these venues offer facilities associated with a fully-fledged marina. Sri Lanka has the potential to derive considerable foreign exchange earnings from high spending nautical tourists, through berthing of foreign yachts, cruise ships and boats and also through peripheral activities such as repairs, refueling, yacht clubs and other tourist spends. As such, marinas are a vital segment that should be developed alongside nautical tourism in order to enhance foreign exchange earnings.

Export market penetration has primarily been achieved through direct marketing, foreign joint ventures/ collaborations, or as in the case of shipbuilding and repairs, through worldwide agents. A local institute, BTI together with the SLEDB organizes buyer-seller meets through a "Boat Show" held in Sri Lanka every two years. SLTDA is the primary promoter of the tourism sector. Besides the above, the industry uses social media and web sites to promote their products. Several new channels could be considered to create awareness of Sri Lanka's potential as an attractive FDI destination and for sector growth, including devising a national/industry level marketing plan, virtual marketing, organizing international maritime sport events and other target marketing campaigns, customer surveys as well as enhancing BTI's role for this purpose.

Industry prospects and growth potential is substantial for the country to enhance foreign exchange earnings and create many job opportunities:

- Given the country's geographical positioning in the ocean routes and its resources, there is vast potential for shipbuilding, ship repair and bunkering services, from ships calling over at the local ports and liners traversing along the main sea route. In 2016, a total of 4,280 cargo ships arrived at the Colombo Port alone, apart from 125 ships that obtained repair, maintenance and bunkering services at this port. Upgrading the other seaports and fishery harbours will lead to higher foreign exchange earnings, employment generation and promotion of nautical tourism.
- The industry should ideally expand beyond the couple of existing players. Existing ship and boat builders, with their proven expertise in international markets, have the potential of broad-basing their vessel range as well as penetrating new markets. Since capital is a constraint, manufacturers could evolve into the next stage through new foreign joint ventures or new technical collaborations. This will enable enterprises to diversify into large scale manufacture to achieve operational efficiencies and meet emerging customer demand for vessels such as pleasure craft.
- The untapped opportunities in boatbuilding are many and include provision of pre-production services such as boat designing and architecture, the manufacture of fishing boats for fish export industry, which is expected to boom consequent to the EU lifting the fishing ban on Sri Lanka, pleasure and leisure craft, a segment that has remained largely unaffected by

global turmoil and expected to grow, fueled by a rising upper-middle class segment and the aniticipated boom in nautical tourism. There is also potential for manufacture of rivercraft for both commercial and leisure purposes, opportunities to build boats for niche markets such as the Maldives, harbour vessels, rescue craft, aluminum and steel boats as well as opportunities for foreign companies to set up manufacturing plants, as in the case of North Sails, who operates a main plant in the country.

- Component supply market could develop into local manufacturing plants and suppliers could ultimately evolve into exports.
- In order to attract ocean based tourists, investments could be made in nautical activities such as chartering yachts and boats, organizing coastal attractions, setting up training schools in nautical sports and by attracting cruise ships, yachts and ferries to dock in local ports . These activities, in addition to generating foreign exchange, will propel the demand for boat building, repairs and maintenance
- Alongside nautical tourism, lucrative opportunities exist for investment in marina development either by way of PPP or as privately owned marinas. Developed marinas will attract a whole new segment of high spending nautical tourists, interested in day charters, live-aboard charters, island hopping and also attract visting yachts desirous of patronising marina faciltities, while expanding the yacht/boat service/repair segment.
- Harbours, such as the Trincomalee harbour, could be developed along the lines of Darling Harbour, Australia with attractions such as day tours, sunset and dinner cruises, sea aquariums, shopping centers and cafes.

For the country to be globally competitive (especially considering low cost vessels supplied by China), attract significant FDI and enhance foreign exchange earnings, the following industry concerns that are a barrier to development, need to be addressed as a pre-requisite;

- Lack of a national strategy for the industry
- Lack of regulatory framework governing quality standards etc.
- Need to upgrade ports around the country
- Lack of Marinas
- Constraints for indirect exports– e.g: Sri Lanka does not allow exporters especially those falling under BOI regulations to supply to other BOI and other foreign exchange earning entities availing the duty free concessions.
- Labour shortages – Mainly due to migration. Access to skilled labour is difficult despite young unemployed trainable youth in the country
- Lack of clearly laid out procedures to assist foreign investors to enter the industry
- Lack of dedicated land and locations to set up boat yards
- Lack of dedicated launching sites and tedious procedures in obtaining approvals
- Constraints in road access

- Funding constraints
- Inadequate Research & Development to be globally competitive
- Absence of an Industry Association

The following strategies are proposed to overcome the above concerns.

- SLEDB, BTI and other key stakeholders should initiate the preparation of a national strategy, incorporating required key policy initiatives, to be implemented and monitored under the purview of an appointed regulatory body.
- Development of a proper regulatory framework has already been initiated by SLEDB. However, sea mammal observation approval requirements needs to be rationalized to promote nautical tourism.
- Ports and Harbours - The government's development plans include establishing the CIFC, upgrading commercial seaports managed by SLPA, upgrading existing and developing new fishery harbours as well as developing three marinas managed by the CFHC.
- Marina development – given the capital outlay, marina development need to be initiated by the state, possibly as PPP. At least two fully-fledged marinas need to be constructed around the country to derive the benefits of this very lucrative industry segment.
- Measures could be taken to amend BOI restrictive laws on indirect exports
- Labour shortages – A key competitive advantage has been the contry's inexpensive labour. Competition with other Asian countries with inexpensive labour and the migration of some skill categories need to be addressed with long term training and retention plans. Selected industries (such as this) could be permitted to access labour from neighboring countries under work permit procedures. Measurers to raise awareness of industry opportunities, especially among unemployed youth is also needed
- Setting out clearly defined procedures to establish shipyard/boatyard, ideally in the form of a printed booklet/brochure, for ease of foreign investors
- Identifying and demarcating dedicated industrial zones for boat building, which will also address the constraints in road access for testing and launching a boat. The National Budget 2017 stipulates setting up 15 export villages including one for boat manufacture, on PPP basis, which may be an opportunity to address this issue.
- Private sector encouragement to develop boat launching sites on PPP basis
- Simplified approval procedures (SLPA and CFHC) to launch a boat
- Funding constraints – Policy support has been the main driver of successful global players, given the capital intensive nature of especially ship building, ship repair and marina development and as such PPPs and FDIs are needed for the development of these segments. The government and the BOI, in cognition of this fact, are focused on attracting FDIs through investor friendly policies and creating an enabling environment. Corporates are encouraged to borrow offshore. The proposed local EXIM bank and the proposed CIFC (an offshore financial centre on par with regional players) are envisaged to supplement the existing bank, financial institution and capital market structure in the country.
- Technical collaborations and accessing ITI for R & D should be considered to be globally competitive.

- Absence of an Industry Association – The industry is informally spearheaded by BTI, an institute engaged in industry training. The role of BTI could be enhanced to formally support the industry by formulating a Boat Builders' Association, with BTI creating and maintaining an industry database, identifying international market and joint venture opportunities, arranging buyer seller meets and being the catalyst in addressing industry needs with regulators and other stakeholders and thus foster growth.

Political stability, strengthening macro economic fundermentals and investor friendly polcieis combine to make Sri Lanka an FDI friendly destination and the nation is ideally positioned to spin-off and develop the Maritime Hub plan envisaged for the country. However, in developing the sector, equal attention should be given for the protection of Sri Lanka's unique and valuable marine life and marine ecosystems.

1. Overview of Sri Lanka

1.1 Country Profile - Salient Country Facts

The Democratic Socialist Republic of Sri Lanka ("Sri Lanka") is an island of 65,600 sq.km situated in the Indian Ocean of the South-Asian sub-continent. The legislative capital of Sri Lanka is Sri Jayawardenepura-Kotte, while the commercial capital and the largest business city is Colombo. Sri Lanka in 5.5+ GMT time zone, is the 57th most populated nation in the world with 21.3 million people and an annual population growth rate of 0.9%. Population density is highest in the Western Province, especially in and around Colombo.

Sinhalese constitute the largest ethnic group in the country, representing 74.8% of the total population. Tamils are the second major ethnic group accounting for 11.2% and Moors comprising 9.2% of the population. The nation comprises a multi-religious society and as per the 2011 census, the composition reflected 70% Buddhists, 13% Hindus, 10% Muslims and 7% Christians.
Sri Lanka is a unitary state governed by a mixture of a presidential system and a parliamentary system. The President of Sri Lanka is the head of state and the Parliament is a 225-member legislature.

Sri Lanka's economy has transitioned from a predominantly rural-based agriculture economy towards a more urbanized economy driven by services. In 2016, the service sector accounted for 57% of GDP, followed by industrial (27%), agriculture (7%) and taxes less subsidies (9%).

	2012	2013	2014	2015	2016
GDP at current market price (US$ billion)	68.4	74.3	79.4	80.6	81.3
Per capita GDP at market price (US$)	3,351	3,609	3,821	3,843	3,835
GDP Growth Rate (%)	9.1	3.4	5.0	4.8	4.4
Annual Average Inflation %	7.6	6.9	3.3	0.9	3.7
External Trade Balance (US$ million)	-9,417	-7,609	-8,287	-8388	-9,090
Exports (US$ million)	9,774	10,394	11,130	10,505	10,310
Imports (US$ million)	19,190	18,003	19,417	18,935	19,400
Annual Average Exchange Rate (Rs/US$)	127.60	129.11	130.56	135.94	145.60
364 days Treasury Bill Rate (year end %)	11.7	8.3	6.0	7.3	10.2
Average weighted prime lending rate of commercial banks % p.a.	14.40	10.13	6.26	7.53	11.52
All share price index (ASPI)	5,643.0	5,912.8	7,299.0	6,894.5	6,228.3
Market Capitalization as a % of GDP	24.8%	25.6%	29.7%	26.3%	23.2%

Source: CBSL

As Sri Lanka aspires to become a higher middle-income country, the government policy envisions promoting a globally competitive, export-led economy with an emphasis on inclusion by generating job opportunities, enhancing income levels, development of rural economies and creating a wide and strong middle class as key policy priorities.

1.2 Overview of the macro operating environment

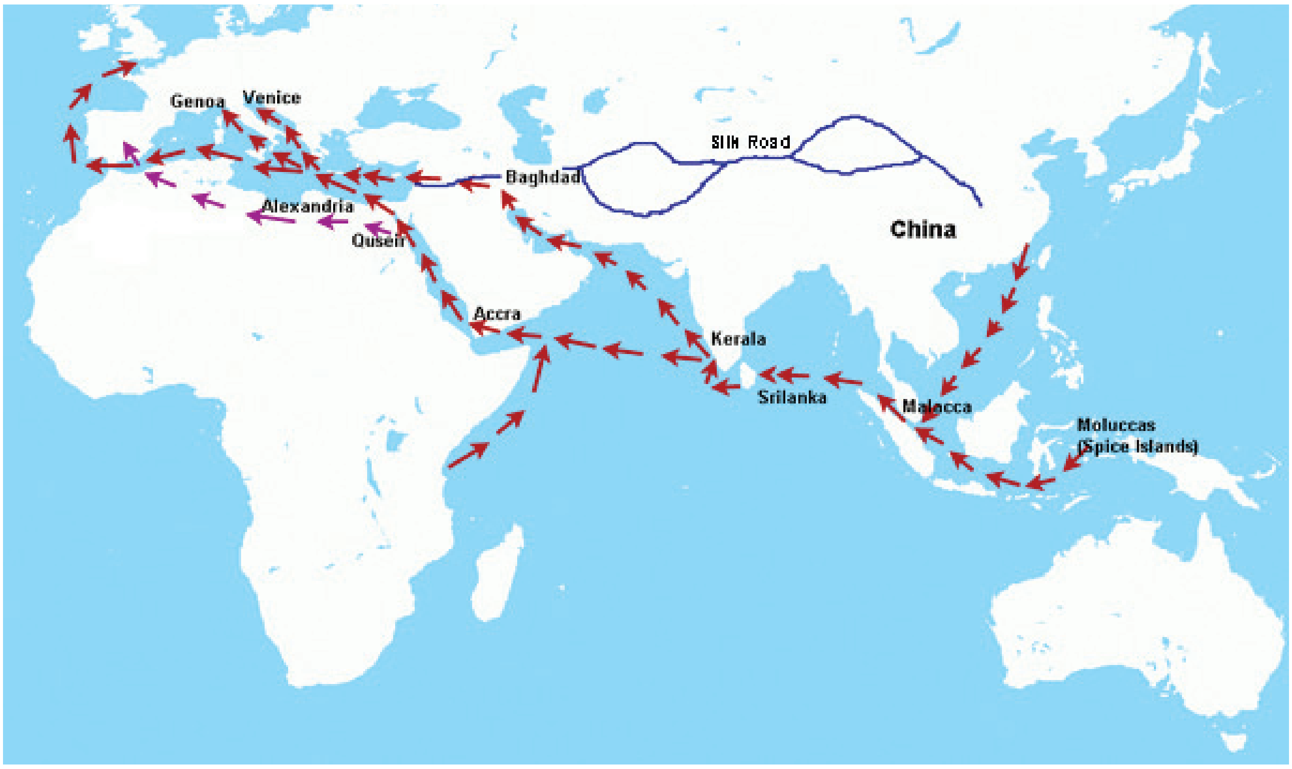
Political	• Country on a stable growth path after a 30-year war that ended in May 2009 • Policies in place to encourage FDI in the form of investments, loans and grants. Rules and regulations promote free repatriation of profits and capital for foreign investors • Government encouragement of private sector participation in terms of PPP, BOO and BOT as the engine of economic growth • Sri Lanka is considered the most peaceful country in South Asia and South East Asia making it an ideal business location • The current political regime is focused on good governance particularly with an independent judicial system free of political interferences whilst creating an environment conducive for business growth
Economic	• Sri Lanka achieved GDP of US$ 81.3 billion by end 2016 with a per capita GDP of US$ 3,835 • In 2016 Sri Lanka recorded a real GDP growth of 4.4% against 4.8% in 2015. It is projected that the economy would grow by around 5.5%– 6.0 % in 2017 (Source: CBSL) • Sri Lanka is a middle income nation with a literacy rate of 93.2%, electrification level of 100%, with 90% having access to safe drinking water and a mobile penetration of 129%. Country is on the path to reach upper middle income status (GDP based) • The Sri Lanka Rupee has been largely stable relative to many currencies. In 2016, the depreciation amounted to 3.8% against the US$ and closed at 149.80 at year end. Sri Lanka Rupee is generally a relatively stable currency, recording an average depreciation of 4% in the last five years. Central Bank constantly creates a policy framework conducive for exchange rate risk management to support the external trade (imports and exports) of the country • Inflation based on the Colombo Consumer Price Index remained below mid-single digits at 4.0% in 2016 and the government policy thrust is to maintain it at present levels or achieve a further reduction in the medium to long term • Fiscal management is an extremely challenging task being a country with a budget deficit in the range of 5-8% and exposure to foreign and domestic debt amounting to over 70% of the GDP. Nevertheless the domestic government securities rates at 10.17% p.a. (364 days) and Commercial Banks average prime lending rate at 11.5% p.a. as at end 2016

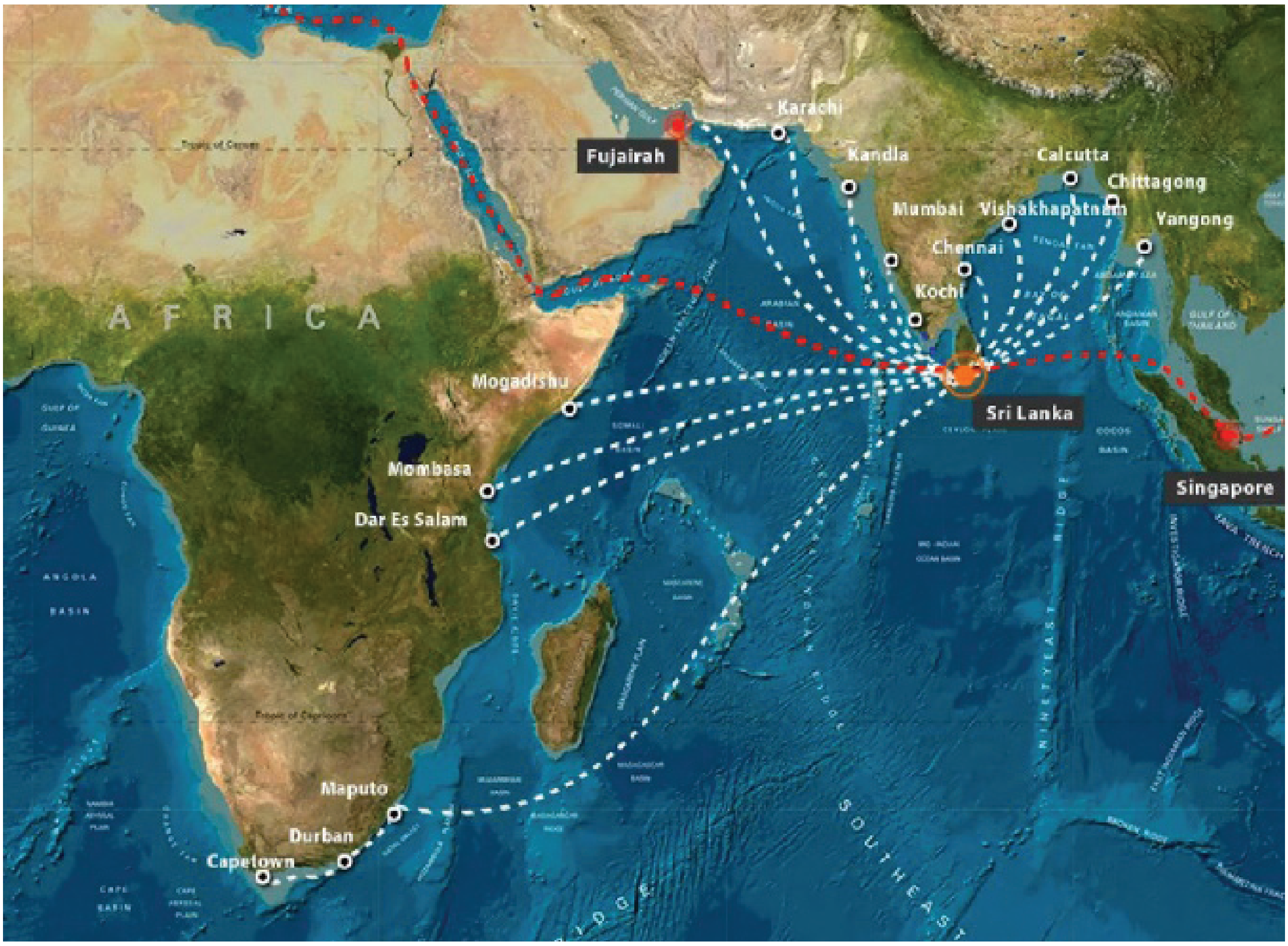
Social	• Focus on improvement of economic and social infrastructure, to achieve sustained high economic growth and raise living standards in the endeavor to be a higher middle income country (Infrastructure includes Power, Transport, Roads, Highways, Ports, Water supply, Telecommunications) • Free healthcare and education (up to undergraduate studies) to all citizens • Adoption of Sustainable Development Goals introduced by the United Nations • Encouragement for Private Sector Participation and Collaboration for providing Higher Education, Technical and Vocational Training to the youth population • 2012 Demographics indicates approximately 67% of the population are in the 15-to-65-year age category which translates to a dependency ratio of 49% due to 25% of the remainder being children and 8% being senior citizens (Source:CBSL) • Labour Force participation in 2016 was 54% and unemployment rate was 4.4%. • Youth preference to engage in white collar jobs over blue collar skilled labour work within country although some may obtain the latter skills in Sri Lanka and engage in similar jobs overseas
Technological	• The Vision of the Ministry of Science, Technology and Research (MoSTR) is "Sri Lanka becomes a scientifically and technologically advanced country by the year 2020" Thereby "Develop, or acquire and adapt, scientific knowledge and technologies for transfer to achieve progressive modernization of all sectors and to enhance the country's competitiveness in the world economy" • The Information and Communication Technology Agency (ICTA), currently functioning under the Ministry of Telecommunication & Digital Infrastructure, is mandated to create a Digitally Inclusive Sri Lanka to Transform Sri Lanka into a creative knowledge based economy • Industrial Technology Institute (ITI), the successor to Ceylon Institute of Scientific and Industrial Research (CISIR) comes under the purview of the Ministry of Science, Technology and Research and serves both the hi-tech industries and SMEs through R&D. ITI could be positioned to support the boat building industry with new cost effective technologies • Telecommunication is one of the fastest growing sectors. Country ranked 65th out of 143 countries (improving from 76th place in 2014) in network readiness - highest among SAARC nations. Broad band, lease-line and satellite connectivity is widely available around the country. • Initial steps taken to set up an Innovation Accelerator during 2017, a platform that will combine the National Innovation Programmes of the Coordinating Secretariat for Science, Technology and Innovation, the National Thematic Research Programme and the technology support schemes of the National Science Foundation.

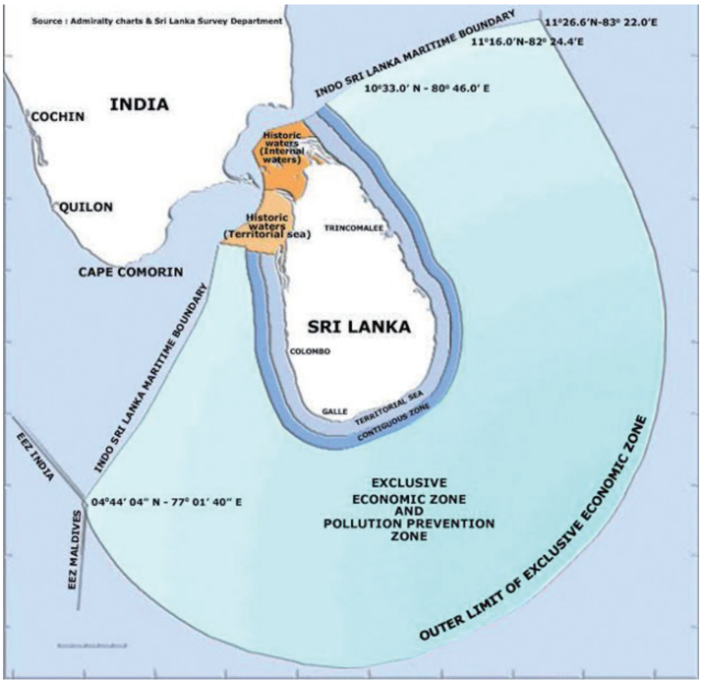
Legal & Regulatory	• Sri Lanka's legal system is an amalgamation of English common law, Roman-Dutch civil law and Customary Law • Company Law (Companies Act No. 7 of 2007), Labour Laws stipulate working hours, age limits, prohibition of child labour industrial safety etc. • Department of Inland Revenue (IRD) administers all direct and indirect taxes under the Inland Revenue Act (http://www.ird.gov.lk/) • Department of Customs (http://www.customs.gov.lk/) administers the customs duties, tariffs and border control procedures (excluding issuance of visas which is done by the Department of Immigration and Emigration) • Some salient industry specific regulatory aspects are given in Chapter 16
Environment	• Tropical climate with varied temperatures - Coastal or upland areas benefit from warm weather, sea breeze or cool mountain breezes throughout the year. Two monsoon seasons. • Adoption of Sustainable Development Goal 14 being "Conserve and sustainably use the oceans, seas and marine resources for sustainable development" and Goal 15 being "Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation, and halt biodiversity loss" • The government is keen on promoting Blue-Green Development since January 2016, aimed at exploiting the natural resources of the country towards sustainable and resilient development, in line with the Sustainable Development Goals • The Central Environmental Authority (CEA), engages in protecting and managing the quality of the environment by promoting public participation, enforcement, advanced technological interventions and environmental education • Coast Conservation & Coastal Resource Management Department is responsible for prevention of erosion, protection of nature, protection of coastal waters, providing Coastal Engineering Consultation for Public/ Private for the formulation of Projects/Programs in Coastal Sector and protection of Coastal homes involved in generating economic benefits such as fishing, tourism, and maritime activities

1.3 Locational Advantages

Sri Lanka, formerly known as **"Ceylon"** and renowned as the **"Pearl of the Indian Ocean"**, is a tranquil island of rich natural resources and cultural heritage. Sri Lanka, advantageously positioned in the path of major sea routes, the "Silk Route" of the ancient traders. Thus from ancient times, Sri Lanka has been one of the important maritime hubs for ship repair and marine services.







Sri Lanka lies within the tropical zone between latitude 5° 55'— 9° 51'N and longitude 79° 41'— 81° 53'E. It has a land area of about 65,600 sq km, bounded by a coastline some 1,340km in length. The continental shelf surrounding the island and connecting it to the continent of Asia is estimated to cover between 26,000 and 30,000 sq km. The Indian Ocean as a whole has a mean depth of 3,900m, increasing to a maximum of about 8,000m. Within the 200-nautical-mile (370km) radius of Sri Lanka's exclusive economic zone, its maximum depth is about 6,000m. The continental shelf on which the island sits has a mean depth of 75m and forms part of the Asian continent.

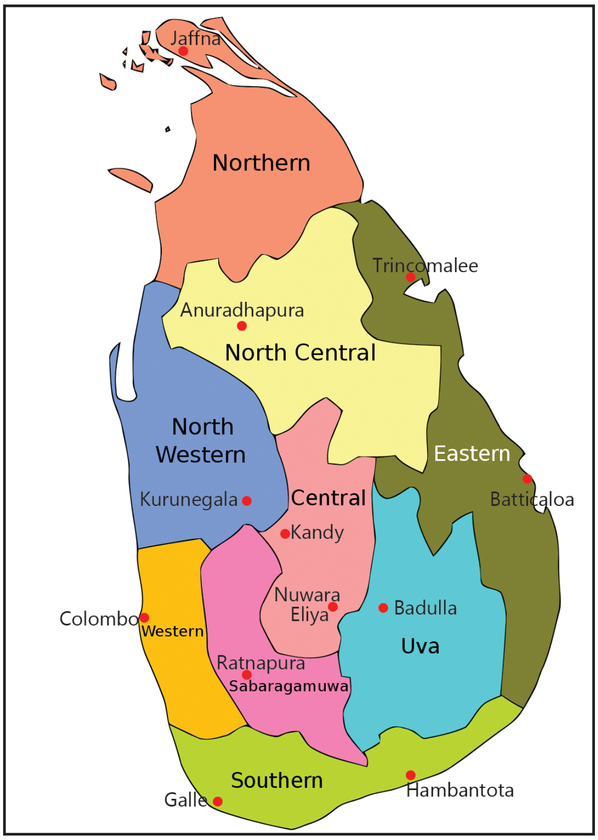
Continental Shelf

(Map: http://www.nara.ac.lk/NARA/12/mebin/index.html)

Sri Lanka is famous for the incredibly beautiful inland tours to its scenic tea gardens, ancient heritage sites as well as perpetually sunny holidays on the beach. The coastline of Sri Lanka is replete with palm fringed sandy beaches. Eight sites of Sri Lanka have been inscribed in the UNESCO World Heritage Sites.

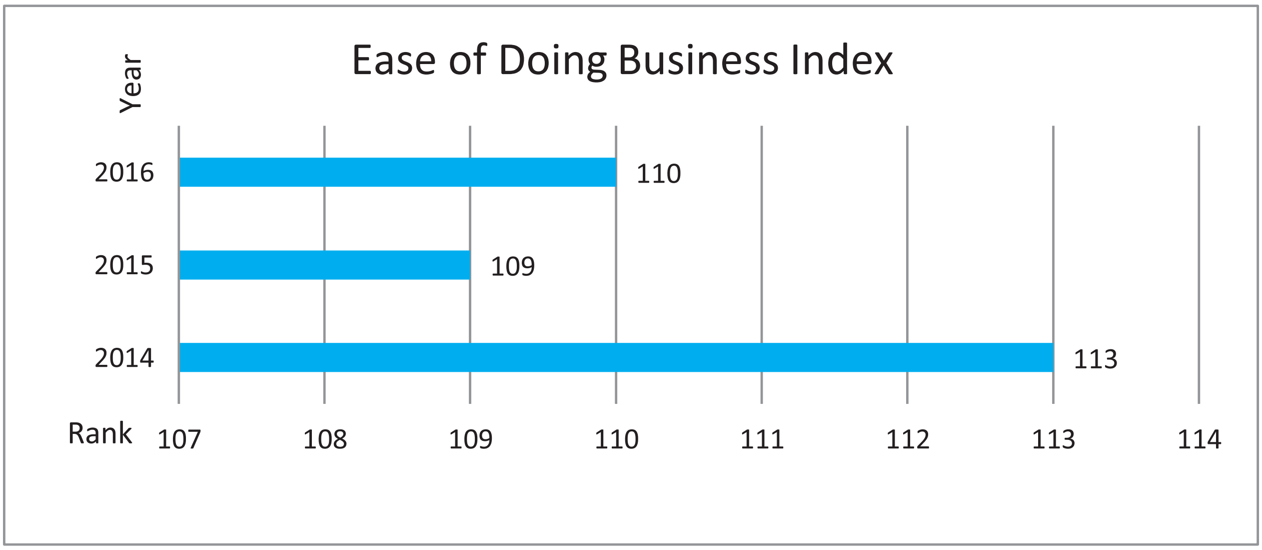
Prime Tourist Attraction Areas

Provinces and Provincial Capitals



1.4 Ease of doing Business and salient global indicators

Sri Lanka is ranked 110 in the World Bank's **"Ease of Doing Business 2016"** index, which ranks the 189 countries based on several criteria including the regulatory environment's conduciveness to business operation, degree of protection of property rights etc. Economies are ranked in descending order with the highest rank 1 indicating simpler and more business friendly regulations.



Source: http://www.doingbusiness.org/

The composition of the overall rank doing business is given in the below table:

Topics	DB 2016 Rank	DB 2015 Rank	Change in Rank	
Overall	110	109	↓	1
Starting a Business	74	95	↑	21
Dealing with Construction Permits	88	83	↓	5
Getting Electricity	86	82	↓	4
Registering Property	155	154	↓	1
Getting Credit	118	109	↓	9
Protecting Minority Investors	42	51	↑	9
Paying Taxes	158	157	↓	1
Trading across Borders *	90	89	↓	1
Enforcing Contracts	163	163	↓	-
Resolving Insolvency	75	76	↓	1

Source: http://www.doingbusiness.org/

Furthermore, English is widely spoken and is the main language used by the business community making it very easy for foreign investors to easily adopt and hire professionals as well as skilled labour within the shores.

