

PROPOSAL FOR SRI LANKA NAVY'S STRATEGY 2030 AND BEYOND

(NAVSTRAT-2030)



Rules Based Good Order at Sea

FOREWORD



As we stand on the threshold of a new decade, the Sri Lanka Navy is poised to embark on a transformative journey, driven by a clear vision and a comprehensive strategy that charts our course towards a secure and prosperous maritime future. The ‘Proposal for Sri Lanka Navy’s Strategy 2030 and Beyond’ (NAVSTRAT-2030) represents the outcome of comprehensive deliberation, in-depth analysis, and foresight, designed to establish our Navy as a formidable force in the maritime domain. Sri Lanka’s strategic geographical location, nestled in the heart of the Indian Ocean, bestows upon us a unique responsibility as well as an opportunity to safeguard the vital sea lines of communication, promote regional stability and harness the full potential of our maritime resources. The NAVSTRAT-2030 serves as our compass, guiding us through the complexities and challenges of the evolving maritime landscape while embracing our nation’s growth and development prospects.

In an era marked by rapid technological advancements and dynamic security threats, the Sri Lanka Navy is committed to upholding a forward-looking approach, underpinned by innovation, adaptability and collaboration. This proposed strategy underscores our unwavering dedication to enhancing capabilities, modernizing fleet and fostering strategic partnerships with friendly nations and maritime stakeholders. Further, the NAVSTRAT-2030 reinforces our commitment to maritime diplomacy, humanitarian assistance and disaster relief efforts, echoing our role as a responsible maritime custodian in the international arena. This proposed strategy provides a blueprint for a proactive and coordinated response to present and emerging maritime security challenges.

I am confident that the SLN, with its rich heritage and legacy of excellence, is well positioned to realize the aspirations outlined in this strategy. Our dedicated personnel, with their professionalism and valour, stand ready to uphold the principles enshrined in the NAVSTRAT-2030, ensuring the safety and security of our maritime domain while contributing to the prosperity and well-being of the nation.

In conclusion, I commend the Strategy Formulating Team and extend my gratitude to all those who have contributed to the formulation of this strategic roadmap. I call upon every member of the SLN to embrace this endeavour wholeheartedly. Let us set sail towards NAVSTRAT-2030 with determination and unity, as we strive to make a lasting and positive impact on the maritime domain and beyond.

A handwritten signature in black ink, appearing to read 'Perera'.

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Vice Admiral
The Commander of the Navy

01 March 2024

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ABBREVIATIONS

ABNJ	Areas Beyond National Jurisdiction
AI	Artificial Intelligence
AR	Augmented Reality
AOPV	Advanced Offshore Patrol Vessel
BBNJ	Marine Biological Diversity of Areas Beyond National Jurisdiction
BIMSTEC	Bay of Bengal Initiative for Multi-Sectoral Technical Economic Cooperation
BRI	Belt and Road Initiative
CMETSL	College of Military Engineering of Technology Sri Lanka
CMF	Combine Maritime Force
CPV	Coastal Patrol Vessel
CS	Continental Shelf
C4ISR	Command, Control, Communication, Computers, Intelligence, Surveillance, Reconnaissance
DA	Defence Attaché
DSCSC	Defence Services Command and Staff College
EEZ	Exclusive Economic Zone
FAC	Fast Attack Craft
FGB	Fast Gun Boat
FMF	Foreign Military Fund
FMV	Fast Missile Vessel
FOE	Future Operating Environment
FOTS	Follow On Technical Support
FPB	Fast Patrol Boat
FPC	Fast Patrol Craft
FPV	Fast Patrol Vessel
GDP	Gross Domestic Product
GoSL	Government of Sri Lanka
HADR	Humanitarian Assistance and Disaster Relief
HDI	Human Development Index
IAMSAR	International Aeronautical and Maritime Search and Rescue

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ICITAP	International Criminal Investigative Training Assistance Programme
IESL	Institution of Engineers Sri Lanka
IFC	Information Fusion Centre
IFWG	International Frigate Working Group
IOIF	Indian Ocean Island Forum
IONS	Indian Ocean Naval Symposium
IOR	Indian Ocean Region
IORA	Indian Ocean Rim Association
IPC	Inshore Patrol Craft
IPESF	Indo Pacific Environmental Security Forum
ISG	Institute for Security Governance
ISPS	International Ship and Port Facility Security Code
ISR	Intelligence, Surveillance and Reconnaissance
IUU	Illegal, Unreported and Unregulated
KDU	General Sir John Kotelawala Defence University
KLE	Key Leaders Engagement
LCM	Landing Craft Mechanized
LCU	Landing Craft Utility
LIMA	Langkawi International Maritime and Aerospace Exhibition
LST	Landing Ship Tank
LTTE	Liberation Tigers of Tamil Eelam
MDA	Maritime Domain Awareness
MOD	Ministry of Defence
MOOTW	Military Operations Other Than War
MOU	Memorandum of Understanding
MRCC	Maritime Rescue Coordination Centre
MRRV	Multi-Role Response Vessel
NAVSTRAT-2030	Proposal for Sri Lanka Navy's Strategy 2030 and Beyond
NDC	National Defence College
NIT	Naval Institute of Technology
NMA	Naval and Maritime Academy
NOSCOP	National Oil Spill Contingency Plan

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OPV	Offshore Patrol Vessel
PAT	Pacific Augmentation Team
PCV	Pollution Control Vessel
PSO	Public Security Ordinance
Quad	Quadrilateral Security Dialogue
RCEP	Regional Comprehensive Economic Partnership
ReCAAP	Regional Cooperation Agreement on Combating Piracy and Armed Robbery against Ships in Asia
SAARC	South Asian Association for Regional Cooperation
SAGAR	Security and Growth for All in the Region
SAR	Search and Rescue
SE	Strategic Environment
SDGs	Sustainable Development Goals
SLA	Sri Lanka Army
SLAF	Sri Lanka Air Force
SLCG	Sri Lanka Coast Guard
SLOCs	Sea Lines of Communications
SLN	Sri Lanka Navy
SLNHO	Sri Lanka National Hydrographic Office
SMEE	Subject Matter Experts Exchange
SRR	Search and Rescue Region
STEEPLEM	Social, Technological, Economy, Environmental, Political, Legal, Ethics, Military
SWOT	Strengths, Weaknesses, Opportunities, Threats
UN	United Nations
UNCLOS	United Nations Convention on the Law of the Sea
UNCTAD	United Nations Conference on Trade and Development
UNHRC	United Nations Human Rights Council
UNODC	United Nations Office on Drugs and Crime
VBSS	Visit, Board, Search and Seizure
VR	Virtual Reality
VSS	Volunteer Special Scheme

EXECUTIVE SUMMARY

The 'Proposal for Sri Lanka Navy's Strategy 2030 and Beyond' (NAVSTRAT-2030), is a comprehensive framework designed to address evolving maritime challenges while optimizing resources for national security. Maritime is an all-encompassing word, including everything that is associated with the sea. The terms 'naval' and 'maritime' are not synonymous, navies are an integral part of maritime affairs. Within it, their work is linked in two directions. First, the navy is linked to the full range of activities in national defence; on the other, it is tied to the entire spectrum of civil activities relating to the sea. A strategy is the comprehensive direction of all aspects of national power to achieve specific policy goals by exercising some degree of control at sea. Therefore, this endeavour mainly deals with how Sri Lanka's security policy objectives can be achieved through the employment of naval power. This strategy emphasizes the rightsizing of the navy to align capabilities with strategic objectives. The document emphasises the importance of maritime security, outlining measures to enhance maritime domain awareness, coastal surveillance and counter non-traditional threats. A central focus is placed on building naval capability through investments in the much-valued human resources, modern assets, infrastructure and fostering innovation. Domestic and regional stability are key pillars, promoting collaborations with neighbouring navies in various ways, such as participation in regional initiatives, multi-lateral and bi-lateral joint exercises are of paramount importance. The strategy aims to contribute to economic prosperity by safeguarding SLOCs, supporting efficient maritime trade and facilitating infrastructure development. Environmental protection is prioritized, with commitments to combat illegal activities endangering marine ecosystems. The rightsizing of the navy involves a comprehensive review of assets, personnel, infrastructure and optimizing resources to meet operational requirements along with other stakeholders involved in protecting the national security. The strategy concludes with a commitment to regular monitoring, evaluation and adaptability, ensuring a responsive and formidable naval force aligned with national security imperatives.

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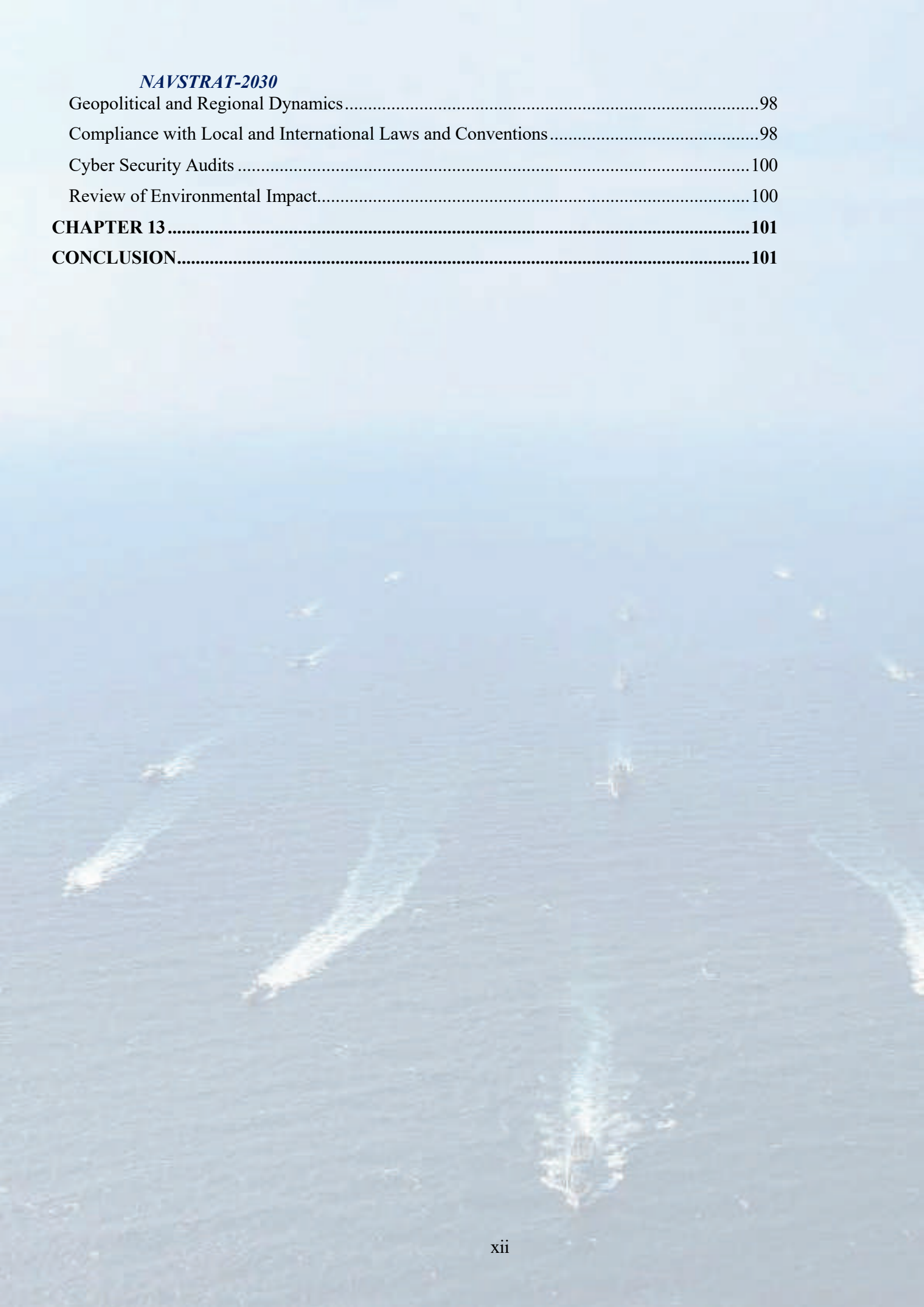
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CHAPTER 1

ASPIRATIONS OF THE NATION AND SRI LANKA NAVY

Introduction

The development of the 'Proposal for Sri Lanka Navy's Strategy 2030 and Beyond' (NAVSTRAT-2030) is a progression of the SLN's Maritime Strategy 2025. To accomplish the intended goals, this strategy will look at our ocean space, its potential and how crucial it is that Sri Lanka Navy (SLN) fulfils its obligations. This strategy will guarantee that the threats and challenges are investigated and that the significance of benefiting from the ocean is strongly supported by SLN. Thus, the main goal of this endeavour is to demonstrate the SLN's need to effectively address current and emerging maritime threats and challenges to protect our national interests.

Historical Context and Importance of Maritime Security for Sri Lanka

Sri Lanka is a country with a rich maritime tradition spanning over 2550 years. The ship that carried Vijaya the son of Sinhabahu (reigned in Sinhapura, a city in present Gujarat) is said to have landed at Tambapanni on the very day of the Lord Buddha's Parinirvanaya. The first settlement of Indo-Aryan mariners and emigrants arrived from Northwestern India to Ceylon towards the end of the 4th century BC were an agricultural community. The pioneer settlement had encouraged further waves of emigrants to follow this distance by sea which is approximately 1500 miles and none but intrepid seamen in seaworthy ships could have accomplished this succession of outward and return voyages. Seafaring, in every aspect of its activities, was the forte of these earliest colonists of Ceylon and should have been the inherited skill of their descendants, the Sinhalese. Even in the reign of King Devanampiya Tissa (250-210 BC), it is said that these voyages up to the Ganges and back had been made by the King's envoys with gifts to Mauryan Emperor, Asoka.

With rapidly increasing commerce between the Arabs and Romans with South India led to a struggle between the South Indians and the Sinhalese, for the mastery of the South Indian seas for Ceylon's rich export trade following which the products of Ceylon had to be transported to South Indian ports and sold to Westerners. However, about the year 125 AD, Roman ships began to sail into Ceylon harbours and to deal directly with the Sinhalese. Chinese ships were also trading directly with the Sinhalese at this time and Ceylon became eventually a significant place for trade in the Indian Ocean. Another most significant evidence is the stone inscription existing at the Godawaya temple provides probably one of the oldest evidence on customs duties proving the maritime heritage of Sri Lanka.

Another historical evidence is an invasion of Burma by King Parakramabahu I. The building of the invasion fleet in the ports of Ceylon took only five months. The expedition set sail from the port of Palvakki on the Northeast coast. King Parakramabahu's next military undertaking across the seas was the invasion of the South Indian Kingdom of Pandya.

Two well-known travellers who visited Ceylon after the fall of the Polonnaruwa Kingdom were Marco Polo (1233) and Ibn Batuta (1344). The greatest of the Ceylon ports were Mahatittha (Mantai) and Gotapabbatha (Ambalanthota). The other important ports of early time were Gokanna (Trincomalee), Sukaratittha or Huratota (Kayts), Tambapanni (near the mouth of the Aruvi Aru) and Uravela (at the mouth of Kala Oya). When close ties were established between the Malays and Sinhalese, the ports on the South and East coasts, particularly Waligama and Trincomalee, were much used. It was not till about the tenth century that Galle and Colombo came into prominence.

Ceylon was renowned among many countries as a famed destination for trade along the silk route of the Asian continent as well as in the Indian Ocean. Being a trading hub in the past, Sri Lanka had prospered in trade in a variety of products such as spices, gems, pearls and ivory. One of the classic examples of Sri Lanka being a maritime hub in the Indian Ocean is that; China had a long history on sailing into the Indian Ocean for trade, commercial and diplomatic missions led by the legendary Admiral Zheng He. The Admiral had visited the country nearly six times from 1405 to 1433.

The first Europeans to visit Sri Lanka were the Portuguese, who sent the explorer Lourenco de Almeida, in year 1505. Then Dutch went on to fight the Portuguese resulted in Dutch victory. Dutch rule in Sri Lanka was done through the Dutch East India Company, a trading company established in 1602 primarily to protect Dutch trade benefits in the Indian Ocean. The British took over the country in 1796, automatically naming 'Zeylan' to 'Ceylon' and in 1815 Sri Lanka ending of her independence. After nearly 133 years of British rule Ceylon got independence in year 1948.

Due to fears of impending war increased the idea of establishing a Volunteer Naval Force emerged. As a result, Navy created for Ceylon and manned by residents of the country, came into being in 1937. In 1937 the Ceylon Naval Volunteer Force (CNVF) was established under CNVF Ordinance No. 1 of 1937. After World War II, CNVF was absorbed into the Royal Navy as, Ceylon Royal Naval Volunteer Reserve (CRNVR). After gaining independence from British rule, a nucleus of officers and men were ready to form the Regular Navy. On 09th December 1950 the Navy Act was enacted (Act No. 34 of 1950) and the Royal Ceylon Navy was formed. In 1972, with the introduction of new constitution the Royal Ceylon Navy was renamed as the Sri Lanka Navy.

By deploying the Fast Attack Craft (FAC), the navy expanded its fleet of patrol boats at the start of the conflict in the 1980s. They were quite effective in reducing the Liberation Tigers of Tamil Eelam's (LTTE) usage of the seas. As the Sea Tigers turned to employing highly advanced suicide craft against Navy vessels, the weapon systems on these were improved over time.

In order to counter sea tiger vessels and intercept arms shipments intended for the LTTE within Sri Lankan territorial seas, the Navy increased the size of its patrol boat fleet in the latter half of the 1990s. Beginning in 2000, the Navy commenced utilizing offshore patrol vessels to increase the scope of its surveillance capabilities. At the same time, the acquisition of two Fast Missile Vessels (FMVs) boosted the capability of conventional warfare.

Following the resumptions of hostilities between the Government of Sri Lanka (GoSL) and the LTTE since early 2006, the Navy took up an active role in limiting the LTTE's use of the seas. This resulted in several major sea battles during the course of 2006, 2007 and 2009. The most significant event during this time was the interception and sinking of several large cargo ships that were bringing illegal arms shipments to the LTTE in the Indian Ocean. The blue water capacity of SLN has been proven by these operations.

In 1944, Navy cadre was 62 officers and 1291 sailors. With the escalation of conflicts within the country, cadre of SLN increased up to 3434, 16191 and 26579 in 1983, 1996 and 2004 respectively. Since 2009, with the Expansion of the Navy, focusing on Economic Development, Nation Building, Environmental Sustainability, International Cooperation in addition to the National Security, approved cadre was increased up to 55000 including naval personnel deputed for SLCG to perform the enhanced Role and Task. Approved cadre since 1944 is illustrated in Table 1.1.

Table 1.1*Approved Cadre*

Year	Officers	Sailors	Total
1944	62	1291	1353
1980	221	2739	2960
1983	267	3167	3434
1996	965	15226	16191
2004	1882	24697	26579
2008	3577	44423	48000
2009	3577	51423	55000
2021	3617	49383	53000

Therefore, considering the three decade protracted conflict in the country, post conflict dynamics in the Indian Ocean Region (IOR) since 2009 and lessons learnt thereto, the SLN needs a comprehensive maritime strategy to ensure national security, safeguard its maritime interests and counter emerging threats. Modernization is crucial for acquiring advanced technologies and capabilities, enhancing operational efficiency and meeting evolving challenges. Rightsizing the navy ensures optimal resource utilization and agility in responding to diverse maritime scenarios, fostering a balanced and effective maritime force capable of protecting Sri Lanka's maritime sovereignty, economic interests, social well-being and prosperity.

Core National Values

Democratic Socialist Republic of Sri Lanka recognises Freedom, Equality, Justice and Fundamental Human Rights as core national values based on the constitution.

National Aim

Creation and preservation of a just and free society guaranteeing the dignity and well-being of succeeding generations, with unhindered economic progress, social and cultural order attained, the unity of the country restored and concord established with other nations.

National Interests

Sri Lanka's national interests are expressed in the Preamble to the Constitution. These are summarised as follows;

- Sovereignty and territorial integrity of the Democratic Socialist Republic of Sri Lanka
- Democratic, secular and unitary character
- Secure and resilient Sri Lanka
- Economic and socio-cultural well-being of the nation and its citizens

Strategic Vision

Planning and articulating a maritime strategy is a vast process, where solution for the problem statement or defining the issue resulted as strategy. Two scenarios can be brought; peacetime and crisis situation. The peacetime scenario refers to the statecraft of forming and materializing a strategic vision of national security. Hence, the strategic vision of the government was taken as guidance for formulating NAVSTRAT-2030 in order to fulfil a safe and secure maritime environment.

National Security Objectives as Envisioned

From the functional point of view, national security objectives act as ENDS in the ENDS-WAYS-MEANS process of making strategy. The following key areas are essential for the endeavour;

- Safety and security of the country and its people (Security agenda)
- National prosperity and wellbeing of the people (Development agenda)
- A favourable and respectable position on the international stage (Influence)

Sri Lanka's National Security Objectives as envisioned are outlined as follows;

- Upholding the Constitution and protecting people
- Protecting Sea/ Air/ Virtual lines of communication while having effective control of borders
- Pursuit or sustaining economic prosperity
- Strengthening partnerships/ relations for regional and international security and stability
- Upholding democratic institutions and advancements of good governance, preserving national values
- Ensuring public safety and crisis response
- Protecting, managing, preserving and developing natural and physical environment
- Prevention of negative domestic developments and events that could affect communal harmony and co-existence of diverse groups in Sri Lanka
- Building and sustaining health security mechanisms for a resilient community
- Education for a sustainable and developed society

National Security – Sri Lanka Navy's Perspective

Over the period of time, the concept of national security has undergone enormous expansion, modification and evolution. It now refers to almost every facet of national life and nation-building, rather than just the conventional ideas of internal and external defence. Economic progression and security are interdependent and mutually reinforcing notions in the new paradigm. National security is contingent upon the development, or the protection of the environment, the economy and social well-being and vice versa. Greater social peace and stability follow prosperity and progress increases when these conditions are met. In present-day geopolitics and security dynamics in the world, no country alone is capable of maintaining its national security. It requires integration within and is dependent upon, our neighbours' and partners' security.

Therefore, our national security mainly focuses on the protection of the country's sovereignty, territorial integrity and core national values. It largely encompasses the safety of our state and Sri Lankan nationals; ensuring people's welfare, well-being, ways of life and protecting from external and internal threats. Further, it is also required to protect the state and the citizens from other

threats primarily; climatic events, financial and energy crises, pandemic diseases, cyber and other forms of attack on vital national infrastructure.

Sri Lanka's Maritime Space

Sri Lanka is assigned a 200 nautical mile Exclusive Economic Zone (EEZ) and Pollution Prevention Zone (Figure 1.1). This area is approximately eight times the land area. The Search and Rescue (SAR) Region, which is 27 times the land area approximately, is another responsibility that is assigned to Sri Lanka (Figure 1.2).

Figure 1.1
Maritime Zones of Sri Lanka

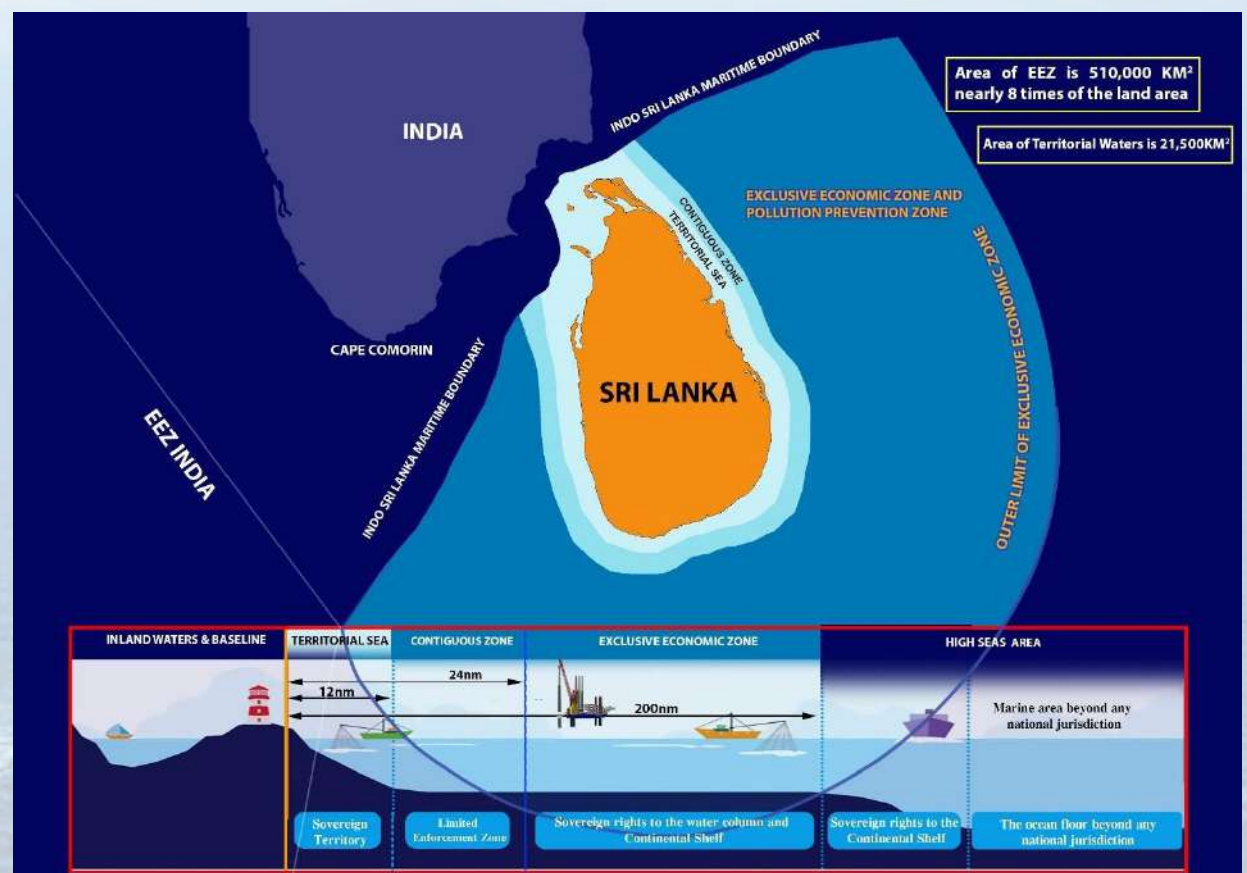
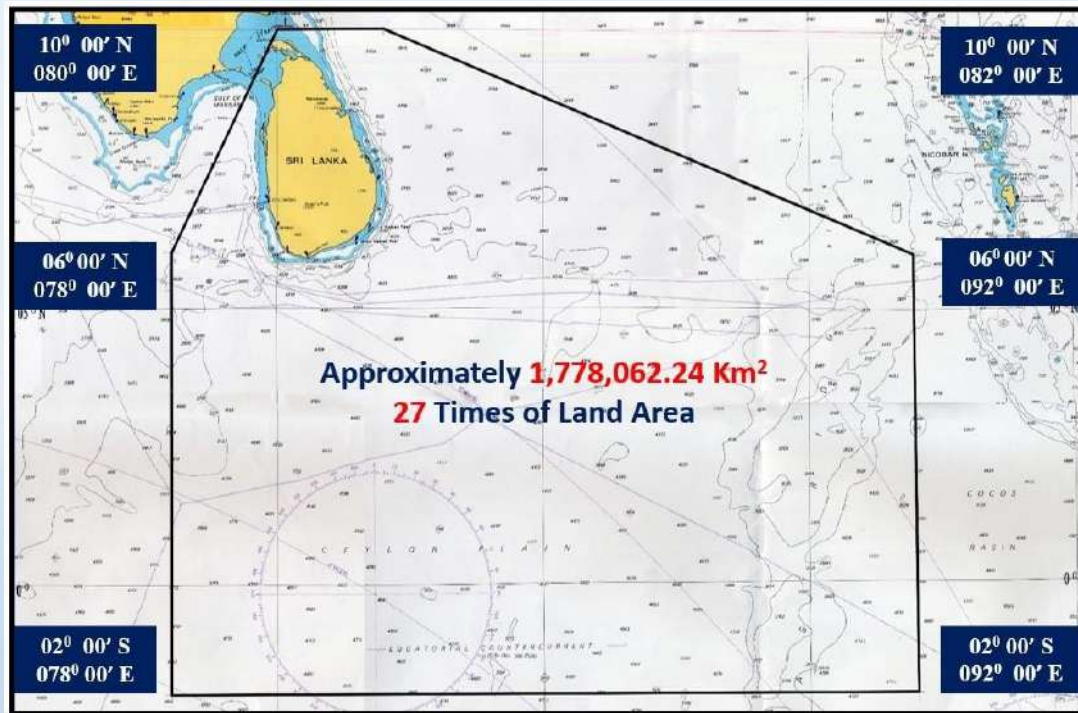


Figure 1.2

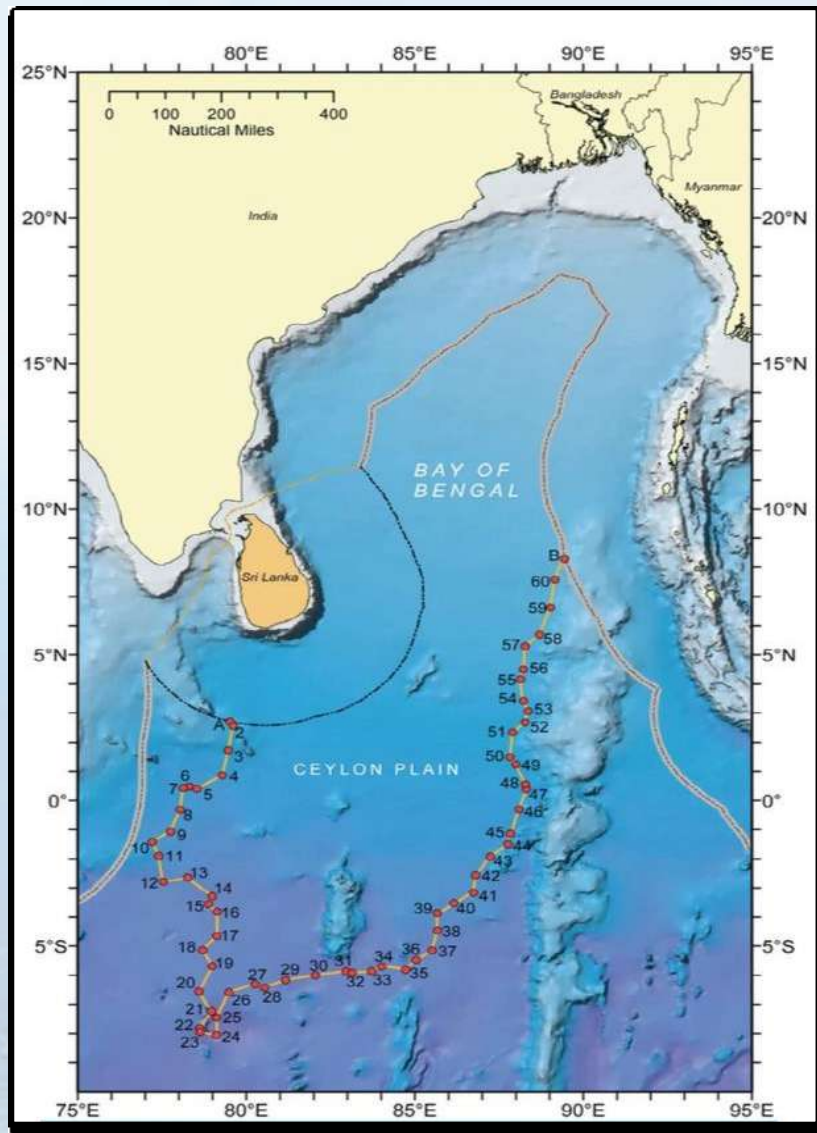
Maritime Search and Rescue Region of Sri Lanka



The total area of the Continental Shelf (CS) occupies approximately 7% of the total area of the oceans of the world, but their financial significance is expressively greater. Therefore, CS is of national importance not only geographically, but also in the social, legal and financial arena. Sri Lanka forwarded the submission to extend the CS beyond 200nm in accordance with Article 76 and Statement of Understanding under Annex II of the United Nations Convention on the Law of the Sea (UNCLOS) in the year 2009. If Sri Lanka secures its claim, it would give Sri Lanka a sea area nearly 24 times as large as the land area by 2025 which has sovereign rights for the purpose of exploring CS and exploiting its natural resources. This delimited CS will provide the ability to exploit rich natural resources and include mineral and other non-living resources of the seabed and subsoil together with living organisms belonging to sedentary species. Main natural resources include hydrocarbons, oil, gas and minerals such as placer minerals and poly-metallic nodules (Manganese etc.) which will provide a large share of the future metal needs of the world. Sri Lanka's claim for CS forwarded to the Commission on the Limits of the Continental Shelf (CLCS) is shown in Figure 1.3.

Figure 1.3

Continental Shelf Claim forwarded to CLCS by Sri Lanka



The Concept of Maritime Power

Maritime power is the ability of a nation to exploit the oceans to its advantage. However, maritime power not only of the ability to exploit the oceans for commercial purposes, but it strengthens to protect this ability from interference. It also implies the ability of a nation to influence others in peace and impose its will in war. Admiral Alfred Mahan listed six fundamental elements of sea power; geographical position, physical conformation, extent of territory, size of population, character of the people and character of government.

