Asymmetric warfare at Sea; The Case of Sri Lanka

A Thesis by Admiral JSK Colombage

Internal Supervisor: Doctor YJSN Fernando
External Supervisor: Professor Rohan Gunaratna

Submitted in Partial Fulfilment of the Requirements for award of
PhD degree in Strategic Studies

General Sir John Kotelawala Defence University

2015
DECLARATION

This thesis contains no material which has been accepted for the award of any other degree or diploma in any University or equivalent institution, and that to the best of my knowledge and belief, contains no material previously submitted or written by any other person, except where due reference is made in the text of this paper.

I carried out the work described in this thesis under the supervision of Internal Supervisor, Doctor YJSN Fernando and External Supervisor, Professor Rohan Gunaratna.

Signature : Date: 11th Sep 2015
Name of Student : Admiral JSK Colombage
Registration No :

Signature : Date
Name of Internal Supervisor: Dr YJSN Fernando

Signature : Date
Name of External Supervisor: Prof Rohan Gunaratna
ABSTRACT

Asymmetric warfare is an historical outcome of the warfare on land which influences war-fighting at sea. For an island nation like Sri Lanka, after evolving via experiencing an enemy who used asymmetric tactics and methods, these lessons of war-fighting offer many avenues for academic studies. In fact, many coastal states face a modern-day trial in trying to deal with asymmetric warfare at sea, irrespective of the might of their navies.

In the Sri Lankan case, the significance of the Liberation Tigers of Tamil Eelam (LTTE) movement was their incorporation of the maritime domain into their armed resistance by extending their insurgency to sea and by establishing the Sea Tigers. In addition, the LTTE insurgents successfully challenged the maritime jurisdiction of the Sri Lanka Navy’s authority over its own territorial waters and seriously threatened the local good order at sea in the broader context. At this point, the Sri Lanka Navy made radical and drastic changes to overwhelm the LTTE threat by sketching out the spectrum of roles that contemporary navies are engaging in the world’s ocean. In this research the researcher will examine how the Sri Lanka Navy succeeded by exploiting appropriate asymmetric warfare strategies—a process that deviates from the norms to obliterate the Sea Tigers in Sri Lanka, regaining sea control.

The research factors reveal that the thinking patterns and the overall mind-set within armed forces, diplomatic, intelligence, and law enforcement communities may need modification in order to meet and combat newly evolving patterns that include non-state actors and asymmetric warfare. Defeating the LTTE allowed the Sri Lanka Navy to learn some key lessons in defend the country at sea and these lessons can be very useful to policy makers, academics and practitioners of maritime security.

Key Words: Asymmetric Warfare, Sea Tigers, Sri Lanka Navy, Sea Control, Maritime Security
ACKNOWLEDGEMENT

It is with immense gratitude that I acknowledge the most valuable guidance and assistance given to me by the Vice Chancellor Major General Milinda Peiris and the staff of faculty of Graduate Studies including Brigadier Nishantha Wadugodapitiya and Brigadier Adeepa Thilakerathne at General Sir John Kotelawala Defence University.

I wish to thank most profusely my internal Supervisor Dr YJSN Fernando and external Supervisor Prof Rohan Gunaratna for their continuous and extremely valuable insights and guiding me in the right direction, throughout my research to accomplish my work successfully.

I am indebted to all my research participants, who allocated valuable time to provide me with lengthy and meaningful interviews and focus group discussions, which became the bedrock of my thesis.

I also express my gratitude to Senior Prof Nayani Melagoda, Prof A.S Karunananda, Prof T.R Weerasuriya, Dr. A.H. Lakmal, Dr. M.M Jayawardena, Dr. Sara Dissanayake, for their valuable inputs and recommendations during various stages of progress review.

A special word of thanks to Prof Narada Warnasuriya and Prof Rohini Fernandopulle for their guidance in ethical concerns of this research.

I am Grateful to Prof Nevil Warnakulasuriya for his invaluable guidance in Research proposal stage and methodology.

I like to acknowledge the contributions made by the faculty of APCSS in my work. My appreciation also goes to Dr Thomas C Sass, Director HFR Platform for guidance and inspiration from the early stage of this research.

I wish to thank naval officers and staffs for providing me with valuable materials, helping me to gather relevant details and doing the formatting work.

I owe my deepest gratitude to all my friends, who encouraged me to embark on this research and kept motivating me to reach the end state.

A very special word of appreciation to my editor Mrs Gayathri Hewagama. Lecturer English Department, Faculty of Arts, University of Peradeniya for her untiring efforts in editing my Thesis.

My appreciation also goes to the Chairman, Major (Retd) Nissanka Senadhipathi and members of Avant Garde Maritime Services for their encouragement provided for me to complete my research.

This Thesis is dedicated to my wife Srima, my mother and my daughter and her family for their wishes and unfailing support and continuous encouragement given to me during the period of researching and writing of this and having faith in me and providing the necessary strength to accomplish the task.
# Table of Contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Pages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Title page</td>
<td>i</td>
</tr>
<tr>
<td>Declaration</td>
<td>ii</td>
</tr>
<tr>
<td>Abstract</td>
<td>iii</td>
</tr>
<tr>
<td>Acknowledgements</td>
<td>iv</td>
</tr>
<tr>
<td>List of content</td>
<td>v</td>
</tr>
<tr>
<td>List of tables</td>
<td>xiii</td>
</tr>
<tr>
<td>List of figures</td>
<td>xiv</td>
</tr>
<tr>
<td>List of abbreviations</td>
<td>xv</td>
</tr>
<tr>
<td>List of annexes</td>
<td>xix</td>
</tr>
</tbody>
</table>

## Chapter 1 Prolegomena

1.1 The Beginning                                  1 - 5
1.2 The Strategy of Asymmetric Warfare             5 - 6
1.3 Extremist Ideology and Asymmetric Warfare      6 - 8
1.4 Islamic Jihadism and Extremist Ideology        8 - 9
1.5 The Sri Lankan Case                            9 - 11
1.6 Problem Statement                              11 - 14
1.7 The Significance of the Research Problem       14
1.8 Research Questions                             15
1.9 Research Objectives                            15
1.10 The Research                                  15 - 18
1.11 Proposition                                   18 - 19
1.12 Chapter Organization                          19
Chapter 2  Discourse on Maritime Terrorism and Rise and fall of the Sea Tigers

2.1  The Genesis  
2.1.1  Conventional Naval Warfare  
2.1.1.1  Balance of Power  
2.1.1.2  Power Transition  
2.1.1.3  Democratic Peace  
2.1.2  Maritime Security  
2.1.2.1  Maritime Strategy  
2.1.2.2  International Maritime Terrorism  
2.1.2.3  International Maritime Terrorist Groups  
2.1.2.4  Mechanisms in Place to Protect the Maritime Environment  
2.1.3  The Organizational Drawbacks of SLN  
2.1.3.1  Policy Drawbacks  
2.1.3.2  Strategic Drawbacks  
2.1.3.3  Tactical Drawbacks  
2.1.3.3.1  The Australian Context  
2.1.3.3.2  Mumbai Attacks of 2008  
2.1.4  The Exploitation of Oceans by LTTE Sea Tigers; the Origination to the End  
2.1.4.1  Early Developments  
2.1.4.2  SLN’s Reactive Response  
2.1.4.3  Formation of Sea Tiger Fighting Elements  
2.1.4.4  The Sea Tiger Maritime Tactics  
2.1.4.5  The LTTE’s International Shipping Network  
2.1.4.6  Naval Response  
2.1.5  The Victory of the SLN  
2.1.6  Closure
# Chapter 3 Research Methodology

3.1 Preamble 82  
3.2 The Relationship between Research and Theory 82  
  3.2.1 Deductive and Inductive Approaches 83 - 84  
3.3 Methods and Methodology 84 - 85  
3.4 The Epistemological Approach 85 - 86  
  3.4.1 Positivism 87 - 88  
  3.4.2 Interpretivism 89 - 90  
3.5 Research Strategy 90  
  3.5.1 Qualitative and Quantitative Research 91 - 92  
  3.5.2 Qualitative Interviews 92  
  3.5.3 Focus Group Discussions 92 - 94  
  3.5.4 Qualitative Data Analysis 94 - 95  
3.6 Use of the Exploratoric Research 95 - 96  
3.7 Main Qualitative Research Steps Adopted 96 - 98  
3.8 Ethical Concerns of the Research 98 - 100  

# Chapter 4 Concepts and Theories of Naval Warfare

4.1 Theories of Naval Warfare 101 - 102  
4.2 The Theory of Asymmetric Warfare 102 - 113  
4.3 Theory of Sea Control 113 - 120  
4.4 Operational Art (OA) 120 - 131  
4.5 Completion 131 - 133  

# Chapter 5 The Organisational Drawbacks of the Sri Lanka Navy and the Development of LTTE Sea Tigers

5.1 Research Analyses 134
5.2 The Organisational Drawbacks of the Sri Lanka Navy 134 - 137
5.2.1 Policy Level Drawbacks 138
5.2.1.1 Not Developing a Strong Navy and Increasing the Strength of the SLN 138 - 144
5.2.1.2 Absence of Political Leadership and Political Resolve to End the War 144 - 147
5.2.1.3 The Dearth of Effective Intelligence and Intelligence Coordination 147 - 148
5.2.1.4 Corruption and the Lack of Proper Evaluations in Procurements 149 - 150
5.2.1.5 Non-evaluating the Capabilities of the Armed Forces 150
5.2.1.6 Non-Application of Modern Technology 151 - 152
5.2.1.7 Not Developing/ Acquiring Integral Air capability 152 - 154
5.3 Strategic Level Drawbacks 154
5.3.1 The Lack of a Grand Strategy 154 - 156
5.3.2 Necessity for understanding concepts of Asymmetric Warfare employed by the LTTE Sea Tigers 156 - 157
5.3.3 Lack of Coordination among Armed Forces 157 - 158
5.3.4 Paucity of Strategic Communications 158 - 159
5.3.5 Shortcomings in Maritime Security 159 - 160
5.3.6 Shortcomings in Dominating Areas around Military Installations 160 - 162
5.4 Tactical Level Drawbacks 162
5.4.1 Dearth of Coordination among the Armed Forces at Tactical Level 162 - 163
5.4.2 Necessity of Proper and Secure Naval Communications 163
5.4.3 The need for Capable Officers as Leaders of Human Resource 164
5.4.4 Paucity of Night Fighting Capability 164 - 165
5.4.5 Under-utilization of Special Forces 165
5.5 The Development of LTTE Sea Tigers 165 - 166
Chapter 5

5.5.1 Use of Asymmetric Tactics by the Sea Tigers and the Employment of Suicide Boats 166 - 168
5.5.2 The Swarming Tactics of the Sea Tigers 169 - 170
5.5.3 Attacks against Naval and Merchant ships in Harbour 170
5.5.4 Development of Sea-lift Capabilities of the LTTE; The Sea Tigers and International Shipping Fleet 171 - 177
5.5.5 The LTTE’s Exploitation of the Political Situations in the Country 177 - 178
5.5.6 Indigenous Boat building of Sea Tigers 178 - 180
5.5.7 Effective use of Cease Fire Agreement (CFA) by the LTTE 180 - 181
5.5.8 Sea Tigers and Ocean 181 - 182

Chapter 6

The Determinants of Success behind The SLN’s gaining Of Sea Control

6.1 Victory of the SLN 183
6.1.1 Developing the SLN 183 - 187
6.1.2 Political Leadership, Resolve and Synergizing the Political and Military will 187 - 190
6.1.3 The Development of a Grand Strategy 190 - 194
6.1.4 Adaptation of Asymmetric Tactics 194 - 198
6.1.5 Invigorating Leadership of the SLN 198 - 200
6.1.6 The Destruction of the LTTE Floating Warehouse Ships 200 - 206
6.1.7 Development of Network Centric Capability 206 - 208
6.1.8 Enhancing Maritime Security with Coastal Defences, Harbour Defences and Underwater Defence Systems 208 - 210
6.1.9 Small Boat Concept and Operations by the SLN 210 - 213
6.1.10 The Development of Effective Intelligence and Intelligence Coordination 213 - 216
6.1.11 Minimizing Corruption and the Proper Evaluations in Procurements 216 - 217
6.1.12 Evaluating the Capabilities of Armed Forces 217 - 218
6.1.13 The Application of Modern Technology, Research and Development (R&D) Work Undertaken by the SLN 218 - 220
6.1.14 Enhanced Coordination among Armed Forces 221
6.1.15 Effective use of Strategic Communications 222 - 223
6.1.16 Dominating the Ground by the Military and Operations Of Special Forces 224 - 226
6.1.17 Improvement to Naval Tactical Communications 226 - 228
6.1.18 Creation of the Rapid Action Boat Squadron (RABS) 228 - 229
6.1.19 The Enhancement of SLN Sea Lift Capability 229 - 231
6.1.20 Enhanced Combat Logistics 231
6.1.21 Effective and Decentralized Medical Support 232

6.2 Outcome of the Data Analysis 232 - 238

Chapter 7 Theories and Practice; the Outcome

7.1 Winning an Unwinnable War 239 - 241
7.2 Asymmetric Warfare at Sea and the Defeat of LTTE 241 - 243
7.2.1 Sea Tigers and Concepts of Asymmetric Tactics 243 - 244
7.2.2 The Transformation of the SLN 244 - 245
7.2.3 Successful Leadership in the SLN 245 - 246
7.2.4 The Use of Asymmetric Tactics by Other States 246 - 247
7.2.5 SLN’s Response to the Growing Sea Tiger Threat 247 - 248
7.3 Theory of Sea Control: SLN vs LTTE Sea Tigers 248 - 250
7.3.1 Components of Sea Control and the SLN’s Victory 250 - 254
7.3.2 Sea Denial and SLN 254
7.3.3 Force in Being and Sea Tigers 254 - 255
7.3.4 Sea Control, Asymmetric Warfare at sea and Offensive Action 255 - 257
7.4 Theory of Operational Art and Success against Sea Tigers 258
7.4.1 Synergizing Political and Military will for a Successful
Campaign and some key Factors of OA and Victory of the SLN 258 - 259

7.4.2 The Strategy and Operational Art and Leadership 260 - 261
7.4.3 Freedom of Action for SLN and the Defeat of Sea Tigers at Sea 262 - 263
7.4.4 Legitimacy and Just war 264
7.4.5 Information Technology for Battle and Effective Command and Control 264 - 266
7.4.6 Operational Analysis, Operational Design and Operational Planning 266 - 267

7.5 Culmination; Theory and Practice 267 – 270

Chapter 8 The End of a Long Battle at Sea; Conclusions, Lessons Learnt and Recommendations

8.1 Prelude 271 - 273
8.2 The Research Questions and Objectives 273
  8.2.1 Research Questions 273
  8.2.2 Research Objectives 274
8.3 The Case Study 274 - 275
8.4 Theories of Naval Warfare and the Sri Lankan case 275
  8.4.1 Asymmetric warfare and the Sea Tigers 275 - 276
  8.4.2 Sea Control and the SLN 276 - 277
  8.4.3 Operational Art and the Demise of the Sea Tigers 277 - 278
8.5 Organizational Drawbacks of the SLN 278 - 279
8.6 The Development of the Sea Tigers 279 - 280
8.7 Determinants of Success behind the SLN’s Gaining of Sea Control 280
8.8 The Exploratory Research and Lessons Learnt from the Conflict at Sea 281 - 282
  8.8.1 The need to develop a Comprehensive Maritime Strategy 282 - 283
  8.8.2 Understand the Threats in the Maritime Domain and
Commit Resources to Enhance Maritime Security 283
8.8.3 Develop Regional Cooperation for Maritime Security 284
8.8.4 Understanding Theories and Concepts of Naval Warfare 284 - 285
8.8.5 Developing the Naval Capabilities in a Systematic and Proactive Manner 285 - 286
8.8.6 Leadership 286 - 287
8.8.7 Development of Effective Intelligence 287
8.8.8 Minimizing Corruption in Military Procurements 287
8.8.9 Use of Strategic Communications 287 - 288
8.9 Use of the Explorative Research 288 - 289
8.10 Limitations of the Study 289 - 290
8.11 Propositions Used and the Research Findings 290 - 291
8.12 Prospects for Future Research 291 - 292
8.13 Culmination 292

References 293 - 313
Table 1 The Difference between Strategy and Tactics
LIST OF FIGURES

Figure 1   The Deductive and Inductive approaches to the relationship between theory and research
**LIST OF ABBREVIATIONS**

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AD</td>
<td>Air Defence</td>
</tr>
<tr>
<td>ASEAN</td>
<td>Association of South East Asian Nation</td>
</tr>
<tr>
<td>ASG</td>
<td>Abu Sayyaf Group</td>
</tr>
<tr>
<td>ATS</td>
<td>Anti Terrorism Squad</td>
</tr>
<tr>
<td>AQAP</td>
<td>Al Qaeda in the Arabian Peninsula</td>
</tr>
<tr>
<td>AW</td>
<td>Asymmetric Warfare</td>
</tr>
<tr>
<td>CBP</td>
<td>Customs and Border Protection</td>
</tr>
<tr>
<td>CCBA</td>
<td>Closed Circuit Breathing Apparatus</td>
</tr>
<tr>
<td>CCTV</td>
<td>Closed Circuit Tele Vision</td>
</tr>
<tr>
<td>CDF</td>
<td>Civil Defence Force</td>
</tr>
<tr>
<td>CDS</td>
<td>Chief of Defence Staff</td>
</tr>
<tr>
<td>CFA</td>
<td>Cease Fire Agreement</td>
</tr>
<tr>
<td>CIWS</td>
<td>Close In Weapon System</td>
</tr>
<tr>
<td>CNI</td>
<td>Chief of National Intelligence</td>
</tr>
<tr>
<td>COG</td>
<td>Centre of Gravity</td>
</tr>
<tr>
<td>CRRC</td>
<td>Combat Rubber Raiding Craft</td>
</tr>
<tr>
<td>CIS</td>
<td>Container Security Initiative</td>
</tr>
<tr>
<td>CSCAP</td>
<td>Council for Security Cooperation in the Asia Pacific</td>
</tr>
<tr>
<td>CSO</td>
<td>Company Security Officer</td>
</tr>
<tr>
<td>CTB</td>
<td>Ceylon Transport Board</td>
</tr>
<tr>
<td>DFLP</td>
<td>Democratic Front for the Liberation of Palestine</td>
</tr>
<tr>
<td>DNI</td>
<td>Director Naval Intelligence</td>
</tr>
<tr>
<td>DOD</td>
<td>Department Of Defence</td>
</tr>
<tr>
<td>DOE</td>
<td>Department Of Energy</td>
</tr>
<tr>
<td>DSCSCC</td>
<td>Defence Service Command and Staff College</td>
</tr>
<tr>
<td>EEZ</td>
<td>Exclusive Economic Zone</td>
</tr>
<tr>
<td>ENC</td>
<td>Eastern Naval Command</td>
</tr>
<tr>
<td>EU</td>
<td>European Union</td>
</tr>
<tr>
<td>FAC</td>
<td>Fast Attack Craft</td>
</tr>
<tr>
<td>FAF</td>
<td>Fast Attack Flotilla</td>
</tr>
<tr>
<td>FBI</td>
<td>Federal Bureau of Investigation</td>
</tr>
<tr>
<td>FDL</td>
<td>Forward Defence Line</td>
</tr>
<tr>
<td>FGB</td>
<td>Fast Gun Boat</td>
</tr>
<tr>
<td>FGD</td>
<td>Fibre Glass Dinghy</td>
</tr>
<tr>
<td>FMV</td>
<td>Fast Missile Vessels</td>
</tr>
<tr>
<td>FPC</td>
<td>Fast Passenger Craft</td>
</tr>
<tr>
<td>GAM</td>
<td>Gerakan Aceh Merdeka</td>
</tr>
<tr>
<td>GCU</td>
<td>Gun Control Unit</td>
</tr>
<tr>
<td>Abbreviation</td>
<td>Description</td>
</tr>
<tr>
<td>--------------</td>
<td>---------------------------------------</td>
</tr>
<tr>
<td>GOC</td>
<td>General Officer Commanding</td>
</tr>
<tr>
<td>GOSL</td>
<td>Government of Sri Lanka</td>
</tr>
<tr>
<td>GPS</td>
<td>Global Positioning System</td>
</tr>
<tr>
<td>GWOT</td>
<td>Global War On Terror</td>
</tr>
<tr>
<td>HFSWR</td>
<td>High Frequency Short Wave Radar</td>
</tr>
<tr>
<td>HMAS</td>
<td>Her Majesty Australian Ship</td>
</tr>
<tr>
<td>HP</td>
<td>Horse Power</td>
</tr>
<tr>
<td>HRA</td>
<td>High Risk Area</td>
</tr>
<tr>
<td>IB</td>
<td>Intelligence Bureau</td>
</tr>
<tr>
<td>ICAO</td>
<td>International Civil Aviation Organization</td>
</tr>
<tr>
<td>ICC</td>
<td>International Chamber of Commerce</td>
</tr>
<tr>
<td>ICE</td>
<td>Immigration and Customs Enforcement</td>
</tr>
<tr>
<td>IED</td>
<td>Improvised Explosive Devices</td>
</tr>
<tr>
<td>IGP</td>
<td>Inspector General of Police</td>
</tr>
<tr>
<td>IMB</td>
<td>International Maritime Bureau</td>
</tr>
<tr>
<td>IMO</td>
<td>International Maritime Organisation</td>
</tr>
<tr>
<td>IPC</td>
<td>Inshore Patrol Craft</td>
</tr>
<tr>
<td>IRGC</td>
<td>Islamic Revolutionary Guard Corps</td>
</tr>
<tr>
<td>ISPS</td>
<td>International Ship and Port facility Security code</td>
</tr>
<tr>
<td>IUU</td>
<td>Illegal, Unregulated and Unreported</td>
</tr>
<tr>
<td>IWCO</td>
<td>Independent World Commission on the Oceans</td>
</tr>
<tr>
<td>JI</td>
<td>Jemaah Islamia</td>
</tr>
<tr>
<td>KW</td>
<td>Kilo Watt</td>
</tr>
<tr>
<td>LCM</td>
<td>Landing Craft Mechanized</td>
</tr>
<tr>
<td>LCU</td>
<td>Landing Craft Utility</td>
</tr>
<tr>
<td>LLTL</td>
<td>L Lanka Logistics and Technologies Limited</td>
</tr>
<tr>
<td>LNG</td>
<td>Liquefied Natural Gas</td>
</tr>
<tr>
<td>LRRP</td>
<td>Long Range Reconnaissance Patrol</td>
</tr>
<tr>
<td>LST</td>
<td>Landing Ship Tank</td>
</tr>
<tr>
<td>LTTE</td>
<td>Liberation Tigers of Tamil Eelam</td>
</tr>
<tr>
<td>MAD</td>
<td>Mutually Assured Destruction</td>
</tr>
<tr>
<td>MBRL</td>
<td>Multi Barrel Rocket Launcher</td>
</tr>
<tr>
<td>MCNS</td>
<td>Media centre for National Security</td>
</tr>
<tr>
<td>MDA</td>
<td>Maritime Domain Awareness</td>
</tr>
<tr>
<td>MLST</td>
<td>Marine Logistic Support Team</td>
</tr>
<tr>
<td>MNLF</td>
<td>Moro National Liberation Front</td>
</tr>
<tr>
<td>MPI</td>
<td>Mega Port Initiative</td>
</tr>
<tr>
<td>MSIS</td>
<td>Multi Sensor Integrated System</td>
</tr>
<tr>
<td>MT</td>
<td>Motor Tanker</td>
</tr>
<tr>
<td>MV</td>
<td>Merchant Vessel</td>
</tr>
<tr>
<td>Acronym</td>
<td>Abbreviation</td>
</tr>
<tr>
<td>---------</td>
<td>--------------</td>
</tr>
<tr>
<td>NATO</td>
<td>North Atlantic Treaty Organization</td>
</tr>
<tr>
<td>NCNC</td>
<td>Northern Central Naval Command</td>
</tr>
<tr>
<td>NGO</td>
<td>Non Governmental Organization</td>
</tr>
<tr>
<td>NHQ</td>
<td>Naval Head Quarters</td>
</tr>
<tr>
<td>NIB</td>
<td>National Intelligence Bureau</td>
</tr>
<tr>
<td>NNA</td>
<td>Northern Naval Command</td>
</tr>
<tr>
<td>NNSA</td>
<td>National Nuclear Security Administration</td>
</tr>
<tr>
<td>NMA</td>
<td>Naval and Maritime Academy</td>
</tr>
<tr>
<td>NSC</td>
<td>National Security Council</td>
</tr>
<tr>
<td>NVG</td>
<td>Night Vision Goggles</td>
</tr>
<tr>
<td>NWNC</td>
<td>North Western Naval Command</td>
</tr>
<tr>
<td>OA</td>
<td>Operational Art</td>
</tr>
<tr>
<td>OBM</td>
<td>Out Board Motors</td>
</tr>
<tr>
<td>OBST</td>
<td>On Board Security Teams</td>
</tr>
<tr>
<td>OD</td>
<td>Operational Design</td>
</tr>
<tr>
<td>OEM</td>
<td>Original Equipment Manufacturer</td>
</tr>
<tr>
<td>OP</td>
<td>Operational Planning</td>
</tr>
<tr>
<td>OPV</td>
<td>Offshore Patrol Vessels</td>
</tr>
<tr>
<td>PA</td>
<td>Palestinian Authority</td>
</tr>
<tr>
<td>PFSA</td>
<td>Port Facility Security Assessment</td>
</tr>
<tr>
<td>PFSO</td>
<td>Port Facility Security Officer</td>
</tr>
<tr>
<td>PIJ</td>
<td>Palestinian Islamic Jihad</td>
</tr>
<tr>
<td>PIRA</td>
<td>Provisional Irish Republic Army</td>
</tr>
<tr>
<td>PRC</td>
<td>Peoples Republic of China</td>
</tr>
<tr>
<td>PTSD</td>
<td>Post Traumatic Stress Disorder</td>
</tr>
<tr>
<td>RADAR</td>
<td>Radio Aid for Direction and Range</td>
</tr>
<tr>
<td>R&amp;D</td>
<td>Research and Development</td>
</tr>
<tr>
<td>RABS</td>
<td>Rapid Action Boat Squadron</td>
</tr>
<tr>
<td>RAW</td>
<td>Research and Analysis Wing</td>
</tr>
<tr>
<td>SC</td>
<td>Sea Control</td>
</tr>
<tr>
<td>SCAPC</td>
<td>Standing Cabinet Approved Procurement Committee</td>
</tr>
<tr>
<td>SCS</td>
<td>Surveillance Command Ship</td>
</tr>
<tr>
<td>SD</td>
<td>Sea Denial</td>
</tr>
<tr>
<td>SENC</td>
<td>South Eastern Naval Command</td>
</tr>
<tr>
<td>SLA</td>
<td>Sri Lanka Army</td>
</tr>
<tr>
<td>SLAF</td>
<td>Sri Lanka Air Force</td>
</tr>
<tr>
<td>SLN</td>
<td>Sri Lanka Navy</td>
</tr>
<tr>
<td>SLNS</td>
<td>Sri Lanka Navy Ship</td>
</tr>
<tr>
<td>SNC</td>
<td>Southern Naval Command</td>
</tr>
<tr>
<td>SONAR</td>
<td>Sound Operated Navigation and Ranging</td>
</tr>
<tr>
<td>Acronym</td>
<td>Description</td>
</tr>
<tr>
<td>---------</td>
<td>-------------</td>
</tr>
<tr>
<td>SSA</td>
<td>Sea Lanes of Communication</td>
</tr>
<tr>
<td>SSO</td>
<td>Ship Security Officer</td>
</tr>
<tr>
<td>SSP</td>
<td>Ship Security Plan</td>
</tr>
<tr>
<td>SUA</td>
<td>Suppression of Unlawful Acts</td>
</tr>
<tr>
<td>TELO</td>
<td>Tamil Eelam Liberation Organization</td>
</tr>
<tr>
<td>TEU</td>
<td>Twenty Equivalent Units</td>
</tr>
<tr>
<td>TSC</td>
<td>Terrorism Suppression Convention</td>
</tr>
<tr>
<td>UAE</td>
<td>United Arab Emirates</td>
</tr>
<tr>
<td>UDT</td>
<td>Underwater Demolition Teams</td>
</tr>
<tr>
<td>UHF</td>
<td>Ultra High Frequency</td>
</tr>
<tr>
<td>UK</td>
<td>United Kingdom</td>
</tr>
<tr>
<td>UN</td>
<td>United Nations</td>
</tr>
<tr>
<td>UNCLOS</td>
<td>United Nation Convention on the Law of the Sea</td>
</tr>
<tr>
<td>UNCTAD</td>
<td>United Nations Conference on Trade and Development</td>
</tr>
<tr>
<td>USA</td>
<td>United States of America</td>
</tr>
<tr>
<td>USS</td>
<td>United States Ship</td>
</tr>
<tr>
<td>VHF</td>
<td>Very High Frequency</td>
</tr>
<tr>
<td>VLCC</td>
<td>Very Large Crude Carrier</td>
</tr>
<tr>
<td>VRM</td>
<td>Variable Range Marker</td>
</tr>
<tr>
<td>VVT</td>
<td>Velvettithurai (a city in north of Sri Lanka)</td>
</tr>
<tr>
<td>WCO</td>
<td>World Customs Organisation</td>
</tr>
<tr>
<td>WBIED</td>
<td>Waterborne Improvised Explosive Devices</td>
</tr>
</tbody>
</table>
ANNEXES

Annexe A  The demarcation of a separate state (Eelam) as demanded by the LTTE  A1
Annexe B  The LTTE’s International Shipping Routes  B1
Annexe C  Sample Letter and Questionnaire for Interviews  C1 - C3
Annexe D  Sample Letter for Focus Group Discussions  D1 - D4
Annexe E  Various Types of Waterborne IED’s used by the LTTE
             Sea Tigers  E1 – E5
Annexe F  Various Types of the Sea Tiger Boats Built by the LTTE  F1 – F17
Annexe G  Destruction of the LTTE logistic warehouse ships
             in 2007 by SLN  G1
Annexe H  Some of the LTTE ships destroyed by the SLN  H1 - H3
Annexe I  Reduction in use of indirect weapons by the LTTE from
             July 2006 to October 2007  I1
Annexe J  One of the LTTE Ships Captured by the SLN  J1
CHAPTER 1

PROLEGOMENA

1.1 The Beginning.

Asymmetric warfare is an historical outcome of the warfare on land, which influences war-fighting at sea. Historical records point out the use of asymmetric tactics in securing victories of land battles, where the same strategies were introduced at sea to counter-balance the force differences between the belligerents. This warfare can be described as a conflict deviating from the norm or a way of offsetting counter balancing of forces (Cordesman, 2002) and this is best understood as a strategy, a tactic, or a method of warfare and conflict.