Trading across Borders is expanded further in the table below depicting the time and cost of exports and imports:

***Trading across Borders Rankings**

Indicator Trading across Borders	Sri Lanka	South Asia	OECD high income
Time to export: Border compliance (hours)	43	59	12
Cost to export: Border compliance (USD)	366	376	150
Time to export: Documentary compliance (hours)	76	78	3
Cost to export: Documentary compliance (USD)	58	183	36
Time to import: Border compliance (hours)	72	116	9
Cost to import: Border compliance (USD)	300	645	115
Time to import: Documentary compliance (hours)	58	106	4
Cost to import: Documentary compliance (USD)	283	348	26

Source: http://www.doingbusiness.org/

Sri Lanka's rank in the other salient Global Indices are also given below:

Index Name	No. of Countries	Sri Lanka's Ranking			
		2010	2012	2014	2015
Global Innovation Index	142	79	94	105	85
Logistic Performance Index	160	137(2007)	81	89	113
Global Competitiveness Index	148	62	69	73	68(2015/16)
Basic Requirements Index	148	73	72	75	75
Infrastructure Index	148	70	62	75	78
Human Dev Index (Value)	186	0.705	0.715	0.750(2013)	0.757
Economic Freedom Index	185	119	96	101(2015)	93(2015/16)
Global Peace Index	162	133	103	105	114
Prosperity Index	142	59	58	62	61
Prosperity Index (Value)	-	58.2	66.8	-	-
Happiness Index	157	-	-	133	117
Corruption Perception Index	167	-	-	85	83
ICT Development Index	155	105	105(2011)	116(2013)	115

Source: http://www.doingbusiness.org/

The Global Competitiveness Index considers Sri Lanka as the most advanced economy in the region. Sri Lanka has also comfortably surpassed most of the Millennium Development Goal targets set for 2015.

1.5 Institutions primarily focused on Investment Promotion for the Sector

Government with a view to establishing Sri Lanka as an export driven economic hub of the region has laid out an export-oriented industrialisation strategy. These measures were implemented toenhancing the country's global competitiveness to further integrate into the global value chain. The Ministry of Industry and Commerce continued to facilitate regional industrialisation by promoting investments and provisioning of infrastructure facilities, and technical assistance at the regional level. SLEDB is currently mandated to work with a number of international partners to identify new products and new markets to promote local products.

Government policy on investment promotion relating to the sectors covered in this study is mainly implemented by the following institutions:

- **Ministry of Development Strategies and International Trade** and **Ministry of Finance** together with the other relevant ministries are actively engaged in supporting the government thrust of attracting FDI for the development and expansion into export markets
- **Board of Investment of Sri Lanka** (BOI) (http://www.investsrilanka.com/) is the one stop central facilitation point for foreign direct investors, providing assistance and advice throughout the investment process from inquiry to project approval, implementation, monitoring and aftercare facilities. BOI facilitates the linkages with the relevant line agencies in order to fast track the project approval process.

  Among the sectors promoted by BOI under the sectoral investment promotion programs are the followng.

  - Maritime sub-sectors for investment opportunities
    - Construction of new terminals
    - Developing skills required for maritime industries
    - Supporting logistic establishments
    - Ship building and repairing industries
    - Developing minor ports & connectivity
    - Expanding related leisure activities
    - Further research on exploring sea bed potential
    - Marine support industries
    - Rigging & offshore engineering
    - Supply of spares, food, water and other goods
    - Bunkering service
    - Maintenance services
    - Transshipments service
  - Manufacturing sub-sector for investment opportunities
    - Export Oriented Industries – Ships and Boats

- Tourism sub-sector - Regional blocks for investment opportunities for construction and management of hotels, resorts, leisure & entertainment complexes include:
  - Kuchchaveli, Trincomalee – North Eastern Coast
  - Passikudah – East Coast
  - 14 Islands in Kalpitiya – North Western Coast
  - Dedduwa (near Madhu Ganga), Bentota – South Western Coast

Projects are approved under Section 17 or 16 of the BOI law.

Benefits for foreign direct investors under Section 17 of the BOI law include the following:

- Customs duty waivers for import of Plant, Machinery and Equipment during project implementation
- Exchange Control exemption
- Import and Export permits (excluding items on the negative list)
- Visa recommendations for Investors, Employees and their dependents
- Labour relations advisory services for employers and employees via Industrial Relations Department
- Locations on long lease in Export Processing Zones/Industrial Parks/Outside Zones – Private or State Land

Foreign investment projects approved under Section 16 of the BOI law would not qualify for fiscal concessions and would be subject to normal laws of the country including Inland Revenue Acts, Customs Laws and Exchange Control regulations. Section 16 applies to projects with a minimum investment of US$ 250,000 (either 100% foreign owned or a joint venture with local collaboration) and the benefits granted are limited to

- Facilitation for entry of foreign investment
- Setting up new company with foreign shareholding
- Transfer of shares or issue of new shares in existing non-BOI companies to foreign investors

- **Sri Lanka Export Development Board** (SLEDB) (http://www.srilankabusiness.com/edb/) is the premier state organisation engaged in the promotion and development of exports and also offers a myriad of services to exporters. SLEDB supports investors in export related industries to find buyers in international markets, in product portfolio expansions and advancement of products as well as conducting capacity building and export market awareness programs. SLEDB is currently working with international partners to identify new local products and export markets.

- **Sri Lanka Tourism Development Authority** (SLTDA) (http://www.sltda.gov.lk/) and Sri Lanka Tourism Promotion Bureau (SLTPB) are the authoritative government bodies responsible in promoting the travel and tourism industry of Sri Lanka

1.6 Other Institutions facilitating the Sector

- **Merchant Shipping Secretariat (MSS) - Director of Merchant Shipping** – MSS, under the Ministry of Ports and Shipping, is the shipping administration arm of Sri Lanka having the overall responsibility for overseeing maritime concerns. MSS deals with ensuring safety of life and property at sea, maritime education, training, examination and certification and registration of ships under Sri Lanka flag. MSS also issues annual licenses to Shipping Agents, Container Depot Operators, Container Terminal Operators, and Container Freight Stations, Freight Forwarders or Non Vessel Operating Common carriers. MSS also implements applicable international Maritime conventions and prepares relevant local regulations and implements the government's maritime safety policy.

- **Ministry of Industry and Commerce -** One of the main activities of this Ministry is registration of industries under the Industrial Promotion Act No. 46 of 1990. Every person carrying on an industrial undertaking where the value of capital investment in plant & equipment exceeds Rs 4 million and the number of permanent employees in such industry exceeds 50, except an industry under BOI should register the site or location at which such industrial undertaking is carried on. Special emphasis is given for the following industries in this process including the following.
  - Any industry with foreign investment
  - **Any industry employing high technology**
  - **Any industry producing goods for export from Sri Lanka**
  - Any industry which is owned by the Government or by company in which the Government holds a majority of the shares

  Facilitating the industry to adhere to international conventions and regulations within the overall framework of sustainable development falls within the purview of this Ministry. The manufacture of a globally marketable environment friendly industrial product has become essential owing to obligations arising from international conventions including World Trade Oganisation Agreements. Most developed countries have coupled environmental standards with other economic and non-economic conditions as pre-requisites for entry into their markets. In line with these requirements, this Ministry promotes industrialists to adopt strategies such as cleaner production, inculcate principles for waste minimization and technological upgrading for a sustainable industrial development.

Aside from the above institutions, the newly established Agency for Development Committee and Ministry of Megapolis and Western Development are also engaged in the rapid development of Sri Lanka. (Details given in Chapter 2)

1.7 Investment Environment

All successive governments have fostered supportive Government Policies conducive for business growth and international investments.

Broad Framework

- Transparent investment laws aim to foster FDI with safety of the investments guaranteed under Article 157 of the island's constitution
- Total foreign ownership is permitted across almost all areas of the economy with no restrictions on repatriation of earnings, fees, capital, and on forex transactions relating to current account payments.
- Vibrant and proactive private sector to partner in joint ventures with foreign investors, even though the latter are allowed to have 100% ownership of an investment in this sector.

- Concessions granted under an agreement with the BOI for qualifying investment projects is relative to the size of the FDI and employment generation capacity.
- Existence of Bilateral Investment Protection Agreements (IPA) with 28 countries and double taxation avoidance agreements with 38 countries.
- Founder member of the Multilateral Investment Guarantee Agency (MIGA), the investment guarantee agency of the World Bank which safeguards against expropriation and non-commercial risks.
- A firm proponent of international laws and UN's rights of labour, children and women. Sri Lanka possesses an edge over its regional competitors with stringent adherence to child labour laws and endorsement of gender equality.

Access to markets

- Plans to transform the country into a strategically important export driven economic hub in the region by developing five strategic hubs; a knowledge hub, a commercial hub, a naval & maritime hub, an aviation hub, and an energy hub, taking advantage of the strategic location & resources.
- Indo-Sri Lanka Free Trade Agreement (ISLFTA) and Pakistan – Sri Lanka Free Trade Agreement (PSLFTA), provide strategic access from Sri Lanka for over 4,000 products each for duty free exports provided they are wholly produced or have a domestic value addition of 35% FOB level. Despite the FTA, Indian Prime Minister Narendra Modi's 'Make in India' initiative with a view to transform the country into a global design and manufacturing hub has impacted Sri Lanka's ship building, boat building and ship repair market for India.
- In addition, by locating in Sri Lanka, a company can gain preferential trade access to two large regional blocs under the South Asian Free Trade Area (SAFTA) and the Asia–Pacific Trade Agreement (APTA)
- The government is also in the process of negotiating more trade agreements (e.g, FTA China, ETCA India, FTA Singapore, FTA Bangladesh etc.). The FTA with China may be a detrimental to the boat builders in the event boats and boat related items are removed from the negative list and if CESS is phased out to zero within a period of five years, which will result in an influx of Chinese built boats at a lower cost (with no import duty) than the locally manufactured cost.

General Infrastructure

- Besides being one of the most popular maritime hubs, the country has strong air connectivity with over 30 international flights operating daily/weekly direct flights from two international airports (Bandaranaike International Airport – Colombo (Main Airport) and Mattala International Airport- Hambantota). The main airport reaches the majority of the destinations in Asia and Europe and then connects to the rest of the world.
- A well connected road network around the country with facilities to travel length or breadth in approximately 6 hours. Expressways connect the airport and the commercial city as well as the southern part of the country. Construction has begun for an expressway connecting the central part of the country whilst an outer circular road will be completed shortly easing the traffic in the city of Colombo

- Availability of land that could be developed
- A 99.3% coverage of reliable electricity, the only South Asian country with 24/7 supply
- Connected to the SEA-ME-WE III and IV (South East Asia – Middle East – Western Europe) fiber optic communication backbone with over 11 communication satellites orbiting above the south of the country
- Mobile phone penetration stood at 121% (Dec 2016) with island-wide 4G internet coverage

2. Synopsis of Government Plans for the Sector

Subsequent to the end of the three decades of war in 2009, the Sri Lanka Government's focus has been on the development of the infrastructure facilities to support anticipated surge in economic activities. Whilst fostering export manufacturing and services, the government is taking steps to attract foreign investors to the country to accelerate development efforts.

The government also intends to develop the country as a leading regional aviation, maritime and trading hub in South Asia. Maritime transportation will be developed in order to expand capacity and improve efficiency of existing ports and to build new ports in strategic locations.

The Western Region Megapolis Planning Project (WRMPP) is a long term project under the Ministry of Megapolis and Western Province Development. The plan unveiled by government as the 'Megapolis Development Plan' includes the above areas as well.

Arial view of the proposed Colombo International Financial City (Source: http://www.megapolis.gov.lk/)

2.1 Existing Ports, Harbours and Marinas around the Country

The ports and harbours around Sri Lanka, some of which are natural harbours, can be divided into 2 categories.

i. Commercial Ports administered by the Sri Lanka Ports Authority (SLPA)

ii. Fisheries Harbours, anchorages and landing sites administered by the Ceylon Fishery Harbours Corporation (CFHC)

- **Commercial Ports**

The Sri Lanka Ports Authority (SLPA) has the mandate to operate and maintain all seven Commercial ports detailed below.

Location	Lat. / Lon.	Notes
Colombo	N6 57.252 E79 50.817	Largest port in the country
Galle	N6 01.979 E80 13.643	Regional Port
Hambantota	N6 06.900 E81 06.315	New port in the south
Oluvil	N7 16.568 E81 52.160	Small port in the east, opened in 2013
Trincomalee	N8 32.600 E81 13.130	Fifth largest natural harbour in the world
Kankesanthurai	N9 49.370 E80 01.654	Minor harbour
Point Pedro	N9 50.133 E80 12.537	Northern minor harbour, mostly dysfunctional

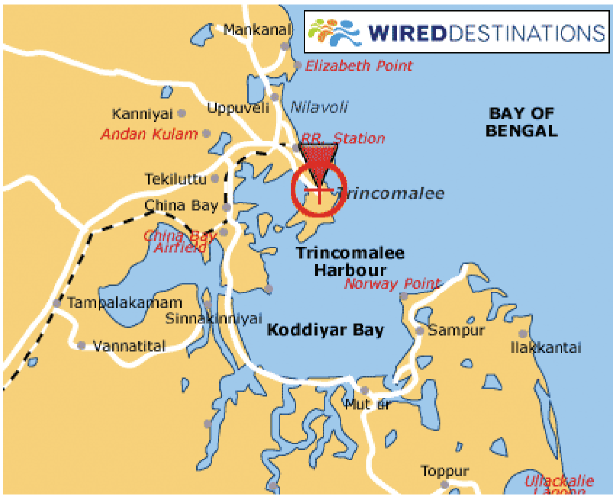
Colombo Port is a rapidly growing maritime hub of the South Asia Region connecting cargo originating from and destined to Europe, East and South Asia, the Persian Gulf, and East Africa. According to the Lloyds Register the Colombo Port ranks as the No. 01 port of South Asia and the 26th in the World. The Colombo Port is primarily a container port. In 2016, the port handled about 5.7 million TEU of containerized cargo, the highest annual container throughput in history. The port has been developed to accommodate deep water berths and the latest generation mainline vessels. The harbour is served by a two-way channel with an initial depth of 20m and a width of 570m. Colombo Port has four terminals with another to be constructed. The four terminals are Jaye Container Terminal, Unity Container Terminal, South Asia Gateway Terminal and Colombo International Container Terminal (CICT), while East Container Terminal is to be constructed. 23 major global shipping lines and 7 feeder services operate out of Colombo.

Colombo Port

Galle Harbour

Galle Harbour, a natural harbour, serves as one of the most active regional ports in the country. When the British colonial government constructed breakwaters in Colombo Harbour in the late 19th century, most international marine traffic shifted to Colombo from Galle. Thereafter, Galle Port became a secondary port, handling considerable amount of maritime traffic with 300 vessels passing by every day. The Galle Port has four berths and 660 meters of quay. SLPA also provides berthing facilities for pleasure yachts in this port. Galle harbour is recognized by international yacht societies as one of the world's best attractions for yacht berthing, leisure and recreation.

Trincomalee Harbour, the fifth largest natural harbour in the world, has water and land area of about ten times as much as the Port of Colombo. Trincomalee was tentatively identified to cater for bulk and break bulk cargo. The government has initiated discussions with Singapore, Japan and India to develop this harbor.



Trincomalee Harbour Location

Trincomalee Harbour

Hambantota Port is located in close proximity to the major international East-West shipping route and on the maritime gateway to India. The harbour area is protected by two 312m and 988m long breakwaters. An access channel of 210m width and 17m depth is provided with a turning circle of 600m diameter and 17m deep to facilitate vessels up to 100,000 DWT.

The existing terminals, the plans for development of more terminals and capacity of the terminals are available in detail in the SLPA website (http://www.slpa.lk/)

- **Fishery Harbours**

The 22 fishery harbours which provide facilities to the fishing community are operated and maintained by the Ceylon Fishery Harbours Corporation (CFHC). (http://www.cfhc.gov.lk/). The facilities offered by CFHC can be hired by private parties. Dickowita, located north of Colombo is the largest fishery harbour.

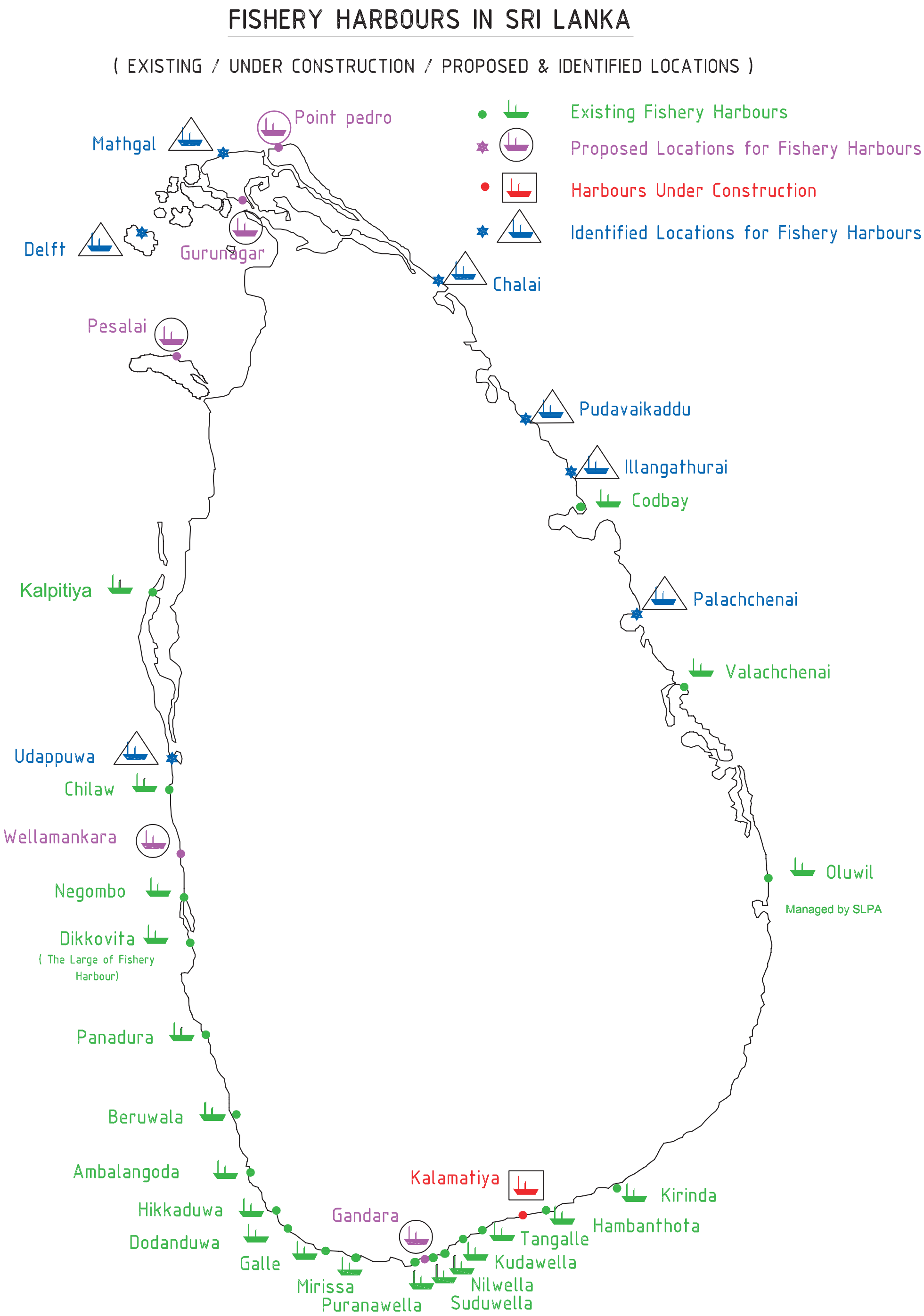
Aside from the fishery harbours the CHFC also owns and leases many fishery anchorages and landing sites around the approximately 1400km coastal belt.

Marine Infrastructure facilities of the CFHC are given below.

	Major Fisheries Harbours	Harbours to be upgraded	Proposed New Harbours	Anchorages	Minor Fish Landing Centers	Improved Landing Centers	Proposed Landing Centers for Upliftment
2015	22*	6	8	58	890	78	61
2014	20	7	11	58	890	78	61

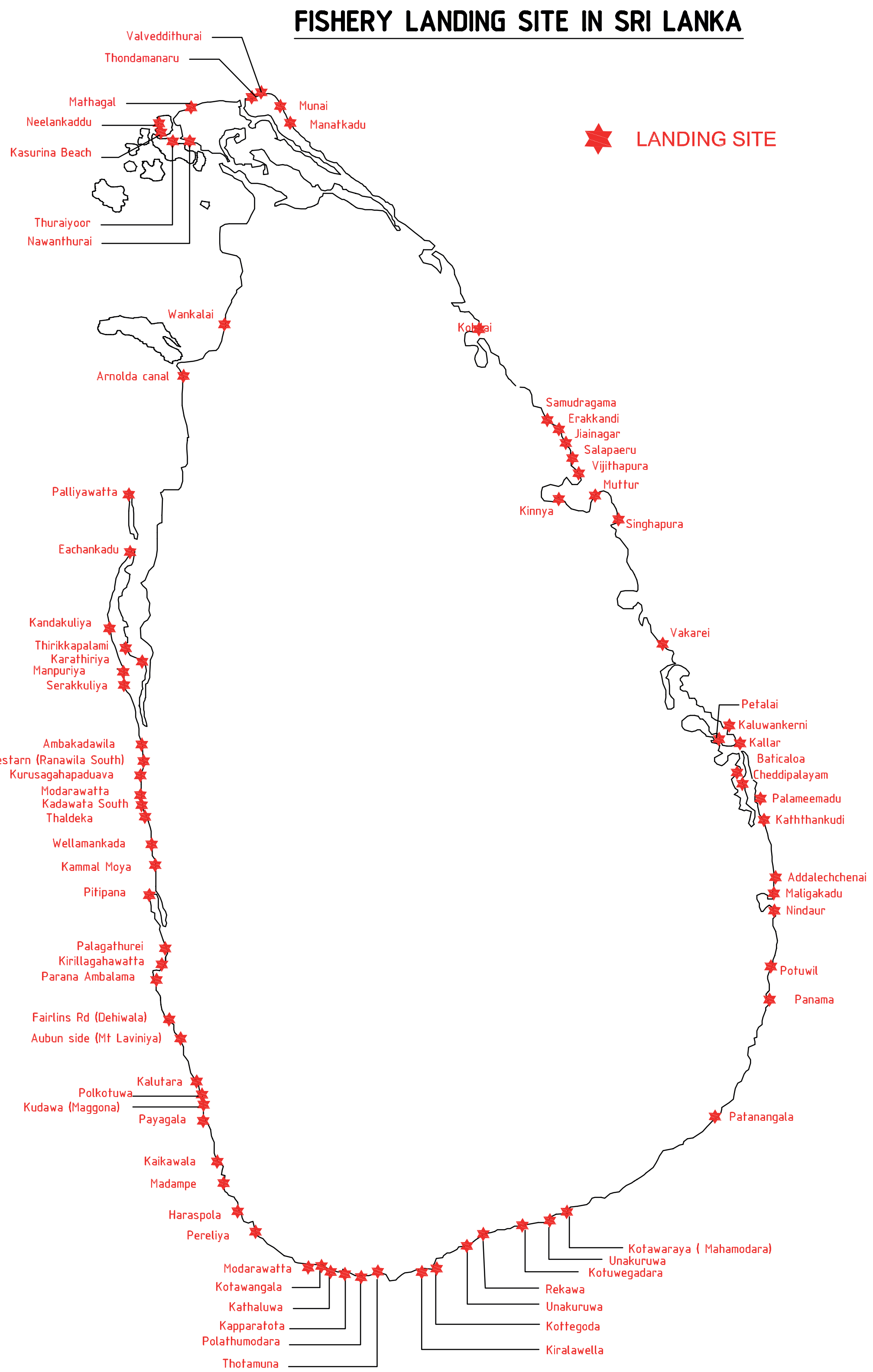
* Mutwal Fishery Harbour is not functioning at present

The existing and proposed new fishery habours are given in the map below:



Source: www.cfhc.gov.lk

The fishery anchorages and landing sites around the island are given in the map below:



Source: www.cfhc.gov.lk

- **Marinas**

At present despite being bordered by the sea and in close proximity to international sea routes the country does not have fully fledged marinas to attract large yatchs. The only facilities available for the yachts and sail boats are mere mooring facilities that are confined to the Southern Coast of Sri Lanka.

However, Sri Lanka, being surrounded by 1400km of shoreline, has a great potential to develop fully-fledged marinas equipped with proper facilities as given in Section 13. Croatia with a shoreline of mere 600km has 56 marinas.

2.2 Development Plans of the Government

The government has multi-dimensional plans to carry out accelerated development and some of the key current plans are highlighted below:

a. Colombo International Financial City of the Megapolis plan
b. Megapolis plan – Other Relevant Areas
c. Sri Lanka Ports Authority Development Plan
d. Ceylon Fishery Harbours Corporation Development Plan
e. Sri Lanka Tourism Development Authority Development Plan
f. Sri Lanka Agency for Development, Development Plan

a. Colombo International Financial City

As part of the **Megapolis plan** the government intends to develop **Colombo International Financial City (CIFC)** as a special financial zone which is expected to be positioned as an offshore financial centre. This city will be developed in reclaimed land adjacent to the Colombo Harbour in the commercial capital, Colombo as South Asia's open city.

This large scale development project planned as an International Finance center with its own laws is expected to be governed under a new act named Colombo International Financial Centre Law. Under the new law, the reclaimed land will be brought into the Administrative District of Colombo and it will be assigned to the proposed Financial City Corporation out of the Colombo Municipal Council.

Investors have the ability of undertaking public-private partnerships in the project to ease the government responsibility especially in areas of road, infrastructure and utilities to the periphery of the site.

Port City which is one part of CIFC is being developed on tripartite agreement between CHEC Port City Colombo (Pvt) Ltd, the Project Company, the Ministry of Megapolis and Western Development & the Urban Development Authority. CHEC Port City Colombo (Pvt) Ltd is the local arm of China Harbour Engineering Company.

CHEC will develop the Port City in 3 phases and the 3rd phase will consist of a **Marina in the South side** of the development. The target users of the marina facilities include the high net worth individuals purchasing the high end residential property which forms a major component of the Port City concept, local sailing and motor boat enthusiasts, visiting international yachts and commercial tourist operators active in a wide range of water based activities in Sri Lanka including whale and dolphin watching, sports fishing, diving and marine safaris.

(Source: http://colomboportcity.lk)

Source: http://colomboportcity.lk

The marina proposed in an extent of 2.5 sq km breakwater setting is expected to have berthing facilities for sail and motor boats and landside facilities such as a club house, boat storage, maintenance and repair workshops along with commercial activities in retail, residential and hotel accommodation.

b. Megapolis Plan – Other Relevant Areas

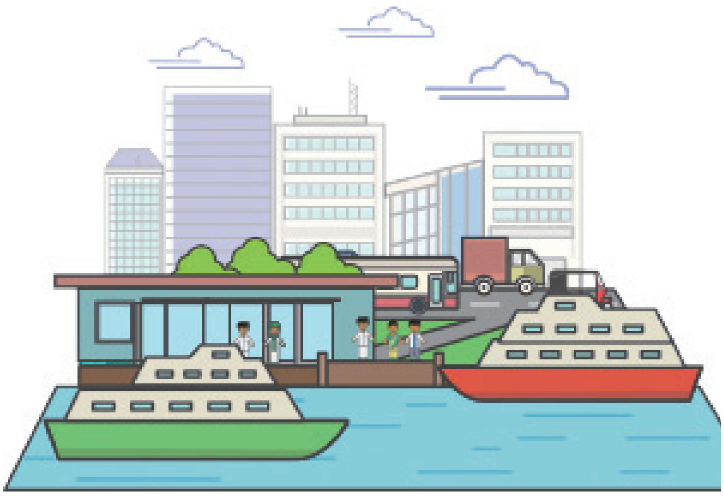
The Colombo metropolis hosts the busiest and most important port in South Asia. Colombo is also widely considered to be the cleanest, most welcoming and most livable among its major peer cities in the region. WRMPP envisions a comprehensive transformation of the Western Region into a world-class metropolis that is diverse, inclusive, and sustainable with modern ways of allocating land areas, reducing traffic congestion, affordable pricing for low and middle income earners, efficient garbage management, sustainable environmental management and simplifying the administrative and bureaucracy aspects. The aim is a responsible transformation of the metropolis into one of the world's great engines of creativity, knowledge, innovation and prosperity.

The plan has prioritized attention to develop the critical infrastructure, especially the transportation infrastructure by comprehensive upgrades, overhauls, and enhancements across all sectors to achieve the required levels of connectivity, efficiency, speed and reliability. The plan is also a measure to improve the existing public transport system in order to modernize the fleet and ease the traffic congestion.

This includes:

1. A modernised bus service
2. An electrified railway system
3. A modern Rapid Transit System (RTS)
4. Inland water transport – i.e. a brand new boat/ferry service that utilizes Colombo's historic canal network

Inland Water Transport



Colombo has a widespread but underused canal network. This phase of the project seeks to utilize these canals to provide a safe and comfortable mode of transport for the citizens of Colombo at a cost of USD 125 million.

- Launch new boat services to enhance Western Province East-West connectivity

a) Wellawatte – Battaramulla connectivity

b) Fort – Union Place connectivity

c) Mattakkuliya – Hanwella connectivity

- Boats will have modern comforts including air conditioning
- Jetties will be placed at main linking nodes with roads providing easy access
- This service is expected to promote eco-tourism at non-peak periods

The other projects that are being planned in the future include the following

Project
Port related infrastructure (Dry Dock, Floating Dock, Slipway, Sincro Lift)
Construction of Deep Sea Fishing Crafts
Chains, Generators and Other Port related Equipment
Shipping Services – Bunkering etc
Specialist and Skilled Labour Training Center
R&D, Innovation Incubators related to Marine Sectors
Establishment of a Transshipment Center

Source: Projects Identification Report – Western Province Megapolis Planning Project

c. Sri Lanka Ports Authority

- <u>Facilitating Cruiser Liners and Yachts in the Colombo Port</u>

  SLPA under the Megapolis Plan intends to deepen the West Berth near the Bandaranayake Quay of the Colombo Port as a passenger terminal to accommodate large cruise ships and enhance the adjacent areas with recreational facilities including a yacht marina. Phase I is planned in 2017-2018 financed through private investments on a BOT basis. Cruise Terminal and a marina is planned with finger jetties to accommodate yachts. Recreational facilities for the terminal and marina users is also planned to be developed alongside.

- <u>Development of Galle Port as a Commercial and Leisure Port</u>

  SLPA also plans to develop the existing Port of Galle. This is planned with the construction of a deep water passenger vessel terminal and breakwaters, dredging of entrance channel and basin. Phase I of this project which was completed in 2015 has berthing facilities for 22 yachts.

Phase II of the project consists of a 900m long breakwater, a 300m long multi-purpose berth and recreation facilities for whale/coral watching, boat services, restaurant and hotels etc. The basic design has been completed and awaiting clearance from UNESCO to commence.