Sri Lanka will be heavily dependent on the maritime domain in the future. Therefore, surrounding oceans must be protected, monitored and regulated to establish a competitive and unique maritime hub in the region. It is in this context, SLN has a huge role to play in order to face the new and existing maritime challenges and to improve maritime security and economic progress in the country.

Main Pillars of the Naval Strategy

The main pillars are; Maritime Security, Professionally Competent and Motivated Personnel, Economic Development, Environmental Sustainability, International Cooperation, Capacity Building, Technology Integration, Public Awareness and Legal and Regulatory Framework.

Sri Lanka Defence Review 2030

The key principles of Sri Lanka's defence policy after gaining independence have always revolved around protecting its sovereignty, avoiding military alliances, refraining from conflicts in the Indian Ocean, countering non-state actors adverse to Sri Lanka and contributing to global peace. However, the security dynamics have witnessed a significant shift.

Previously, Sri Lanka's primary focus was on combating internal terrorism, notably the LTTE. Today, the strategic environment has grown more complex, marked mainly by great power competition between the United States and China, the emergence of strategic alliances such as the Quadrilateral Security Dialogue (Quad) and trilateral security partnership by Australia, the United Kingdom and the United States (AUKUS), the Ukraine war, the Israel – Hamas conflict and the omnipresent threat of climate change. Therefore, in the present context, Sri Lanka needs to prevail in exercising its maritime tasks to maintain '*Rules Based Good Order at Sea*' with interacting obligations in the Indian Ocean while protecting the nation from any maritime threats to national interests.

Given this evolving landscape, the 'Defence Review – 2030' serves as a crucial step to adapt Sri Lanka's defence policy. The review not only analyse the current regional challenges but also outlines a roadmap for the future, encompassing both the immediate future and steps beyond 2030.

Key components of the Defence Review - 2030 include;

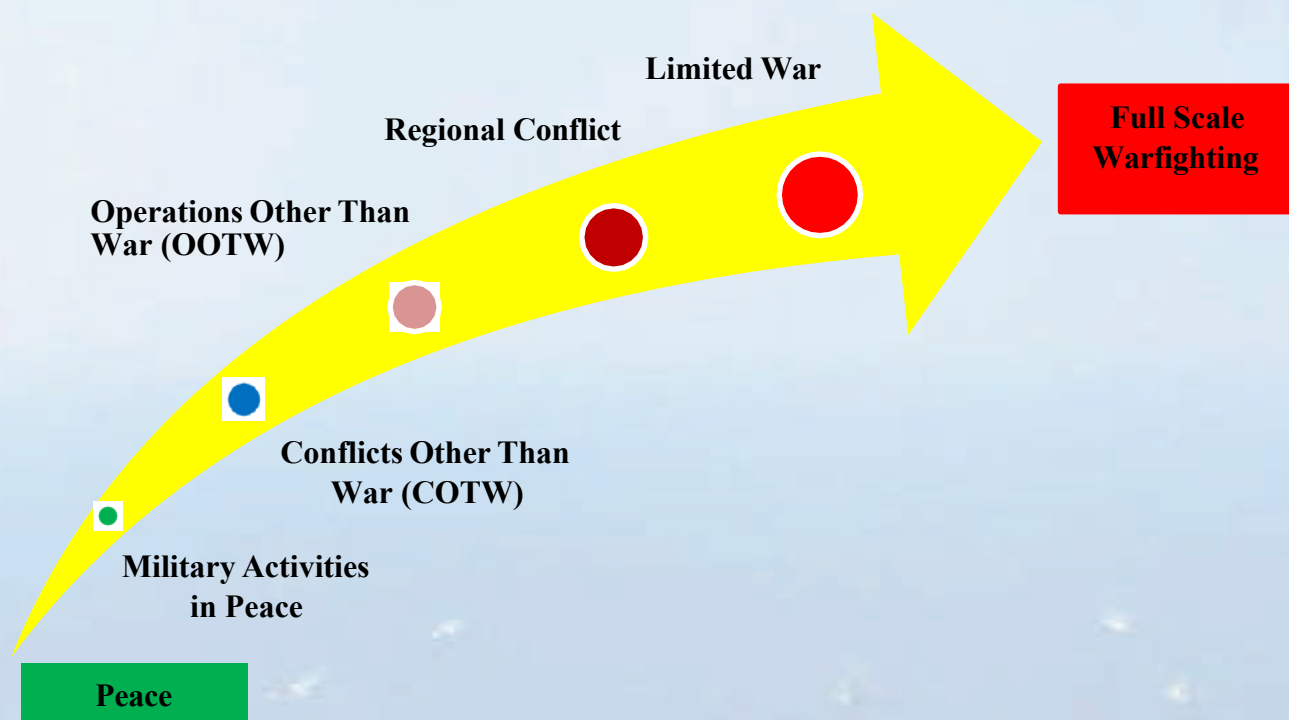
- Strategic Vision and Challenges for Sri Lanka in 2030
- Security Interests of Sri Lanka
- Defence Policy Objectives for 2030
- Power Posture and Power Structure to address Strategic Challenges
- Prioritization of urgent needs within the constraints of the existing financial situation

The Spectrum of Conflict

The spectrum of conflict signifies the full range of situations in which military forces may be called upon to operate, ranging from stable peace to full-scale warfighting. The spectrum of conflict may be diagrammatically denoted in Figure 1.4:

Figure 1.4

The Spectrum of Conflict



Peace and Conflict

Any nation or state can be said at any one time to be at peace or in conflict. Peace remains the goal above all to be prized. In reality, the current security environment places all countries somewhere in this spectrum of conflict. Many are actually in situations of conflict other than war and some are at conflict itself. The edges of peace and conflict are concealed and overlapped. Military activities discharged during peace are likely to be based on the need for training and may also include military aid to the civil authority. Peace can also be categorised into three main areas;

- **Established Peace.** There is no threat or actual violence. However, this is a transitory condition, generally not enjoyed for long.
- **Vulnerable Peace.** In circumstances where peace is threatened it could be termed as vulnerable peace. In such a scenario, disputes that threaten to dissolve into conflict will be apparent. Violence will come as an inevitable outcome and the boundary to conflict will be crossed.
- **Fragile Peace.** In a situation following a conflict; if the basic causes and effects have not been fully dealt with or restored, the peace that exists will be fragile and will demand careful steps to rebuild and consolidate.

The Maritime Fighting Power

Maritime fighting power and warfighting speciality – both allow our credibility and utility. When required, we are called upon to protect the country from internal and external aggression. Naval forces have significant military power within them. Aforesaid military power enables them to perform desired roles spanning the entire spectrum of conflict. For this, the SLN must maintain

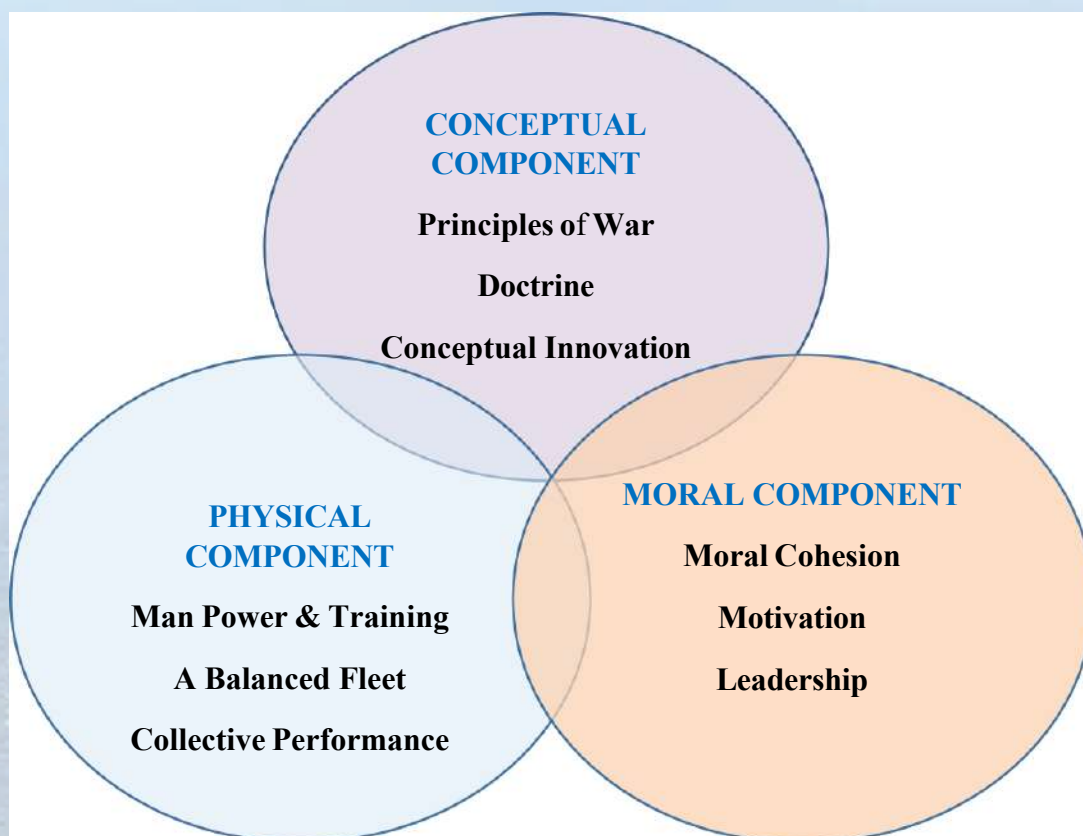
the required level of combat power and state of readiness at all times particularly with unique attributes of naval forces namely; Access, Mobility, Versatility, Sustainability, Resilience, Poise, Lift Capacity and Leverage.

Maritime fighting power defines our ability to fight and achieve success in maritime operations. It is made up of an essential mix of three interrelated components as shown in figure 1.5.

- Conceptual component (the thought process)
- Moral component (the ability to get people to fight)
- Physical component (the means to fight)

Figure 1.5

The Components of Maritime Fighting Power



- **Conceptual Component.** The conceptual component provides a framework of thinking within which military personnel can develop an understanding about both their profession and the activities that they may have to undertake.
- **Physical Component.** The physical component of maritime fighting power provides the means to fight. This component consists of manpower and training, a balanced fleet, collective performance, sustainability and readiness.

- **Moral Component.** The moral component concerns the human aspect of maritime fighting power. Warfare is a human activity and the moral component exerts a decisive psychological influence, both individually and collectively. While morals (principles of right and wrong) are one aspect which enhances cohesion and morale (a sense of confidence and well-being) is another which promotes courage and commitment. The moral component is considerably broader. The moral component of fighting power is about the ability to get people to fight. It comprises the following three interrelated functions:
 - Moral cohesion (prepared to fight)
 - Motivation (enthused to fight)
 - Leadership (inspired to fight)

In summary, the conceptual, physical, and moral components of maritime fighting power collectively contribute to navy's effectiveness and success in warfare. A holistic approach that integrates these components ensures a resilient and adaptable naval force capable of safeguarding national interests in the dynamic maritime domain. Therefore, more focus required on maintaining the essential maritime fighting power when modernization and restructuring processes are being implemented.

Sri Lanka Navy Vision

‘To develop into a naval force capable of countering Brown, Green and Blue water challenges with a formidable force structure to achieve National Security Objectives and safeguard Sri Lanka's Maritime Interests.’

Sri Lanka Navy Mission

‘To maintain, train and equip a combat ready naval force capable of achieving National Security Objectives and safeguard Sri Lanka's Maritime Interests whilst nurturing a stable environment at sea.’

In order to successfully carry out this mission, SLN maintains the capability to perform the following key functions;

- Conduct of prompt and sustained operations at sea
- Provide the afloat forces for sealift
- Provide/obtain air support essential for naval operations
- Provide naval forces for the conduct of amphibious operations
- Interdict enemy capabilities through operations at sea
- Conduct/obtain close air and naval support for land operations
- Organise, train, equip and provide forces for surveillance and reconnaissance, protection of shipping and mitigate traditional and non-traditional threats

Sri Lanka Navy Values

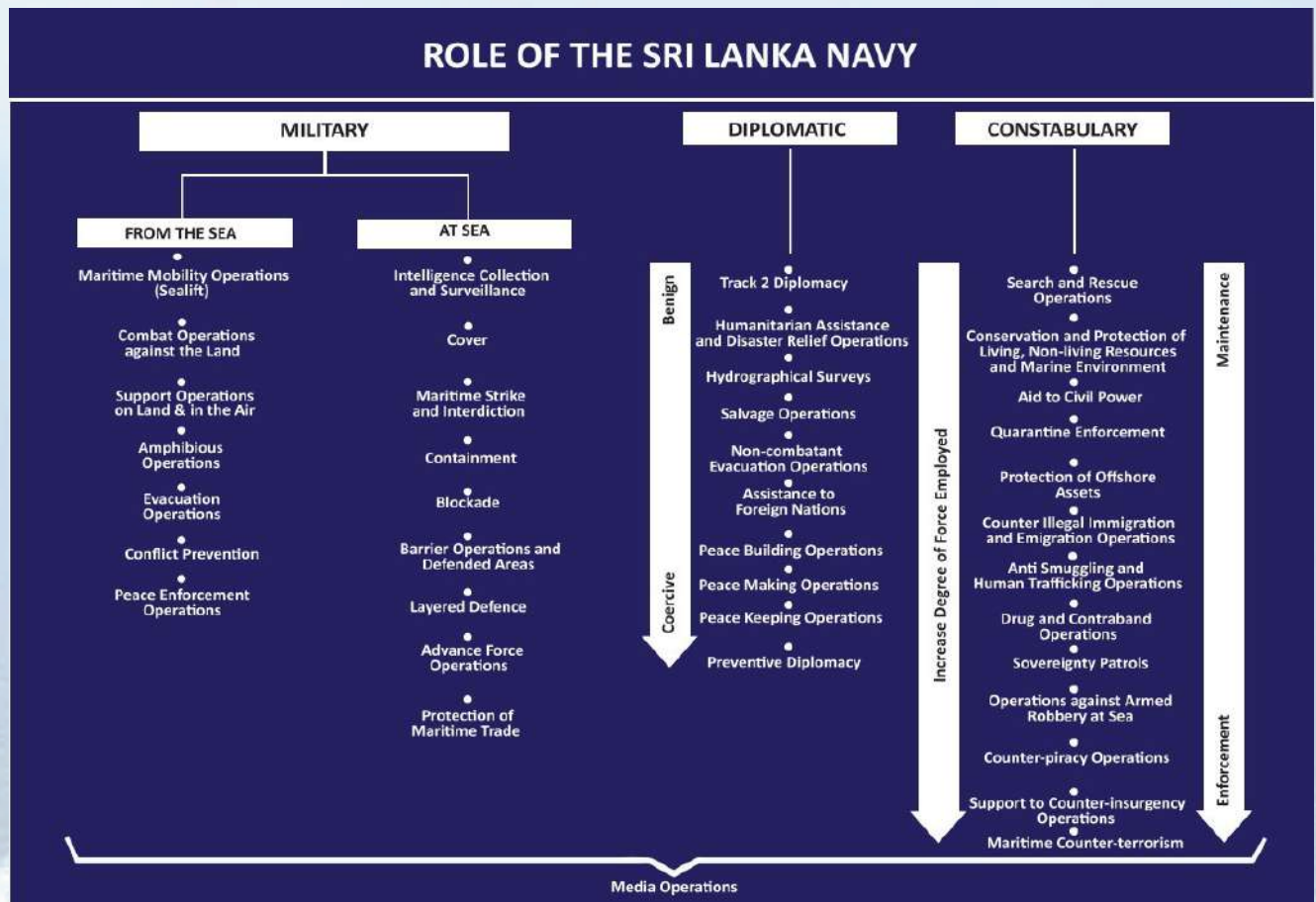
Honour, Honesty, Integrity, Loyalty and Courage are the Values of Sri Lanka Navy.

- **Honour.** Honour is the vital value on which the Navy's and each person's reputation depends. It reflects our moral and ethical standards. Honour demands strength of will and inspires physical effort and selfless service. Honour guides our actions in a way explicit rules cannot; it shapes our morality and defines our self-respect, notions of pride and indignity.
- **Honesty.** Honesty is always being true to self, ship's crew and our colleagues. Honesty demands us to face our shortcomings. We must be open and upfront with each other and ourselves. Honesty drives personal and professional development. Honesty enables us to serve with a clear conscience, sincerity and selflessness.
- **Integrity.** Integrity is being committed to always doing what is right, no matter what the consequences. Our integrity defines moral power and underpins our fighting spirit. As people with integrity, we confront and overcome wrong regardless of personal cost. The integrity will be suspected if one's personal, financial and moral conduct falls below the accepted standards. We must be sincere, impartial and straightforward and sense of purpose must never be in doubt. Further, we must act with a sense of fair play and in keeping with the principles of natural justice.
- **Loyalty.** Loyalty is being committed to each other and to our duty of service to the country. Loyalty is a reciprocal obligation of our shared and mutual commitments to each other and to the nation. It requires we acknowledge commendable effort and the knowledge that one will always support the others. It promotes trust and confidence in fellow members that we accept responsibility and accountability for our actions and for those of our subordinates.
- **Courage.** Courage is the ability to control our fear in a dangerous or difficult situation and strength of character to do what is right in the face of adversity. Courage demands unwavering obedience to moral principles. Courage drives responsibility, humility and personal example. No amount of education and experience can overcome a deficiency of courage. Courage, both physical and moral, forms the foundation upon which bravery, fighting spirit and success depends; Physical courage means being prepared for tasks that, either directly or indirectly, involve the use of lethal force while being in harm's way. During these periods of heightened danger, it is likely that an individual's faith will become increasingly important. Whenever possible, religious advice should be available for support. Moral courage is equally important. This is the courage to do what is right even though it may be unpopular and the personal cost is high. It is also the courage that allows one to admit mistakes, to accept blame and responsibility, thereby improving effectiveness for the whole.

Role of the Sri Lanka Navy

The full range of operations in which a nation's naval forces may be involved is vast, ranging from high-intensity warfighting at one end to humanitarian assistance and disaster relief operations at the other end. This broad continuum of operations can be broken down into distinct roles, each demanding a specific approach to the conduct of operations. Accordingly, the three main roles envisaged for the SLN are; Military, Diplomatic and Constabulary (Figure 1.6).

Figure 1.6
Role of the Sri Lanka Navy



Role and Task of Sri Lanka Coast Guard

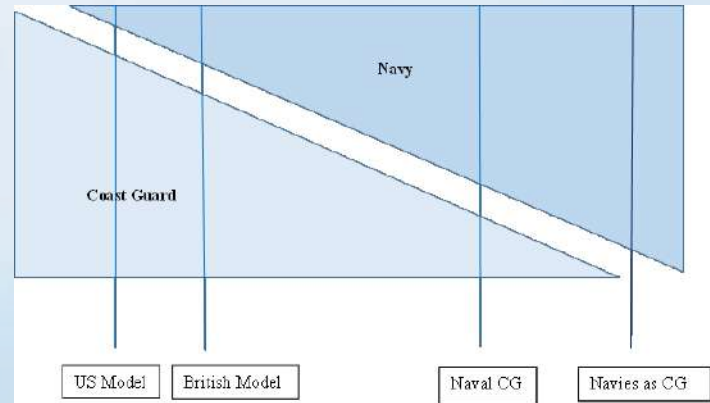
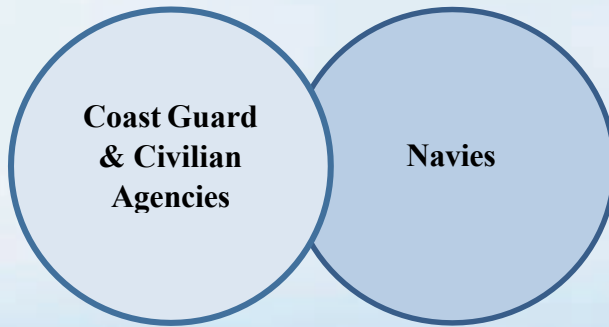
The distinctions between the Coast Guard and the Navy are quite country-specific; hence it is hard to generalize about them. Coast Guards are not all the same, just as not all navies are. However, Geoffrey Till (2009), points out that navies typically concentrate on matters pertaining to national security whereas Coast Guards and civilian organizations typically concentrate on public safety and law enforcement responsibilities. There is, nevertheless, some overlap in the duties that they perform (Figure 1.7).

Figure 1.7

Overlapping Role and Responsibilities Navy/ Coast Guard

Role and Responsibilities

Enforcing Laws Defending National Security



Source: Till (2009)

Considering the purpose of establishing Sri Lanka Coast Guard the Spectrum of Conflict (Figure 1.4) and the Role of the Navy (Figure 1.6), it is apparent that some role and task that Sri Lanka Navy is undertaking during Peace, Vulnerable Peace, Fragile Peace, Military Activities in Peace, Conflicts Other Than War (COTW) and Military Operations Other Than War (MOOTW) can be entrusted to SLCG. The recommended SLN and SLCG model for Sri Lanka is as follows;

Figure 1.8

Proposed SLN and SLCG Model

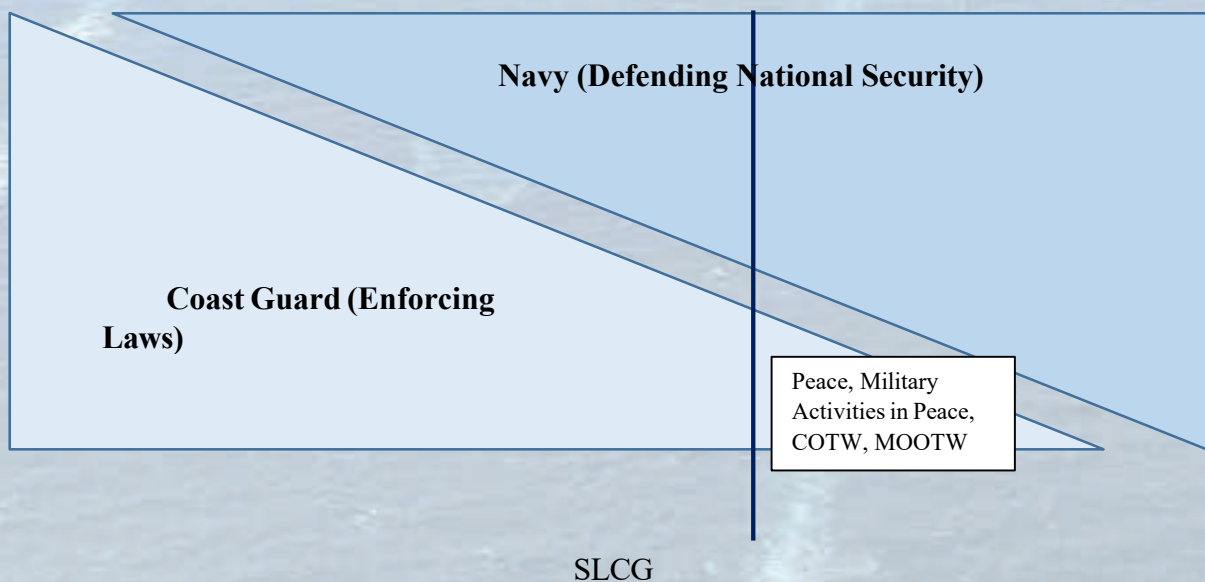
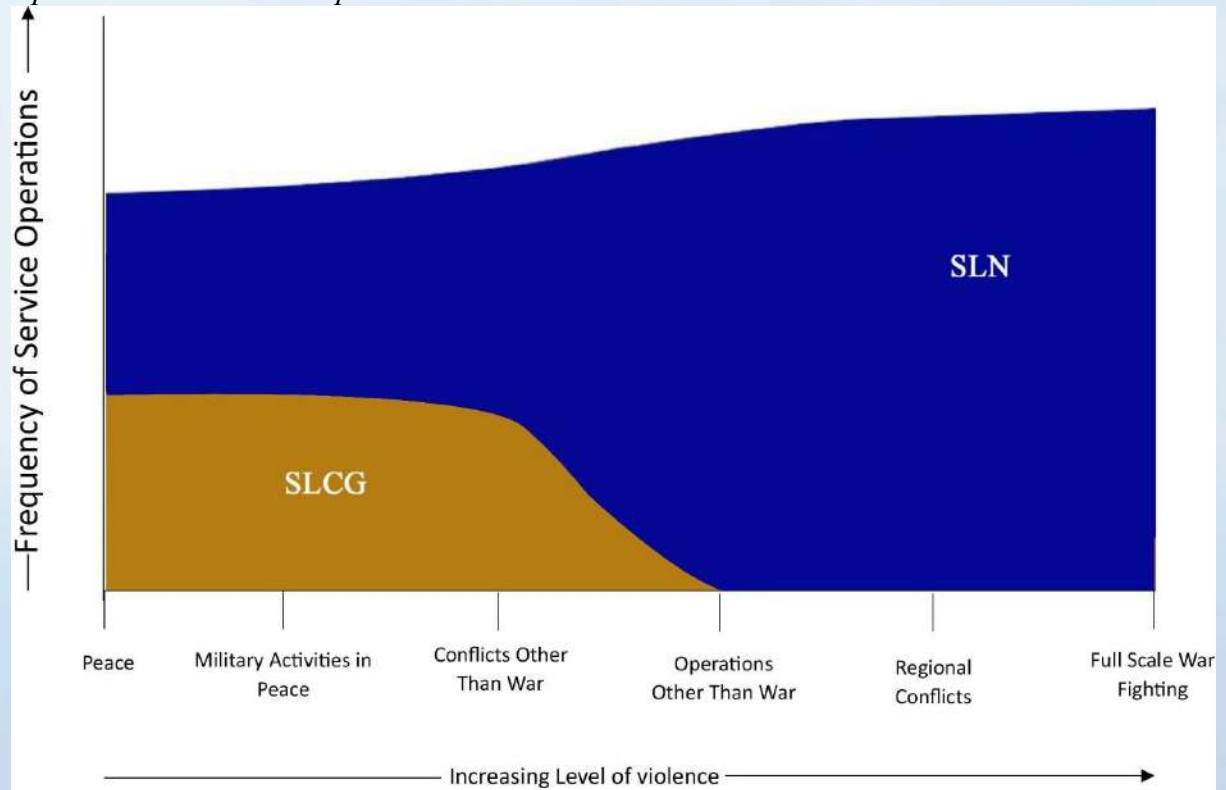


Figure 1.9

Proposed SLN and SLCG Spectrum



Progress of Sri Lanka Navy's Maritime Strategy 2025

Sri Lanka Navy's expected fleet by 2025 is placed at Table 1.2 to conduct exclusive patrols in the EEZ and perform the designated role including the SAR. However, due to the COVID-19 pandemic followed by financial constraints, the requirement was not fully accomplished. The present SLN and SLCG fleets are illustrated in Table 1.3 and Table 1.4 respectively.

Table 1.2

The Twenty Ship Fleet Expected in 2025

Vessel/Craft	As at 2016	2018	2020	2022	2025	Total
Frigates	-	01	-	01 (02)	-	02
Corvettes	-	01	-	01 (02)	-	02
OPV	04	01 (05)	01 (06)	01 (07)	01 (08)	08
FMV	02	01 (03)	-	01 (04)	-	04
FPB	02	-	01 (03)	-	01 (04)	04
FGB	11	-	01 (12)	-	01 (13)	13
LCM/LCU	06	-	-	02 (08)	-	08
FPC	04	-	-	-	-	04
FAC	57	-	-	-	-	57
IPC	73	-	-	-	-	73

Table 1.3*The Present SLN Fleet*

Vessel/Craft	Actual in 2023
Frigates	-
OPVs	08
FMVs	02
FGB/CPV	11
FPC	02
FAC	49
P Aux	01
LST	01
LCM	02
LCU	02
IPCs	63

Table 1.4*The Present SLCG Fleet*

Vessel/Craft	Actual in 2023
OPV	02
FPV	02
FPB	10
IPC	10

The following aspects were considered as the pillars in the direction for planning, developing, and delivering current and future capabilities of the future Navy 2025;

- Professionalism
- Operational versatility
- Interoperability
- Deployable
- Information focused
- Agility
- The right expansion
- Asymmetric warfare

Following are the key facts that were expected to be focused prior to developing the ‘A Twenty Ship Navy 2025’;

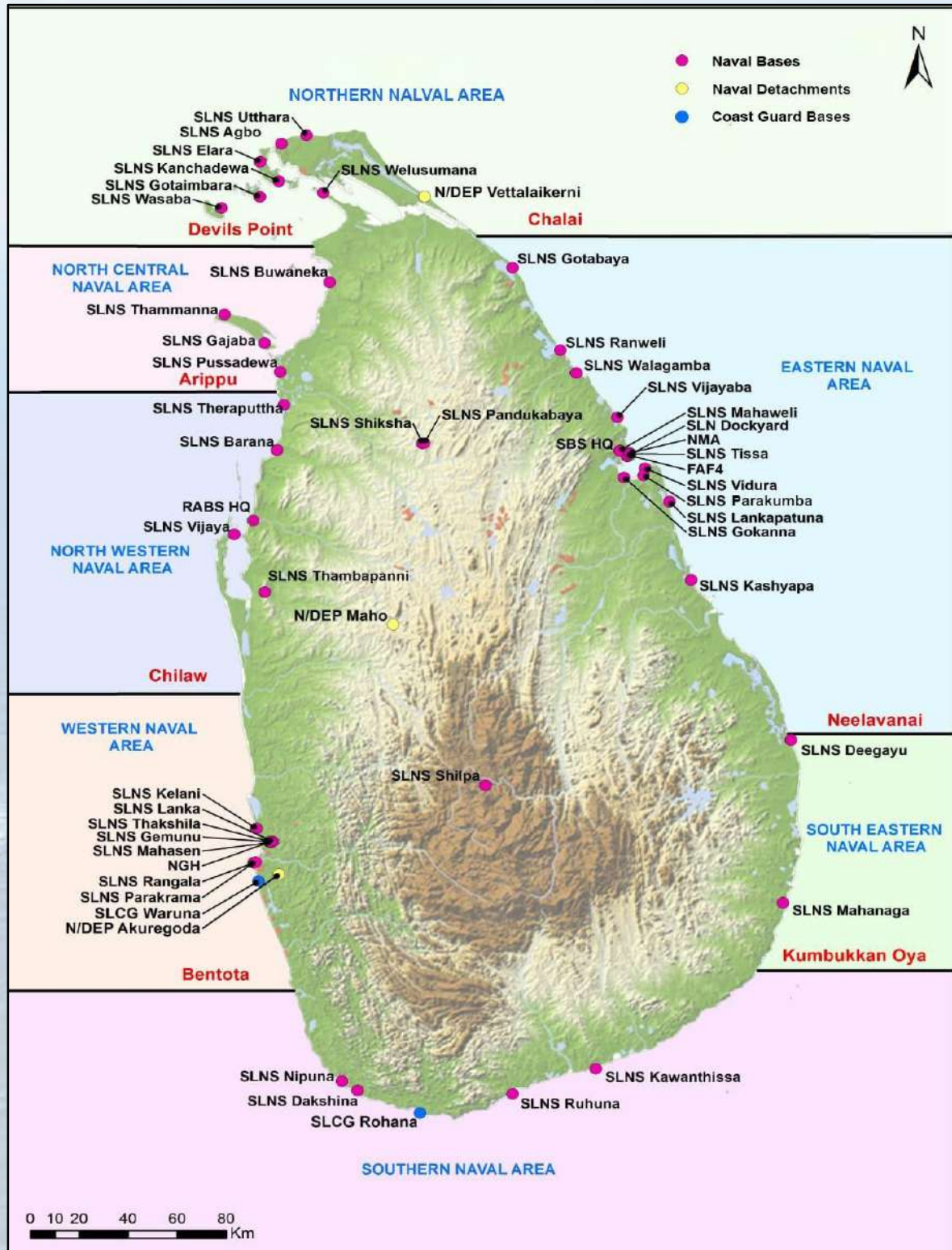
- Influence events at a distance
- Freedom of the seas
- Joint enabler
- Wide range of operations
- Versatile and combat-capable
- Collaboration
- Interoperability

SLN-SLCG Shore Establishments and Detachments

Figure 1.10 illustrates present SLN – SLCG shore establishments and detachments.

Figure 1.10

SLN – SLCG Shore Establishments and Detachments



CHAPTER 2

SRI LANKA COAST GUARD

Evolution of the Sri Lanka Coast Guard

The concept of having a Coast Guard was first introduced in 1998 with a long felt need to enforce fishery laws at sea. Having been approved by the Cabinet of Ministers, the 'Coast Guard' commenced its activities in 2001 with six small vessels and 75 personnel under the Ministry of Fisheries and Aquatic Resources. The basic training of Coast Guard personnel began at the Naval base at Welisara, SLNS Gemunu while professional training took place at the Japanese Coast Guard Training Centre in Tokyo. Six small vessels for the Coast Guard were launched at the fishery harbour in Beruwala. However, less than a year later, on 31st March 2002, a decision was taken to abolish the Coast Guard transferring all the assets and personnel to the Coastal Conservation Department.

The requirement of effective policing of the seas in the present context can be seen as an area where everyone needs to pay close attention. The much needed constabulary nature involvement is required in the present context where the dealings need to be carried out in accordance with laid down laws and regulations of the country as well as internationally accepted guidelines especially when it comes to maritime safety aspects. Naval and other maritime forces such as the Coast Guard are playing an essential role in these enforcement efforts. However, persons involved in maritime law enforcement should receive comprehensive training within the legal framework applicable to the execution of their respective duties. Accountability measures should be in place to address non-compliance with these regulations. Adherence to the rule of law enshrined in the existing maritime legal framework ensures that maritime law enforcement forces are equipped with the necessary international legal tools to effectively fulfil their mission. This approach allows for legitimate uses of the sea to proceed with a minimal amount of unwarranted interference, prioritizing the safety of life and property.