Sri Lanka as an island nation that experienced an asymmetric war during its thirty year conflict and finally took control of the sea which contributed to establishing peace in the country. The war-experience at sea against the Liberation Tigers of Tamil Eelam (LTTE) maritime threat is a rare case that helps in deriving a case study for war strategy against non-state actors and terrorism in the maritime domain. Maritime terrorism poses a grave threat to seaborne world trade routes. Almost all the countries are concerned about safeguarding their sea lines of communication (SLOC) from maritime terrorism which incorporate asymmetric warfare tactics and concepts.

The ocean is a common heritage of humankind; it is vast, unregulated and hence chaotic. Maritime nations in today’s competitive economies depend on the ocean for sustenance and growth and they would like to enjoy freedom of movement in order to use their seas to further their national interests. The freedom of navigation in the ocean for any type of vessel is a concept that many nations accept and operate. However, this freedom could be exploited by an adversary to threaten the national security of a state. Thus, concepts and techniques that protect this freedom and enable the use of the seas are applicable across the entire spectrum of maritime activities during peace as well as war.

A nation becomes a maritime power when it uses the seas to safeguard and pursue its national interests. In defining maritime power, sea control becomes a tool of measurement on deciding how influential the nation is. The term command of the sea was gradually replaced
by the term sea control after the end of World War II. This is in realization that the technological advances in the areas of mines, torpedoes, submarines, aircraft, and now satellite applications make it extremely difficult even for the strongest navy in the world to obtain full command of the sea, for extended periods over a large part of the maritime theatre. Likewise, sea control more accurately describes a realistic view of the situation at sea.

Yet, it is not possible for any navy to maintain total sea control or deny the use of the complete sea to the enemy. What is practically possible is to establish a favourable maritime situation where one’s own fleet can operate with a high degree of freedom whilst denying the same to the enemy, for a limited time period and in a limited ocean area.

Sea control could further be divided into three areas; strategic, operational and tactical. Strategic sea control refers to the entire maritime theatre of intended operation. Operational sea control means that a major part of the maritime threat is under one’s own control while tactical sea control means the control of a maritime combat sector. In strategic terms, obtaining or loosing sea control on the open ocean would have an indirect effect on the war situation on land (Vego, 2009). The effects can be more direct in enclosed or marginal sea areas as the loss of sea control can lead to the collapsing of the land defences and thereby affect the outcome of the war. It can also be argued that obtaining or loosing sea control is considerably influenced by the courses of war on land. Maintaining sea control in close proximity to the land is far more complicated than maintaining sea control in the open ocean, as many other land based factors would influence the threat to the ocean.

The seas integrate millions of people across the globe by way of trade, travel and even cultural and religious links, and, it has become a major source of renewable resources and non-renewable resources, which humans are heavily dependent on. Concerns over sea lanes security are issues that any maritime nation cannot ignore in the present day, because one cannot deny the significance of the inter-dependence between nations for the smooth movement of global maritime trade. For this reason, it is of paramount importance that the maritime community is prepared to meet any contingency that may arise from these sea lanes, choke points and the narrow seas coming under threat or siege.

“In today’s globalized world, almost no nation can rely solely on what it produces domestically. Most countries are involved in international trade at some level” (UK Essay, 2013, 1). So the world depends intensely on sea-borne trade for its survival and global
trade will not be able to exist if sea-borne trade is interrupted. Such trade might be a victim of terrorism, as it is the life line of international economy.

Within a globalized scenario of maintaining maritime security, trade competitions among nations play a pivotal role. The world has become more connected than ever before through maritime trade. Therefore, the key difference today is the wide array of maritime threats such as international piracy, smuggling of people and weapons of mass destruction (WMD), the possibility of environmental terrorism and the significant volume of trade that depends solely on the security of the world’s oceans.

The current global security environment requires a reassessment of roles and mission of nation’s armed forces. In today’s world, traditional functions of conventional armed forces may no longer be sufficient to perform their duties and to meet new challenges. In fact, the new strategic environment may require a change in the shape and focus of our maritime forces, as well as an expansion of responsibility to include organizations not normally associated with the maritime domain. This necessary change will generate a new balance between traditional combat capabilities and the need to perform other tasks at sea to prevent newly emerging threats to maritime domain. Yet, the threat of maritime terrorism is not a new phenomenon. It is plausible to assume that both terrorism and large scale violence have a negative impact on international trade and there may be a decline of global trade business due to higher risks, additional security measures, and direct destructions. Terrorists target a country’s trade because countries become vulnerable by the disruption of the industrial supply chain or the destruction of particular transport modes.

Maritime terrorism is not just a possibility but a real one. Recent history indicates that the general vulnerability of the marine environment has become more apparent. To analyse the maritime terrorist threats, it is not enough to study only the capabilities and motives of terrorist groups, but one must also observe the maritime industry, shipping practices, the vulnerability of the shipping trade as well as counter measures taken by the authorities and other institutions which are entrusted with the security of the shipping routes.

“Al-Qaeda operatives have staged several major maritime terrorist attacks. These include the spectacular waterborne suicide bombing of the USS Cole in October 2001, in the Yemeni port of Aden, which killed seventeen American sailors, and the October 2002 small boat suicide bombing of the French super tanker Limburg off Yemeni coast” (Joshua, 2004,
These are techniques pioneered and mastered by the LTTE Sea Tigers. In spite of the numerous directives and measures to increase a country’s safety, no greater vulnerability exists than the immensity, complexity, and ambiguity of the maritime domain. Though other vulnerabilities still exist, the maritime domain in particular presents not only a medium through which international terrorist organizations can move, supply and generate financial support, but it also offers a broad array of potential targets that fit their operational objectives of achieving mass casualties and inflicting catastrophic economic harm.

As mentioned earlier, maritime security assumes a considerable significance in the current era of globalization and trade competition amongst nations. In the case of Sri Lanka, maritime security will definitely have a direct bearing on maritime resource utilization, as the future of this island nation is likely to depend on the ocean and its resources. Maritime security is a broad, somewhat amorphous area of focus, and a coherent definition is therefore difficult to determine, but for the purposes of this research, maritime security will be seen as dealing with the prevention of illicit activities including terrorism in the maritime domain. It could be linked directly to the national security efforts of a specific country or it could cover regional and international efforts to enforce maritime security.

Apart from terrorism, Maritime Domain Awareness (MDA) is a significant aspect of the maritime space, which pertains to the strengthening of marine security internally as well as internationally (Klein, 2011). At the same time, good order at sea ensures the safety and security of shipping and permits countries to pursue their maritime interests and develop their marine resources in accordance with agreed principles of international law (Till, 2009). Threats to good order at sea include piracy and armed robbery against ships, maritime terrorism, illicit trafficking of drugs and arms, people smuggling, stowaways, pollution, marine natural hazards and illegal, unreported and unregulated (IUU) fishing. To elaborate, the promotion of good order at sea lies in the ‘frame work’ provided by the 1982 United Nations Convention on the Law of the Sea (UNCLOS) which is supported by numerous other international conventions that provide subsidiary commands or regimes for maritime security, safety and marine environmental protection (Hong, 2012).

In the context of today’s maritime security threats, technologically advanced equipment is needed in order to enforce law and to stay ahead of criminals, who generally have the financial resources to continuously update and improve their methods of evasion. Likewise
human resources need to be raised both in quantity and quality. The systems and issues that require monitoring are abundant, overlapping and complex as well as highly sensitive. Therefore, educated, and skilled personnel with integrity are needed to operate an effective security command on a national level.

However, the most fundamental requirement that underlies all others is the financial resource. Countries or nations therefore, need access to adequate funding to meet their implementation obligations under international maritime resource utilization. This is so because, as a result of differences and limitations in the financial resource base, the effective implementation of maritime security will be negatively affected.

1.2 The Strategy of Asymmetric Warfare

Asymmetry can be used to describe several types of conflicts and it is not limited to an irregular opponent waging a campaign against a conventionally oriented fully structured military force under the control of a state. Asymmetry means the absence of a common basis of comparison in respect to a quality, or in operational terms, a capability. As per Breen and Geltzer, “strategy of asymmetric seeks to transform advantage in mass and firepower into disadvantages by exhausting the foe in a protracted campaign while goading or misleading him into misdirecting forces against the civilian population” (Breen, Geltzer, 2001, 45). In the case of Sri Lanka, the LTTE or for that matter the Sea Tigers were much smaller and weaker in strengths, in numbers and platforms. The LTTE used the strategy of asymmetry to great advantage and especially during the initial period of conflict, most of the action taken by the military resulted in pushing the Tamil population towards them. The asymmetric strategy transforms the disadvantages and vulnerabilities of a weaker force to an advantage. As Breen and Geltzer points out “sufficient skills and cunning are the only attributes that asymmetric strategy demands” (Breen, Geltzer, 2011, 43). The LTTE as an organization was committed to the objective of achieving their end state; that is the separate state called ‘Eelam’. They were determined to achieve this end state over a long period of time with a clear strategy. McKenzie provides an advance definition for asymmetric warfare; “Leveraging inferior tactical or operational strengths against the vulnerabilities of a superior opponent to achieve disproportionate effect with the aim of undermining the opponent’s will in order to achieve the asymmetric actors’ strategic objectives” (Mckenzie, 2001, 76).
When analysing the conflict in Sri Lanka, it can be clearly seen that the LTTE was able to leverage many of the vulnerabilities they had by using an asymmetric strategy. Asymmetric warfare should be therefore, understood as a strategy, a tactic or a method in which the inferior actor explores the asymmetric strategy to gain superiority. Grange describes this concept as “a conflict deviating from the norm, or an indirect approach to affect a counter-balancing of force” (Grange, 2000, 1). The shock and the impact of asymmetric strategies and tactics used by the LTTE Sea Tigers at sea resulted in making the sea area around Sri Lanka unsafe for even an ordinary passage. As François Verý points out “in effect, the LTTE insurgents successfully challenged the maritime jurisdiction of Sri Lankan authorities over its own territorial waters for quite a sometime and seriously threatened the local good order at sea in its broader context” (Vreý, 2013, 9-10). The manner in which the LTTE’s venture into the ocean is not a normal practice of an insurgent force. The advantage of surprise, which is the hallmark of success of a guerrilla organization cannot be maintained at sea for a long time. The LTTE leadership properly understood the need to dominate the ocean space in order for them to sustain the war and finally achieve their end state.

1.3 Extremist Ideology and Asymmetric Warfare

Insurgency and criminality are merely expressions of a political war of ideas carried out by insurgent or terrorist groups to demoralize and finally defeat the government forces. Most active terrorism is usually an end product of greater ideology movement that propel it to the forefront in a conflict. “Ideology is what gathers resources and recruits new fighters to replace those who have been eliminated” (Sookhdeo, 2011, 228). The LTTE was able to motivate a large number of Tamil youth to take up arms against the government forces. They used separatist and extremist ideology to carry forward their organization. Muni states that “terrorism is the philosophy and thought behind the use of terror as an instrument, a means, in the pursuance of political goals generally expressed through conflict and violence” (Muni, 2006, 453). The LTTE was convinced that the only way to win the right to self-determination of Tamil people was by using terror and violence. Since the beginning of the conflict, there was a huge gap of force levels between government forces and the LTTE. The LTTE employed guerrilla and asymmetric tactics to overcome this gap. They wanted to motivate the Tamil
youth to join the organization, the Tamil population to support their concept, and, their cadres to act with vigour and determination to fight against the government forces.

The ideology is defined as “a set of ideas, doctrines, and beliefs that characterizes the thinking of an individual or group and may transform into political and social plans, actions or systems” (Stepanova, 2008. 28). The LTTE made use of the perceived injustice meted to the Tamils by the Sinhalese majority and successive governments led by Sinhalese leaders as a motivating ideology to lure Tamil youths to join them and take up arms. The LTTE ideology was simple; Sinhalese majority are evil and always harm the Tamil minority and hence they should be considered as the enemy and the use of violence was the only way to win the demands and aspirations of the Tamil minority. Hettiarachchi writing to Prism Journal on Sri Lanka’s rehabilitation program states that; “if the mind-set is locked into an ideology of intolerance and violence and violence against another ethnic or religious community, strategies must focus on changing their thinking patterns” (Hettiarachchi, 2013, 106). The LTTE leadership was able to lock the ideology of the Tamil population, especially the youth that the Sinhalese majority is always intolerant and uses violence against Tamils, whenever their genuine grievances are aired. The LTTE transformed this into a ‘hatred ideology’ and motivated its cadres to use extreme violence to achieve their ends. Niza Yunay in an interview to Aljazeera indicates that “people react with hatred toward those who humiliate them, control their movement, or deny their rights. This is hatred as response to power” (Yunay, 2002). Yunay further goes on to say that “the intense ideology of hatred signifies the return of the repressed, the return of that which is denied” (Yunay, 2002). The LTTE convinced the Tamil people that the Sinhalese majority always humiliate them and try to impose control over them and deny their rights. The LTTE used hatred as an effective tool for rallying Tamil people around them. Based on the ‘hatred concept’ many of the Tamil militants were ready to sacrifice their life to further their cause. That is the reason why there were many suicide cadres in the LTTE. They were willing to be used as a weapon for their cause. The LTTE cadres also wore a cyanide capsule around their neck to commit suicide if they were ever caught by the law enforcement authorities. The LTTE had a nationalistic hatred and not merely a personal hatred. Bartoli and Coleman argues that “extremism is an emotional outlet for severe feelings. Persistence experiences of oppression, insecurity, humiliation, resentment, loss and rage lead individuals and groups to adopt violent and disruptive strategies” (Bartoli, Coleman, 2003, 2).
The Tamil youth who joined the LTTE were made to believe that they had to be vengeful and violent and that this was morally sanctioned. They felt that by using extreme violence such as indiscriminate suicide bombing, they were empowering the Tamil cause.

1.4 Islamic Jihadism and Extremist Ideology

Religion has been used to motivate people to take up arms against established states for centuries. Presently, however, Islamic fundamentalism is exploited by various groups to recruit, justify and wage war against the authorities. Pratt states:

religiously motivated terrorist exhibit a fundamental difference when compared to their political cousins and they usually seek little or no dialogue with contemporary society and wish only to eliminate its modernizing influence. For the most part religious terrorists are hierarchical and authoritarian. A divine being appears directly involved in determining ends and means or a terrorist’s strategy (Pratt, 2011, 12).

When compared with the LTTE, it can be seen that they used extremist ideology based on hatred, but their leader was like a divine power. In the LTTE, it was very similar to a religious stimulus, but was an inspirational individual leadership which kept the Tamil population rallying around it.

Pratt says that; “today Islam is not the only source of religious terror; however, the vast majority of religious terrorists are Muslims. Islamism is a set of ideologies holding that Islam is not only a religion but also a political system that emerged as a branch of the Islamic reform in the 19th century” (Pratt, 2011, 13). The Islamic fundamentals see that Islam should preside over the entire Muslim world and use religious teaching to rally people around it. Sookhdeo says that: “Islamist such as Al Qaeda are radical in their contemporary application of the Islamic source scriptures, extremist in their methods, and exclusivist in their views of competing ideologies” (Sookhdeo, 2011, 232). In a similar manner the LTTE used extremist ideology and instilled and exclusive view which lasted from inception to demise.

Sookhdeo goes on to describe: “Jihad is a continuous permanent state of war between the Islamic state and the non-Muslim world, wage don all fronts and in all spheres. This twofold division of the world is defined in classical Islam as the house of Islam (Dar al- Islam), where Islam hold power, and –significantly- the house of war (dar al- Harb), where non-Muslims have power” (Sookhdeo, 2011, 232). The extremist movements exploit these differences to
inspire the target population to take up violent alternatives to impose their will. This is common to most revolutionary organizations although they will use different ideologies to achieve their mission. As per a Pakistani army senior officer “Jihad is a continuous and never-ending struggle waged on all fronts including political, economic, social, psychological, domestic, moral and spiritual to attain the objectives of policy” (Sookhdeo, 2011, 232). It can be seen that the LTTE also waged a war on all fronts against the government of Sri Lanka (GOSL) even with international dimensions though there was no spiritual touch to it. Their spirit came from their strong and dedicated leadership.

1.5 The Sri Lankan Case

Sri Lanka is an island nation, and sea control is of great relevance to the country and it also finally impacted the outcome of the war and the national security of the nation. The LTTE used the sea very effectively in developing their war-fighting capabilities and became a threat to the territorial integrity of the country. The dynamics of sea control were exploited by both sides with a varying degree of success and even at times failures and many a battle were fought to regain or to maintain sea control. Unlike on land, sea control cannot be obtained by occupying a certain sea area. There are no front lines and visible boundaries at sea. The LTTE had a clear strategy to gain sea control as they realized the value of the sea for their sustenance and growth. The GOSL, had to keep the sea lanes of communication open and the commercial ports secured to maintain the freedom to operate in all seas and connected water ways.

It was the ignorant act of not protecting a mere 1340 km of Sri Lanka’s coast line that helped flourish the LTTE organization with a sea-going capability. The lukewarm attitudes towards the ocean space around the island nation failed to engage with concepts such as Sea Control, Maritime Security & Maritime Domain Awareness (MDA). Whilst the Sri Lanka Navy (henceforth SLN) was trying hard to maintain sea control of the northern and eastern coasts of the country, the LTTE was hell bent on denying the same to the Navy. The connection between territorial integrity and maritime security was understood much later, thereby making the country miss many opportunities to control the flourishing terrorist organization. Due to the lack of maritime domain awareness, the terrorists’ supply lines were not challenged until the last few years of the conflict.
There are many examples of the attempts made by both parties to gain and deny sea control along with many aspects of conventional warfare, asymmetric warfare and improvisations. Sea control and sea denial were experimented by the Sri Lanka Navy and the LTTE in order to gain the upper hand at sea where both parties tried to explore the control of the surface, under-sea surface and the air above, in order to gain sea control.

The Sea Tigers or the maritime arm of the LTTE had a well-structured command organization and its own attack, logistics and suicide craft squadrons, which were capable of operations even in high seas. The Sea Tigers also had a merchant fleet, which was engaged in various legal as well as illegal activities through various front companies based in many capitals of the world. The Sea Tigers also had carried out a number of terrorist attacks against naval as well as civilian targets, hijacked and pirated ships, attacked ships in harbours and engaged in large-scale gun–running and many other crimes at sea.

The LTTE controlled certain coastal areas, rivers and lagoons in the northern and eastern parts of Sri Lanka, where government forces re-took control of the same after defeating them in the final stage of conflict. In many ways, the LTTE was considered as the leader, or a trend setter in maritime terrorism, and the possibility of transferring technology and tactics between various terrorist groups existed, even though the latter did not have the same ideology or motives and merely aspired to acquire maritime capabilities.

The theory of operational art predicts that the LTTE would have continued to leverage asymmetric tactics to defeat the SLN. However, SLN became a fully functional, operational navy and using an operational art campaign design by executing traditional and non-traditional concepts of sea control; SLN was able to counter the seam that the LTTE exploited and finally defeat them at sea. Therefore, a detailed study of the developments, strengths and weaknesses of the Sea Tigers and the multitude of counter actions taken by the Government of Sri Lanka (henceforth GOSL) and the SLN to secure maritime borders is essential for anyone who is interested in acquiring knowledge of the trends and dangers posed by maritime terrorism to sustain good order at sea. Not many navies were engaged in real battle conditions at sea in recent history for prolonged periods.

The navy’s response at times did not contain the Sea Tigers and resulted in developing their conventional military capabilities. The navy was unable to stop war-fighting materials being transported by sea and landing in LTTE controlled areas. There was a time that the navy
did not have an effective counter action against Sea Tiger suicide and swarm tactics. However, SLN evolved through the conflict and managed to rise above the Sea Tigers and maintain sea control, which resulted in the LTTE losing the much needed replenishment of military ordnance. This situation directly affected the LTTE’s ability to sustain a counter offensive against the military and led to the demise of their fighting ability.

1.6 Problem Statement

The conflict in Sri Lanka involving the SLN and the Sea Tigers could be considered as a unique case of significance of a non-state actor at sea and exposes the spectrum of activities, which could pose a considerable threat to any navy. The traditional security paradigm where the state fights with states at sea is no longer a high probability. However, the non-state actors are threatening to use the ocean to achieve their objectives. This research is titled as ‘Asymmetric warfare at sea: The case of Sri Lanka’ in order to examine the use of asymmetric tactics by the Sea Tigers to gain a substantial advantage over that of the SLN at sea. This is a unique case where a non-state actor challenged an established navy successfully at sea. Therefore it merits scrutiny and further study.

Potential security threats to sea lane trade could originate from state or non-state actors. Piracy and armed robbery at sea, which are the most common security threats are as old as the shipping trade. Although there are internationally accepted conventions and treaties governing the activities at sea, the regulatory and implementing mechanism is sovereignty specific; in the sense that the maritime nation can either pursue or ignore such conventions and treaties depending on the relevance of the threat to the state.

In the present day maritime environment, a nation may treat this asymmetric or irregular approach imprudently and one may not realize how threatening this asymmetric warfare at sea could turn out to be, if neglected.

The strategic significance of the asymmetric threat is explained by McKenzie as: “leveraging inferior tactical or operational strengths against the vulnerabilities of a superior opponent to achieve disproportionate effect with the aim of undermining the opponents’ will in order to achieve the asymmetric actor’s strategic objectives” (McKenzie, 2001, 76). The Sri Lankan case depicts clearly this strategic objectives of the LTTE and how successful they were in achieving their desired end-states. In the beginning, the LTTE was clearly inferior in
strength and abilities. The SLN on the other hand was quite powerful and superior. However, 
adaptation of asymmetric tactics changed the nature of the game in favour of the LTTE Sea 
Tigers. This situation compelled the SLN to change its organizational and operational 
doctrines. The SLN had to come up with special units and restructure some existing units and 
adapt different tactics to fight against the Sea Tigers. Until these changes were made by the 
SLN and asymmetric tactics were adopted to fight with the Sea Tigers, the SLN was not 
winning the war at sea. On the contrary they were losing sea control and the Sea Tigers were 
gradually gaining limited sea control and posed a considerable threat to the much superior 
navy.

SLN’s evolution through rigorous experience of the effects of asymmetric warfare in 
the maritime domain, proves that no leeway should be entertained in eliminating the sea crimes 
for the betterment of safety at sea.

The LTTE was one key non-state actor, which exploited the ocean and elements of 
maritime terrorism to its advantage. The LTTE had a de-facto navy with an international 
shipping network, which operated through various front offices across the world. They 
succeeded in acquiring large quantities of weapons, ammunition, explosives & transported 
these through international ports and sea lanes to coastal locations within their control. This 
helped to develop and sustain their war-fighting capabilities and the GOSL was unable to 
counter them effectively until changes were effected to policy and strategies in the year 2005. 
In fact, the Sea Tigers were a trend setter in maritime terrorism and pioneered the suicide craft, 
under water suicide saboteurs, under water improvised explosive devices such as limpet mines, 
mires and mine necklaces, attacks and reconnaissance by submersible vessels.

The SLN confronted this threat to win against the formidable Sea Tigers and radical 
changes were necessary in many aspects how they conducted training and operations. Thus, 
the SLN, which matured through nearly three decade old war, finally managed to overcome 
the power of the Sea Tigers. During the final phase of the battle, the SLN was able to create a 
layered defence system at sea, which prevented the LTTE leadership from attempting to escape 
the military advances on land, and hence were subjected to total annihilation. Thus, the SLN, 
which matured through the nearly three decade old war, finally managed to overcome the 
power of the Sea Tigers.
In these endeavours, the SLN had to suffer heavy losses in terms of human resources, ships and craft at sea and in harbours. Their victory against the sea tigers—-the most ruthless terrorist organization in the world, with advanced international maritime capability can be considered as a gold mine for academic and operational research, although there is no comprehensive research done on the maritime aspect of the conflict. A comprehensive research on the winning strategy, policy and strategic decisions, the development of new doctrines, the aspect of leadership, motivation and dedication of naval personnel, experiments and research and development, application of components of operational art can produce valuable lessons learnt to counter asymmetric threats posed by non-state or state adversaries for any country or organization interested in combating the future threats of maritime terrorism.

The focal motivation behind this study is to analyse the above problem and find a solution; to produce lessons learnt, to derive best practices and to make the maritime environment safe for world trade, travel and the continuation of cultural exchanges, to maintain freedom at sea and finally, to prevent this most important medium of world being exploited by unscrupulous elements. This study intends to focus on the threat to maritime security that could originate from the littorals; especially the potential threat from non-state actors in an asymmetrical approach and this research will deal with the above from a Sri Lankan perspective, drawing from the experience of the SLN over the last thirty years of irregular combat at sea.