- <u>Development of East Container Terminal of the Colombo Port</u>

  A 440m length 18m depth quay wall and a 10ha container stacking yard has been developed by the SLPA to handle 800,000 TEUs p.a. and is in the process of completing the project. This quay wall is extended to be 1.2km in total under Phase II to handle a capacity of 2.4million TEUs p.a.

- <u>Development of the Oluvil Cargo Port</u>

  Government, to give impetus to economic development in the Eastern region, has built a port in Oluvil. The fisheries section of this port is being used at present. This port will form the southeastern link in the developing chain of coastal harbours in the country and will provide more convenient and cost effective access to and from the southeastern region for goods and cargo originating on the west coast. Given the Oluvil Development Project the port will undoubtedly be a catalyst for the growth of this region.

d. Ceylon Fishery Harbours Corporation (CFHC)

- <u>Establishing a Marina in the Dickkowita Fishery Harbour</u>

  CHFC under the Megapolis Plan intends to develop a Marina by converting Southern Part of Dickkowita Fishery Harbour with a view to serve the niche market in marine tourism. This project which will have adjacent landside facilities is at the planning stage and will attrect the nautical tourists in the Asian region and complementing the tourists in the Negambo (Western Sri Lanka) belt.

- <u>Marina Development in the Beruwala Fishery Harbour</u>

  CHFC plans to optimise the utilisation of the outer harbour area into a marina to service yachts along with shore infrastructure and thereby contribute to the tourism development by attracting a new segment of nautical tourists.

e. Sri Lanka Tourism Development Authority (SLTDA)

Sri Lanka Tourism Development Authority is committed towards transforming Sri Lanka to be Asia’s foremost tourism destination by developing diverse, unique and quality tourism services and products that would make Sri Lanka a distinctive global destination.

Under SLTDA, a One Stop Unit (OSU) has been established for centralized promotion of National Tourism and as a one-stop location and point of contact for facilitating investors. Specialist staff from various government agencies helps investors identify feasible projects, submits applications, and obtain investment privileges, trade licenses and other approvals required for project clearance.

The projects in the pipeline under the Megapolis Plan for SLTDA are

Project
Dedduwa River Mouth and Surrounding Areas – Inland & Water
Water Sports. Leisure Fishing, Shopping, Restaurants, Marine Museum etc. in Dickkowita
Negambo Township Tourism Development and Expansion

Source: Projects Identification Report – Western Province Megapolis Planning Project

f. Sri Lanka Agency for Development

Government plans to set up a new one-stop shop, namely the Sri Lanka Agency for Development, for the ease of foreign investors. The government promotes FDI-led exports as one of the ways of providing employment and facilitating growth. The Sri Lanka Agency for Development together with the SLEDB and BOI will focus on promoting non-traditional exports in furthering the Government mission.

In 2014 Sri Lanka was ranked at 74 out of 145 countries in the Economic Complexity Index (ECI) whereas Thailand Ranked 36. Thailand ranked higher than Sri Lanka, the former being an export oriented economy with exports accounting for around 65% of the GDP. Thailand been able to successfully move up the ECI and make exports account for a significant portion of the GDP whilst capturing large markets mainly due to the enhancement of the export product range to technologically advanced products such as electronics, vehicles and machinery & equipment. They mainly export manufactured goods (86% of total shipments) with electronics (14%), vehicles (13%), machinery and equipment (7.5%) and foodstuff (7.5%) being the most prominent. Major exporting countries are China (12%), Japan (10%), the United States (10%) and the European Union (9.5%).

In order for Sri Lanka to move up the rank in the ECI and to benefit from higher profitability in export earnings, the country, through the Agency for Development will have to upgrade the export product portfolio into more technologically advanced products, similar to the staregy adopted by Thailand almost a decade ago.

3. Overview of Waterborne Vessels

3.1 Types of Ships

Type of Ship	Purpose
Container Ship 	Transport of goods in containers. Container ship capacity is measured in 20-foot equivalent units (TEU). Typical loads are a mix of 20-foot and 40-foot (2-TEU) ISO-standard containers
Cargo Ship / Freight 	Cargo ships/freighters can be divided into several groups, according to the type of cargo they carry. • General cargo vessels – transport of packaged goods such as food, furniture, machinery, • Multi-purpose vessels – transport of wood, steel and building material • Reefer ships – refrigerated ships carrying perishable goods • Tankers – see below • Dry bulk carriers -.see below
Tankers 	Transport of liquid or gas in bulk - crude oil, chemicals and petroleum products.
Bulk Carrier 	Transport of unpackaged raw materials such as cement, grain, iron, ore and coal

Ferries and Passenger Ships 	Short journey ships for passengers and transport of wheeled cargo, mostly Ro-Ro (roll on - roll off) ferries, where vehicles can drive straight on and off Luxury ships /floating hotels for pleasure
Specialist Ships 	Includes supply vessels for the offshore oil industry, anchor handling, salvage tugs, ice breakers and research vessels.
Naval Ships 	Military ships used by the Navy
Other 	• Factory Ship: A floating fishing, processing, and preserving factory at sea. • Floating restaurants • Cable and pipe laying ships • Special Purpose carriers – vehicle, livestock, project cargo etc.

3.c Types of Boats

Type of Boats	Purpose
Fishing boats 	• Multi-day fishing boats/trawlers • Single- day fishing boats/trawlers • Mechanized fishing boats with inboard motors • Fiber glass boats with outboard motors
Commercial boats 	A merchant vessel that transports cargo or carries passengers for hire.
Pleasure Craft 	Used for recreational activities and includes motor boats and sail boats, fishing boats (for pleasure), yachts, paddle boats, kayaks and other watercrafts.
Naval and Surveillance Boats 	Fast attack crafts, coast guard vessels, patrol crafts, rescue crafts, sea cadet training vessels, surveillance vessels
Other 	• Tug Boats: To tug or pull ships, oil platforms and barges. Also used as ice breakers, salvage boats and assist in the fire-fighting • Other Harbour boats - Pilot boats, work boats, tow boats, pushers etc. • Ambulance boats • Houseboats – for living or holiday • Floating restaurants • Life boats – usually attached to a ship and used during a rescue

4. Global Industry – Ships, Boats and Floating Structures

4.1 Global Demand – Imports

Total world imports of **ships, boats and floating structures** amounted to US$ 89.3 billion in 2016. Data indicate a decline of 2% in import values in 2016 compared to 2011, primarily due to the impact of the downturn in global demand. Marshall Islands is the largest importer, whose share of imports has increased from 8% to 16% over the 5 year horizon. UAE and Panama are also recent entrants to the market. Sri Lanka imported US$ 227 million in ships/boats in 2016, of which US$ 220 million reflected light-vessels, fire-floats, dredgers, floating cranes and other vessels, the navigability of which is subsidiary to their main function such as floating docks, floating or submersible drilling or production platforms (excluding fishing vessels and warships).

The top ten importers are depicted in the table below.

US$ '000

Importers	Imported value in 2012	%	Imported value in 2013	%	Imported value in 2014	%	Imported value in 2015	%	Imported value in 2016	%
World	91,327,120		96,528,823		77,823,228		76,422,846		89,323,053	
Top 10 Importers										
Marshall Islands	7,703,320	8	10,176,171	11	11,988,937	15	13,707,338	18	14,675,201	16
Panama	52,575	0	69,081	0	114,160	0	89,345	0	7,375,259	8
Liberia	8,889,836	10	7,570,910	8	5,547,065	7	4,027,845	5	6,143,320	7
India	6,158,533	7	7,004,947	7	4,893,401	6	4,739,933	6	5,480,639	6
United Arab Emirates	305,463	0	276,572	0	318,205	0	1,027,628	1	3,929,871	4
Cayman Islands	1,028,254	1	1,167,712	1	1,476,492	2	1,458,290	2	3,044,708	3
Germany	6,112,247	7	4,548,730	5	2,556,610	3	2,022,811	3	2,838,584	3
Norway	2,259,196	2	2,736,901	3	3,037,298	4	4,191,349	5	2,561,518	3
Bahamas	18,663	0	41,768	0	66,350	0	37,530	0	2,509,927	3
United Kingdom	624,947	1	1,109,649	1	1,504,346	2	1,739,055	2	2,194,659	2

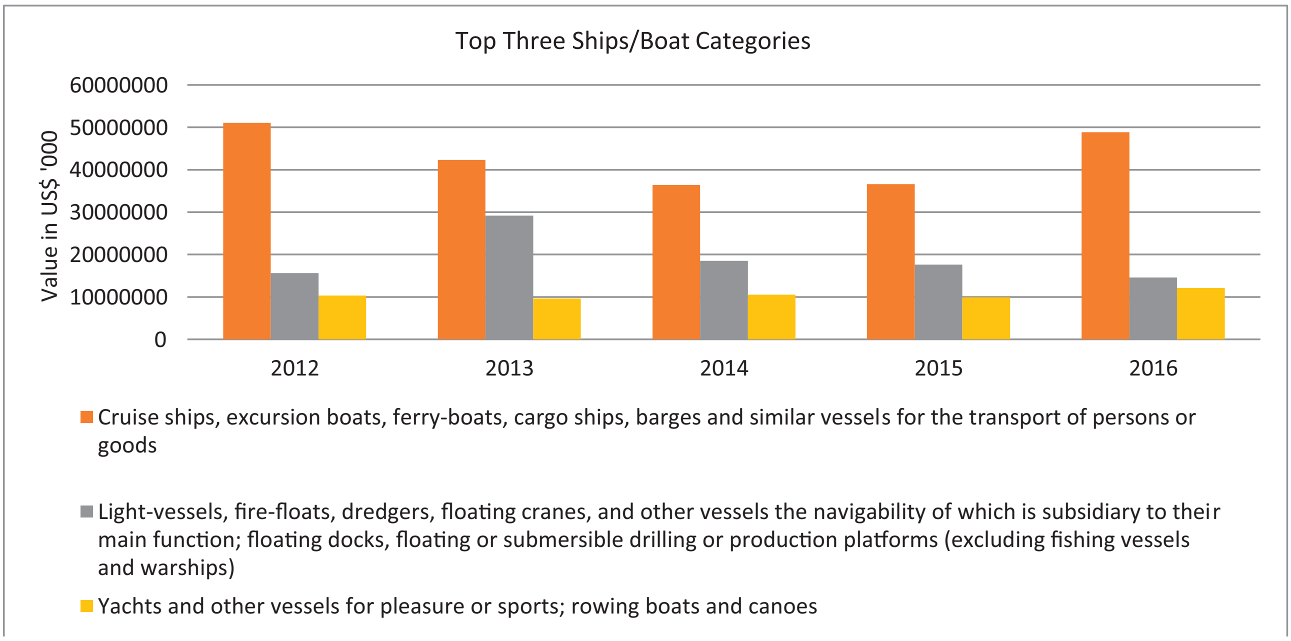
Data Source: www.trademap.org

Import data indicates that the world's highest demand is for the following segments.

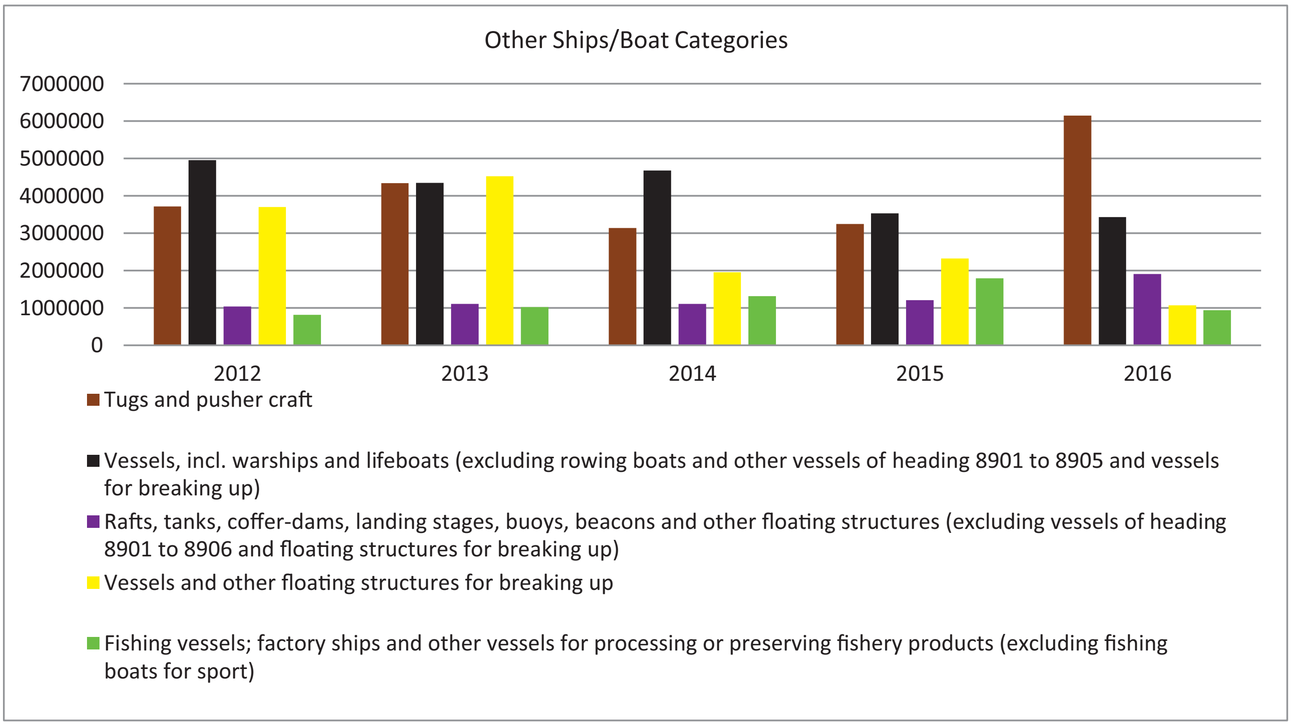
- Cruise ships, excursion boats, ferry-boats, cargo ships, barges and similar vessels for the transport of persons or goods- Annual average is 55% of the total import value
- Light-vessels, fire-floats, dredgers, floating cranes, and other vessels the navigability of which is subsidiary to their main function; floating docks, floating or submersible drilling or production platforms (excluding fishing vessels and warships) - *Annual average is 22% of the total import value*

- Yachts and other vessels for pleasure or sports; rowing boats and canoes-- Annual average is 12% of the total import value

Total imports by ship/boat categories are as follows.



Data Source: www.trademap.org



Data Source: www.trademap.org

Note: HS codes 8901 to 8906 are defined in page 34.

4.2 Global Supply - Exports

Total world exports of **ships, boats and floating structures** was US$ 124 billion in 2016. Data indicates a decrease in export values from US$ 158 billion to US$ 124 billion throughout the period 2012 to 2016. The crisis in European economies, China's slowdown, the drop in demand for oil rigs amid plummeting oil prices and oversupply, were some of the key reasons for the decline in world exports. The market is dominated by three Asian nations, China, South Korea and Japan, together accounting for 55% of the global export market in 2016. Europe at second place, trails behind with about 17% of the market. (Europe however, still dominates the cruise ship sector.) Among the Asian triad, the market gradually shifted from Japan/China to Korea due to the Korean government's support, a skilled, hardworking labour force, as well as a favourable exchange rate. Korea was the highest exporter in 2016 with 27% market share. Sri Lanka holds the 53rd position with 0.1% market share. The top ten exporters are depicted in the table below.

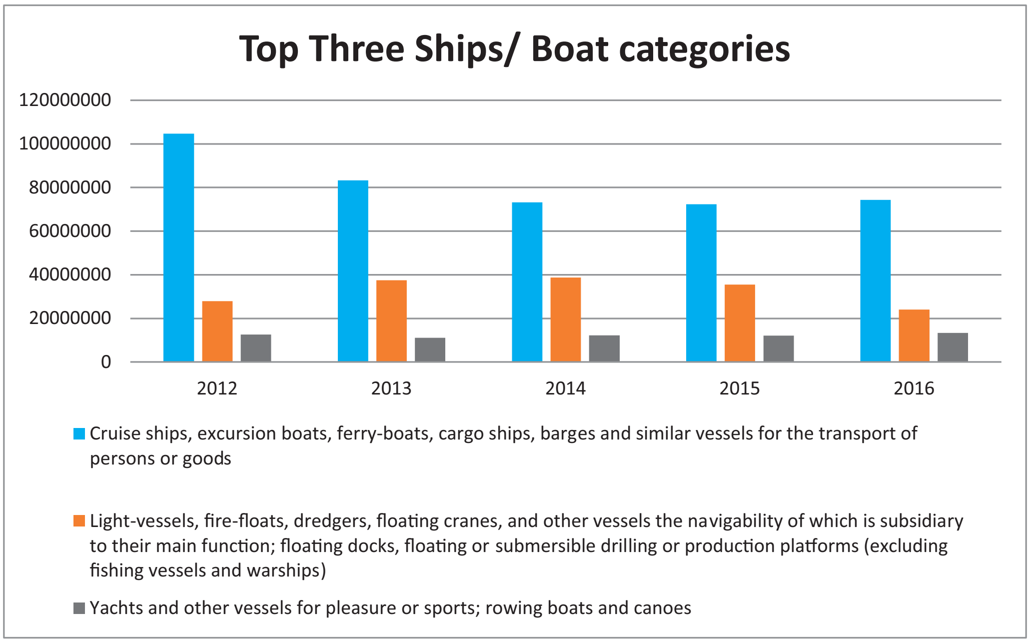
`	Exported value in 2012	%	Exported value in 2013	%	Exported value in 2014	%	Exported value in 2015	%	Exported value in 2016	%
World	158,413,279		146,612,793		138,798,883		133,241,520		123,637,347	
Top 10 Exporters										
Korea	37,828,429	24	35,869,754	24	38,339,918	28	38,434,210	29	33,155,192	27
China	38,819,904	25	28,681,232	20	25,202,442	18	28,794,779	22	22,538,032	18
Japan	22,229,715	14	15,383,770	10	12,913,707	9	11,406,561	9	12,895,335	10
Germany	5,084,445	3	4,642,302	3	5,425,285	4	5,750,028	4	5,696,747	5
Italy	3,378,374	2	3,376,838	2	4,497,871	3	3,444,057	3	4,866,700	4
Netherlands	2,154,446	1	1,763,279	1	2,221,320	2	3,912,334	3	4,773,476	4
Brazil	1,548,826	1	7,933,738	5	2,167,168	2	1,985,490	1	3,841,358	3
Poland	3,991,591	3	5,444,937	4	5,627,554	4	5,462,789	4	3,697,570	3
India	4,124,615	3	3,597,492	2	4,556,552	3	4,063,750	3	3,221,852	3
France	1,931,376	1	2,366,313	2	1,426,695	1	1,574,853	1	2,771,849	2

Data Source: www.trademap.org - The difference in export and import values in the two tables, represents the trade balance (trade surplus or deficit).Trade data for countries who do not report trade statistics to UN COMTRADE or ITC has been constructed by trademap.org on the basis of data reported by partner countries, referred as mirror statistics.

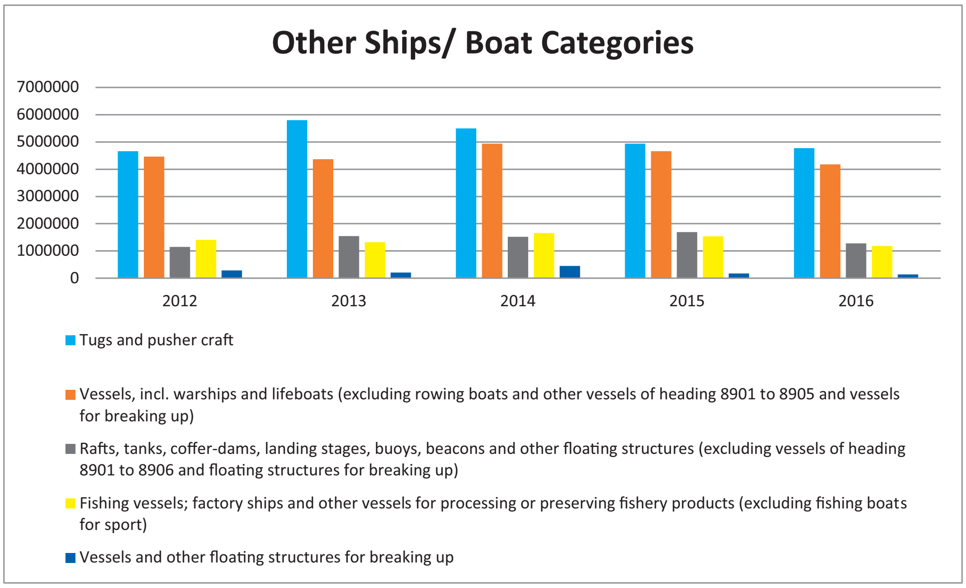
Export data indicates that the world's highest supply relates to the following segments.

- Cruise ships, excursion boats, ferry-boats, cargo ships, barges and similar vessels for the transport of persons or goods. This segment amounts to an annual average of about 58% of the total export value.
- Light-vessels, fire-floats, dredgers, floating cranes, and other vessels the navigability of which is subsidiary to their main function; floating docks, floating or submersible drilling or production platforms (excluding fishing vessels and warships).This segment amounts to an annual average of about 24% of the total export value.
- Yachts and other vessels for pleasure or sports; rowing boats and canoes. *This segment amounts to an annual average of about 9% of the total export value.*

Total exports by different ships/boats categories are as follows



Data Sources: www.trademap.org



Data Sources: www.trademap.org

8901- Cruise ships, excursion boats, ferry-boats, cargo ships, barges and similar vessels for the transport of persons or goods

8902- Fishing vessels; factory ships and other vessels for processing or preserving fishery products (excluding fishing boats for sport)

8903- Yachts and other vessels for pleasure or sports; rowing boats and canoes

8904- Tugs and pusher craft

8905 Light-vessels, fire-floats, dredgers, floating cranes, and other vessels the navigability of which is subsidiary to their main function; floating docks, floating or submersible drilling or production platforms (excluding fishing vessels and warships)

8906- Vessels, incl. warships and lifeboats (excluding rowing boats and other vessels of heading 8901 to 8905 and vessels for breaking up)

4.3 Global Shipbuilding Market

Ships and Maritime Business – Salient Facts

Around 90% of world trade is performed by the international shipping industry.

Best-connected countries in May 2016	
In Africa	Morocco, Egypt and South Africa
In Eastern Asia	China and the Republic of Korea
In Latin America and the Caribbean	Panama and Colombia
In South Asia	Sri Lanka and India
In South-East Asia	Singapore and Malaysia

Source: UNCTAD/RMT/2016). Review of Maritime Transport 2016

Top five Ship Owning Economies
(in terms of dwt)
Greece
Japan
China
Germany
Singapore

Top five Economies by Flag of Registration
Panama
Liberia
Marshall Islands
Hong Kong (China)
Singapore

Largest Shipbuilding Countries
China
Japan
Republic of Korea,
(accounted for 91.4% of gross tonnage constructed in 2015)

Largest Suppliers of Seafarers
China
Indonesia
Philippiness

As at January 2016

Most demolitions of old ships take place in four Asian countries: Bangladesh, India, Pakistan and China (accounted for 95% of ship scrapping gross tonnage in 2015).

Source: UNCTAD/RMT/2016). Review of Maritime Transport 2016

World Fleet

The world fleet dwt grew by 3.5% during 12 months to 1 January 2016 and consisted of 90,917 commercial vessels as at 1 January 2016. Gas carriers led the growth for 2015 (9.66%), followed by container ships (7%) and ferries and passenger ships (5.5%), while general cargo ships recorded the lowest growth rate of 1.4%, as depicted in the table below.

World fleet by principle vessel type (Thousands of dead-weight tons and % share)	2015	%	2016	%	% change
Oil Tanker	488,308	27.97	503,343	27.86	3.08
Bulk Carrier	761,776	43.63	778,890	43.11	2.25
General Cargo Ship	74,158	4.25	75,258	4.17	1.48
Container Ship	228,224	13.07	244,274	13.52	7.03
Other:	193,457	11.08	204,886	11.34	5.91
Gas Carrier	49,669	2.8	54,469	2.8	9.66
Chemical Tanker	42,467	2.4	44347	2.4	4.43
Offshore	72,606	4.2	75,836	4.2	4.45
Ferry and Passenger Ship	5,640	0.3	5,950	0.3	5.50
Other	23,075	1.3	24,284	1.3	5.24
World Total	**1,745,923**	**100**	**1,806,651**	**100**	**3.48**

Note: Propelled seagoing merchant vessels of 100 gross tons and above, as at 1 January.

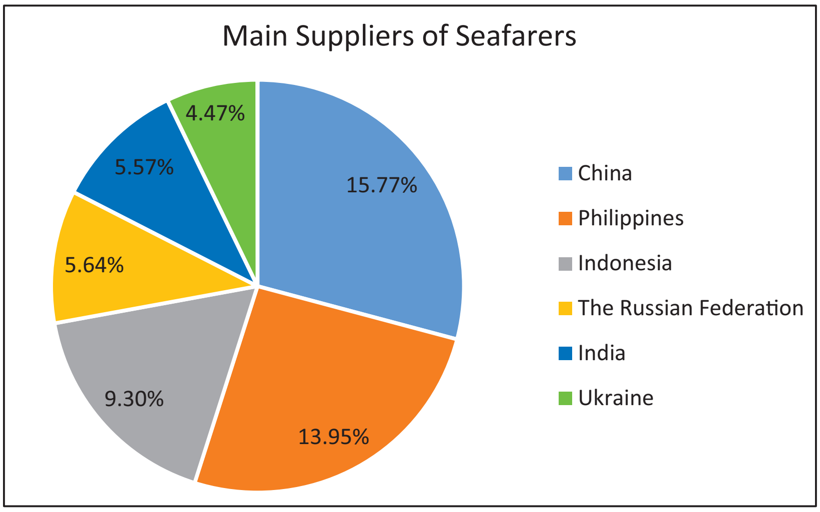
Source: UNCTAD/RMT/2016). Review of Maritime Transport 2016

Global Seaborne Trade

World seaborne trade volumes were estimated to have surpassed 10 billion tons in 2015. Shipments grew by 2.1%, markedly slower than the 3.4% and 3.5% recorded in 2013 and 2014, respectively. The tanker trade segment recorded its best performance since 2008, while growth in the dry cargo sector, including bulk commodities and containerized trade, fell short of expectations. Developing countries continued to contribute larger shares to the total volumes of international seaborne trade. *Source: UNCTAD/RMT/2016). Review of Maritime Transport 2016*

Employment

In 2005–2015, global demand for seafarers grew by about 45% in line with the world fleet growth. Latest data indicate that the world fleet provides approximately 1.5 million jobs for seafarers in international shipping. Officers account for approximately 51% of positions, compared to 45% in 2005, while Ratings (non-officer sailors such as able seafarer or ordinary seafarer) account for approximately 49% of positions compared with 55% in 2005. The change in officer/ratings composition reflects technological advances and lower demand for manual on-board work.



Source: UNCTAD/RMT/2016). Review of Maritime Transport 2016

Major Shipbuilders

- Hyundai Heavy Industries – South Korea
- Daewoo Shipbuilding and Marine Engineering – South Korea
- China State Shipbuilding Corp. – China
- Samsung Heavy Industries – South Korea
- Imabari Shipbuilding - Japan
- Mitsubishi Heavy Industries - Japan

Ship Building Industry in 2016

In 2015, the Asian triad accounted for 91% of shipbuilding (by gross tonnage); China (36%), the Republic of Korea (34%) and Japan (20%). These countries rose to spectacular heights mainly due to supportive government policies, including capital funding, the facilitation of joint ventures with overseas companies to access latest technology as well as measures to promote FDI.

However, the global giants, especially South Korea and Japan, that mainly build commercial shipping vessels, have suffered tremendously from sluggish global conditions, over-capacity and the downturn in oil prices, which led to a massive drop in orders for large shipbuilders. The Korean industry, in particular, which had seven companies among the world's ten largest shipbuilders, experienced a severe setback. Some shipbuilders have already collapsed, including South Korea's STX Offshore & Shipbuilding. In May 2016, three Chinese shipyards Zhong Chuan Heavy Industry, Zhong Chuan Heavy Industry Equipment, and Zhoushan Xuhua Metal Material, were bankrupt and began liquidation. Thus, the industry largely navigates turbulent waters, with some companies facing a crisis necessitating restructure and bail outs.

European shipyards focused on the leisure shipbuilding sector, nonetheless continued to thrive. Given the growing orders at these for cruise ships, ferries and tugs, some shipbuilders have begun diversifying from commodity-carrying dry bulk ships into this sector.

Industry Outlook

The shipping industry is cyclical and has proved its capability in surviving peaks and slumps of the economy. Despite present global conditions, the industry is expected to regain momentum, with anticipated global upturn in the medium term. A gradual recovery in global trade is expected in 2017 and 2018, but at a weaker pace compared to its long-term performance. (Source World Bank's Global Economic Prospects, January 2017).

Demolition Market

Some of the main reasons for scrapping ships are age (the economic life of a ship is approximately 25-30 years), obsolescence, scrap prices, current earnings and market expectations (demand and supply). As a means of dealing with over supply, strong demolition has been a key focus of the shipping industry in 2016.

Age distribution of world merchant fleet by vessel type – 2016

	Years (Percentage of total ships)					Average Age		Percentage change
	0 - 4	5 - 9	10 – 14	15 - 19	20+	2015	2016	2015 - 2016
Bulk Carriers	42.83	25.46	11.97	9.86	9.89	9.04	8.83	-0.21
Container ships	19.47	33.45	19.36	17.15	10.57	10.86	11.21	0.35
General cargo ships	9.67	15.93	8.66	8.41	57.33	23.99	24.72	0.73
Oil tankers	17.12	22.41	14.09	8.26	38.12	18.02	18.49	0.47
Other	15.02	18.22	9.72	8.80	48.23	22.12	22.52	0.41
All Ships	13.47	17.03	9.11	7.53	52.86	19.92	20.31	0.39
Developing economies – all ships	18.59	19.54	9.91	8.63	43.33	19.34	19.74	0.40
Developed economies – all ships	18.21	22.92	13.15	11.24	34.48	18.30	18.67	0.36
Countries with economies in transition – all ships	6.73	8.41	4.59	3.48	76.79	28.35	29.04	0.69

Source: UNCTAD/RMT/2016). Review of Maritime Transport 2016 - UNCTAD secretariat calculations, based on data from Clarksons Research.
Note: Propelled seagoing merchant vessels of 100 gross tons and above, as at 1 January 2016.

Key Demand Drivers for shipbuilding include the following.

- Seaborne trade – for ships
- Freight rates
- World economy
- Age of fleet and demolition rate

4.4 Global Ship Repair and Maintenance Market

Ship repair and maintenance includes ship renovations, overhauls, new system installations, breakdown and damage repairs, machinery and equipment repairs and routine maintenance. The market is cyclical, labour intensive and affected by general freight rates, as ship owners refrain from investing in maintenance during times when freight rates are low.

The average age of the world fleet is 20 years and the better part of the fleet will require continuous maintenance.

Key considerations in selecting a repair and maintenance yard include the following.