Therefore, having identified the excessive commitments and inadequate legal mandate in law enforcement of the SLN and the lack of capacity of Sri Lanka Police to enforce laws at sea, it had been decided to form a separate, empowered maritime law enforcement force. Accordingly, the SLCG was established to policing the waters around the island over the Indian Ocean. Meanwhile, there is a huge demand for non-military organizations to take the lead role in both regulating and close monitoring of developments in the maritime domain with assistance from the SLN and other key stakeholders who are involved in protecting maritime security. In this context, SLCG is of great assistance in the protection of maritime security concerns. The cabinet paper was presented on 03rd April 2008 to establish the Department of Sri Lanka Coast Guard. The Department of Coast Guard Act No 41 of 2009 was passed by the parliament on 09th July 2009 and the Department of Sri Lanka Coast Guard was formed. The operational activities of the SLCG were officially inaugurated on 04th March 2010 in Galle. The SLCG is entrusted to deal with a broad spectrum of tasks such as maritime security, maritime safety and marine environment protection through the enforcement of laws applicable to all maritime zones of Sri Lanka as described in the Maritime Zones Law, No 22 of 1976 and UNCLOS 1982. Every officer of the SLCG shall be deemed to be a 'Peace Officer' within the meaning for the purposes of the Code of Criminal Procedure Act No. 15 of 1979. The Coast Guard consists entirely of Navy personnel, whose tenure is generally two years. An officer or sailor deputed to the SLCG from the SLN remains subject to the provisions of the Navy Act and requisite legal measures are instituted against them in the event of a violation of disciplinary protocols as outlined within the aforementioned provisions.

Despite its comparatively diminutive size in relation to other Armed Forces, the Coast Guard constitutes a multifaceted institution tasked with diverse roles and missions. The diverse roles assigned to the SLCG, the allocation of SLCG resources necessitates a design that accommodates not only a singular function but also multiple functionalities. The fundamental nature of the Coast Guard as an organization is embodied in its versatile and multi-mission resources.

- **Vision of the SLCG.** A peaceful maritime environment whilst protecting the national interests.
- **Mission of the SLCG.** To ensure the security, safety and serenity of the maritime environment whilst enforcing the law at sea. Coast Guard is further committed towards the sustainable management and development of maritime resources.
- **Duties and Functions of the Coast Guard.** The duties and functions of the Department of Coast Guard shall be;
 - To prevent illegal fishing in the coastal areas of Sri Lanka and the protection of fishermen including rendering assistance at sea
 - To assist the Customs and other relevant authorities in combating anti-smuggling and anti-immigration operations
 - To initiate action to prevent and manage piracy at sea
 - To co-operate with the law enforcement agencies and the armed forces by taking necessary measures for the suppression of destructive terrorist activities occurring in the maritime zones and the territorial waters of Sri Lanka
 - To prevent transboundary movement of narcotics, by sea
 - To assist the relevant authorities in ensuring safety of life and property at sea
 - To participate in search and rescue operations for human beings in times of natural catastrophes and to assist in salvage operations in relation to vessels and other goods after such catastrophes and other accidents at sea
 - To assist in the preservation and protection of maritime and marine environment
 - To assist the relevant authorities in the implementation and monitoring of measures required for the prevention and control of marine pollution and other disasters which occur at sea
 - To assist in the conservation of marine species
 - To disseminate information including warnings by radio or any other means in times of natural catastrophes
 - The performance of such other functions as may from time to time be conferred on it or assigned to it, by the Government

Commenced with limited resources and infrastructure facilities, the SLCG aims to strategically institute coastal facilities across the island, thereby bolstering the potency of its fleet units to efficiently fulfil prescribed responsibilities and functions. Meanwhile, SLCG Life Saving Training School (LSTS) inaugurated its training by starting a Basic Level Lifesaving Course on 12th November 2012 with 12 numbers of trainees and continues to share commitments to improve public safety in and around waterfronts to make Sri Lanka free from drowning. SLCG Advanced Training Centre (ATC) was established on 29th February 2016. Initially, it was named as Training Office of SLCG Rohana. On 14th January 2022, ATC was shifted to CGS Kirinda due to congestion

in SLCG Rohana, in Mirissa. Advanced Training Centre is dedicated to designing and providing advanced training to newly joined personnel to SLCG.

The Coast Guard fleet was further expanded with the addition of a few vessels ranging from Offshore Patrol Vessels (OPV) to small craft. SLCG received its first OPV (CG 60) from the Indian Coast Guard (formerly ICG Varuna) and was commissioned as SLCGS Suraksha at the Port of Colombo on 21st October 2017. Subsequently, the Government of Japan donated two 30 meter long steel hull Fast Patrol Vessels (FPV) under the project for Maritime Safety Capability Improvement in Sri Lanka and commissioned as SLCGS Samudra Raksha and SLCGS Samaraksha, at the Port of Colombo on 29th August 2018. These ships are equipped with equipment used for firefighting, oil spill management and law enforcement activities. The second OPV of the SLCG was received from the SLN and was commissioned as the SLCGS Jayesagara at the Naval Dockyard, Trincomalee on 23rd July 2022.

The Contemporary Sri Lanka Coast Guard

The SLCG persists in attending to evolving national imperatives, encompassing the rescue of persons in distress, prevention of illicit and coercive maritime activities and promoting economic well-being and environmental custodianship. While the Coast Guard delivers exemplary service to the nation, the escalating demands of missions coupled with limited resource availability persist as ongoing challenges, posing obstacles to the preparedness of the Service for its designated duties, functions, and contingency operations. Although new assets provide the Coast Guard with remarkable capability, it is imperative to ensure the comprehensive training, provisioning and maintenance of the workforce and shore infrastructure essential for the operation and maintenance of these assets. Investments of this nature are pivotal for enabling missions, guaranteeing present operational success, and catalysing a transformative shift in the modus operandi of future operations.

The budgetary request of the Coast Guard is concentrated on endeavours aimed at reinstating service readiness by purposefully investing in technology, assets and support essential for fulfilling extant requirements and addressing emerging mission demands, all while maintaining a resilient and proficient workforce. It embodies consequential, risk-informed decisions that leverage scarce resources to enhance operational results, rectify outstanding maintenance backlogs, attract and retain a skilled and diverse workforce and modernize infrastructure to counteract 21st century threats. Therefore, the SLCG is in the process of charting its course to the future having the right understanding of the country's vision into a strategic way forward, broadening duties and functions on the following scopes;

- Maritime Security and Law Enforcement
- Maritime Safety
- Marine environment protection
- International Cooperation

For the smooth function and easy administration of the SLCG, four Coast Guard regions (North, East, South, West) have been established with the followings;

- | | | |
|-----------------------------|---|----|
| • SLCG Bases | - | 02 |
| • SLCG Stations | - | 08 |
| • SLCG Substations | - | 08 |
| • Fishing Monitoring Points | - | 26 |
| • Life Saving Posts | - | 16 |

Even though the approved personnel strength of 1600, encompassing 100 officers and 1500 sailors for the Coast Guard, up to the present time, has resulted in pronounced operational and administrative challenges for the SLCG. Consequently, the SLCG had to strategically allocate its existing human resources in accordance with operational requirements and threat analyses. However, it is evident that SLCG has functioned with below mentioned cadre (Table 2.1) over the preceding seven years.

Table 2.1*SLCG Cadre*

YEAR	OFFICER	SAILOR					FULL TOTAL
		RNF	VNF	VSS	RNR	VNR	
2017	91	1130	68	29	58	20	1396
2018	92	1134	70	30	60	15	1401
2019	94	1105	107	59	28	04	1303
2020	101	1089	123	61	20	06	1400
2021	94	1099	122	63	22	04	1404
2022	101	1153	118	59	18	04	1463
2023	109	1086	118	61	10	02	1386

Furthermore, a deficiency in personnel is evident across various Coast Guard deployments and fleet units, including the Coast Guard Headquarters.

Functioning of SLCG

The SLCG was made responsible for law enforcement and security of the coastal areas, the Maritime Zones of Sri Lanka and the high seas under the existing SLCG Act. Currently, maritime law enforcement and coastal security of Sri Lanka is mainly governed by a two-tiered structure. The SLN patrols the IMBL and EEZ by using both SLN and SLCG sea going assets except few IPCs and smaller craft deployed under the operational control of SLCG. This operational control has been taken charge by the SLN due to lacunas of SLCG to cater its operational monitoring functions independently from the inception.

Other than the fleet utilization by SLCG for maritime security and law enforcement, SLCG deploy its personnel for SLCG Bases, Stations, Sub-stations, Fishing Monitoring Points at fishery harbours, Lifesaving Points in key tourist beaches and dedicated teams for Oil Spill response and management in the four Coast Guard regions. Aforementioned functions and duties are carried out through officers and sailors of SLN deputed for SLCG for a specified period. SLCG ships and craft attached to four regions (North, East, South and West) for rapid operational deployment considering the strategic and operational readiness and availability of the seagoing units for such purposes.

However, as the SLCG cannot afford a fleet of vessels intended solely for specialized missions due to financial constraints, it is required to acquire vessels which are capable of carrying out a diverse range of Coast Guard duties. Moreover, the current Coast Guard fleet proves insufficient for the efficient execution of maritime law enforcement operations within the maritime zones of Sri Lanka.

Enduring Operational Challenges of the Sri Lanka Coast Guard

In general, the SLCG is confronted with numerous, complex and hybrid challenges. The following can be identified as significant challenges for the SLCG;

- The current workforce and available assets within the SLCG are insufficient for fulfilling their role effectively. Hence, there is a need for a highly trained and well-equipped workforce capable of adapting to evolving circumstances and responding promptly and effectively to emergencies.
- The SLCG is tasked with responding to distress calls and conducting search and rescue operations in diverse weather conditions. Therefore, the SLCG must be prepared to manage a variety of situations, especially under challenging weather and sea conditions in the future.
- The SLCG is responsible for protecting the marine environment and responding to oil spills, chemical leaks and other environmental disasters. These situations necessitate specialized equipment and training to ensure their safe and effective management. However, the SLCG faces a notable challenge due to the insufficient availability of a designated stockpile of required equipment and materials.
- The SLCG is also playing a critical role in protecting the national security. The absence of collaboration between agencies and gaps in information sharing could present challenges in effectively identifying and preventing threats to the country.
- The SLCG is facing numerous challenges due to the technology advances. As such, the SLCG needs to stay informed about advancements in maritime technology and adjust their training and equipment accordingly. This proactive approach ensures a swift response to the various maritime threats that may arise.
- The economic challenges within the country may pose obstacles to the development of the SLCG under current circumstances.
- The existing legal repository of the SLCG is a hindrance to its effective and efficient functioning and futuristic expansion.
- The transferring of proficient Coast Guard personnel to the SLN before fulfilling their mandatory service period in the SLCG could potentially impede the optimal utilization of available resources within the SLCG. Therefore, the SLCG has to allocate its finite resources to train a significant number of newly joined SLN personnel annually, in addition to the routine training scheduled for Coast Guard personnel.

CHAPTER 3

THREAT ASSESSMENT AND BROAD STRATEGIC DIRECTION

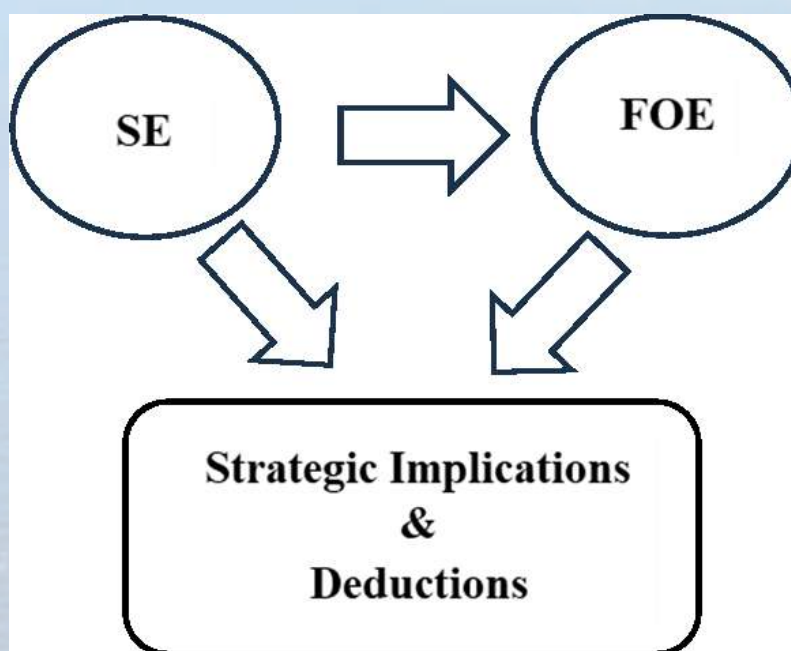
Understanding the Strategic Context

To understand the strategic context, the undermentioned factors are important to be followed;

- Measuring up strategic vision against existing Strategic Environment (SE)
- Predicting impact of Future Operating Environment (FOE) on strategic vision
- Deriving set of strategic implications and conclusions for study for existing strategic environment which are likely to be valid in the future operating environment to be used ENDS, WAYS and MEANS process

Figure 3.1

Understanding Strategic Context



Significance of the Indian Ocean Region

Geopolitically, major powers such as the US, China, India, and other regional stakeholders are actively shaping the Indian Ocean Region (IOR). The increasing prominence of the Indo-Pacific strategic concept reflects a broader realignment aimed at fostering stability and cooperation. In support of an open and free Indo-Pacific that enhances economic collaboration and regional security US, India, Japan, and Australia have come together to form the Quad. From a geostrategic perspective, maritime security remains a critical priority. The increase in infrastructure projects and naval activities associated with China's Belt and Road Initiative (BRI) has also drawn attention and interest from other nations regarding its implications for the region. While traditional maritime countries continue to have a strong interest in maintaining stability and freedom of navigation, India's Security and Growth for All in the Region (SAGAR) vision strongly emphasizes collaboration. With nations investing in port infrastructure and connection initiatives, the IOR is a crucial trade route from an economic standpoint. Economic rivalry is facilitated by the region's

importance for natural resources and energy transmission. The Indian Ocean remains a central hub for global economic and strategic dynamics as countries strive to strike a balance between geopolitical concerns and commercial goals.

The strong economic rise of Asian nations, especially China and India, has changed the current geopolitical, geostrategic and economic environment in the IOR. The BRI of China and the Act East Policy of India highlight their respective economies as investments and infrastructure projects spread throughout the region. One important factor is the transmission of energy since the Indian Ocean is used to carry a large amount of the world's oil traffic. Crucial chokepoints for energy supplies are the Straits of Hormuz and Bab-el-Mandeb which connects the Indian Ocean to the Persian Gulf and the Strait of Malacca which connects the Indian Ocean to the South China Sea. Sri Lanka's strategic location has positioned it as a pivotal player in regional geopolitics. The development of key infrastructure projects, including the Hambantota Port, Colombo Port City, the expansion of the Port of Colombo and the proposed Trincomalee development plan has drawn significant international attention. These projects highlight the increasing interest and engagement of various global powers in the region, reflecting the broader dynamics of strategic influence in the Indian Ocean. A more comprehensive engagement plan is indicated by the strategies of various countries, including India; 'Look East,' 'Act East' and 'Look Africa'. These policies, which emphasize diplomatic relations, economic cooperation and security cooperation with regions outside of the conventional Western-centric perspective are helping to shape the changing dynamics in the IOR as nations turn their attention more and more towards the Indo-Pacific.

Regional Initiatives

In this regard the Indian Ocean Rim Association (IORA), the Regional Cooperation Agreement on Combating Piracy and Armed Robbery against Ships in Asia (ReCAAP) and the Colombo Security Conclave (CSC) are regional maritime centric arrangements that are pivotal in Sri Lanka's future outreach and engagements. These constructs are not military alliances and are centered around a common thread towards persisting and evolving economic, environmental, societal and maritime security challenges and threats in the IOR. Sri Lanka already assumed chairmanship of IORA in October 2023 for a period of two years ending in 2025, while it also executes secretariat responsibilities of the CSC which is to be headquartered in Colombo. These are to be regarded as vantage points where Sri Lanka could influence policy directions and gain credibility towards future engagements. Further, the SLN is gearing to partner with the Combined Maritime Force (CMF) based in Bahrain in its long-term ambitions of undertaking UN led missions.

Ports Developments and Potential

The island's location connects its ports to the global supply chains and Port of Colombo is its crown jewel. It is one of the busiest transshipment port in South Asia and handles 95% of the island's external trade. Thirty percent of global oil supplies and 50% of container ships traverse through Sri Lankan waters. The Colombo port alone handles nearly 7 Mn Twenty-foot Equivalent Units (TEUs) annually. Forty percent of cargo handled in Colombo port are India bound. Further, the Colombo Port City development project is expected to attract vital Foreign Direct Investments (FDI) to a city that is already contributing nearly 45% to the state's Gross Domestic Product (GDP).

Meanwhile, an extension of the West container terminal in the Port of Colombo is a possibility. This on completion is expected to add 3Mn TEUs capacity to the port annually. The China Merchants Port Holdings Company Ltd is also operating a separate terminal in Colombo port

(Colombo International Container Terminal). By 2040, Colombo port is expected to handle 35Mn TEUs annually.

The Hambantota Port located within 10nm of the main shipping lanes has an expanse of 4,000 acres and a berthing capacity of 33 ships at a time, Hambantota is among the largest harbours in South Asia. Despite the controversies associated with its development, it is hard to rule out the port's potential as a maritime trading hub and service provider. The port operations had reached 1mn MT of cargo in 2019.

The GoSL has declared an ambitious development plan for the Eastern province centered around Trincomalee harbour. Further, the Trincomalee harbour is the 4th largest natural harbour in the world. It provides depth even for the largest commercial carriers. During the colonial era, the British built 101 oil tanks. It has great potential for a container transshipment facility and cruise liners. Efforts at developing Trincomalee harbour as early as 1980 were stalled due to geopolitics concerns that prevailed. Harbour and channel facilities still remains to be developed ensuring around the clock port operations. With the development boom experienced and expected among the Bay of Bengal states, Trincomalee harbour's strategic significance is about to rise.

Port of Kankasanturai in the Northern Province of the Sri Lanka plays multi-dimensional roles as an economic port, naval port and a socio-cultural port linking India and Sri Lanka. The development of this port is one of the important aspects.

The Oluvil port in the Eastern Province, is currently underutilized and non-operational due to heavy silting that is taking place within the port perimeters. This is the resultant of considerable sand and sediments from the Galoya river delta been swept further southwards through seasonal currents and been deposited at the harbour mouth. However, if properly functioned the Oluvil harbour has potential in facilitating the tourism sector providing safe anchorage and berths for leisure craft. Feasibility of the development of a yacht marina cannot be ruled out. Located between Trincomalee and Hambantota, development of the Oluvil harbour is to be considered advantageous considering socio-economic advantage for fisheries, tourism, boat building, local communities and related industries.

The existing boat jetty at the Delft island is to be developed into a harbour / yacht marina facilitating the tourism sector. In addition, this is the furthestmost land territory of the mainland with a substantive community which implies provision of security and supplies for its inhabitants.

The proposed Thalaimannar port is mainly intended to be used for boosting passenger and cargo ferry services between Sri Lanka and India. However, this facility can be harnessed for the harbouring of SLN and SLCG vessels to prevent any illegal activities in the area.

Anticipated Threats and Challenges

The IOR will be threatened by several traditional and non-traditional issues. In terms of geopolitics, growing competition between major powers, especially those involving the US, China, and India may intensify regional resentments and change the strategic environment. Security issues persist due to maritime threats such as terrorism, piracy and unresolved territorial conflicts. Rising sea levels and extreme weather events are two ways that climate change exacerbates non-traditional challenges to vulnerable coastal nations like Sri Lanka. This combined problem necessitates comprehensive approaches to security cooperation and environmental resilience.

Due to its strategically advantageous location in the IOR, Sri Lanka faces particular difficulties. For Sri Lanka's sovereignty and security amid major power competition, striking a careful balance in the face of budgetary restrictions becomes essential. Security concerns are heightened by the growing militarization of the marine realm. To maintain strategic autonomy and avoid excessive influence, Sri Lanka needs to exercise caution in managing its interactions with big nations. Overcoming these obstacles and building resilience against complex threats in the IOR need to address socioeconomic inequality and strengthen internal political stability. Ensuring environmental sustainability, economic progress and security requires cooperative regional efforts.

Sri Lanka's Maritime Security Interests

Sri Lanka's strategic location in the Indian Ocean is directly linked to its interests in maritime security, with a focus on safeguarding its maritime boundaries and maintaining regional peace. Sri Lanka is an island nation whose economy is largely dependent on maritime trade. Maritime security is of utmost importance considering the emerging maritime trade in the IOR and Sri Lanka's potential to become a transshipment hub.

The idea of an 'Indian Ocean Peace Zone,' which sees the area as a peaceful area free from military rivalries and wars, has received backing from Sri Lanka. The concept is in line with Sri Lanka's dedication to upholding a stable and peaceful maritime environment, encouraging collaboration and economic growth among states bordering the ocean.

The nations that border the Indian Ocean are known as littoral states and they are vital in determining the nature of maritime security. Working along with these surrounding countries, Sri Lanka takes an active position in regional forums like the IORA. The six priority areas of IORA are; Maritime Safety and Security, Trade and Investment Facilitation, Fisheries Management, Disaster Risk Management, Tourism and Cultural Exchange and Academic Science and Technology Cooperation. The two focus areas are; Blue Economy and Women's Economic Empowerment.

Sri Lanka plays a proactive role in enhancing maritime security by participating in initiatives to combat armed robbery and piracy, safeguard freedom of navigation, and provide assistance during natural disasters. Its strategic location has enabled Sri Lanka to collaborate with key maritime stakeholders, strengthening its ability to protect national maritime interests while contributing to stability and security across the IOR.

- **Key Maritime Interests.** The national interests of Sri Lanka would entail fostering a secure environment for economic growth. In order to ensure this, it would be in Sri Lanka's interest to maintain peace and stability in its region of interest and nurture a stable environment at sea.
- **Economic Security.** Fostering economic security for Sri Lanka in the maritime sphere would include the protection of trade, energy supplies, and ocean resources. The main components are; maritime trade, ocean resources and energy requirements which are essential.
- **Regional Cooperation.** Sri Lanka is keen to promote regional stability as well as bilateral and multilateral collaboration. As a result, the marine domain may become a collaborative space, with the following; conduct of exercises, setting up of joint task force to assist in tackling natural calamities, ensuring the safety of SLOCs and joint effort preventing marine pollution, conservation of marine environment, piracy, global smuggling, poaching and Search and Rescue (SAR).

Non-Traditional Maritime Security Threats

The protection of the aforementioned marine security interests is contingent upon the effective handling of the non-traditional security threat issue. Following are some of the main threats identified;

- IUU Fishing
- Irregular Maritime Migration
- Trafficking Drugs and Small Arms
- Hijacking/ Armed Robbery at Sea and Piracy
- Terrorism/ Maritime Terrorism
- Maritime Insurgency
- Transfer of Weapons of Mass Destruction
- Marine Pollution
- Climate Change
- Natural Disasters

Hybrid Threats

- Cyber threats to virtual lines of communication
- Economic coercion aimed at political instability
- Proxy front groups / individuals destabilizing social cohesion

Threats to Maritime Economic Security

The major threats to maritime economic security are;

- Disruption of SLOCs
- Closure of Choke Points
- Competition for Resources
- Piracy

Transnational Security Threats Viable in IOR

It has been observed that drug trafficking, IUU fishing, human trafficking and piracy are the most prioritized maritime security threats in the IOR. IUU fishing in the Palk Bay area is widely seen as a danger to food security, the marine ecosystem, maritime livelihoods and the maritime economy. The next most contentious issue reported is drug trafficking from the Golden Crescent and Golden Triangle along the Southern sea routes. Other than that, piracy in the Horn of Africa, the Malacca Strait and human trafficking in the entire IOR are major transnational crimes concerned in the region.

- **Drug Trafficking.** Due to the centrality of its location, Sri Lanka continues to be utilized as a transit point for drug trafficking through the East-West sea lanes. Along with the trade of illicit drugs, other illegal activities such as money laundering, terrorism, human smuggling become widespread not only within a single country, but in the region. UNODC terms this route as the ‘Southern Route’ and it involves the movement of drugs by sea across the Indian Ocean from the Makran Coast to East Africa and the key attraction of the southern route for drug

trafficking is the lack of enforcement capacity on the high seas. The phenomenon of illicit drug trade, drug circulation and drug addiction are not new to the country, but it has reached a level which the government cannot further ignore. Not only for Sri Lanka, but it has also become a serious issue for regional as well as extra regional countries despite numerous counter mechanisms. In the Sri Lankan scenario, it is not only identified as a serious social and health issue but also a huge challenge to national security due to the wide range of associated criminal activities.

- **IUU Fishing.** IUU fishing in the Palk Bay area is generally recognized as a significant threat to food security, sustainable marine ecology, maritime livelihoods, and the maritime economy. Therefore, IUU fishing must be considered a significant maritime security threat in the Palk Bay area and is likely to be a threat in the Bay of Bengal in the IOR. Therefore, it is necessary to implement robust policies to combat IUU fishing to minimize the spread of maritime transnational criminal activities such as drug trafficking and other impacts of IUU fishing.

National Economy and Maritime Security

Admiral Mahan developed a simple yet powerful idea about how a country's economic success, its maritime trade and its navy are interconnected. He outlined a logical sequence, when a nation is active in economic endeavours, it naturally engages in maritime trade, moving goods both along its coasts and across oceans. To safeguard this trade, a navy is essential. The navy's protection not only ensures the safety of the trade but also increases its general prosperity. In this way, the relationship forms a positive cycle where economic activity leads to trade, which in turn requires a navy for protection and the protected trade further enhances the nation's wealth. In the contemporary context, maritime security is a collective effort involving various stakeholders operating at different levels. The acceptance and implementation of maritime enforcement jurisdiction by recognized agencies within the liberal international order are pivotal in this regard. Globally, Coast Guards play a significant role in upholding maritime law enforcement. Their involvement underscores a comprehensive approach where cooperation among diverse entities is crucial for the effective safeguarding of maritime interests and the maintenance of order in sea areas of interest often within littorals.

Sri Lanka became an important transshipment hub because of its geo-strategic location in the Indian Ocean. Supporting the facts, the Port of Colombo ranked as the 24th best port in the world and the highest performing port in South Asia accordance to the review of UNCTAD in year 2022. Furthermore, the huge volume of traffic passing through close to the Southern tip of Sri Lanka in the Indian Ocean includes 70 percent of the global oil trade and 50 percent of the global container traffic in which some traffic is facilitating its ports (Ports of Hambantota and Galle) outside port limits (OPL) services to approximately 750 ships per month, primarily in Galle. Moreover, offshore supply of fuel and gas buoys, Major submarine cables connecting the mainland, proposed wind farms offshore and many more economically viable infrastructures within port limits and construction of Colombo Port City, tourist hot spots including accommodations along the coast are directly connected to the blue economy and demand maritime security to decide its direction in long run.

Blue Economy and Maritime Security

Sri Lanka's maritime zones and continental shelf contain some of the world's richest concentrations of biodiversity and supports the livelihoods of millions of people, both directly and indirectly. Sri Lanka's marine resources also include essential commodities, such as petroleum,

natural gases and minerals, which are not being effectively utilised. The emergence of a Blue Economy approach offers a unique opportunity to address complex and interconnected maritime security challenges without compromising economic growth. Sustainable economic growth is the focus of the global policy discourse where SLN and SLCG have to play key roles in promoting collaboration in blue economic sectors.

The Blue Economy needs to ensure maritime security for its growth and sustainability. The absence of security prevents investments and blue crimes undermine economic development. In contrary maritime security needs the help of the Blue Economy as law enforcement is required to be funded. The maritime environment is threatened by transnational crimes, marine pollution, IUU fishing and inter-state disputes. Therefore, Blue Economy cannot prosper without proper security. The mandate of the SLN and SLCG is defence, law enforcement and protection of sovereignty and maritime territorial integrity. Therefore, the SLN and SLCG are at the centre of the growth of the blue economy. Because in the absence of maritime security, no meaningful economic activity or resources can be exploited from the ocean.

Sri Lanka National Hydrographic Office (SLNHO)

Sri Lanka Navy performed hydrographic related duties in Island after independence and SLN Hydrographic Service established in year 2017 to perform national and defence charting requirement of the country. Sri Lanka had ratified the international convention for the Safety of Life at Sea (SOLAS) and according to SOLAS chapter V - regulation 9, hydrographic surveying need to be carried out to ensure the requirements of safe navigation. Further, Sri Lanka National Hydrographic Office (SLNHO) was established on 14 December 2023 by SLN to functioned under the MOD as the responsible agency for National Charting in Sri Lanka. At present SLNHO possess facilities to conduct shallow water surveys, including single-beam echo sounders, side-scan sonar, 3D motion sensors and other relevant equipment. Additionally, it possesses data processing and Electronic Navigational Charts/Paper chart production software, supported by a skilled workforce of 37 officers and 131 sailors specialized in hydrographic subjects, ensuring manufacturing of hydrographic products to meet international standards.

Another significant contribution is the maintenance of eight tide monitoring stations across Sri Lanka, operating 24 hours a day. This capability enables the publication of accurate tide tables for the country, serving as the current tidal prediction. The established office is tasked with effectively overseeing hydrographic surveying operations, aiming to generate revenue from the maritime sector through the production and sale of nautical charts/ENCs. As part of its growth strategy, SLNHO anticipates increased engagement, requiring the SLN to facilitate necessary human resources and other facilities such as to support SLNHO's envisions of future expansion by acquiring a hydrographic survey ship with deep water surveying capabilities dedicated to hydrographic survey purposes.

Improved Maritime Search and Rescue System by Strengthening MRCC

The SLN has been entrusted with the delegated responsibility, as per the Merchant Shipping Act No 52 of 1971, to operate the MRCC within its functional establishment. In fulfilling this mandate, SLN personnel are actively engaged in coordinating and collaborating with regional rescue centres, merchant mariners and all relevant maritime stakeholders. This involvement is particularly evident in search and rescue operations where their actions are guided by the International Aeronautical and Maritime Search and Rescue (IAMSAR) manual. This strategic role positions the SLN at the forefront of maritime safety, underscoring its commitment to effective coordination and cooperation within the broader maritime community. This endeavour would indirectly affect maritime safety of merchant vessels, pleasure craft, passenger vessels transiting around Sri Lanka in which boost coastal and adventure maritime tourism.

Sri Lanka's flourishing blue economy is heavily reliant on the ocean-based service sector. Therefore, the preservation of economic growth and prosperity necessitates a paramount focus on maritime safety and security. An indispensable element in achieving this is the establishment of an effective Maritime SAR system. Such a system is critical for fostering a safer and more secure environment for maritime industries, coastal adventure tourism, travel and overall economic development.

In this strategic initiative, the SLN is focusing to fortify the MRCC. This enhancement will involve establishing a separate and independent management system, incorporating a well-structured SAR organization and upgrading communication capabilities, including the Global Maritime Distress and Safety System (GMDSS) distress system. Additionally, the MRCC will expand its reach by establishing a Rescue Sub-Centre (RSC) at the Port of Hambantota. This extension aims to improve the coordination of SAR-related incidents in proximity to the busy sea lanes south of Sri Lanka, complementing the efforts of MRCC Colombo.

Furthermore, a network of new coastal radio stations is planned to establish in Kallarawa, Galle, Arugambay, Batticaloa, Trincomalee, Point Pedro and Mullikulam. These stations will play a pivotal role in monitoring radio distress frequencies and facilitating ship-to-ship and ship-to-land communications. This comprehensive approach will enable the SLN and the SLCG to coordinate SAR incidents seamlessly with other maritime stakeholders with a particular emphasis on collaboration with the SLAF for expeditious responses to maritime search and rescue operations.

Maritime Environment Protection

The SLN and SLCG play vital roles in safeguarding the maritime environment, with a particular focus on combating marine pollution. In Sri Lanka, the Coast Guard serves as the initial responder in oil spill response and management, adhering to the guidelines outlined in the National Oil Spill Contingency Planning (NOSCOP). Their proactive approach ensures swift and effective measures are taken in the event of oil spill incidents. Concurrently, the SLN is mandated to maintain a capable oil pollution response team to manage potential oil spillage, up to tier one level, within its operational purview. In compliance with the NOSCOP, both the SLN and the SLCG are equipped with substantial, well-trained personnel to address major oil spill incidents. This preparedness encompasses the ability to engage in oil containment and clean-up operations, aligning with NOSCOP's stipulations as an integral component of the national safety strategy. The emphasis on maintaining trained personnel and a coordinated response underscores the commitment of the SLN and SLCG to environmental protection and maritime safety.