SLN, having being trained and aligned on a conventional naval mind-set was found to be reactive in facing the development of LTTE Sea Tiger activities using asymmetrical concepts. The LTTE and the Sea Tigers employed a strategy of asymmetric warfare and the initial successes against the SLN convinced them that it was the way forward. The inability to counter-act decisively in the face asymmetric threat posed by the Sea Tigers, the SLN found it very difficult to maintain sea control. However, the years of evolution helped the SLN to learn from the past, adjust and face the enemy proactively with a mind-set configured for asymmetric warfare which resulted in them gaining sea control. Very describe this situation as, “Adaptation became a crucial survival imperative for the SLN against the asymmetry of the Sea Tigers” (Vreý, 2013, 10). The SLN was able to narrow the gap created by the Sea Tigers for their advantage by using asymmetric strategy and tactics and was able to apply pressure on the Sea Tigers in northern coastal waters, and gradually the Sea Tigers began to lose the freedom
enjoyed by them at sea. It is creditable that the changes in application of factors critical for warfare made SLN victorious against a non-state actor with an international network of shipping. Therefore, this research aims to undertake a philosophical study on the evolution of contributory factors and formulating an explorative model for future applications.

1.7 The Significance of the Research Problem

Sri Lanka emerged victorious in 2009 defeating the LTTE, becoming the most likely and the only country which was capable of defeating terrorism, militarily, following a near three decade protracted conflict. Although the threat of terrorism has been countered in Sri Lanka, it still remains as a worldwide threat, possibly for years to come. In the SLN’s perspective, it was the detection and disruption of the maritime logistical line that supported the LTTE was the main achievement. The main task of the SLN was to achieve ‘sea control’ and enforce ‘sea denial’ to ensure safe sea lines of communication for legitimate shipping and to prevent the LTTE receiving supplies.

Destroying the LTTE’s arm supply lines was a major blow to the LTTE. However, the defeat of the LTTE maritime wing at the hands of the SLN and the naval battles for supremacy at sea has not been studied, academically, even though the war on land has been studied and many books are available on this topic. This would provide an ideal research, a case study in asymmetric warfare at sea in contemporary history since preserving the freedom of the seas and the right of vessels to travel freely in maritime waters and also to have access to ports are essential elements of national security, and hence become a top priority.

Given the above reasons and uncertain situations, it is vital to study the changing dynamics of asymmetric approaches, and in the Sri Lankan case, the thirty year conflict rapidly changed the conventional mind-set of armed forces in strategic level decision making, and it supported them to come out with fresh, ‘out-of-the-box’ thinking; creativity and ingenuity to engage with and understand the new asymmetric threats and challenges posed by maritime terrorism.
1.8 Research Questions

The following research questions are formed to unpack the research problem;

a. What are the organizational drawbacks of the SLN under the conventional environment against the rise of LTTE Sea Tigers using unconventional (asymmetric) concepts?

b. How did the LTTE exploit the ocean to develop into an almost ‘conventional’ military force and continue the battle against the Government of Sri Lanka for nearly three decades?

c. What are the factors that influenced SLN to transform from a conventional approach to an asymmetric approach that minimized the failures and assured the successes of the war-winning formula?

d. How did the concepts & theories such as ‘Sea Control’, ‘Asymmetric Warfare’, and ‘Operational Art’ contribute to the transformation of the SLN’s conventional strategy and the ultimate demise of Sea Tigers?

1.9 Research Objectives

The prime objective of the research is to study lessons learnt to counter asymmetric warfare at sea, taking key lessons from the SLN. To achieve this objective, the following secondary objectives are also focused on;

a. To examine the organisational drawbacks of SL Navy’s application under a mind-set of conventional naval warfare.

b. To research and evaluate how LTTE Sea Tigers exploited the oceans for their advantage.

c. Identify the determinants of success in gaining sea control.

d. To research the concepts & theories of naval warfare in relation to the Sri Lankan context.

1.10 The Research

The ethno-political conflict in Sri Lanka was going on for nearly three decades resulting in a loss of a large number of human lives. An accurate figure of deaths is not available. The report of the United Nations secretary general’s panel of experts indicate that during the final
phase of the battle alone, more than 40,000 deaths occurred due to the conflict (UN secretary generals panel of experts on accountability in Sri Lanka, 2011, 40). Beehner writing to the small wars journal indicate: an estimated 80,000 people perished during the quarter century conflict, including an Indian Prime Minister and countless Sri Lankan politicians (Beehner, 2010, 2). The LTTE and the Tamil diaspora give a much elevated figure and the government of Sri Lanka would indicate a lower figure, and, hence it is difficult to come up with an accurate casualty figure on both sides of the conflict and scores of civilians killed during the conflict.

The LTTE became the most dominant Tamil militant group in the 1990s and developed military capability to fight the armed forces of Sri Lanka. It is banned as a terrorist organization in 31 countries including USA, UK, EU, India and Canada. It was the only insurgent force in the world which possessed a naval arm as well as the ability to carry out a few attacks against economic and military targets using light air crafts. Therefore, it can be concluded that the LTTE is the only terrorist organization in the world which had a near-conventional Army, a de-facto Navy and an Air Force.

The scope of literature that is available on the subject area of the LTTE and asymmetric warfare has been thematically reviewed. The literature review was carried out by analysing global, local, theoretical, empirical and unpublished literature. The key thematic areas covered in the literature review include ‘Conventional Naval Warfare’, ‘Maritime Security’, ‘Organizational Drawbacks of SLN, and ‘Exploration of Oceans by LTTE ’; ‘ Determinants of Success in Gaining Sea Control ’ and ‘ Concepts and Theories of Naval Warfare.

Home-based literature as well as foreign publications give vivid descriptions of both sides of the story. Furthermore, the literature review will be expanded to encompass the research material relevant to the subject, as there are significant numbers of studies done relevant to the development of Asymmetrical warfare at sea. These literatures will be studied and reviewed in support of the research questions and factors as described in the conceptualization of the research problem.

Asymmetric warfare encompasses a wide scope of theory, experience, conjecture and definition (Barnett, 2003). “The implicit premise is that asymmetric warfare deals with unknowns, with surprise in terms and ends, ways and means. The more dissimilar the opponent, the more difficult it is to anticipate his actions. If we know in advance how an opponent planned to exploit our dissimilarities, then we will be able to develop a specific
doctrine to counter his actions” (Ancker, Burke, 2003, 18). Unfortunately, uncertainty is inseparable from the nature of warfare. If and when the enemy surprises us with a capability, our response is necessarily ad hoc and less effective. Therefore, the doctrine must prepare the military force with a mind-set to deal with uncertainty quickly and effectively.

Asymmetric warfare tactics generally provide the ability for a smaller and weaker force to challenge a more powerful adversary with a real prospect of achieving its goals at sea. It is also referred to as guerrilla warfare at sea. The LTTE pioneered the asymmetric warfare at sea in a significant manner and was a considerable threat to the SLN as well as to the other military forces and contributed effectively in continuing the conflict for nearly three decades, fighting at times like conventional military forces.

In modern naval warfare, theoretically, it is possible to achieve success by employing larger forces and with the use of modern technology. However, such cases are rare as no country likes to engage in long battles at sea and would rather concentrate on economic progress. To have any meaningful outcome, the naval forces apply strategy and tactical actions at sea to accomplish aims. “However, the strategic framework is too large to properly orchestrate tactical actions at sea to accomplish aims of policy and strategy. At the same time, the tactical framework is too narrow to bridge the gap that separates it from strategy” (Vego, 2009b, 1). Therefore, another field of study and practice must exist to properly synchronize or orchestrate all available sources of military and non-military power in order to accomplish the ultimate strategic objectives through a series of intermediate objectives. This third component is the military ‘Operational Art’ (Vego, 2009a). The operational art occupies an intermediate position between policy and strategy on one hand and tactics on the other.

These theoretical components are well connected to practical employment as they are inter-related. The National Security of a nation is comprised of many factors which are crucial for the survival of the State. Maritime security is such a crucial factor for coastal as well as land-locked States, where one’s economy is directly dependent on sea trade. Sea trade could range from importing & exporting general commodities to energy; the life line of any state. Therefore, in engaging with maritime security concerns, naval assets become the state’s primary tool. Irrespective of the capacity of the naval assets to enforce sea control or sea denial, asymmetric warfare remains a low-cost solution to bring disruption and destruction to hostile elements. Even in times of peace, maritime security is a matter of crucial significance as
national economies are inter-related in the global economy. Piracy in Somalia is a classic example of how a localised issue grew in to a global concern where many multinational coalitions were required in order to sustain maritime trade among the trading nations.

1.11 Proposition

When the three decade long confrontation ended on 19\textsuperscript{th} May 2009, many reasons were seen as the key factors for winning the war. However, the common perspective was affirmed as a combined effort of all the armed forces and a whole of government approach. But it is a known fact that the LTTE developed their war fighting capabilities by using the sea very effectively and became a threat to the territorial integrity of the country. As Sri Lanka is an island nation, the importance of sea control was of great relevance in deciding the outcome of the war. Combat at sea is dynamic, hazardous and also unpredictable, especially when it is under the shadow of asymmetric warfare. But the SLN being a hardened force, involving in immense active combat operations which became the main source of detection and disruption of the logistical line or the maritime life line that supported the LTTE. Devastating their arms supply line became a major blow to the LTTE’s war fighting capability.

Likewise, SLN played an imperative role in obliterating terrorism, and had a multi layered approach in maritime security which integrated the activities of various stake holders with complementary objectives at three levels of over-lapping responsibilities; such as port security, shipping security and maritime defence. At the same time, in devising an appropriate intensification of strategy to destroy the LTTE, SLN paid great attention on policy changes, aspects of leadership, resource availability and contemporary technology till they reached the final destination of comprehensive victory.

While considering the above significant factors the researcher proves that the successes was heavily depended on SLN’s efforts on defeating the LTTE at sea utilizing their maritime capabilities and also by determining the enemy’s plans and strategies and devising effective counter measures which took them by surprise that led to the diminishing of their sea power capabilities.

To test the research hypothesis, the theories of asymmetric warfare, sea control and operational art are used. The actions and counter actions of the SLN are analysed against the fundamental elements of these theories to identify key lessons and to develop a model for
future academic and operational studies. The following three propositions have been identified as the working hypotheses:

a. The study assumes that at the earlier period of the war, the naval forces were not able to deter the LTTE at sea, and could not establish the control of the seas because of a lack of understanding of the attributes of maritime warfare.

b. Determination, leadership & motivation led the LTTE organisation to transform itself from a rudimentary fighting force to a fighting force with near conventional capabilities.

c. The leadership, resolve & transformation of strategies were the factors that influenced the SLN to transform from a conventional approach to an asymmetric approach that minimized failures and assured the successes of the war-winning formula.

1.12 Chapter Organization

Chapter one comprises the introduction, an elaboration of the concept of sea power, asymmetric warfare and its application in the modern day. Chapter two defines the literature review, the work done by other academics in this regard or similar situations elsewhere. Chapter three explains the research design and the methodology used in the study. The theoretical background is discussed in Chapter four and the analysis of data is in Chapter five and six. Chapter seven compare the research findings from data analysis with the theoretical perspectives. Chapter eight is the conclusion of the thesis and it offers an exploratory outcome with recommendations and suggested scope for further research in this case study.
CHAPTER 2

DISCOURSE ON MARITIME TERRORISM AND THE RISE AND FALL OF THE SEA TIGERS

2.1 The Genesis

In understanding how the Sea Tigers effectively used the seas around Sri Lanka to sustain a military conflict for nearly three decades, a broader literature needs to be reviewed. As most of the available literature is limited in scope and focus on the LTTE, the present review was carried out by analysing global, local, theoretical, empirical and even unpublished literature, in order to understand the broader aspects which encompass this study. The literature review is organized under different components which cover the above aspects of the study. The discussion will focus on the components of ‘conventional naval warfare’, ‘maritime security’, ‘organizational drawbacks of SLN’, ‘exploitation of oceans by LTTE Sea Tigers’ and ‘determinants of success in gaining sea control’.

The literature review begins with a focus on the concept of ‘conventional naval warfare’ by studying issues such as the ‘concept of balance of power’, ‘theory of power transition’ and ‘theory of democratic peace’. On the topic of ‘maritime security’, literature is reviewed on areas such as ‘international maritime terrorism’, ‘international maritime terrorist groups’ and ‘mechanisms in place to protect maritime environment’. Works pertaining to ‘organizational drawbacks of the SLN’ are analysed by considering policy, strategic and tactical drawbacks via reviewing the Australian and Indian contexts.

The focus then shifts to the area of ‘exploration of oceans by LTTE Sea Tigers’ where emphasis is laid on ‘early developments of the LTTE’, ‘SLN’s reactive response’, ‘formation of Sea Tiger fighting elements’, ‘Sea Tiger maritime tactics’, ‘LTTE international shipping network’ and ‘naval response’. The study of the ‘determinants of success in gaining sea control’ is then followed by the final segment of the literature review where global literature available on ‘concepts and theories of naval warfare’ is cited. This section includes key concepts and theories such as asymmetric warfare, sea control, operational art, and exploratory models.


2.1.1 Conventional Naval Warfare

The general definition of ‘conventional warfare’ is the use of a specific form of warfare conducted by using conventional military weapons and battlefield tactics between two or more states in an open confrontation. Doctrine for the Armed Forces of the United States, Joint Publication 1-02 defines the term conventional forces as, “those forces capable of conducting operations using nonnuclear weapons and those forces other than designated special operations forces” (U.S. Department of Defence, 2008). The U.S. Joint Publication defines conventional warfare as “Armed conflict between states and/or nations in which combatants appear in organized military units that are often outfitted with standard uniforms, weapons and equipment. It typically involves major combat operations that overtly seize control of territory, inhabitants and resources” (Piddock, 2009. 2). The force structure on either side is well defined and primarily targets the opposing enemy compositions. Use of weapons is conventional and does not utilize chemical, biological or nuclear weapon components. Weakening or destroying the enemy capabilities or destroying the enemy’s military force remains as the general purpose of conventional warfare.

With the changes that took place around the 17th century in the warfare environments both on land and sea, capabilities of countries in the western world evolved along with the industrial revolution. This had a great impact on strengthening their militaries. The ability to use naval fleets to ferry troops to greater distances enabled concurring various continents. Colonization in Africa, the Americas and Asia was seen as a direct result of this development; using conventional troops and weaponry that the occupying forces held. This method of waging war over the enemy soon attracted the term ‘conventional’ warfare as these forces were equipped with conventional weapons. The naval and army components progressed towards becoming more professional military entities laid down in accordance with conventional settings.

The formation of the British conventional naval fleet was not an overnight miracle but a result of many centuries work. None of the other countries during that era identified the importance of having a conventional naval force. Thus, a brief outlook on the employment of conventional warfare in the past provides an overview of the deployment of the concept which helps in understanding the evolution of naval warfare.
Following the Trafalgar war which is considered as a significant example of conventional naval warfare, the era of conventional naval warfare came to an end with the Falklands War which began on 2\textsuperscript{nd} April 1982 with an amphibious landing by a brigade of the Argentinian Navy which captured Port Stanley, the capital city of Falklands [commonly known as Islas Malvinas]. The British then responded to this invasion by utilizing diplomatic as well as naval components with a Task Force that included almost the entire British surface fleet and attack submarines. As Evans points out, “from the British perspective, the Falkland conflict was predominantly a naval campaign, involving a task force which ultimately amounted to 127 ships, consisting 43 Royal navy vessels, 22 from the Royal fleet auxiliary and 62 merchant vessels” (Evans, 2012, 1).

Apart from the discussion of Trafalgar, Falkland and Cold Wars, the concept had no evolution in unleashing conventional naval confrontations as many countries tend to strike a balance in power. Yet attempts made to develop conventional armies, navies and air elements by most advanced nations have not stopped. Despite the development of unconventional means of fighting non-traditional threats primarily emerging in the form of asymmetric warfare, the formation of conventional naval fleets with standard surface, air and subsurface elements continued to grow. China’s evolving strategic strike capabilities can be cited here as the best example to highlight the significance given to enhance conventional naval power.

Authoritative Chinese writings indicate research into and development of increasingly accurate and long range conventional strategic strike systems, that could be launched from Chinese territory against land and sea based targets throughout the Asia pacific region in a crisis situation (Stokes, 2009). The use of the conventional medium and long range ballistic missiles, which can strike conventional naval formations such as aircraft carrier battle groups can be seen as a viable option for Chinese Navy to target mainly the western pacific region. These developments among the leading countries show the interest that countries have in acquiring conventional force structures despite emerging non-traditional threats.

The concepts of conventional warfare encompasses other important sub theories such as Balance of Power, Power Transition and Democratic Peace theory
which also need to be looked at as they form integral segments of the conventional warfare concept. It is necessary to study these aspects too, in order to understand the nature of warfare.

2.1.1.1 Balance of Power

The concept of ‘balance of power’ is considered as one of the oldest and fundamental concepts in the field of international relations (Paul, 2004). Glenn Snyder highlights balance of power as a core theoretical concept in international relations. Hans Morgenthau calls balance of power the ‘iron law of politics’ and Henry Kissinger, regards it as more of an art than a science (Amin, Naseer, 2011). When looking at conventional warfare, the importance of balance of power can in no way be undermined. As conventional warfare is primarily based on the number and strength of forces [be it the army or the navy], balance of power will be a crucial element in striking a balance between two states that are in equal power. The weaker states have a natural tendency in forming alliances with stronger states to balance the power vacuum. Major Powers use the strategy of balancing as a topmost priority in the security realm because a successful balancing strategy ensures peace and it is a precondition of the preservation of the State system (Odgaard, 2007).

2.1.1.2 Power Transition

The importance of this theory in combining with conventional warfare is mainly due to its application at a time of war, in a specific region or within an international domain. The theory in general states that war is more likely when the power of a rising state approaches that of the dominant state (Morrisey, 2010). While this theory proves the role played by power in various magnitudes at various levels in the international relations arena, the understanding of the definition of power also signifies its value when applied to scenarios in the real world.

The primary architects of the theory define power as the ability of a State to impose on or persuade another State to comply with its will (Organski,
Kugler, 1981). Power is achieved through the combination of a State’s population, the population’s economic productivity, and the ability of its government to mobilize the former two effectively and efficiently (Tammen, 2000). As power is defined here as the ability to impose a will on another State, the military component plays a significant role among many approaches available for achieving such an end.

2.1.1.3 Democratic Peace

According to Jack Levy, the democratic peace thesis is “the closest thing available to an empirical law in the study of international relations” (Levy, 1989, 88). This theory refers to the idea that democracies by nature do not go to war with one another, a fact which historically has guaranteed peace between democratic States, arguably without exception (Pugh, 2005). The idea that democracies do not fight each other can be traced back to the writings of Immanuel Kant over two hundred years ago in ‘The Perpetual Peace’. However, it was not until the early 1980s, with the writings of Doyle that the idea received its first contemporary articulation (Doyle, 1996). According to Doyle, those states that have been identified as liberal democratic have been maintaining healthy relations among themselves, yet can be inclined towards war against democratic States.

The conclusions reached are best signified in the work of Russett who has argued that alleged wars between democracies [most of which took place in the 19th century] do not meet ‘rigorous’ criteria for a democracy and/or for war (Russett, 1996). These criteria of course are those subjectively chosen by Russett. He defines a democracy as “a system of government with a voting franchise for a substantial fraction of citizens” (1996, 58-81). Russett defines “war as an interstate activity with one thousand battle fatalities” (1996, 69-72). Furthermore, his data claim that since the end of World War II, democratic dyads have not only been able to avoid war, but are also less likely to threaten to use force in settling of their disputes (Shapio, 1996).
2.1.2 Maritime Security

Whether a country is landlocked or coastal, the present trends in globalization have an enormous impact on the access to resources and markets. The sea based trading system is found to be a gigantic force in the modern trading system. “With over 80% of trade being done through sea” (Caron, Oral, 2014, 270), states themselves have invested heavily on the maritime supply network. As maritime trade continues to grow at a rapid pace, challenges that emerge in the form of mainly non-state actors have become high. This has in turn made the whole maritime industry a much more challenging as well as a sensitive factor. As the challenges continue to grow, the responsibility of states has become a crucial factor and an international obligation. States have invested significant political, diplomatic and military resources to ensure the smooth flow of commerce and have chosen sophisticated security strategies and systems so as not to slow down international trade and impede economic growth; in essence, operational strategies are primed to ensure that trade flows unhindered and sea lines of communication are protected (Sakhuja, 2010). Likewise, given the global importance of maritime trade, countries pay great attention to both understanding maritime security and responding to its emerging challenges and threats.

As the study is based on the LTTE—a terrorist organization that evolved into a decisive factor in the maritime security domain of Sri Lanka as well as the Indian Ocean- a brief look at how the concept of ‘maritime security’ developed in the global literature is essential in understanding the context. The world has taken the topic of maritime security into great concentration paying a high price and allocating considerable time to find solutions.

The term ‘maritime security’ and ‘maritime safety’ have been used in connectivity in most occasions but when defined, they provide two different meanings in the maritime context. The term ‘maritime safety’ is defined in the United Nations 2008 report on the Oceans and the Law of the Seas as “ensuring safety of life at sea, safety of navigation, and the protection and preservation of the marine environment”. The shipping industry has a predominant role in that regard; vessels must be safely constructed, regularly surveyed, appropriately equipped and adequately manned; crew
must be well trained; cargo must be properly stowed; and an efficient communication system must be on board.

The differences of ‘Maritime Safety’ and ‘Maritime Security’ are defined as follows by Pozo:

a. Maritime Safety; The combination of preventive measures intended to protect the maritime domain against, and limit the effect of accidental or natural danger, harms, damage to environment, risk or loss

b. Maritime Security; The combination of preventive and responsive measures to protect the maritime domain against threats and intentional unlawful acts (Pozo et al, 2010, 45-46).

Feldt highlights the above significance:

‘Maritime Security’ has to be distinguished from “Maritime Safety”. “Maritime Security” is “the combination of preventive and responsive measures to protect the maritime domain against threats and intentional unlawful acts”. Key words are; preventive and responsive measures, aiming at both law enforcement as a civilian and military requirement and defence operations as a military, in this case naval requirement. “Maritime Safety” is “the combination of preventive and responsive measures intended to protect the maritime domain against, and limit the effect of, accidental or natural danger, harm, and damage to environment, risks or loss (Feldt et al, 2013, 2).

Further, the definition of ‘maritime security’ has taken different shapes and views depending on the context in which it was applied. The 2008 UN report on the Oceans and the Law of the Sea indicates the main threat components as, “Piracy and armed robbery at sea, terrorist acts involving shipping, offshore installations and other maritime interests, illicit trafficking in arms and weapons of mass destruction, illicit traffic in narcotic drugs and psychotropic substances, smuggling and trafficking of persons by sea, illegal, unreported and unregulated fishing and intentional and unlawful damage to the marine environment”. Likewise, the difficulty to define maritime security is primarily attributed to various political contexts and organizational requirements, which project a general view that the term has been used loosely. These
developments with regard to defining the term have evolved into a broader conceptual debate on security. Thus, it might be viewed simply as another dimension of security, although literature pertaining to security studies does not reflect that. Rahman explains this complexity as follows:

On the other hand, each dimension of security already discussed may also be applied to the maritime environment, with each arguably possessing maritime elements. Similarly, each of the alternative security system ‘concepts’ on offer may also be applied to the maritime sphere. It is thus possible to speak, for example, of ‘marine environmental security’, ‘comprehensive maritime security’ or ‘cooperative maritime security,’ and so on (Rahman, 2009, 29).

The existing literature on maritime security has tended to focus on the characteristics of the sea and its varied users, and the threats posed to those users (Cozens & Mossop, 2005). The non-traditional view on maritime security differs from its focus on strategic standpoint. In this context, Till (2004) focuses on the organizing concept of ‘good order at sea’, whereby the sea as a resource, as a medium for trade and information exchange, and as an environment, faces risks and threats to the good order on which their continued contribution to human development depends. This is a clear indication of how complicated maritime security is. It is further complicated by the fact that different users find different risks and vulnerabilities for their areas of responsibility and hence it is even more difficult to find common definitions of concepts.

It is important to see some more definitions on maritime security to understand the nature of the problem deeply. Rahman highlights the key definitions of maritime security by taking into account some significant studies done by Dalhousie University which define maritime security as:

A process of maintaining stability in the international system on, over, under and from the sea’. That may not be unreasonable as it encompasses the three domains under the maritime security, but it remains too vague to be of much utility. A Canadian study also identified four ‘basic principles which govern the use of the oceans’ similar in substance to till’s conception: a recognition of the
oceans as a ‘source of wealth’, as a ‘life support system’ and a ‘medium for trade and communications’, and a ‘tradition … that those who use the oceans should do so in peace and security (Rahman 2009, 29).

The U.S. *National Strategy for Maritime Security* (2005) views maritime security in a much broader and practical sense as:

The creation and maintenance of security at sea is essential to mitigating threats short of war, including piracy, terrorism, weapons proliferation, drug trafficking, and other illicit activities. Countering these irregular and transnational threats protects our homeland, enhances global stability, and secures freedom of navigation for the benefit of all nations.

The complex nature of maritime security and safety has created a number of difficulties to the maritime industry as arguments were raised over the category of violence to which certain acts such as terrorism, armed robbery and piracy fall. Maritime violence is yet another term that one comes across quite often.

### 2.1.2.1 Maritime Strategy

Various time spans, outlooks, capabilities, thinking patterns and various problems that one has encountered in history shows that maritime strategy has been shaped to a greater extent by history. By analysing these historic developments one can easily outline a broader concept for maritime strategy.

Analysing the developments in the last century, it is quite clear that a number of strategies have been developed. Most Recently in the wars involving Iraq, Afghanistan and Kuwait in the Arabian Gulf, regional crises in the Adriatic and in the blockade off Haiti and both the Korean and Vietnam wars, maritime nations concentrate on using the sea for their own purposes. Even though nations have practiced the concept for many centuries, politicians and historians have only examined it for relatively a shorter period. It was only 125 years ago that Alfred Thayer Mahan pointed out the role of sea power in wartime national policy; it has been a century since Sir Julian Corbett first
provided a more complete theoretical statement of the principles for establishing control of the sea in wartime (Hattendorf, 1991).

While many point out to the leaders that they had not thought strategically, others counter-argue that they acted strategically. At the very end of the period of naval wars under sail, only a very few people, men such as Carl von Clausewitz and Antonie-Henri Jomini were just beginning to think more abstractly about military strategy; although not about maritime strategy (Gat, 1989). Despite these historical developments, recent history bears evidence for the building up of a much larger understanding of the theories that are related to maritime strategy. The requirement of working in close coordination was amply highlighted during World War II. Rear Admiral Wylie of the US Navy was among the first to attempt to integrate the main, service oriented theories into a general theory of power control (Wylie, 1989).

Analysing various events that unfolded in the recent past, it seems that many navies tend to overstate the effort to achieve control by paying attention to battles. Uhlig highlights that once a certain degree of control has been obtained, the most important wartime functions of naval forces become:

a. Protecting and facilitating one’s own and allied merchant shipping and military supplies at sea,

b. Maintaining safe passage for shipping through restricted waters and access to ports and harbours,

c. Denying commercial shipping to an enemy,

d. Protecting the cost and offshore resources,

e. Moving and supporting troops and advanced bases and;

f. Gaining and maintaining local air and sea control in support of air and land operations (Uhlig, 1994, 24).