- Location of ship yard and its proximity to the ship's route
- Price – Raw material and labour costs are key determinants, thus countries with low labour costs have enjoyed a competitive edge
- Quality of service
- Delivery time (speed of service)
- Shipyard experience and track record, safety record
- Local infrastructure
- Climatic conditions of the area

4.5 Global Boat Building Industry

The global boat building market is fragmented and overall satistics are not readily available.The industry is vast and consists of fishing boats, commercial as well as pleasure and leisure boats and specialized craft, with manufacturers engaging in either customized production or batch production.

The increasing popularity of nautical tourism and nautical sports is expected to propel demand for recreational boats include sail boats, yachts, luxury yachts, and catamarans. Moreover, while the demographics for recreational boat ownership point to the middle aged, more and more of the younger generation shy away from owning a boat, preferring rather to charter boats at their preferred destination to cruise the sea or other waterways during vacation time. This has resulted in a rising demand for charter vessels.

Furthermore, in some countries, owners of boats less than 26 feet in length, use trailers to transport boats to waterfronts, thus avoiding marina storage costs.

Key demand drivers for recreational vessels (boats and yachts) include the following:

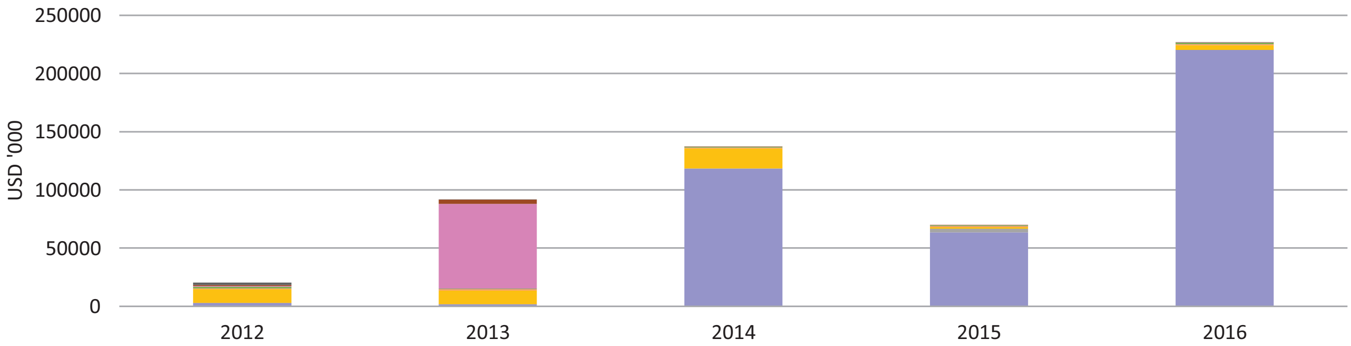
- Urban population growth
- Increase in per capita income and increase in household recreational spend
- Fuel prices
- Age of existing boat fleet
- Status of marinas, the services and attractions offered

5. Domestic Industry – Ships and Boat Building – Demand & Supply

5.1 Sri Lanka Imports

Imports of **ships, boats and floating structures** amounted to US$ 227 million in 2016. The main categories are depicted in the following graph. The trend in imports, over the five year time horizon has shifted from the category “Cruise ships, excursion boats, ferry-boats, cargo ships, barges and similar vessels for the transport of persons or goods” to “Light-vessels, fire-floats, dredgers, floating cranes, and other vessels the navigability of which is subsidiary to their main function; floating docks, floating or submersible drilling or production platforms”, primarily due to the imports to support development activities, which include dredgers imported under re-export arrangements.

Domestic Imports

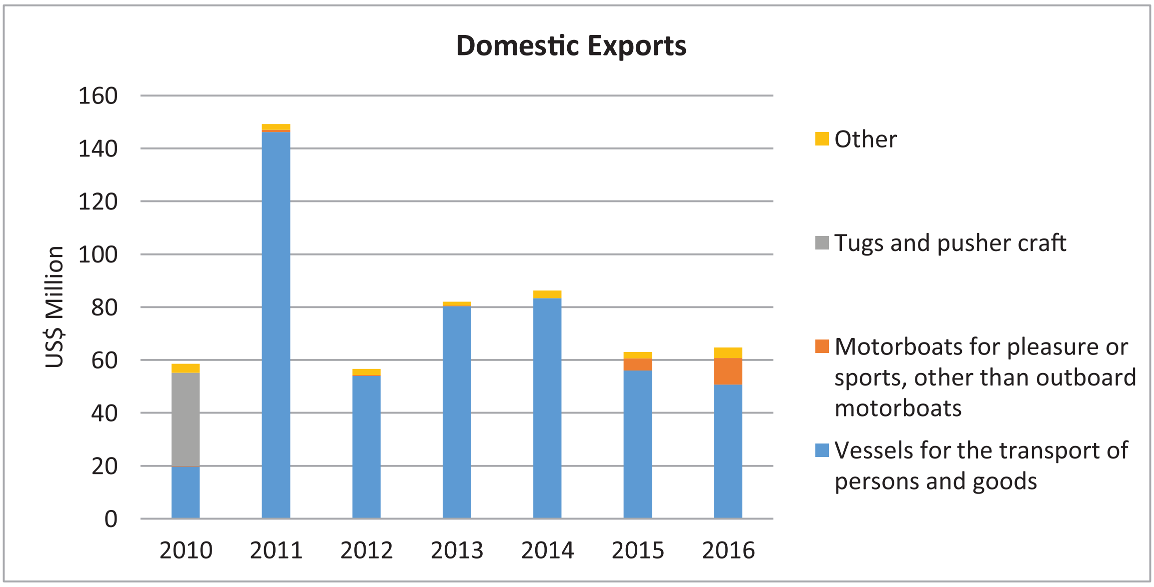


- Tugs and pusher craft
- Fishing vessels; factory ships and other vessels for processing or preserving fishery products (excluding fishing boats for sport)
- Vessels, incl. warships and lifeboats (excluding rowing boats and other vessels of heading 8901 to 8905 and vessels for breaking up)
- Rafts, tanks, coffer-dams, landing stages, buoys, beacons and other floating structures (excluding vessels of heading 8901 to 8906 and floating structures for breaking up)
- Yachts and other vessels for pleasure or sports; rowing boats and canoes
- Cruise ships, excursion boats, ferry-boats, cargo ships, barges and similar vessels for the transport of persons or goods
- Vessels and other floating structures for breaking up
- Light-vessels, fire-floats, dredgers, floating cranes, and other vessels the navigability of which is subsidiary to their main function; floating docks, floating or submersible drilling or production platforms (excluding fishing vessels and warships)

Source: www.tradermap.org

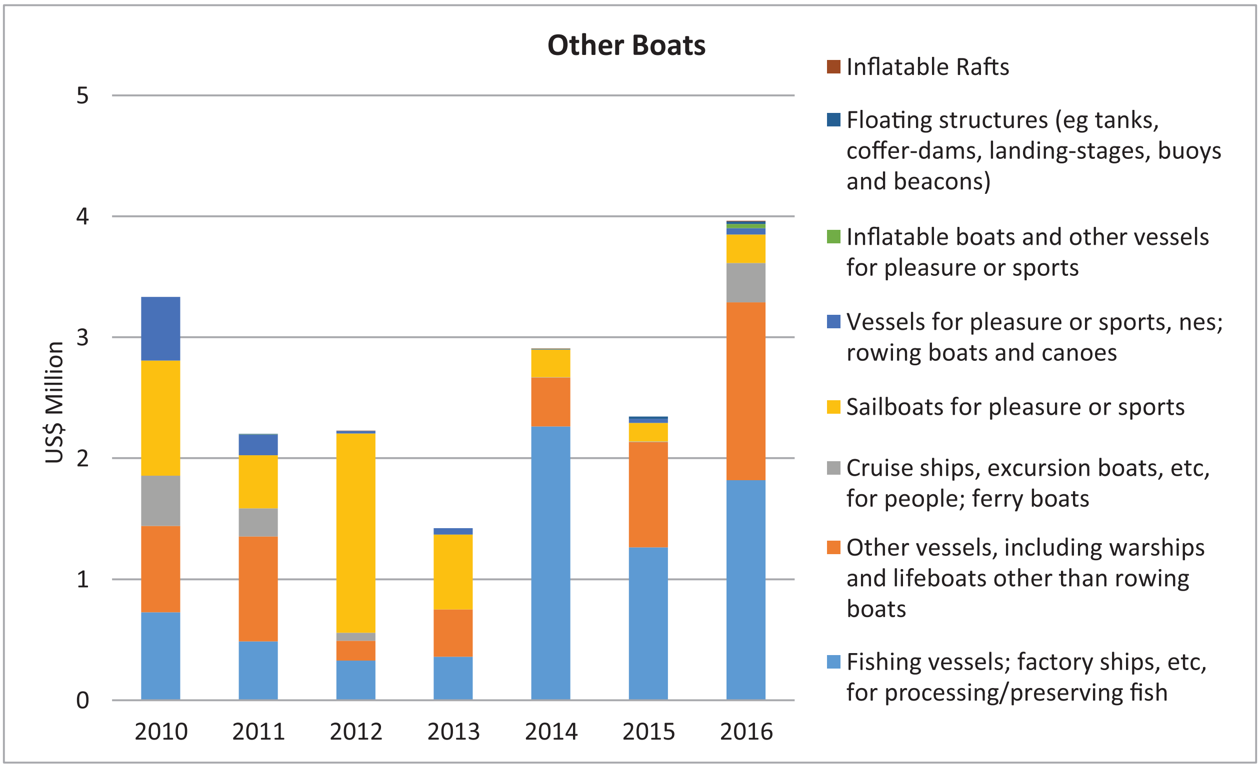
5.2 Sri Lanka Exports

Total export of **ships, boats and floating structures** amounted to US$ 65 million in 2016. The highest contribution in exports is derived from "Vessels for the transport of goods and passengers" category which reflects an annual average value of about 78% of the total export value. Sri Lanka has a proven capacity in building the following classes of ships and boats for the export market, as illustrated in the two graphs below.



Source- SLEDB

The following graph illustrates that fishing vessels have comprised the major segment in the category "Other Boats" referred to in the previous graph.



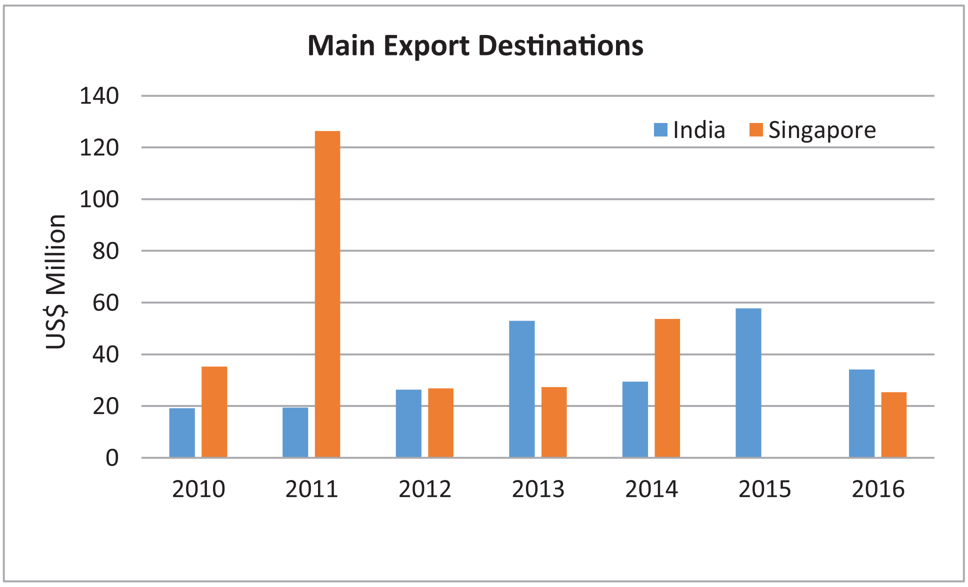
Source- SLEDB

Major Export Destinations

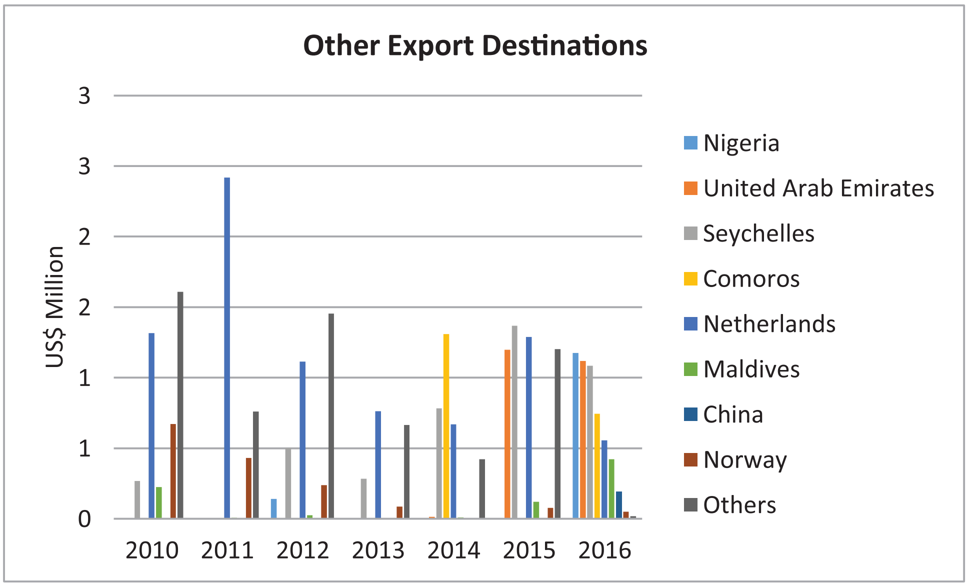
The main export destinations for ships and boats have been India, UAE, Seychelles, Netherlands, UK, Norway, Maldives, France, Singapore, Comoros, Somalia, Nigeria and Mauritius. Export destinations for boats also include Bangladesh, Iran, Yemen, Gambia and Pakistan.

India (58%) and Singapore (36%), comprise the major markets with an aggregate average share of around 94% of the total exports during the last five years.

The top export destinations of Ships, Boats and Floating Structures are given in the following two graphs.



Source: SLEDB



Source: SLEDB

6. Domestic Shipbuilding, Ship Repair and Bunkering Services Industry

6.1 Domestic Shipbuilding Market

Sri Lanka's earliest dockyards were built as far back as 1906 during British rule. The vast potential associated with providing maintenance facilities to the increasing traffic flow at the Colombo Harbour, led to the country adopting a cohesive dry dock development and management strategy, which in turn led to the establishment of Colombo Dockyard PLC, (CDPLC) and in 1975, launched the country into the shipbuilding arena. Presently Sri Lanka has a well-experienced shipbuilding and repair segment.

Key Players in Shipbuilding

The landscape is dominated by CDPLC, a company that has made significant inroads into the global shipbuilding arena. The second shipbuilder emerged in 2015, when MTD Walkers PLC, launched its subsidiary, Walkers Colombo Shipyard, through the acquisition of a ship repair yard. The capability of the two players is illustrated below.

- **Colombo Dockyard PLC (CDPLC)**

Established in 1974 and subsequently listed on the Colombo Stock Exchange, CDPLC, is the largest and oldest ship building, ship repair, heavy engineering and offshore engineering company in Sri Lanka. The Company is located within the Colombo Port in over 5 acres of land. CDPLC has built both Coast Guard and merchant vessels of diverse design for various applications for the local and overseas markets. Since 1993, CDPLC operates in joint collaboration with Onomichi Dockyard Co. Ltd, Japan.

  - Shipbuilding capability - 4 specialized vessels per annum generating over US$ 100 million
  - Workforce of over 3,000 Sri Lankans
  - Average annual turnover over US$ 150 million
  - 500 Ton Steel Press
  - 160 Ton Dock Side Crane
  - Shipbuilding Docks covered by movable shed
  - CAD/ CAM steel processing
  - Certified to ISO 9001:2008 by Lloyds Register Quality Assurance
  - LRQA Certification for OHSAS 18001:2007 & ISO 14001:2015

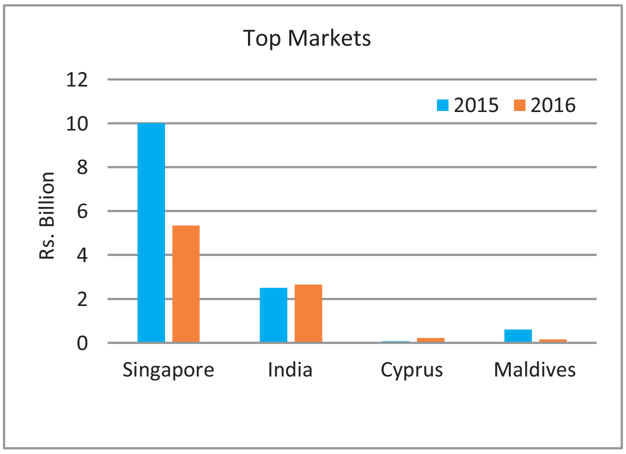
Types of Vessels Manufactured –

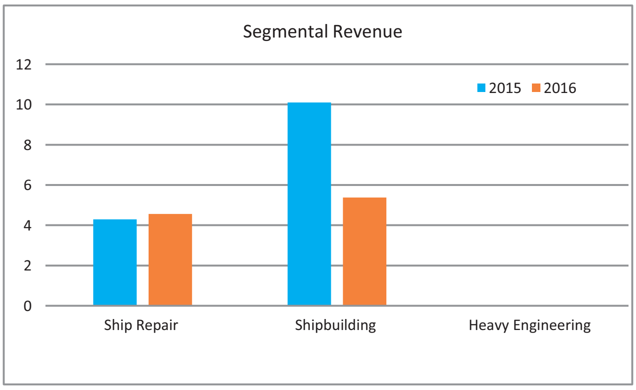
- Offshore Support Vessels- 80- 200 Ton Bollard Pull Anchor Handling Tug Supply Vessels, Multipurpose Platform Supply Vessels, Platform/ Remotely Operated Vehicle Support Vessels and Crew Boats. CDPLC has built 24 Offshore Support Vessels so far and delivered to Singaporean & Indian ship owners.
- Passenger Vessels- Vessels to carry passengers and general cargo between mainland India and Lakshadweep Island. So far, built and delivered two 400 passenger cum 250 ton cargo vessels and two 250 passenger cum 100 ton cargo vessels.

- Harbour Tugs- Tug Boat as required by SLPA. Includes Tug Boats ranging from 5 to 65 Ton Bollard Pull capacity equipped with state of the art Azimuth Propulsion Package and three 58 Ton Bollard Pull Tug Boats for the Jeddah Ports Authority of the Kingdom of Saudi Arabia.
- Rescue & Coast Guard Vessels- Designed, built and delivered one of the most effective and highly maneuverable aluminum alloy hull fast coast guard vessels for local use as well as international clients. Constructed and delivered large number of vessels for the Maldivian Coast Guard ranging from 24m Coastal Surveillance Vessels to 42m Offshore Patrol/Fisheries Protection Vessels.

Markets served

Name of the country	Product offered
Local Market (Mainly Sri Lanka Coast Guard and SLPA)	• Coast Guard Boats • Tug Boats • Fire Fighting vessels
India	• Offshore Support Vessels • Passenger Vessels
Maldives	• Coastal Surveillance Vessels • Tug Boats • Offshore Patrol/ Fisheries Protection Vessels
Singapore	• Multipurpose Platform Supply Vessels • Anchor Handling Tug Supply Vessel
Saudi Arabia	• Tug Boats





Source: CDPLC

CDPLC's key success is attributable to the blending of Japanese inputs in technology and quality as well as CDPL's delivery standards, reliability, track record and competitive pricing.

- **Walkers Colombo Shipyard (Private) Limited (WCS) and Related Companies**

WCS, a subsidiary of Walkers CML was launched consequent to Walkers CML acquiring 90% of Seagulf UK, a company that had secured a 25 year lease agreement with Ceylon Fishery Harbours Corporation, to build and operate a fully integrated shipyard at Mutwal Fishery Harbour, spanning 3.5 acres.

Types of Services – Shipbuilding, ship repairs, general engineering and other related marine services

Types of Vessels Manufactured

The portfolio includes Naval Vessels, Landing Crafts, Tug Boats, Anchor Handlers, Work Vessels, Passenger Vessels and Fishing Vessels. Despite its short history, WCS has already exported Landing Craft and Barge to Maldives and China, besides building vessels for the local market.

Expansion Plans

WCS's strategy is to establish shipyards across the island to cater to the growing demand for ship repair and shipbuilding services in the Indian Ocean. Walkers CML group presently include,

- Walkers Colombo Shipyard (Pvt) Ltd - Mutuwal Harbour, Colombo
- Walkers Galle Shipyard (Pvt) Ltd – Galle Port
- Walkers Trincomalee Shipyard (Pvt) Ltd – Cod Bay Fishery Harbour
- Colombo Engineering Services (Pvt) Ltd – Ship Repairs, Colombo Port

6.2 Domestic Ship Repairs

Sri Lanka has long been a popular destination for ship repair and maintenance services, due to its geographic advantage that requires minimum diversion from main sea routes. Ship repair activities are offered by,

- CDPLC
- WCS group
- Several small players, including Master Divers, providing marine afloat repair services in local ports or out of port limits.

- **CDPLC**

CDPLC services over 200 ships per annum generating US$ 30-40 million and carries out repair and maintenance activities for vessels both in dry docks and afloat. The Company operates four dry-docks, ranging from 9,000 dwt up to a capacity of 125,000 dwt. The largest dry-dock caters to tankers, bulk carriers, and offshore drill rigs, while the 30,000 dwt dry-dock accommodates the feeders and trampers plying regional waters. The two 9,000 dwt dry-docks provide docking facilities for offshore support vessels, naval vessels, trawlers and work boats. CDPLC is fully equipped to provide an entire gamut of repair services ranging from routine, damage, and retrofit repairs and more complex requirements, supported by a network of suppliers and service providers.

Following are the main repair services provided by the company.

- Routine dry docking repairs
- Major layup repairs
- Collision damage repairs
- Conversions and retrofits
- Expertise in Machinery, Piping, Steel, Electrical and Electronics
- Installation of ballast water treatment systems

CDPLC also performs general and heavy engineering services through a fully owned subsidiary, including heavy steel fabrication and heavy lifting capability up to 160 Tons.

Following are CDPLC's main ship repair markets.

Name of the country	Service provided
India	• Repairing Tankers • Dredger/ Offshore Support Care
Singapore	• Repairing Tankers • Container/ Bulk/ Cement Carrier Care
Cyprus	• Tanker Care/Repairing Tankers • Cement Carrier repairs
Greece	• Tanker Care/Repairing Tankers • Container/ Bulk/ Cement Carrier Care
Germany	• Container/ Bulk/ Cement Carrier Care
Hong Kong	• Cement Carrier repairs
Thailand	• Cement Carrier repairs
France	• Dredger/ Offshore Support Care • Passenger Vessel repairs
USA	• Dredger/ Offshore Support Care • Passenger Vessel repairs
Norway	• Dredger/ Offshore Support Care

- WCS

WCS offers dry docking and afloat repairs. A modern Syncrolift and Transfer system capable of accommodating a broad range of vessels up to 1,250 tonnes, as well as a boatlift system catering to small vessels up to 50 tons will be installed in the shipyard. WCS currently operates three docking and repair facilities in the Ports of Colombo, Galle and Trincomalee.

Following are the main repair services provided by the company.

- Floating repair services for vessels up to 80m in length.
- Dry berth repair services for vessels up to 65m in length.

Following are WCS's main ship repair markets thus far.

Name of the country	Type of Vessel
Seychelles	• Trawler
South Africa	• Yacht
Dubai	• Offshore supply vessel
Local	• Crew boat • Dredger

General engineering services are provided by the Group's Colombo Engineering Services, located within the Colombo Port. Technical expertise include,

- Underwater repairs
- Underwater inspections
- Anchor replacement
- Container cell guide repairs
- Main engine repairs and steel structure repairs

6.3 Domestic Ship Bunkering Services

Ship bunkering is one of the major support services for the shipping industry. The process involves the transfer of oil, fuel, lubricants or any mixture in the marine environment. The business is dependent on the world crude oil markets and trade routes. Companies engaged in bunkering may also provide additional services such as provision supply (food, linen, stationary etc.), fresh water supply and crew changes.

The product portfolio mainly comprises of HSFO 380 cSt, HSFO 180 cSt and Marine Gas Oil (MGO). Bunkering services are presently offered at Colombo, Hambantota and Trincomalee ports. Value addition is achieved through break-bulk operations, with oil being imported, stored and re-exported by way of bunkering. Imports are primarily from India, Singapore and the Middle East. Bunkering license holders share a common storage facility at Bloemendhal Road, Colombo.

Location	Capacity (MT)	Remarks
Colombo	40,000	Total capacity exhausted
Hambantota	60,000	Out of 80,000 MT capacity, 20,000 MT is reserved for aviation fuel to serve the Mattala International Airport. Both capacities are not fully utilized at present
Trincomalee	24,000	There are 99 tanks with a capacity of 12,000 MT each. Out of these only 15 tanks are used by Lanka IOC. Only 2 are used for marine fuel storage whilst the balance 13 are used for inland fuel distribution.

There are around ten licensed bunker holders of which only four are very active at present, namely Lanka Marine Services (Pvt.) Ltd, Hayleys Advantis Bunkering Ltd, (represents the combined operations with Lanka Maritime Services Ltd and Lanka Bunkering Services (Pvt.) Ltd, post takeover of these two companies by Hayleys PLC.),

Interocean Energy (Pvt.) Ltd and Lanka IOC, the Indian Oil Corporation's Sri Lankan subsidiary. High working capital requirement is a key reason for the rest of the bunker license holders' inactive state.

Lanka IOC operates in the Trincomalee Harbour whilst Magampura Port Management Co (Pvt) Ltd operates in the Hambantota Port. Companies such as Lanka Marine Services owns and operate their own bunker barges for the supply of bunker fuel.

Currently, Lanka Marine Service's share is estimated at around 45%-47% followed by Advantis Bunkering Ltd.

Lanka Marine Services commanded a market share of 43.7% in bunkering in the first nine months of 2015 as depicted in the table below.

Entity	Sales (MT)					
	2010	2011	2012	2013	2014	2015 (Upto 3Q)
Lanka Marine Services (Pvt) Limited	149,829	170,213	130,433	137,280	144,875	151,361
Lanka Maritime Services (Pvt). Limited	74,962	92,130	73,137	62,660	46,991	33,220
Lanka Bunkering Pvt Ltd	1,315	1,250	4,470	1,748	3,247	*
Lanka Indian Oil Company (Trincomalee)	99,702	103,695	120,421	72,557	74,299	71,682
Inter Ocean Energy (Pvt) Limited	11,723	19,728	9,027	38,008	87,588	54,407
Moceti International (Pvt.) Limited	*	584	67	3,062	15,464	17,345
CSC Kandia (Pvt) Ltd	5,113	*	*	*	*	*
Thalina Shipping (Pvt) Ltd	*	*	*	*	30	120
Maria Shipping (Pvt) Ltd (a)	*	22	*	*	49	*
Mc Marine (Pvt) Ltd	*	*	*	*	4,276	500
Ceylon Petroleum Storage Terminals Ltd	*	*	*	43,523	43,726	1,016
Magampura Port Management Co (Pvt) Ltd (Hambantota)					53,486	15,577
	241,978	342,644	387,622	337,555	474,031	345,228

Source-Ministry of Petroleum Resources Development: Progress Report – 2015 and Action Plan - 2016

Note: Not operated, (a) License is expired from March 2015.

Key drivers for bunkering services include;

- Proximity to sea routes
- Capacity of bunker tank farms
- Price
- Quality of supplies
- Reliability – Sri Lanka has a high reputation in the region for reliability

7. Domestic Boat Building

7.1 Overview

Surrounded by the sea and with many inland rivers, fishing has long been a key economic activity in the country that paved the way for the birth of the fishing boat building industry. The history of boat building could be traced back to ancient times when wooden canoes and boats were built, operated by oar or sail, before engine powered boats were manufactured.

Today, Sri Lanka has a proven track record for designing and manufacturing a wide range of waterborne vessels including fishing boats, luxury yachts and sailing boats, other pleasure and leisure craft, naval, surveillance and rescue craft, off-shore vessels, harbor vessels, general purpose vessels, fisheries research vessels, sea cadet training vessels and other types such as house boats, floating restaurants and pontoons, for international markets. This has led to the SLEDB and the BOI identifying the potential for the sector to develop into a regional hub for boat manufacture.

Existing Boat Population

Following are details of the boat population and annual production in Sri Lanka.

Fishing Boats Population includes				
Inboard Multi-day Boats, Inboard Single-day Boats, Out-board engine Fiberglass Reinforced Plastic Boats, Motorized Traditional Boats, Non-motorized Traditional Boats and Inland Fishing Craft				
2012	2013	2014	2015	2016 (provisional)
60,734	59,415	61,145	59,116	60,165

Population of Pleasure Boats and yacht category includes				
Fisheries research vessels, Ferries, Passenger vessels steel, Speed cruisers, Luxury sailing and motor yachts, Sports boats, Coast guard vessels and surveillance crafts, Rescue crafts, Ambulance crafts, Fast attack crafts, Work boats, Paddle boats, Floating restaurants and bars				
2012	2013	2014	2015 (provisional)	2016 (provisional)
312	434	476	506	536

Production of Pleasure Boats and yacht category includes				
Fisheries research vessels, Ferries, Passenger vessels steel, Speed cruisers, Luxury sailing and motor yachts, Sports boats, Coast guard vessels and surveillance crafts, Rescue crafts, Ambulance crafts, Fast attack crafts, Work boats, Paddle boats, Floating restaurants and bars				
2012	2013	2014	2015 (provisional)	2016 (provisional)
112	96	98	84	72

Source: BTI

Fishing Vessels

Manufacturing of fishing vessels constitute the most prolific of the boat building sector. Presently fishing vessels are manufactured for both local and export markets. Local fishermen in turn, engage in fishing for local and export markets.The industry is developed to manufacture small fishing vessels, as well as larger multi-day fishing boats, mainly fiberglass reinforced plastic (FRP) boats for local and export markets.

Cey-nor Foundation Ltd is the main state sector producer of fishing boats for domestic use, besides some private boat builders and informal boat builders. It is expected that, due to inefficiencies in ice storage of the fish catch in smaller boats, future focus of the government is to manufacture larger 50ft-75ft vessels with proper refrigeration facilities, to enhance the catch volume in a single voyage and reduce wastage and rotting.

7.2 Employment

Boat yards are labour intensive and requires a host of skills ranging from welding, fitting, painting, carpentry, fabrication to management. Training of workers is important for the yards to maintain its skill base and often, through boat builders, a skilled talent pool is built in the area. It is estimated that the sector provides employment for 200 direct and 10,000 indirect personnel.

7.3 Key Players in Boat Building and the Products

The local boat building industry is fragmented, consisting of large, medium and small scale players as well as an informal sector.