Maritime Biodiversity of Areas Beyond National Jurisdiction (BBNJ)

Approximately 64 percent of the earth's oceans fall under Areas Beyond National Jurisdiction (ABNJ), making the conservation and protection of biodiversity in these areas a collective responsibility. The Biodiversity Beyond National Jurisdiction (BBNJ) treaty denotes a significant advancement in global ocean governance, addressing gaps in the existing legal framework for marine biodiversity conservation. However, the effective enforcement of such agreements relies on advanced technologies like surveillance and monitoring tools. In the Sri Lankan context, only the Navy and Coast Guard possess the capabilities to engage in monitoring and regulatory duties, as other maritime agencies lack brown water facilities. Therefore, a well-equipped and sizeable naval and Coast Guard force is crucial to addressing the unique challenges posed by biodiversity conservation beyond national jurisdiction. To fully support the current international effort in regulating the BBNJ, the Sri Lankan government must ensure that the SLN and SLCG forces are

technologically prepared and strategically positioned. Thus, the SLN and SLCG strategies must account for future needs when formulating maritime force structures and acquiring assets.

Net Assessment – Sri Lanka Navy and Sri Lanka Coast Guard

Conducting a comprehensive net assessment of SLN and SLCG involves a multifaceted framework encompassing national security, economic development, environmental sustainability and international cooperation. Security considerations require a deep dive into historical conflicts, ongoing security challenges and the effectiveness of reconciliation efforts. Additionally, strategic collaboration and geopolitical positioning are pivotal in understanding Sri Lanka's regional identity and recognition.

Establishing Strategic Intent

Strategic Intent mainly consists of National Vision, National Values, National Aim, National Mission, National Interests and National Security Objectives.

Perceived Maritime Security Objectives

As an island nation with significant national and regional interests, the importance of the maritime domain to Sri Lanka is unquestionable. It has been and will continue to be, the invisible lifeblood of our nation's prosperity. Over the next five years, action will be taken on these perceived Maritime Security Objectives to further develop our approach to maritime safety and security, prosperity and international cooperation while upholding laws, regulations, and norms to deliver a free, fair and open maritime domain. These objectives are interconnected and form the basis of this strategy document. These perceived Maritime Security Objectives shall inform at focusing on core functional areas for our maritime forces.

- **Protecting Our Homeland.** Achieve the most effective maritime security framework for our maritime domain, ports and infrastructure.
- **Responding to Threats.** Response to bring capabilities and expertise to new and emerging maritime threats in order to achieve maritime safety and security.
- **Ensuring Prosperity.** Ensuring the security of international shipping, the unimpeded transmission of goods, information and energy to support continued global development and our economic prosperity.
- **Compliance to Our Values.** Championing the United Nations Convention on the Law of the Sea and national laws as the legal framework within which all activities in the ocean and seas are carried out whilst ensuring rules based good order at sea.
- **Supporting a Secure, Resilient Ocean.** To work towards an ocean that is effectively governed, clean, healthy, safe, productive, and biologically diverse while achieving Sustainable Development Goals (SDGs).

This strategy looks at how Sri Lanka can continue to strengthen the defences of the maritime sector, setting out robust, approaches to emerging threats. Using our strength in security and diplomacy and our will and agility to lead the way in tackling some of the most challenging issues in the maritime domain. It will look forward to identify and mitigate future threats; from, in and under the water.

Core Functions of our Maritime Forces

Aligned with its Maritime Security Objectives and unique context, the SLN focuses on core functions of Maritime Domain Awareness(MDA), Defence, Deterrence, Maritime Security, and Sealift. These priorities guide the efficient planning, organization, and utilization of limited resources to achieve strategic goals outlined in 'NAVSTRAT-2030.'

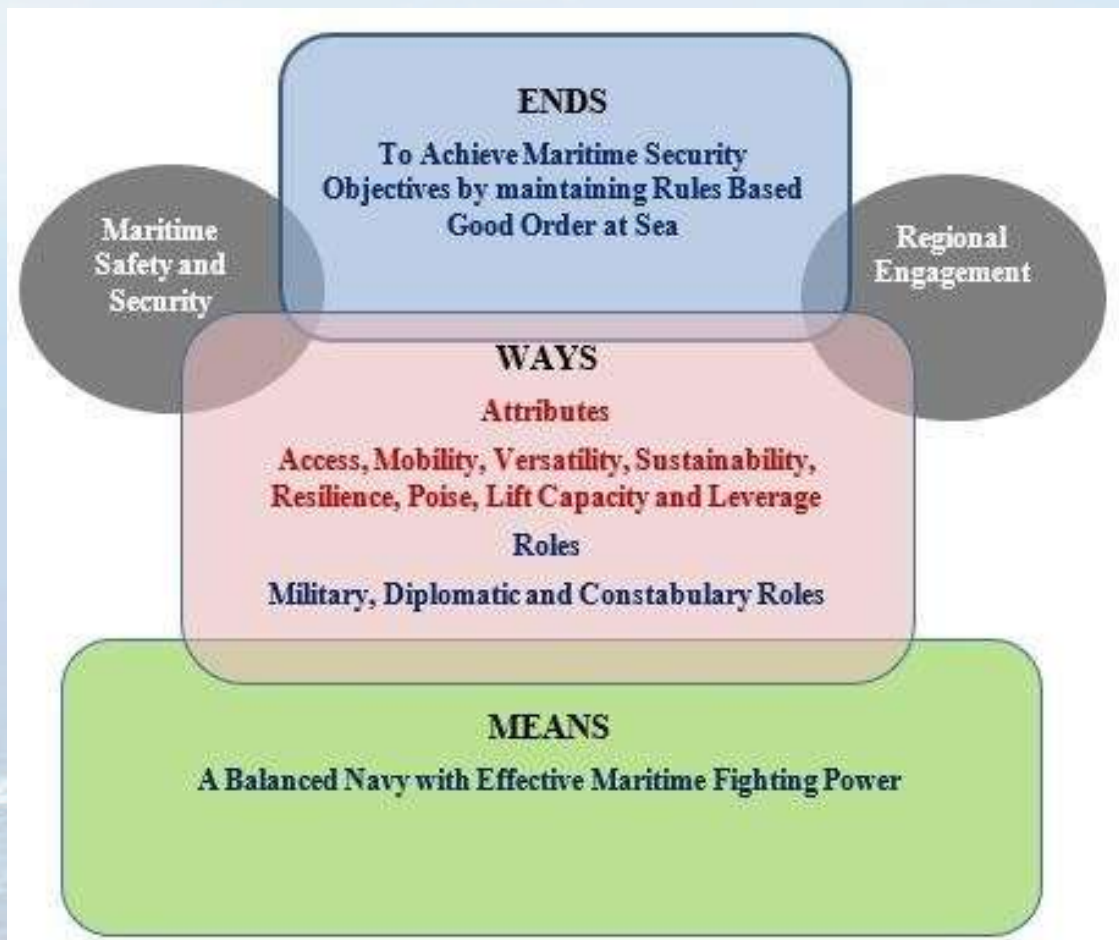
- **MDA** - Capability and capacity for real time MDA is critical for the execution and realization of desired effects in our Sea Area of Interests(SAOI). This could also be attributed as central to other functions efficacy and actualization of optimum results. MDA as per the IMO definition is, *"the effective understanding of anything associated with the maritime domain that could impact the security, safety, economy or environment"*. SLN understands the need for a comprehensive Maritime Operational Picture(MOPP) which includes but not limited to the surface, sub-surface and air dimensions. A more holistic approach would be the inclusion of safety and security into this matrix. In a sense, this elucidates having credible MDA improves safety, which in turn supports safe navigation by monitoring weather conditions, vessel traffic and potential hazards at sea. It also helps prevent collisions and accidents ensuring safety of vessels, crew and cargo. Establishing a clear and precise maritime picture in our maritime jurisdiction and in the SAOI provides for the effective and efficient utility of available assets, resources especially considering our inherent limitations.
- **Defence** – Defence of critical infrastructure / resources, strategic and operational Centres of Gravities that are vital to the sustenance, survival, security and safety of the state, without which would be perilous to our way of life, societal progress and prosperity.
- **Deterrence** – Deterrence involves showcasing a credible threat to discourage aggression or unlawful actions in our domain by highlighting the risks and costs outweighing any potential benefits. A visible presence effectively deters lower-level conflicts and lawless behaviour. Forward presence is a crucial aspect of this strategy in the maritime domain.
- **Maritime Security** – Maritime security operations aim to protect sovereignty and ensure safety in our maritime domain by addressing threats like transnational crimes, piracy, terrorism, arms smuggling, illegal migration, and environmental hazards. These efforts also include safeguarding marine resources and responding to security challenges such as human trafficking and WMD proliferation. Additionally, the SLN participates in joint and combined security operations with regional and international partners. These operations demonstrate our commitment to collective security and upholding a rules-based international order at sea. From sharing situational awareness to executing interdiction and law enforcement, we contribute to maintaining maritime stability.
- **Sealift** - Sealift in our unique context consists of the afloat pre-positioning for replenishments to sustain maritime security operations and to support civil authorities and regional states for HADR missions during natural and man-made disasters. This ensures that the SLN is capable to sustain and deliver specialized maritime services in support of national security objectives and regional commitments or projection of stability operations (POSO) at times of war and peace.

Broad Strategic Direction

The ends, ways and means of Sri Lanka's Maritime Power are summarised in the following figure 3.2;

Figure 3.2

Broad Strategic Direction



CHAPTER 4

RESOURCE ALLOCATION AND BUDGETING

The NAVSTRAT-2030 will require a comprehensive budget allocation in order to effectively implement and achieve its strategic objectives. Especially, when developing a comprehensive resource allocation and budgetary plan for the SLN, it requires careful consideration of several factors like;

- The evolving maritime security landscape
- New and emerging threats
- National priorities and government policies
- Available resources
- National Gross Domestic Product (GDP)

Therefore, considering all aspects mentioned in above, the resource allocation and budget to be prioritized;

- Investment in naval infrastructure facilities to enhance the SLN's operational capabilities and facilitate the maintenance of naval assets
- Allocation of sufficient funds for the new acquisitions
- Provisions for adequate resources for training and development
- Allocation of funds for research and development initiatives to promote innovation and technological advancements
- Provision of financial resources for international cooperation initiatives to enhance maritime safety and security through partnerships with foreign navies and agencies

Comparison of National Defence Budget and Navy Budget in Last Six Years

Defence spending has consistently increased over the past decade, despite the end of the armed conflict in 2009. Annually GoSL spends around 1.7% to 1.9% of GDP for defence budget. In 2023, GoSL allocated Rs. 411.7 Bn to defence and it is 1.8% of GDP. This is the third highest budget allocation among all ministries, exceeded only by Finance and Public Administration. As per the Table 4.1, SLN has received 17% to 20% of allocation from defence budget.

Table 4.1

Comparison of Defence Budget with SLN Budget (2019 - 2024)

DESCRIPTION	2019	2020	2021	2022	2023	2024
Defence Budget(Mil) (Rs Bn)	279.1	283.8	307.8	353.1	411.7	423.7
SLN Budget (Rs Bn)	56.4	56.4	57.3	61.4	77.7	81.3
SLN Budget as a Percentage of Defence Budget	20.2%	19.90%	18.60%	17.40%	18.90%	19.20%
Annual Increment of SLN Budget compare to previous year		Very minimal percentage	1.57%	7.27%	26.5%	4.6%

Government vision of promoting a Blue Economy initiative, the country aims to become a maritime hub in the region taking advantage of its central geographical position and proximity to major sea lanes. In order to realise government Blue Economy initiatives, it is essential to achieve maritime security objectives. Hence, it justifies to allocate at least 25% to 30% of defence budget provisions towards the SLN to acquire essential technology, platforms and infrastructure to facilitate rules based good order at sea.

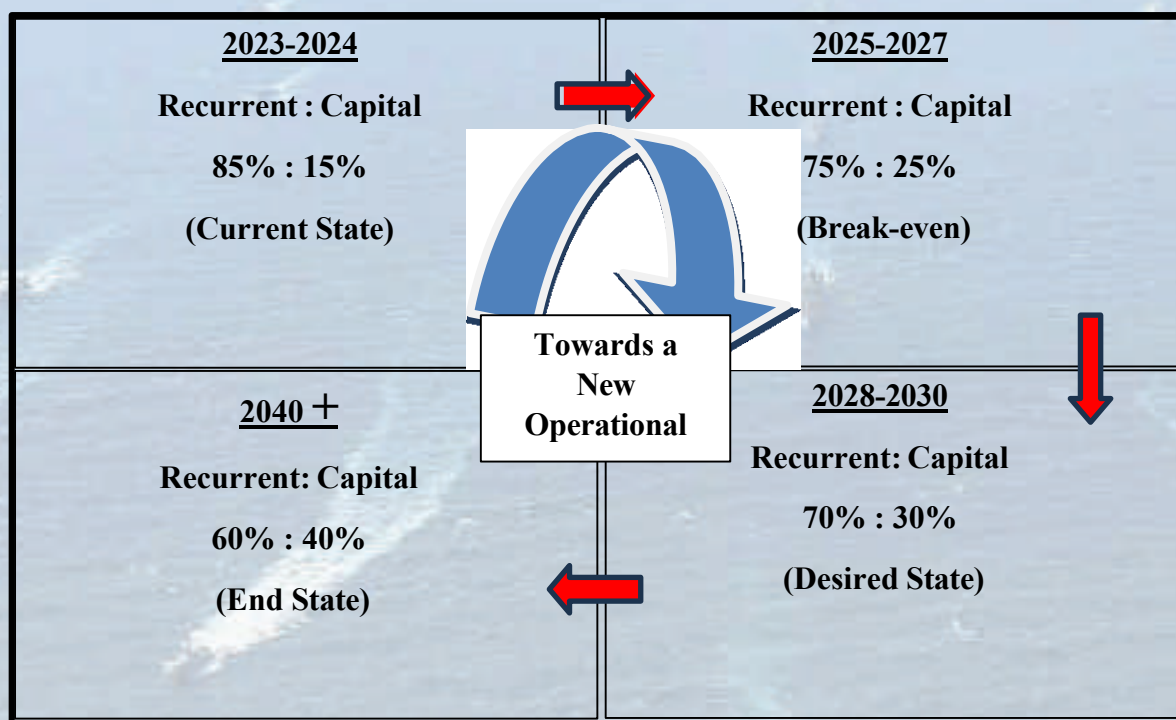
Budgetary Rationale for Force Structuring

Navies are capital and technical intensive. Thus, there needs to be a clarity of thought and understanding on this premise from the polity. SLN is not in a position to invest in a multitude of platforms, technologies, sensors, weapons and equipment that would be envisaged by any maritime nation in the 21st century due to financial constraints. However, SLN could compensate to its overall limitations through a balanced force generation capacity at a particular time and space.

The underlying strategic logic of this endeavour is to identify a viable figure of personnel required for an optimum quality to quantity mix for the future Navy in order to achieve the desired effects pursuing SLN's maritime security objectives.

Figure 4.1

Possible Future Scenarios based on Recurrent and Capital Expenditure Variances



CHAPTER 5

PARTNERSHIPS AND NAVAL DIPLOMACY

Introduction

Expanding our network of partners and improving our ability to operate alongside their naval forces foster the secure environment essential to a free flow of goods, protect our natural resources, promote stability, prevent conflict and maintain our neutral stance. Understanding the influence of regional powerhouses are paramount important for deciding the well-balanced maritime strategy for Sri Lanka. Even though the influence of the United States all over the world seems to endure, Russia and Europe may remain important global actors. The economic and soft power of the West tends to be weakened. Meanwhile, China is booming globally and directing its energy through the sea. The alliances such as Quad and AUKUS encourage Sri Lanka to strategize pragmatic maritime strategy in order to sustain the status quo. Consensual engagements are essential for lasting benefits. Sri Lanka must use the ocean as a conduit for building relationships. The UN, Combined Maritime Forces (CMF) and other maritime organizations to be rightly tapped and pre-emptive efforts are imperative for capitalizing on new opportunities. Thus, the force structure and the capabilities of SLN and SLCG are required to be compatible with the futuristic demand of global maritime efforts.

Development of Partnerships through Diplomacy

The promotion of free and open seas ensures maritime safety and security while tackling environmental issues that come directly under naval responsibility. Navy's operation in isolation can achieve limited success thus navies are building partnerships with foreign friendly nations. The partnerships of SLN have grown ever since the Navy was established on the Island. The country is known for having a non-aligned policy while maintaining relationships with regional and extra-regional stakeholders. The global recognition for the hospitality and openness of our country paved the path for booming healthier relationships with foreign navies, Coast Guards, and other agencies.

The evolving maritime competition in the Indian Ocean and Indo-Pacific region opens many windows of opportunity for Sri Lanka to strengthen its existing as well as fresh partnerships with maritime stakeholders. The strategic competition of powerful countries for establishing their footprint creates both opportunities and threats for countries like Sri Lanka. The strategic competition between the US and China may trigger a conflict situation or an unstable IOR. Therefore, a bandwagon or taking sides are not viable options. Thus, a balanced approach is key to remaining nonaligned and presenting SLN as a valued partner for stabilizing the IOR.

Our partnerships grew numerically and the challenge is to develop healthier ones which produce mutual benefits. The complementary interests of stakeholders can be served through the partnerships among likeminded countries. The accurate identification of complementary interests of maritime stakeholders is the primary task and strategizing to capitalize on strengths and capabilities through interoperability and interdependency is the secondary task.

Naval Diplomacy is unique for an island nation like Sri Lanka in which the country can extend its goodwill and peaceful stance. Since 2000, SLN has been sending ships on goodwill visits. Sri Lanka is facilitating port calls for all friendly navies. Since 2008, the country has hosted 646 foreign naval ships.

Ongoing capacity building efforts among friendly foreign countries are in significant growth. The expertise and tacit knowledge in asymmetric warfare give SLN a prominent role in disseminating knowledge with foreign navies pioneering Visit, Board, Search and Seizure (VBSS) and Special

Forces training. United Nations Office on Drugs and Crime (UNODC) and Pacific Augmentation Team (PAT) have partnered with SLN. Those agencies have been working collaboratively with SLN and mutually organizing tailor-made as well as customized courses for a range of military participants since 2016.

Military diplomacy through the placement of Defence Attaches (DAs) in foreign countries and inviting more foreign military representatives on Sri Lankan soil will augment our global acceptance. Australia, India and Indonesia are facilitating the opportunity of permanent residential DAs of SLN. The contribution and sending of potential SLN officers for overseas assignments are to be continued and new opportunities are to be sought. The capacity building of potential officers is to be deliberated aiming at expanding the future maritime landscape.

Strengthen Diplomatic ties with Maritime Nations

At present, like-minded maritime nations are interconnected through a web of alliances and Sri Lanka stands in a prominent place mainly due to its location. SLN has maintained balanced diplomatic ties with all the South Asian countries which allows our role as maritime facilitator in the region. Sri Lanka is the only country in South Asia that can invite all other South Asian countries to sit and talk in one forum. It is the unique advantage Sri Lanka has compared to all our neighbours.

The US and other partner nations in the Indo-Pacific work on the concept of a 'Free Indo-Pacific' and are more concerned with regional security. Similarly, Sri Lanka collaborates and coordinates with regional nations to ensure freedom of navigation and regional security. The SLN aims to enhance capabilities through diplomatic partnerships with Australia, China, France, India, Japan, Maldives, Russia, Singapore, the UK and the US to protect the maritime environment. Sri Lanka is widely regarded for its contribution towards the formulation of UNCLOS and remains a signatory or ratified nation for the majority of peaceful conventions and holds responsibility for international obligations. The already signed 76 bilateral agreements and ongoing initiatives to sign MoUs between like-minded countries facilitate enhanced diplomatic ties with nations. Therefore, a futuristic action plan is to be worked out with a pragmatic approach in order to take all potential states on board.

Engage in Joint Patrols and Exercises with Regional Navies

The SLN has been pledging for UN missions and contributed to global efforts since 2009. The UN missions bestow the opportunity for financial benefits and invariably elevate the professionalism of SLN personnel. Several South Asian navies successfully deploy naval vessels in UN peacekeeping operations, earning significant contributions to the economy and GDP. SLN may follow suit, a similar approach would foster a positive and healthy competitive culture within the navy, directing the naval force towards talent enhancement and competency development. Recently CMF has opened doors for SLN to conduct joint patrols. The invitation of CMF may be a further catalyst for the UN missions as well. The development of capabilities to deploy for CMF or UN missions should be considered in future force structuring. The interoperability and interdependency only can be achieved through technological match, which requires sophistication and sufficient budgetary allocations. The country may be rewarded with international recognition and will have a professionally competent naval force as a return on investment.

The regional navies of Bangladesh, India and Pakistan maintain strong relationships with SLN however great effort is to be taken to avoid the delusion that SLN supporting any navy against the interests of another. The steadily growing number of joint maritime exercises is a real testament to SLN's attempt to build interdependency and interoperability among partners. SLN has the added advantage of having strong neighbouring navies for collaboration. Several key naval

exercises are organized in the maritime domain and opportunities has given like-minded countries to collaborate. The current maritime calendar of SLN is as follows;

- **Bilateral**
LION STAR – Sri Lanka and Pakistan
SLINEX – Sri Lanka and India
- **Tri-Lateral**
CARAT – US, JMSDF and Sri Lanka
DOSTI – Sri Lanka, India and Maldives
- **Multilateral**
AMAN – Pakistan
BARRACUDA- Pakistan
COMODO – Indonesia
IDEX – UAE
IFR – Japan, Bangladesh
IMDX – Singapore
KAKADU – Australia
LIMA – Malaysia
MILAN – India
NATPOLREX- India
SEACAT – Singapore

Great care is to be taken to maintain the same mix and balance in the future maritime calendar creating more opportunities for enhanced collaboration. The vertical and horizontal expansion of the magnitude of the maritime calendar is to be anticipated and correct predictions on force structure and budgetary allocations are imperative.

Participate in International Forums Addressing Maritime Security

The SLN participation in international forums is progressing steadily and making noteworthy progress. The initiatives have already been taken to establish a Sri Lankan footprint in the international arena. SLN represents underneath events;

- **Inter-Governmental Organization/ Maritime Dialogues**
Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC)
Critical Maritime Routes Indo-Pacific (CRIMARIO)
Coast Guard Global Summit (CGGS)
Colombo Security Conclave
Galle Dialogue
Goa Maritime Conclave
Head of Asian Coast Guard Agencies High Level Meeting (HACGAM)
Indian Ocean Naval Symposium (IONS)
Indian Ocean Regional Information Sharing (IORIS)
Indian Ocean Rim Association (IORA)
International Sea Power Symposium
Rim of Pacific (RIMPAC)
Western Pacific Naval Symposium (WPNS)

- **Defence Dialogues**
India and Sri Lanka
Pakistan and Sri Lanka
- **Navy to Navy Staff Talks**
India
Indonesia
Japan
Pakistan
Russia
US
- **Workshops**
ICITAP - International Criminal Investigative Training Assistance Programme
IFWG - International Frigate Working Group
IOIF - Indian Ocean Island Forum
ISG - Institute for Security Governance
IPESF - Indo Pacific Environmental Security Forum
KLE - Key Leaders Engagement
LIMA - Langkawi International Maritime and Aerospace
ReCAAP - Regional Cooperation Agreement on Combating Piracy and Armed Robbery against Ships in Asia

Galle Dialogue

The Galle Dialogue is the main international maritime event that takes place in Sri Lanka. This apt initiative was the brainchild of the SLN under the patronage of MOD and Ministry of Foreign Affairs (MOFA) aftermath of humanitarian operation in 2009. The Galle Dialogue, since its inception in 2010 has created a forum to share knowledge, experiences and evolving maritime matters. The Galle Dialogue has been consecutively organized by the SLN under related maritime themes until COVID-19 pandemic. The participation grew exponentially and the last edition 'Galle Dialogue 2023' was attended by 284 participants including 143 international dignitaries. Thus, the fame of Galle Dialogue as a significant maritime initiative to bring different partners together to achieve 'good order at sea' is reckoned to be a national strength. Sri Lankan role as a mediator, as well as maritime facilitator, has been well recognized by the international community through the Galle Dialogue. However, without being overly optimistic, the constructive critiques on the absence of a reviewing mechanism for the existing Galle Dialogue framework are to be reviewed. Therefore, the way forward for Galle Dialogue to be in cooperate with the pragmatic implementation modality. Then the international acceptance and recognition will be further strengthened and Sri Lankan reputation as a maritime facilitator in IOR will be greatly upheld. Sri Lanka could further facilitate meeting grounds for regional and extra-regional stakeholders to share their thoughts. Thus, the formulation of a pragmatic and smart approach to represent Sri Lanka and SLN in international forums is imperative in strategic outlook.

CHAPTER 6

TECHNOLOGY AND INNOVATION

Overview

In an increasingly technology-driven environment, world navies are highly dependent on a wide range of technologies. These technologies cover ship designing, navigation, communication, weapon systems and surveillance in three dimensions, space-based technologies, environmental monitoring and presently with more concern on cyber security, AI technology, unmanned, autonomous and mechanized systems. Sri Lanka, being a maritime nation situated strategically important location in the Indian Ocean, relies heavily on maritime trades, maritime commerce and other activities. As a vital component of the nation's defence, there cannot be a significant technology gap in between SLN and other state and non-state actors. Hence, it is essential to equip SLN with cutting-edge technologies to strengthen the capabilities. This can be achieved by managing, sharing and investing in acquisitions, force strengthening, innovations and international collaborations.

The acquisition of sophisticated platforms and latest technology mostly depends on the financial feasibility of the country and diplomatic relations. However, in the recent past the attempt made by SLN to upgrade or replace the obsolete and costly systems with viable, cost-effective home-grown technical solutions has filled the said technological gap to an extent while saving a substantial amount of public money. The Return on Investment (ROI) of innovations and re-engineering projects done by SLN using the knowledge and experience of expert naval professionals is significantly higher than the budgetary allocation.

Accordingly, the following key areas of technology and innovation are to be considered for the next five years and beyond to enhance the SLN's capabilities;

Unmanned Systems and Autonomous Vehicles

Unmanned systems will replace costly manpower and reduce the risk to humans in dangerous situations. The advantages of introducing unmanned autonomous systems/vehicles for activities including maritime surveillance, security check points, and medicine distribution instead of manual checking by humans are as follows;

- Efficient real-time surveillance and reconnaissance
- Deterrence
- Flexibility and adaptability
- Safety and reduction of risk to human
- Extended range and endurance
- Swarm capability
- Ability to maintain the surprise
- Capability of integrating with other naval systems
- Target acquisition, tracking and launching precision strikes on designated targets
- Logistics support in distress
- Capability to carry out search and rescue missions
- As a part of electronic warfare (use as jammers or hackers)
- Mine detectors and clearance
- Border protection
- Training and simulation
- Cost-effectiveness

At present SLN utilizes UAVs and drones for surveillance, reconnaissance, aerial photography and videography. A fully established UAV unit can utilize many applications including the following;

- **Unmanned Surface Vehicles (USVs).** USVs are used for patrol, surveillance and mine countermeasure operations in conventional warfare to augment naval capabilities while reducing risk to human lives. These USVs can be utilized as platforms for Unmanned Aerial Vehicles (UAVs), Autonomous Underwater Vehicles (AUVs) and drones can be interoperated with other fleet units as a force multiplier by extending range and endurance.
- **Unmanned Underwater Vehicles (UUVs).** Deploy UUVs for underwater reconnaissance, mine detection and surveillance to enhance the SLN's underwater capabilities. These facilities are essential not only for warfare but also for encountering illegal activities, assisting legitimate activities, diving operations, search and rescue missions, oil spills and similar peacetime operations on a large scale. SLN is in the process of developing an underwater vehicle to use in multiple activities with suitable sensor nodes and has identified as a field of concern in the future to develop cost-effective home-grown solutions for operational issues come across.
- **Unmanned Aerial Vehicles (UAVs).** The UAVs or drones are the unmanned systems that SLN use maximum to ongoing peacetime operations. A fully equipped UAV / Drone unit with dedicated officers and sailors is an essential requirement to accomplish the naval role at present cost-effectively and efficiently. These systems consist of various sensors, cameras and AI algorithms. The possibility of Autonomous UAVs to identify and track the exact target with the assistance of AI and machine learning and strike precision targets maintaining the maximum surprise essential to encounter most of the illicit activities happening in Sri Lankan waters.
- **Naval Robotics.** Innovation in naval robotics involves the development of robotic platforms to perform various tasks, including hull inspection, obstacle and mine clearance and search and rescue operations. These technologies enhance the naval ability to operate in challenging environments where humans cannot utilize and contribute to overall mission success. The SLN can find viable home-grown solutions in naval robotics commencing from proto-type applications.

Maritime Domain Awareness (MDA) Through Technology and Innovation

An effective understanding of the maritime domain affects its safety and security and the stability of the economy of the country. Comprehensive awareness with minimum sea blindness mitigates the risk at sea and from the sea. Security of an incredibly active and diverse maritime domain under the purview of Sri Lanka which is much larger than the country is a challenging and essential task vested on SLN and SLCG. Sophisticated MDA is the best option to monitor, detect, identify, prioritize, manage and mitigate threats with this overwhelming scope of licit and illicit activities. Instead of traditional systems, the world maritime industry moving fast with AI-powered MDA systems. Hence, an effective MDA system with prime concern on the following areas is inevitable to perform the much-needed role and task of SLN and SLCG in the future;

- **Advanced Surveillance Systems.** SLN is to be equipped with state-of-the-art maritime surveillance systems, including the newest radar systems, Unmanned Aerial Vehicles (UAVs), underwater detection and analysis sensors and vehicles, Automatic Identification Systems (AIS), Global Positioning Systems (GPS), Vessel Monitoring Systems (VMSs), satellite surveillance facilities, to improve real-time situational awareness. The High-Frequency Surface Wave Radar (HFSWR) system on the Eastern coast served immensely to apprehend vessels conducting illegal activities in the long-range beyond the coverage of typical radars in the past. The introduction of similar mechanisms to other areas towards South East, South and Western coasts will enhance real-time detection capabilities further. However, this process has to commence subjected to careful study of the existing system and its utilization at present and future.
- **Data Fusion and Analysis.** The establishment of a robust data fusion and analysis centre to integrate information from various sources has enabled a quick and informed decision-making process. This mechanism will enhance with full functioning of existing IFC and MRCC by acquiring equipment and sensor nodes for surveillance stations, main units, sub-units and platforms. Interconnection of those systems is possible only through adequate data, telephone and other communication network facilities including MF, HF, VHF, UHF and satellite communications means. Integration of AIS, Automatic Vessel Locating System (AVLS), GMDSS, updated electronic charts and mapping data, human intelligence and sharing information with local, foreign and multinational institutions will easier this process.
- **Under Water Detection Capability.** The increasing power rivalries in the IOR, require the necessity of having underwater detection capability for major ports in the country and platforms. Frigate with ASW capability would be the best option for platforms for this purpose. Due to the financial constraints, instead of high-end sonar systems; affordable dipping sonars, towed array sonars or unmanned underwater vehicles will serve the purpose.
- **Hydrography and Oceanography.** Considering the large sea area belongs to the country, hydrography and oceanography surveying capability is another concern of SLN and SLCG. Hydrographic and Oceanographic survey platforms with multi-beam echo sounders will serve this purpose. The introduction of surveying equipment onboard ships/craft as feasible is another option at the early stage.

Total Maritime Surveillance Solution

A Total Maritime Surveillance Solution (TMSS) is an integrated, comprehensive solution designed to monitor, manage and control maritime-related activities covering the maritime domain of the country. This total solution consists of the following to ensure safety, security and to have real-time situational awareness and reaction;

- Surveillance using coastal sensors (Radars, HFSWR, High-resolution day and night cameras, Underwater detectors)
- Surveillance using sensors onboard fleet units
- Human and Maritime Intelligence
- Weather and Environmental Sensors

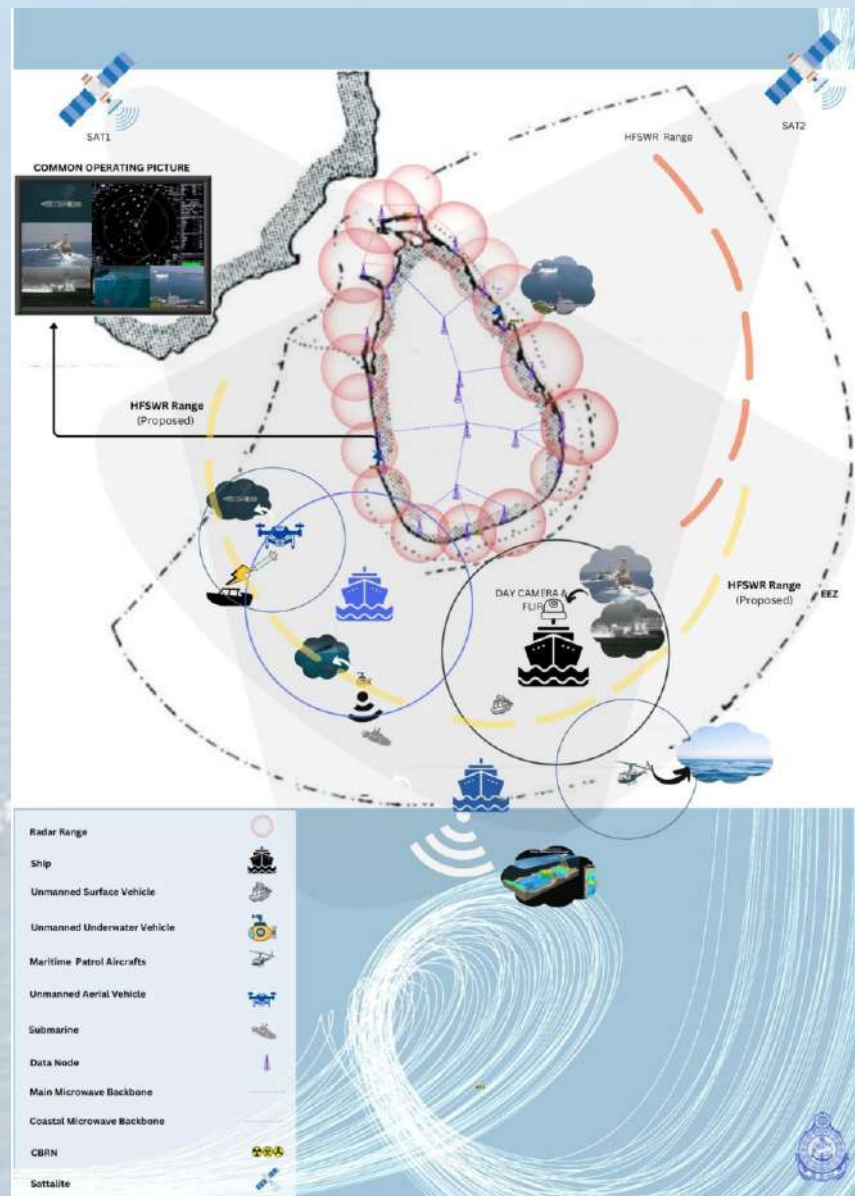
- Data through other institutions and systems (SLA, SLAF, MRCC, IFC, Police, SLCG, Customs, MEPA, Meteorological Department etc.)
- Automatic Identification Systems
- Communication Systems (MF, HF, VHF, UHF, Satellite, Telephone and Data)
- Satellite-based monitoring

A TMSS requires UAVs, UUVs, USVs, drones, etc. with interconnection and interoperation capability. The extension of TMSS to an Autonomous Maritime Security System (AMSS) is achievable with AI-based advanced data collection, processing and analysis system to protect licit activities and prevent illicit activities. This process can be developed to raid or strike with payload carried by autonomous drones or UAVs for identified targets.