2.1.2.2 International Maritime Terrorism

In the context of the LTTE Sea Tiger maritime terrorist activities, knowledge of the global reach and expansion in the maritime terrorism related activities adds depth to the study of the Sea Tigers. As many experts on
maritime terrorism have found links between the Sea Tiger activities and the activities of other terror groups, referring to some of the similarities and the influence of Sea Tigers in the global context gives a better understanding of where the LTTE stands.

Richardson (2008), a visiting senior research fellow of the Institute of Southeast Asian Studies-Singapore has done an extensive study on the subject of maritime related terrorism. He cites over 15 cases where international maritime terrorism has succeeded or had attempted in carrying out seaborne attacks in the recent past. Some important cases are highlighted below:

a. East Africa- An Al Qaeda controlled cargo ship delivered the explosives that its operatives used to bomb two US embassies in East Africa in August 1998, killing 224 people.
b. Yemen- Al Qaeda attacked and destroyed the USS Cole in year 2000 using a suicide craft. Another similar attempt failed when the suicide craft sank due to being over-laden. News reports following the incident talked of the Al Qaeda’s connection with the LTTE. The trademarks of LTTE suicide tactics was well exhibited in this attack. The other incident which took place in Yemen in 2002 crippled and set ablaze the French registered oil tanker Limburg following an Al Qaeda suicide boat attack.
c. Iraq-In April 2004, suicide terrorists in several small boats packed with explosives tried to attack tankers and storage facilities in Southern Iraq. The attempt failed and it was found that it was ordered by Al Qaeda.
d. Jordan-A terrorist group led by Zarqawi claimed responsibility for the Katyusha rocket attack in August 2005 which narrowly missed two US warships in the Jordanian Red Sea port of Aqaba.
e. Turkey- A senior Al Qaeda operative in Turkey, Loai Sakka was arrested while attempting to make a one-ton bomb following the premature explosion. He had planned to place it in his yacht and
carry out a suicide attack on one of the cruise ships carrying Israelis or North Atlantic Treaty Organization (NATO) ships.


g. Philippines- Philippines officials stated that a member of the Abu Sayyaf Group (ASG) placed a bomb which sank a passenger ferry; the MV Super ferry 14 killing 116 passengers.

h. Singapore- The Singapore officials in December 2001 cracked down a plot by the members of the Jemaah Islamiyah (JI) to launch suicide attacks on US warships entering Singapore ports.

The above incidents provide ample evidence to prove the extensiveness of maritime terrorism activities globally. When these activities are taken together, the nature, motivation and final objectives were found to be very similar with the LTTE’s modus operandi.

2.1.2.3 International Maritime Terrorist Groups

Among the many facets which comprise maritime security, maritime terrorism has evolved as the leading challenge in the present context. Ranging from piracy to armed robbery and many other attacks of asymmetric nature, the dynamics of maritime terrorism continue to present challenges not only to the developing countries but also to the developed countries. When compared with land-based terrorist attacks, maritime terrorist incidents have been very low in percentage. According to Nincic,

In 2003, the Aegis Research and Intelligence Database estimated between 1999 and 2003 that maritime targets represented less than one percent of all terrorist attacks and a similar analysis of the RAND terrorism database supports these figures; of the 40,126 terrorist incidents recorded between 1968 and 2007, only 136 (0.34%) were against the maritime domain (Nincic, 2012,1).
Bombings near ports and attacks on port facilities are some of the common modes of maritime terrorism activities that have taken place. Yet, those attacks that had been carried out targeting the ships are few; they have always been able to drag the highest media attention. The low incidents in the maritime domain are remarkable despite the availability of a number of terrorist groups that possess maritime terrorist capabilities. This threat has made nations spend billions of dollars on protecting their vital shipping networks, facilities and ships. In fact, some have even argued whether these threats are real or not.

While there are citing of links between piracy and terrorism in a more general form, these two terms have been used side by side to explain violence at sea. Recent suggestions that a nexus may be forming between pirates and terrorists add further obfuscation to understanding the differences between them (Nelson, 2012). The lack of agreement on the definition of both piracy and maritime terrorism has created a number of implications which hamper policy developments. Although maritime terrorism and piracy are two distinct phenomena that exist for different reasons, many of their characteristics tend to overlap.

Many have argued on the definitions provided by the United Nations on piracy and terrorism. UNCLOS Article 101 defines piracy as an act of violence or robbery carried out for private ends against another ship or person while in the high seas (UNCLOS 1982). The inability to focus on a universal definition for terrorism has hindered many policy issues when it comes to taking action on a number of significant illegal activities that take place out at sea. The International Maritime Bureau (IMB) defines piracy as “an act of boarding or attempting to board any ship with the apparent intent to commit theft or any other crime and with the apparent intent or capability to use force in furtherance of that act.” While Council for Security Cooperation in the Asia Pacific (CSCAP) defines maritime terrorism as the undertaking of terrorist acts and activities; within the maritime environment, using or against vessels or fixed platforms at sea or in port, or against any one of their passengers or personnel,
against coastal facilities or settlements, including tourist resorts, port areas and port towns or cities (Chalk, 2008).

The Arab Convention on the Suppression of terrorism, signed at a meeting held at the General Secretariat of the League of Arab States in Cairo on 22 April 1998 defines terrorism as:

Any act or threat of violence, whatever its motives or purposes, that occurs in the advancement of an individual or collective criminal agenda and seeking to sow panic among people, causing fear by harming them, or placing their lives, liberty or security in danger, or seeking to cause damage to the environment or to public or private installations or property or to occupy or seize them, or seek to jeopardize a national resource (Mejia, 2003, 170).

In this regard, motivation can be cited as one area where a distinction between maritime terrorists and pirates can be drawn. According to Murphy (2008), piracy involves a group of criminals that seek financial gain by stealing anything of value from a ship, to include cash, personal possessions, cargo, the ship and its crew. However, terrorists may conduct maritime attacks to fund their onshore operations; thus, leading some to infer that piracy and maritime terrorism are one and the same (Mitchell, 2007).

Threat, vulnerability, consequences and liability are some of the key factors which need to be looked at when analysing maritime terrorism. The ‘threat’ component provides the founding stone for conducting a detailed analysis on maritime terrorism. By examining how these possible contingencies might manifest themselves, assess their operational implications, and explore their relationship to historical attacks and the characteristics of known terrorist groups, we can generate an empirically based foundation for characterizing the risks confronted by sovereign states across the globe. The vulnerability factor has been largely attributed to the general idea of the lack of maritime governance and policing. This is true to a certain level as many nations do not have the luxury of protecting and policing their maritime facilities and maritime
domain. The international community appears to have become progressively more cognizant of the general vulnerability of global shipping as a result of the largely un-policing nature of the high seas, the fact that many littoral governments lack the resources and in certain cases, the willingness to enact serious programs of coastal surveillance, and the sheer esoteric character that typifies much of the oceanic environment.

Capabilities of terrorist groups are yet another salient feature. The inherent openness and opaqueness of the maritime environment has been viewed as particularly worrisome during a time when terrorist capabilities to act on a non-territorial “footing” may be increasing. One significant observation has been cited by Jenkins et al (1986, 65) as “various commentators have argued that the growth of offshore industries combined with the general popularity of maritime sports is serving to expand greatly the potential ease by which groups can gain basic skills and equipment for seaborne attacks”.

Many tend to view that the mere purpose of conducting terrorist attacks is to cause physical violence and analysts have proven that this is not the reality, as in most cases the significant economic loss to a nation has been the result in addition to deaths and injuries to civilians. The attack on MV Limburg by Al Qaeda can be cited as a prominent example in this scenario. Although 90,000 barrels of crude oil were damaged and spilt into the Gulf of Aden, only a limited number of injuries were caused along with three fatalities, two of which being the suicide attackers carrying the explosives on their small vessel (Whitaker 2002). However, the intention of their attack, being to induce economic disruption, was clearly successful with oil prices rising by $0.48 per barrel and growing insurance premiums introducing a loss in port revenue of $3.8 million per month (Lorenz, 2007).

The vastness of the ocean remains as a critical factor in enabling maritime terrorism to emerge. There are two main forms in which terrorist groups benefit from the vastness and lawlessness of the sea; by conducting attacks against sea-based targets and by using the sea to transport weapons, militants and other support means from one place to the other (Voort, O’Brien,
2003). As many terrorist group are quite familiar with the operations on land, the maritime environment has presented obstacles in conducting attacks on sea based targets. This has led to the targeting of critical facilities that are essential for maritime trade. A successful attack against this kind of facility would cause a suspension of traffic, severe economic losses, and a rise in the price of oil and other commodities. The need to counter the threat of maritime terrorism has led to fundamental changes in the international maritime security environment, and the maritime strategies of most countries, especially major seaborne trading nations (Bateman, 2006).

Over 15,000,000 containers are currently in circulation, making over 200,000,000 port visits annually and the world’s top ten container ports handled 178,000 thousand TEU (twenty foot equivalent units) in 2010, nearly as much as the next 40 ports together (179,070 thousand TEU), (Nincic, 2012). As we find very few important ports emerging as major commercial hubs, an attack on any such major port can have a significant impact on the world maritime trade. In this context, the danger which terrorists can pose to the maritime domain is vast.

In this context, Gunarathna identifies the significance of understanding the nature of maritime intentions and maritime capabilities in order to emerge as a prominent maritime terrorist group:

Maritime guerrilla and terrorist capabilities are extensions of their land capabilities. However, maritime intentions are different from maritime capabilities. Translating intentions into capabilities requires significant human expertise [experience and training] and resources. If a guerrilla and terrorist group can develop its understanding and knowledge of the maritime environment, it will begin to exploit that domain. In the early phases, most groups use the maritime environment to support land operations and, second, to mount attacks (Gunarathna, 2008, 76).

Targeting a ship out at sea is not an easy task, this requires timely intelligence and a suitable craft or a fleet with those who know how to navigate
and which part of the ship to be attacked, in order to sink a ship or to cause maximum damage. Most large, modern merchant ships travel at speeds in excess of fourteen knots and it is both difficult and dangerous for a small craft to attempt to approach them at this speed (Bateman 2006). Ships have become handicapped due to maritime terrorism mostly when they are inside harbours. This has led the United States Navy (USN) and other Western navies to lay great emphasis on the force protection of their ships during port calls (Mullen & Bartee, 2002).

With large number of ports engaged in international shipping, security of ports and related facilities are critical in maintaining a nation’s global trade. The challenge of protecting a port from a terrorist attack is not as easy as one would think. The Sri Lankan experience can be sighted as an example. The amount of effort the navy and other entities directly involved in protecting the harbours contributed at the time of conflict is immense. The slightest error could have caused colossal damage to the national economy as well as to international maritime trade. The port provides a number of dimensions to be protected in order to achieve complete security. The Sri Lankan ports have seen threats emerging from land, sea, air and even the sub-surface, making defence a mammoth challenge. Each port is different by virtue of its geography, topography, surroundings and population” (Mayer, 2005).

Each port is different by virtue of its geography, topography, surroundings and population” (Mayer, 2005).

The willingness to explore the acquisition of maritime capabilities has been noteworthy in the recent few decades despite the marine environment being a complex and hostile environment to operate in in most cases. The capabilities of these terrorist groups are spread in all spheres ranging from surface to sub-surface. Nearly two dozen terrorist groups have been identified as having engaged in acts of terrorism at sea and have struck in Latin America, Europe, the Middle East, South Asia and South-East Asia (Gunarathna, 2001).
The amount of technological advances various terrorist groups have acquired in the field of technological advances, navigation capabilities along with lethal weaponries are found to be astounding. These technical advances have increased the potential of such terrorist groups to take on various maritime targets ranging from the weakest defended to the highest protected. Besides lethal weaponry some terrorist groups have carried out attacks by employing marine leisure equipment [scuba-diving equipment and diving apparatus, sea scooters, speedboats and tourist submarines] and devices and explosives that have commercial use (Sakhuja, 2010).

Of the 44 terrorist groups described in the US Department of State’s Country Reports on Terrorism 2009, ten are identified as having maritime capabilities, or at least of having demonstrated maritime capabilities in the past (Nincic, 2012):

a. Al-Qaeda
b. Abu Nidal Organization
c. Abu Sayyaf Group
d. Basque Fatherland and Liberty
e. Hamas
f. Hizbollah
g. Jemaah Islamiya
h. Lashkar e-Tayyiba
i. Liberation Tigers of Tamil Eelam (currently defunct)
j. Palestine Liberation Front – Abu Abbas Faction

As per Nincic (2012), with the exception of al-Qaeda, Jemaah Islamiyah in Indonesia, and the Abu Sayyaf Group (ASG) in the Philippines, many terrorist and/or insurgency groups which are of most concern to maritime security trade do not appear on this list because they had not been designated as Foreign Terrorist Organizations by the United States, or because they had not yet demonstrated maritime capabilities. Al-Shabaab, Al-Qaeda in the Arabian Peninsula (AQAP) and the Abdallah Azzam Brigades have been added
following various intelligence reports of possible acquisitions of maritime capabilities.

Out of the many terrorist groups who either had or is in possession of maritime capabilities at present, Al Qaeda can be sighted as the most prominent due to a number of facts. As the LTTE is defunct, Al Qaeda is seen as a much more global terrorist component that has the striking capability to launch major maritime attacks on some of the leading countries in the world. Al Qaeda’s attacks on maritime targets have taken a significant place in the world maritime terrorism incidents when viewed through the spectrum of maritime attacks which span from Achille Lauro in 1985, MV Limburg in 2002 to MV Star in the Strait of Hormuz in 2010. The importance of having a profound maritime strategy was well identified by Al Qaeda at an early stage.

Initially developed by Abd al Rahman al-Nashiri, this four-part strategy consisted of:

a. Suicide attacks on vessels
b. Hijacking ships and using them as “weapons” against port or transportation infrastructure
c. Attacking large vessels such as super tankers from the air by using explosive laden small aircraft, and
d. Attacking vessels with underwater demolition teams or with suicide bombers (Nincic 2012).

Attacks on USS Cole in 2000 and a tanker Limburg in 2002 bear evidence of the nature of maritime terrorism, mainly in the Arabian Peninsula. The ability to exploit explosive-laden suicide craft to damage or destroy vessels hull is sighted as a significant point in Al Qaeda’s maritime terror capabilities. The fears raised by such operations led to the formulation of catastrophic scenarios featuring large-scale seaborne attacks, including the use of waterborne improvised explosive devices (WBIEDs) against floating vessels transporting hazardous cargo, of the kind of liquefied natural gas (LNG), in order to harm coastal populations’ naval bases, offshore oil and gas facilities, other critical infrastructure, or the maritime trade itself (Farrel, 2007). It is from
this perspective that Al-Qaeda poses a serious threat to maritime trade (Gurpreet, 2007).

The progress made by Al-Qaeda in the maritime terrorism field has been a gradual development like most other such terrorist groups. They have been involved in the transportation of weapons and other war like material in the neighbouring areas with the help of small vessels. In this regard, Gunarathna provides extensive information on the formation of Al-Qaeda and its major seaborne attacks:

Al Qaeda also transported explosives into Kenya for the east Africa attack in August 1998. An Al Qaeda cell in Yemen began planning to hit USS The Sullivans in the spring of 1999 and made preparations in the summer of 1999. … On 3 January 2000, when USS The Sullivans arrived in port, the explosives-laden suicide boat was launched from a nearby beach. From its weight, the boat sank almost immediately. … Compared to the USS The Sullivans attack, the investment Al Qaeda made to ensure the success of the attack on USS Cole was significant. The USS Cole, a guided-missile destroyer (DDG), had a crew of 346. The 154-meterlong and 21-meter-wide ship had a displacement of 8,422 tons. The ship had a maximum speed of 33 knots. Its armaments included antiaircraft missiles, anti-ship missiles, torpedoes, a five-inch gun, and Phalanx close-in weapon system (Gunarathna 2008, p. 79).

Terrorist tactics developed and tested in one part of the world becomes a proven weapon for the others to use in their respective domains, be it either on land, sea or air. The trend to learn these valuable battle-proven tactics from the other groups is quite common among terrorists. Gunarathna resembles this connectivity between the LTTE and Al Qaeda as follows:

For instance, Al Qaeda’s attack on USS Cole was a copycat of the LTTE’s attack on Abheetha, a Sri Lankan navy supply ship. On 4th May 1991, Abheetha was anchored six miles north of Point Pedro, northern Sri Lanka, when an explosives-laden suicide boat rammed it. The attack caused extensive damage to the ship, and killed six and injured 18 naval
personnel. … After the alarm and publicity generated after Al Qaeda’s attack on the USS Cole on 12 October 2000, many terrorist and guerrilla groups became interested in mounting attacks in the maritime domain. Within a month of the USS Cole suicide bombing on 12th October, the terrorist “copycat effect” was demonstrated. LTTE suicide stealth boats breached the defences of Trincomalee, the most protected Sri Lankan naval port, and destroyed a fast personnel carrier on 23rd October; and a Palestinian Hamas suicide boat attacked an Israeli naval craft on 7th November 2000 (Gunaratna, 2008, 82).

Al-Qaida’s interest in underwater capability is revealed in the interrogations of Abd al-Rahim al-Nashiri, nicknamed ‘Prince of the Sea’, an alleged Al-Qaida mastermind (Acharaya, 2008). In 2003, the Singaporean authorities arrested 15 suspected Islamic militants linked to Al-Qaida: elaborate plans had been drawn up to attack US naval vessels at Changi Naval Base (Singapore Ministry of Home Affairs White Paper, 2003).

The other significant terrorist group which is in possession of maritime capabilities is the Abu Sayyaf Group known as the ASG which emerged as a more violent Islamist alternative to the Moro National Liberation Front (MNLF). While the Abu Sayyaf Group has perpetrated a number of high profile attacks to include everything from assassinations, bombings, mass executions, beheadings as well as kidnappings. The very first attack for which the ASG received and/or claimed credit for was the 1991 bombing of the M/V Doulos, a Christian missionary ship docked in Zamboanga which was reportedly carried out as retaliation for anti-Islamic statements made by the missionaries (Atkinson 2012). ASG launched a deadly attack targeting a ferry on February 2004. Redento Cain Dellosa, trained by Jemmaah Islamia (JI), planted an explosives-laden television set in the tourist compartment of Super Ferry 14, plying between Manila and the southern Philippines, where the explosion and the subsequent fire killed 118 passengers; it was the worst maritime terrorist attack in history (Gunaratna, 2008). Parallel to their development as a terrorist
organization, engaged in fomenting sectarian conflict, the ASG deepened their relationship with transnational terrorist organizations (Abuza 2005). Early on, the Abu Sayyaf was funded through a financial network established by Mohamm Jamal Khalifa, Osama bin Laden’s brother-in-law, who was dispatched to the Philippines in 1991 and established a network of Islamic charities (Abuza, 2003).

Due to the sheer difficult nature in conducting a maritime attack, many view that an immediate major waterborne terrorist attack is unlikely in the coming few years. Depending on the target location and method of attack there is potential to cause mass casualties, widespread structural damage and an estimated economic impact of up to $1.3 trillion in lost trade (Buky, 2007). Experts in the field have argued that the growth of offshore industries combined with the general popularity of maritime sports serve to greatly expand the potential ease by which groups can gain basic skills and equipment for seaborne attacks (Jenkins, 1986).

The gravity of this kind of non-traditional maritime asymmetric warfare presented a significant challenge to the maritime security aspects. As the fast small boats are difficult to detect and counter, unless detected at a decisive range, a ship with the most advanced weapon and sensor systems can become handicapped by the potential threat posed by a suicide boat laden with explosives sufficient to damage or sink the ship. The development of naval weapon systems known as Close-in Weapons System (CIWS) even though it took place in the early 70s, became much more important with the introduction of maritime terrorist suicide tactics in the recent years. Many considered the CIWS as the last line of automated weapon defence mainly against anti-ship missiles. The attack on USS Cole by Al-Qaeda even challenged the CIWS known as Phalanx which was fitted on-board. This signifies the gravity of the maritime threat and terrorist capabilities.
2.1.2.4 Mechanisms in Place to Protect the Maritime Security Environment

The attack on Achille Lauro in October 1985 drew a considerable amount of attention from all over the world on the safety of ships as well as their passengers and cargo in the face of the emerging maritime terrorism. Since then various international bodies have introduced measures over the years to both protect the shipping industry as well as the personnel against maritime terrorism. The evolution of these measures was originated from the Achille Lauro incident and was further revolutionized by the 9/11 terrorist attack. With the intention of establishing good order at sea, various Conventions, Acts and measures have been introduced. The International Maritime Organization (IMO), as the United Nations’ regulatory body responsible for the safety of life at sea and environmental protection, has adopted a great number of conventions and regulations since its creation in 1959.

The promotion of good order at sea lies in the “framework” provided by the 1982 United Nations Convention on the Law of the Sea (UNCLOS) which is supported by numerous other international conventions that provide subsidiary regimes for maritime security, safety and marine environmental protection (Bateman 2006). Examples of these include the 1974 Safety of Life at Sea Convention (SOLAS), to which a new chapter was added in 2002 concerning the adoption of the International Ship and Port Facility Security Code (ISPS); the 1979 International Convention on Maritime Search and Rescue; and the 1985 Convention on the Suppression of Unlawful Acts Against the Safety of Maritime Navigation (SUA) (Rolls, 2011). Among the many arrangements that are already in place, the 9/11 incident had a major impact on the security of the existing transportation modes. A high concentration was placed on sea transportation due to obvious reasons. This had a major impact on adding a vital component to the SOLAS in order to enhance maritime security through the International Ship and Port Facility Security Code (ISPS).
The ISPS framework assists governments by providing consistent and firm methods to identify various threat levels and thereby to gauge the vulnerability of ships and port facilities.

The ISPS Code is made in such a way in order to ensure that the minimum functional security measures are achieved for both ships and ports. These include:

a. Ship security plans  
b. Ship security officers  
c. Company security officers  
d. On board equipment  
e. Port facility security plans  
f. Port facility security officers  
g. Monitoring and controlling access  
h. Monitoring people and cargo  
i. Availability of communication (ISPS Code, 2003)

The above are to be fulfilled by ships, ports and by both elements to ensure that the facilities and ships are adequately protected against terrorist activities. The ISPS Code itself dedicates a huge responsibility to the government to both implement these measures and to ensure that expected standards are maintained and they pass the security audits conducted by the IMO. In this context, Sri Lanka ranks as one of the leading countries which made significant contributions to making the ISPS Code a success within a short time duration. The Code identifies three important security levels for the international use such as; Security Level 1, normal; Security Level 2, lasting for the period of time when there is a heightened risk of a security incident; and Security Level 3, lasting for the period of time when there is the probable or imminent risk of a security incident (ISPS Code, 2003, 5-6).

Shipping companies have a designated responsibility in making the ISPS Code a success. The company is bound to appoint a suitable Company Security Officer (CSO) and a Ship Security Officer (SSO) for each ship. The CSO has a significant role to play in ensuring that the Ship Security Assessment
(SSA) is in place and the ship is equipped with a sound Ship Security Plan (SSP) prepared in accordance with the ISPS Code (ISPS Code, 2003, 14).

In addition to fulfilling requirements from the ship’s point of view, the governments also need to seriously look into the aspects of security facilities at the port which is known as the Port Facility Security Assessments (PFSA). These assessments shall be undertaken by the Contracting Government, a Designated Authority, or the Recognized Security Organization and the Port Facility Security Assessments will need to be reviewed periodically and the results of the Port Facility Security Assessment have to be approved by the government or Designated Authority and are to be used to help determine which Port Facilities are required to appoint a Port Facility Security Officer (PFSO) (ISPS Code, 2003, 17).

According to the U.S. Department of Energy’s National Nuclear Security Administration (DOE/NNSA) report (2010), Mega Port Initiative (MPI) is yet another key component in the multi-agency, multi-layered, defensive network that strengthens the overall capability of partner countries to deter, detect and interdict illicit trafficking in special nuclear and other radioactive materials at key international seaports. This initiative is also another measure at large in place to avoid terrorists exploiting the seaports. Since the inception of the concept in year 2003, a total of 27 ports have been equipped with MPI including Sri Lanka.

The primary aim of the MPI is to scan as much as possible containers which are involved in imports, exports and trans-shipped containers. The initiative is applied with minimal impact to the port operations and is expected to equip 100 seaports with radiation detection systems by 2016, scanning approximately 50% of the global maritime containerized cargo following the NNSA. According to the NNSA 2010 report, the MPI works with foreign customs and other law enforcement agencies, port authorities, terminal operators, and/or other relevant entities in partner countries to systematically enhance detection capabilities for special nuclear and other radioactive
materials in containerized cargo transiting the global maritime shipping network.

To make this effort a success, the initiative renders assistance to countries which have agreed to implement MPI by installing various equipment and communication facilities including training for personnel which is a valuable factor. The NNSA 2010 report highlights that MPI will be able to scan over 80 percent of the maritime containerized cargo bound to the United States. The same report highlights future expectations in order to make the MPI a much more effective tool by way of initiating new partnerships and establish formal agreements for Mega ports cooperation; to provide mobile detection systems to select trans-shipment ports, develop response protocols with select nations to address nuclear and radiological threats, provide training to partner nation officials, help to ensure appropriate use and long-term sustainability of the systems, provide specialized equipment and/or training to select ports to enhance partner nation capability for detection, response, recovery efforts and transition operational Mega ports to partner nation officials after the sustainability transition period.

In another measure that originated from the U.S. following the 9/11 incident is the introduction of Container Security Initiative (CSI). According to the U.S. Department of Homeland Security official web portal, CSI addresses the threat to border security and global trade posed by the potential for terrorist use of a maritime container to deliver a weapon. CSI proposes a security regime to ensure that all containers that pose a potential risk for terrorism are identified and inspected at foreign ports before they are placed on vessels destined for the United States. Customs and Border Protection (CBP) has stationed multidisciplinary teams of U.S. officers from both CBP and Immigration and Customs Enforcement (ICE) to work together with our host foreign government counterparts. The following core elements have been identified as the key pillars in the CSI;
Identify high-risk containers. CBP uses automated targeting tools to identify containers that pose a potential risk for terrorism, based on advance information and strategic intelligence.

Pre-screen and evaluate containers before they are shipped. Containers are screened as early in the supply chain as possible, generally at the port of departure.

Use technology to pre-screen high-risk containers to ensure that screening can be done rapidly without slowing down the movement of trade. This technology includes large-scale X-ray and gamma ray machines and radiation detection devices.

According to the Container Security Initiative Summary (2011), issued by the U.S. Customs and Border Protection, CSI operates in 58 ports worldwide: North, Central, and South America, the Caribbean, Europe, Africa, the Middle East, and throughout Asia. Currently, over 80 percent of all maritime cargo imported into the United States is subject to pre-screening, the World Customs Organization (WCO), the European Union (EU), and the G8 support CSI expansion and have adopted resolutions implementing CSI security measures introduced at ports throughout the world. From these practical initiatives that are already in place, a closer look at the legal and framework to counter terrorism is also required.

As terrorism has brought about a number of challenges to effective governance and global peace, the need for a separate set of instruments that deal with various elements of terrorism was felt and the introduction of 13 Sectoral Conventions was found to be a very effective tool. These 13 Sectoral Conventions are spread across a wider range of possible terrorist activities such as Convention on offences committed on board aircraft, unlawful seizure of aircraft, taking hostages, protection of nuclear material etc. In addition to these Conventions there are other regional arrangements which have been initiated. Out of the above, there are the Convention for the Suppression of Unlawful Acts against the Safety of Maritime Navigation, 1988 and its Protocol relating
to Fixed Platforms Located on the Continental Shelf, 1988 which were adopted on 14 October 2005 (Trelawny nd, 2007).