7.3.1 Private Boat Builders

There are approximately 12 export oriented private boat builders, operating an estimated 20-25 boat yards in the country, of which 10 boat yards possess medium to large scale manufacturing capabilities. Registration with a regulatory authority is not required to operate a boatyard.

Apart from manufacturing boats, boat builders enable ancillary services such as

- Manufacturing boat accessories
- Pre-production services such as boat designing, lofting, plug making, mold making
- Supplying of engines, navigation and communication equipment, refrigeration systems and fire and safety equipment
- Post production services such as boat repairing and maintenance during warranty periods

Niche Markets - Some players operate in niche markets, such as the fisheries or pleasure sector, while others manufacture and export a range of boats for diverse purposes. In addition, BAFF Polymech group, designs and builds pleasure craft such as yachts that are supplied to Sail Lanka Charters Ltd, a group company engaged in tourist charter.

The industry produces a wide range of boats from small canoes and kayaks to larger vessels, including yachts.

Given below are some of the key players in the industry and their product categories.

Company	Products
Neil Fernando & Company (Pvt) Ltd (Neil Marine)	Fishing Boats, Life Crafts & Surveillance Boats, Pleasure Boats, Specialized Vessels- Floating Restaurants, Whale watching, Catamarans, Logistic, Transport & Work Boats
Solas Marine Lanka (Pvt) Ltd	Fishing Boats, Defense Boats, Petrol Crafts & Rescue Crafts, Ambulance Crafts, Passenger Crafts & Pleasure Crafts, Speed & Sports Boats, Work Boats
Baff Polymech (Pvt) Ltd	Leisure Boats-Luxury sailing yachts, Catamarans
Jostein Viksund Design and Model Centre (Pvt) Ltd	Leisure Boats- Passenger, Waterjet, Outboard, Game fisher, Ocean Cruiser, Floating Pontoons
A J Fishing Industries (Pvt) Ltd	Leisure & Recreational boats
North West Marine Lanka (Pvt) Ltd	Fishing Vessels- Long Liners, Boats
Hairu Naval Craft Engineering (Pvt.) Ltd	Fishing boats – including multi-day boats, Leisure & Recreational boats
Dhanusha Marine Lanka (Pvt) Ltd	Fiberglass Boats, Trailer Covers, Kayaks, Leisure boats, Paddle boats, Dinghy Boats, Speed boats

Source: SLEDB, Company websites and published material, interviews

Salient features and specifications (lengths) of the different types of boats manufactured by a few key players are illustrated in Annex 1

Brief Profiles of four main players are given below:

- **Neil Fernando & Company (Pvt) Ltd (Neil Marine)**

Neil Marine is one of the largest fiberglass boat manufacturing companies in South-East Asia with a track record of 47 years. All boats are manufactured in accordance to an international standard. The company has the expertise and a wealth of experience that caters to the modern age of boat manufacturing. The company has a range of around 40,000 boats and the export markets include United Kingdom, France, Holland, Norway, Maldives, Seychelles, Africa and the Gulf region. An average of 5-6 boats are exported on a monthly basis.

The company works closely with Menken Maritiem BV of Holland and Ocean Wide Safety and is responsible for manufacturing all of their boats. Additionally as and when required both parties transfer valuable technology to the company and this is carried out through training programs and site visits whilst world renowned architechts have designed boats for manufacture by the company. The company has also been granted the prestigious "Lloyds Approved Status" and further has the approval to construct vessels under other International classification bodies such as DNV and IRS. The company possesses the unique ability of having the expertise and resources to perform all boat building tasks inhouse.

- **Solas Marine Lanka (Pvt) Ltd**

Solas Marine Lanka (Pvt) Ltd. is a company registered with BOI. Incorporated in 1979 as "Blue Star Marine Ltd." the yard was taken over by the Solas Marine Group in 2008. The yard has since designed, manufactured and supplied over 25,000 FRP boats of varied designs and sizes. The export markets include India, United Kingdom, Maldives, Kenya, Nigeria, Ghana, Australia, New Zealand and USA.

The company is also accredited with ISO 9001:2008 by DNV to design and construct all types of composite boats and yachts in the world and the workshops have been approved by Germanischer Lloyd and IRS for composite manufacturing and repairing.

- **BAFF Polymech (Pvt) Ltd**

BAFF Polymech (Pvt) Ltd is a boatyard registered in 2009 with the BOI. The company is situated in the BOI free trade zone in Koggala on the southern coast. They mainly recruit labour among youth trained at the Building A Future Foundation (a not for profit arm of the group) in the areas of boat building and mechanical & electrical engineering. The boatyard currently builds large catamarans to equip the fleet of its sister company Sail Lanka Charter (Pvt) Ltd. The company has the necessary infrastructure and equipment's to manufacture ropes as well as moulded rubber, polyurethane and plastic products and mechanical & electrical engineering parts.

- **Dhanusha Marine Lanka (Pvt) Ltd**

Danusha Marine Lanka (Pvt) Ltd has been in the manufacture of fibreglass range of boats for over 25 years, and has created a niche in both the national & international markets. The company had been awarded as Best Exporter- Boat/Ship building Sector by SLEDB in 2012.The company also has progressed into backward integration with the supply of TMS and Marine in board and out board engines to the local market.

7.3.2 State Owned Boat Builders:

There are two state entities, Ceynor Foundation Ltd and the Sri Lanka Navy, involved in boat building. Ceynor Foundation manufactures boats, mainly fishing boats, for the local market. The Navy primarily manufactures military vessels for its own requirement, although other crafts such as pleasure vessels, have also been manufactured in the past.

- **Ceynor Foundation Limited (Ceynor)**

A state-owned entity operating under the Ministry of Fisheries and Aquatic Resources Development of Sri Lanka, Ceynor is focused on the production of fiberglass fishing vessels for the local fishing industry as well as pleasure craft and inland craft. The entity also offers a vast range of fishnets and allied products and has built Fishing Boats including Long Liner, Multiday fishing Boats and Leisure Boats including- Paddle Boats, Floating Restaurants, Trimaran, Fleet Flat Bottoms Boats and other Boats such as Ambulance Boats. All Boat sales of Ceynor are backed by state guarantee.

Given below are types of boats produced by Ceynor.

Category	Boat Types	Length
Fishing	Long Liner	49.5 - 55 ft
	Multi day fishing boats	30 - 42 ft
	Trimaran	45 - 50 ft
Pleasure/Tourism	Leisure boats	24 ft
	Paddle Boat	7 ft 8 inches
Other	Ambulance Boat	32 ft

- **Sri Lanka Navy (SLN)**

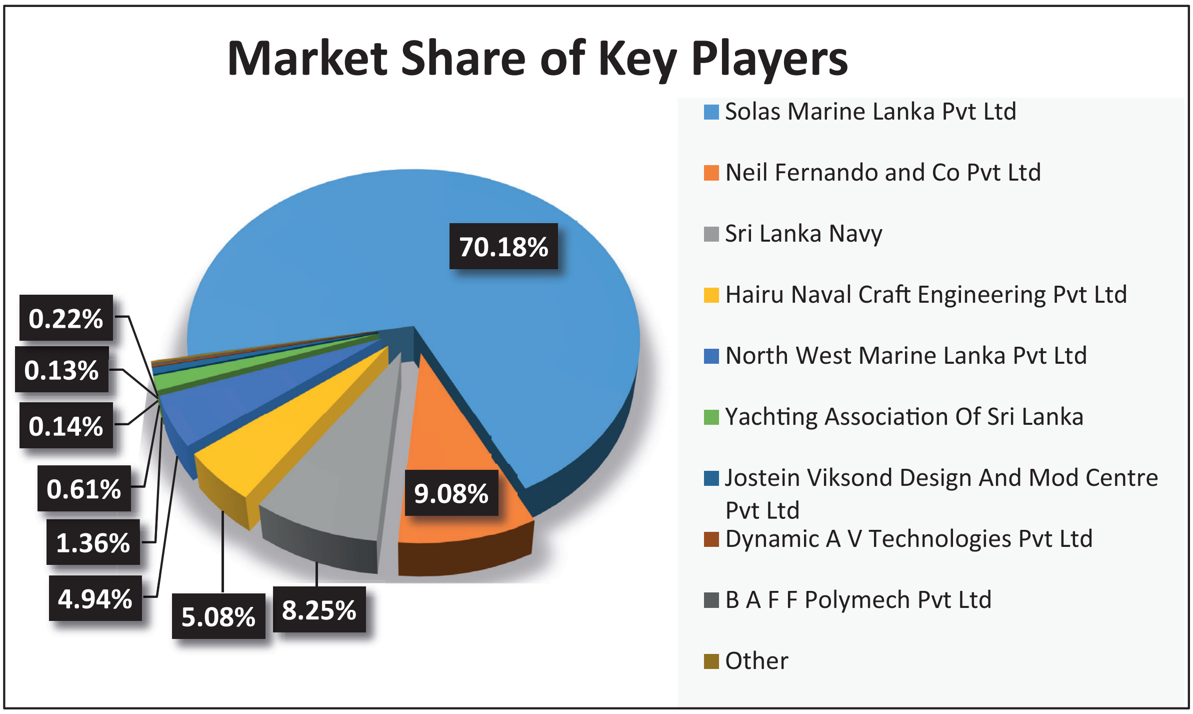
  The SLN operates one boatyard in Welisara for manufacture of boats for their own use and boat repair yards are maintained at every major area command station for repair and maintenance of own vessels.

7.4 Foreign Investment/Collaboration of private sector boat builders

Export oriented boatyards enjoy BOI status. The larger and more successful manufacturers frequently work in collaboration or as a joint venture with an overseas partner, which provides them advantages such as access to international markets and technology, and/or technical capability and know-how. Technology transfers are often arranged with local boat builders. Overseas investors from countries such as Belgium, Scandinavia, Norway and Korea have either set up operations or are a joint venture partner in successful boat building operations in Sri Lanka. Some of the joint collaboration companies are given below.

- Jostein Viksund Design and Model Centre (Pvt) Ltd, a leading producer of Scandinavian fiberglass pleasure boats, is located in Sri Lanka.
- Belgiun entrepreneur operates BAFF Polymech (Pvt) Ltd which benefits from a technical collaboration with a French boatyard
- Neil Fernando & Company (Pvt) Ltd works in collaboration with Menken Maritime BV of Netherlands, Blondecell Limited, UK and Yarmouth Marine Services UK. International architects from the UK and Holland are engaged in the design of most boats.

7.5 Market Share of Key Players



Source: EDB

8. Competitor Intelligence

8.1 Competitors in Ship Building

Sri Lanka's main competitors include China (for commercial vessels), European yards, India, Korea, Japan, Singapore, Philippines and Malaysia. China has been able to derive price advantages due to its access to inexpensive labour and materials. One of the primary reasons for the stiff competition faced by Sri Lanka is the lack of shipyards in the country to attract buyers.

8.2 Competitors in Boat Building

Sri Lanka's major competitors in the export market for boats are Malaysia, Singapore, Taiwan, Australia, China and Korea.

The following table depicts the top ten competitors for Sri Lanka's main export categories.

Cruise ships, excursion boats and similar vessels principally designed for the transport of persons; ferry-boats of all kinds	
• Germany	• Austria
• Italy	• Indonesia
• Finland	• China
• Philippines	• Norway
• Poland	• Greece
Rafts, tanks, coffer-dams, landing stages, buoys, beacons and other floating structures (excluding inflatable rafts, vessels of heading 8901 to 8906 and floating structures for breaking up)	
• Republic of Korea	• Australia
• United Kingdom	• France
• United States of America	• Singapore
• Netherlands	• Italy
• China	• Estonia
Vessels for pleasure or sports; rowing boats (excluding motor boats and motor yachts powered other than by outboard motors, sailboats and yachts with or without auxiliary motor and inflatable boats)	
• United States of America	• Finland
• Poland	• Japan
• Canada	• Singapore
• Taipei, Chinese	• Italy
• China	• United Arab Emirates
Sailboats and yachts, with or without auxiliary motor, for pleasure or sports	
• France	• South Africa
• Netherlands	• United States of America
• Spain	• Italy
• Germany	• Poland
• United Kingdom	• Finland

Light-vessels, fire-floats, floating cranes and other vessels, the navigability of which is subsidiary to their main function (excluding dredgers, floating or submersible drilling or production platforms; fishing vessels and warships)	
• Republic of Korea	• Thailand
• China	• Mexico
• India	• Croatia
• Brazil	• South Africa
• Netherlands	• Qatar
Vessels, incl. warships and lifeboats (excluding rowing boats and other vessels of heading 8901 to 8905 and vessels for breaking up)	
• China	• Netherlands
• Russian Federation	• Germany
• India	• Poland
• United States of America	• France
• Viet Nam	• Norway
Tugs and pusher craft	
• Saudi Arabia	• Russian Federation
• China	• Viet Nam
• India	• Romania
• Thailand	• Germany
• Turkey	• Chile
Vessels and other floating structures for breaking up	
• United Arab Emirates	• Bangladesh
• Vanuatu	• Liberia
• Marshall Islands	• United Kingdom
• Iran, Islamic Republic of	• Nauru
• Chad	• Viet Nam
Fishing vessels; factory ships and other vessels for processing or preserving fishery products	
• Poland	• Taipei, Chinese
• Spain	• Denmark
• Norway	• Romania
• Turkey	• Iceland
• China	• Viet Nam
Motor boats and motor yachts, for pleasure or sports (other than outboard motor boats)	
• Italy	• France
• Netherlands	• Mexico
• Germany	• British Virgin Islands
• United Kingdom	• Cayman Islands
• United States of America	• Canada

Vessels for the transport of goods and vessels for the transport of both persons and goods (excluding refrigerated vessels, tankers, ferry-boats and vessels principally designed for the transport of persons)	
• China	• Philippines
• Japan	• Taipei, Chinese
• Republic of Korea	• Romania
• Poland	• Viet Nam
• Germany	• India

Source- www.trademap.org

8.3 Competitors in Ship Repairs

Sri Lanka's key competitors in the segment are India, Singapore, Dubai and other Middle Eastern countries.

8.4 Competitors in Bunkering

Competition for bunkering services mainly arise from the base country of the vessel as well as from Singapore and Dubai ports lying on the major sea routes.

9. Supply Chain

Most components for ship and boat manufacture, other than steel and aluminum for hull making, could be procured locally, through importing agents. Shipbuilding grade steel and aluminum are imported from many countries and quality assurance is substantiated to ensure that the steel has been manufactured to ship building code and required standard, mainly British, American. Japanese or Indian standards. Supplier countries such as Dubai and Singapore are reachable within 3-4 hours, providing easy access to spares as well as skills.

Some boat manufacturers are engaged in backward integration through subsidiary companies and also function as key component suppliers to the local boat building industry. Major manufacturers import fiberglass fabric mats and resin from overseas suppliers. Most reputed brands of marine engines and marine electronic and communication equipment could be obtained through these companies or other local agents in the country. Most manufacturers operate outfits such as welding, lathe work, pipe fitting and carpentry, to manufacture specific requirements (such as furniture) for their boats.

Having identified Sri Lanka as an ideal investment destination, the world's largest sailmaker, North Sails, operates one of its largest sail making plants in Sri Lanka, with a specialization in building paneled and 3D sails with luff lengths up to 22 meters. North Cloth Sri Lanka manufacturing operations focus on laminated sail cloth. High modulus woven taffeta components are produced for heavy offshore use. The North Cloth laminating line is the most advanced in the sail cloth industry.

Development of the local boat manufacturing sector will also lead to expansion of the value chain as more entrepreneurs will be attracted to the component manufacture/import sector. This will also, ultimately lead to price competitiveness for the ship/boat manufacturers.

9.1 Access to Major Components

Key Component	Imported	Locally Procured
Steel, aluminum for Ship/larger vessels Fiber mats and resin, wood, aluminum for-boats	√	
Molds		√
Boat building tools		√
Main Engines – inboard motors		√
Outboard motors		√
Generators		√
Auxiliary machineries and pumps		√
Propellers and rudders		√
Sails	√	√
Navigation and Communication systems		√
Fire and Safety Equipment		√
Guard Rails and Fenders		√
Anchoring gears		√
Refrigeration Systems		√
Furniture and Fittings		√
Marine Paint and Lacquer Materials		√
Other Miscellaneous Equipment		√

9.2 Main Component Suppliers

All major international brands are represented by local agents in Sri Lanka. Some such trade names are Siemens, Bosch, Detroit MTU, Atlas Copco, MAN Diesel & Turbo SE, Ingersoll-Rand, Furuno, JRC, Ivom, Samyung and Raytheon Anschutz.

The following are a sample of suppliers. However, this does not comprise an exhaustive nor a recommended list.

Component	Selected Suppliers
Hull /Fabric mat and Resin	There are over 10 importers although only some suppliers satisfy the industry expectations of standards. These include; • USS Service (Pvt.) Ltd • KKK Distributors (Pvt.) Ltd. • Neil Marine (Pvt.) Ltd • Morexlanka
Marine Engines	• Browns Group Industries (Pvt.) Ltd - marine engines and marine gear • Diesel and Motor Engineering PLC – MTU, John Deere • Hayleys Ltd – Volvo Penta • Dhanusha Marine (Pvt.) Ltd importer of Hyundai marine diesel engines from Korea (Engine range from 80Hp to 550hp (4 cylinder and 6 cylinder) and Daewoo marine diesel engines • Neil Marine Ltd, - Agents for Suzuki outboard motors and Daewoo marine diesel engines • AMW- Agent for Yamaha outboard motors
Generators	• Trade Promoters (Pvt) Ltd
Propellers	• Diesel and Motor Engineering PLC • Saram Marines
Electronic	• Queens Radio Marine Electronics (Pvt) Ltd • International Marine Services
Navigation Equipment	• Queens Radio Marine Electronics (Pvt) Ltd • Elite Radio and Engineering (Pvt.) Ltd
Communication Equipment	• Dynamic Corporation (Pvt) Ltd
Safety equipment	• Rajasekara & Sons (Pvt) Ltd • Western Engineering (Pvt) Ltd • Marshal Trading Company (Pvt) Ltd • Kangaroo International
Paint	• Agents for PPG/Sigma, Hemple, Nippon, Jotun, CMP, KCC etc.

10.1 Ship Manufacturing – Main Process

Pre-Production Planinig

- Setting of shipbuilding process business objectibves
- Initial inquiry and identifying customer requirements
- Compliance with statutory and regulatory requiremnts
- Process capability
- Prepare and review basic engineering design and estimate cost
- Carryout a risk analysis prepare and submit proposals
- Certification and negotiation
- Award of contract
- Internal nortification (Information sheet)
- Submit invoice bonds and guarantee
- Appoint project manager
- Appoint design team
- Project Planning
- Allocation of resources

Design

- Detailed design
- Design and development review verification and validation
- Control of design and development changes

Production Planning

- Meterial planning/requisitioning (MOC)
- Marerial purchasing/ logistics
- Customer supplied items and storage/ stores management
- Incoming inspection

Construction

- Primer coating
- Cutting of steel
- Processing of steel
- Panel line
- Sub assembly
- Block assembly
- Outfitting for blocks
- Block joint on the dock using a jumbo crane
- Installation of main equipment

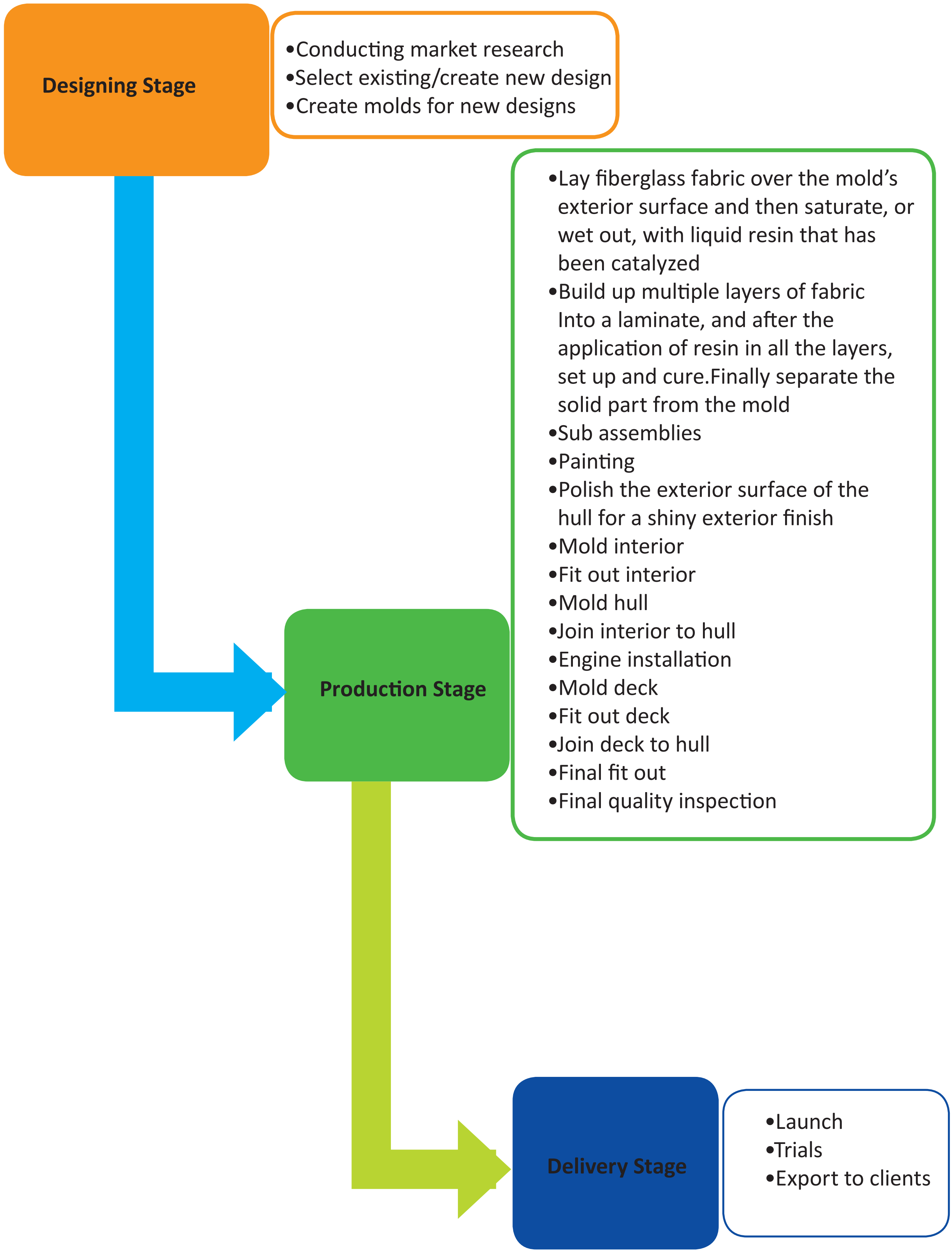
Inspection

- Progress review and monitoring including budget review
- In progress inspection/quality control
- Invoicing
- Final inspection and trials

Post Production

- Delivery
- Warranty
- Contract conclusion
- Project evalution
- Monitoring and measurement of costomer satisfaction
- Continual improvement

10.2 Fiber Glass Boat Manufacturing Process



11. Infrastructure, Logistics and Skilled Labour (Ship and Boat Building)

Given below is the current status of key infrastructure and logistics that are required for the ship and boat building industry.

11.1 Location

- **Location of Shipyards**

The site location is integral to the long term economic viability of a shipyard. Essential pre-requisites in site selection include,

- Port accessibility - Should be located near a port that handles container and bulk traffic
- Shipping traffic patterns
- Connectivity- highway connection or railway connectivity
- Ancillary support – availability of suppliers, sub-contractors and utilities
- Labour availability
- Environmental impact
- Factors such as wave climate, topography (natural layout), depth of surrounding waters, sedimentation, geology and ground conditions

The location should also be suitable to accommodate shipyard infrastructure such as,

- Dry docks and dock gates
- Shiplifts & cranes
- Floating docks
- Ship launch systems
- Piers and quays
- Assembly and construction halls
- Workshop buildings and stores
- Offices and amenities
- Breakwaters
- Dredging

The most suitable shipbuilding locations in Sri Lanka are Colombo, Hambantota and Trincomalee. CDPLC is located in the Colombo port, while WCS operates in the ports of Colombo, Galle and Trincomalee.

The CFHC plans to upgrade 7 existing fishery harbours as well as develop 11 new harbours around the country. CFHC also proposes to invest in heavy machinery for harbour maintenance. These harbours will facilitate repair and maintenance of both ships and boats.

- **Location of Boatyards**

Presently boat manufacturers are clustered in the Western and Southern Provinces although locations along the coastline (barring protected zones) as well as in inland locations preferably adjacent to waterways/canal network are also potential boat building sites.

Locations of existing export oriented boat manufacturers

The country has plenty of land that could be developed and the land prices may vary according to the distant to the beach or water frontage. Land is usually privately owned or on long term lease from the government.

A company may operate a single boatyard or several. Some have set up factories in BOI administered export processing zones such as Koggala (Habaraduwa) and Industrial Estate Nagoda, Kalutara.

However, there are no dedicated locations demarcated for boat builders to set up yards.

11.2 Launching Sites for Boatyards

Ideally, every boatyard should be accompanied by a launching pad for sea trials and/or to launch their boats for delivery to customers. However the existing fragmented boat builders are not equipped with individual launching pads and dedicated locations for boat launching are also not available in the country. As such, heavy duty cranes are deployed for such operations.

Since it is not economically viable for these fragmented players to possess individual launching sites, at least 1 or 2 dedictaed sites could be allocated for the common use of all boat builders so as to overcome the constraint. Government's National Budget 2017, proposes to establish 15 export villages, on a PPP basis and one of the focus areas will be boat manufacturing. This would provide an opportunity to establish launching pads or lifting docks and slipways in these demarcated areas.

11.3 Road Network

Where a boat yard is not located immediately adjacent to the sea/river, larger vessels need to be transported via road to point of testing or launch. Inland boat yards depend on trailer transport to access waterways for test/launching.

Sri Lanka has a well-connected network of roads at present. However boat builders experience difficulties in ground transportation due to the narrow width of some roads and the low height of high-tension wires and overhead powerlines along the roads.

Further expansion of the road network with new expressways and upgrading of the existing roads are key policy priorities of the government, to support growing economic activity and to reduce regional disparity. Several road development projects, supported by financing from countries such as Japan, China, Korea, Saudi Arabia and Kuwait and international agencies such as the ADB and World Bank are underway. In addition, UK and France provide financial assistance for construction and restoration of regional bridges and steel flyovers. An ADB assisted Integrated Road (i-ROAD) program has also commenced to improve around 2,548 km of rural and provincial roads and 118 kms of national roads, with a view to enhancing connectivity. The government has also allocated funds to renovate bridges, culverts and other supporting structures.

11.4 Workshop and Factory Requirements

The layout for manufacturing ships and boats would generally include the following.

- Workshops for carpentry, welding, marine equipment & component assembling, electrical & electronics related work
- Lamination shop
- Storage area for molds, raw material, tools & machinery and other hardware
- Display area
- Office area
- Staff/worker facilities

Currently ships and boats are built to order and storage requirement has not arisen. However, there are declared free ports and bonded warehouses for BOI approved projects.

11.5 Utilities

Island wide coverage of the national electricity grid with uninterrupted 24/7 supply is ensured by the Ministry of Power and Energy. The supply burden is taken on by the Ministry and not passed on to the consumer to ensure a continuous supply through the use of several sources namely hydro, thermal or solar.

An advanced level of uninterrupted telephone connectivity is provided via connections to the SEA-ME-WE III and IV (South East Asia – Middle East – Western Europe) fiber optic communication backbone and over 11 communication satellites orbiting above the south of the country

Mobile phone penetration is high at 121% with island-wide latest technology of 4G internet coverage

Being a tropical country there is easy access to pipe borne water from the national grid or there are ample sources for the creation of own water supply.

11.6 Export Delivery

Upon receiving customs clearance, delivery of a boat is usually performed in one of the following methods.

- Boarded Delivery - Smaller boats are usually loaded in 40ft containers and exported in container ships to the final destination. None of the boat yards are located near ports, hence vessels for delivery need to be transported from the sites using trailers.

- Sailed Delivery - Larger vessels sail to their port of destination from a harbor or marina/jetty. The manufacturer hires/provides competent crew for such delivery.

11.7 Skilled Labour

At present the industry encounters skill shortages primarily due to the following.

- Migration of skilled labour - Sri Lanka has a high adult literacy rate of 92.6%, the highest in South Asia and well above world averages. The country has produced industry related skilled labour who are in high demand overseas, (particularly in Middle Eastern countries, Australia and New Zealand) for infrastructure development projects such as road, bridges, airports and seaports, or are lured by competitors. This has however, created a dearth of skilled labour within the country, particularly for welders, carpenters and fitters.
- Lack of awarenesss of job opportunities in the sector - Sri Lanka's youth unemployment rate rose from 17.2% in 2012 to 21.6% in 2016. Youth unemployment refers to the share of the labour force ages 15-24 without work but available and seeking employment. According to the Youth Not in Employment, Education or Training (NEET), a newly introduced indicator for Sri Lanka shows one out of every four youth belongs to this category.

The industry has adopted several strategies to overcome this constraint.

- Importing low cost labour from the Indian sub-continent on temporary work permits, particularly relating to ship building skills.
- Subcontracting
- Training unskilled labour by tapping into the unemployed sector as defined above, from the boat yard's visinity.

However, a decline in labour migration has been recorded in 2016 due to better domestic employment opportunities, government initiatives aimed at discouraging semi-skilled and unskilled migration as well as unfavourable economic conditions in traditional migration destinations. *(Source: CBSL Annual Report 2016)*

Labour Training

Training is undertaken in the following manner

- In house on the job training
- In-house formal training or overseas training – mainly provided by larger players such as the Colombo Dockyard PLC, BAFF Polymech, Solas Marine etc. For instance Solas Marine engages a technical team trained in the UAE, Finland, Italy, Austria and New Zealand some counting over 30 years of experience.
- Formal Training Institutes

Training Institutions

a) Boat Building Technology Improvement Institute Lanka (GTE) Ltd (BTI) (http://www.btilanka.com/), is a collective of Boat Building Companies interested in the improvement of their business capabilities by enhancing labour skills through training programs. BTI empowers the members in technological improvements and knowledge transfers. The institute's boat building training instructors are trained in Germany, specializing in German technology.

BTI's Training Courses include:

Introduction to Boat Building	Introduction to Mold Making
Fiberglass Technology & Repair	Introduction to basic Welding Techniques
FRP Technology for Boat Building	Advanced Welding Techniques
Advanced Composite Technology	Inboard Marine Engine Operation, Maintenance & Repairing
Naval Drafting	Inboard Marine Engine Installation
Auto CAD for Designing Boats	Fish Preservation & System Designing
Introduction to Lofting & Plug Making	General Electrical & Marine Electrical

b) Building A Future Foundation (BAFF) (http://www.baflk.org/) acts as a catalyst in introducing up to date skills in boat building, mast and sails making, chartering activities, building necessary infrastructure (mini marinas) and the manufacturing of various products required for this industry. BAFF conducts training programs for youth in

a) Boat building (fishing and leisure)

b) Sail and mast making

c) Mechanical and electrical engineering

d) Polyurethane and molder rubber products manufacturing.

e) Civil works: masonry, plumbing, carpentry, air conditioning and refrigerator repairs

c) Ocean University of Sri Lanka conducts education and training in Fisheries and Marine Sciences and offer the following.