A reliable microwave communication backbone with sufficient bandwidth to connect all major command and control centres, observation points and fleet units at sea is also essential in TMSS. A holistic view of TMSS is depicted in Figure 6.1.

Figure 6.1

Total Maritime Surveillance System



Naval Fleet Modernization

The key component of maritime power projection is the naval fleet. The rapid development in the maritime industry in the world with technological evolve demands SLN to modernize her fleet by acquiring modern platforms and technologies while timely phasing out or replacing obsolete technologies, equipment, systems and platforms.

- **Upgradation of Existing Fleet.** SLN is compelled to maintain a sufficient number of fleet units to accomplish the role and task entrusted. However, due to financial constraints, the acquisition of new platforms would be limited within the next five years. Hence, the implementation of a comprehensive modernization plan for the existing fleet, incorporating advanced navigation, communication, weapon systems, main and auxiliary machinery would be the possible way forward to SLN. Acquiring underwater detection capability for existing platforms as feasible is also essential in the future.
- **Acquisition of Multi-Mission Capability Platforms.** The naval role at sea is versatile and the naval fleet must be capable of performing various missions at sea. There is a need to acquire next-generation naval vessels equipped with advanced sensor suites, stealth technology, long-range precision strike capabilities, three-dimensional detection and surveillance capabilities including underwater detection capability for SLN to meet the anticipated threats and commitments in the future. Another aspect is to consider the acquisition of Multi-Role Research Vessels, tugs and Air-Cushion Vehicles (ACVs) commonly known as Hovercraft to operate on the ground, water, sand, mud and various other surfaces.
- **Acquisition of a Floating Dock.** Considering the number of fleet units to be maintained, the acquisition of a floating dock will provide several benefits to SLN. Accordingly, it is important to enhance the in-house technical capabilities to carry docking related repairs and maintenance while seeing the possibilities of sharing such assets with other organizations for the best use of them and to make the ROI feasible.
- **Phasing out Assets.** SLN has realized the necessity of replacing some of the existing fleet units, systems and equipment by suitable means due to being beyond economical and which do not facilitate to upgrade or sustain with available technologies.
- **Naval Aviation.** UAVs and drones would be a better option to cover the air space at this juncture. These UAVs can be used in coastal bases as well as onboard ships at sea as a force multiplier.
- **Ship Design and Propulsion.** Innovative ship design, incorporating advanced materials and propulsion systems contributes to improving fuel efficiency and reducing maintenance requirements while increasing the operational range. The adoption of alternative fuels and propulsion technologies also aligns with environmental sustainability goals. SLN is very capable of constructing indigenous smaller craft (Inshore Patrol Craft etc.). The Directorate of Naval Design (DND), Naval Boat Building Yard (NBBY), Research Development Unit (RDU), Electrical

New Design Centre (ENDC), Machinery Testing and Trials Unit (MTTU), and Hull Inspection and Trials Unit (HITU) are engaged with designing, fabrication, testing and commissioning process. This process can be further developed to build military and non-military craft even bigger than IPCs utilizing own capabilities and with the collaboration of other stakeholders.

- **Extended Service life through Technology Insertion.** The service life of ships and systems can be extended by upgrading them with the latest technologies and compatible indigenous solutions derived through R&D. Introduction of such viable solutions including the cost incurred in the R&D projects is economical compared to building an entirely a new ship. The insertion of propulsion systems, engines, auxiliary machinery, control systems, the newest sophisticated surveillance systems and communication systems into the existing platforms multiply their capabilities effectively.
- **Routine Maintenance.** The operational readiness, effectiveness, longevity and reliability of naval vessels and systems exclusively depend on the proper and appropriate maintenance philosophy of SLN. This ensures the safety of men and equipment by preventing catastrophic failures. The cost incurred for major repairs/ major overhauls or entire system replacement in the absence of routine maintenance would cost more than periodic maintenance. Amidst financial constraints, the routine maintenance of costly platforms is indispensable to preserve them for decades to come.
- **Preservation of Fleet Units.** The change of role in SLN from humanitarian operations to encountering contemporary non-traditional threats and challenges requisite preservation of existing assets including some of the fleet units. These assets are used exclusively and extensively for the operational requirements in the past and limited operations at present. Hence, it is viable to preserve them for future usage while pursuing possibilities to transfer them as feasible to other institutions or navies.
- **Environmental Sustainability and Acceptability through Green Technologies.** SLN is required to integrate environmental friendly technologies into naval operations including energy-efficient vessels and waste reduction measures. Most of the international harbours do not allow ships enter to their ports without having environmentally safe machinery and systems onboard including Oil Water Separators and Sewage Treatment Plants, which compelled SLN to draw consideration.
- **Interoperability and Joint Operations.** Naval fleets are frequently engaging with joint and combined nature operations. Upgraded technology is essential to ensure interoperability in multinational operations, SAR missions, exercises and for participating in international peacekeeping missions responding to global traditional and non-traditional security challenges.

Digital Transformation

Digitalization of SLN began way back intending to be a paperless Navy. The IT branch has been established and strengthened for this purpose. Most of the systems including the E-pay, Integrated Logistics Management System (ILMS), Health Management System (HMS), Human Resource Information System (HRIS), Transport Management System (TMS), etc. were converted to online-based systems. These cost-effective, efficient, and flexible systems have eased up the administrative process enhancing collaboration across individuals, departments and institutions.

SLN needs to improve every aspect of functioning in the digitalized platform including personnel assessments and naval examinations with the help of digital technologies and applied digitalization with a full-blown data-driven digital transformation strategy to seek sustainable growth in the organization. The following focal points are essential to consider in this process in the next five years and beyond:

- **Enhanced Connectivity and Communication.** Ensure real-time communication, collaboration and seamless sharing of information within the Navy and with the outside. Data network to be upgraded with SLN's network and with leased lines to ensure 24 x 7 connectivity while keeping redundancies for safe and continuous operation in extreme emergencies.
- **Data-driven AI Powered Decision Making.** It is essential to enhance coordination within SLN to achieve data-driven decision-making by collecting, handling and analysing vast amounts of data. The AI integration, automation and machine learning ease up and speed up the data analysis process essentially required for decision-making. This Human-Machine Teaming by collaborating naval personnel with autonomous systems will optimize resource allocation and will improve overall operational efficiency to achieve objectives.
- **Development of IT Infrastructure.** IT infrastructure development is essential to establish a fully digitalized environment. This includes sufficient data network facility, computers and other user interfaces.
- **Online or Computer Based Assessments and Examinations.** This will enhance the transparency of examinations and will speed the assessment process in SLN.

Cyber Security

To maintain operational integrity and protect sensitive information, cyber security has become one of the prime concerns of the Navy with ever-increasing dependence on digital technologies as a result of digital transformation.

- **Cyber Security Cell.** SLN Cyber Security Cell (CSC) is responsible for establishing a dedicated cyber security framework to protect critical naval infrastructures including communication and data networks, command and control systems, online administrative and management systems, weapon systems and classified information from cyber threats.

- **Cyber Warfare/ Information Warfare and Espionage.** Foreign countries, non-state actors and even individuals can engage in cyber warfare or espionage. The CSC to develop strategies, acquire technologies to detect, prevent and respond to all such threats, and educate all concerned. Due to the increment of users, conducting regular training programmes to enhance cyber security awareness and ensure data integrity is essential for all naval personnel.

Design, Research & Development

Design, R&D can play a vital role in improving SLN. Some of the fleet units, systems and equipment are aged or obsolete and their spares are no longer available or extremely expensive. This has compelled SLN to find alternative solutions to maintain the operability of the fleet and other systems. Several key concerns in Design and R & D are as follows;

- **Solutions for Operational Matters.** Since the Humanitarian Operations, different units involved in Design and the R & D sector in SLN have developed home-grown solutions for operational issues. Modernization of Bush Master Gun mount, steering control systems, fire alarm systems, bilge alarm systems, UAVs, building automation systems, medical robots and control systems for ships and craft have saved billions of money to flow from SLN. Naval engineers and technicians have done these cost-effective modernizations with limited resources and fund allocations. This process can be continued further benefiting the country subject to receipt of sufficient provisions.
- **NSR Projects.** The SLN R&D has engaged with several NSR projects successfully. The outcomes of such projects including the fabricating of Medicine Infusion System for Thalassemia patients and Reverse Osmosis (RO) plants to provide purified safe drinking water to the community since 2015 to prevent Chronic Kidney Disease (CKD) exhibit the best use of naval professionalism to the nation while saving public money.

Invention of in-house solutions for most of the issues would be one of the best viable options for SLN to maintain its operational status and reach sustainable growth by 2030 and beyond. To achieve that, the following could be viable options in the Design and R&D sectors;

- **Collaboration with Sister Services and Military Institutions.** Foster collaboration with military, academic and research institutions to assist stay abreast of emerging technologies and leverage research for naval applications. The KDU, College of Military Engineering and Technology Sri Lanka (CMETSL), Centre for Defence Research and Development, R&D units of SLA and SLAF are possible entities to collaborate to pursue improvement in defence R&D.
- **Local and International Collaborations.** It is possible to improve this sector through collaboration and cooperation with local and international, government and non-government institutions including universities, technical forums, associations, etc. in the form of donations, knowledge and assets sharing.

Sufficient Budgetary Allocations

This will be the most crucial and essential aspect in the process of enhancing technology and innovations in SLN. Rightsizing any military force emphasizes the necessity of strengthening the force with technology while adjusting the manpower appropriately reducing in numbers. The cost of manpower will be further high in the future. This will affect recruitment and retention. Integration of technology will replace the use of manpower in many sectors providing long-term advantages. Hence, budgetary allocation to invest in R&D will not go in vain for SLN and the country. Accordingly, the units engaged in Design, R&D, production, construction, testing and monitoring in SLN are to be equipped with cutting-edge technologies and need to provide adequate budgetary allocations and human capital to harvest the best.

Technology and Related Human Capital Development

The trained, skilled and experienced manpower is considered as the biggest asset in SLN. Amidst financial crises, SLN continuously committed to recruiting, training and retaining technical staff while promoting innovations. The following focal points are to be considered;

- **Talent Recruitment for Technology Branches.** Being a technical force, continuous enrolment of technical staff is essential to reach the goals of SLN. The wages and perks, recognition of the society to the engineers and technical professionals, freedom of job and many other factors directly impact on recruitment process. The pre-requisites such as minimum educational qualifications to enlist to the technical staff are comparatively high and these requisites keep the number of eligible candidates lower. However, considering the complexity of the job and the danger can cause to men and equipment in case of unprofessionalism, SLN is not in a position to lower the required minimum qualifications to enlist technical staff. Higher basic qualifications keep the expectations on salary and privileges high, whereas they can seek better opportunities at outside. This phenomenon is experienced by SLN while enlisting officers and artificers to technical branches that need immediate solutions.
- **Training Programmes.** Basic training, specialized training programmes and Continuous Professional Development (CPD) are essential to maintain the proficiency of naval personnel. The exorbitant cost incurred for technical training is one of the major obstacles in training. However, investing in technology training will provide ROI in the long term to SLN and the country. Type training is essential to update the knowledge of modern systems. Since the technology is developing rapidly, type training also needs to continue. Due to the heavy cost incurred for foreign training, the trainee trainer method can be used to get training for a few selected personnel and train the rest of them for identified sections.
- **Talent Retention.** The availability of job opportunities, higher wages and perks given outside for professionals/ skilled workers has caused to increase the premature leave and unexpected evaporation while reducing the retention rate after initial engagements of technical officers and sailors enrolled. The inability to retain trained and experienced cadre greatly impacts on smooth and efficient functioning of the Navy. Hence, a holistic approach is essential for talent recruitment and retention to function SLN to achieve the desired maritime security objectives.

- **Simulation.** Virtual and augmented reality technologies can be utilized for training purposes, allowing naval personnel to simulate complex scenarios and enhance their skills in a risk-free environment. Digital training tools contribute to the continuous improvement of skills and readiness.
- **Joint Exercises and Sharing.** Strengthening partnerships through joint exercises and sharing knowledge and assets with regional and international navies to have a win-win situation for all stakeholders. This can be done through temporary attachment or exchange programmes.
- **Technology Transfer.** It is essential to ensure proper technology transfer methods within the Navy. This will ensure the smooth functioning of systems equipment and enhance the operational capabilities in the long term. Training, awareness and adherence to the standard practices are required to transfer the technology and technology-related knowledge from one generation to another within the Navy.
- **Vertical Specialization.** The latest technologies covered vast areas of specialization. Hence, the concept of vertical specialization has been identified as cost-effective and efficient method. SLN also can practice the same to train identified individuals/ groups for specific skilled tasks/ work, provide necessary tools and equipment for them adequately and utilize them where deemed.

Naval Entrepreneurship, Outsourcing and Sharing

The SLN's technological expertise, resources, and facilities can be strategically offered to external entities for national benefit, ensuring optimal utilization without compromising naval duties. This process should be guided by thorough analysis and careful consideration. The boat-building expertise at NBBY, along with innovative R&D outcomes such as RO plants, medicine infusion systems, engine control and monitoring systems, fire alarm systems, steering control systems, and bilge alarm systems developed by the SLN, can be leveraged for commercial ventures. Additionally, naval assets like the proposed floating dock facility and technical assistance services can be offered to local and international customers, contributing to national income generation and strengthening the country's reserves.

The national security concerns are the foremost important consideration to ensure while outsourcing. Accordingly, basic infrastructure development and services including transportation facilities can be outsourced. However, the configuration of equipment, password protections, maintenance of critical facilities and redundancy paths and developments in high-security zones are not recommended to be outsourced. Sharing resources, facilities and knowledge cautiously as needed with other selected organizations is another way of maximizing the limited and expensive capabilities within the organizations.

Advanced Weapon and Defence Systems

SLN continually invests in the acquisition, development and integration of advanced weapon systems merely not only for conventional warfare but to ensure national security and sovereignty through deterrence while adapting to future threats. The acquiring multi-domain inter-operational capability with different military forces, navies and to have flexibility in missions, ensure accuracy and precision are the other advantages of having advanced weapon systems. These may include short, medium and long-range weapon systems, missile systems, integrated air and missile defence

systems and precision-guided munitions mainly based on autonomous platforms either drones or unmanned surface vehicles to prevent illicit activities. Other than the traditional systems, defence systems against non-traditional firearms and systems including drone attacks are essential to mitigate the possible threats to naval assets and the threat from the sea in the contemporary world. Financial constraints may obstruct the acquisition of sophisticated weapon systems. However, the SLN's experience with home-grown solutions by modifying weapon systems cost-effectively to suit to purpose during humanitarian operations gives the green light on future innovations in weapon and defence in Sri Lanka.

Energy Conservation

Due to the heavy involvement of technology, the energy consumption of SLN is one of the concerns. These are mainly in the form of electricity and fossil energy. The total units consumed for the year 2021 was 28,577,819 kWh and SLN has reduced the consumption by 10% in 2023 compared to the year 2021. Other notable aspects are as follows;

- **Use of Renewable Energy.** The introduction of Solar PV systems as feasible is another aspect to develop in the energy sector. Remote locations where the national grid is not available, street light systems and rooftops of large buildings are identified as possible suitable locations to install Automated Solar PV systems. Most of the bases and detachments are located in the coastal belt and dry zones where solar energy harvest is high will be an added benefit for SLN to implement this project. SLN to seek the possibility of this attempt through collaborations.
- **Periodic Maintenance.** SLN continues carrying out periodic maintenance of systems running with fossil fuels and electricity including; main engines, auxiliary machinery, AC systems and motors to ensure energy efficiency.
- **Energy Audits.** Energy audits are carried out in-house and with the assistance of other stakeholders and governing institutions such as the Sustainable Energy Authority to ensure efficient energy usage and to identify the drawbacks to mitigate appropriately.
- **Continuous Monitoring, Education and Awareness.** The SLN continuously educates and monitors energy consumption and the details are published on the main page of SLN internal web to aware naval personnel of SLN energy consumption patterns and insist on energy saving.

Technology to Accomplish Naval Role

SLN is entrusted to carry out non-naval duties in various capacities. Such duties required special equipment and systems other than the available sensors. Apprehension of radioactive substances, chemicals, drugs and some contraband items can only be done with specific detectors. Real-time and predicted meteorological data can be obtained by satellite systems and weather forecasting systems subjected to subscribe such on a payment basis. Prevention of oil spills, firefighting and damage control can be efficiently carried out with modern equipment. The CBRN response teams, VBSS teams, 4RS, RABS, VIP protection teams, SBS, Harbour Defence Units, Marines, Divers, Naval Hospitals and the duties of similar specific units will ease up with wearable sensors and modern advance systems, which SLN is essentially required to possess.

CHAPTER 7

NAVAL CONTINGENCY FORCE

Establishment of a Naval Contingency Force (NCF)

NCF constitutes a repository of crucial resources, capabilities and forces that a nation maintains to safeguard its national security and respond adeptly to unexpected diverse threats, whether they be conventional or unconventional in nature. In the realm of maritime strategy, this reserve operates as an external reinforcing force, not pre-committed to any specific major capability but utilized to meet regular military operation requirements.

Establishing the NCF within the SLN is imperative, aligning with the maritime security objectives. This force serves as a prioritized and robust element in national efforts during emergencies, and which considered as a standby force. The operandi of NCF is significantly influenced by regional security collaboration, partnership, political will, public opinion, and global geopolitical and security shifts (cyber and hybrid, etc). The NCF will be used as a force multiplier.

Effective Utilization of NCF

The NAVSTRAT-2030 has identified the delicate balance of combat power as a prerequisite to mitigate threats to the security of the country. However, this strategic stand-in is designed to manage emergencies until main force reinforcements arrive and this may function as a Quick Reaction Team (QRT) with technical and technological capabilities. This ensures long-term sustainability and combat professionalism in hasty response, relief and rescue military operations at any place, in given time. According to maritime security objectives, NCF consists of Special Boat Squadron (SBS), Rapid Action Boat Squadron, Rapid Response Rescue and Relief Unit (RABS and 4RU) and Marines. In view to ensure best optimization, NCF is to be deployed in predetermined locations of important around Sri Lanka with all military capabilities under the naval classic roles encompassing military, diplomatic and HADR aspects.

- **Special Boat Squadron (SBS).** The SBS stands as the distinguished naval SOF and the sole elite force within the SLN. It is entrusted with the execution of small-scale, clandestine, covert or overt Special Forces operations, often of an unorthodox and high-risk nature. Furthermore, SOF is operating seamlessly across sea, air, land and sub-surface domains.
- **Marines.** Marines is a designed and specialized to conduct land and amphibious operations such as counter insurgency operations, anti-piracy operations and act as Commander's reserve in emergencies.
- **Rapid Action Boats Squadron (RABS).** Based on the concept of 'swarming tactics', the RABS was formed and deployed in a limited maritime domain close to coastal waters during wartime. However, at present this unit is equipped with skilled personnel and necessary resources to perform a range of HADR activities such as rescue operations, life-saving duties during disaster situation, lifeboat handling, assistance in aquatic recreational in coastal waters and inland water bodies, waterborne rescue, rescue patrols in reservoirs, rivers and coastal areas.

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The NCF plays a pivotal role in maintaining a well-balanced combat power, encompassing manoeuvrability, firepower, protection and leadership within the context of maritime strategy. This strategic inclusion not only strengthens a nation's defensive posture but also positions it to mitigate emerging challenges proactively, thereby enhancing its strategic standing in the maritime domain. Following cadre details are used to best utilization of the NCF in par with the concept of rightsizing naval cadre for achieving the maritime security objectives.



CHAPTER 8

INTERAGENCY COORDINATION

Maritime terrorist action, cyber-attacks, pandemics, natural disasters and other maritime security threats spread beyond organizational and geographic boundaries. A domestic terrorist attack or a public health emergency like the COVID-19 outbreak, for instance, can have an impact all over the country. It could be challenging one agency to handle such incidents alone. Thence interagency coordination is a vital factor in a country's maritime strategy, for counter maritime security threats. Interagency coordination encompasses the full range of efforts and actions carried out concurrently by two or more government/non-government agencies working jointly and contemporaneously to address a shared threat, problem, or occurrence. Collective efforts by different agencies benefit collective capabilities for greater progress, unanimity of efforts or ensuring effectiveness in achieving a common goal. Interagency collaboration should not be the ultimate goal of maritime administration; it often implies a more reactive rather than proactive approach to marine security concerns. During coordination, agencies' responses to incidents or threats must give way to active cooperation and coordination on shares in initiatives, as well as complete integration of mechanisms supporting a layered approach to maritime security governance and operational synergy. When considering key agencies with which Navy needs to work in coordination/collaborations, there are the number of functional areas of some form of maritime concerns including technological and health services as indicated in Figure 8.1.

Level of Coordination

It is necessary to understand there are several levels of interaction between agencies considering the importance and frequency of occurrence in the maritime environment. Thus, to ensure seamless agency-to-agency functioning in the maritime environment, interagency coordination must be developed at the following levels.

- **Policy Level.** Constitute the principle mechanism for developing policy advice and recommendations for interagency coordination.
- **Operational Level.** This should be Command Headquarter level coordination and need to set guidelines and limitations of the interagency coordination.
- **Tactical Level.** This level is for assets at sea, field officers and operational level should provide clear guidance on operations.

Factors towards Effective Interagency Coordination

There are numerous ministries and agencies involved in maritime governance in Sri Lanka and it indicates the necessity of a systematic approach to interagency coordination in maritime governance according to set parameters. To attain positive interaction between different agencies whilst achieving shared goals under any designed mechanism need to have some vital factors. There are essential guidelines for interagency coordination along with recommendations for improving maritime security in Sri Lanka by strengthening interagency synergy. In this, one agency must not develop all the parameters and all the parties must be on the same understanding to develop parameters such as MoUs for interagency coordination.

- **Collaborative Platforms.** Without an appropriate platform that enables agencies to come together to discuss common issues, collaboration is impossible. These

platforms can range from boards to joint task forces or working groups. Institutions by themselves can offer venues for cooperation, particularly if there is a common goal. For example, there is a set procedure between the SLN and the SLAF when obtaining air assets for maritime security. Similarly, it is necessary to have collaborative platform such as MoUs. Standard Operation Procedures (SOPs) between agencies.

- **Intelligence and Data Sharing.** Functional information-sharing mechanism is fundamental for any interagency coordination and collaboration model to be successful. Due to limited sea going assets, it is necessary to have a comprehensive intelligence appraisal on maritime domain where need to have healthy relations with other stakeholders. As an example, intelligence gathered by SLAF through maritime patrol aircraft.
- **Transparency and Delay in Data Sharing.** Commonly there is a problem in transparency whilst data sharing between agencies. This leads to getting less information to other agencies mainly due to not having proper arrangement for sharing data between agencies. Further, some agencies are not aware of the mechanism of sharing information. This can be minimized by having proper MoUs between agencies to ensure relevant data is shared without delay. For example, unhindered access to VMS to the Navy is vital for conducting operations against drug trafficking, IUU fishing and other maritime illegal activities by Sri Lankan fishing vessels.
- **Mandates for Inter Agencies/ Suitable Legal Framework.** One of the main reasons for relevant agencies for maritime security do not possess good interagency coordination is they do not possess a proper mandate with clarity and adequate legal framework to cover relevant sectors of involvement. However, it is necessary to specify the lead agency when promulgating acts of legal instruments whilst empowering agencies to execute similar mandates and ensuring adequate legal framework is established prior to entrusting responsibilities.
- **Accountability.** Agencies involved need to be accountable for implementing relevant maritime mandates and act effectively. With adequate communication and reporting mechanisms in place, agencies should be able to demonstrate quantifiable results that demonstrate prioritizing interagency collaboration over duplication of effort and reluctant to share information. Further, this will enhance the sense of responsibility and accountability between agencies involved in maritime security.
- **Institutional Capacity.** In order to promote effective interagency collaboration, stakeholder institutions must be empowered and have their capacities and capabilities up to the required standard. This is closely tied to the issue of clear mandates. For each institution to carry out its mandate at sea, it needs to be sufficiently equipped. In order to contribute effectively to interagency dialogue, well-trained staff on aspects of maritime governance, regulation and enforcement relevant to their roles is imperative.
- **Strategic Directive.** It is paramount to have clear strategic directives for stakeholders involved in the maritime sector in the country. This could come in the form of a policy document intended to coordinate the actions of various stakeholders in the Sri Lankan maritime security framework in order to comprehend a common goal. To guarantee that all stakeholder agencies' inputs are taken into account, a certain amount of coordination is necessary for the strategy development.

However, one of the main dilemma in the Sri Lankan context is that all the ministries and agencies do not have proper awareness on responsibilities under their role and task in maritime security. There is a lacuna of proper procedures, regulations, or MoUs between inter agencies to handle maritime issues and mostly dealt case by case basis which more time-consuming and delay in action. Therefore, properly laid down procedures and regulations indicating lead agency and MoUs will enhance interagency coordination and avail enhance maritime security. Further, lack of awareness on others' capabilities and work areas often leads to duplication of efforts, which invariably wastes the government funds and time of the respective agencies. Therefore, it is necessary to have laid down the strategies in interagency coordination whilst preparing regulations, procedures, and MoUs. Some of the strategies that can be used whilst in interagency coordination as indicated below;

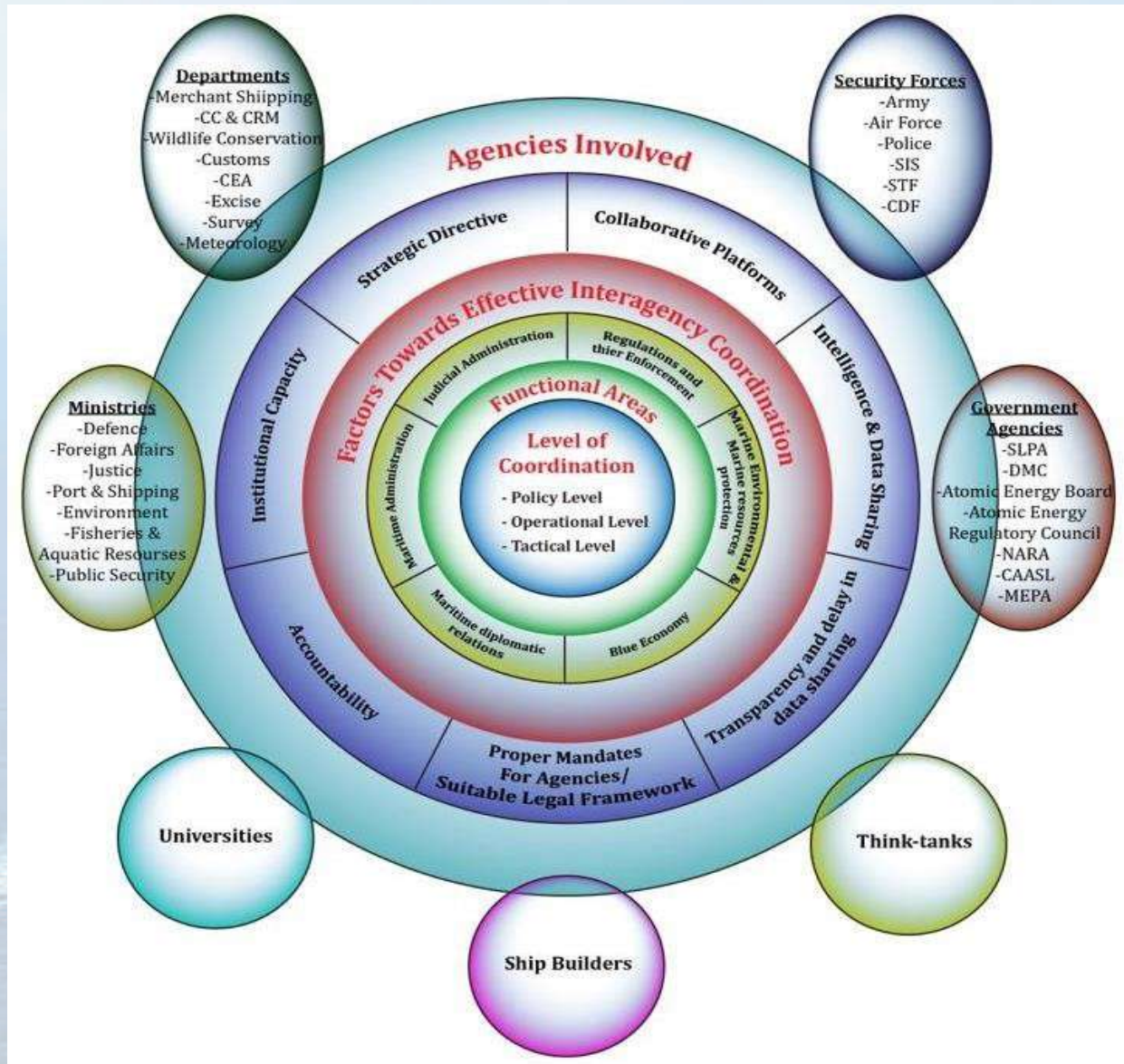
- Establishing clear channels of communication, maintaining updated contact lists, and regularly informing stakeholders on ways to foster open communication
- Defining roles and responsibilities clearly helps to ensure that people work on the right tasks, avoiding confusion and reducing the likelihood of duplication of effort
- Using practice and cooperative exercises to improve the abilities of those serving in administrative and front-line capacities, as this can reduce the complexity of resource coordination and guarantee a more cohesive response
- Regularly checking on the status to make sure everything is operating as it should and to spot areas for improvement
- Collaborating with the private sector, can offer more resources, knowledge and viewpoints in the fields of cyber security, infrastructure development and disaster relief

Agencies Involved

A country's maritime strategy is a subset of a Nation's Security Strategy as it traces on the full range of interests and activities at sea. Maritime strategy is not just the domain of the Navy. The other exercises of state power that mainly included in maritime strategy are; diplomacy, fishing, safeguarding and defending the maritime commerce, exploitation, conservation, regulation. Further, defence of the EEZ, coastal defence, national border security, offshore island protection, and involvement in regional and global issues concerning the use of oceans, the skies over the oceans and the land beneath the seas are also relevant. Main ministries, organizations and entities that have direct involvement and importance in interagency coordination with SLN indicated in Figure 8.1.

Figure 8.1

Interagency Coordination



CHAPTER 9

LEGAL AND REGULATORY FRAMEWORK

Maritime law has its own terminologies and jurisdictions such as other legal regimes. This brief introduction into the maritime law offers a framework outlining the most important legal concepts, including a few maritime aspects of the law that are vital to carry out duties and responsibilities in effective and efficient manner.

Present maritime security environment is more complex and involves many national and international legal regimes. A conceptual understanding on maritime legal frameworks and correct implementation are vital to address issues and law enforcement activities in the maritime domain by the SLN and the SLCG.

United Nations Convention on the Law of the Sea (UNCLOS)

The legal position regarding the sea is a matter covered under international laws, in which UNCLOS can be considered as the present international law of the sea. Sri Lanka ratified the UNCLOS on 19th July 1994 and exercises jurisdiction over the territorial sea, contiguous zone, EEZ and the continental shelf in par with the definitions laid down in the convention.