The convention offered authorities with a legal foundation to take actions against violence that takes place against persons on ships, seizure of ships and placing of devices on board a ship which could destroy or damage it. The 2005 Protocol to the SUA Convention requires states to criminalize the unlawful and intentional transport of another person on board a ship in the knowledge that such person has committed an offence as defined in the relevant Convention or any of other Terrorism Suppression Conventions (TSCs) already in force at the time of the Convention adoption (Trapp, 2011).

The addition of two new Protocols helped to expand the scope of the initial Convention by widening the range of offences and including the aspects of boarding to suspected vessels, which is a pre requisite for the navies and Coast Guards to effectively conduct search on board vessels especially out at sea. The relevant UN Security Council resolutions and other instruments, including the International Convention for the Suppression of Terrorist Bombings (1997), and the International Convention for the Suppression of the Financing of Terrorism (1999) are directly linked to the new SUA protocol (Trelawny, 2007).

2.1.3 The Organizational Drawbacks of SLN

On the specific study area of the ‘organizational drawbacks of SLN’, available literature is found to be very limited in scope and depth. No major study on the aspect of the Navy’s drawbacks on its major components has been done. This is found to be a vacuum in this specific study as no serious research has taken place in order to assess the strategic as well as tactical drawbacks of the Navy in the battle against the LTTE Sea Tigers during the war. As the researcher is a very senior naval officer who had the opportunity of observing the full spectrum of the conflict, observations made during the career will be taken as the available literature on the specific study area.

It is a well-established fact that the LTTE Sea Tigers used the ocean effectively in carrying out their logistic, training and other activities to support the battle against
the government armed forces. This they did for nearly three decades, graduating from a very small component of fishermen-turned-insurgents operating fibre glass dinghies to a much more sophisticated de-facto navy, which could even threaten the dominance of the Sri Lanka Navy. Hence a deeper analysis of the factors that led to the growth of the Sea Tigers vis-a-vis SLN is needed to understand this complex situation. The researcher intends to analyse these aspects under, policy, strategic and tactical level drawbacks.

2.1.3.1 Policy Drawbacks

Having a strong maritime defence in an island nation is so crucial in formulating its overall defence strategy, aligned with the Grand National strategy. On the same note, the importance of Sri Lanka as an island nation in the Indian Ocean too has been amply discussed at various forums. Being an ever growing maritime trade and being located in the path of one of the dense international shipping lines in the world, maritime security remains as a vital pillar in the defence of Sri Lanka.

Especially after independence in 1948, emphasis has been mainly focused on developing the army in particular. The importance of having a sizable naval fleet was identified but at that time the navy was primarily considered to be a ceremonial arm than an effective tool in protecting maritime security. This failure to rightly project the importance of developing a sizable navy since gaining independence, impacted the country negatively with the formulation of LTTE Sea Tiger wing and their international shipping network.

2.1.3.2 Strategic Drawbacks

According to the Department of Defence Dictionary of military and associated terms, strategy has being defined as “a prudent idea or set of ideas for employing the instruments of national power in a synchronized and integrated fashion to achieve theatre, national, and/or multinational objectives” (Joint Publication 1-02-amended document, 2013).
Looking at the tactical drawbacks the SLN made in conflict with the Sea Tigers, the failure to draw attention to the sensitive bits of information that were received as tactical inputs can be seen as one of its major strategic failures. In formulating the grand strategy, the tactical components are necessary to find the connectivity of strategy and tactics, as one can never form a strategy without giving due consideration to tactical evolution. Identifying the enemy’s tactical moves can be sighted as one of the most important first clues to gauge the enemy’s grand strategy. By failing to identify this crucial linkage, the SLN suffered losses and continued to battle with an enemy which many considered unwinnable.

SLN’s early failures to identify the Sea Tiger strategy behind forming itself into a deadly Sea Tiger fleet and an international shipping network can be seen as one of the main strategic failures. SLN’s strategy for a considerable time period was a responsive or reactive strategy to face the Sea Tiger threat. The impact of not having a grand strategy to counter Sea Tiger activities had a bearing on the overall effect of the military operations which were fought on land. As the LTTE continued to maintain its supply channels without a major hindrance due to not challenging the maritime activities in a larger scale, SLN witnessed the continued presence of Sea Tiger attack crafts, even though many had been destroyed in confrontations.

2.1.3.3 Tactical Drawbacks

The Macmillan online dictionary defines tactics as “a particular method or plan for achieving something and defines tactics as the skill of effectively organizing and using soldiers, weapons and equipment in battles”. According to the Department of Defence Dictionary of military and associated terms, the term tactics is defined as “the employment and ordered arrangement of forces in relation to each other” (Joint Publication 1-02-amended document, 2013).

Tactical drawbacks of the SLN can be traced back to the very inception of the Sea Tigers in 1984. When the LTTE initially started to move across the Palk Strait by way of using small fibre glass dinghy boats to ferry cadres, and
leaders, between Tamil Nadu and Sri Lanka and also to conduct illegal trafficking or arms and contrabands disguised as fishermen, the SLN fleet units had few or no clue at all until the time some apprehensions of these Sea Tiger boats were done. These apprehensions are termed as surprised or opportunity incidents which were not assisted by accurate naval or other intelligence sources. By the time SLN had started to alert mainly the northern fleet units, the Sea Tigers had sailed a long distance in their illegal activities. They were better equipped with craft that could outrun the SLN fleet units. This can be seen as a major setback in the tactical consideration as many such incidents were either treated as separate incidents, without mapping them to the much broader picture with a timely collaboration of a much needed naval strategy.

The subsequent developments in the Sea Tiger activities too were seen as mere individual incidents and the broader Sea Tiger thinking was not visualized. When the Sea Tigers formed an international shipping network by utilizing various merchant ships which became one of the most decisive factors of keeping the LTTE militarily strong, is another area where the tactical attention was not rightly mapped on to the overall strategy.

Tactical innovations which came as suicide boats, innovative weapons, underwater divers, improvised explosive devices, communication usage, electronic sensors (RADAR, GPS), innovative boat hull designs, disguising the identity of LTTE merchant ships etc. are some of the key features which have taken the Sea Tigers to a level which took the SLN fleet with the element of astonishment, in almost all of the encounters faced out at sea. It would be correct to say here that the SLN tactics primarily evolved through a responsive mechanism rather than being proactive to the Sea Tiger tactics. The delay in responding as well as creating reactive counter tactics took time and space from the SLN which should have been otherwise dedicated for achieving the main objectives and goals of the SLN.

The tactics of using even the large fishing boats, mostly to conduct gun running from the merchant ships which were stationed in deep seas to the coastal areas under the domination of the LTTE was a grand success for them.
This tactic worked quite efficiently till the final phase of the conflict. Major innovations that were in place to totally disguise the consignments of theses fishing vessels made it difficult for the SLN to detect those by using available naval sensors.

The Navy had traditionally been a ceremonial force and was not accustomed to fighting an asymmetric war on the open seas. As a result, even with high tech ‘Fast Attack Craft’ (FAC) from Israel, the Sri Lankan Navy could not counter the swarming tactics employed by the Sea Tigers (Fish, 2009). These drawbacks were seen till the final few years of the conflict where especially in the latter part of year 2005, dramatic changes took place in the tactical thinking of the SLN leaders which were mainly driven as a direct impact of the overall strategic thinking of the SLN.

2.1.3.3.1 The Australian Context

Literature on the organizational drawbacks to respond to similar threats can be sighted from Australia. Threats from small vessels on commercial targets such as ports and ships can have a huge impact on the economy as a whole if launched by terrorists. While concentrated effort is required in protecting assets from a maritime attack the challenges one faces will be also immense. The Australian Government’s approach to countering maritime terrorism has been incremental and slow to evolve but terrorists have demonstrated the capacity to adapt rapidly and outpace government policy (Buky, 2008). This gives a glimpse of the challenges that are faced by countries in responding to maritime terrorism; mainly these organizational drawbacks of a country could be overcome on a broader strategic level. The Australian Navy’s challenges in this context would not have been lesser than those faced by the government itself.

Buky goes onto explain the vulnerability of the Australian government: …by sighting the HMAS Sydney incident when exiting Garden Island in Sydney Harbour provided a vivid example of the inability of the Australian authorities to protect a capital ship in the country’s major port within a densely populated urban area. If the authorities and the
crew of the *Sydney* are unable to protect such a vessel in confined waters, it is doubtful whether they are able to protect the numerous cargo vessels that have substantially greater vulnerability when transiting the territorial sea and beyond (Buky, 2008, 10).

The Australian Public Service Commission report (2007) has identified the need for governments to reconsider their approach to wicked problems, admitting that such problems require holistic and innovative thinking to which the public service is unaccustomed. As there are a number of organizations involved in the maritime security in Australia, the importance of functioning through a single department has been identified as an essential factor. This highlights the drawbacks of the existed system. This fact has been supported by Bateman (2006), by suggesting that one minister needs to be given the responsibility of the overall policy and legislative development in maritime enforcement and compliance even though this is very unlikely to occur.

Australia’s vulnerability to maritime threats grows to a greater extent due to the 36,000 kilo metres odd coastline and the extensive maritime activities endangering Sea Lines of Communication which carry an important amount of sea-borne trade. The logistics of monitoring, patrolling and securing vast sea areas that are crossed by large slow-moving commercial vessels, many of which carry high risk cargoes present a substantial challenge (Buky, 2008).

### 2.1.3.3.2 Mumbai Attacks of 2008

Many cite the 26th November 2008 attack on Mumbai as India’s 9/11. Available literature on this incident gives an insight into some of the grave mistakes that took place in paving the way for a group of ten terrorists from Pakistan to create havoc in Mumbai, the heart of India. The multiple attacks which were of an amphibious nature resulted in killing over 180 personnel in a modern day confrontation that lasted over 60 hours.

In summary, members of the Pakistan-based terrorist group Lakshar-e-Taiba (LeT) executed a complex attack on five targets in Mumbai following a
well-executed maritime landing in Mumbai. The targets were the CST Railway station, Leopold Café and Bar, Taj Mahal Hotel, The Oberoi Trident Hotel and Nariman House. The selection of Mumbai and the above targets bear testimony to what the LeT terrorists were aiming at. The modern media network made the whole event a live telecast one similar to that of the Al Qaeda attack on the U.S. Twin Towers. The complexity of the planning of the caught the attention of many international terrorist experts.

The maritime component of this attack bears evidence of the extreme level of exploitation of the maritime domain by terrorists. The terrorists used a Pakistani cargo vessel which sailed from Karachi and hijacked a Indian fishing trawler either on the 22nd or 23rd November; beheaded the crew except for the Captain and later killed him too as they reached nearer to the destination. This had enabled the terrorists to bypass many security layers which were in place to detect intruders entering into the Indian territory. But the terrorists effectively used the maritime domain to avoid Indian security points on land as well as to minimize suspicion of the Indian navy or the Coast Guard as they were using an Indian trawler. Landing at two points of the city was done using two rubber inflatable dinghy boats (Rabasa et al, 2009).

This incident bears a significant hallmark on a nation that strives to have one of the most developed blue-water navies in the region. With advanced surveillance systems, underwater capabilities, a modern naval fleet and importantly with one of the most advanced intelligence networks in the region. This attack on the Indian soil emerged as a major impact on the Indian military component in the first place and subsequently questioned the effectiveness of the Indian maritime domain awareness (MDA) capabilities. This `terrorist invasion` of the country seriously undermined, if not crippled, multiple layers of security and crisis management structures put in place with considerable investment for the protection of the country (John et al, 2009).

The success of the Mumbai attack or for that matter any terrorist attack that takes place either on land, air or sea highlights two significant areas. They are; either the terrorists are capable of out-manoeuvring the existing layered
defence systems or that the systems that are in place for protection are not suited to the changing dynamics of maritime terrorism. The inquest in to Mumbai terrorist attacks signifies some important learning points to highlight the institutional drawbacks of a powerful nation in the region.

Intelligence failure can be sighted as one of the most significant factors in this whole scenario. Even though India received early warnings from local as well as U.S. sources of a major attack, lack of specific details and uncertainty seems to be the most probable reasons for the absence of a specific response. Ganguly sums up this situation as follows:

The dearth of coordination among key intelligence service such as the Research and Analysis Wing (RAW) and the Intelligence Bureau (IB) is another major factor. This issue highlights the universal problem of rapidly disseminating covert intelligence for actionable purposes (Ganguly, 2008, 13).

This can be seen as the pivotal factor which had the capability of changing the terrorist’s aim. However, had the maritime surveillance systems been able to detect the fishing trawler prior to reaching to close proximity, the fate of Mumbai would have changed drastically. India being the leading naval power in the region with a sizable navy and a coast guard adding depth to the maritime defence, was not able to prevent such an attack, is a clear indication to the possible threat scenarios posed by non-state actors. This inability to effectively monitor the waterfront has been a point which drew serious attention on the naval as well as coast guard capabilities in addressing asymmetric challenges. This failure would seem to reflect the coast guard’s shortage of equipment for coastal surveillance: fewer than 100 boats for more than 5,000 miles of shoreline and minimal aviation assets (Rabasa et al, 2009). Although the central government had set aside funds for the purchase of 26 additional vessels to patrol the country’s coastal states, Maharashtra State [of which Mumbai is the capital] refused them on the grounds that it lacked the funds necessary for maintenance (Parikh, 2008).
The weapons and sensor devices used by the railway guards were found to be outdated and limited in number and the railway guard forces were also found to be not sufficiently competent in reacting to scenarios of this nature, which highlighted the state mechanism in having established counter terror drills with the close coordination of local authorities. Although the force has the ability to fend off common criminals, it completely lacks in training to deal with a well-orchestrated terrorist attack (McElroy, 2008). Although local police contingents [including the Anti-Terrorism Squad-ATS] responded relatively quickly, they lacked both the training to set up appropriate command posts and dragnets for sealing off the attack sites (Rabassa et al, 2009).

The failure to cordon the site by law enforcement authorities was another factor that hindered the effective utilization of Indian defence personnel including the Police. This was largely attributed to the terrorist strategy of selecting targets in multiple locations which prevented a coordinated effort of the Indian military in neutralizing the attacks, which would have been possible if they had taken place in one location. This can be sighted as another major learning point.

Another critical area which one needs to be attentive to is the reactive response time factor of the Indian defence force and police personnel. Local contingents of the army arrived at the scene of the attacks at 02:50 hours, a full five hours after the first shots had been fired (Rabassa et al, 2009). Serious time delays in response by different segments of the Special Forces in the Indian Army were reported. These elite units which are professionally trained and equipped are the most critical units that a country could deploy during incidents of this nature. Initial search-and-rescue operations were mounted some 30 minutes later, and it is only at that point that the terrorists could seriously be considered engaged (Ajai, 2009). According to various counterterrorism experts, any rapid-reaction force must reach the scene of a terrorist incident no later than 30–60 minutes after it has commenced. In Mumbai, nearly 10 hours elapsed (Rao 2008).
Major observations regarding the above points can be narrowed down to the lack of training in responding to similar situations. Mumbai had to pay a heavy toll in this incident according to many analysts who highlight the failure of the first responding elements; i.e. the Maharastra Police official’s failure in handling an incident of this nature. The substandard nature of weapons and protective gear was also found to be a crucial factor. Helmets were of World War II vintage and not designed for modern combat, and most of the responding detachments involved in the incidents were carrying .303 bolt-action rifles of the sort used by the British Army in the 1950s (Rao 2008).

The strategic value of communication was another significant area which failed miserably in the whole scenario signifying another crucial drawback of the military as well as the government mechanism. Throughout the crisis, the central government and security forces failed to project an image of control, with the words “chaos” and “paralysis” used repeatedly to describe events as they unfolded (Ajai, 2009). So badly did officials handle communications that an unprecedented public interest lawsuit has been filed against the government, charging that it failed to discharge its constitutional duty to protect the country’s citizenry and uphold their right to life (Sengupta, 2009). Passing crucial information of the security deployments was done over the public domain. Not only did this alert the terrorists as to when a hostage rescue mission might occur, but it also effectively confirmed that no forward operating units had yet been mobilized (McElroy, 2008).

These learning points provide ample evidence to prove that the key factor in avoiding the Mumbai attacks would have been the detection out at sea. While the points discussed above are seen as major drawbacks of the institutions which responded to India’s 9/11, the lessons are equally valued for the Sri Lankan case.
2.1.4 The Exploitation of Oceans by LTTE Sea Tigers; the Origination to the End

As Bandarage points out:

over the course of the Sri Lanka conflict, the LTTE banned in USA, Canada, European Union, India and Malaysia as a terrorist organization, has emerged as ‘the most lethal and well organized terrorist group in the world’ and a proto-type of global terrorism (Bandarage, 2009, 1).

The LTTE which started as a small insurgent group grew up to be named as the most lethal and organized group and as a trend setter in maritime terrorism. The Sri Lankan case was a vicious struggle for territory, which was perceived as traditional homelands by the Tamils. The LTTE wanted to establish a separate state for Tamils and they wanted to be accepted as the sole representative of Tamil speaking people in Sri Lanka. ‘The demarcation of a separate state (Eelam) as demanded by the LTTE’ is placed as Annex ‘A’. The island Sri Lanka was engulfed in terrorism for thirty years and was subjected to large scale suicide terrorist attacks even in the south, where fighting was taking place. As Bandarage points out: “The LTTE perfected the use of suicide bombers; invented the suicide belt; pioneered the use of woman in suicide attacks and the LTTE was the only terrorist organization to acquire air power” (Bandarage, 2009, 1). The LTTE was responsible for the conscription of child soldiers in large numbers as well. It is very difficult to measure the extent of suffering undergone by people of all communities in Sri Lanka due to this conflict. As this conflict had been going on for a long time, it was considered as an intractable conflict. Bandarage goes on to indicate the carnage created by the LTTE as follows:

Since its inception in early 1970s, the LTTE has carried out extensive attacks against strategic installations throughout Sri Lanka including its world trade centre, national airport and its carrier, the central telecommunication building, army headquarters, sacred heritage sites and innumerable homes, villages, busses, trains and airplanes carrying civilians. It has systematically eliminated political leaders, journalists and most Tamil dissidents. It has acquired tremendous military, financial and media capability with support from the Sri
Lankan Tamil diaspora, the world Tamil movement, with alleged links to the global narcotic trade, human smuggling and other illegal activities (Bandarage, 2009, 14).

It can be seen that the LTTE was no ordinary terrorist organization but a well strategized outfit with a clear command and control structure and was determined never to give up the struggle till they achieve the separate state, which they were aspiring for. The LTTE used every conceivable weapon and tactics to force the government of Sri Lanka surrender to its demands. Though they were not able to defeat the armed forces, they could inflict heavy casualties and damages to the armed forces units and installations.

Most of the terrorist organizations are concentrating on land battles than sea battles as they believe in achieving surprise and withdrawing after an attack. However the LTTE was an exception as they concentrated on developing their sea fighting capabilities since the inception of the war. The LTTE realized the importance of the sea for their growth and sustenance and developed their strategies and tactics to achieve and maintain sea going capability. The close link that the Liberation Tigers of Tamil Eelam had with the seas off the northern areas of Sri Lanka is not a connection that was formed overnight. The sea has always been a strong bonding element of the LTTE due to many of its cadres being primarily either fishermen or being related to fishing activities. Knowing the seas around them, geared with seamanship knowledge, knowledge of various approaches to landing areas and knowledge on sea routes had provided the LTTE cadres with the valuable acquaintance that they required to dominate the seas around them. The very close nexus between Tamil Nadu and LTTE at the initial stages was based on the criticality of the short sea route the two countries shared in the northern peninsula.

The links that the LTTE developed with Tamil Nadu through its fleet of few fishing boats went onto continue till the final phase of the conflict. In the eighties, particularly after the anti-Tamil riots in 1983, Tamil Nadu served as a training ground and sanctuary for the LTTE (Prashar, 2007). The successful formation of a strong link with the local fishermen by the LTTE paved way for the establishment of the crucial
pillars required to form a stronger fleet. With the very few fibre glass dinghy boats they had at the initial stages, they went onto form strong links with Southern Tamil Nadu.

The connections were primarily focused on obtaining medical supplies, training and other essential supplies. The sea route was found to be very effective in achieving the objectives of the LTTE at the initial stages, largely due to short sea routes and the ability in mixing with the fishing clusters to establish the much wanted maritime link with Southern Tamil Nadu. In 1983, the Research and Analysis Wing (RAW) of the Indian intelligence agency set up numerous training camps in the Indian state of Tamil Nadu to train and equip Tamil insurgents for operations against the Sri Lankan government (Povlock, 2011). This military training was possible only through successful cadre transportation to India across the maritime boundary using the small fishing boats. With training came the much required small arms and ammunition into the hands of the LTTE which were smuggled to various hideouts and lagoons in the North.

2.1.4.1 Early Developments

The free flow of small arms along with many other counterfeit items flourished primarily due to the lack of effective monitoring and surveillance on both sides of the International Maritime Boundary Line (IMBL). The city of Jaffna was also within easy reach as a logistics hub for the LTTE as the Sri Lankan government had marginal control of the port facilities and even less of the local seaborne trade (Povlock, 2011). With the official formation of the LTTE sea tiger wing in 1984, it mainly concentrated on the establishment of a sea supply route between LTTE northern strongholds and South India [Tamil Nadu] to facilitate casualty evacuation to India, to establish an escape route for wanted criminals and to ferry leaders to and from India. Even though the sea tiger wing was formed in 1984 (Fish 2006), the first known records of arms and ammunition procurement from Tamil Nadu has been reported in the year 1983.

LTTE links with the local fishing community and between Tamil Nadu proved to be a crucial factor in paving way for the extension of LTTE maritime activities into a broader scope. The local fishermen were all free to assist the
LTTE in their Palk Strait operations and enjoyed total immunity. With early developments being identified by the Sri Lankan government, late President JR Jayawardene on 3rd October, 1985 wrote to then Indian Prime Minister Rajiv Gandhi:

We have been receiving reports from reliable sources that there is regular movement of weapons, explosives and manpower from Tamil Nadu to Sri Lanka, particularly after the ceasefire became operative. It is between Rameshwaram and Point Calimere and also points North of Point Calimere including Vedaraniyam and Nagapattinam that much of this movement took place. If it is any way possible to increase your coast guard patrols in Indian waters to prevent these movements from taking place, it would be of great assistance to us; it will also help in a long way resolve the major problem of terrorism that face us (Dissanayaka, 2004, 98).

This diplomatic note highlights the importance of having effective surveillance and monitoring the activities in the Palk Strait, as mainly the fishermen from Velvettithurayi (VVT) had mastered the navigation skills to frequent between Tamil Nadu and VVT without navigational charts or any other navigational aids. Velupillai Prabhakaran and the other founding leaders of the LTTE like Kittu are known for their familiarity with the seas as they originated from the coastal town of VVT (Sridhar, 2004).

The significance of VVT to the development of LTTE sea tiger activities is found to be very crucial and many consider VVT as the founding stone of the LTTE as described below:

Among its special attractions were its cohesive community, held together by ties of kinship and caste. There were links between its smugglers, fisher folk, and ordinary tradesmen. It is said that there has usually been a spirit of mutual tolerance between its law enforcement officers and its criminals” (Peiris, 2002, 85).
Since VVT reverberates as an important pillar in the LTTE’s near three decade struggle, the social as well as economical ambiance has been well portrayed by Hellmann Rajanayagam:

Velvattithurai has since time immemorial been a fishing centre ... a harbour famous for smuggling and the audacity of the Karaiyar fishing caste; an area where the Karaiyars were particularly well able to hold their own against the high caste Vellalas. This gives one some clues to the caste base of the militant groups, and it can be said that the LTTE is not only one of the few militant groups with a mixed-caste Karaiyar dominated rank-and-file base, but also the only one where Karaiyars are the leaders of the movement. … Quite clearly there was at this stage a confluence of the firepower and the will-o’-the-wisp skills of the VVT smugglers, and the ruthlessness and fanatical commitment of the militants. It is also easy to understand in retrospect the haughty defiance shown in later times by the Tiger leaders to other prominent Tamil militants and, indeed, towards the entire Vellala elite (Peiris, 2002, 89).

This strength pulse in the region was well understood by Prabakaran at the beginning and he focused on concentrating on the need of having maritime capabilities. The initial sea tiger craft were small fishing vessels which were fitted with medium range weapons without board motor (OBM) engines that could be easily used to cross the Palk Strait in less than 30 minutes. In the aftermath of escalating communal riots in 1983, the LTTE intensified its activities against the Security Forces. The LTTE Sea Tiger Wing which was started in 1984, and was popularly known at as ‘Kadal Pura’ (Sea Pigeon). The LTTE carried out many smuggling activities at the initial stages using slightly modified fiberglass dinghy boats fitted with OBMs. Quite often these boats used to mingle with fishing clusters to avoid detection. The SLN did not have sufficiently capable patrol boats to meet this type of scenario (Jalaldeen, 2009). The platforms SLN had at that time were slow, lacked manoeuvrability and were not sufficiently armed to face the emerging challenges.
The first recorded naval encounter on the LTTE was reported as early as October 1981 in the Manalkadu beach, where a naval patrol was capable of taking into custody three well known smugglers Jagan, Kuttimani and Thangadurai; the entire leadership of the TELO (Dissanayaka, 2004). The arrest then subsequently resulted in apprehending another 24 well trained TELO members.

2.1.4.2 SLN’s Reactive Response

During most parts of the conflict, the Sea Tigers exercised initiative better than the SLN. The SLN most of the time were reacting to the tactics employed by the Sea Tigers. SLN took a considerably long time to realize that they were only reacting and their defensive tactics gave the Sea Tigers the upper hand at sea. When the out manoeuvring of the navy was taking place at sea, the navy evolved rather reactively than proactively and started attacking the enemy.

This situation resulted in the SLN purchasing the first six Fast Attack Craft (FAC) built in Israel in 1985 [two initially purchased and another four later], commonly known as Dvoras. (focus group NMA) This made a sizable impact on LTTE maritime activities as the SLN went onto chase and apprehend or successfully destroy most of the LTTE craft. This proved to be very disadvantageous to the LTTE maritime links with Tamil Nadu and as a direct result of naval successes out at sea. Sea Tigers shifted most of their operations to night time capitalizing on the inability of the naval craft to detect and classify sea tiger craft at night due to limitations of the sensors fitted on board SLN craft.

The evolvement of the ‘Mother Ship Concept’ in the SLN during this time frame can be seen as yet another reactive strategy which focused on forming a surveillance zone in the northern waters. This concept expanded the FAC’s operational range to a greater extent through extended logistics support given by the bigger platforms known as the Surveillance Command Ships (SCS). The FACs which formed into organized squadrons began to operate under the operational and tactical command of the SCSs and achieved a number
of successes in terms of apprehending LTTE illegal activities across the Palk Strait (Focus Group NMA). It took no time for the LTTE to realize the damage that had been caused by these ships and they commenced targeting the SCSs using suicide craft. The SCSs were vulnerable mainly due to its size, lack of manoeuvrability, speed and fire power. The FACs then had to immediately shift from its former task to providing protection to SCSs and to escort these vessels. With the commencement of the Eelam war II in 1990, the LTTE began confronting and attacking naval units whenever the opportunity arose. With mounted pressure from SLN units, LTTE resorted to employing a very effective tactic against the SLN; ‘the suicide bomb’. Sea Tigers deployed specially designed craft with explosives that can deliver a lethal impact during confrontations, without utilizing a sizable attacking fleet.