Degree Programs:	Diploma Courses:	Certificate Courses:
• B.Sc. in Fisheries and Marine Science (General and Special • B.Sc. in Marine Engineering (Special) • B.Sc. in Boat Building and Naval Architecture (Special)	• Fishing Vessels Deck Officers • Marine Engine Technology • Fibreglass Technology and Boat Building • Basic Coastal Hydrographics surveying • Aquaculture and Fisheries Management • Computer Science	• Fibreglass Technology • Scuba Diving • Life Saving • Swimming • Coxwain Repair, • Maintenance and Operation Course for Outboard • Engines Electrical Circuits in Fishing Vessels • Electronics in Navigation Marine Chart Reading, Communication and Operation of Satellite Navigators Tig and Mig Welding Technology • Welding Technoloty Basic • Computer Applications • Computer Graphics Marine • Engine Technology • Fishing Technology • Marine Science and Disaster Management

d) Colombo International Nautical & Engineering College conducts marine science and marine engineering course.

12. Nautical Tourism Industry

12.1 Overview - Global

Nautical tourism is the form of tourism that combines sailing and boating with vacation and holiday activities. It can be travelling from port to port in a cruise ship, or joining boat-centered events such as regattas or landing a small boat for lunch or other day recreation at specially prepared day boat-landings. It is a form of tourism that is generally more popular in the summertime. Nautical Tourism, initially popular in Europe and South America, has since caught on in the United States and the Pacific Rim.

Many tourists who enjoy sailing combine water travel with other activities. Supplying the equipment and accessories for those activities has spawned businesses for those purposes. With many nautical enthusiasts living on board their vessels even in port, nautical tourists bring demand for a variety of goods and services.

Marinas, especially for nautical tourists, have been built in Europe, South America and Australia. Services available at marinas catering to nautical tourists include:

- Leasing of berths for sailing vessels and nautical tourists who live on board.
- Leasing of sailing vessels for holiday and recreational use (charter, cruising and similar),
- Reception, safe-guarding and maintenance of sailing vessels.
- Provision of stock (water, fuel, supplies, spare parts, equipment and similar).
- Preparation and keeping sailing vessels in order.
- Providing information to nautical enthusiasts (weather forecasts, nautical guides etc.)
- Leasing of water scooters, jet skis, and other water equipment.

Marine/coastal water based activities are classified as Scuba Diving, Snorkeling, Skin Diving, Body Surfing, Canoeing, Parasailing, Kite surfing, Game fishing, Paddle Boating, Inflatable rafting, Wake Boarding, Water skiing, Jet skiing, Surfing, Kayaking, Wind Surfing, White water rafting, Paddle Boarding, Sailing, Rafting, Rowing and Boating.

12.2 Overview - Local

Sri Lanka, the "Wonder of Asia" is a popular tourist destination with its coast and ocean being one of the main attractions. Ocean related boat based activities have begun to receive recognition from tourists only since the opening up of the North-East and North-West regions of Sri Lanka as safe areas for travel after the end of terrorism in 2009. However Sri Lanka is yet to develop nautical tourism and specially build marinas, an essential infrastructure requirement for the development of the industry despite being surrounded by the sea. The yachting industry also has not fully developed hence.

Boat Safari, White Water rafting, Kayaking, Sports Angling and Canoeing are some of the other relatively new water sports practiced in the inland rivers and lakes in a relatively small scale that can be fully developed to exploit the full potential.

12.3 Tourist Arrival Trends and Earnings Patterns

World

Demand for international tourism remained robust in 2016 despite challenges in safety and security and International tourist arrivals grew by 3.9% to reach a total of 1,235 million. World Tourism is directly correlated to the world economic growth as travel and tours are a semi-luxury and not a basic necessity.

Asia and the Pacific (+8%) led growth in international tourist arrivals in 2016, fuelled by strong demand from both intra- and interregional source markets. Africa (+8%) enjoyed a strong rebound after two weaker years. In the Americas (+4%) the positive momentum continued. Europe (+2%) showed rather mixed results, with double-digit growth in some destinations offset by decreases in others. Demand in the Middle East (-4%) was also uneven, with positive results in some destinations, but declines in others.

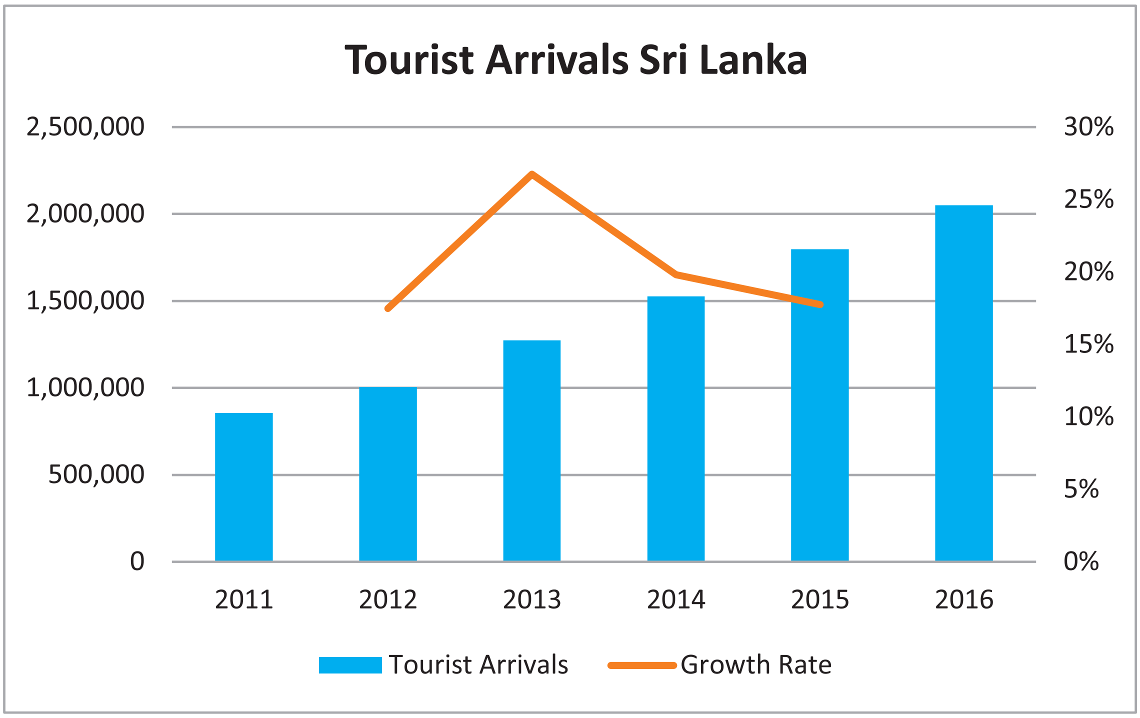
With a 12% increase in spending in, China continued to lead international outbound tourism, followed by the United States, Germany, the United Kingdom and France as top five spenders.

(Source: UNWTO World Tourism Barometer)

Revenue from the cruise industry worldwide was US$ 39.6 billion in 2015. Average cruise revenue per head and profit per head in that year was US$1779 and US$226. *(https://www.statista.com/topics/962/global-tourism/)*

Sri Lanka

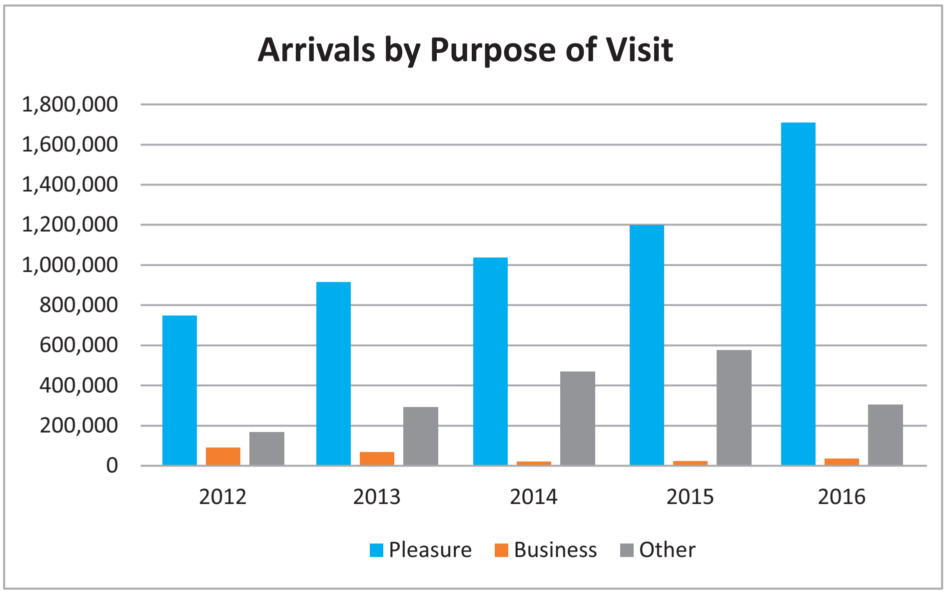
Sri Lanka Tourism surged to a new high recording 2.05 million arrivals in 2016. The growth rate in arrivals of 14% surpassed the South Asia growth 9% in 2016. The "Travel and Tourism Competitiveness Report 2015" ranked Sri Lanka at 63rd place out of 141 countries.

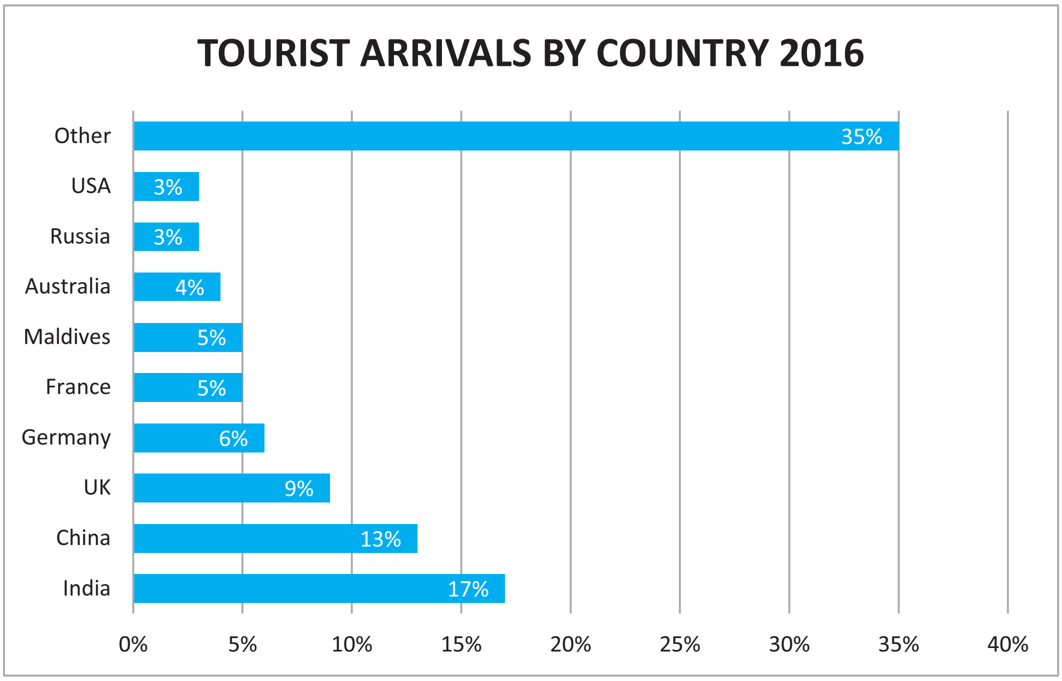


Source: SLTDA

The majority of visitors arrive mainly for pleasure followed by those visiting friends and relations.

Western Europe has been the dominant markets in terms of Tourist Arrivals to the country and India, China and UK have been leading in terms of country of residence.





Source: CBSL Annual Report 2016

The foreign exchange earnings from tourism stood at US$ 3.5 million in 2016 and the growth in tourist arrivals together with higher spending tourists (US$ 168.2 per day in 2016 from US$ 164.1 in 2015) and increased average duration of stay (10.2 days in 2016 from 10.1 days in 2015) contributed towards the increase in aggregate annual earnings.

Source: CBSL Annual Report 2016

	2012	2013	2014	2015	2016
Tourist Arrivals (000)	1,005	1,274	1,527	1,798	2,050
Growth	17%	27%	20%	18%	14%
Earnings (US$ m)	1,039	1,715	2,431	2,981	3,518
Growth	25%	65%	42%	23%	18%
Average Spend (US $)	1034	1346	1592	1658	1716
Growth	6%	30%	18%	4%	4%

12.4 Key Destination Selection Drivers

The growth rate in earnings and the average spend of the number of tourists visiting a country are clear indications of the willingness and ability of people to spend particularly for pleasure. The leisure activities sought by vacationing tourists are presently going through a paradigm shift especially with the requirements of the youngsters being vastly different to the activities sort by the retired high spending seniors.

There are many emerging trends that are leading to increased interest in pleasure boating within Asia. "Trekksoft Travel Trends for 2017' indicate the below listed 6 global trends

1. Chinese market for tour and activity is the fastest growing tourism source in the last decade, having spent a $498 billion in 2014 on outbound travel with increasing tendencies for online mobile-optimised booking experience.

2. Rising trend of younger professionals and executives seeking work life balance and opting for outdoor and sporting interests in their limited free time wanting to unplug and completely sign-off from work although WiFi remains a key requirement.

3. Discovering untouched and unique places, create unforgettable memories by moving away from materialistic acquisition tours (luxury goods shopping in Paris) and traditional travel destinations such as Europe and North America.

4. **Millennials look for adventure, unique and authentic experiences in untapped destinations**

5. Increase in international business travel due to globalization, rise in multinational organisations, alongside greater flexibility for travel during career breaks with cheap flights make weekend breaks in foreign destinations easier.

6. Increasing trends of Staycations, or travelling closer to home due to cconcerns on security, inconvenience at major airports and at crowded destinations by Asians that travel with families or with friends taking into modes such as cruising.

12.5 Key Drivers for Sri Lanka to be a Nautical Tourist Destination

As indicated above especially with the youth looking for adventure and pleasure combined with leisure, Sri Lanka has a perfect opportunity to create a value added nautical tourist industry to enhance the foreign exchange earnings to greater heights. Since Nautical Tourism includes recreational boating, marinas, cruises, water sports, water based tourism such as marine wildlife tourism (marine parks), maritime history and education and associated land based components including hotels/resorts, and cafes/restaurants, the country can form a sustainable tourism program that can create many new opportunities by transforming the existing mature tourism operations. It is also a way to revitalise coastal areas that have become outdated or stagnant.

Given below are key drivers of tourist destination selection, particularly nautical tourism and water based recreation. The advantages Sri Lanka possesses are given with a colour coding of the current status green (good), amber (mediocre) and pink (requires more attention).

Key Driver	Strengths of Sri Lanka or Potential for improvement
Length of the Tourist Season	All year round warm and pleasant weather
Location	Strategic in the Indian Ocean Strategic stopover location for superyachts East and West coasts within reasonable distance
Availability of Accommodation	5, 4 & 3 Star Hotels and many Guest Houses Room for improvement of Accommodation with increasing presence of international hotel managemenet chains
Availability of Attractive Products	Water based activities are available and developing rapidly
Marketing	Sri Lanka Tourism Promotion Bureau is actively engaged. Increasing focus on modern ways of promotions specially in getting included in the top web searches
Value for Money	Attractive exchange rate at US$:SLR 150
Safety and Political Stability	One of the safest destinations in the world since the ending of the war in 2009.
Accessibility	Well connected to international air traffic. Sea Port access via cruise ships and yachts can be improved further.
Other Factors	Sri Lanka Government Direction Increasing intra-Asian tourism

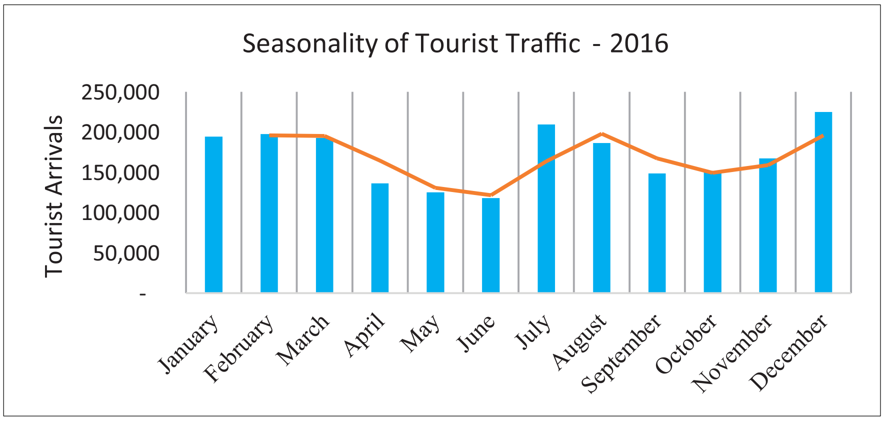
There are 45 tourism zones introduced by SLTDA. The below zones in different regions depict locations suitable for marina development and promotion of nautical tourism:

Region	Tourism Zones	Purpose
North Western	Kalpitiya, Marawila, Waikkal, Negombo	Beach Resort, sailing,
Western	Colombo	Commercial city with entertainment – floating restaurants, inland water transportation, city cruises
Western	Wadduwa, Kalutara, Beruwala, Bentota	Beach Resort with water sports, sports angling
Western	Dedduwa, Madu Ganga	Lake Resort with inland safari's on waterways
Southern	Balapitiya, Ahungalla, Hikkaduwa, Unawatuna, Koggala, Weligama, Mirissa, Matara, Tangalle, Hambantota	Beach Resort with water sports, sports angling and marina development
Southern	Galle	World heritage site, natural harbor, marina development
Eastern	Arugambay, Passekudah	Beach Resort for surfing activities
Eastern	Trincomalee	Ocean based city, 5th largest natural harbour

12.6 Marine Weather of Sri Lanka

Sri Lanka is a year round tourist destination as there are only two distinct rainy seasons and two inter-monsoonal (dry) seasons during the year.

Yet the tourist traffic to Sri Lanka has been very much seasonal according to the four seasons in the Eastern and Western World but with little correlation to monsoonal periods of the country.

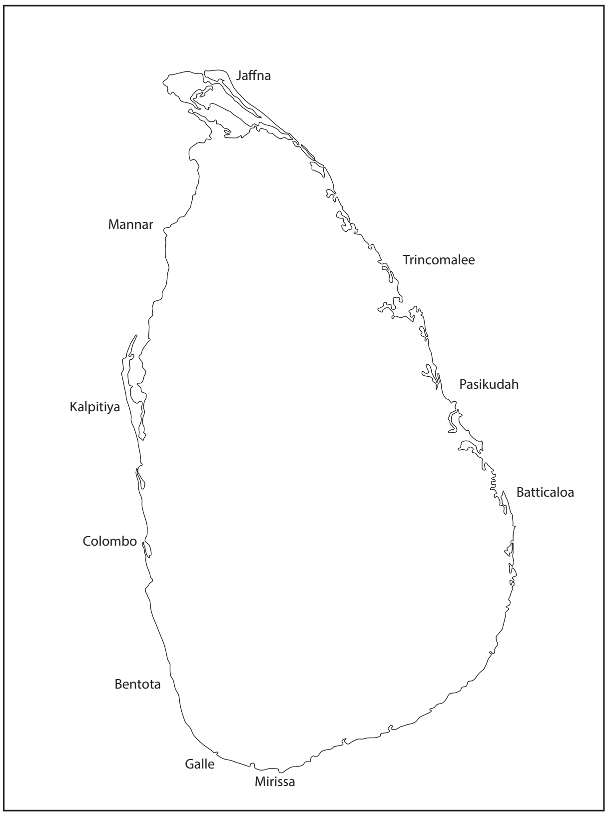


Source: SLTDA

Weather	Location/Activity
December to February: Northeast Monsoon	Season for the South and West Bound Tourists
March & April: First Inter-monsoonal	Best season to see migratory birds, nomadic whales and dolphins in the North East
May to September: Southwest Monsoon	Season for the North East Bound Tourists
October & November: Second Inter-monsoonal	All round the country
Tides	The seas around Sri Lanka are 'microtidal' with two high and two low tides every day

12.7 Types of Sri Lanka's Marine Recreation/Maritime Activities and Popular locations

The 1400 km sea around and the two monsoon winds providing rain to the two corners of the country at various periods, makes Sri Lanka's nautical tourist destination with year round prospects.



With a continental shelf of 10,000 square miles, the seas around Sri Lanka is also one of the most challenging marine game fishing locations, may it be windsurfing, kayaking, yachting or water skiing. Although comparatively new to the country surfing too has made its mark in the Southern and Eastern coasts of the island for the last twenty five years. The most known among the surfing enthusiasts' is Arugum Bay. All sea-based activities are dependent on the season, with western and southern coasts accessible from November to April and the east coast being more suitable from May to September.

The outfalls of 103 major river basins and hundreds of estuaries, lagoons are also potential development areas for marine sporting anglers with rental boats and other boating activities. Jaffna is a potential area that could be developed as an island hopping paradise. The potential locations available around the country are depicted in this map. *(Graph Source :http://sail-lanka-charter.com/)*

The popular nautical recreational activities in Sri Lanka have been detailed in two categories as given below:

a. Pleasure craft based adventure oriented recreations,

b. Other nautical related recreations

a. Pleasure craft based adventure oriented recreations

- Arugam Bay (East), Galle, Mirissa (South)
- Some tour groups charter luxury Sailing Yachts to operate from Pasikuda from April to September in SW Monsoon & Beruwala November to April in NE Monsoon.
- This topic is eloborated in detail under "Marina Development"

- A lightweight plastic or fiberglass covered canoe propelled by a double-bladed paddle are used mostly restricted to the lagoon areas
- Kalpitiya (North West) has a slew of excellent IKO instructors at reputable kitesurfing schools with top-notch equipment and courses for all, ensuring that anyone and everyone can enjoy kitesurfing safely

- Arugambay "The surfing capital" known to have one of the best 'point brakes' in the world, Hikkaduwa and also Weligama Bay are popular destinations.
- Negambo, Galle, Mirissa and Beruwala are also popular spots

- Southern coast is the only area that offers scenic cruises, from three hours to ten days at present.
- There is extensive room for further development of sports angling and short cruises

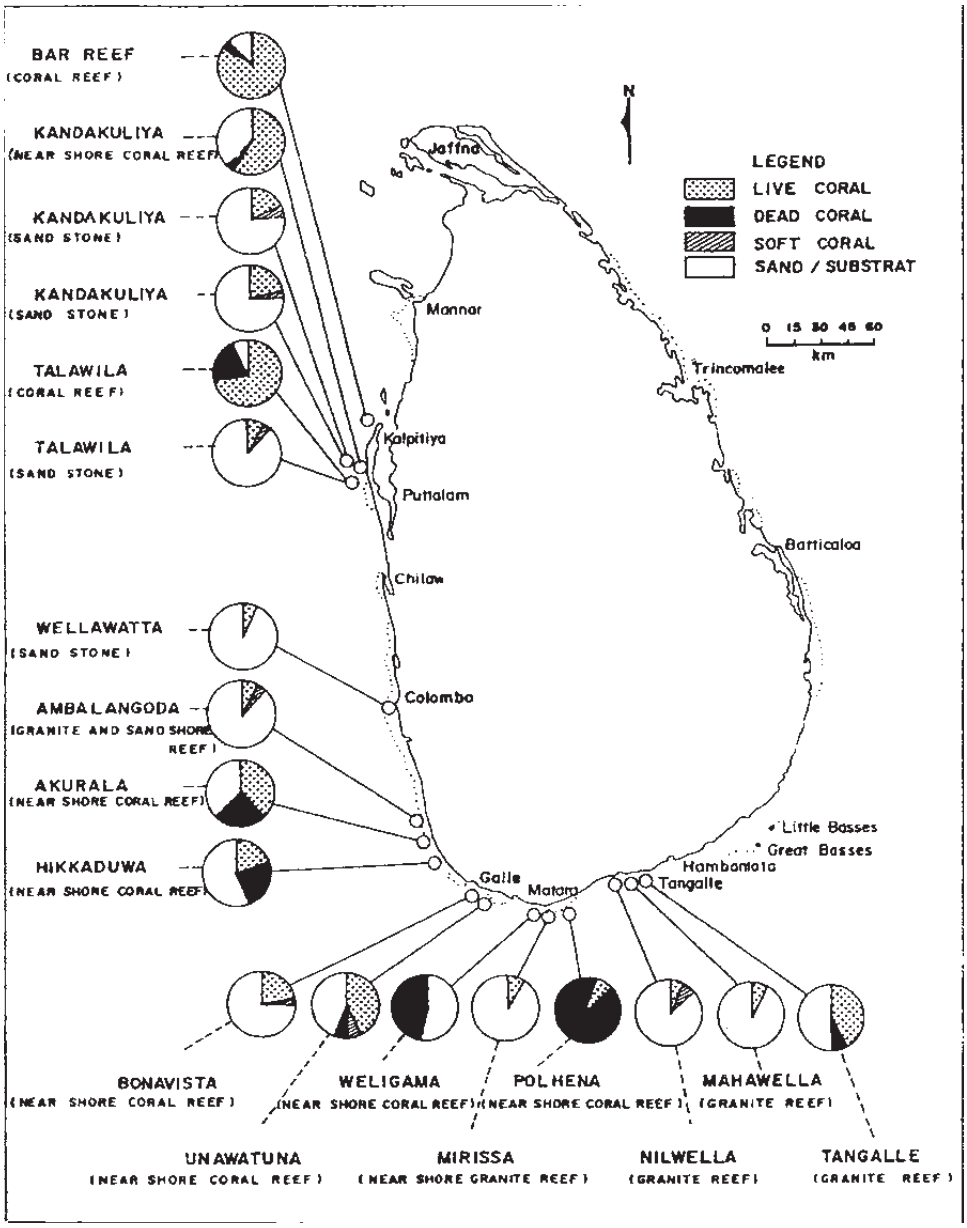
- Weligama, Bentota, Beruwala (South) and Kalpitiya (North western) shallow seas are famous for smooth riding

- Small lagoon areas are the ideal locations
- Kapplady lagoon, Talawila (West) and Kalpitiya lagoon (North West) are attractive locations for mild adventure seekers

b. Other nautical related recreations - Marine Nature Watching

Coral Reefs

Map of Coral Reefs around the country



Source: http://www.fao.org

Whales & Dolphins

- Dolphins, the humpback and the blue whales glide past on whale/ dolphin watching excursions off Dondra Point (Southern Coast) and Trincomalee (Eastern Coast) and sea off Kalpitiya (West Coast). Whale shark watching is popular in Kalpitiya

Snorkeling and Scuba diving

- Snorkeling and scuba diving are the most popular beach sports in the country. Scuba diving has a long history in the country and the ocean is filled with coral gardens, multitude of exotic fish, flora and fauna offering one of the best diving experiences in the world. The greatest extents of true corals in Sri Lanka also lie in patchy reefs from Vankalai to the Kalpitiya peninsular.

Wreck diving

- Sri Lanka is fast becoming known around the world as one of the top wreck diving destinations.

Given below are the main marine associated national parks and sanctuaries in the country.

National Parks- Marine Associated

Maritime District	National Park	Extent (hectares)
Galle	Hikkaduwa	101.6
Hambantota	Ussangoda	349.0
	Bundala	6,216
	Yala (Ruhunu)	97,881
	Kumana (Yala East)	18,149
Trincomalee	Pigeon Island	471.4
Jaffna	Chundikkulam	11,149.1
	Delft Island	
Mannar	Adam's Bridge Island No.3	
Puttalam	Wilpattu	131,667.1

Source: Martenstyn, H. 2016. Sri Lanka's Amazing Maritime website. <www.slam.lk>.

Sanctuaries-Marine and Marine Associated

Maritime District	Marine Sanctuary	Extent (hectares)
Galle	Honduwa Island	8.5
	Rocky Islets-Ambalangoda	0.1
	Telwatta	1,425
	Nun's Island	190
	Rumassala (Buona-Vista)	1,707
	Medin Duwa	0.8
Hambantota	Godawaya	-
	Kalametiya lagoon	2,525
	Rekawa	-
Ampara	Kudumbigala	6,533.9
Trincomalee	Little Sober Island	6.5
	Great Sober Island	65
Mullaitivu	Kokkilai lagoon	1,995.0
Jaffna	Paravitivu Island	97.1
Mannar	Vankalai	4,839.0
Puttalam	Bar Reef	30,669.9
Gampaha	Muthurajawela	1,285.4

Source: Martenstyn, H. 2016. Sri Lanka's Amazing Maritime website. www.slam.lk

Beach Resorts and Seafood Restaurants

- Sri Lankas extensive palm-fringed coastline and pristine beaches offers the perfect environment to unwind. Several activities available for enjoyment or to just sunbathe or take a quiet stroll along the beach. Beach tourism and seafood restaurants are around the country tourist activity.
- The best of the Southern beaches include Tangalla, Beruwala, Mirissa, Bentota and Unawatuna with varying options including chic boutique hotels, glowing coral reefs, gentle sandbars, beach tourism and seafood restaurants
- On the Western part of the country the Negambo beach along the lagoon is a favourite especially with fame for lagoon lobsters and seafood.
- Galle Face Green in the city of Colombo and Mt Lavinia are beach locations with 5 star seafood restaurants
- On the Eastern Coast, Passikudah, Arugum Bay, Trincomalee, and Uppuveli beaches are open to the sun seekers.

12.8 Key Local Players (excluding Restaurants and Accommodation)

Sri Lanka is yet to have diversity of players in the nautical tourism industry. Although not mandatory, there are only 16 establishments registered with the SLTDA providing water sports activities while there may be many other unregistered fragmented establishments. The marine water sports activities are mainly concentrated in the Southern Coast, North Western Province – Kalpitiya Beach and Eastern Province – Arugam Bay/Passikudah.