The Maritime Zones Law No. 22 of 1976, is one of the major legislations that links with the above international law instrument which proclaimed its maritime boundaries, especially the territorial sea area to be free of such prejudicial conduct by the users recognizing the importance of national security envisaged by the Charter of the United Nations. Further, it contains provisions that regulate state rights and interests in respect of the sea. As per the provisions of this law as well as the 1974 agreement between India and Sri Lanka settled the maritime boundary between them in the Palk Strait. Also, in 1976 another two Agreements were concluded on the maritime boundary in the Gulf of Mannar and the Bay of Bengal between the two states and the Republic of the Maldives on the tri-junction point between India, Sri Lanka and Maldives in the sea beyond the Gulf of Mannar. As such, the demarcated maritime zones around Sri Lanka is undisputed and void of contentions by neighbouring states. However, Sri Lanka's Continental Shelf claim is yet to be finalized. Further, the Proclamation by President W. Gopallawa dated 15th January 1977 prescribed the country's maritime baselines, declared a 12 nautical mile territorial sea, a 24 nautical mile contiguous zone, and a 200 nautical mile EEZ / pollution prevention zone and all to be measured seaward from the baseline. It also defined Sri Lanka's historical waters in the Palk Strait, Palk Bay and the Gulf of Mannar.

Sri Lanka Navy's Key Concerns

- **Legal Provisions Related to Fisheries.** Fisheries of Sri Lanka is governed by Fisheries and Aquatic Resources Act No. 2 of 1996 as amended by Acts No. 4 of 2000, No. 4 of 2004, No. 22 of 2006, No. 35 of 2013, No. 2 of 2015, No. 2 of 2016 and No. 11 of 2017. In addition, illegal fishing activities by foreign fishing boats are regulated using provisions available under the Fisheries (Regulation of Foreign Fishing Boats) Act No. 59 of 1979 as amended by Act No. 1 of 2018. These two Acts contain provisions required to deal with all illegal activities conducted by local fishing boats as well as foreign fishing boats in Sri Lankan waters and by local fishing boats in high-seas and waters under the national jurisdictions of other Coastal States.

- **Acts of Legal Provisions Related to Terrorism and Piracy.** Two of the leading international instruments in this aspect are the IMO Convention for the ‘Suppression of Unlawful Acts against the Safety of Maritime Navigation (SUA) 1988’ and the Protocol for the ‘Suppression of Unlawful Acts against the Safety of Fixed Platforms located on the Continental Shelf’. However, as far as Sri Lanka is concerned local laws enacted complements these conventions (Suppression of Unlawful Acts against the Safety of Maritime Navigation Act No. 42 of 2000 and the Piracy Act No. 9 of 2001).
- **Legal Provisions Related to Maritime Pollution.** Jurisdiction of the above subject confirmed by article 211 of the 1982 UNCLOS led the Sri Lankan Government to adopt a new Act, namely the ‘Maritime Pollution Prevention Act No 35 of 2008’ by revoking the ‘Marine Pollution Prevention Act, No. 59 of 1981’. Similarly, few other legislations were inspired by the UNCLOS, namely the ‘National Environmental Act, No. 47 of 1980’ empowering the Central Environmental Authority to formulate national environmental policy and the ‘Coast Conservation Act, No. 57 of 1981’ providing provisions for protection of the marine environment and other ecosystems, such a coral reefs, mangroves and estuaries.
- **Legal Provisions Related to Drug Trafficking.** There are three major existing international drug control treaties. The ‘Single Convention on Narcotic Drugs of 1961’ (as amended in 1972), the ‘Convention on Psychotropic Substances of 1971’ and the ‘United Nations Convention against Illicit Traffic in Narcotic Drugs and Psychotropic Substances of 1988’. However, only Article 17 of the 1988 convention and UNCLOS have provisions related to the suppression of Narcotic drugs trafficking at the sea. Meanwhile, domestic legislations related to narcotics; the ‘Penal Code (Ordinance No 02 of 1883)’, ‘the Poisons, Opium and Dangerous Drugs Ordinance No 17 of 1929’ (amended by Act No 41 of 2022), ‘the Cosmetic, Devices and Drugs Act No 27 of 1980’, ‘Customs Ordinance of 17 of 1869’ (amended by Act No. 19 of 2013), ‘Ayurveda Act No 31 of 1961’ (amended by Act No 19 of 2023) and the ‘Conventions Against Illicit Traffic Narcotic Drugs and Psychotropic Substances Act No 1 of 2008’. In this regard the ‘Narcotic Drugs and Psychotropic Substances Act No 1 of 2008’ authorizes law enforcement activities related to drugs at sea.
- **Legal Provisions related to Irregular Maritime Migration.** In order to regulate immigration and emigration of individuals to and from Sri Lanka, the ‘Immigrants and Emigrants Act No. 20 of 1948’ has been enacted. This was amended by Act No. 16 of 1955 and Act No. 68 of 1961. However, due to the surge in illegal migration especially over the seas, the Sri Lankan legislature made further amendments to the Immigrants and Emigrants Act through the Act No.16 of 1993 and Act No. 42 of 1998. In light of the legal discrepancies that have arisen and continue to arise with regard to the provisions set out in the Immigrants and Emigrants Act in an attempt to curtail the smuggling of migrants illegally, an additional amendment was made to the main Act by imposing the Act No. 31 of 2006. Through such amendments, aiding and abetting illegal migration through forged and fraudulent documentations and processes are deemed offences under the provisions. The activities related to prevention of Human Trafficking are basically governed by ‘Convention on Preventing and Combating Trafficking in Women and Children for Prostitution Act, No 30 of 2005’ and the penal code (amendment act No. 16 of 2006).
- **Legal Provisions Related to Maritime Safety.** The activities related to maritime safety are basically governed by the ‘Merchant Shipping Act No. 52 of 1971’ and also the relevant clauses of the ‘Admiralty Jurisdiction Act No. 40 of 1983’ and subsequent regulations made thereafter. Some of the legal powers vested on Merchant Shipping Act are delegated to SLN.

- Hydrography - SLNHO
- Disseminate Maritime Safety Information - SLNHO
- SAR operations assistance – through MRCC
- ISPS Code – SLN

Ratification of SAR Convention and Incorporated into a Domestic Law

GoSL is vested with the responsibility over 1,778,062.24 km² of maritime Search and Rescue Region (SRR) which is approximately 27 times of the landmass and share boundaries with Australia, India, Indonesia, and Maldives. Disaster preparedness and risk management pertaining to maritime search and rescue in particular, are vital for a coastal state like Sri Lanka.

On 10th April 2014 SLN become the national responsible authority for the conducting of maritime SAR operations in Sri Lanka SRR. Executing the responsibility, MRCC Colombo at Navy Headquarters coordinate assistance to vessels in distress by all possible means. The maritime SAR services to some extent are embodied in the 'Department of Coast Guard Act No. 41 of 2009'. Further, institutions such as Aeronautical Rescue Coordination Centre (ARCC), Department of Fisheries and Aquatic Resources (DFAR), Colombo Radio, other Rescue Coordination Centres and SLAF act with SLN when providing the Search and Rescue facilities.

Unfortunately, no efforts are made to incorporate the 'SAR Convention' in the country for a proper and unified mechanism to handle all types of search and rescue operations including maritime search and rescue. The incorporation of 'SAR Convention' will fulfil the needs of the country to regulate the execution of maritime search and rescue operations in Sri Lanka.

Implementation of International Ship and Port Facility Security Code (ISPS Code)

The ISPS Code is a comprehensive set of measures to enhance the security of ships and port facilities, developed in response to the perceived threats to ships and port facilities in the wake of the 9/11 attacks in the US. The ISPS Code is implemented through Chapter XI-2 Special measures to enhance maritime security in the International Convention for the Safety of Life at Sea (SOLAS).

Prior to the year 2023 Sri Lanka does not possess a legislative instrument implementing the ISPS Code, Commander of Navy was appointed as the Designated Authority for implementing the ISPS Code by the Minister of Ports and Aviation via Ministry of Ports and Aviation letter No. AD/2 M14 dated 20 May 2004 as per the directive of IMO. Finally, the ISPS Code fully came into operation in Sri Lanka with effect from 14 June 2004 on a trial basis.

By the Gazette No 2320/35 dated 21st February 2023 – Merchant Shipping (Special Measures' to enhance maritime security) Regulations, No 01 of 2023 are made with regard to the Merchant Shipping Act No.52 of 1971 to implement the ISPS Code and Commander of Navy was appointed as the Designated Authority for implementing the ISPS Code under the regulation 26.

Further, following IMO instruments mentioned below can be divided in two categories such as party and non party by Sri Lanka and some are not domesticated by way of implementing Act as even Country is a party to the convention. As because Sri Lanka follows a dualist approach, whereby signed international conventions require the passing of enabling statutes for incorporation into domestic law. Any convention that is not incorporated into local law by the Parliament only has persuasive authority.

Sri Lanka is party to the following IMO instruments;

- Convention on Facilitation of International Maritime Traffic (FAL), 1965
- International Convention on Load Lines (LOAD LINES), 1966
- International Convention Relating to Intervention on the High Seas in Cases of Oil Pollution Casualties, 1969 (INTERVENTION)
- International Convention on Tonnage Measurement of Ships (TONNAGE), 1969
- International Convention on Civil Liability for Oil Pollution Damage (CLC) - Protocol 1992 - Sri Lanka has denunciation from CLC Convention, 1969
- International Regulations for Preventing Collisions at Sea (COLREG) Convention, 1972
- Special Trade Passenger (STP) Ships Agreement, 1971; Protocol on Space Requirements for Special Trade Passenger Ships, 1973
- International Convention for the Safety of Life at Sea (SOLAS), 1974
- Convention on the International Maritime Satellite Organization (INMARSAT), 1976
- Convention on the International Maritime Satellite Organization (INMARSAT) - OA, 1976
- The International Convention for the Prevention of Pollution from Ships (MARPOL), 1973/1976 (Annex - I, II, III, IV, and V)
- The International Convention on Standards of Training, Certification and Watch keeping for Seafarers (STCW), 1978
- Convention on the International Maritime Organization (IMO), 1984
- The Convention for the Suppression of Unlawful Acts against the Safety of Maritime Navigation (SUA), 1988
- The International Oil Pollution Compensation Fund, 1992 (FUND) – Protocol 1992

Sri Lanka is not party to the following IMO instruments;

- International Convention for the Safety of Life at Sea (SOLAS) - Protocol 1978, 1988 and Agreement 1993
- International Convention on Load Lines (LOAD LINES)- Protocol 88
- International Convention for Safe Containers (CSC), 1972
- Convention for the Safety of Fishing Vessels (SFV) - Protocol 1993
- Cape Town Agreement 2012 - Consolidated Text of the Regulations Annexed to the Torremolinos Protocol of 1993 Relating to the Torremolinos International Convention for the Safety of Fishing Vessels, 1977
- The International Convention on Standards of Training, Certification and Watch keeping for Fishing Vessel Personnel (STCW-F Convention), 1995
- International Convention on Maritime Search and Rescue (SAR), 1979
- International Mobile Satellite Organization (IMSO Amendments) 2006
- The International Convention for the Prevention of Pollution from Ships (MARPOL Protocol 1997 (Annex-VI)
- The Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter 1972 (London Convention); and Protocol 1996
- International Convention Relating to Intervention on the High Seas in Cases of Oil Pollution Casualties (INTERVENTION) - Protocol 1973
- International Convention on Civil Liability for Oil Pollution Damage (CLC) Protocol 1976
- The International Oil Pollution Compensation Fund, 1992 (FUND) Protocol 1976 & amendment; 2003

- Convention relating to Civil Liability in the Field of Maritime Carriage of Nuclear Material (NUCLEAR), 1971
- Convention relating to the Carriage of Passengers and their Luggage by Sea (PAL) 1974 and Protocol 1976, 1990 & 2002
- Convention on Limitation of Liability for Maritime Claims (LLMC) Convention 1976 and Protocol 1996
- The Convention for the Suppression of Unlawful Acts against the Safety of Maritime Navigation (SUA) Protocol 1988 and Convention & Protocol 2005
- International Convention on Salvage (SALVAGE), 1989
- International Convention on Oil Pollution Preparedness, Response and Co-operation (OPRC), 1990
- The Hazardous and Noxious Substances Convention (HNS), 1996 and HNS PORT 2010
- International Convention on Oil Pollution Preparedness, Response and Co-operation (OPRC) / The Hazardous and Noxious Substances Convention (HNS), 2000
- International Convention on Civil Liability for Bunker Oil Pollution Damage (Bunkers Convention), 2001
- The International Convention on the Control of Harmful Anti-fouling Systems in Ships (AFS Convention), 2001
- International Convention for the Control and Management of Ships and Ballast Water and Sediments (BWM), 2004
- The Nairobi International Convention on the Removal of Wrecks (WRECK REMOVAL), 2007
- The Hong Kong International Convention for the Safe and Environmentally Sound Recycling of Ships (SHIP RECYCLING), 2009

Maritime Law Enforcement (MLE) related Legislations to SLN

At present SLN personnel are engaging in assisting to law enforcement authorities within the territorial water as well. Sri Lanka has already passed following legislations to ensure maritime security and maritime safety in the country.

- Immigrant and Emigrant Act No. 20 of 1948
- Merchant Shipping Act No. 52 of 1971
- Maritime Zones Law No. 22 of 1976
- Fisheries and Aquatic Resources Act No. 02 of 1996
- The Suppression of Unlawful Acts against the Safety of Maritime Navigation Act No. 42 of 2000
- Piracy Act No. 09 of 2001
- Narcotic Drugs and Psychotropic Substances Act No. 01 of 2008
- Marine Pollution Prevention Act No 35 of 2008
- Department of Coast Guard Act No. 41 of 2009

Powers of SLN Personnel in Law Enforcement under General Law

Even though the role of the SLN as a specialized force at sea to protect its ocean from threats; at present the SLN assists government agencies to enforce the law under Section 21 of the Navy Act No 34 of 1950. Following are the examples for non-naval duties assigned to SLN;

- Gazette No 13,351 dated 17th October 1962 -Authorized members of the forces under the Immigrants and Emigrant Act
- Gazette No 13,791 dated 15th October 1963 -Powers of Officers and Sailors of the Sri Lanka Navy to act as Custom Officers
- Gazette No 13,943 dated 6th February 1964 -Prevention and Detection of the dynamiting of fish in Sri Lankan waters

Further Sections 95 (3), 96 of the Code of Criminal Procedure Act No. 15 of 1979 requires Service personnel to perform certain duties in the dispersal of an unlawful assembly and arresting of persons involved in such assembly.

In addition to the above mentioned duties and responsibilities under the law of the state, the Public Security Ordinance (PSO) promulgated by His Excellency the President calls armed forces for duty under Section 12 of the PSO. Armed Forces are attributed the same powers conferred on Police officers other than powers specified in Chapter XI of the Criminal Procedure Act. No. 15 of 1979 relating to the investigation of offences.

Powers of SLN personnel in Law Enforcement under Emergency Law

The President has the authority to issue whatever regulations referred to as ‘Emergency Regulations’ appear to him to be necessary or expedient in the interests of public safety, the maintenance of public order, the suppression of mutiny, riot or civil unrest or for the upkeep of supplies and services vital to community life under section 5 of the PSO. In times of emergency armed forces are allowed to perform certain functions ordinarily performed by police officers.

CHAPTER 10

PUBLIC AWARENESS AND SUPPORT

Public awareness and support are crucial components for the success of a maritime strategy. Whether a nation is focused on economic development, national security, environmental protection or international cooperation involving the public is essential. Public awareness and support are vital for the following main aspects;

Main Aspects

- **Maritime Security.** Maritime security is integral to Sri Lanka's overall national security. The public needs to understand the importance of a strong maritime presence for safeguarding national interests and countering illegal activities.
- **Resource Allocation.** Support from the general public guarantees that the government will provide enough funding for maritime projects. This covers financing for research, infrastructure development, acquisitions and naval forces.
- **Economic Growth.** A maritime strategy largely involves promoting trade, ensuring the security of SLOCs and developing maritime infrastructure. Public support is essential to sustain these initiatives as they contribute to economic growth and job creation.
- **Environmental Protection.** Awareness is crucial for promoting sustainable maritime practices. Public support can lead to the implementation of environmentally friendly policies, such as reducing maritime pollution, protecting marine ecosystems and addressing the important climate change.
- **International Relations.** A well-informed public can appreciate the role of maritime diplomacy in fostering international cooperation. This support helps in building positive relations with neighbouring countries and navigating international maritime differences peacefully.
- **Disaster Preparedness.** Public awareness is vital for preparing communities for maritime disasters. Support for emergency response plans and investments in disaster management infrastructure can be reaped through public engagement.

The NAVSTRAT-2030 is committed to fostering public awareness and support through robust education and outreach campaigns. Recognizing the pivotal role of maritime activities in the nation's development, these initiatives aim to enlighten the public on the multifaceted significance of the maritime industry, emphasizing environmental conservation as a core component. Central to this strategy is the implementation of comprehensive awareness campaigns that transcend traditional communication channels. Leveraging both online and offline platforms, the SLN is required to strive to simplify complex maritime concepts, making them accessible to diverse audiences. Through engaging workshops, seminars and interactive exhibits, the SLN is required to create immersive learning experiences that highlight the industry's role in national development and the imperative of environmental stewardship.

One of the main pillars of the outreach plan is collaboration. The SLN to collaborate with academic institutions to incorporate marine and environmental themes into academic curricula, to educate the next generation about these important subjects. The SLN is to place equal emphasis on community involvement, collaborating closely with nearby communities to address concerns and actively include them in the awareness-raising process.

Technology innovation is essential to these efforts. The reach and impact of awareness campaigns are increased through the use of social media, internet platforms and cutting-edge technologies like Augmented Reality (AR) and Virtual Reality (VR). The marine sector has a positive impact on both the sustainability of the environment and the profitability of the country.

Therefore, conducting effective awareness campaigns and outreach efforts is essential for gathering public support and understanding of maritime activities, environmental conservation and the broader role of the maritime industry in national development. The key strategies and components to consider for a successful education and outreach initiative are;

- **Effective Communication**
 - **Simplify Information.** Present complex maritime and environmental concepts in a clear and easily understandable manner.
 - **Use Multiple Platforms.** Utilize various communication channels such as social media, websites and community events to reach diverse audiences.
- **Engagement Initiatives**
 - **Interactive Workshops and Seminars.** Organize workshops and seminars involving experts to discuss maritime issues and conservation efforts.
 - **Interactive Exhibits.** Develop interactive exhibits or displays to engage the public and provide hands-on learning experiences.
- **Collaboration**
 - **Partnerships with Schools and Universities.** Collaborate with educational institutions to incorporate maritime and environmental topics into curricula.
 - **Engage Local Communities.** Work closely with local communities to understand their concerns and involve them in the awareness process.
- **Use of Technology**
 - **Online Platforms.** Leverage social media, webinars, podcasts and online resources to reach a wider audience.
 - **Virtual Reality (VR) and Augmented Reality (AR).** Explore innovative technologies to create immersive experiences related to maritime activities and environmental conservation.
- **Case Studies and Success Stories**
 - **Showcase Positive Impact.** Highlight success stories and positive impacts of sustainable maritime practices and environmental conservation efforts.
 - **Real-life Examples.** Share case studies demonstrating how the maritime industry contributes to national development and environmental protection.
- **Promotion of Sustainable Practices**
 - **Highlight Environmental Initiatives.** Emphasize the industry's commitment to environmental friendly practices and innovations.
 - **Encourage Responsible Tourism.** Promote responsible tourism that respects marine ecosystems and promotes conservation.

- **Community Involvement**
 - **Community Events.** Organize events or fairs to bring the community together and raise awareness.
 - **Volunteer Programmes.** Encourage volunteer participation in environmental clean-up activities (SLN Green-Blue initiatives).
- **Policy Advocacy**
 - **Advocate for Policies.** Engage with policymakers to ensure that regulations and policies support sustainable maritime practices and environmental conservation.
 - **Publicize Policy Impacts.** Communicate how supportive policies positively impact both the maritime industry and the environment.
- **Measuring Impact**
 - **Feedback Mechanisms.** Establish feedback mechanisms to assess the effectiveness of awareness campaigns and adjust strategies accordingly.
 - **Surveys and Metrics.** Use surveys and measurable metrics to gauge changes in public perception and understanding.
- **Continuous Improvement**
 - **Adapt to Feedback.** Be open to feedback from the public and stakeholders and be willing to adapt and improve outreach strategies.
 - **Regular Updates.** Provide regular updates on the progress of maritime initiatives and conservation efforts.

As the SLN continues to advocate for policies that support sustainable maritime practices, these campaigns serve as a conduit for publicizing information on policy impacts and encouraging public participation. It is important to ensure that its outreach and education programmes are dynamic, flexible and constantly enhancing public understanding and support for the maritime industry's critical role in environmental preservation and national development by tracking the results through surveys and feedback mechanisms.

CHAPTER 11

FORCE STRUCTURE AND RIGHTSIZING

This section delves into the strategic justification for the ongoing improvement and reinforcement of a balanced Navy and Coast Guard, with a primary emphasis on their roles extending beyond conventional naval functions. Some maritime/naval strategies are of grand scale such as power projection, expeditionary forces or on super power competitions. Strategies also exist to find the right-fit-force purpose, especially when the maritime forces are smaller in comparison to land forces of an island nation and in particular underpinned by the realities of the strategic circumstances and the economic outlook. Though there are no perceived or significant military aggressions or threats from the sea to Sri Lanka, there is a high probability of our waters being exploited and exhausted for unjust ends. The residual effects from the ongoing tense situation in the Arabian Gulf and recent maritime incidents in proximity to the sea lanes of the Indian subcontinent demand much attention. Certainly, Sri Lanka lacks an ambitious maritime orientation which is very much visible in the existing inward heavy security outlook. However, our prosperity lies with the stability of the international system, economies of scales and net external trade. Hence, this Chapter contemplates how to manage a balanced and effective fleet in the pursuit of our national interests and collective challenges as a credible maritime stakeholder.

Why Need a Balanced Navy and Coast Guard?

In a period marked by shifting security challenges, maritime forces assume a crucial role in safeguarding and promoting a state's national interests. Although naval capabilities are traditionally linked to maritime security, the imperative of maintaining a Navy with a balanced fleet and a dedicated Coast Guard with the assessment of new and emerging maritime threats in today's ever-evolving global dynamics is a timely requirement.

This narrative, conceptualization emanates from a conscious effort made from an understanding of the above chapters, appraising the strategic environment, emerging domestic and global realities and risks involved at synthesizing viable options (WAYS) in the pursuit of the national interests successfully. This presents our rationale informing grand policy of how the SLN and SLCG intend to create desired strategic effects in support of the state's enduring interests. The Chapter also looks to provide a shared vision, unity of effort and prioritization of the effective utilization of assets (MEANS), minimizing costs, managing risks and creating opportunities for the SLN and SLCG in its aspiration of being a credible stakeholder in the Indian Ocean. The endeavour is also an attempt to draw clear distinction and a rebalance between our classic maritime roles and tasks.

We no longer can be prisoners of circumstances nor blame everything else other than ourselves as we transit through the 3rd decade of the 21st Century. Way forward is by taking control and owning our circumstances through accountability in charting a new passage plan realizing the enduring vision. We need to break ourselves from the past and reassess threats, challenges and risks involved. We also need to position ourselves to take advantage and seize opportunities presented and to develop ways and means necessary in the pursuit. Fundamentally, the endeavour is to be regarded as a roadmap based on pragmatism and critical thinking for a futuristic SLN and SLCG (versatile & flexible), with lesser burden on our national coffers.

- **Core to SLN's Strategy.** None aggression, deterrence and self-preservation in the pursuit of our national interests and collective aspirations for rule of law, good order and freedom of navigation in the Indian Ocean.

- **Pillars of SLN's Strategy.** Security and Safety, Professionally Competent and Motivated Personnel, Economic Development, Environmental Sustainability, International Cooperation, Capacity Building, Technology Integration, Public Awareness and Legal and Regulatory Framework.

Understanding the Strategic Requirement

Sri Lanka essentially needs the stability of the international system for the realization and advancement of her interests. Indeed, the island nation has limited trading partners and very low diversity of exports. Sri Lanka has a small domestic market, lacks industrial capacity and limited with resources. Further, the island's consumptions are imported heavy resulting in a net loss of reserves. The main sources of net income are susceptible for external shocks where investing in securing SLOCs and good order at sea is important. The 'MV X-Press Pearl' incident alone justifies the consequences in failing to be proactive and pragmatic in the island's maritime orientations. In addition, a flawed path of fiscal and monetary decisions in the past has led to a worrying state of external debt and debt servicing obligations further exacerbating the negative economic outlook. However, the island's leadership has expressed intent in a relentless pursuit for sustained economic development.

In this backdrop, it is imperative that we are aware of the associated pitfalls of inaccurate interpretation of policy guidance and flawed assumptions. The island's fiscal situation has resulted in more budgetary constraints in the pursuit of striking a balance between providing for public goods and defence expenditure. The Navy's proportion of the national budget for 2024 amounts to Rs. 81.3 billion. Meanwhile, our recurrent to capital expenditure as a percentage on an average is approximately 85% to 15%. Hence, any wish list should have to be an interplay within these monetary limits. This context is to remain the status quo during the next few years. However, neglect of our maritime orientation would be catastrophic given the evolving geo-strategic situation, persisting regional challenges and our collective aspirations. Securing freedom of navigation, rule of law, good order, maritime security, law enforcement, safety of critical infrastructure, search and rescue and crisis response shall remain enduring challenges. Hence, the SLN and SLCG have a strategic choice to make; three options are apparent: reducing personnel; force development to achieve specific capabilities or finding the right balance between quality and quantitative elements. These signify our understanding for a balanced Navy and Coast Guard, with lesser burden on tax payers ensuring credible defence and deterrence in the realization of our national interests.

Core Message of our Strategy: *'Rules Based Good Order at Sea'*

What will be Our Navy?

SLN aspires a balanced force structure with credible defence and deterrence to seaward threats and maritime challenges in the sustainment and advancement of our way of life, security and future aspirations. We envisaged deployment in expanding sea areas of interest in order to achieve and secure our overarching interests as a nation. This shall encompass;

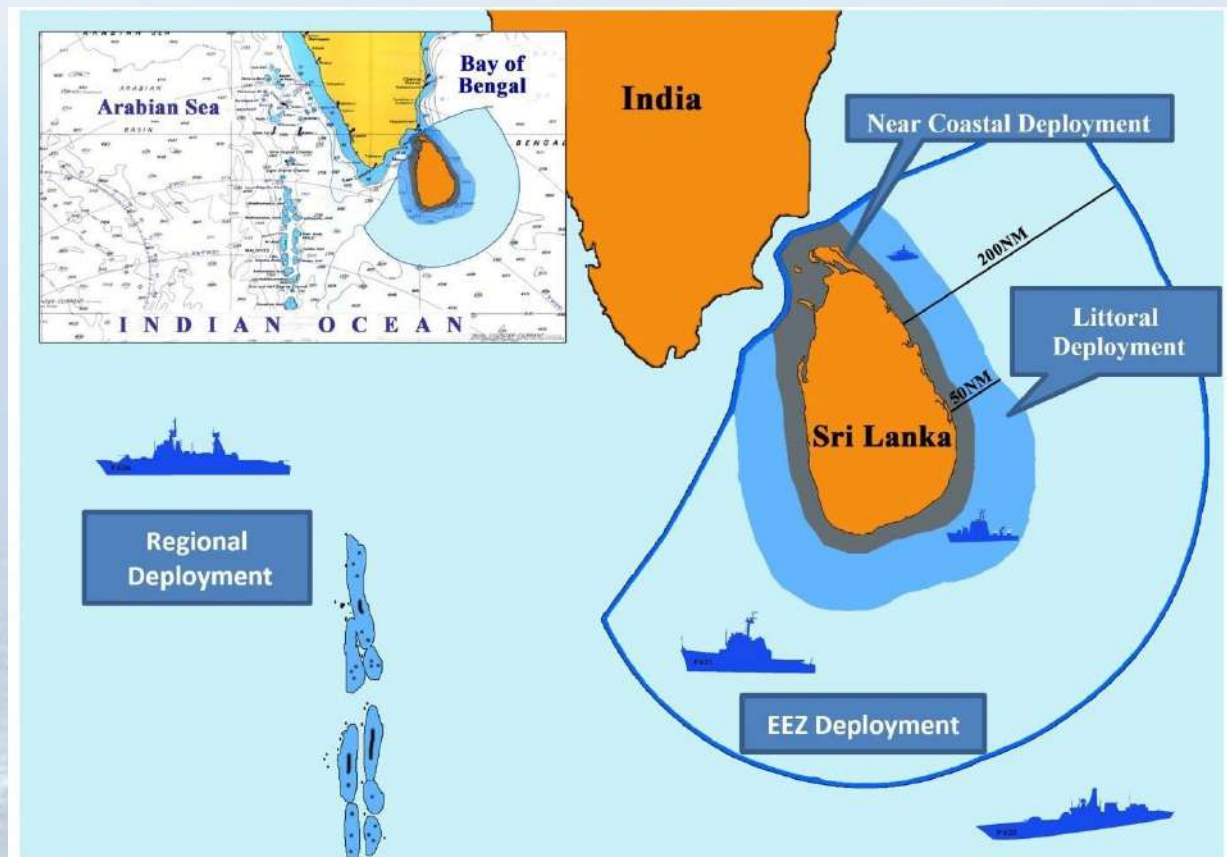
- **A Near Coastal Deployment** – Focuses on base distribution, redistribution, automation and mechanization.
- **Littoral Deployment** – Includes the employment and deployment of SLN and SLCG assets to an extent of 50nm.
- **EEZ Deployment** – In support of maritime security operations deterring criminal acts at sea, exploitation and exhaustion of living and non-living marine resources within our jurisdiction.

- **Regional Deployment** – This represents our forward presence in response to collective security challenges securing global commons in support of freedom of navigation and rules based good order at sea whilst advancing our MDA.

Above current deployments of our naval assets in areas as illustrated in Figure 11.1 affirms achievement of SLN's aspiration to become a credible regional naval force. Thus, our strategy and conceptualization is driven through this overarching concept.

Figure 11.1

Sea Areas of Interest for Naval Deployment



What is NAVSTRAT-2030?

The NAVSTRAT-2030, is to be weighed in its purpose, scope and time horizon. Our comprehension of the strategic guidance has prompted to formulate ways to identify the optimum ratio between available tangible (personnel, forces, equipment, sensors, platforms, weapons, budget, facilities) and intangible (national will, leadership, organization, morale) means in the foreseen future to undertake multiple and diverse roles. It shall incorporate at identifying the right fit between quantity and quality of force posture. Fundamentally, this strategy should be viewed as the new operational orientation in response to the strategic realities of our time and the foreseen future especially considering the limitations superimposed by the island's revenue, consumptions, investments and external trade.

An understanding of contemporary maritime/naval strategy development learnt through synthesis and analysis of a multitude of maritime nations resulted in the realization of the need for a strategy-

led approach to capability development as most effective. This is effective in terms of achieving the desired end-state and also from a resources perspective.

This shall be short of 'Force Modernization' but rooted in the ideal of striking the right balance in generating credible defence, deterrence and crisis response capabilities and capacities whilst actively engaging in our national, regional and global commitments. The effort is to be defined as a declarative strategy; our envisioned operational orientation and force structure creating effects for a desired future.

We need to elevate Sri Lanka's maritime profile. The SLN and SLCG over the years have been regarded as proven instruments of maritime power. The SLN and SLCG are subordinate state institutions integrated with other agencies and maritime stakeholders as well as laws and policies. NAVSTRAT-2030 is no substitute to a 'Maritime Strategy'. However, this could be understood as a nudge towards making the polity appreciate the requirement for a comprehensive strategic guidance/document for the maritime environment. Thus, it is imperative that the formulation of such is not made in isolation but through wider consultation. It is vital to comprehend that strategy is subordinate to policy and different from plans. Plans are problem-solving processes while strategy is a problem-defining process. We must also be aware of 'strategic monism', prescribing a single concept for all situations. The inclusion of technology should be regarded as an enabler rather than an alternative strategic concept. During the process, we should be mindful not to transform operational concepts to the strategic level.

Today, what transpires in the Red Sea demonstrates the need for 'forward defence' and 'interoperability'. It is not too ambitious to think of a concept that would maximize risks and costs for any aggression in our domain. It is fundamental that we are committed to protecting international trade contributing to national, regional and global security. In this, our forward employments are to be regarded as confidence building measures in our state's ability as a credible stakeholder in the Indian Ocean.

What are Our Limitations?

We need to guard against overly ambitious wishful conceptual tendencies for Blue Water Capabilities, Power Projection, Expeditionary Fleets etc. Ambitions and the envisaged roles must be complementary in the foreseen strategic context and national interests. Failure to do so will create unnecessary inventories, liabilities and increase our vulnerabilities in the long run. Our prime limitations are budgetary support, industrial capacity, research and development, availability of raw materials and recruitment.

What the Strategy will do?

This should equip the SLN and SLCG to be interoperable with the evolving strategic environment in the region and beyond. It does not alter the focus from defence of our coasts, littoral waters, ports and critical seabed infrastructure. The strategy will identify whether the Strategic Objectives can be accomplished with the available resources or more resources are needed. This endeavour is to provide necessary planning guidance to the subordinate operational and tactical levels. Hence, the NAVSTRAT-2030, is not to be regarded as a detailed prescription. Through this, the document ensures to preserve the flexibility, initiative and creative decision making at subordinate levels. The formulation is to be viewed as a retrospective effort, looking backwards to ensure that means available are sufficient to implement the ways and these concepts can achieve the desired effects or envisioned objectives.

Meanwhile, following provides a synoptic illustration of the SLN's evolution since 1980 to date.