In the mid-1990s the LTTE changed its tactics to a great extent by introducing crafts with high speeds and a weapon outfit which could deliver a heavy fire power on the SLN fleet. This was found to be more lethal with the introduction of the ‘wolf-pack’ attacking method used extensively to isolate and outnumber SLN units prior to achieving total destruction. With suicide threats, new tactics and the element of surprise introduced by the Sea Tigers, escort duties as well as other surveillance patrols of the Navy became hindered to a greater extent. The effective utilization of the ‘Suicide Attack Strategy’ crippled the Navy’s surveillance and patrolling capabilities. The details of the attacks on SLN targets as indicated by the focus group ENC are as follows: The first suicide attack on SLN was reported on 10th July 1990 off VVT on Sri Lanka Naval Ship (SLNS) Edithara, a SCS and another attack on SLNS Abeetha, yet another SCS on 04th May 1991 off Point Pedro. Things began to worsen with the targeting of SLN’s forefront fighting arm, the FACs, by the Black Sea Tiger suicide craft. The first FAC (P464) that was destroyed due to the LTTE suicide attack carried out by cadres disguised as fishermen took place on 29th August 1993 off Point Pedro and the FAC was operating in isolation at the time of the attack. Since then, FACs were targeted frequently inflicting heavy damages to SLN’s fighting spirit (Focus Group Northern Naval Command).
Wanting a stronghold in the eastern shores, the LTTE launched a major operation under the code name ‘Operation Unceasing Waves’ on the early hours of 18th July 1996 to capture the Sri Lanka Army (SLA) base at Mullaithivu. This attack paved way for the LTTE to have control over the coast from Kokkuthoduwai to Vettilaikerni endangering the sea line of communication (SLOC) which connected the Jaffna Peninsula and Trincomalee. This victory enabled the LTTE to establish a Sea Tiger stronghold which was capable of effectively controlling the LTTE’s maritime activities both near shore as well as offshore.

The SLN’s attempt to reinforce the base with troops was disenchanted by the sea tigers and a similar fate was faced by the Special Forces personnel and the helicopter assault which was conducted by the Sri Lanka Air Force (SLAF). While both sides suffered heavy damages in terms of loss of valuable lives, the LTTE was highly successful in owning some valuable artillery munitions and guns which cost a heavy prize to the military in the latter part of the conflict. The victory showed the ability of the insurgents to carefully coordinate naval and land forces and achieve a hard fought victory over the poorly coordinated Sri Lankan forces (Vijayasiri, 1999).

Reacting to the Sea Tiger night operation tactics, the naval fleet was once again baffled by counter measures in nabbing the sea tiger operations of smuggling cadres, arms and ammunition across the Palk Strait. As pointed out by a retired commander of the navy, this was the time where the SLN introduced the powerful search light to detect and classify sea tiger boats. This brought in results at its inception, but also paved way for many sea tiger crafts to get away.

2.1.4.3 Formation of Sea Tiger Fighting Elements

With the assassination of Rajiv Ghandi in the year 1991, the LTTE started to lose Indian sympathy towards its cause. This had a major blow on the LTTE as it was left in troubled waters in continuing its essential life line with Tamil Nadu in terms of bringing in essentials for its survival. This pushed the LTTE leadership to find ways and means in acquiring the much needed supplies
through an alternative way. The need to go beyond the Palk Strait was felt in the LTTE hierarchy and the naval pressure forced the LTTE to navigate through brown water to blue water expedition in order to achieve Eelam. Prabakaran began to focus more on the need for a maritime force that had ocean-going capability to procure arms and ammunition from a distant arms market, and also the capability to inflict serious damage to the SLN (Sridhar, 2007).

One of the significant turning points of the LTTE’s forming of an advanced fleet was attributed to the siege of the Sri Lanka Army base in Elephant pass by the LTTE in 1991. The SLA was able to break the siege by landing several thousand troops on the coast near the base using vessels of the Navy. It was this defeat and the inability to prevent SLN from carrying reinforcements that made Prabhakaran conclude that the capabilities of the sea tigers were to be expanded drastically to engage the SLN.

In order to venture into acquiring the limited Blue water capabilities, the LTTE leadership focused on establishing a dedicated fleet with ocean-going capabilities along with suitable platforms to attack the naval fleet, logistics transportation and to carry out suicide attacks. Two main sections were formed by Sea Tigers; one to look after the operations closer to shore and the other to mainly focus on the international logistic fleet network which was crucial in the survival of the LTTE and their quest for Tamil Eelam. The Sea Tiger wing had almost all the major components of a modern navy; dedicated units working on intelligence, Radar/communication, Underwater Demolition Teams (UDTs), boat building yards etc. are among the twelve sections which formed the Sea Tiger wing. The twelve sections include the following (Sridhar, 2007);

a. Sea battle regiments
b. UDTs
c. Marine Engineering and Boat building section
d. Radar and Telecommunications unit
e. Marine weapons armoury and dump group
f. Maritime school and academy
g. Recruiting section
Yet, the LTTE felt the need to start from scratch if significant results were to be achieved in the struggle for a separate homeland. Much attention was focused on developing the LTTE Sea Tiger wing as the LTTE leadership very rightly understood the decisiveness of having a stronger naval force in changing the Centre of Gravity of the LTTE’s destination. Without large scale shipyards, the insurgents had to build a Navy by scratch, often in jungle workshops using off the shelf components (Povlock, 2011). This was seen as a major achievement by many analysts, as this indigenous boat building by the LTTE made a significant change in the battle tempo that the Navy witnessed during the entire conflict. Deriving primarily from fibre glass material, LTTE Sea Tigers went onto achieve miracles which took the naval fleet units by amazement on many battle encounters. Gluing together a fiberglass maritime force designed by unemployed Tamil engineering graduates, the Sea Tiger fleet mainly comprised of the following indigenously built vessel types (Povlock, 2011, 19):

a. The four man *Thrikka* class, armed with a single machine gun and used to deploy combat divers. This craft could reach speeds of approximately 45 knots.

b. The six man *Suddai* class, armed with a single machine gun and used to attack naval vessels. This vessel had a top speed of approximately 10 knots.

c. The *Muraj* class, usually armed with three machine guns and used for attacks on naval vessels, logistic runs and amphibious assaults. This craft had a crew of ten to fourteen sailors and had a top speed of approximately 45 knots.
d. The two man *Idayan* class armed with explosives and used for suicide attacks on maritime targets.

### 2.1.4.4 The Sea Tiger Maritime Tactics

SLN fleet continued to respond with available platforms, technology and tactics to the growing Sea Tiger activities with a mind-set of a conventional navy. However the LTTE was fully focused on developing their sea going capabilities and continued to progress slowly but surely. SLN began to realize that the tide was not going to change in favour of them, having suffered many losses and casualties at the hand of Sea Tigers at sea and in harbour. When one tactic of Sea Tigers was analysed and responded to, SLN witnessed the emergence of a series of new Sea Tiger tactics.

With the establishment of the suicide fleet wing known as Black Sea Tigers in 1990, the asymmetric nature of the whole maritime conflict scenario changed to a greater extent. Even with lesser speeds at the initial stages, suicide boats could do more damage than any of its combat units. The LTTE leadership rightly understood the impact of the suicide craft against the SLN FACs. The suicide attacks by the Black Sea Tigers soon became a critical factor in countering the Sea Tiger threat. With essential and vital tasks being vested upon the SLN, such as the logistics supply to the northern peninsula and troop transportation, the suicide threat factor presented a great encumbrance to the naval strategic planners. Even with the latest detection equipment on board SLN platforms, the Sea Tiger suicide threat could not be countered to the effect the free use of the Sea Line of Communication (SLOCs) by the SLN as and when required. Sea Tigers sensing the advantage in their most proven weapon i.e. the suicide boat, continued to keep the SLN fleet commanders on pins on each and every occasion that they escorted a naval convoy or were deployed for routine patrols.

Adding another dimension to the warfare, the LTTE introduced a sub-surface threat by using divers with explosives to carry out a task similar to the one done by the Black Sea Tigers with suicide craft. These divers used
improvised explosive devices (IEDs) for the purposes of placing underwater explosive devices in tactically important locations and utilized semi-submersible or low profile craft to deliver the suicide diver. These attacks had a detrimental impact on the Navy’s craft, harbours and even coastal installations.

The first underwater sabotage act of Sea Tigers was reported in the year 1986 with a failed attempt of a suicide diver to blow the Karainagar base. The first successful underwater diver attack was launched on 19th September 1994 on an auxiliary vessel: A 516, anchored inside the Kankasanthurai harbour. (Focus group NWNC) Since then the LTTE deployed the suicide diver component to the fullest to inflict damages to SLN assets demanding SLN strategic planners to rethink many aspects related to underwater warfare. With ample options for the suicide divers to select the intended target, time and location, many vital installations both of naval value and national value became high priority targets which required immediate protection.

Sea Tigers enhanced their procurement capabilities from mere diving equipment to much more sophisticated Close Circuit Breathing Apparatus (CCBA). By the time of the humanitarian operation, Sea Tigers had acquired Russian IDA 71 and IDA 55, CCBAs, diver propulsion vehicles, underwater communication equipment etc. In the 1990s members received training in underwater sabotage, allegedly by Norwegian naval instructors (Murphy 2009). Re-breather equipment for clandestine diver attacks was purchased to allow stealthy approaches. Semisubmersible, human torpedoes were constructed and jet skis that could be packed with explosives were purchased for use by the Black Sea Tigers, the maritime component of the LTTE’s crack suicide department (Murphy, 2009).

Sea Tiger activities below the sea surface level too were found to have extensive links with other countries. The interesting connections the LTTE had with Thailand are enumerated below:

There have been reports of Tiger activities in Thailand since the mid-1990s. … The row began on April 9, when marine police at Phuket's
Rassada pier stopped a truck. They suspected its driver was involved in oil smuggling linked with a tanker anchored off the resort. … When the police accompanied him to the office of Seacraft Co. Ltd., which he co-owned with a Thai partner, they found much more to interest them than oil. There and on a high-powered 17-meter boat, they discovered sophisticated sonar and global positioning system equipment, satellite phones, combat-training videos in Tamil, and LTTE calendars and uniforms. Worried by the implications of the underwater sonar, Thai navy officers searched Phuket's shipyards and found a half-built mini-sub at Koh Si-rae. Officials quickly clammed up, citing "national security" concerns (Davis, 2000, 1).

2.1.4.5 The LTTE’s International Shipping Network

As the LTTE primarily concentrated on developing their maritime strength centred on small boats with speed at the initial stage, the quest for acquiring larger vessels too surfaced within the LTTE’s maritime strategy. Reportedly, the first large vessel purchased by the LTTE in 1984 was named MV Cholan. With the purchase of this ship from a Mumbai based shipping agent, the gradual formation of the much needed international logistics shipping network of the LTTE began moving forward. They ensured that this ship and many others to join the fleet were kept away from being detected. As a very basic measure to prevent these ships being taken into custody, they were utilized for legitimized cargo transportation purposes. The LTTE also obtained permission from the Myanmar government to establish a modest shipping base in the island of Twante located off the Irrawady delta (Sakhuja, 2006).

Knowing the importance of capitalizing on the construction of this vital pillar in the sustainability of the organization, the LTTE went to the extent of placing orders for ship construction from a shipbuilding yard in Kerala coast, where the ship was later identified as Kadalpura (Bhardwaj 2002). They felt the value of increasing the merchant fleet activities partly because it was an area of income generation to the LTTE and on the other hand played a vital role in
bringing in its much wanted arms and ammunition. The fleet thus increased to five or six small freighters, which were registered under the ownership of several dummy companies having their offices in Bangladesh, Thailand, Malaysia, Singapore and Hong Kong (Peiris, 2002). These vessels were used to carry mainly goods such as timber, grain, fertilizer and cement. As it is quite difficult to hide a merchant ship in a port and for that matter to hide ships that are engaged in illegal activities, the LTTE mastered the technique to circumnavigate many officials and legitimate procedures to find safe havens for their maritime operations far away from Sri Lankan shores. By the early 1990s, Phuket in southern Thailand also emerged as a port for LTTE’s commercial maritime activity (Sakhuja, 2006). ‘The LTTE’s International Shipping routes’ is places as Annex ‘B’

While the SLN was apprehending few fishing boats across the Palk Strait in the late 80s, the LTTE was fast organizing itself in becoming a professionally competent maritime terrorist outfit. This organization gradually tended to change its activities by late 1990s and in early 2000 to prevent ships being apprehended or noticed by the intelligence community. Although LTTE procurement officers had been active in Africa and in South and Central America, there was very little intelligence of the LTTE procurement and shipping activities in these regions. With arms transport spanning across the globe, LTTE ships crossed both the Atlantic and the Pacific Ocean (Sakhuja 2006).

Looking through the historical developments of the Sea Tigers, the emphasis that the LTTE leadership had placed in making the unit a more comprehensive and a leading element in the survival of the LTTE could be clearly seen. The initial concept of establishing a maritime network with international connections itself proves that the LTTE stands tall when compared with any other terrorist organizations in the world. In this scenario, a profound international scholar on the subject, Peter Chalk goes onto describe the Sea Tigers, especially their international maritime fleet as follows:
Except for the Provisional Irish Republican Army and the Palestine Liberation Organization, the LTTE is the only insurgent organization that is known to have at its own disposal a fleet of deep sea going vessels. The LTTE started building its maritime network with the help of a Bombay shipping magnate in the mid-1980s. Today the fleet numbers at least eleven freighters, all of which are equipped with sophisticated radar and Inmarsat communications technology. The vessels mostly travel under Panamanian, Honduran or Liberian flags, and are typically owned by various front companies located in Asia…ninety five per cent of the time the vessels transport legitimate commercial goods…for the remaining five per cent they play a vital role in supplying explosives, arms, ammunition and other war-related materiel to the LTTE theatre of war (Chalk, 1999).

The above statement itself shows the international connections that the LTTE had in running the much wanted maritime logistic network. This was in addition to the parallel work that was taking place in the Sri Lankan shores in building the Sea Tiger wing to challenge the SLN. The operational command of the Sea Tiger merchant fleet was kept separated from that of the Sea Tigers or their activities. Apart from seeking assistance from the Sea Tigers in transferring the cargo from merchant ships to small boats, the Sea Tigers provided the much wanted protection till the consignment reached shores off Mullaitivu. In certain occasions Sea Tiger cadres had the opportunity of serving on board their commercial fleet. At the same time, it is important to keep in mind that drug couriers with links to the LTTE have been arrested worldwide, but no LTTE ships transporting narcotics have been intercepted or searched. This could be attributed to the lack of intrusive intelligence on the LTTE shipping lines. This further describes the LTTE’s capabilities in conducting discrete operations without being detected by the international intelligence services.
This progressive development in the LTTE shipping network came with setbacks to the SLN in certain occasions and also due to various other intelligence round ups in the maritime domain. This did not in any way make the LTTE leadership disturbed but there was continued support given to the fleet knowing the value and importance the unit held in the survival of the LTTE. According to a Lloyds estimate, the LTTE fleet had 11 vessels, by March 2000, “most of which were said to be well equipped and capable of trans-oceanic long distance sailing” (Peiris, 2002).

As the LTTE merchant shipping fleet became a target of the SLN as well as our neighbouring countries, various improvisations were introduced to cancel the identity of the vessels. Even though hiding a ship is not a task that can be achieved due to its size, the LTTE in many occasions outsmarted the SLN and various other authorities by simply changing the name and certain vital physical characteristics of the ship. According to Gunaratna:

Some South-east Asian intelligence agencies believe that the LTTE has hijacked foreign vessels, but the affected governments have failed to present conclusive evidence implicating the LTTE. Since the LTTE has demonstrated quite regularly its mastery of phantom shipping - changing the ship’s name and appearance - it is likely that it is also engaged in maritime crime even outside Sri Lankan waters (Gunaratna, 2001, 3).

There are a number of incidents to prove the above fact. Out of many such incidents, the following remains as a case in point to show the capabilities of the LTTE in revolving to get through the state as well as the international intelligence network:

In yet another case, a ship with a cargo of 32,000 mortar shells from Zimbabwe Defence Industries (ZDI) left the Mozambican port of Beira on May 23, 1997 supposedly en-route to Colombo, Sri Lanka. The consignment belonged to the Sri Lankan government. The ship did not reach its destination. ZDI assumed that the Sri Lankan government had
sent a ship to collect the munitions, but the company alleged that the consignment was loaded onto a ship called the Limassol, which was one of the LTTE freighters and the cargo transferred to the LTTE (Chalk 1999).

Further, the LTTE managed to store their arms and ammunition yards in the Wanni, due to incidents of the above nature. As gunrunning and drug trafficking kept the LTTE arms flow strong and continuous, unloading of these vital cargo from these merchant ships to smaller craft was altogether a new operation which had encounters with the SLN on a number of occasions. When these merchant ships reached closer to shore, they waited for the smaller vessels. Quick unloading took place with the escort of Sea Tiger craft and then they started heading towards the shores. Often encountering the SLN, the Sea Tigers ensured that the craft carrying vital cargo reached its destination while the interferences from the SLN were being looked after by the Sea Tiger fighting units.

The government’s failure to implement an appropriate and decisive strategy to combat the LTTE was only one reason for the organization’s longevity while Colombo’s inability to dismantle the Tiger’s global support network played a major role too. The International Institute for Counter Terrorism highlights that this “global network spanned across 50 nations, including countries such as Africa, Central Asia, Europe, and the Middle East. This massive financial apparatus generated over $80 million per year” (Fair, 2005, 125-156).

With only $8 million operating cost for its parallel government in Sri Lanka the Tigers were able to spend handsomely on military hardware and propaganda (Solomon, 2007). Monthly revenues from Switzerland, Canada, and the United Kingdom amounted to (US) $650,000, (C) $1,000,000, and (US) $ 385,000 respectively (Fair, 2005). These funds were seen as the major contributory factors which kept the LTTE’s international shipping network oiled and greased to sustain the military machine.
The effective use of a number of fishing trawlers by the LTTE in transferring arms and ammunition disguised as fishermen was seen at the early stages of the conflict till the final phase. The transfers both across Palk Strait and deep blue seas were heavily assisted by the trawler involvement. With the presence of thousands of Indian fishing boats in the Palk Strait, SLN found it extremely difficult to isolate the LTTE craft from a normal fishing vessel. Taking advantage of this factor, the LTTE capitalized on the weakness of the SLN to even extend the trawler operations to unload cargo from LTTE ships that were stationed in the high seas.

2.1.4.6 Naval Response

SLN gradually started to realize that they were facing an enemy who was capable of out-maneuvering tactics and rapidly adopting to the changing nature of the maritime domain. The Sea Tigers were evolving very fast and gradually they were becoming a serious threat to the SLN. When SLN first encountered a group of fishermen engaged in smuggling activities across the Palk Strait, SLN would have never imagined that the sea tigers would reach a level which could challenge SLN’s dominance over its territorial waters. Evolving largely around the Sea Tigers, the SLN started responding through a reactive strategy until the naval leadership correctly understood the importance of out maneuvering the LTTE sea tigers both strategically and tactically. The naval units had to look into the safe escorting of vital supplies and troops to the northern peninsula, carry out surveillance patrols, protect harbours and coastal installations and perform the ground role in order to ensure that navy had the total sea control and total sea denial for the Sea Tigers.

Since its inception, the SLN was in a reactive mode rather than a proactive one. This cost the SLN at crucial times of the conflict mainly due to losing the tactical and operational edge over the enemy. The evolution of the Sea Tigers not only made the navy a formidable fighting unit for the LTTE, but it changed the way the SLN reacted in the mid-1980s to deliver a lethal blow to the LTTE through a much more proactive nature. This evolution which took
place from developing through a rapid change of operational concepts of the SLN in taking over the much warranted sea control, the Navy was fast losing and was quite often challenged by the LTTE. In this context, the response to Sea Tigers by the SLN can be categorized mainly into three areas; countering the Sea Tiger attack fleet and suicide threat, response to underwater threat and destruction of the International maritime logistics network. Another vital factor in SLN’s response to Sea Tiger threat on the maritime domain was the need to maintain the vital SLOCs intact especially during the crucial period of the conflict till its end in 2009. The attempts made by the SLN in protecting the vital supply line which connects the North and East too evolved with the pressure that was built up by the Sea Tigers. The impact on the SLN was felt initially when the Sea Tigers started attacking the SCSs which changed the role of the FACs from surveillance to escorting bigger vessels. This had a greater impact on the operational mobility of the SLN as much time and effort was dedicated to providing security for convoys which took essential items and troops to the North. These convoys were targeted quite often by the Sea Tigers which in turn resulted in SLN convoys moving far away from the shore. The naval convoys necessitate more deployment of FACs for convoy escort and only a limited number of units for offensive maritime operations. This responsibility made SLN assets thin down to a great extent. The importance of providing security to these ships carrying cargo and passengers became crucial with the destruction of MV Ocean Trader off Vettalaikerni on 09th October 1994 and passenger ferry, Irish Mona off Mullaithivu on 29th August 1995. (focus group SNC)

As the Sea Tigers continued to exploit SLN’s vulnerability in the slow speed of the convoys, a number of attacks were launched by the Sea Tigers on the SLN convoys adding further pressure on the naval fleet to ensure that the vital connectivity was maintained. The major impact was felt on the much needed troop transfers to the Jaffna peninsula to keep the battle rhythm moving. Transferring less number of troops in low speed vessels made the whole operation a riskier one. The acquisition of a much faster and a bigger capacity
vessel ‘Jet Liner’ in the year 2006 made a sizable change in the troop transferring aspect. The vessel was capable of carrying 3000 personnel with a speed of 23knots. (focus group SNC) With a capacity of 3000 service personnel on board the Jet Liner, Sea Tigers found this one of the most attractive targets, where, if successful they could easily kill 3000 personnel making a sizable impact on the whole humanitarian operation. Identifying the national value of protecting this convoy, SLN deployed nearly 20 FACs each and every time the Jet Liner was deployed.

The other biggest factor in changing the tide in favour of the SLN came with the decision taken to go out hunting the International shipping network, which supplied the much required arms and ammunition for the ground cadres. Turning ‘Brown Water’ capabilities into ‘Blue Water’ capabilities with available limited platforms can be seen as one of the most risky decisions that the SLN command took at a critical moment of the conflict. The slightest miscalculation would have easily shifted the Centre of Gravity in favour of the LTTE.

Due to the urgency and the heavy demand for arms and ammunition by the LTTE ground leaders, they had to sail a couple of ships within a short time duration. With precise intelligence the SLN was able to destroy these LTTE ships though there were some critical limitations on the naval platforms. LTTE’s last seven ships were destroyed during a period of 16 months, which was a huge blow to the LTTE ground offensive. During the final phase, SLN established a naval blockade which consisted of three layers comprising different classes of ships/craft for specific tasks and roles. The prime concern was impeding any attempt by the LTTE leadership or the cadres’ attempt to flee using sea routes. These blockades were maintained round the clock until the successful completion of the humanitarian operation on 19th May 2009.

2.1.5 The Victory of the SLN

As mentioned in ‘Gota’s war; The Crushing of Tamil Tiger Terrorism in Sri Lanka’ by Chandraprema:
If the LTTE was to be destroyed completely, the whole country had to be on a war footing. The people had to support the war, the armed forces had to be properly equipped and led, and most importantly, the political will of the government to finish the war had to be maintained no matter what (Chandraprema, 2012, p.402).

From the above statement the level to which the LTTE had grown towards the end of the conflict can be clearly seen. They became a force to reckon with. They could not be dealt with just like any other organization. The LTTE through its diaspora campaigns were able to apply tremendous pressure to halt the military offensive by the government. On many occasions the government had to give in to these pressures and the LTTE went on developing their capabilities and inflicting heavy losses to the armed forces. As pointed out by Chandraprema “The LTTE tried to function as the government and a state power with police stations, courts, prisons, a system of taxation and emigration and immigration regulations” (Chandraprema, 2012, 331). The Sea Tigers became an indispensable tool for the LTTE to sustain its combat power. The Sea Tigers posed a considerable threat to the SLN. As Chandraprema points out “during the three decade long war, 28 naval vessels were destroyed by the Sea Tigers, almost all of them in head on encounters” (Chandraprema, 2012, 372). No other navy in the contemporary world has suffered this much due to the actions of a non-state actor like the LTTE. The Sea Tigers, having understood the importance of the ocean for their sustenance, was always looking for achieving a certain degree of sea control for their tasks at sea. They used their attack craft, suicide craft and other improvised weapons to keep the SLN away from the area of their interest and succeeded up to a great degree.

The theory of sea control is discussed in a later section by analysing available literature. In a much generic form, when a Navy’s control at sea is lost, the challenges a country faces is unimaginable. The situation applies equally to nations with access to sea and those who do not have access. With the Navy losing free access to its littorals, the probability of facing attacks far out at sea will be high. Since the best protection for a naval force is to be un-located in the vast ocean, the force must not only develop
measures for achieving this condition in wartime but must set things up accordingly in advance, in peacetime (Rubel, 2010).

One key component in gaining success in sea control is not only limited to having the best weaponry, other assets and tactics, but a major weight needed to be placed on the command and control component and other doctrinal aspects. The U.S. Navy allowed this discipline to erode in the Vietnam era, when it focused all its energies on power projection. Consequently, when a true sea-control challenge arose, in the form of the Soviet Fifth Eskadra during the Yom Kippur War in 1973, the U.S. Navy had neither the weapons nor the tactics to deal with the situation (Goldstein & Zhukov, 2004).

There are a number of victories by great naval fleets marked on the high seas and on the contrary those same fleets have suffered in the opponents’ coastal or literal waters. Even though a coastal navy will not succeed in the blue water warfare environment in most occasions, the handicapped nature of blue-water navies in the littorals often goes unnoticed. For example, “In 1178 B.C.E., the Egyptians defeated a large fleet of sea raiders that had dominated the Mediterranean for more than 100 years by ambushing them from shore with flaming arrows, and in 480 B.C.E. the Greeks conquered a much larger Persian fleet by luring them into the restricted waters of the Straits of Salamis, where they were outmanoeuvred and could not bring their superior numbers and firepower to bear” (Addison & Dominy, 2010, 7).

Rear Admiral Alfred Thayer Mahan and Sir Julian Stafford Corbett are seen as the fathers of the modern understanding of sea control. Mahan had his concept centralized on key elements such as decisive battles, concentration of forces and naval superiority. Corbett’s thinking was on a much broader scale where he kept his focus on achieving national objectives. According to Mahan, in blue water, sea-control challenges are likely to come from enemy fleets withal objectives focused on decisive battle, and in the littorals, sea-control challenges are often asymmetric in nature, with military objectives, such as establishing a sea base or conducting an amphibious landing, tied to the broader context of influencing events on shore (Goldstein & Zhukov, 2004).
2.1.6. Closure

The Sea Tigers effectively used the ocean around the country and operated their ships even in international waters. A broader literature review is needed to understand how the Sea Tigers grew to be a force to reckon with and challenged the supremacy of SLN. The researcher observed that not much academic research has been conducted on the rise and fall of the Sea Tigers, and, hence it was difficult to find sufficient materials to study.

SLN, like most other navies in the world was raised within a conventional framework; that is to fight against another navy, but not to fight with a non-state actor, who employed asymmetric tactics. Although the Sea Tigers were a non-state actor, they were organized in a similar line to that of a navy. The Sea Tigers had a command structure and various sections set up to perform specific tasks. The initial response of the SLN for the Sea Tiger threat was rather responsive. SLN was trying to maintain Sea Control of the whole sea area around the island by using various conventional platforms and tactics. The Sea Tigers, on the contrary, being the much smaller and weaker force, experimented with asymmetric platforms and tactics with greater success than the SLN.

Maritime security is considered as a priority task by many navies around the world. The world depends heavily on the maritime transportation system for sustenance and prosperity. Hence, maintaining the freedom of the ocean is of utmost importance. Maritime strategy is a common requirement for maintaining the sanctity of the global maritime commons. The maritime strategy of Sri Lanka had to be re-drawn, mainly focusing on maritime security, as the Sea Tigers became a considerable threat at sea.