Resgistered Water Sport Establishments	Location
Weligam Bay Dive Center	Southern Coast - Weligama
De Silva Wind Resort Kalpitiya	Southern Coast - Aluthgama
Diyakawa Water Sports Center	Southern Coast - Aluthgama
Sunset Araliya Water Sports	Southern Coast - Aluthgama
Diving and Sailing Center	Southern Coast - Weligama
Poseidon Newrod Water Sport	Southern Coast - Beruwela
Mirissa Water Sports	Southern Coast - Mirissa
Kalpitiya Discovery Diving	North Western Coast - Ethalai
Wind4love Kite Center	North Western Coast - Kalpitiya
Kappalady Kite Garden	North Western Coast - Kalpitiya
Rascals Kite Resort	North Western Coast - Kalpitiya
Kite Surfing Lanka	North Western Coast - Kalpitiya
Dinuda Resort	North Western Coast - Kalpitiya
Funky Fresh	North Western Coast - Kalpitiya
Kite Beach Villas	North Western Coast - Kalpitiya
Hosannak and RRD Water Sport Center	North Western Coast - Kalpitiya

Source: SLTDA

Profiles of some of the popular establishments registered with the SLTDA are:

Mirissa Water Sports

Based at Mirissa Harbour, Mirissa Water Sports provides Whale watching, Sports fishing, Sailing, Coastal cruises, Snorkeling and Boating activities. Experienced crew qualified in first aid, personal survival and fire-fighting accompany passengers. They promote responsible Whale Watching that seeks to reduce the impact on whales and their habitat.

Weligama Bay Dive Center

Weligama 5 km from Mirissa is a great place where Scuba Diving is popular. The center instructs diving using the Professional Association of Diving Instructors Open Water Diver course, the most popular program worldwide where as a certified Diver one can dive life long all over the world. The underworld diving sites offered in Weligama include various kinds of Nudibranchs, Blue Whales, Whale Sharks and Manta Rays Sea Turtles, Electric Rays, Moray Eels and huge variety of fish between massive rock formations.

Kitesurfing Lanka

Kitesurfing Lanka Kite School offers lessons to beginners and advanced riders. Lessons are given by certified kite instructors. Kite Coaching is also offered either freestyle, freeride or surfing (strapped or strapless) to, get to the next level in surfing. Kite Safari is offered as rides to discover some great and uncrowded flat spots.

The other well known players are:

	Activities Offered	Locations
Sail Lanka Charters (http://sail-lanka-charter.com/)	• Day Cruises • 10 day Residential Cruises • Sailing Club Membership	• Bentota • Galle • Mirissa • Trincomalee • Pasikudah
Sri Lanka Navy (http://whalewatching.navy.lk/)	• Whale watching cruises • 5,3& 1 Hour trips	• Trincomalee (May to Oct) • Galle (Nov to April)

Source: WLM Analysis

12.9 Key Counterparts in the South Asian Region

Main counterparts in the nautical recreation activities in the region (where Sri Lanka is also connected in the flight path) are given in the table below:

Country	Attraction	Details
Thailand	**Water Recreation** Beaches	Phuket beach tourists participate in a variety of water recreation activities, such as sailing snorkeling, scuba diving and kayaking.
Malaysia	**Scuba Diving** Beaches	Langkawi and Perhentian Islands are a small group of beautiful, coral-fringed islands off the coast of northeastern Malaysia
Philippines	**Scuba Diving** Beaches	Busuanga Island is one of the best diving spots in the world. Boracay is a small island located less than 320 km (200 miles) south of Manila.
Indonesia	**Sailing** Beaches	Sumatra is famous for Sailing. The Gili Islands are three small islands located in northwestern Indonesia off the coast of Lombok.
Vietnam	**Sailing** Beaches	Nha Trang and Halong Bay for breathtaking backdrops Phú Quốc is an island known for white-sand beaches and resorts.
Cambodia	Beaches	Cambodia’s most popular beach destination
India	**Sailing** Beaches	Kerala, Andaman and Nicobar Islands are famous for Sailing. Goa’s has one of the most beautiful beaches surrounded by a natural bay

Source: WLM Analysis

Promotion of nautical tourism will help to uplift the local ship and boat building industry and to derive indirect export earnings through the tourist spend.

13. Development of Marinas in Sri Lanka

13.1 Overview of Marinas

Together with nautical tourism, Sri Lanka has huge potential to develop marinas and marina based tourism. At present fully fledged marinas are not available in the country, despite the vast potential associated with marinas. With its 1400km of shoreline, the nation has the great potential to develop fully-fledged marinas equipped with proper facilities, considering that Croatia with a shoreline of mere 600km has 56 marinas.

Facilities and Services provided by marinas	Refueling, Washing and repair facilities, Marine and boat chandlers, Restaurants. Supermarkets, Slipways (or boat ramps), boat hoist (traveling crane), Service personnel, Parking Lots for Vehicles and Boat Trailers, Showers, Overnight lodging Charges could be on clubhouse membership based fixed fees on long-term rental agreements or on one off rates for visiting yachtsmen usually for few weeks of temporary berthing.
	Moorings and access for in- or out-of-water boat storage, buoys, fixed or floating walkways tied to an anchoring piling by a roller or ring mechanism (floating docks, pontoons) are available. Buoys are cheaper to rent but less convenient than being able to walk from land to boat. Harbor shuttles (water taxis), may transfer people between the shore and boats moored on buoys. Alternative is a tender such as an inflatable boat. Facilities offering fuel, boat ramps and stores will normally have a common-use dock set aside for short term visitors. Where the tidal range is large, marinas generally use locks to maintain the water level for several hours before and after low water.

13.2 Currently operational coastal mooring facilities in Sri Lanka and the key players

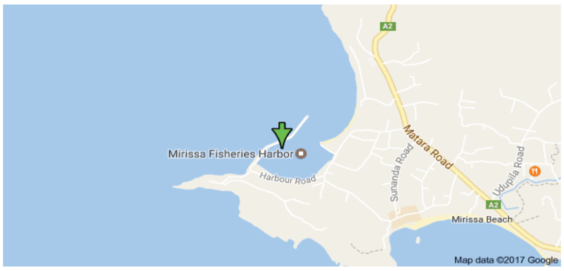
At present all the mooring facilities for the yachts and sail boats are confined to the Southern Coast of Sri Lanka and they are:

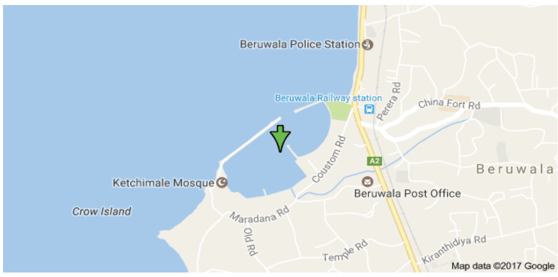
Sail Lanka Charter through Solar Impulse	Galle Harbour
3 mini marinas Mirissa (5 yachts) Hikkaduwa (Not operational Yet) Beruwela (2 yachts)	Only Sri Lankan port that provides facilities for pleasure yachts

Sail Lanka Charter

Sail Lanka Charter (http://sail-lanka-charter.com/mooring-sri-lanka.php) through Solars Impulse (Pvt) Ltd was the first private company to operate mini coastal marinas in Sri Lanka. The country does not have many places for sailing boats and small yachts to moor on pontoons for local and visiting boat owners. Since 2012 Sail Lanka Charter offers mooring places with the main base being Mirissa. The mooring facilities are open throughout the year. Sail Lanka Charter does not only offer a berth but also offers maintenance and repair services, and through the sister companies, Solars Impulse and BAFF Polymech, carry out sail making, fiber works, welding, mechanical engineers and

3D printing. Solars Impulse is located in the Mirissa Fisheries Harbour waters and is engaged in renting the space from CFHC (This was formally done by Mirissa Moorings on behalf of Solars Impulse but the operations of the two companies have been merged once marinas were developed in other locations). Solar Impulse also has to obtain the necessary approvals from CFHC to moor the boats/ yachts for the commercial operations and pay a fee of US$0.50 per day per one-foot length of the vessel to CFHC. Solars Impulse is engaged in providing a value added service to the clients as depicted in the following table:

<table>
<tr><th colspan="2">Solars Impulse Mini Marinas - Locations</th><th>Size of Pontoons</th><th>Facilities/ Operating Hours</th></tr>
<tr><td>Mirissa Fisheries Harbour</td><td>
</td><td>2 Pontoons of 24m wide and 75 m long</td><td>Mooring/Water/Electricity/ Security/ Repair Facilities/ Renting sail boats/ Renting of Charter Boats including 47ft long catamaran for 2 hours, a half day or on full day basis with crew

8 am to 5 pm</td></tr>
<tr><td>Hikkaduwa</td><td>
</td><td>1 Pontoon of 25 m wide and 40 m long</td><td>Operations are yet to commence</td></tr>
<tr><td>Beruwala</td><td>
</td><td>2 Pontoons of 24m wide and 40 m long</td><td>Water/Electricity

8 am to 5 pm</td></tr>
</table>

Galle Harbour

This mooring facilities inside the Galle Harbour are administered by the SLPA.

Location	Saliant Features
Operating Hours	Only during daylight (7.30 -17.30) as entering the harbour at night is prohibited. Yachts arriving after 18:00 or at night should anchor behind Watering Point
Facilities	Berthing, Freshwater and Fuel through agents or jerry cans, waste disposal, Port Security
No of Yachts	22 Yachts of 15m long and 3m draft

The Galle Port is the only Sri Lankan port that provides facilities for pleasure yachts. The International Yacht Society has recognized the Galle Port as one of the world's best attractions. The increase in arrival of these yachts has revived the tourism industry of the country in general and Galle in particular. SLPA provides berthing facilities to passenger vessels of 300 m in length and cargo vessels of 200 m in length which have a depth of 10 meters and 10.9 meters respectively.

13.3 Existing Plans to develop marinas in the future

Sri Lanka is strategically located on the shipping route between the Far East and Europe such that with the right facilities and logistical support, Sri Lanka should become a "must" stopover destination for transiting superyachts and cruise liners. Furthermore, Sri Lanka would make a natural support base for yachts and other vessels based in the Maldives. Recreational navigation, ocean based game fishing are other activities gaining popularity worldwide.

However, Sri Lanka is yet to fully exploit marina development. Sri Lanka does not ply any own flag bearing cruise ships & ferries operating in the international waters earning foreign exchange for the country. Few foreign cruise ships nevertheless dock at Colombo, Galle and Trincomalee Harbours.

Below are the currently identified locations and projects for development of fully fledged marinas in Sri Lanka.

1. Marina in the South Side of the Port City to be developed by CHEC in the 3rd phase of the development of Colombo International Financial City under the WRMPP (Refer Chapter 2 for more details)
2. Development of the West Berth near the Bandaranayake Quay of the Colombo Port to include a yacht marina by the SLPA under the WRMPP (Refer Chapter 2 for more details)
3. Development of the existing yacht mooring facilities of the Galle Harbour to a fully-fledged Marina under Phase II of the Galle Harbour Developments plans by the SLPA (Refer Chapter 2 for more details)
4. Conversion of the Dikkowita Fishery Harbour into a Marina by CHFC under the WRMPP (Refer Chapter 2 for more details)
5. Development of the outer harbor area of the Beruwala Fishery Harbour into a Marina by CHFC under the WRMPP (Refer Chapter 2 for more details)
6. Development of a marina in Marawila (North Western Province) by a German hotelier now based in Marawila

14. Access to Finance

Financing requirements include long term equity and debt finance to support capital investments and short term working capital requirements. Most manufacturers obtain an advance payment from the buyer, prior to constructing a vessel. The balance, a significant part of the payment, is paid upon delivery. As such the manufacturer may need to finance a greater part of the production, whilst at times, also taking on a considerable risk related to delayed payment.

The primary sources of finance comprise the following.

14.1 Foreign Direct Investment (FDI)

FDI includes equity capital and reinvested earnings. Maritime is a key sector promoted by the BOI to attract FDIs. Political stability, a strengthening macroeconomic environment and investor friendly policies combine to make Sri Lanka an attractive destination for FDI. Overseas investors, by investing in local ship/boat building operations, will benefit from low-cost resources such as labour leading to global competiveness. For ship and boat manufacturers on the other hand, affiliations and joint ventures with overseas investors will not only provide access to finance, but also to more efficient technology and assured markets.

14.2 Multi-lateral Agencies

Depending on the project, both the ADB and the World Bank's IFC have extended finance for private sector projects by way of equity or long-term debt. Private sector projects are supported on a selective basis.

14.3 Banking Sector

The banking sector is the primary source of finance for private sector projects. The sector consisted of 25 licensed commercial banks (13 domestic banks and 12 foreign banks), 7 licensed specialized banks (1 regional development bank, 1 national savings banks, 2 housing finance institutions, and 3 private savings and development banks) as at end 2016. The sector operates 6,594 branches and outlets and 3,188 ATMs across the island. Loans and advances (61.2%) comprise the major share in banking assets. Manufacturing sector is one of the main sectors supported by the banks.

Banks are required to extend at least 10% (per sector), of their lending portfolio for SME, Exports and Tourism. The banks are largely unexposed to the ship and boat building sectors, leaving space for new projects to access bank financing. For larger shipbuilding projects, syndicated loans could be arranged.

As of January 2017, the commercial banks average weighted lending rate for prime customers (for both short and long term lending) was 11.22% p.a. Banks mostly resort to collateral based lending.

14.4 Non-Bank Finance Sector (NBFI)

These comprise 46 licensed finance companies, 7 specialized leasing companies, besides 21 insurance companies, 14 unit trust managing companies operating 70 unit trusts and 3 publicly managed funds. Finance companies and leasing companies are mostly focused on vehicle/vehicle backed lending by way of leasing and mortgage loans. Nonetheless, several finance companies have advanced facilities for export oriented boat building. The NBFIs displays a clear appetite to finance such asset acquisitions due to the export oriented nature of the projects and non-exposure to the sector.

14.5 Off shore borrowings

External/ foreign commercial borrowing is permitted for local companies.

14.6 Alternative Financing Mechanisms

a) Capital Market

The capital market in Sri Lanka has emerged as a popular means of accessing finance, for companies that comply with the CSE and SEC rules on listed corporate debt. CSE is one of the most modern stock exchanges in South Asia providing a fully automated trading platform.

Equity

An entity is able to list on the CSE by an Offer for Subscription (Initial Public Offering (IPO)) or Offer for Sale or Introduction. New funding could be raised via an IPO or a rights issue of the listed share capital.

Listed Corporate Debt Securities

Finance could be raised through corporate debt securities listed on the CSE. Corporate debt securities comprise of bonds issued by a company, bearing coupon interest, usually with interest payable periodically and capital amount on a set redemption date. The most popular form of listed corporate debt securities have been medium-long term debentures. Rs 78 billion was raised in 2016 by way of listed debt securities.

b) Unlisted Corporate Debt Securities

Privately placed debt securities market mainly consists of commercial paper and unlisted debentures. Privately placed debentures are subject to SEC rules. Commercial paper are typically issued for 3, 6 and 12 month tenures and are thus generally used for working capital purposes. Commercial paper could be issued with the support of banks. Investors in privately placed debt securities often place emphasis on the company (issuer of the debt security)'s rating assigned by an accredited rating agency, in accessing risk. As such the rate of interest may vary depending on market conditions and investor appetite.

Interest rates on commercial papers in 2016 ranged between 8.7% p.a to 14.8% p.a.

c) Exim Banks

Companies incorporated with foreign collaboration such as joint ventures, could access funds from Exim Banks in the joint venture partner's home country. For instance component imports for products destined for such markets could be financed by such country's Exim Banks.

Sri Lanka is also considering establishing an Exim Bank, with technical assistance from Commonwealth Offices, to provide working capital financing for local exporters. An Exim bank is a specialized financial institution, with expertise in export market financing for the export sector.

15. Export Marketing Channels and Strategies

Marketing channels and strategies presently adopted by existing players include the following.

15.1 Existing marketing channels and strategies

a. Ship/Boat Building and Ship Repair

- International marketing campaigns and face to face meetings to achieve market penetration through foreign joint venture partners/foreign investors/affiliations/ collaborations with the Company.
- Direct marketing in target markets and /or target clients.
- International agents are appointed to represent the manufacturer (especially for ship and boat building and ship repair and bunkering services) in the target foreign markets, for a commission. The manufacturer will receive orders from his agent and ship directly to his foreign buyer, which forms a fairly cost effective strategy.
- The manufacturer's brand name emblazoned on the customer's vessel.

b. Boat Building – "Boat Show, Sri Lanka"

- Exhibitions - Sri Lanka organizes a Boat Show every other year, to attract the world boating industry to the country. It provides a forum for the industry to display and promote their respective sectors (boats and boat accessories) to potential clients. The show is considered South Asia's most focused and largest international boat exhibition. The SLEDB and BTI are key stakeholders of the Show. The latest Boat Show was held at the Dickowita fishery harbour from 13th to 15th October 2016.
- The table below illustrates the interest displayed by potential buyer countries at the exhibition and reflects an increase of 44% in overall attendance over the past two years.

Country	Attendance		
	2012	2014	2016
United Kingdom	4	6	2
Belgium	2	4	6
Germany	3	-	2
Cuba	-	2	2
Maldives	16	24	32
Nigeria	4	8	6
Seychelles	8	12	10
India	16	24	36
Pakistan	18	4	2
Bangladesh	2	8	6
Taiwan	8	12	18
South Korea	12	18	12
Singapore	12	20	6

China	4	12	4
Mauritius	-	-	4
Kenya	0	2	4
Netherlands	0	2	6
Sweden	0	0	4
Norway	4	4	6
Somali Lands	2	4	4
Dubai	8	4	2
Saudi Arabia	0	1	3
Delegates from World Export Forum*	0	0	120

Note: The International Trade Centre (ITC)'s World Export Development Forum was hosted by Sri Lanka in 2016

Source: BTI

c. Nautical Tourism

- SLTDA through the Sri Lanka Tourism Promotion Bureau promotes the country as a tourist destination whilst supporting local service providers with assistance in enhancing visitor experiences. The currently registered establishments in the coastal front are given Secction 12.9 of this report.

15.2 Other general marketing channels and strategies

The following are common channels deployed and strategies used in marketing the country's ship and boat building, ship repair and bunkering service capability, as well as attracting tourists.

- The SLEDB plays a pivot role in positioning Sri Lanka in the export market and in accessing international markets by arranging trade fairs to facilitate local exporters to showcase their products.
- Social Media such as Facebook and Twitter are considered important channels, especially to reach Millennials.
- Web sites – Most exporters have their own websites demonstrating their product portfolio and expertise.
- Media- The industry also raises top-of-the-mind awareness, by publishing articles in local and foreign media, both print and electronic media.

15.3 Potential new marketing channels and strategies

- Appoint an expert firm of marketing consultants to develop a cohesive and comprehensive marketing strategy for the industry
- Negotiate Government to Government agreements to penetrate or develop niche markets
- Enhance pre and post event publicity locally and internationally (e.g. Boat Show)
- Virtual marketing - Work with search engines for ranking the country and its players among the top listings under each category (ship/boat building, nautical tourism etc.)

- Industry associations such as BTI could partner with the Sri Lanka Tourist Development Authority to promote nautical tourism activities and capture new markets
- Advertising in Sri Lanka's international airports, sea ports and marinas as well as strategic international locations.
- Sponsorship/co-sponsorship of international events particularly at a country level with the government agency support (e.g. SLEDB) to create mind share of Sri Lanka's capabilities.
- Offer prizes at events to experience Sri Lanka (i.e. yacht cruises, sailing vacations)
- On-line yacht charter bookings and partnering with airlines/travel agents to include maritime leisure activities, such as yacht charter for tourists, which will boost both nautical tourism and boat/yacht building in the country.
- Obtain membership in international associations such as "The International Congress on Coastal and Marine Tourism (CMT)"and Host International Conferences of such associations in Sri Lanka with a view to showcasing the destination to large gatherings around the world.
- Coastal festivals/events/attractions- Although Sri Lanka beach weddings have become a relatively known attraction in many parts of the world, the activities proposed below may need to be originated as international competitions to attract large crowds:
    - Ocean Regattas
    - Surfing festivals
    - Sports angling events
    - Cruise ship festivals
    - Yachting competitions
    - Coastal recreation competitions: Sand-dune surfing, beach volleyball, tidal-pool exploration, kite-flying, horse-back riding, sand-castle building or sand sculpting, shell-fish gathering, ocean swimming
    - Nautical, underwater archeology and lighthouse tourism are other areas Sri Lanka can easily develop to yield a return
- Conducting customer surveys in target markets to ascertain customer requirements in order to be ready to offer more relevant services and products to specific customers.
- Since BTI constitutes of industry participants, BTI's role could be enhanced to support the participants by facilitating data bases, customer acquisition and market development for a fee. BTI could formulate a Boat Builders' Association, create and maintain an industry database, scouting for market and joint venture opportunities, arranging buyer seller meets and being the focal point in Lobbying and advocacy in policy related issues

15.4 National level marketing initiatives

The following measures were announced in the National Budget 2017.

- To boost exports, tourism, FDI and the brand "Sri Lanka", a global marketing campaign to be undertaken by the Ministry of National Policies and Economic Affair.
- Sri Lanka to participate at key trade fairs on an annual basis such as Canton, Indian and German Fairs which will facilitate the process to develop business relationships and market access.

16. Regulatory Framework

16.1 Standards for Ship/Boat Building

The following are some of the Classification Societies having surveyors represented in Sri Lanka. (Classification societies establish and maintain technical standards for the construction and operation of ships, boats and offshore structures. These societies validate that the design and calculations are in accordance with the published standards. They also conduct periodical surveys of these vessels to ensure that parameters of set standards are maintained).

- Lloyds Register of Shipping;(LR)
- Des Norske Veritas;(DNV)
- Germanischer Lloyd;(GL)
- American Bureau of Shipping (ABS)
- Nippon Kaiji Kyokai; (NK)
- International Naval Surveys Bureau
- Bureau Veritas (BV)
- Indian Register of Shipping (IRS)
- Registrar Italiano (RINA)

There are no specified standards governing the local industry. However, ship and boat manufacturers in Sri Lanka are experienced in manufacturing vessels in compliance with international standards specified by the customers. The SLN builds vessels for its own use based on the SLN internal standards.

16.2 Current Regulatory Framework

The regulatory function of the shipping industry and the enactment and implementation of national laws, rules and regulations are vested with the Merchant Shipping Secretariat falling under the purview of the Ministry of Ports and Shipping. Presently all vessels above 24 meters of length fall within the purview of the international load line regulations whilst there are no regulations governing vessels below 24 meters. However the latter is being addressed by the proposed amendments to the Merchant Shipping Act No 52 of 1971.

Merchant Shipping Secretariat (MSS)

Key functions of the MSS is given in Annex 2.

Boats Ordinance of 1900, which is the law applicable at present, requires **boats carrying goods or passengers for hire** from any port or place in Sri Lanka to any other port or place in Sri Lanka, or in any portion of the sea adjacent to Sri Lanka, or in any river, canal, lake, or inland water within the same, to be licensed by the proper authority having jurisdiction within the relevant province or town.

Fishing boats should be registered with the Ministry of Fisheries and Aquatic Resources. Section 6 of the Fisheries and Aquatic Resources Act, No. 2 of 1996 specifies that "No person shall engage in or cause any other person to engage in, any prescribed fishing operation in Sri Lanka waters except under the authority and otherwise than to accordance with the terms and conditions, of a license issued by the Director General of Fisheries and Aquatic Resources or a Licensing Officer.

As per the Sea Mammals (Observation, Regulation and Control) Regulations, No. 1 of 2012, **pleasure crafts for the purpose of watching sea mammals** such as whales and dolphins, requires registration with the Department of Wildlife Conservation and a license to ply in a dedicated zone. Prior approval of the Department of Wildlife Conservation should also be obtained by the vessel operator if a passenger wishes to observe sea mammals by diving within the authorized Zone or Zones. Any person/s, who wishes to go out to sea in a vessel to observe sea mammals, also require a permit from the Department. Such requirements are also specified in the Tourism Authority (Dolphin and Whale Watching) Regulations 2012. A license is also required from the Navy for operation of craft.

Some salient Sri Lankan Laws (Main Acts) applicable to these industries are given below.

Merchant Shipping Act No. 52 of 1971

Fisheries and Aquatic Resources Act No. 2 of 1996

Fauna and Flora Protection Ordinance

Antiquities Ordinance No. 9 of 1940

Maritime Zones Law No. 22 of 1976

Whale and Dolphin Watching Regulations 2012

16.3 Planned Regulatory Focus:

The lack of adequate regulations, standardization and quality assurance mechanisms has been a key concern of the industry. For the country to realize its vision of positioning itself as a maritime hub and in order to accommodate the envisaged growth in ship and boat building activities as well as nautical tourism activities, it is imperative that proper legislature is in place to protect the industry against import of inferior quality vessels into the market and to ensure safety and quality assurance.

Focus has been drawn to assess the adequacy and applicability of the regulatory framework with a view to developing/upgrading the regulatory framework, benchmarking with global legislation and best practices.

As a prelude, the following measures have already been initiated.

- Amendments to Regulations under the Merchant Shipping Act No. 52 of 1971 to regularize Small Commercial Vessels:
  Sri Lanka Cabinet in January 2017 approved the issue of standardized regulations for small commercial vessels and pleasure craft. Commercial vessels, which are cargo and passenger vessels of less than 24 meters, but 5 meters or more in length, which carry not more than 100 passengers, or provide overnight accommodation for up to 20 passengers, engaged in domestic voyages will fall within the purview of the new regulation. The rules will also apply to pleasure craft which are rented out. The regulation will not apply to fishing vessels, rescue crafts or vessels holdings international passenger ship safety certificates issued under the International Convention on the Safety of Life at Sea.

- The SLEDB, together with Ministry of Ports and Shipping and Ministry of Industry and Commerce, has initiated the development of a regulatory framework covering the registration, regulation and technical guidelines for,
    - boat manufacturing (all boat categories other than fishing boats)
    - leisure craft operations in the country and for visiting yachts/crafts
    - import of boats (other than fishing boats)

The proposed regulatory framework is expected to address the concerns relating to import of inferior quality vessels into Sri Lanka, streamline the vessel registration process (other than fishing boats) and ensure quality standards.

16.4 Ship Bunkering

A license is provided by the Ministry of Petroleum Industries to engage in bunkering activities. Entities should also need to be registered with the Marine Environment Protection Authority. A license from Director of Merchant Shipping is required to operate a bunker tanker.

16.5 Land Ownership

According to the latest regulations, foreigners are only allowed to enter upto 99-year-leases for acquiring property if they are not contributing to the Sri Lanka's economy. Under Land Act No 38, foreigners may setup joint ventures, which later allows the purchase of freehold land based on case by case tax exemptions.

Investors are advised to consult the Coast Conservation Department prior to purchasing land within the Coastal Zone. The Coastal Zone is the area lying within 300 meters landward of the Mean High Water Line and 2 kilometers seaward of the Mean Low Water Line.

16.6 Factory Buildings

Whilst any building in Sri Lanka requires a Certificate of Conformity (COC) from the respective Municipality Council, all BOI approved projects will additionally require a COC from the Executive Director, BOI (Engineering Approvals and Special Projects) prior to commencement of exports.

17. Industry Opportunities and Potential for Growth

(Export Oriented Ship/Boat Building, Nautical Tourism and Marina Development)

Sri Lanka, being surrounded by the sea and owing to its strategic location in the major East West shipping route across the Indian Ocean in close proximity to some of the world's biggest markets and fastest growing economies, is well positioned to be a major Maritime Hub as envisioned by the Government.

17.1 Market Penetration

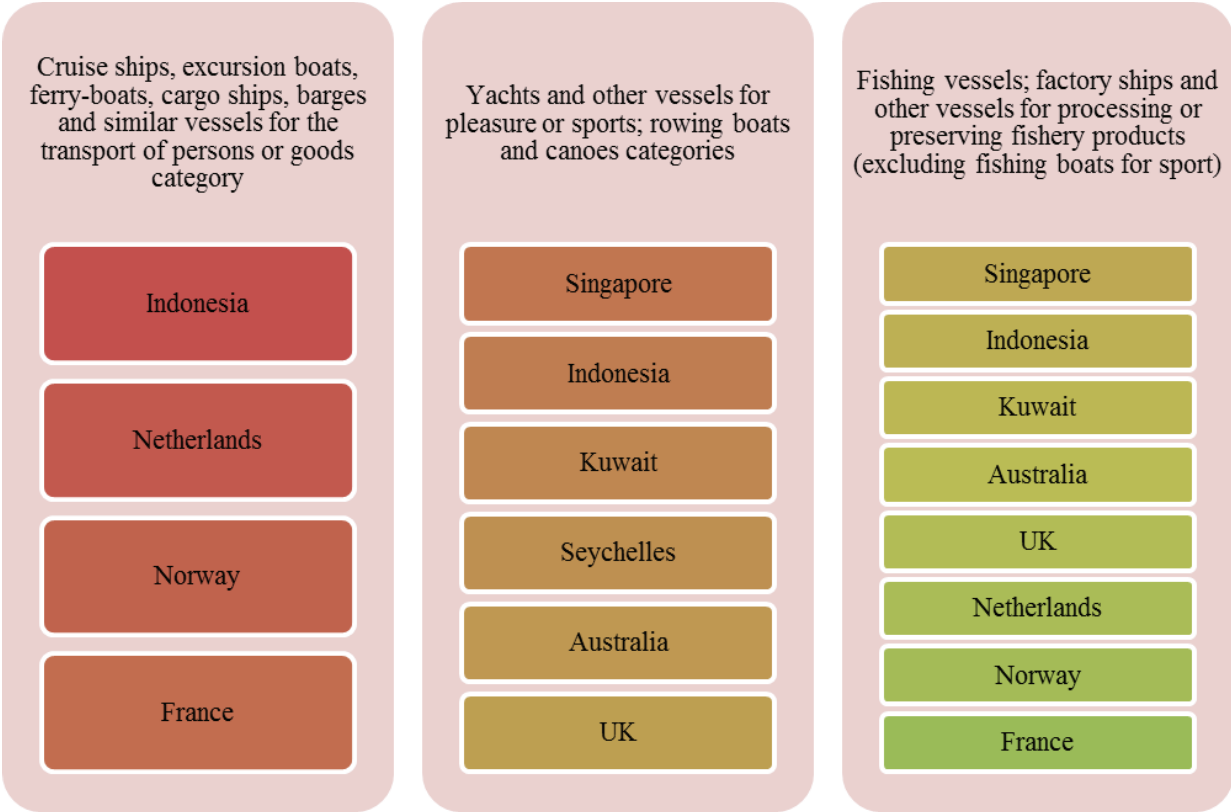
Sri Lanka can further penetrate existing markets with the existing portfolio of ships and boats considering that the country supplies only a minor portion of the total demand of the importing countries. Following are a list of countries presently served by Sri Lanka with expansion potential.

Cruise ships, excursion boats, ferry-boats, cargo ships, barges and similar vessels for the transport of persons or goods	Yachts and other vessels for pleasure or sports; rowing boats and canoes	Fishing vessels; factory ships and other vessels for processing or preserving fishery products (excluding fishing boats for sport)
Singapore	Maldives	Maldives
Maldives	India	Seychelles
India	Netherlands	
Kuwait	Norway	
Somalia	France	
Seychelles		
Australia		
UK		

Source: www.trademap.org and WLM Analysis

17.2 Market Development

Analysis reveals Sri Lanka has the potential to enter new markets where there is demand for the country's existing portfolio of ships and boats. Following are a list of countries Sri Lanka has potential to develop:



Source: www.trademap.org and WLM Analysis

17.3 Ship Building Potential

While Sri Lanka has the necessary skills and a proven track record of serving global markets, the industry is presently confined to just two players. However, for the country to be recognized as a shipbuilding hub, the industry needs to be broad-based beyond the existing two players. The existing players too need to expand beyond the existing locations and create economies of scale by manufacturing more than one ship at a time.