Table 11.1

Synoptic View of SLN Evolution (1980 Onwards)

Sr. No	Description	1980	1990	2000	2010	2020	As at 31 Dec 23
1	Total no. of Personnel (including VNF)	2,691	7,426	19,144	52,828	48,526	44,533
	Officers	224	497	2,165	2,399	3,341	3,175
	Sailors	2,409	6,771	16,979	50, 429	45,185	41,358
	Approved Cadre:	2,960	9,419	16,191	55,000	55,000	53,000
2	Total no of Volunteer Forces	58	158	2,048	9,865	11,056	11,157
	VSS	-	-	-	5,399	4,139	6,472
3	Portion of National Budget (LKR)	0.11 bn	1.14 bn	7.8 bn	31.08 bn	56.37 bn	81.3 bn
	Recurrent to Capital Expenditure ratio	46: 54	65: 35	56: 44	87 : 13	91 : 9	85 : 15

In order to anticipate associated risks above appraised and the threats identified to national security with an appreciation of our strategic circumstances, following deficiencies and challenges were identified existing in our capabilities and capacities in ensuring a safer and secure Sri Lanka;

Enduring Deficiencies and Operational Challenges

Our understanding into the strategic environment, global dynamics, historical precedence and in the IOR has prompted a strategic appraisal into our enduring deficiencies and operational challenges as an element of national power and a maritime stakeholder. Following are not listed on priority basis;

- Lack of credible 3 dimensional capabilities
- Operational readiness (to be at least over 75 %)
- Versatile platforms to conduct efficient and effective maritime security operations
- Capability and capacity for SAR, HADR and respond to pandemics
- Managing and law enforcement in the maritime domain
- Real-time MDA capability
- Effective contribution towards enduring national and international partnerships for collective security challenges
- Safety and security of port operations, approaches and critical infrastructure
- Credible defence and deterrence capabilities
- Morale, suitability of personnel, recruitment, retention and training
- Public awareness and support for maritime affairs

Focal Areas of Interest

Understanding our existing capabilities, capacity deficiencies and operational challenges led to the conceptualization of our role in maritime affairs on our coasts, littorals, the IOR and beyond. Thus, it is imperative that the SLN re-orientate its focus on the following Focal Areas of Interest which underscores our Navy's objectives in our maritime domain.

- Achieving MDA
- Ensuring maritime safety and security
- Maritime law enforcement ensuring 'Rules based good order at sea'
- Protection of living, non-living resources, littoral, EEZ and continental shelf Management
- Conducting Maritime Search and Rescue
- Responding to HADR
- Port operations and critical infrastructure security
- Improving defence and deterrence
- Nurturing enduring partnerships with local, regional and global entities for collective challenges without military alliances
- Cyber security
- CBRN preparedness
- Providing better health, nourishment, and welfare facilities
- Providing high quality training and retention of the best men and women
- Public awareness and support for maritime affairs

Weighing our Fleet, Basin Structure and People

Our seas are today congested and contested. In order to respond to the persisting maritime threats, challenges in our domain and the evolving strategic environmental dynamics and realities, SLN must seek a new seaward orientation. Acquiring capabilities to meet future demands is not a choice but a necessity. This is easier said than done given the existing financial constraints. However, in order to facilitate Sri Lanka's pursuit of national interests, SLN is the ideal lead organization in our maritime frontier. Our defence orientation is non-aggression but concentrated on developing credible defence, deterrence and maintaining 'Rules based good order at sea'.

Our understanding of the enduring focal areas of interest has made us realize that the existing capabilities and capacities are insufficient and the fleet is acutely equipped to achieve a desired effect in our domain.

Fleet

The existing 'fleet' has a core complement of over 3,600 personnel. The 08 capital ships; AOPVs and OPVs are severely short of credible surface capabilities (surveillance, reconnaissance) let alone self-defence. These vessels are under- equipped and lacks versatility and flexibility in order to be deployed for various maritime security operations /missions. Apart from conducting routine high sea patrols these platforms are underutilized due to existing sensory, weaponry and equipment limitations. None of these ships does possess subsurface detection, electronic warfare or anti-air capabilities that are essential configurations and integral for a balanced Navy.

The state of auxiliaries is also a concern, seriously constraining our ability to conduct effective sustained operations at sea. Almost all the auxiliaries are employed beyond their general life cycle. In fact, the void of a sufficiently capable auxiliary fleet is a critical vulnerability overall.

Meanwhile, the FMVs, the FGBs and the FACs are serving and deployed beyond their respective original life cycles. Keeping these operational and maintenance has become cost-intensive. The lack of spares and high maintenance costs involved induce a critical drag into our future fleet advances. Eventually, some of these platforms will have to be phased out in order to provide for new acquisitions. There needs to be a proper appraisal of the respective roles expected from each platform and prescribing the right role-task-platform synchronization. These need to be gradually phased out before transforming into serious liabilities. Similarly, the FPVs are also limited in deployment considering seaworthiness.

The IPCs have seriously become redundant and incapable of responding to the perennial non-traditional threats existent from the North-western coast to the Northern coast. The SLN needs to rethink the employment of a suitable all-weather platform/platforms along these coastal waters to deter and deny IUU fishing and illicit activities.

Overall, the entire SLN fleet is severely short of credible surface, subsurface or anti-air capabilities. They acutely lack versatility and flexibility which is essential for a balanced Navy to achieve the desired effect in an object area. To offset the high costs involved in operating ships, aircraft on the high seas can be leveraged through advanced technology.

Basin Structure

There is an apparent incoherence of our Basin Structure (ashore establishments, berthing & maintenance facilities) to meet the future demands in the maritime domain. Across the existing 07 Area Authorities, there are 45 Commissioned bases, 03 Naval Deployments, 129 Detachments, 25 Naval Sub-units and 337 Coastal Observation Points (COPs). In a sense, SLN has overstretched itself along the coastal regions which had become even worse following the establishment of COPs making administration, sustenance, logistics, communications and training arduous. In a security sense, these have become our critical vulnerabilities. However, we need to strengthen our coastal security operations and missions ensuring our territorial integrity, sovereignty and the pursuit of our national interests.

Further, there also exists a more worrying phenomenon considering available berthing facilities, provision of shore power, fresh water and waste disposal at any given time for our existing and future fleet forecasts. Given the associated annual maintenance and major overhauls and our own capacity to undertake the same, the Navy indeed faces a dilemma.

People

Our personnel are not only for ships/craft but essential to support our fleet from ashore. Given our classic role, a significant number of personnel, over 6,000 are employed for non-naval roles and tasks from maintaining RO plants, non-security related duties at religious places and other construction work. Further, there is a cadre of 6,472 personnel under the Volunteer Special Scheme (VSS) that represents a considerable portion of our overall complement. Further, the Navy maintains an active Volunteer Naval Force (VNF) of 11,157 including 379 Officers.

Meanwhile, our work spaces, accommodation areas are highly congested and provisions are inadequate to provide for significant intrinsic or extrinsic benefits that are essential factors in maintaining a high status of morale among our men and women. These need to be immediately addressed or ignorance to do so will result in a 'butterfly effect' that would be detrimental to the organization both short and long terms. We must be receptive, proactive and pragmatic in our approach to these worrying signs already visible in the horizon.

Thus the synchronization of our people, ships and basin structure should complement in building our credibility in the execution of missions in our focal area of interests.

Understanding Our Approach (the Logic for ENDS, WAYS and MEANS)

The policy guidance provided by the higher authority, national interests and national security objectives, assessment of our strategic environment and our corresponding focal areas of interest underscored the devising of our strategic imperatives or objectives for the SLN. Identification of these strategic objectives (ENDS) reflects our focus on root purposes and causes and an appreciation of the strategic environment. These objectives on accomplishment are to result in desired effects and the achievement of the desired end states as a nation.

Articulation of the strategic concepts (WAYS) explains ‘how’ the end state is to be achieved through the employment of instruments of power at our disposal. Thus, the following rationale approach was undertaken in order to identify suitable, viable and acceptable strategic concepts and means with low or no risks in articulating a new orientation for the future SLN.

Table 11.2

ENDS, WAYS and MEANS Approach

Enduring Needs/ Strategic Objectives (doing the right things or effectiveness) (ENDS)	Desired Effect	Operational Challenges & Deficiencies	Strategic Concept (WAYS) (Doing things right or efficiency)	Resources (MEANS) (Costs)
1. Achieving Maritime Domain Awareness (MDA)	MDA in our maritime region and beyond in all weather conditions	Lack of credible three dimensional capability and relevant investments Real-time MDA capability and capacity Less effective maritime air surveillance capability (so far zero seizure rate since induction) Increasing threat by resurgence of piracy and drone attacks to global commons especially in the IOR (Red Sea area). This shall persist till 2030	This should be through patrols, surveillance, technical monitoring and information sharing Maintaining a credible deterrent effect through a persistent presence in our littoral and EEZ covering a vast span of area in all weather conditions. Visible presence deters lawless behaviours Increasing and investing in MDA capabilities (IFC, MRCC) Existing maritime surveillance asset to be employed as per SLN mission requirements / alternative is to train SLN crew to man aircraft and separate vote allocated for SLAF for maintenance etc.	Versatile and flexible surface and air platforms An MPA can be an effective surveillance tool, flying the EEZ often in less than an hour and patrolling thousands of square miles of sea more quickly than ships UAVs/ UUVs might be cost effective and a force multiplier Real time satellite imagery

<p>2. Ensuring Maritime Safety and Security</p>	<p>Strict compliance of Maritime Safety and Security Laws, provisions</p> <p>Minimizing maritime security incidents in our maritime domain as spill overs of the escalating situation in the Red Sea area</p> <p>Effective and efficient management of maritime safety-related incidents</p>	<p>Lack of credible three-dimensional maritime capability</p> <p>Inability to conduct sustainable MARSEC operations in our domain</p> <p>Lack of maritime incident management assets and equipment</p>	<p>This should be through inspection, maritime safety and security laws. Boat registration safety inspection under a unitary authority</p> <p>Collaborative use of network-centric data/information at pre-classifying threats and advance response in collaboration and cooperation with national, regional and international stakeholders</p> <p>Increasing and investing in MDA capabilities</p> <p>Developing marine scientific research capabilities</p> <p>Through the effectiveness of Port Authority agencies, maintenance of facilities, security of facilities, cyber security, and international agreements/treaties</p> <p>Establishing proper maritime casualty management mechanism</p> <p>Identifying suitable places as port of refuge</p>	<p>IFC and MRCC.</p> <p>Versatile and flexible cost-effective platforms with enhanced C4ISR capabilities that could be equipped for various mission requirements</p> <p>Declared port of refuge</p>
<p>3. Maritime Law Enforcement Ensuring Rule Based Good Order at Sea</p>	<p>Good order at sea and accessible to all nations and free from</p>	<p>Lack of effective legal mechanism on par with international</p>	<p>This should be through laws and regulations, equipment, law enforcement training,</p>	<p>Domestic maritime laws in line with international laws</p>

	<p>illegal activities</p> <p>Increased seizure rate</p> <p>Enabling growth of blue economy</p>	<p>maritime legal framework</p> <p>Lack of enforcement of legal framework in sensitive sea areas</p> <p>Lack of expertise for comprehensive and effective policy making in the maritime domain and lack of legal experts specialized in the maritime domain</p> <p>Lack of understanding of having maritime security as a key enabler of blue economy</p> <p>Increasing regional (IOR) instability</p>	<p>interdiction capability, seizure rate</p> <p>This should be mitigated through pragmatic diplomatic relations</p> <p>Cautious and measured approach in implementing and ratification of legislations</p> <p>Ensuring safety and security of SLOCs, port, harbours, other critical maritime infrastructures and maritime resources through SLN / SLCG operations</p>	<p>International laws on maritime safety and security</p> <p>Maritime diplomatic relations and diversification with more credible partners</p> <p>Colombo Security Conclave; IORA, Combined Maritime Force Partnership, IFC Colombo, Galle Dialogue Maritime Symposium, IONS, HACGAM etc.</p> <p>SLN/ SLCG force and assets</p>
<p>4. Protection of Natural Resources and EEZ Management</p>	<p>Zero exploitation & exhaustion of our marine resources & eco systems by illegitimate agencies/ organizations</p> <p>Preventing IUU fishing and use of our waters for illegal activities</p>	<p>Non-availability of versatile platforms, real time MDA & adequate legal framework</p> <p>Lack of law enforcement in sensitive sea areas</p> <p>Increased IUU fishing and illegal activities in maritime zones of SL</p>	<p>Through Fisheries related training, capacity building initiatives, strict law enforcement, international agreements</p> <p>Enactment/ strengthening of appropriate domestic laws for preserving conservation and management of maritime resources</p> <p>Research & data collection</p>	<p>Awareness training.</p> <p>Versatile platforms for data collection and conducting sustained maritime research</p> <p>SLN/SLCG platforms</p> <p>Sensors, systems, equipment and C4ISR</p>

			<p>Implementing measures to protect marine environment, seaward pollution</p> <p>Marine pollution monitoring and controlling within our maritime jurisdictions</p> <p>Technology utilization in deterring IUU fishing fleets</p> <p>Surveillance, reconnaissance & law enforcement</p> <p>Diplomatic relations and enhanced C4ISR initiatives</p>	
5. Conducting Maritime Search and Rescue	Effectively coordinate SAR operations to ensure minimal loss of lives at Sri Lankan SAR Region	<p>Not ratified SAR Convention</p> <p>Lack of equipment /assets cover all sea areas defined under GMDSS</p> <p>Lack of platforms and trained personnel</p> <p>Lack of proper MoUs with neighbouring SAR regions</p>	<p>Ratification of SAR Convention</p> <p>Employment of SAR teams</p> <p>Enhance diplomatic ties with neighbouring SAR regions</p> <p>Through legal binding cooperation agreements on SAR and possible disasters at sea</p>	<p>SAR Convention</p> <p>MRCC sub stations</p> <p>Aerial surveillance</p> <p>Satellite imaging</p> <p>Radio communication</p> <p>International cooperation</p> <p>Unmanned/ Drone technology</p> <p>Make Availability of equipment/assets to cover all sea areas defined under GMDSS</p> <p>Signing SAR partnership with</p>

				neighbour SAR regions Joint rescue operations
6. Responding to HADR	Effectively handle HADR activities in SL waters and respond to global necessities as a credible stakeholder	Lack of collaboration between maritime agencies Lack of proper equipment/assets to engage in HADR Lack of adequate MDA	Upgrading capacities and capabilities to respond to HADR eventualities locally, regionally and globally Collaboration with maritime agencies national and international Integration of technology and a force multiplier in HADR missions Specific module of training required to conduct through capacity building	Enhance collaboration with stakeholder maritime agencies on HADR activities Proper assets and equipment to handle HADR incidents (new acquisitions to have capacity for quick changeovers for disaster relief missions) Unmanned vehicles for disaster response and relief missions
7. Port Operations and Critical Infrastructure Security	Resilient port operations and relevant infrastructure Safety and security of offshore installations including submarine cables	Ability to maintain port security facilities as per international standards Ability to provide safety and security to offshore installations including submarine cables Security of harbour approaches and channels Ability to maintain required	Port security initiatives, maintenance of facilities, security of facilities, cyber security, and international agreements/treaties Create collaborative framework with stakeholder agencies for safety and security of ports and port facilities Implementation of ISPS audit Developing CBRN identification (IMDG Code), response and mitigation	Appropriate regulations and entry restrictions. MoUs and regulations to ensure maritime safety & security ISPS audits. Freight scanners, sensors and equipment Interagency intelligence sharing at national and international level Multi-purpose tugs for

		<p>depths in ports and approaches</p> <p>Ability to identify and respond to potential CBRN threats</p> <p>Increasing threat by asymmetric and hybrid threats</p>	<p>capabilities and capacities</p> <p>Increased C4ISR capabilities and capacities</p>	<p>employment for port operations emergencies (oil spills; fire-fighting etc.)</p>
8. Improving Defence and Deterrence	<p>Force generation for credible defence & deterrence in the maritime zones, coastal region and the islands</p>	<p>A significantly large coastal area, internal waters and islands</p> <p>Lack of ability to have defence and deterrence.</p> <p>Acute deficiency in self-defence, surface, subsurface and air sensory capabilities and capacities, equipment, expertise, weaponry & CONOPS</p> <p>Operational readiness and number of aging platforms exceeding operational life cycles</p>	<p>Through Naval training and readiness, interoperability, interdependency, tactical assets, surveillance and reconnaissance capabilities and capacity, coordination with partner agencies, regional and international stakeholders.</p> <p>Strengthening coastal defence/ protection through re-orientation of basin structures, use of technology and mechanization increasing presence, interdictions</p> <p>Acquiring credible three dimensional capabilities</p> <p>Achieving an operational readiness of over 75 %</p> <p>Improved self-defence through firepower, sensors,</p>	<p>Versatile and flexible platforms to conduct sustained, cost effective multi-role missions</p> <p>Unmanned Vehicles on platforms</p> <p>SLCG and the Strategic Reserve forces</p> <p>C4ISR suites onboard platforms</p> <p>Maritime Air Surveillances</p> <p>Maritime combat air power</p>

		Insufficient berthing, logistic facilities and costly routine maintenances	<p>equipment and systems acquisitions</p> <p>Induction of versatile, cost effective and flexible platforms that could be made ready to undertake various missions and sustained employment</p> <p>Conducting consistent and sustained Maritime patrols, surveillance and reconnaissance missions</p> <p>Employment of unmanned submersibles, underwater sensors along, inside and off our harbours and approaches</p>	
9. Nurturing enduring partnerships with local, regional and global entities for collective challenges without military alliances	Strong international and local partnerships to cater maritime security and safety concerns of maritime zones of Sri Lanka	<p>Lack of strong, credible international partnerships</p> <p>Lack of collaboration between local stakeholders</p> <p>Possible covert pressure to be pushed into military alliances</p> <p>Need for legal binding cooperation agreements on SAR and possible oil spills and</p>	<p>Engaging in multilateral maritime security cooperative initiatives</p> <p>Leasing of potential platforms for employment on international mission requirements</p> <p>Taking lead in promoting rules based good order and accessibility to all in the IOR</p> <p>Pragmatic relations with maritime stakeholders</p>	<p>Proper procedures and regulations between local entities to face maritime security concerns in Maritime zones of Sri Lanka</p> <p>Maritime diplomatic relations and diversification with more credible partners</p> <p>Colombo Security Conclave; IORA, Combined Maritime Force Partnership, IFC Colombo, Galle</p>

		accidents at sea		Dialogue Maritime Symposium, CMF, UN missions
10. Cyber Security	Improved resilience of our cyber domain	Inadequate ICT infrastructure	Enhance cyber security in skilled men and infrastructure to face cyber security threats	Modern ICT infrastructure and train skilled operators to face cyber security challenges
11. CBRN preparedness	Effective CBRN response force	Lack of CBRN capacity & capability	Improve CBRN capacity & capabilities	Modern CBRN capabilities to enhance CBRN preparedness, resilience with international and government collaboration Radio-active detection locations (Nuclear Disaster Early Warning System)
12. Providing better health facilities	Healthy workforce	Lack of sufficient budgetary allocations, facilities	Improved health facilities	Sufficient budgetary allocation.
13. High quality training and retention of the best men and women	Competent, skilled, high morale & combat ready workforce	Lack of sufficient budgetary allocations, facilities Inadequate skills & competencies for a modernizing Navy Lack of performance based appraisal system	Improve facilities and quality of training, work-life balance Appropriate salary structure aiming retention of best employees and increase welfare facilities Improving just system based on meritocracy	Improved facilities and quality training Work-life balance Skills development Appropriate wages in par with outside private sector aiming to retain skilled personnel Welfare measures and key enablers

		Inadequate welfare measures on par with regional navies		for improved quality of life
14. Increased Public awareness and support on maritime affairs	Acceptance among the general public and stakeholders	As silent service, most of the work by SLN in maritime domain not reached to public Lack of awareness and inadequate support from stakeholders and general public	Increase awareness on maritime affairs among general public and stakeholder organizations	Public awareness campaigns. Effective Communication. Engagement Initiatives

Optimization of Fleet Composition

The overall aim of the Sri Lankan Government's strategic blueprint is to establish a technically and tactically sound well-balanced defence force by the year 2030, capable of addressing upcoming security challenges in line with the national security dimensions of the country. A balanced fleet is identified as the key to achieving maritime objectives. Changing technology, economic and political compulsions and perception of own capabilities have always played a crucial role in determining the desired force level.

The SLN has developed into a sizeable fleet over the last 30 years, serving as the country's primary maritime force. However, the SLN has struggled to keep pace with the rapid advancements in the global maritime environment, particularly in terms of technology-based military hardware and firepower. This shortfall can be attributed to a lack of national interest and economic constraints. The re-orientation of the SLN is intricately linked to the national defence policy, but progress has been hindered by the absence of a comprehensive defence policy, a lack of awareness among policy makers and budgetary constraints.

Despite these challenges, the perceived threats to Sri Lanka's maritime interests have prompted the formulation of a naval strategy and concept of operations, encompassing planning for personnel, platforms and other support facilities. However, considering all available resources and constraints, the SLN must evaluate its current strength and strategic plan for the future to determine a justified naval strength that ensures a secure and successful trajectory into the future.

Peacetime Concept of Operation

Currently, the SLN deploys ships for EEZ patrol based on analysed information only, without maintaining dedicated sea units at different geographical areas to address multi-dimensional threats 24 x 7 due to cost considerations. Instead, the SLN utilizes maritime domain awareness tools to identify white shipping and dark targets and planning to invest in satellite imagery in suspicious areas for further analysis. However, the SLN faces challenges in directing physical assets for further investigation. Therefore, it is advisable for the SLN to initiate with shipborne UAVs for extended Intelligence, Surveillance and Reconnaissance (ISR).

Nevertheless, the SLN needs to consider the optimal utilization of the existing fleet, deviating from solely operating based on information. Even during peacetime, once dark targets are filtered through the criteria explained above, there should be a few sea-going assets floating in demarcated strategic areas to perform such tasks 24 x 7. To reduce wear and tear and fuel wastage, it is advised to use vessels for 20 to 30 nights, particularly capable AOPVs/ OPVs. Moreover, the SLN may need to address maritime terrorism, piracy or hostage activities at sea in the future, requiring Naval Contingency Force trained in special operations at sea.

In addition to security concerns, Sri Lanka is prone to natural disasters and marine accidents, necessitating the SLN's involvement in SAR and disaster relief operations at sea. The SLN is also responsible for conducting hydrographic surveys of its area of operation during peacetime.

Requirement of UAVs to the Sri Lanka Navy

UAVs have gained significant attention in enhancing maritime surveillance and reconnaissance capabilities. Their advantages such as extended flight times, heightened deployment flexibility and the ability to capture high-resolution imagery and sensor data make them indispensable for monitoring marine operations. Across the IOR, countries are increasingly integrating UAVs into their maritime security strategies enabling efficient coverage of maritime zones and swift responses to emerging threats.

UAVs can serve as force multipliers for SLN ships by extending the force sensor horizon and enabling stand-off offensive and defensive capabilities within equipment constraints. Tactical UAVs can offer opportunities for deploying limited aviation capabilities from a range of minor war vessels including patrol boats for tasks such as surveillance, reconnaissance, intelligence collection and communications.

NAVSTRAT-2030

At present there is an inability to afford a huge amount of capital from naval budget for purchasing large seagoing platforms during next few years. Therefore, best utilization of tactical UAVs at available larger platforms would be cost-effective and efficient means to bolster its naval capabilities despite budgetary constraints. Moreover, it will address the nourishing maritime safety and security issues in the maritime domain of Sri Lanka. Some of the most important maritime aspects compensated from UAVs are listed below;

- Wide area surveillance
- Provide Over The Horizon Targeting (OTHT) data
- Surveillance and reconnaissance
- Battle damage assessment
- Surveillance of area prior to combat search and rescue operation
- Obtain real time imagery of area or objects of interest
- Surveillance of EEZ and fishery protection
- Maritime patrol in the coastal area
- Merchant traffic monitoring
- Assistance in SAR operations
- Coastal and critical maritime infrastructure protection
- Pollution prevention, law enforcement and evidence collection

Desirable Fleet

To confront multidimensional maritime security threats and safety issues, despite all the limitations and constraints, the SLN needs to relentlessly perform tasks entrusted by the nation. This is true irrespective of the capabilities of the present naval fleet as elaborated above. Therefore, the SLN fleet must be optimized with the new assets to deliver the roles and tasks to protect and promote national interests.

Fleet Composition

In order to accomplish our mission and perform the roles vested on the basis of concept of operation the desirable ORBAT for 2030 are as follows;

Table 11.3

SLN Fleet Composition 2024-2040

Assets	20 Ships Fleet	Actual in 2023	2024-2025	2026-2030	2031-2035	2036-2040	Total
Frigates (ASW/AA)	2	0			1	1	2
OPV	9	8	1	1	2 (-1)	4	15
FMV	4	2			4	2	8
FGB/CPV	15	11	1	2	4	4	22
FPC	4	2			1		3
Multi-Purpose Vessel			1				1
Oceangoing Tug				1			1
FAC	57	49		- 4	4	4	53
P Aux		1		1		1	3
Hydrographic Survey Vessel				1			1
LST	8	1			1	1	3
LCM		2			1	1	4
LCU		2		1	1		4
LCAC (S)					1	1	2
IPC	73	63	6 (-2)	6 (-5)	6 (-5)	10 (-5)	74

Table 11.4

SLCG Fleet Composition 2024-2040

Assets	Actual in 2023	2024-2025	2026-2030	2031-2035	2036-2040	Total
PCV			1	1		2
OPV	2					2
MRRV				1	1	2
FPV	2					2
Oceanographic Research Ship			1			1
FPB	10		4			14
Boom Laying Boat			4			4
IPC	10					10

Volunteer Naval Force (VNF)

The Volunteer Naval Force (VNF) serves as the principal supplementary arm of the SLN, maintaining a state of naval readiness to offer essential assistance during periods of national urgency and distress. The core mission of the VNF is to augment and provide necessary support in the execution of the SLN's roles and tasks, leveraging expertise from diverse fields. The VNF is entrusted with various naval responsibilities, complementing the regular naval force, and actively recruits professionals and skilled personnel, particularly in technical, technological, medical, and administrative domains from external sources. The implementation of a volunteer scheme becomes imperative when challenges arise for the regular force in meeting the requisite professional standards for fulfilling naval responsibilities. The VNF, therefore, stands ready to contribute its expertise and manpower, ensuring the seamless execution of naval duties in the face of evolving challenges.

International Collaboration for Force Optimization

The international collaboration for force optimization of SLN was greatly impacted upon the success of humanitarian operations. The formulation of FAC squadron with the initial assistance of the USA, Israel and the Republic of Korea paved the path for our success story. Then fire control systems, night capabilities, high-speed engines, auxiliary machinery and technical packages with the assistance of Germany, India, Israel, Pakistan, UK, USA and many other countries optimized SLN for beating LTTE sea tigers. Subsequently, international support was instrumental in augmenting the capabilities of SLN to deal with non-traditional threats such as human trafficking and the transfer of drugs. The assistance provided by the Australian Border Force greatly contributed to effectively deal with human trafficking and ships for surveillance from USA under Foreign Military Fund (FMF). Thus, international collaboration is a decisive factor for SLN force optimization. The optimization of capabilities through enhanced interoperability and interdependency is the way forward for harnessing synergy out at sea. No matter how capable a platform is, it can operate within a limited time and space. Therefore, collaboration with partners in the maritime domain remains a viable option. SLN has the advantage of a geographical location situated amid the Indian Ocean surrounded by stronger navies. The futuristic international collaboration is imperative for force optimization. The right optimization options for the enhancement of weapon and sensor capabilities will meet the future demand of maritime landscape.

Collaboration with International Partners to Leverage Shared Capabilities and Expertise

Shared capabilities and expertise through international partners were key to the success of the SLN developments during humanitarian efforts and for facing aftermath challenges. However, the same efforts be continued only if SLN navigate with an understanding of the complementary interests of different stakeholders. The friendly nations should be incorporated with SLN efforts towards maintaining good order at sea. Thus, make sure a meaningful fair share of partner nations as compensation of their efforts.

The strategic interests of regional and extra-regional stakeholders are intermingled and contested within IOR. The competition for reserving strategic space for futuristic objectives remain real challenge for small countries like Sri Lanka. The maritime research vessels belong to numerous powerful countries are seeking potential space within Sri Lankan waters. Therefore, the future force structuring of SLN to be worked out with a great concern of this strategic issue. Unless Sri Lanka acquire maritime research capability to deal with scientific affairs within our waters, escalation of existing challenges and concerns of neighbouring countries would not be eliminated. The attempt to address this strategic issue needs collaboration with capable and friendly countries support to share assets and technical know-how with Sri Lanka.

The technological advancement of navies worldwide is achieved through the integration of Artificial Intelligence (AI), automation, satellite-based applications, smart and secure IT options etc. The future force of SLN to be compatible with the latest technology and without the support of international partners this may not be a reality. The collaborative training programmes with international partners with National Defence College (NDC), Defence Services Command and Staff College (DSCSC), General Sir John Kotelawala Defence University (KDU), Naval and Maritime Academy (NMA) and other training institutes have shown progressive improvement. The collaboration with more international partners to seek knowledge transfer is one of the key focuses. The military technology is rarely shared even among partners. Accordingly, future collaboration with international partners to leverage shared capabilities and expertise depends on how best we strategize our maritime forces and other agencies.

Explore Joint Ventures for the Procurement and Maintenance of Naval Assets

Procurement and maintenance of naval assets are costly affairs necessitating partner counters and joint ventures aiming for the common good. A futuristic framework is required for strategizing current and future acquisitions. The Australian Border Force supported the SLN force optimization as a joint venture donating two Bay class ships and continuing their support for post-delivery maintenance on a goodwill basis. US Coast Guard has already donated three ships after refurbishing to augment the SLN fleet capability with Follow On Technical Support (FOTS). India has always supported SLN fleet augmentation through the provision of ships, sensors and weapons along with numerous technical assistances. China has always supported SLN efforts through the donation of ships and other military assets followed by technical assistance. Pakistan supported SLN through the provision of weapons and ammunitions including technical assistance. The defence dialogues and Navy-to-Navy staff talks are arranged through diplomatic channels and the exchange of Subject Matter Experts Exchanges (SMEEs) in various fields is ongoing. The sharing of information and MDA has augmented with the establishment of Information Fusion Centre (IFC) Colombo and which in turn enhanced the capabilities of MRCC Colombo. A wide range of international support is required for maintaining an operational fleet and other supporting operations. Thus, exploring joint ventures for the procurement and maintenance of naval assets require a more futuristic realization of the maritime surrounding.

Futuristic Framework

Table 11.7

Futuristic Framework

Area of Interest	2024-2030	2030-2035	2035-2040
Partnerships and naval diplomacy	Need to augment the limited participation in international engagements	Participation in majority of international engagements New placements of DAs	A credible stakeholder in the Indian Ocean
Strengthen diplomatic ties with maritime nations	Workout 73 maritime related MOUs and agreements already signed. Initiate MOUs with India, Indonesia, France, Pakistan, Russia etc.	Enhanced diplomatic ties More number of ship visits	Harnessing mutual benefits Increased two way ship visits
Engage in joint patrols and exercise with regional navies	Accept CMF invitation for combine patrol from 2024. Continue Exercises, MILAN, SLINEX, etc.	Participation in CMF and UN missions (ships and men) Limited joint patrols	Joint patrols with interoperability
Participate in international forums addressing maritime security	Participate for ReCAAP, IORA, IONS, RIMPAC MAHASAGAR etc.	Represent all maritime forums in IOR More participants for Galle Dialogue	Presents SLN as a valuable stakeholder within Indo-Pacific region
International collaboration for force optimization	Get the Australia, China, India and US etc. assistance for force optimization Develop the sensor and weapon capabilities of OPVs, (At least self-defence capabilities)	More partners/donors etc. Assets and capabilities maintain as closer to forecasted plan	More partners Assets and capabilities maintain as per forecasted plan
Collaboration with international partners to leverage shared capabilities and expertise	Develop the capacity of IFC, MRCC, Maritime Security School (MSS) Exchange of SMEE and MTT VBSS, Advanced Baoding, SF training, UNODC etc.	Independent IFC and MRCC operation outside NHQ (lead by navy) Upgraded to latest technology	Independent IFC and MRCC operations Upgraded to latest technology
Explore joint ventures for the procurement and maintenance of naval assets	Coast Guard Cutter (US) Multi-Purpose Vessel (Grant from China) Australia (spare parts for Bay class) India (Floating Dock, ships, spare etc.)	Two-way collaboration with France (Reunion island) and other potential maritime nations Export/Military Sale (African market -IPCs)	Two way collaboration with All possible likeminded countries

A Holistic Approach to Talent Retention Policy in the SLN

The decline in the quality of life among naval personnel has become evident, primarily attributed to alarming economic indicators such as cost of living, inflation and tax policies in the country. Notably, salaries, allowances and overall benefits for naval personnel have become outdated. Furthermore, this discrepancy has led to a situation where individuals with similar educational backgrounds outside the military enjoy greater earning power and personal freedom. The economic crisis has further exacerbated the decline in the quality of life, resulting in a notable increase in the attrition rate (from the existing cadre) among naval personnel from 2.87% in 2018 to 5.95% in 2023. However, maintaining current retention rate with under the restrictive enforcement and if not, this could have been even worst. Cumulative trend analysis indicates a persistent and increasing attrition rate, significantly surpassing the annual recruitment capacity of the SLN. This poses a substantial challenge to the Navy's ability to retain professionals critical for ensuring the national interest of Sri Lanka, predominantly national security, territorial integrity and sovereignty. The trend is further underscored by a significant reduction in the number of applications to join the naval force declining by nearly 75% in 2023 when compared to median enlistment applications from 2018 to 2022 (Officer Cadets). Sailors' applications are also having similar trend. To address this critical issue and maintain a high-quality naval force, urgent attention is needed to enhance the overall quality of life for naval personnel, aligning with contemporary economic realities and required to redesign the recruitment policy. Followings are the key guidelines for retention policy;

- **Competitive Compensation and Benefits.** Providing competitive salaries, allowances and comprehensive benefit packages is essential to attract and retain skilled naval personnel. There is an immediate need to review outdated allowances to align with the contemporary nature of Sri Lanka. Furthermore, creating welfare facilities similar to regional navies are recommended. Moreover, SLN welfare measures must be flexible in generating wellbeing for its personnel to make them feel that they are enjoying welfare in comparable with many employee-centered welfare systems that are operated by outside organizations.
- **Life of Quality Initiatives.** Implementing Quality of Life initiatives to enhance the overall quality of life for naval personnel including improved health facilities, comfortable living conditions and recreational facilities is vital. The SLN is required to implement strategies in place to support the improvement of living conditions while personnel are in service and during retirement like the practices in the Pakistan Navy. This approach would motivate the workforce to stay in the service considering the monetary benefits they are eligible for after completing commendable service.
- **Endeavour to Utilize SLN Assets with Crew for UN Peace Keeping Missions.** The SLN need to convince the GoSL about the viability of deploying its fleet units for United Nations (UN) peacekeeping missions. This initiative has the potential to generate foreign exchange and elevate the professionalism of SLN personnel. Several South Asian navies have successfully deployed their fleet units in UN peacekeeping operations, resulting in significant earnings of foreign currency and contributing to GDP and the development of their navies. Therefore, the SLN could strategically plan to provide opportunities for high-performing individuals to earn extra income thereby improving their quality of life. This approach would foster a positive and competitive training and development culture within the Navy directing naval force towards talent enhancement and competency development.