The LTTE was considered as the ‘most ruthless terrorist organization in the world’ during its hey-day. The Sea Tigers pioneered the suicide boat, underwater suicide saboteurs, swarming tactics and improvised sea mines in the recent maritime history. The Sea Tigers were considered as a trend setter in maritime terrorism. Their activities were not limited to littorals and the EEZ of the country. They operated a fleet of ocean going merchant vessels, plying between foreign ports and international shipping lanes. The Sea Tigers used these ships to carry out their illegal activities such as gun running and human and narcotic smuggling. These ships were used to ferry large
quantities of war-fighting materials acquired by the LTTE international network, from the source of origin to the coasts of Sri Lanka. The growth and sustenance of the LTTE as a near-conventional fighting force, is mainly attributed to the supplies they received from abroad. The LTTE was able to operate from many front offices in many capitals of the world and exploited the systems and regulations in those countries to carry on with their illegal activities. The fact that the LTTE was banned in 32 countries including the USA bears testimony to this capability. The LTTE benefitted immensely from the funds raised from the Tamil diaspora to purchase arms and ammunition and other items required for the war. The LTTE was held responsible for carrying out various maritime terrorist and crime activities such as, suicide boat attacks, underwater saboteur attacks, hijacking merchant vessels, attacking ships with sea mines, attacking harbours with standoff weapons, gun running, narcotic and human smuggling.

The Sri Lankan Government was compelled to implement enhanced maritime security measures to protect the freedom of SLOCs and harbours in order to keep the economy of the country moving ahead. The growth of the Sea Tigers can be mainly attributed to organizational drawbacks of SLN as well as innovative and daredevil asymmetric tactics of the Sea Tigers. The organizational drawbacks of SLN can be considered as strategic, policy and tactical.

The Sea Tigers benefitted from their affinity to the ocean. Normally, terrorist groups do not venture into the open sea very much, as then they become vulnerable. The Sea Tigers were an exception. The LTTE leadership understood the importance of the ocean for their growth and used it effectively and challenged the supremacy of SLN at sea, successfully. The Sea Tigers graduated from a small fibre glass boat operating outfit to a maritime force with substantial capabilities.

The situation changed for the advantage of SLN only after they changed their approach; to break away from a traditional conventional mind-set to the asymmetric approach. SLN evolved through the conflict having suffered casualties in terms of crafts and human resources. With the right strategy, professionalism, equipment and innovation, SLN was able to defeat the Sea Tigers at sea comprehensively. SLN was able to destroy the entire LTTE international logistic network and the LTTE could no longer sustain their war efforts against the advancing government forces.
Sea Control played a significant role in the rise and demise of Sea Tigers. Sea control depends not only on weaponry and tactics, but on doctrinal and command and control aspects as well. From late 1980s to 2005, the SLN was losing sea control to the Sea Tigers. Only after 2006, the trend reversed and SLN was able to regain sea control and prevented the Sea Tigers from dominating the sea. This gain of sea control by SLN resulted in attacking the centre of gravity of the LTTE organization, and they could never regain their balance.
CHAPTER 3

RESEARCH METHODOLOGY

3.1 Preamble

This chapter focuses on the philosophical assumptions that support the research by defining what research is; the relationship between research and theory, research methods and methodology, epistemological and ontological approach, research strategy adopted and elaborations on key steps involved in the qualitative research.

There are a number of definitions which have described the key elements which comprise the term “research”. According to University of New South Wales, the Commonwealth Government defines research as the “creation of new knowledge and/or the use of existing knowledge in a new and creative way to generate new concepts, methodologies and understandings.” Emory and Cooper (1991) define research as an “organized inquiry to provide information for the solution to a problem.”

3.2 The Relationship between Research and Theory

As the term theory is used in a number of ways, a common understanding one can reach is the “explanation of observed regularities” (Bryman, 2008, 6). In this context, it is important to differentiate between the common notion of theory and a formal definition of theory (Wacker, 1998). Academics highlight four integral parts when defining theory: definitions of terms or variables, a domain where the theory applies, a set of relationships of variables and specific predictions (Hunt, 1991; Bunge, 1967; Reynolds, 1971). Theories provide a precise and a specific definition and help understanding relationships in a logical sequence and assist in providing specific predictions.

This study has analysed the relationship in terms of both theory and research in the field of asymmetric warfare in the maritime domain. The existing theories pertinent to sea control and operational art were analysed in order to formulate a unique exploratory research. This specific model focuses on the LTTE Sea Tigers through prevailing theories and also by closely observing the Sea Tiger activities for a near three decade period.
3.2.1 Deductive and Inductive Approaches

The deductive theory represents the commonest view of the nature of the relationship between theory and social research (Bryman, 2008, 9). Deductive reasoning works from the more general to the specific and is generally referred to as the top-down approach. Conclusions follow logically from premises. On the other hand, inductive reasoning approaches move from more specific observations to broader generalizations and theories; this is informally known as the bottom-up approach and the conclusion is likely based on premises.

Bryman explains the relationship between the theoretical consideration and domain as, “The researcher on the basis of what is known about in a particular domain and of theoretical considerations in relation to that domain, deduces a hypothesis that must then be subjected to empirical scrutiny” (Bryman, 2008, 9).

The hypothesis is then seen to be transformed into entities which are researchable. The operationalization of terms according to the hypothesis should be enabled through data gathering. Bryman (2008) in figure 1 depicts the flow of the research work which falls into the category of empirical inquiry which consists of the process of deduction.

**Figure 1: The Deductive and Inductive approaches to the relationship between theory and research**

**Deductive approach**

```
Theory

Observations/Findings
```

**Inductive approach**

```
Observations/Findings

Theory
```

**Source:** (Bryman, 2008, 11)

The deductive approach is usually associated with quantitative research and it often does not follow the above flow (Bryman, 2008). The process in most occasions
is found to be following the steps in a logical and a systematic order. It is commonly known as the theory guided research when the above approach is adhered to largely in the qualitative research field.

The inductive approach is largely the opposite of the deductive approach, where through observations and findings, theories are formed. The inductive stance in a research, theory is found to be the end result. Marshall (1997) illustrates the theoretical use of both terms (inductive and deductive) as follows:

When researchers first begin to open up any new line of enquiry there will be no useful theories available from which to deduce propositions for testing. Knowledge has to begin with collecting facts and then trying to find some order in them. This is known as induction. Deduction is the technique by which knowledge develops in more mature fields of enquiry. It involves a sort of logical leap. Going a stage further than the theory, data is then collected to test it (Marshall, 1997, 17).

Easterby-Smith et al. (2002) and Gray (2004) indicate that qualitative research is often associated with inductive research designs in which a range of methods are used to collect the data and explore the problem from different perspectives. Saunders et al (2003) notes that the inductive approach opens up space for more explanations of what is going on.

This research is shaped with using the inductive research design. Some key theories mentioned in the study have been used to better comprehend key factors of the exploratory model in countering asymmetric warfare in the maritime domain.

### 3.3 Methods and Methodology

Henning (2004) describes methodology as a coherent group of methods that complement one another, that has the ability to deliver data and findings that will reflect the research question and suit the researchers’ purpose. It is equally important to note the distinction between ‘method’ and ‘methodology’ as these two constitute the major portion of the methodological discussion that this chapter has undertaken. The distinction between the two components is explained by Barnett as follows:
Method refers to the range of techniques that are available to us to collect about the social world. Methodology, however, concerns the research strategy as a whole, including, as Seale notes, the political, theoretical and philosophical implications making choices of method when doing research’ (Barnett, 2003, 3, 10).

There are different styles of research [which are linked to different philosophical or world views that we hold] as well as different actual methods and techniques for collecting information (or data). For some of us, the methods and techniques we choose will largely be determined by our understanding of what constitutes acceptable or what is termed our epistemological position (Barnett, 2006).

Bryman describes the study of society as follows:

A research exhibits contrasting paradigms about the nature of social reality and about what is acceptable knowledge concerning that reality. In this way, the distinction between quantitative and qualitative research is not simply a matter of different approaches to the research process, each with its own cluster of research methods…but it concerns antagonistic views about more fundamental issues to do with the nature of one’s subject matter (Bryman, 1989, 248).

3.4 The Epistemological Approach

If research is essentially an exercise in the production of knowledge, the selection of a method is a decision that can be explained or justified in terms of the theory of knowledge; that is to say, in epistemological terms (Uyangoda, 2010). The mission of epistemology, the theory of knowledge, is to clarify what the conception of knowledge involves, how it is applied, and to explain why it has the features it does (Rescher, 2003). Epistemology therefore focuses on questioning on what the acceptable knowledge is in a particular discipline. A particularly central issue in this context is the question of whether the social world can and should be studied according to the same principles, procedures, and ethos as the natural sciences (Bryman, 2008). Barnett (2006), defines epistemology as:

a crucial philosophical concept for social scientists, which considers questions to do with the theory of knowledge. Essentially, the two positions of positivism and interpretivism hold contrasting epistemologies. They differ in terms of their views
about the status of different claims to knowledge and about how to judge knowledge claims’ (Barnett, 2006, 12).

As the meaning of the word epistemology is directly linked with the theory of knowledge, the epistemological approach used in this research looks at finding answers to some of the key questions such as; what are the ways available to obtain knowledge on the research area? What are the ways and means through which the validity of the produced knowledge can be guaranteed? What are the available criteria for validating the knowledge? Does the knowledge gained through the research encompass objectivity or certainty?

There are primarily two main opposing views on the nature of knowledge or competing paradigms. Bryman defines paradigm as:

a cluster of beliefs and dictates which for scientists in a particular discipline influences what should be studies, how research should be done, how results should be interpreted, and so on. Essentially, then, a paradigm is a set of assumptions about how the issue of concern to the researcher should be studied (Bryman, 1988, 4).

Positivism and interpretivism remain as one of the two contrasting epistemologies in the study of knowledge. These two paradigms contain two different views pertaining to research strategies. In general concoction, the positivist paradigm is most commonly associated with quantitative research strategies and the interpretive paradigm is usually associated with qualitative research strategies. Bryman further defines this contrasting nature of the two paradigms as follows:

Exhibits contrasting paradigms about the nature of social reality and about what is acceptable knowledge concerning the reality. In this way, the distinction between quantitative and qualitative research is not simply a matter of different approaches to the research process, each with its own cluster of research methods but it concerns antagonistic views about more fundamental issues to do with the nature of one’s subject matter (Bryman, 1989, 248).
3.4.1 Positivism

Out of the many views that focus on conducting research, one particular view highlights that research in the social sciences should be similar to the methods adopted in the natural sciences, which is commonly known as the positivist or scientific approach. With the shifting of the relative idea between the natural world and human beings which took place as a result of industrialization, challenged the previously established beliefs which saw the world through the divine concept by replacing that with science. As a result of this, understanding of the natural world was based on facts which could be observed.

The idea, as applied to the social world can be traced back to the work of the nineteenth-century philosopher August Comte (1798-1857), in his work The Positive Philosophy (Barnett, 2006). As the application of positivism is not an easy task which enables one to be concentrated within a specific outline due to the various ways and means many scholars have used the term, it is quite often found that for some writers, it is a descriptive category and for others it is a pejorative term (Bryman, 2008).

The early stages of the twentieth century witnessed science taking over the divine or abstract explanations. Comte was one of the leading philosophers who paid a great deal of attention on finding the “truth” about the social world. These ideas were further developed by a group of philosopher’s work popularly known as the Vienna Circle, where the birth of logical positivism took place. This approach was criticized by Karl Popper:

the inductive, verification list approach of logical positivism was fundamentally flawed, since in keeping to continually verifying established theories, he felt that knowledge would not progress. He also saw the possibility that there would always be another situation, yet to be witnessed, that does not work according to the corresponding law, and so laws based on induction are based on assumptions (Barnett, 2006, 13).

Positivists believe that reality is stable and can be observed and described from an objective viewpoint (Levin 1988). The ability to isolate the phenomenon and repeat the observations is quite often contended by positivists. Positivism is so embedded in our society that knowledge claims that are not grounded in positivist thought is simply
dismissed as a scientific and therefore invalid” (Hirschheim, 1985). Bryman (2008) defines positivism as an epistemological position that advocates the application of the methods of the natural sciences to the study of social reality and beyond. He highlights the following key principles that are entailed to positivism:

a. Only phenomena and hence knowledge confirmed by the senses can genuinely be warranted as knowledge (the principle of phenomenalism).
b. The purpose of the theory is to generate hypotheses that can be tested and that will thereby allow explanations of laws to be assessed (the principle of didacticism).
c. Knowledge is arrived at through the gathering of facts that provide the basis for laws (the principle of intuitivism).
d. Science must (and presumably can) be conducted in a way that is value free (that is, objective).
f. There is a clear distinction between scientific statements and normative statements and a brief that the former is the true domain of the scientist (Bryman, 2008, 14).

One of the important characteristics of positivism is the idea that a social phenomenon can be explained through cause and effect. The approach is ‘theory’ to ‘research’ based, which means components such as research question and strategy are primarily guided by a priori theoretical proposition. This approach focuses on collecting data which assist testing the initial theory. This approach pays attention to and focuses on the main quantitative measuring tools such as experiments, questionnaire surveys, content analysis and statistics. Barnett (2006) indicate the following components as the logic based on the positivist research design:

a. Identify process of cause and effect to explain phenomena and to test theory.
b. Knowledge is based on what can be tested by observation of tangible evidence.
c. Researches should use the scientific method.
3.4.2 Interpretivism

Bryman defines interpretivism as:

a term that usually denotes an alternative to the positivist orthodoxy that has held sway for decades. It is predicated upon the view that a strategy is required that respects the differences between people and objects of the natural sciences and therefore requires the social scientist to grasp the subjective meaning of social action (Bryman, 2008, 16).

As positivism has offered many a useful approach to the pursuit of knowledge in order for it to become scientific, rigour, precision and reliability are seen as important characteristics. While others in the field of social research tend to use a different approach with certain qualities that are not normal to human consciousness, Jones (1993) highlights this difference as: “because sociologists are human too, we can put ourselves in the place of others, appreciate the structural circumstances in which they find themselves, take account of their goals, and thereby understand their actions. This is what distinguishes a social science from a natural science” (Bryman, 2008, 67-68).

The term ‘Verstehen’ is known as understanding. Max Weber (1864-1930), who was instrumental in making this notion of significance through his writings is cited by Barnett as “Max Weber who argued that in order to increase our knowledge of the social world, we must seek to understand it from the points of view of the people we are studying, rather than explaining human actions by means of cause and effect” (Barnett, 2006, 15).

In this context, interpretivist researches pay attention to identifying the key differences between natural and social sciences. Rather than reacting to a series of actions, humans have the capacity to analytically evaluate them through various avenues. In this context, human actions can be understood by linking with aspects such as conscious intentions, motives and purposes, and ultimately the values of the agent who performs it (Barnett, 2006).

Unstructured qualitative methods such as participant observation and in-depth interviews are found to be key components of the interpretive approach. The understanding of the world possessed by humans is seen as a major component in this
approach, as human behaviour is not shaped by external factors. This approach is focused on exploring and building up understanding on a certain subject matter we had less or no understanding of, in contrast to explaining why a certain thing has happened (Barnett, 2006).

According to the aligned objectives of the research, the philosophical paradigm for the current research is based on interpretivism in the epistemological field. This requires the research to understand the nature of reality and social behaviour. With reference to this study and the analysis related to the above mentioned characteristics of Positivism, the current research has also looked into the cause and effects’ in explaining the key theories discussed, along with a careful analysis of tangible evidence pertaining to the activities of the LTTE Sea Tigers. As the study also focuses on generating a working hypotheses, a proposition which can be tested, knowledge is primarily arrived through gathering of facts pertaining to Sea Tigers and their use of asymmetric warfare tactics. This necessarily combines both elements of ‘didacticism’ and ‘intuitivism’ making the study embed itself with characteristics of Positivism.

In looking at the Sea Tiger evolution, which is yet another set of actions that were performed by humans, their actions are analysed and linked by taking into consideration aspects such as Sea Tiger intentions, motives and purposes. Unstructured qualitative in-depth interviews were used as a key factor in the research. As the study has focused on an area where many had no in-depth analysis, an attempt has been made in understanding and explaining why things have taken place. These factors are essential components of interpretivism.

3.5 Research Strategy

Quantitative, qualitative and mixed research strategies are the basic strategies which are available for conducting research. Attention is focused on the first two strategies; their characteristics and strategy application in the current research are discussed in the following section.
3.5.1 Qualitative and Quantitative Research

Many academics attempt to distinguish between quantitative and qualitative research. The status of the distinction is ambiguous, because it is almost simultaneously regarded by some writers as a fundamental contrast and by others as no longer useful or even simply as false (Layder, 1993). Layder defines the distinction between the two as: “there would seem to be little to the quantitative/qualitative distinction other than the fact that quantitative researchers employ measurement and qualitative researchers do not” (Layder, 1993, 21).

Qualitative research methods focus on discovering and understanding the experiences, perspectives, and thoughts of participants—that is, qualitative research explores meaning, purpose, or reality (Hiatt, 1986). Denzin and Lincoln explain qualitative research as:

a situated activity that locates the observer in the world. It consists of a set of interpretive, material practices that make the world visible. These practices transform the world. They turn the world into a series of representations, including field notes, interviews, conversations, photographs, recordings, and memos to the self. At this level, qualitative research involves an interpretive, naturalistic approach to the world. This means that qualitative researchers study things in their natural settings, attempting to make sense of, or interpret, phenomena in terms of the meanings people bring to them (Denzin and Lincoln, 2005, 3).

Qualitative research is generally described as conducting a detailed exploration of a subject area where information is collected through case studies, interviews, ethnographic work etc. Using the qualitative methods, a researcher will be able to derive theories, hypotheses or even explanations.

Some of the key characteristics of the quantitative approach are the use of tools such as surveys and tests to collect data and then analyse the relationship with the hypotheses by answering through the formulated research questions. Frequently, the quantitative approach is described as deductive in nature. Quantitative methods are also frequently characterized as assuming that there is a single ‘truth’ that exists,
independent of human perception (Lincoln & Guba, 1985). The current research is enriched by the use of the qualitative approach. Prime attention has been focused on a number of in-depth interviews and focus group discussions.

3.5.2 Qualitative Interviews

Nearly five years have gone after defeating LTTE terrorism on the soil of Sri Lanka and remembering all the facts, events and concepts by the population sample is not possible. The researcher did all the interviews personally and was able to talk with some senior key personnel who commanded the armed forces during the time of conflict, who were involved in gathering Intelligence, International law experts, directing the mass media campaign, and the master mind of LTTE overseas operations, ex-sea tiger combatants and senior naval officers who played important and crucial roles during the war. Initially a request letter was sent to ask for consent for the interview, together with a sample questionnaire so as to allow them to refresh their memories and to collect relevant data and prepare for the interview. A background brief on the importance and intention of the discussion was provided to all those who were interviewed and their consent to record and quote the discussions, purely for the purpose of this research, was obtained from them. ‘Sample letter and questionnaire for interviews’ are placed as Annex ‘C’.

3.5.3 Focus Group Discussions

Focus groups can reveal a wealth of detailed information and deep insights. When well executed, a focus group creates an accepting environment that puts participants at ease allowing them to thoughtfully answer questions in their own words and add meaning to their answers. A focus group could be defined as “a group of interacting individuals having some common interest or characteristics, brought together by a moderator, who uses the group and its interaction as a way to gain information about a specific or focused issue” (Masadeh, 2012, 63).
Guidelines for Conducting a Focus Group provided by Eliot & Associates indicate that
a) A focus group is a small group of six to ten people led through an open discussion by a skilled moderator. The group needs to be large enough to generate rich discussion but not so large that some participants are left out
b) The focus group moderator nurtures disclosure in an open and spontaneous format. The moderator’s goal is to generate a maximum number of different ideas and opinions from as many different people in the time allotted
c) The ideal amount of time to set aside for a focus group is anywhere from 45 to 90 minutes. Beyond that most groups are not productive and it becomes an imposition on participant’s time
d) Focus groups are structured around a set of carefully pre-determined questions, usually no more than 10 – but the discussion is free-flowing. Ideally, participant comments will stimulate and influence the thinking and sharing of others. Some people even find themselves changing their thoughts and opinions during the group (Eliot & Associates, 2005, 1-2).

Eight in number Focus Groups were created in six naval areas, Naval and Maritime Academy in Trincomalee and Defence Services Command and Staff Collage in Batalanda, in order to obtain perceptions, beliefs of segments of naval officers based on the following propositions;

a. The gradual exercise of sea control by the LTTE at the “Early Stages of War” for transporting illegal arms and ammunition, cadres for training and combat operations across Palk Strait and at sea helped the organisation to grow into a substantive conventional military level which threatened the territorial integrity and sovereignty of Sri Lanka for nearly three decades.

b. The gradual loss of sea control by the LTTE as a result of Sri Lanka naval operations especially after 2006 at the latter (final) stage of the war resulted in weakening the LTTE’s ability to continue to wage war and resulted in their demise, at the hand of government forces.

Naval officers of varying backgrounds, branches, seniority and diverse experience were selected from the respective areas and institutions and they were
briefed and given ample time to do research on the assigned sub topic. Later on, focus group discussions were conducted under the supervision and moderation of the senior officers and the proceedings were recorded and obtained by the researcher. ‘Sample letter for focus group discussion’ is placed as Annex ‘D’.

3.5.4 Qualitative Data Analysis

This research was carried out as a qualitative research. The interviews conducted by the researcher on the research participants and focus groups have generated a large database. As the interviews were conducted with open ended and unstructured questions, and some of the answers were very long and elaborative, the length of interview transcripts are very long. Miles (1979) describe qualitative data as an ‘attractive nuisance’. Although the richness of interview transcripts and focus group proceedings is very high, it was difficult to find analytic paths through this data mass. In other words, “it is critical to guard against failing to carry out a true analysis” (Bryman, 2008. 538). The method used in this research to analyse ‘this rich data’ was carried out by using an interpretive paradigm. This was done in order to have an in depth subjective understanding of the case study: ‘Asymmetric Warfare at Sea: The case of Sri Lanka’. The researcher wanted to understand the inside, deeper view from the experience and expertise of the research participants and the focus groups. The researcher aimed to explore a broad research area. An established analytical tool was deliberately not used as it would not have given a deeper understanding about the case and as the researcher did not want to be restricted and confined to parameters of a research tool.

Grounded Theory has been defined as “theory that was derived from data, systematically gathered and analysed through research process. In this method, data, collection, analysis and eventual theory stand in close relationship to one another” (Strauss and Corbin, 1998.12). Bryman says that “grounded theory is not a theory-it is an approach to the generation of theory out of data” (Bryman, 2008. 541). The researcher did not study the theories of naval warfare first in this research. The data collection and analysis were done at the same time, progressively. Once the analysis of
gathered data was completed, the theoretical aspects and the application of theory to the outcome of data analysis was looked into establish the relations.

Coding is considered as “one of the most central process in the grounded theory” (Bryman, 2008. 541). The coding was done on all interview and focus group transcripts, and labels were given to component parts that appear to be of some significant value to theories of naval warfare and to the possible lessons to be derived from the research. These labels of coded data were used in compiling the answers to the research questions.

Strauss and Corbin describe selective coding as a procedure of selecting the core category, systematically relating it to other categories, validating those relationships, and filling in categories that need further refinement and development (Strauss and Corbin, 1988. 116). In this data analysis, asymmetric warfare was selected as the core category and labels were given mainly to identify concepts of asymmetric warfare. Based on this, other labels were systematically related to sea control and operation art. In order to validate these relationships, development of the Sea Tigers and determinants of success in the SLN’s gaining of sea control were considered and coding was done accordingly. The labels thus coded were then refined and developed to ascertain the lessons learnt from this case study.

### 3.6 Use of the Explorative Research

The on-line *business dictionary* defines exploratory research as “Investigation into a problem or situation which provides insights to the researcher. The research is meant to provide details where a small amount of information exists. It may use a variety of methods such as trial studies, interviews, group discussions, experiments, or other tactics for the purpose of gaining information”. It was observed that at the beginning of this research, only a small amount of information was available in academic literature as no other researcher had undertaken a comprehensive study on the naval aspects of winning the war in Sri Lanka. The researcher used in-depth, open ended, semi structured qualitative interviews of selected samples of key personnel who were involved in the war at crucial stages and focus group discussions, in order to obtain insightful information for the reasons behind the victory against the Sea Tigers at sea by the SLN.
The researcher had an idea of how the war against the Sea Tigers was won. He has also observed many aspects of the victory. However he endeavoured to understand various reasons for the victory and explore those reasons with existing theories of asymmetric warfare, sea control and operational art. These theories have been in existence for a long time and various naval commanders and scholars have examined them against different scenarios. This research embarked upon to find the applicability of various concepts of these theories to the war against the Sea Tigers by SLN. It is an established fact that the Sea Tigers grew to be a force to reckon with, with various innovative asymmetric tactics, and challenged the traditional role of SLN; sea control. However, finally the SLN was able to take the initiative back to their side and dealt a severe blow to the Sea Tiger operations, which contributed effectively to the defeat of the LTTE.

3.7 Main Qualitative Research Steps Adopted

The current study utilizes the six key steps introduced by Bryman (2008, 370) in conducting a qualitative research. This sequence of steps utilized in the process provides a better visualization of the process. The following steps are adopted in this study:

a. **Step 1. General Research Question (s)**

The formulated research questions in the current study attempt to solve a major research problem which evolved with the LTTE Sea Tigers for near three decades. The changing dynamics of the maritime environment and the indigenous use of tactics and counter tactics in the asymmetric warfare environment are unique in a number of ways. As the research focuses on analysing the critical naval factors which contributed to the grand victory, this research in essence has critically analysed four thematic research questions. These four research questions are; how did the LTTE Sea Tigers evolve on capitalizing on the SLN’s drawbacks? How did the Sea Tigers sustain a three decade battle? What are the contributory factors which led the SLN to transform from a conventional mind-set to an asymmetric fighting force? And how did some key theoretical concepts contribute the SLN to emerge victorious?
b. **Step 2. Selection of Relevant Subject(s)**

The current study focuses on the Sri Lankan conflict in which the LTTE Sea Tiger activities were analysed along with SLN reactions and responses. LTTE Sea Tigers were taken as the prime research subject. Their activities in the local as well as international level were considered.

c. **Step 3. Collection of Relevant Data and the Population Sample**

The researcher had the unique opportunity of observing the complete spectrum of the Sri Lankan conflict as a naval officer. The rise and fall of the LTTE Sea Tigers is an area which the researcher had great opportunity in both observing and analysing. With over 30 years of experience in the SLN and the long-time duration the researcher had spent in studying this unique LTTE Sea Tiger culture, the research can be easily categorized as ‘ethnographic’. Qualitative interviews were used extensively to collect data pertaining to various aspects of the LTTE Sea Tigers. Eighteen professionals who have an in-depth knowledge of the LTTE activities including those who were directly involved in the final phase of the conflict were interviewed. These professionals include academics, military professionals, subject matter experts and government officials who held key positions. Also selected for the interviews were former members of the LTTE. In addition, seven focus group discussions were also held with the participation of senior naval officers in respective naval area commands.

d. **Step 4. Interpretation of Data**

Interpretation of data reveals an important aspect (among many others) pertaining to the emergence of the LTTE Sea Tigers. The main contributory factor for the rise of Sea Tigers can be considered as lack of application of naval capabilities.

e. **Step 5. Conceptual and Theoretical Work**

Even though no new theory evolves as a result of this study, a new exploratory model that can be effectively utilized by naval forces in maritime asymmetric warfare has been introduced. This model mainly focuses on achieving sea power and sea control by a conventional Navy which confronted a maritime terrorist wing which used unconventional tactics. The exploratory
model introduced can be effectively utilized by the other navies in countering similar unconventional maritime threats.

f. **Step 6. Findings/Conclusions**

The analysing of data obtained from qualitative interviews and focus group discussions will be done towards the latter part of the thesis. Data analysis will be carried out based on research questions and research objectives. The main areas of focus will be as follows:

I. Organizational drawbacks of SLN

II. Development of LTTE Sea Tigers

III. Determinants of success behind SLN’s gaining of sea control

Findings on the above three areas will then be analysed against the theories of naval warfare to ascertain the applicability and relevance of those concepts with the findings. The conclusion will be made bringing back theoretical implications and research findings. The aim is to come out with an ‘Exploratory Model’ to combat maritime terrorism in the future and to indicate prospects for future research on this subject taking Sri Lanka as a case study. Then the focus will be made on finding recommendations deriving out of research findings.