In order to facilitate this expansion, it is vital that suitable locations be allocated for shipyards, in ports such as Trincomalee, Hambantota, Galle and Oluvil.

Since the 3 major Asian shipbuilders namely South Korea, China and Japan are undergoing turmoil with the current downturn in the seaborne trade ship building industry, Sri Lanka is ideally positioned to focus on a growth strategy. The evolving market will besides attracting new players, foster development of main industry sub-sectors such as industrial components, machinery, skilled labour, advanced technology and advanced facilities.

Passenger Ship/Cruise Ship market is a rapidly growing industry with the high spending elite tourists demanding luxury services and Sri Lanka has the capability and the opportunity to penetrate and develop this market.

17.4 Ship Repairs, Maintenance and Bunkering Potential

Sri Lanka has a clear edge over its global competitors in this industry and the potential to be positioned as a leading service, repair, maintenance and bunkering center, due to its location in one of the busiest sea routes, technical competencies, turnaround times, skilled and relatively inexpensive human capital, accomplished know-how and track record of reliability.

Ship Arrivals			
		2015	**2016**
Cargo Ships			
	Container	3,643	3,804
	Conventional	45	40
	Other Cargo	388	436
Ships for Repairs		43	46
Ships for Bunkering		30	29
Other Ships (Passenger, Survey etc)		48	50
TOTAL		**4,197**	**4,405**

Source: SLPA – Statistics of the Colombo Port

The above table illustrates the significant potential arising from ships calling over at the Colombo Port and the liners passing the main sea route. The services offered will mainly include:

- underwater and dock-side ship repairs
- dry dock ship repairs
- de-bunker / re-bunkering operations
- deep sea bunkering

Technical expertise together with the location advantage of ports around the country and the government plans to significantly uplift the ports and harbours as a maritime hub provides the impetus for tremendous growth in ship repairs and maintenance sector.

A large number of ships passing Sri Lanka daily along the shipping routes provides opportunities for deep sea bunkering services such as supply of marine fuel, marine lubricants, fresh water, crew change, in addition to the other services at a port of call. Bunkering activities can be further developed as follows.

i. Expanding the existing 40,000 MT tank farm capacity in the Bloemendhal Road, Colombo

ii. Capturing more business to fully utilize the existing 60,000 MT capacity at Hambantota

iii. Renovating the 84 tanks that are lying idle in Trincomalee

17.5 Boat Building Potential

The export oriented boat building industry is presently confined to a handful of players, Thus there is significant potential for new entrants as well as for some existing players to enter into the next phase of growth through joint ventures etc. Following are some opportunities identified.

a) **Pre-production services:** Individuals or firms could set up **inshore boat designing and architectural** businesses, as designing and architectural skills are often procured from overseas. In 2015, as per US Bureau of Labour Statistics, commercial and industrial designers in ship and boat building earned an average salary of US$ 72,000 p.a. This reflects the potential to reduce the cost of production if designed in Sri Lanka as well as the ability for a **new industry**, the design and architectural industry, to evolve and grow.

b) **Manufacture of Fishing Boats for Export Oriented Fishing -** With Sri Lanka demonstrating it had sufficiently addressed illegal, unreported and unregulated (IUU) fishing, the EU in 2016, lifted the fishing ban placed on the country. This has opened up the prospect for greater trade opportunities with EU countries. This is also an increasing demand for larger fishing vessels such as multi-day trawlers and other long haul vessels (50-75 feet) with proper refrigeration systems for preserving fish, while at sea. At present the fleet of small multi-day boats often use ice cubes to freeze the fish, while at sea, resulting in a considerable amount of spoilt fish. Thus larger vessels with less wastage of catch is promoted by the Ceylon Fishery Harbour Corporation.

c) **Manufacture of Leisure and Pleasure Craft –**

- With the country's increasing focus on sustainable nautical tourism, there exists potential for manufacturing pleasure crafts, for instance with low acoustic waves for whale and dolphin watching, to replace the unsuitable craft presently being deployed for this purpose.
- Given its technological expertise and trained labour, new and existing boat builders could be positioned to serve the increasing global demand for pleasure craft such as yachts.
- **Leisure craft** -Ability to expand leisure fishing boats and leisure activity boats for the export as well as for local nautical tourism industry.

d) **Rivercraft:** As with ocean based activities, Sri Lanka has not reached its potential associated with river based activities. Rivercraft could be used to promote water based activities such as,

- Transport of inland passengers and cargo via river, which will save fuel consumption in the country leading to savings in foreign exchange outflows (also Megapolis plan to address congestion –see Chapter 2)
- River cruises for tourists linked with hotels located along riverbanks.
- Leisure cruises for tourists along Sri Lanka's scenic villages – presently locations such as the Madhu Ganga are used for such purpose, albeit in an informal manner
- Floating restaurants that tourists can patronize – there are only 3 known floating restaurants – Diyawanna. Beirra Lake and Nawala Weli-Park, while greater potential exists in the same locations and other locations such as Bolgoda Lake, Lake Gregory etc.
- Boat houses along riverfronts for renting to tourists

e) **Build boats for Niche Markets:** Opportunities exist for

a. Government to Government negotiations to supply fishing boats as well as passenger/ ferry boats for passenger/tourists transfer between islands such as the Maldives Islands

b. Expansion of military, coast guard and rescue vessels to countries such as India, Pakistan, Maldives, Seychelles and the African continent a newly emerging market

c. Opportunities to build Ambulance vessels for Maldives – (Many Maldivians come to Sri Lanka to access medical specialists, hospitals)

f) **Aluminum boat manufacture;** presently most manufacturers specialize in FRP and setting up aluminum boat manufacturing yards would enable to cater to global demand for such lighter and speedier boats.

g) **Workboats -** Greater demand for work boats and harbor vessels, associated with the anticipated development of ports, harbours and marinas

h) **Manufacturing Plants –** manufacturing plants of overseas boat builders or component suppliers could be set-up/re-located in Sri Lanka as in the case of North Sails that operates a sail making factory in Sri Lanka.

i) **Indirect Exports-** Sale of all of the type of boats to local entities engaged in exports or bringing export earnings.*

* Sri Lanka does not allow exporters especially those falling under BOI regulations to supply to the local market (other than a minute percentage of less than 5%) availing the duty free concessions. This prohibits the supply of products even to other BOI entities or entities engaged in earning foreign exchange such as tourism, dampening the potential to earn a large amount of foreign revenue.

17.6 Yacht Building Potential

The yacht building industry has considerable potential as a new thrust industry since the only yacht building company is BAFF Polymech (Pvt) Ltd that builds large catamarans to equip the fleet of its sister company Sail Lanka Charter (Pvt) Ltd. Yacht building should be fostered with the ambition of making Sri Lanka a yachting hub in South and South East Asia), in order to maximize the locational advantage for marine pleasure. In order to make the most from the foreign exchange earnings as a hub, the country should simultaneously focus on:

- Yacht building for export
- Yacht operation in local waters to promote nautical tourism (addressed below and in Chapters 12)
- Provide infrastructure with mini and medium marina development and management (addressed below and in Chapter 13)

There are several sports clubs established in sailing, rowing & motor yachting and most of their boats are imported as quality of the product is an essential feature for international competitions. These sports bodies participate in world and regional events regularly and attract regional and world enthusiasts.

17.7 Marina Development and Boat/Yacht Repair Potential

In order to attract foreign vessels and to support local boat berthing and repairs, a string of marinas built to international standards with level of service consistent with developed cruising grounds should be set up around the coast of Sri Lanka.

To be competitive with the regional players Sri Lanka has to keep pace by developing the following:

- Selection of mooring points giving due considerations to environmental considerations
- Marinas both mini marinas and large marinas developed to international standards
- Development of adjacent landside recreation activities.
- Development of Support logistics for repair and maintenance
- Development of Facilities for Customs, Immigration, Quarantine and Port Clearances (CIQP) at sites
- Ensuring vessel and crew availability of international safety requirements

Development of marinas around the country will,

- Attract a new segment of high spending tourists creating a highly profitable niche market
- Attract yatch owners to own luxury apartments (particularly in light of the vast amount of apartments that are being built around Colombo)
- Facilitate growth of the water-based adventure tourism industry
- Increase the demand for water born vessels and accessories
- Expand the yacht/boat repair market
- Increase revenue from berthing/anchoring charges or use of infrastructure at the marinas
- Attract visiting yachts that could anchor and patronise the marina facilities and adjacent facilities
- Attract tourists desiorous of vacationing in a liveaboard charter boat sailing around the country, whilst enjoying the country's nautical attractions, such as water sports, game fishing etc,
- Island hopping in a charter boat – for instance from Jaffna to Kayts, Delft, Mannar etc.

In Marinas/yacht harbours including those in the Government Plans (Chapter 2), it is imperative for international travelers to have easy access to facilities such as:

i. Wet berths /slips, dry stack berths, dry sail berths
ii. Open moorings
iii. Slipways
iv. Pontoons
v. Tug Boats
vi. Repair facilities
vii. Supplies – Fuel, lubricants, fresh water, provisions, spare parts
viii. Accommodation
ix. Landside recreation

The existing and proposed harbours, anchorages and landing sites owned by the CHFC that could be converted into Marinas or mooring facilities if desired is given in Chapter 2

17.8 Nautical Tourism

Expansion potential in nautical tourism includes:

a) Trincomalee is an ideal location to develop nautical tourism including marinas along the lines of Darling Harbour, Australia with attractions such as day tours, sunset and dinner cruises, sea aquariums, shopping centers and cafes. Caution should be exercised however by taking measures to protect the environment of this heritage harbor

b) Sea Aquariums – Sri Lanka does not have any sea aquariums and suitable locations could be identified to construct such aquariums in natural pools with breakwater.

c) Expansion of Cruise Ship & Ferry activities into Sri Lanka flag bearing Ships or Ferries and promote more foreign Cruise ships to dock at Colombo, Galle and Trincomalee and other existing and proposed harbours.

d) Opportunities to expand chartering luxury Sailing Yachts to operate from Pasikuda during April to September in South West Monsoon & Beruwala during November to April in North East Monsoon.

e) Setting up training schools –Licensed trained instructors could conduct instant, day or 1-2 week training courses for tourists in sailing, surfing, scuba diving, and other marine sports. Besides tourists, the training centers could also attract and train individuals interested in marine sports from the region or provide short courses to tourists.

f) CHFC has identified harbours (Chapter 2) incurring high maintenance costs due to continuous dredging requirements and would therefore be more suitable for nautical tourism than for fishing. Also vessels for tourism activities such as whale/dolphin watching, sports fishing, yachting and ocean cruising could be deployed from these harbours, for which a tariff would need to be paid to CFHC.

g) Developing Sailing, Rowing & Motor Yachting activities together with clubs/ associations. There are several sports clubs established in Sailing, Rowing & Motor Yachting with potential for creating tourism related activities. This includes the Yachting Associations of Sri Lanka (YASL) established in 1958 (recognized by the International Sailing Federation) that brings together the following associations and clubs, some of which are more active than others:

   - Royal Colombo Yacht Club (RCYC) established 1898 but obliged to give up their Port of Colombo club house and now co-located with CMYC
   - Ceylon Motor Yacht Club (CMYC) established 1929 with their own premises on Bolgoda Lake and the most active club currently
   - Sri Lanka Navy Sailing Club (SLNSC) focused on dinghy sailing
   - Ruhunu Sailing Association (RSC) established 2006 as a non-profit to develop sailing at grass root level for underprivileged youth and associated with for-profit charter company Sail Lanka
   - Bentota Windsurfing Club (BWSC), part of for-profit Sunshine Watersports Center on the Bentota River
   - Kalpitiya Windsport Club (KSA) associated with for-profit Kitesurfing Lanka

Sport clubs in rowing which organize small occasional ocean regattas are as follows;

i. Colombo Rowing Club (Main Club)

ii. Sri Lanka Navy Rowing Club

iii. Sri Lanka Army Rowing Club

iv. School Rowing Clubs (around 7)

v. University Rowing Clubs (around 3)

Government policy support for regattas and rallies is also required from easing permit applications to at least the initial sponsorship of signature events to put Sri Lanka on the yachting map.

18. Risks and Challenges

As with any industry or business, the ship/boat building, repairs, bunkering and nautical tourism industry are susceptible to macro-economic factors such as inflation, fluctuations in exchange rates and interest rates etc. In this chapter, these risks common to any export business are not being addressed and emphasis is made only on risks and challenges specific to this business.

The factors that creates the sensitivities and the opportunities that could be created from converting the negatives to positives are given below under the sub categories of Global Macro factors, Local Macro factors, Industry Specific factors and Company Specific factors.

It is vital for SLEDB to take immediate measures together with the relevant government agencies and other stakeholders to particularly address some of the persistent concerns highlighted in Local Macro factors and Industry Specific factors to ease of some such pressing issues encountered by industry participants.

18.1 Global Macro Factors

Risk/Challenge	Mitigating Factors/Opportunities
Ship building/fleet replacement is highly correlated to the average age of the ships (25-30 years and currently over 40% of the world fleet is 15 years or younger) and the number of ships demolished in a year	Creates opportunities in the ship repair and maintenance market
Merchant ship fleet requirements are sensitive to the world sea borne trade volumes and the freight charges. Oil rigs building market is correlated to the oil prices. Margins are low due to stiff global competition during industry down times	90% of the world trade being accounted by the sea borne trade together with the expected world GDP growth and the increase in global population will ensure the sustainability of this market. Demand for all offshore vessel types is expected to increase.
Cruise Ships, Superyachts and Large Ferries market is essentially patronized by the wealthy	The number of wealthy and the high income category seeking luxury tourism world over are not only growing but shifting to new destinations in Asia. Rise in per capita spend on Cruise Tourism in 2015 to US$1779 is an example.
Cruise Shipping and Super Yachting is susceptible to the world weather conditions, world economy, marina facilities and recreational facilities adjacent to the marinas	Short cruises such as weekend cruises to nearby destinations preferred by young professionals and executives needing work life balance, will reduce the susceptibility to these factors
Ship repair and maintenance market oscillates along with the profitability from freight operations, age of the ships	Relatively young fleet of ships in the world at the moment is a positive factor for the ship repair and market.

Ship Bunkering is very much an activity of fuel and lubricant prices (due to the large volume requirements of a ship) and the proximity to shipping routes	Sri Lanka’s location in one of the busiest shipping lanes of the world creates a tremendous opportunity
Quality and quantity of the fuel supplies plays a major role in the choice of bunkering locations	Sri Lanka is regarded a highly reliable location for bunkering activities unlike some regional counter parts, which could be harnessed to the highest potential
Personal Boats/Yachts/Pleasure Crafts ownership market is correlated to the personal wealth and the craze for adopting novel hobbies	The increase in the wealthy individuals worldwide coupled with the present young old and the middle aged wanting to display their wealth through the investments in novel hobbies such as water based vessels and crafts
World Tourism is directly correlated to the world economic growth as travel and tours are a semi-luxury and is not a basic necessity	Opportunities for nautical tourism is increasing with the rise in per capita income of the global population led by more and more folks looking for stress relieving adventure sports as hobbies or unique & memorable experiences during the vacation breaks
Youth look for non-traditional forms of pleasure tourism during their leisure	Sailing/Kite Surfing/Scuba diving /Kayaking/Rafting in unique new destinations coupled with the year round weather is a timely opportunity for Sri Lanka’s expansion

18.2 Local Macro Factors

Risk/Challenge	Mitigating Factors/Opportunities
Continuation of policies and large projects by successive governments	All successive governments have been firmly committed to attract FDIs and therefore has been supportive of foreign investors (Chapter 1, 2, 17 and 18)
BOI laws restrict indirect exports- Sri Lanka does not allow exporters especially those falling under BOI regulations to supply to the local market availing the duty free concessions. Due to this reason BOI companies are prohibited from selling to other BOI entities or industries engaged in earning foreign exchange for the country such as tourism.	Enable exporters to supply to businesses engaged in indirect exports with a view to enhancing the total foreign exchange earnings of the country, with proper controls

Labour shortages – both skilled and unskilled categories – mainly due to migration on account of high demand and lack of awareness of local job opportunities. Domestic workforce enjoy greater number of statutory holidays than other countries, which affects productivity	Sri Lanka is yet a lower middle income country with a relatively cheap and rapidly trainable work force which is a competitive advantage for the country. • Government's measures to set minimum wage for overseas employment. • Permit selected industries (such as this) to fill up shortage of skilled labour from the neighboring countries under work permit procedures on a case by case basis. • Motivational aspects such as promotions to the executive cadre • Initiate measures to raise awareness, especially among unemployed youth • Productivity aspects need to be closely monitored to ensure global competitiveness
Sri Lanka not adequately acknowledged as a popular marine adventure sports/ nautical tourist destination	Enhance reliable on-line booking facilities for tourists together with search engines ranking the country as one of the top most locations and raise international market
Need for modern infrastructure and logistics for ease of business continuity	Addressed in Chapter 1 and Chapter 11
Access to finance	Addressed in Chapter 14

18.3 Industry Specific Factors

Risk/Challenge	Mitigating Factors/Opportunities
Lack of a National Strategy for the development of this industry, vital to position the nation as a maritime hub	SLEDB together with the Ministry of Industry and Commerce, BTI and key players could draw up a medium term industry growth strategy particularly identifying the key policy initiatives and changes necessary for industry expansion. The Strategic Plan should be implemented and monitored under the purview of an appointed regulatory body to create a meaningful difference.
All commercial ports being owned by the SLPA and the fisheries harbours and anchorages being owned by CFHC. All the appropriate locations for shipbuilding, repair and marinas, being Government owned (SLPA and CFHC) constraints the optimal commercial development of the ports, harbours and anchorages to maximize the revenue potential of the country.	The Government should speedily engage in PPP agreements or long lease of appropriate areas for the development of the sector and optimize the commercial activities.

India's 'Make in India' initiative with a view to transform the country into a global design and manufacturing hub has impacted the local ship building, boat building and repair market for India	Penetration into new markets and expansion of existing markets across the globe diversifying the concentration will help in mitigating this risk. Furthermore focus could be made on enforcing FTA conditions with India to remove the barriers of entry.
Many Asian countries such as China and India also have a skilled and inexpensive workforce	Sri Lanka's labour force is fast adoptable to new technologies given the high literacy rate, reliability and trustworthiness
Environmental pollution and destruction of marine biology. Emissions from ship/ boat building operations on their immediate environment can be very significant, especially given that ship/boat yards are inevitably near and on water, creating discharges of hazardous contaminants to waterways and marine ecosystems	Environmental Protection Laws should be reviewed and strengthened and concerns of lobby groups and industry stakeholders needs to be addressed with priority to cease harm and prevent further damage
Lack of standardized regulatory framework governing registration, regulation and quality assurance aspects especially for boat building while protecting industry from import of low quality boats Requirement of several licenses from Department of Wildlife Conservation, SLTDA and the Navy for sea mammal observation	• Development of regulatory framework has been initiated by SLEDB. • However, sea mammal observation requirements need to be streamlined • Presently boat builders abide by customer specified standards Status and developments addressed in Chapter 16
Need for provision of warranty in line with international standards and the necessity to travel to the export destination for repairs/ replacement of parts during warranty	Appointment of international agents could address this issue. Furthermore, if a ship or boat building industry association could be set up, backed by overseas agents to represent the country, the cost of such affiliations could be reduced by sharing it amongst all players
Lack of dedicated launching pads for testing and sailing larger boats/yachts etc. Furthermore tedious procedures have to be followed in obtaining approval from the Government agencies (SLPA and CFHC) to launch a boat. Non-availability of nearby locations for the launch of boats also creates a huge hassle in transporting boats for testing and exporting thereafter.	Encourage private sector to venture into this area of developing launching pads/slipways given the anticipated future growth in boat and yacht building. Since this would be a relatively high capital intensive venture with a long incubation period, may be prudent to consider PPP based development. Should work with the SLPA and CFHC etc. to simplify the approval procedures

Lack of demarcated economic or industrial zone with infrastructure facilities to support new entrants and re-location requirements of existing players	BOI, SLEDB, Ministry of Industry and Commerce and BTI should work closely to identify and demarcate suitable dedicated industrial zones for ship/boat building and development of mini marinas. The national budget 2017 has identified 15 export processing zones for specific industries including boat manufacturing is one of them. Suitability of the locations to be identified under WRMPP as the **logistics hub zone** which includes the manufacturing and repairs of boats and ships should be verified.
Lack of clear procedure to assist foreign investors in ship/boat building to commence operations in Sri Lanka setting out approval process, licenses required, conducive/ permitted locations, land allocation procedures, launching sites etc.	Produce an Industry specific booklet covering all relevant aspects for guidance of sector investors (BOI)
Need for technological advancement through research and development	Joint ventures or collaborations with internationally recognised players who can bring in the know how. Local entities such as BTI engaged in teaching international technology can also assist the industry in this aspect. SLEDB also can obtain assistance from the Industrial and Technological Institute of Sri Lanka to cater for the requests of the industry or BTI.
Lack of formal Industry Association to address industry needs with relevant bodies and support the envisaged growth of propelling the industry from the present few players to a maritime hub.	Given its years of expertise and experience in working closely with the industry and its objective of providing a competent workforce through specialized training and technology improvements, BTI is ideally positioned to play a pivotal role. The role of BTI could be expanded to further support the industry through, • Formulate a Boat Builders' Association, create and maintain an industry database, scout for market and joint venture opportunities, arrang-ing buyer seller meets and being the focal point Be the focal point for the industry in addressing industry needs with regulators and other stake-holders and thus foster growth Modalities of manpower requirements and expenses could be arranged through membership fees, commission and re-imbursement structures etc. so as to defray additional costs

Tropical Environment create dust and toxic fumes in FRP boat building factories	Creation of air-conditioned environments
Water borne adventures not being popular with Sri Lankans despite being surrounded by the sea and a fishing community around the country limiting the employment opportunities/ability for hiring staff for nautical tourism	Lifestyle receptiveness could be built with school curriculums or extracurricular activities incorporating swimming/rowing/sailing Vocational training could include boating specific skills such as seamanship and ship/yacht maintenance
Lack of Coastal Marinas in Sri Lanka hinders the growth of companies engaged in the yacht building, sailing schools and development and expansion of nautical tourism	Encourage and provide special facilities for PPP or FDI interested in building coastal marinas
Existing boat testing locations and yacht mooring facilities are located inside the fisheries harbours such as Beruwala, Mirissa and Hikkaduwa. The fisher folk in the locality at times obstruct fisheries harbour facilities being hired for other activities and tend to disrupt the operations of the hirers.	Relevant authorities and lobby groups needs to educate the fisher folk of the locality, the benefits of enhancing government revenue sources
Bunkering is limited to the tank farm capacities and currently Sri Lanka has only two farms in Colombo and Trincomalee	Sri Lanka is strategically placed to compete with Singapore and India (has its own refineries) and expansion of tank farms and berthing facilities can give rise to a bigger re-export industry
Since pleasure craft engaged in whale/dolphin watching are not regulated, the charges levied from passengers differ among the boat owners. A uniform pricing mechanism is yet to be implemented.	

18.4 Company Specific Factors

Risk/Challenge	Mitigating Factors/Opportunities
Access to export markets	SLEDB generally assists the exporters to show case the products at global fairs by sharing the stall costs. Continuous participation for recognition of Sri Lanka as a Ship/Boat Building hub will create tremendous opportunities. Expand in-shore boat shows beyond BTI event
High capital requirements for ship building, repairs and bunkering is an entry barrier	Higher equity investments, joint ventures and the ability to secure long term debt (Addressed in Chapter 14 as well)

Inability to spread overheads and labour costs to minimise costs due to limitation of orders	Scaling up of operations up to the maximum level of productivity optimization with more or bigger orders.

19. Financial Aspects

19.1 Shipbuilding, Repairs & Maintenance

Sri Lanka's shipbuilding activity has, until recently, been undertaken solely by CDPLC. WCS is yet to complete a full year of operation. A separate financial feasibility including the cost of constructing a shipyard and ships have therefore not been considered in this study.

19.2 Boat Building

Operational performance and profitability of the boat building sector is very subjective and depends on the product portfolio composition, operational model, cost efficiencies etc. and thus cannot be generalized. In this report, the following estimates are attached;

- Cost of setting up a FRP Technology Boat Yard
- Total Production Cost per annum of a (45-50 ft) Yacht using FRP technology
- **Estimated Cost of setting up a FRP Technology Boat Yard**

<table>
<tr><th>Item</th><th>Total
(LKR 000)</th><th>Total (US$)</th></tr>
<tr><td>Fixed Assets</td><td></td><td></td></tr>
<tr><td>Land (Sea front) - 4000 sqmtrs</td><td>80,000</td><td>533,000</td></tr>
<tr><td>Buildings (1400 sqmtrs)</td><td>30,000</td><td>200,000</td></tr>
<tr><td>Machinery & Equipment</td><td>10,000</td><td>66,666</td></tr>
<tr><td>Boat plug</td><td rowspan="2">75,000</td><td rowspan="2">500,000</td></tr>
<tr><td>Boat mould</td></tr>
<tr><td>Furniture & Fittings</td><td>1,000</td><td>6,666</td></tr>
<tr><td>Tools (Hand tools)</td><td>1,000</td><td>6,666</td></tr>
<tr><td>Vehicles - Crain & heavy machinery
Other transport</td><td>60,000
16,000</td><td>400,000</td></tr>
<tr><td>Safety gear</td><td>500</td><td>3,333</td></tr>
<tr><td>Others</td><td>1,000</td><td>6,666</td></tr>
<tr><td>Total fixed assets(A)</td><td>274,500</td><td>1,830,000</td></tr>
<tr><td>Pre-Operating expenses (POE)</td><td></td><td></td></tr>
</table>

Business registration and Boat yard registration	500	3,333
Feasibility study	500	3,333
Boat Designing expenses	15,000	100,000
Building plan and its approval expenses and any other	1,500	10,000
Total Pre-Operating Expenses- POE(B)	**17,500**	**116,666**
Working capital per annum		
Raw material	130,000	866,666
Manpower	31,000	206,666
Overheads	10,000	66,666
Admin Expenses	37,400	249,333
Total working capital (C)	**208,400**	**1,389,334**
Total project cost (A+B+C)	**500,400**	**3,336,000**

- **Estimated Total Production Cost of a (45-50 ft) Yacht using FRP technology**

Product	**45 feet yacht**	50 feet yacht
No of units per annum	**02 Nos**	**02 Nos**
Material Cost **(**LKR ‘000**)**	70,000	80,000
Direct Labor cost **(**LKR’000**)**	15,000	16,000
Overhead cost **(**LKR ‘000**)**	25,500	28,800
Total production cost (**LKR ‘000**)	**110,500**	**124,800**
Unit production cost (**LKR ‘000**)	**55,250**	**62,400**
Unit production cost (US$)	**368,333**	**416,000**

Annex 1

Salient specifications (lengths) of the different types of boats manufactured by a few key players:

	Fishing Vessels	Commercial	Pleasure/ tourism	Naval/ Security/ surveillance boats	Other
Solas Marine	Fishing Boats 36-62 ft			Defense Boat 35- 54 ft Petrol Boat 32-44 ft	38 ft Harbour Petrol 65 ft Offshore Vessels 43 ft Fire Fighters Emergency medical support 32- 65 ft
Neil Marine	28-35 ft Fishing Boat 37 ft Rider 40-75 ft Long Liner	39-75 ft Ferry Boats 45 ft Logistics Boat	20-33 ft Cuddy Cabin 36 ft Sailing Cromety 49 ft Yacht 19-30 ft Pleasure Boats Boats for Whale Watching 44-87 ft Catamaran	Petrol/ Surveillance Boats Enclosed Life Boats	Floating restaurants 59 ft Work Boat (Harbour Boat/ Diving Boat) Rigid Inflatable Ribs
Hairu Naval Craft Engineering	Fishing Boats 19 ft Multi day fishing boats 30-60 ft		Leisure Boats 19-23 ft Catamaran- 43 ft		
North West Marine Lanka	Long Liner 49-59.9 ft		Leisure boats 19-32 ft		
Jostein Viksund	Outboard 20.5 ft Silver craft 18-23 ft Hardtop 18 ft Game fisher 34 ft		Ocean Cruiser 27 ft Waterjett 20.8 ft 1200 Foil Cat Jet Foil Cat Pasinger		
Dhanusha Marine	DML Rocket 300- 19.6’		Dinghy-9-12 ft Kyak- 11.3-12 ft Paddle 8-11.6 ft Lagoon- 11.3 ft DML Power- 16.6-19.6 ft Speed 800- 14 ft Sport- 17 ft Weekender- 23 ft Passenger Pontoon- 40 ft		

Source: SLEDB, Company Websites, Published Materials, Interviews

Annex 2

Key Functions of the Merchant Shipping Secretariat

- General Administration of the Merchant Shipping Act No. 52 of 1971
- Enforcement of the Licensing of Shipping Agents Act No.10 of 1972 issue of annual licenses and monitoring of Freight Forwarders, Non Vessels Operating Common Carriers, Container Depot Operators, Container Terminal and Container Freight Station Operators
- Deal with matters pertaining to maritime wrecks
- Enforcement of compliance of International Maritime Conventions, preparing the related local legislation.
- Functioning as focal point for IMO in Sri Lanka
- Enforcement of MLC 2006 regulations
- Approving monitoring and auditing maritime training courses conducting examinations and certification of seafarers
- Supervision, monitoring and auditing of maritime training establishment
- Seafarer registration, engagement and termination of crew agreements
- Facilitation of ship owners to purchase ships and deal with their problems related to shipping
- Facilitation and enhancement of employment opportunities in foreign ships for Sri Lankan seafarers
- Registration of ships under the Sri Lanka flag, surveyor of ships and the issue of necessary statutory certificates.
- Flag state inspections for Sri Lanka flagged vessels
- Port state control inspections on foreign vessels calling at Sri Lankan ports
- Maritime casualty prevention and investigation
- Functions of the Marshal of the Admiralty of the court under Admiralty Jurisdiction Act no. 40 of 1983
- Issue of COR to foreign certificated Seafarers employed on board Sri Lanka Flagged ships
- Issue of horse power certificates to Engine Operators under launch ordinance of 1906
- Issue of Continuous Discharge Certificate (CDC) to seafarers and revalidation
- Issuing and re-validation of Certificate of Competency and Certificate of Proficiency for seafarers
- Act as an arbitrator in disputes relating to seafarers
- Conducting ship surveys

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- Mr Sunil de Silva, Director, BOI
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- Mr Y G I S Kumara, Managing Director, CFHC
- Mr Janaka P Mudalige, Deputy General Manager (Operations) CFHC
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- Mr Kapila Sumanapala, Director Administration, Neil Fernando & Co (Pvt) Ltd
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