- **Initiate Leveraging from Buying Navy to Builders Navy.** Cabinet approval has been secured for the manufacturing and sale of boats to international buyers, using an established administrative mechanism at the Ministry of Defence (MOD). SLN is actively working on expanding its commercial activities with a streamlined approach to attract more commercial orders. This initiative will leverage the existing boat building resources of the SLN to create vessels for commercial use contributing to foreign income for the country. A specific percentage of the earnings could be allocated to the welfare and well-being of naval personnel.
- **Opportunities for Serving Naval Personnel in Merchant Marine and Post-Retirement Transition Entering the Merchant Navy and Multinational Companies.** The SLN need to optimize the use of the Merchant Marine Training School at the NMA to align with a whole-government approach aimed at training proficient mariners. It is essential to assess the feasibility of facilitating serving officers who will be undergoing training in accordance with the Standards of Training, Certification and Watch-keeping for Seafarers (STCW) in future. Additionally, the Navy required to finalize a MoU with the Director General of Merchant Shipping to ensure a seamless transition for naval personnel both serving and retired into the Merchant Navy (through strategic interventions). This MoU is required to acknowledge the sea service and training of our officers and sailors as they pursue a career in the merchant navy as a second option. Furthermore, the establishment of additional memorandums with multinational companies is imperative, providing exceptional opportunities for naval personnel upon completion of their dedicated service or retirement. These initiatives aim to enhance the quality of life for naval personnel surpassing that of their civilian counterparts. This strategic approach seeks to maintain the focus of naval personnel on their missions, deterring any inclination towards illegal activities or premature exits from service. These opportunities will not only lead to the optimal utilization of training resources but also contribute directly to the national economy, leveraging the wealth of experience accumulated by naval personnel.
- **Performance Based Career Progression System.** The SLN needs to meticulously evaluate both seniority and performance, mirroring the practices observed by other naval forces globally. While the present Navy system places a significant emphasis on providing equal opportunities to all its members for the organization to thrive and attain professional excellence comparable to international navies, a system must be implemented that actively fosters a competitive learning environment for all naval personnel and opportunities be given based on the performance basis. To achieve this, a strategic approach is recommended where training, appointments, foreign assignments and other incentives are allocated based on individual performance matrix. This tailored approach ensures that resources are directed towards those demonstrating superior competence and dedication, contributing collectively to the organization's overarching goals. This effort would change present organizational behaviour and collectively pushing everyone towards healthier competition. Without such prioritization, the SLN may encounter difficulties in retaining quality human resources in every ranks. Therefore, the impartial establishment of a performance-based system holds the potential to add significant value to the naval profession, ultimately paving the way for heightened retention rates and the continued enhancement of the SLN's capabilities, skills, outlook and overall professionalism.

Training and Development

The global defence and security environment continue to evolve with great uncertainty and inherent unpredictability, but the trends point towards an increasing importance of the maritime domain as ocean politics intensify particularly in the IOR. This dynamic maritime environment requires a persistent, forward, and integrated all-domain naval force. The SLN maintains a naval force that is always ready to control our maritime domain and protect our national interests against existing and emerging threats. Alongside the naval partners, SLN as a responsible maritime custodian in the international arena to maintain a reassuring deterrent presence in the IOR, defending our Nation's interests and keeping the seas open for global economic prosperity.

Training is the foundation for ensuring that the Officers and Sailors are prepared to meet the many evolving dynamic maritime challenges that will test our determination, understanding and skills. An adaptive and flexible training system is demanded for this environment that supports the generation of operational excellence. The role of naval training is to provide individuals with professional knowledge and skills such that they can be integrated into teams, which themselves are then integrated into capability as part of operational units. To achieve this, a training continuum is recognized as consisting of individual training and education, operational training and collective training.

The SLN will take an integrated approach to improve naval training and prioritize programs that are critical for a competitive advantage. The SLN provides a range of learning opportunities for Officers and Sailors to further develop professional competencies and intellectual skills that enable us to respond to present and emerging maritime security challenges effectively. Naval education curricula, research, and experiential learning all contribute to the total force's professional development and all need to continuously evolve to ensure that naval personnel have the competencies to succeed against these challenges. Our Nation's maritime defence requires attracting talented individuals and developing the most professional, strategic-minded, critical-thinking, innovative and adaptive naval forces in the region. To sharpen professionalism and maintain fighting efficiency a continuum of training and development programmes are conducted across the SLN. For Officers and Sailors, this means emphasizing the importance of professional military education to cultivate the art and science of naval operations, deepen our knowledge of history, seek opportunities to learn new skills and embrace new techniques and technologies to face the challenges. Education opportunities also build trust and reinforce interoperability across the force, including the sister services and partner Naval Forces.

Building a nation's maritime advantage requires SLN to learn, apply and exercise decisive judgment in difficult situations. Education and training are inextricably linked and complement each other to develop both individual and collective competencies. The Officers and Sailors benefit from intellectual development, experiential learning and well-designed training. New technologies and the evolving maritime security environment, including disruptive changes in the conduct of naval operations, directly affect what we teach our force, how we provide that education, and the ways that we resource our programs. To succeed in deterring maritime threats and winning future naval operations, the SLN must improve naval education programmes, infrastructure, technology, systems, processes and opportunities to ensure that the SLN is always more prepared against multiple maritime challenges.

Scheme of Training

In achieving the overall objectives of the training mentioned above, the training of SLN is projected through the following main approaches;

- **Internationalized level of professional training.** SLN personnel perform duties and responsibilities not only within the national jurisdictions but also beyond the limits when conducting missions and operations at high seas. Moreover, they are supposed to undertake the diplomatic role at sea when engaging with foreign counterparts. Hence, the professional training has to be up to the global standards to meet the challenges at sea. Such professional training is sub categorized under tactical, operational and strategic levels to provide required knowledge for the SLN personnel at each level. The institutions and the type of training planned under these categories are discussed under separate heading.
- **Proficiency in high tech developments.** A navy is primarily a platform-biased service where the major roles are undertaken at sea depends on the nature and the efficiency of the platform assigned. Therefore, technological advancement is a highly demanding aspect of a navy being naval forces relies heavily on machineries, weapon systems, sensors and equipment. Hence, in parallel to the professional developments of individuals it is mandatory to incorporate latest technological advancements and innovations to the naval force.
- **Joint/ combined operational training.** Due to the increasing complexity of traditional and non-traditional maritime security and safety challenges, no single agency is capable of ensuring maritime security of a nation alone. Therefore, SLN capacity building is focused towards joint/ combined training with both local and foreign stakeholders and to develop close cooperation and regional initiatives with counterparts when addressing such challenges.

Future Training Design

Future training and capacity building of SLN is primarily focused on following areas to meet the overall objectives;

- **Strength.** With the objective of rightsizing the cadre to 40,000 personnel by 2030, training will be designed proportionate to the existing cadre at a particular time. 10% of the total cadre will be targeted to undergo training at a time. Such training will not include type/ specific training conducted by ships, establishments and departments.
- **Capabilities.** Training will be directed to achieve competencies in modern technological developments such as automation of systems, application of AI, advancements in MDA and to strength the joint/ combined operations concept by commencing joint operations and missions with regional navies and other stakeholders. In addition, initiatives to be undertaken to develop simulator-based training in maritime domain including ship handling, war gaming, Global Maritime Distress and Safety System (GMDSS) to provide wider range of training aspects to personnel.

- **Capacities.** In order to meet the reduction of cadre, the selected number of courses will be omitted from the training programmes which are not directly connected with naval training scope. Further, number of berths allocated and frequency of the courses will be reduced accordingly under assessment of the future requirements. A separate foreign training wing will be established step by step under the Training Directorate to offer more opportunity to regional navies to undergo training in SLN, with the aim of strengthening bilateral/ multilateral cooperation.

Mode of Conduct

Training and capacity building in SLN is planned and conducted at number of training establishment within the navy and outside institutions. Such include both local and foreign institutions such as naval training academies, universities, colleges, institutes in public and private nature. Major categories of professional training will be conducted as follows;

- **Strategic Level Training.** The National Security and Strategic Studies Course offered by NDC Colombo and the equivalent foreign training institutes will provide training and capacity building for senior naval officers. This training aims to inculcate the knowledge and experience required in the decision-making process in planning naval operations and designing naval architecture at the strategic level to achieve national interests.
- **Operational Level Training.** Staff course offered by DSCSC, Sri Lanka and the equivalent foreign training establishment are designed to deliver the knowledge and know-how for the middle level officers in planning operations at the operational level in par with the decisions made by the strategic level. Further, specialization courses offered for respective branches will provide the technical and specific knowledge for the middle level officers to perform specific duties assigned to individuals when performing role and task carried out during the respective missions and operations undertake by SLN. In addition, Naval Fleet Training will be designed under Naval Fleet Command to address the requirement of conducting joint/combined operations with local/ regional stakeholders. These training will include joint exercises, crew work up programmes and table top exercises in regional context.
- **Tactical Level Training.** Basic training and the subsequent higher basic training programmes will deliver the knowledge for junior officers to perform duties at the tactical level. These training are undertaken at NMA and KDU, while offering basic degree for the junior officers to be proficient in both military and academic studies in naval and related technical disciplines. In addition, the artificer training courses at Naval Institute of Technology (NIT), recruit training courses and the follow-up training including advancement and specialization courses for the sailors are designed to perform in parallel to the tactical level necessity of the naval force to perform its role and task efficiently and effectively. Further, training and capacity building programmes with the coordination of government and non-government agencies will continue in the areas of maritime law enforcement, marine environmental protection, marine disaster management and HADR.
- **Career Development/ Specific Training.** Postgraduate Diploma programmes/ specific training courses are designed to provide specific career development training required to obtain technological know-how and innovative skills in respective disciplines. Such training will offer new dimensions in the future

planning and designing of naval architecture in SLN to face the dynamic and never-ending maritime challenges. These include the Masters/ PGDip programmes and specific training courses at local and foreign universities and military training institutes for both officers and sailors.

Way Forward of Sri Lanka Coast Guard

Globally and regionally, naval forces are gradually ceding constabulary roles to Maritime Law Enforcement Agencies (MLEAs), particularly Coast Guards. This shift is underscored by the rationale for MLEAs notably Coast Guards to serve as peace officers, signalling a paradigm shift in maritime security. The SLN played a unitary peacetime role in maritime resource protection, maritime surveillance, and maritime law enforcement with the increasing challenges of maintaining a secure maritime environment.

- **Forecasted Capacities of SLCG.** The SLCG, while gaining operational and training competence, faces challenges in fully assuming its suite of peacetime constabulary roles. Capacity shortfalls, recruitment challenges and other endogenous factors hinder the SLCG's ability to independently perform its mandated duties. Recognizing SLCG's multifaceted mandate, existing capabilities, trained human resources and operational competence, maritime stakeholders expect increasing assistance from the Coast Guard. Therefore, to address the national requirement, strengthening the Coast Guard is imperative by effectively taking over significant sea assets and bases predominantly held by the Navy. Thus, NAVSTRAT-2030 has identified the need to handover specific naval bases along with sea assets to enhance the SLCG's capacity to fulfil its anticipated law enforcement responsibilities, encompassing the entire coastal perimeter of the island.
- **Coordination and Cooperation between SLN and SLCG.** Effective collaboration between the SLN and SLCG is essential throughout to address dynamic maritime security challenges. While the SLCG assumes a key role in frontline maritime law enforcement in the longer run, the SLN continues to play a crucial function in information sharing, joint or combined maritime patrols and other assistance vital to mitigate complex maritime security threats. Therefore, the execution of a Memorandum of Understanding (MoU) between the SLN and SLCG is imperative to systematize the responsibilities and functions assumed by both entities.
- **Budgetary Independence.** Since, the SLCG assigned with separate budget head, in the longer run it is appropriate to facilitate independent budgetary allocation for the functioning of its assets. This proactive measure aims to prevent any overlap in budget allocation with SLN. By adopting this approach, administrative complexities could be mitigated and such a delineation of budgetary resources ensures optimal utilization and collaboration in maritime security endeavours, enhancing overall operational efficiency.
- **Acquisition of Oceanographic Vessel.** Availability of comprehensive oceanographic data around Sri Lanka being an island nation with large sea area is vital in maritime security perspective as well as marine environmental stewardship, exploring/exploitation of maritime resources and international cooperation. Therefore, Sri Lanka acutely needs an oceanographic ship and equipment dedicated for oceanographic researches. Lack of such means have severely limited and

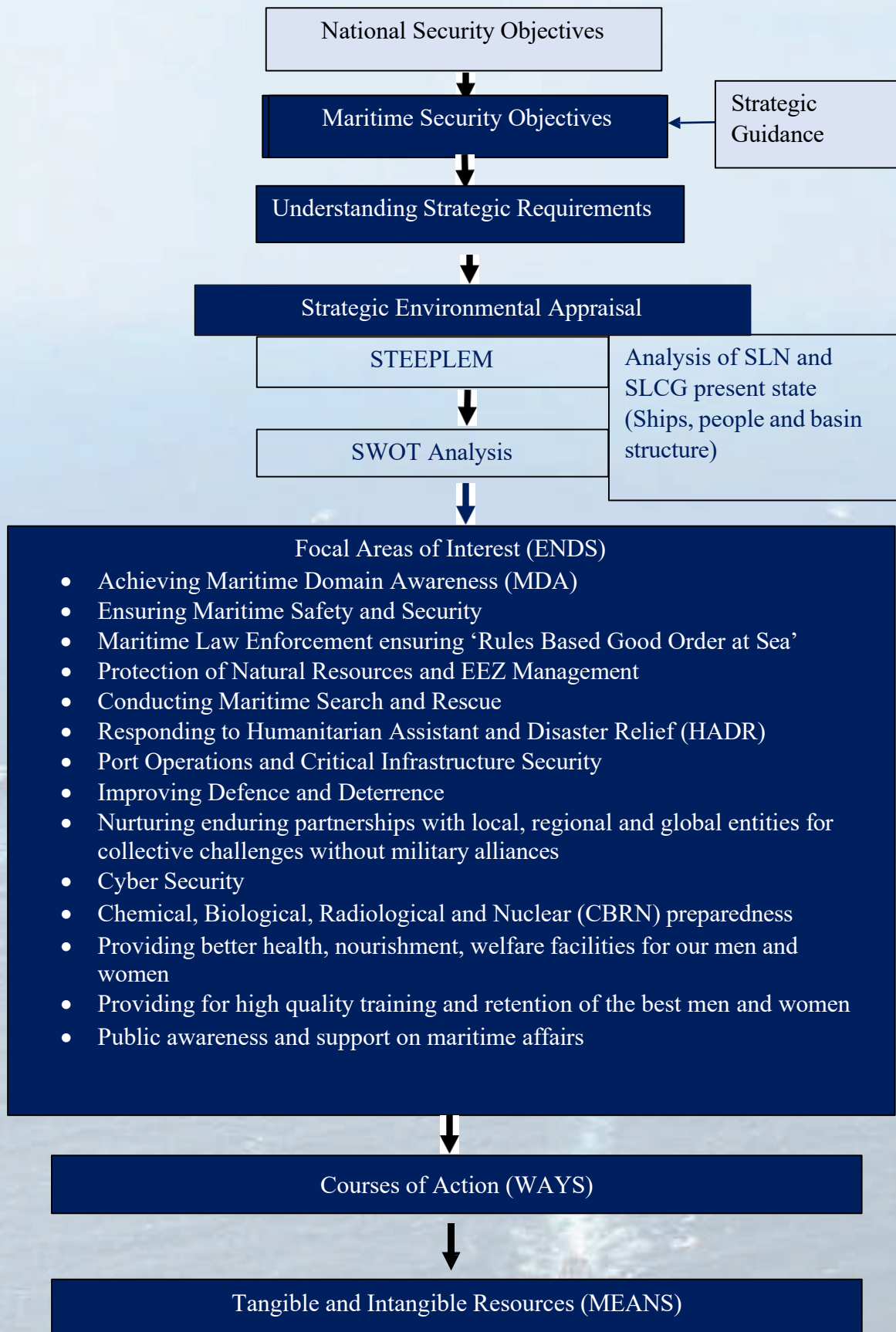
constrained island's Blue Economy endeavours and future demands such as BBNJ. At present maritime stakeholders rely on foreign research vessels gathering oceanographic data and it does not fulfil the requirement of the country. Therefore, acquisition of oceanographic ship to Sri Lanka is vital and needs to engage in negotiations with donor agencies and international partners. NAVSTRAT-2030 opines to establish oceanographic unit under SLCG in support of Oceanographic ship. This endeavour will support for the maritime stakeholders such as scientists, government research agencies, universities, independent researchers, etc. to carry out oceanographic researches.

Strategic Framework

NAVSTRAT-2030 strategic framework is an illustration of the process and rationale that forms the basis of this discourse. The framework underscores the essentials from appraising the strategic environment, underlying domestic aspirations and ideologies in the realization of the strategic objectives (desired end states) through strategic concepts (ways) and necessary resources (means) as depicted in Figure 11.2.

Figure 11.2

Strategic Framework



Key Activities of NAVSTRAT-2030

Following imperatives (key activities) underline the resultant elements of the strategy formulation process for both the SLN and the SLCG as envisaged into 2030.

Figure 11.3

Key Activities

- Re-adjusting recurrent to capital expenditure to 70% : 30% by 2030
- At-least 25% allocation from National Defence Budget for SLN
- Re-organizing regular and volunteer naval forces
- Optimizing human resource, fleet and basin structure
- Fleet re-orientation, acquisition planning according to envisioned and enduring mission requirements
- Increasing quality of provisions; health, welfare and facilities for our men and women
- Training and development, talent enhancement, capacity and competency development
- Enhanced MDA through technological integration
- Operational provisions for Floating Dock
- Enhance capacity and repair facilities at SLN Dockyard Trincomalee and other SLN Shipyards
- Naval diplomacy through international cooperation and collaboration
- Outsourcing organizational dead-weights, through a holistic audit/ Cost-Benefit-Analysis
- Enhancing law enforcement powers at sea
- Restructuring SLCG to cater coastal protection and maritime law enforcement
- Enabling Blue Economy
- Recruitment and retention policy
- Digital transformation
- Cleaner and safer ocean
- Maritime governance through 'Rules Based Good Order at Sea'

CHAPTER 12

MONITORING AND EVALUATION

Sri Lanka's strategic location in the Indian Ocean makes maritime security as a vital national interest. In that, effective monitoring and evaluation are critical for ensuring the NAVSTRAT-2030 remains adaptable, effective and aligned with national security priorities. By implementing robust monitoring and evaluation mechanisms, SLN and SLCG can continuously improve its maritime security capabilities and safeguard Sri Lanka's vital maritime interests.

Monitoring and evaluation are crucial components of any strategy to ensure its effectiveness identify areas for improvement and adapt to changing circumstances. Following provides a framework for monitoring and evaluating the NAVSTRAT-2030;

Establish Key Performance Indicators (KPIs)

Need to establish Specific, Measurable, Achievable, Relevant and Time-bound (SMART) KPIs for each objective outlined in Chapter 3. Further, SMART KPIs allow for data-driven decision-making and timely adjustments to the strategy.

Resource Allocation and Budgetary Analysis

Evaluate the adequacy of resources allocated to the Navy, including budgetary allocation, personnel, vessels, craft and technological infrastructure. Monitor resource utilization and identify areas for optimization to ensure effective execution of the strategy. Further, assess the cost-effectiveness of various initiatives and make adjustments as needed to ensure alignment with strategic priorities. The following points include a general framework for conducting resource allocation and budgetary analysis;

- **Set Priorities and Allocate Resources.** Priorities the identified capabilities and projects based on strategic importance. Allocate resources accordingly, considering financial constraints, technological advancements and geopolitical considerations.
- **Budgetary Analysis.** Develop a detailed budget for each prioritized project or capability enhancement. Consider capital costs, operational expenses, maintenance costs, and personnel expenses. Ensure that the budget aligns with the overall strategic goals.
- **Risk Management.** Identify potential risks associated with budgetary constraints, project delays or unforeseen geopolitical events. Develop risk mitigation strategies to address these challenges.
- **Monitoring Mechanism.** Establish monitoring mechanisms to trace resource utilization justifying budgets. This could involve regular financial reports, project progress reports, and performance matrix.

Periodic Reviews and Assessments

Conduct comprehensive reviews and assessments of the strategy's implementation at regular intervals, involving stakeholders from the Navy and other government agencies. These reviews identify strengths, weaknesses and opportunities for adaptation and resource allocation adjustments. Followings are some areas that SLN and SLCG can implement periodic reviews and assessments;

- **Incident Analysis.** Analyse maritime incidents, including successes and failures, to understand the root causes and identify areas for improvement. Then implement corrective measures based on the lessons learnt from incident analysis.
- **Independent Evaluations.** Consider engaging an independent expert panel to conduct periodic evaluations of the NAVSTRAT-2030 to provide an objective assessment of the strategy's effectiveness. This mechanism ensures solicit input from experts, think tanks or international partners to gain external perspectives.
- **Training and Capability Assessments.** Regularly assess the training programmes and capabilities of naval personnel to ensure they are adequately prepared to address emerging threats. Then identify areas where additional training or technological upgrades are necessary.
- **Emergency Response Drills.** Conduct regular emergency response drills to evaluate the SLN and SLCG preparedness for various scenarios such as natural disasters or security threats.

Data Collection and Reporting

Implement a robust data collection and fusion system to gather and distribution of relevant and real-time information on maritime activities, incidents and navy operations. Further, regular reporting on KPIs to relevant stakeholders of SLN, SLCG and government officials are to ensure adaptation of strategy and accommodating required adjustments.

Geopolitical and Regional Dynamics

Monitor public perception and community engagement efforts related to maritime security. Use surveys and feedback mechanisms to gauge public awareness and confidence in the SLN's ability to address maritime threats. The Navy should implement tools like big data, Power BI, AI, etc. to extract meaningful insights, hidden patterns, predict future trends and public preferences through social media like Facebook, TikTok, X, Instagram, WhatsApp etc. to have better prediction of public awareness and their perception regarding Navy's efforts.

Compliance with Local and International Laws and Conventions

Needs to ensure ongoing compliance with local and international maritime laws and conventions regarding the navy's projects and planning. It is mandated to review legal frameworks and update them to address any gaps or changes in local and international regulations. Further, the navy should work in close ties with government agencies and government accepted Non-Governmental Organizations (NGOs) to have better compliance with local and international laws and conventions.

Cyber Security Audits

Implement regular audits of cyber security measures to protect naval communication and information systems from evolving cyber threats. This involves considering various aspects of information security, technology infrastructure and personnel training. The following is a general framework for conducting cyber security audits;

- **Conduct Infrastructure Analysis.** Assess the current state of communication and information system and identifying vulnerabilities in existing hardware, software and network system and implement the rectify procedure.
- **Data Classification and Handling.** Needs to implement a proper data classification policy and evaluate how data is handled, stored and transmitted across naval and other government and non-government agencies. Further, strengthen access controls for critical systems and implement multi-factor authentication for sensitive information access.
- **Network Security.** Implement intrusion detection and prevention systems especially when virtually linking with outsiders. Establish guidelines for secure collaboration with external entities especially in the expansion of systems like Integrated Logistics Management System (ILMS), Integrated Treasury Management Information System (ITMIS), etc. Further, needs to conduct regular penetration testing to identify and rectify vulnerabilities.
- **Regular Audits and Assessments.** Conduct periodic cyber security audits to assess ongoing vulnerabilities. In that use red teaming exercise to simulate real-world cyber threats.

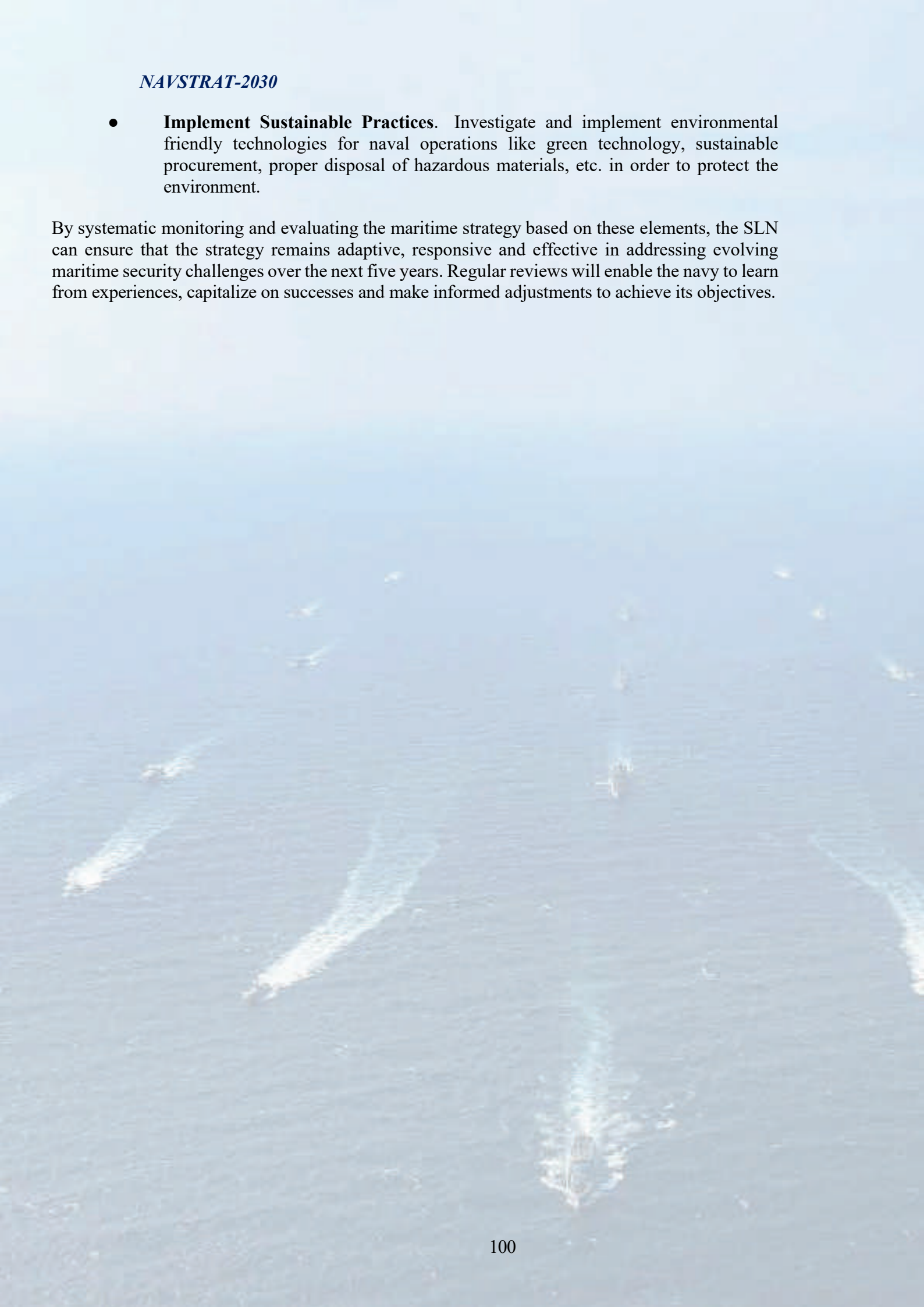
Review of Environmental Impact

Evaluate the impact of naval operations on the environment and assess the effectiveness of measures taken to protect marine ecosystems. In particular, the SLN needs to consider the environmental impact to ensure sustainable and responsible practices. The following are key considerations for monitoring and evaluating the environmental impact;

- **Ecosystem Analysis.** Conduct a comprehensive analysis of the maritime ecosystem including habitats, biodiversity and vulnerable species in the operational areas.
- **Pollution Assessment.** Assess the current levels of land, water and air pollution in the maritime zones. In this, there is a need to identify potential sources of pollution due to naval activities.
- **Renewable Energy Integration.** Explore opportunities to integrate renewable energy sources like solar, wind or hybrid systems for powering naval bases, vessels and facilities.
- **Analysis of Climate Change Impact.** Analyse the potential impact of climate change considering rising sea levels, changes in weather patterns and their implications.

- **Implement Sustainable Practices.** Investigate and implement environmental friendly technologies for naval operations like green technology, sustainable procurement, proper disposal of hazardous materials, etc. in order to protect the environment.

By systematic monitoring and evaluating the maritime strategy based on these elements, the SLN can ensure that the strategy remains adaptive, responsive and effective in addressing evolving maritime security challenges over the next five years. Regular reviews will enable the navy to learn from experiences, capitalize on successes and make informed adjustments to achieve its objectives.



CHAPTER 13

CONCLUSION

NAVSTRAT-2030 is a forward-thinking blueprint that will lead the country into a new age of maritime excellence by the country's National Vision. This strategic framework, which has its roots in the rich historical fabric of Sri Lanka's maritime legacy, represents a futuristic perspective that acknowledges the crucial role that the country plays in the shifting geopolitical landscape of the IOR. NAVSTRAT-2030 serves as a visionary blueprint, charting a path toward maritime excellence in alignment with the nation's overarching vision. Rooted in Sri Lanka's rich maritime heritage, this strategic framework embraces a forward-looking perspective, recognizing the country's pivotal role within the evolving geopolitical dynamics of the IOR.

Focusing on economic prosperity, the strategy outlines a path to optimize maritime resources, transforming Sri Lanka's harbours and waters into cornerstones of sustainable growth rather than mere trade conduits. By addressing security imperatives, the Sri Lanka Navy's approach seeks to strengthen maritime borders, countering emerging traditional and non-traditional threats. This establishes Sri Lanka as a pillar of regional stability, promoting 'Rules-Based Good Order at Sea.'

Moreover, the commitment to environmental protection underscores the Navy's dedication to preserving the pristine beauty of Sri Lanka's marine ecosystems, thereby fostering a legacy of sustainability for future generations. As Sri Lanka assumes a central role in global maritime affairs, the NAVSTRAT-2030 serves as a testament to the nation's resilience, adaptability and unwavering commitment to charting a course toward a maritime future that is both prosperous and secure. In this aspiring endeavour, the SLN emerges as the vanguard, steering the nation towards unparalleled success on the seas and beyond.

NAVSTRAT 2030 AND BEYOND – STRATEGY DEVELOPMENT TEAM

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Rear Admiral
Member

DN PATHBERIYA, WWV, RWP, RSP****, USP, ndc
Commodore
Member

JMBSB JAYAWEERA, USP, psc
Commodore
Member

ERPK UDAKUMBURA, RSP*, USP, psc
Captain (G)
Member

JSD SILVA, RSP, psc, psc (j)
Captain (G)
Member

TRL PIYASENA, RSP*, USP, psc
Captain (G)
Member

WMNL PERERA, RWP, RSP*****, psc
Commander (SBS)
Member

UN HEWAHAKMANAGE, psc
Commander (H)
Member

KAC JAYAMINI
Commander (LS)
Member

ADRW ATHUKORALA, USP,psc
Commander (C)
Member

CRP WALAKULUGE, USP
Commander (N)
Member

BARS BAMUNUSINGHE, psc
Commander (L)
Member

WNTL WICKRAMARACHCHI, psc
Commander (S)
Member

WPPN PERERA, psc
Commander (N)
Member

NDCJM WICKRAMASINGHE
Commander (LS)
Member

SR SUDUSINGHE, PSV, psc
Commander (VNF)
Member

JMHI BANDARA, psc
Lieutenant Commander (ASW)
Member

PWSL BANDARA
Lieutenant Commander (S)
Member