### 3.8 Ethical Concerns of the Research

Since the research was of an exploratory nature, data collection was primarily based on a qualitative research approach. The researcher relied heavily on un-structured, open ended, in-depth interviews and focus group discussions to collect the required data. The sample group of persons interviewed were mostly retired senior military officers and civilians, who were mostly senior to the researcher in rank and position. The sample group was selected based on their role during the war in various positions and civilian subject matter experts. In order to obtain a balanced view and an insight into the Sea Tigers, three former LTTE members were also interviewed. All the research participants were informed well in advance by a letter, indicating the purpose, objectives, propositions and scope of the research and a convenient date, time and a location to conduct the interview were requested. A sample questionnaire was also provided together with the request letter indicating the broad areas that the researcher was interested in finding answers to. Once the consent for the interview was obtained, on most
occasions the researcher visited the place indicated by the participant to conduct the interview. Once again the purpose of the interview was explained and permission was requested to record the interview and to use it for this research purpose, and the informed consent was obtained. The research participants were always given the opportunity to make their observations heard and recorded by the researcher. At the end of each interview, the participants were given an opportunity to indicate any other matter that they wished to make. Once the interview was completed the transcripts of the recording were sent to the participant and an opportunity was again given to provide new information or to withdraw any comment already made.

In the case of the former LTTE members, they were free people living as ordinary civilians in the society. They were not under any duress to provide the interviews and they were neither in custody nor going through a rehabilitation program. The informed consent was obtained from them too prior to recording the interview and a similar procedure was adopted to maintain the neutrality of the participant and also to protect his identity. They were also informed and assured that the interview was purely for the mentioned academic purpose only.

With reference to the focus group discussions conducted for this research, the naval area commanders and commandants were requested to conduct a focus group discussion on the propositions used for this research. The senior officers had selected the members for the group on voluntary basis, and they were given sufficient time and allocated a subject area to focus on. The members were permitted to express their opinions freely on various aspects of the propositions, under a moderator also appointed from the same area. The deliberations were summed up and recorded and forwarded to the researcher. The researcher did not play any direct role in this process. There were no civilian or former LTTE members in these focus group discussions and only naval officers of various levels of seniority and professional expertise had been selected.

No research participant, either in the interviews or the focus groups belong to any vulnerable community. They were all experienced people in the given field. There was no compulsion to provide an interview or to join a focus group but they were all volunteers. No inducements were given to any of the participants. The recorded interviews and deliberations of the focus groups were kept with the researcher in safe custody and not provided access for anyone else. The names of the participants were not divulged in the thesis in order to protect...
their identity. Although most of the sample groups were retired at the time of the interviews, they were in sound mental and physical condition.

Most of the research participants expressed satisfaction for being part of this research and they felt that it was a good idea to record and analyse the proceedings of the conflict, and to derive lessons learnt, so that it would be very useful, should there be another similar conflict break out. They also expressed their happiness for being able to express their thoughts, views and opinions and contribute to the knowledge.
CHAPTER 4

CONCEPTS AND THEORIES OF NAVAL WARFARE

“When conventional tactics are altered unexpectedly according to the situation, they take on the element of surprise and increase in strategic value.”

-Sun Bin, The Lost Art of War-

“Greater powers and resources do not guarantee tactical superiority.”

-Sun Bin, The Lost Art of War-

4.1 Theories of Naval Warfare

Theories of naval warfare have evolved mainly due to past experience in battles at sea. The lessons learnt and experience gained from these battles are documented, evaluated and analysed by naval officers, historians, and scholars. Some theories such as asymmetric warfare is mainly derived from land battles. Although some of these theories are very old, their relevance can be seen even today. Warfare has changed today greatly. Modern technology is being applied to present day warfare. However, fundamentals of warfighting have not changed much and therefore the relevance of even old theories. Various academics have added value to the existing theories by trying to interpret them into modern warfare and case studies. One of the key objectives of this research is to study three theories of naval warfare, namely, the theory of asymmetric warfare, sea control and operational art, and to explore the relevance to the conflict which lasted a long time and was finally won by the SLN. As the thesis mainly focuses on the ‘Asymmetric Warfare at Sea’, under the theoretical foundation, other key theories and concepts such as ‘Sea Control’, and ‘Operational Art’ are discussed along with the theory of ‘Asymmetric Warfare’. The three main theoretical concepts that are considered here are those crucial in identifying how the Sea Tigers evolved from a mere fishing background into one of the most advanced terrorist outfits in the world, with a lethal maritime wing in its disposal to launch attacks at the SLN at will. The Sea Tigers during its near three decade odd confrontation with the SLN have been able to disturb and disrupt the effective use of the sea by the SLN. As this had a significant impact on the conflict since its inception until its termination, it is
important to lay emphasis and consideration on the above theories in order to understand the Sri Lankan case through a well-established theoretical foundation.

4.2 The Theory of Asymmetric Warfare

The theory of Asymmetric Warfare (AW) has been in existence since the dawn of time. Through many writings of various scholars and military strategists, the concept has evolved over the years in becoming one of the most discussed theories in recent history. The AW theory and concepts need to be analysed by taking into account historical as well as recent theoretical developments that have taken place. This assisted in having a broader look at the theory in order to apply it to the Sri Lankan context in identifying the significance of this theory to the current study. Strategists define AW as:

conflict deviating from the norm, or an indirect approach to affect a counter-balancing of force. Such warfare is not new. Combatants throughout the ages have continually sought to negate or avoid the strength of the other, while applying one’s own strength against another’s weakness. Asymmetric warfare is best understood as a strategy, a tactic, or a method of warfare and conflict (Grange, 2000, 1).

According to Manwaring (2011) writing to the Kandratieft waves, warfare and world security describes asymmetry in warfare as “acting, organizing, and thinking differently than opponents in order to maximize one’s own advantages, exploit an opponent’s weaknesses, attain the initiative, or gain greater freedom of action” (Manwaring, 2006, 237).

The online dictionary.com Unabridged describes Unconventional warfare as “Warfare that is conducted within enemy lines through guerrilla tactics or subversion, usually supported at least in part by external forces”. The same dictionary describes AW as “warfare in which opposing groups or nations have unequal military resources, and the weaker opponent uses unconventional weapons and tactics, as terrorism, to exploit the vulnerabilities of the enemy”. Another definition in the Dictionary of Military and Associated Terms of United States Department of Defence explains AW as “warfare between a powerful military force and a weak guerrilla force”. Quite often, both these terms are used to describe the conflict in Sri Lanka. For the purposes of this research, the term asymmetric warfare will be used to describe the war
in Sri Lanka as it involved unequal military resources and the use of guerrilla tactics by the LTTE.

Carl von Clausewitz in his famous book, *On War* describes the very notion of the theory as “Every age has its own kind of war, its own limiting conditions, and its own peculiar preconceptions” (Howard and Paret, 1976, 346). In addition to Clausewitz, *The Art of War* written by Sun Tzu over 1500 years ago describes the same aspect as “All warfare is based on deception. When confronted with an enemy one should offer the enemy a bait to lure him; feign disorder and strike him. When he concentrates, prepare against him; where he is strong, avoid him” (Griffith, 1971, 66-77).

When this statement is analysed, it suggests that military strategists require this theory to be applied in all forms of warfare without concentrating only on traditional or conventional forms of warfare. Sun Tzu further goes onto say “what is of supreme importance in war is to attack the enemy’s strategy” (Griffith, 1971, 77). The thinking of Sun Tzu defines that his prime intention is not to defeat an army, but to focus on attacking the enemy’s strategy. “To be certain to take what you attack a place the enemy does not protect. To be certain to hold what you defend is to defend a place the enemy does not attack” (Griffith, 1963, 96). This explains Sun Tzu’s thoughts on having a better understanding of the enemy in a broader scale. Sun Tzu states, “where the weaker side is forced to fight against odds, its lack of numbers must be made up by the inner tension and vigour that are inspired by danger….If an increase in vigour is combined with wise limitations in objectives, the result is that combination of brilliant strokes and cautious restraint that we admire…” (Howard and Paret, 1976, 346). These thoughts when applied to the conflict in Sri Lanka, provides a direct comparison to the applications of them by the LTTE and also the fact that government forces were neglecting these possibilities. This is the reason for the conflict to drag on for a long time and the LTTE gaining substantial capacities.

Explanations by Carl von Clausewitz highlight that warfare is not simply intertwined with political aspirations but that they should be subservient to politics. In much simpler terms; “the political object is the goal, war is the means of reaching it, and means can never be considered in isolation from their purpose” (Howard and Paret, 1976, 346). While all these three scholars’ concepts can be equally applied to all forms of warfare, the significance of this...
lies in the understanding that warfare is an extension of politics rather than a raw matching up of firepower (Buffaloe, 2006).

Otto Von Bismarck provides an insight into the AW in the late 19th century as a way to balance conventional military weaknesses by saying; “We live in a wondrous time in which the strong is weak because of his moral scruples and the weak grows strong because of his audacity” (Applegate, 2001, 6). What Bismarck tries to infer through the above statement is the ability of a weaker element to strike a balance against a much stronger force by waiving moral and cultural acceptability. The LTTE used asymmetric tactics effectively to offset the superiority of force levels of GOSL.

A significant contribution on AW was made by David Galula in his book Counterinsurgency Warfare, where he explains the observations made following his study on insurgents and counterinsurgents as follows:

There is an asymmetry between the opposite camps of a revolutionary war. This phenomenon results from the very nature of the war, from the disproportion of strength between the opponents at the outset, and from the difference in essence between their assets and their liabilities. …The insurgent has a formidable asset, the ideological power of a cause on which to base his action. The counterinsurgent has a heavy liability he is responsible for maintaining order throughout the country. The insurgent’s strategy will naturally aim at converting his intangible assets into concrete ones, the counterinsurgent’s strategy at preventing his intangible liability from dissipating his concrete assets. . . .The peculiarities that mark the revolutionary war as so different from the conventional one derive from this initial asymmetry (Galula, 1964, 15).

This argument could be seen as very valid in the Sri Lankan conflict. The LTTE was heavily motivated for a cause; to create a separate state for Tamils. They were focusing on military gains mostly in the areas demanded by them as their traditional homeland but terrorized the rest of the country in order to compel the government to give in to their demands. The government forces had to defend the whole country. Whilst the government forces had to protect the whole country they were compelled to fight hard in the areas demanded as separate state by the LTTE as well. Vreý describes the situation which prevailed in the country as:
The Sea Tigers of the LTTE movement in Sri Lanka also portrays the use of asymmetry at sea, but by an irregular opponent against a regular navy. Whereas the pirates off Somalia do not deliberately employ asymmetry, but perhaps exploit the advantages, Iran made a conscious decision to plan and equip for asymmetry by investing in a naval force operating in parallel with its regular navy. In contrast, the Sea Tigers, being an irregular force, used asymmetry at sea through tactics and equipment to wage its low-intensity conflict against the Sri Lanka Navy (Vreý, 2013, 3).

The above statement is a clear indication that not only the non-state actors use asymmetric tactics at sea but can be the weapon of a weaker state and can be a real threat to any regular conventional navy.

The book titled Unrestricted Warfare by Colonel Liang and Xiangsui of the People’s Liberation Army (PLA), China highlights some of the concerns pertaining to AW. They explain that the reduction in military violence and the increasing of political, economic and other forms of violence was explained in the quest for waging war against a country, which is immensely superior in military power as follows:

While we are seeing a relative reduction in military violence, at the same time we definitely are seeing an increase in political, economic, and technological violence. However, regardless of the form the violence take places, war is war, and a change in the external appearance does not keep any war from abiding by the principles of war (Liang and Xiangsui, 1999, 10).

While many have attempted to define the term AW over the last couple of years, it has turned into forming a term that meant so many viewpoints to so many scholars. This has resulted in confusing its real meaning. Blank’s (2003) following statement summarizes this development:

For the last several years, the U.S. strategic community has used the terms ‘asymmetric’ and ‘asymmetry’ characterize everything from the threats we face to the wars we fight. In doing so, we have twisted these concepts beyond utility, particularly as they relate to the threats we face. As one writer cited here observed, we have reached the point where the German offensives of 1918 are considered asymmetric attacks.
Clearly this use of the term asymmetric or of the concept of asymmetry does not help us assess correctly the threats we face. Indeed, “Secretary of Defence Donald Rumsfeld has voiced his discomfort with the term asymmetry, indicating his unease with its use (Blank, 2003, 14).

The term asymmetric warfare largely appeared in the U.S. public documents and other writings in the late 1990s but started to wane later on. Yet the 9/11 incident had a significant impact on the term and many tend to include almost all forms of threats into asymmetric warfare. Understanding the concept of asymmetric warfare has always been challenging (Buffaloe, 2006). The symmetrical nature which existed during the Cold War era ensured that peace was assured through Mutually Assured Destruction (MAD). Even if a perfect symmetry of forces could not be achieved, a balancing of qualitative advantages of the West versus the quantitative numbers of forces in the East led to an arguable symmetry (Metz and Johnson, 2001).

With the first official mentioning of the concept of asymmetry in the year 1995, in the Joint Publication 1, Joint Warfare of the United States of America, many tend to talk at length of the concept, its application and implication in the warfare scenarios that were present during that particular time frame. This doctrine attempted to define mere military engagements that took place between air vs. sea, air vs. land etc. as asymmetric warfare. This very narrow concept of asymmetry had limited utility (Metz and Johnson, 2001).

As the term gathered momentum mainly in the U.S., there were attempts to define the term in a more acceptable manner in 1996. The attempt to define asymmetry was visible in the US with the Joint Strategic Review published in the same year, which explains asymmetric approaches as:

Asymmetric approaches are attempts to circumvent or undermine U.S. strengths while exploiting U.S. weaknesses using methods that differ significantly from the United States’ expected method of operations. [Asymmetric approaches] generally seek a major psychological impact, such as shock or confusion that affects an opponent’s initiative, freedom of action, or will. Asymmetric methods require an appreciation of an opponent’s vulnerabilities. Asymmetric approaches often employ innovative, non-traditional tactics, weapons, or technologies, and can be applied at all levels of warfare.
strategic, operational, and tactical and across the spectrum of military operations (Shelton, 1999, 14).

One cannot argue on U.S. biases in relation to these definitions as they primarily originated in the U.S. This is seen as a result related to the U.S. reaction to events that unfolded during the time period in discussion. When attempts are made to define AW with the preoccupied mind-set of incorporating all possibilities into a single definition, thinking that it can cover all the needed answers, it is no wonder that the definitions turned more complex. The definition was further complicated by its identification of levels of asymmetry and at least six different forms of asymmetry (Metz & Johnson, 2001). After considering the historical evolution and many other attempts by various scholars to define AW, David L. Buffaloe proposes the following definition for asymmetric warfare:

Asymmetric warfare is population-centric non-traditional warfare waged between a militarily superior power and one or more inferior powers which encompasses all the following aspects: evaluating and defeating asymmetric threat, conducting asymmetric operations, understanding cultural asymmetry and evaluating asymmetric cost (Buffaloe, 2006, 13).

The above definition accumulates the key ingredients of what AW represents in the present context. The main ingredient that is represented in the definition clearly defines the true nature of the AW, which essentially needs to be applied to the grand strategy. The theory of AW in this context can be seen as “a tool which can be effectively used in leveraging inferior tactical/operational strength against vulnerabilities of a superior opponent to achieve disproportionate effect with the aim of undermining the opponent’s will in order to achieve the asymmetric actor’s strategic objectives” (McKenzie, 2001, 76).

Colonel Clinton J. Ancker III and Lieutenant Colonel Michael D. Burke of the U.S. Army explain the complexity of the AW and the value of doctrine:

While asymmetric warfare encompasses a wide scope of theory, experience, conjecture, and definition, the implicit premise is that asymmetric warfare deals with unknowns, with surprise in terms of ends, ways, and means. The more dissimilar the opponent, the more difficult it is to anticipate his actions. If we knew in advance how
an opponent planned to exploit our dissimilarities, we could develop specific doctrine

to counter his actions. Against asymmetric opponents, doctrine should provide a way
to think about asymmetry and an operational philosophy that would take asymmetry
fully into account (Ancker & Burke, 2003, 12).

The study of the theory of AW in the battles against states is yet another aspect from
which one can draw vital components of AW. It is important to understand how a relatively
weaker state through its right use of strategy can challenge a strong actor and make its power
seem less effective. If power and strength imply victory in war, then the weaker player should
almost never win against stronger opponents. Yet, history suggests otherwise: Weak actors
sometimes do win (Paul, 1994). Hence, the quest for an answer as to how a weak state wins
over the strong will provide more insight into understanding the concept of AW. A strong
general explanation forwarded by Andrew Mack highlights that “an actor’s relative resolve or
interest explains success or failure in asymmetric conflicts’ (Mack, 1975, 94). Mack’s
explanation provides an intuition to the winning formula of the weaker states who win over
the much powerful and stronger state. One main comparison tool in this regard is the relative
power base among the states. When the relative power gap increases, the strong actor becomes
vulnerable and less determined. On the other hand, the weak actor who is more determined is
politically less vulnerable. Andrew Mack simplifies the solution for the above answer by
explaining how weak states win asymmetric wars/conflicts through three key elements,
“relative power explains relative interests, relative interests explain relative political
vulnerability and relative vulnerability explains why strong states lose” (Mack, 1975, 175).
This argument further explains that strong actors generally tend to have a lower winning
interest primarily due to the confidence that they have on their survival, but on the other hand
the weak actors/states have a high interest in winning as they have no other way to ensure their
survival. This explanation simplifies the winning and losing strategy by indicating that the
strong actors tend to lose asymmetric conflicts primarily due to the adaptation of wrong
strategy vis-à-vis their weaker adversaries (Toft, 2001).

Kaplan writing to the October 2008 issue of “The Atlantic’ compares the asymmetric
warfare situation combining the past and the present:
Iran is bringing 21st century warfare to the seas by planning small-boat suicide attacks that would resemble in some ways the aerial and naval suicide missions launched by Imperial Japan during its last desperate days in the Second World War. At the Battle of Okinawa in 1945, the Japanese mixed unconventional and conventional tactics to kill 12,000 Americans and wound more than 33,000. Iran, by contrast, is threatening a purely unconventional naval war, including attacks on U.S. military targets and on international maritime traffic. Oil prices would spike, and Iran would enjoy a long-term profit, even if it temporarily could not export its own oil (Kaplan, 2008).

This goes to prove that the asymmetric tactic is not only used by non-state actors but by states too. Iran is an example of using asymmetric threats to keep away much powerful and technologically advanced forces. Anthony H Cordesman writing about asymmetric threat posed by Iran to the Centre for Strategic and International Studies in 2014 quote few senior military and political figures in Iran, and explains how Iran uses the AW concept to keep much more powerful military forces at bay. These quotes are indicated as follows:

“Asymmetrical warfare... is [our] strategy for dealing with the considerable capabilities of the enemy. A prominent example of this kind of warfare was [the tactics employed by Hezbollah during] the Lebanon war in 2006... Since the enemy has considerable technological abilities, and since we are still at a disadvantage in comparison, despite the progress we have made in the area of equipment, [our only] way to confront [the enemy] successfully is to adopt the strategy [of asymmetric warfare] and to employ various methods of this kind”. – General Mohammad Ali Jafari, Commander of the IRGC

“Today, the US feels insecure due to the IRGC’s speedboats. Our enemies believe that our country and the Islamic Iran have acquired deterrence power and it is due to this capability that no move has been made against our country ever since the end of the Iraqi imposed war (on Iran 1980-88)”. – Rear Admiral Ali Fadavi, Commander of the IRGC Navy, September 24, 2013
“…compensates for its technological inferiority to the United States with a strategy of asymmetrical warfare, including suicide attacks and the use of speedboat and its missile capability…these weapons [American weapons] are ineffective against a new [Iranian] strategy relying on faith, on a desire for martyrdom, and on [Iran’s] unique speedboats.”

– Rear Admiral Ali Fadavi, commander of the IRGC Navy, May 16, 2014

“We can use all the available military equipment and tools in any (possible) asymmetric war through creativity, initiative and employing new methods. We should redefine methods for utilizing weapons in accordance with the type of the combat.”

– Brigadier General Mohammad Pakpour, Commander of the IRGC Ground Force, July 16, 2009 (Cordesman, 2014, 72, 74).

Many lessons can be drawn from the above statements attributed to senior Iranian military officials about Iranian asymmetric tactics, which are ready to be deployed against much formidable US and other forces, which could be a threat to Iranian interests in the Gulf region. Iran seems to be quite open about the employment of asymmetric tactics against much bigger and superior forces. Iran has stated that they are ready to use speed boats, suicide attacks, and under-water vessels with a strategy of asymmetry against anyone who is coming to be a threat against them. Many parallels can be learnt from these Iranian tactics when compared with the LTTE. The LTTE leadership was able to motivate their cadres by emphasizing communal zeal with their hatred toward Sri Lanka armed forces to commit themselves with purpose and vigour, even ready to sacrifice their life for the cause. The LTTE like Iran had realized that faith and motivation could resist against the enemy. The LTTE used small speed boats and suicide boats effectively and was experimenting with submersibles and submarines. The LTTE was developing into a near conventional force by using asymmetric tactics as their doctrine. Their successes could be greatly attributed to this asymmetric doctrine. The LTTE used asymmetric forces to compensate for conventional weaknesses and became a considerable threat to the armed forces. Although the Sea Tigers’ asymmetric assets did not have the ability to defeat and destroy the SLN, they did cause considerable damages to SLN assets and affected the morale of personnel. The Sea Tiger asymmetric tactics were able to make the SLN feel insecure and vulnerable at sea and in harbour. The Sea Tiger suicide boat
can be named as the most potent asymmetric asset developed and used by the Black Sea Tigers to good effect. With the suicide boat, the Sea Tigers were able to keep the SLN at bay on most occasions and they were able to exercise a certain degree of sea denial to SLN, when they wanted to use that sea area for a special mission such as unloading of weapons brought to them by their international shipping network. The Sea Tiger suicide boats also compelled the SLN planners to consider large force levels to protect their assets at sea and in harbour which resulted in huge costs and the excessive usage of SLN units, which in turn incurred addition costs for maintenance. The use of the under-sea environment and attempts made by the LTTE to experiment with submersibles and small submarines indicate the asymmetrical thinking of the LTTE leadership. As a former commander of Fast Attack Flotilla (FAF) brought out, if another six months were given to the LTTE they would have caused considerable damages to the SLN fleet by using these under water craft. The LTTE was going to use more and more under water asymmetric tactics against SLN and SLN did not have any proper underwater detection and fighting capability for asymmetric war at sea. The LTTE fought with the Sri Lankan government forces for nearly three decades. The LTTE moved away from the traditional concept of staying within land borders and extended their resistance even to the maritime domain. As Vreŷ Points out:

The LTTE decision to extend their insurgency to sea by establishing the Sea Tigers was significant for two reasons. The first was the successes they achieved against the Sri Lanka Navy (SLN) as the SLN was unprepared for the off-shore shift of operations made by the Sea Tigers of the LTTE movement. The second interesting development was the way in which the SLN adjusted to successfully oppose the asymmetric threat deliberately employed by the seaward wing of the insurgent movement (Vreŷ, 2013, 8).

Tardi and Knoll writing to The National Interest May 2014 explains a possible asymmetric threat to war ships in harbour citing an event in Ukraine:

One event in particular should serve as a wakeup call for US naval strategists. In March, pro-Russian forces sunk two ships in the narrow channel that connects Ukraine’s Southern Naval Base to the Black Sea. With the entrance blocked, several Ukrainian ships were trapped in Donuzlav Bay. American ships are not adequately prepared for
This tactic, and would have been hard-pressed to escape the bay. In the open sea, US Navy ships are powerful actors, protecting sea-lanes and projecting American power abroad. Near shore, however, their advantage is lost and they are vulnerable to asymmetric attacks (Tardi, Knoll, 2014, 1).

This is an example of how a weaker force was exploiting asymmetric tactics to prevent a much bigger force from even leaving harbour. The LTTE did this successfully when they attacked and sank some big ships in the Kankesanthurai harbour in the northern coast of Sri Lanka, thereby restricting the manoeuvring space inside the small harbour.

Employing a well-organized armed force, raised to fight with a similar organization against insurgents does not sound logical. However when an insurgency breaks out, the governments may be compelled to utilize armed forces to combat them at some stage. Therefore special doctrines and organization are required to combat such asymmetric threats. In October 2003 it appeared that the United States was creating its own special organization to combat Iraqi insurgents: Task Force 121, a new joint strike unit reportedly composed of American Special Forces units and Army Rangers (Robert, 2004). The defeat of the Sea Tigers came only after the SLN changed its mind-set to fight the enemy by using SLN assets in an asymmetric way and even developing special craft suitable for asymmetric war at sea. It is quite clear that the SLN was ill-equipped to deal with the threat posed by the Sea Tigers at sea. The Sea Tigers managed to challenge the authority of the SLN at sea even in territorial waters of Sri Lanka by using effective asymmetric tactics at sea. The Sea Tigers were able to exercise insurgent sea control over certain areas of the sea of their interest. Much of the success of the Sea Tigers was a result of the lack of readiness of the SLN in terms of equipment, training, doctrine and a general mismatch between an ordinary conventional navy and one having to fight a dangerous asymmetric threat at sea. “A weak non-state actor may have greater incentive to adopt such strategies in order to overcome a lack of options, but there is no reason that a strong state actor could not do the same” (Breen & Geltzen, 2011, 44).

As Sun Tzu said “to fight and conquer in all your battles is not supreme excellence; supreme excellence consists in breaking the enemy’s resistance without fighting. The basic theme of this strategy is that an enemy should be attacked at its point of vulnerability and not where it is the strongest” (Sakhuja, 2006, 4). The SLN was always trying to attack the Sea
Tigers whenever they came out to engage naval craft. The Sea Tiger attack craft combined with suicide boats was the Sea Tigers’ strongest asset. The LTTE international shipping and logistic network was not as militarily strong as they had to be in international maritime system. They could not behave like a war ship as then it would have invited the attention of law-enforcement authorities in those countries. When SLN decided to go after the LTTE warehouse ships, it was relatively a soft target and a vulnerable one.

Richard Scott publishing an article on June 2015 edition of the Jane’s International Defence Review, summarizes the effect of asymmetric warfare at sea as follows:

The asymmetry that the navies must confront stems from the effective coordination of multiple assets. By synergizing characteristics of speed, mass, or coordinated manoeuvre. Low signature and concealment, operational commanders seek to exploit their local ‘sea space’ to achieve tactical surprise and saturate a ships defences (Scott, 2015, 40).

The asymmetric threat posed by small boats or ‘swarms’ as used by the Sea Tigers encompassed these characteristics described by Scott, in that they used speed, coordinated manoeuvres and low signature and concealment of the Sea Tiger boats to take advantage of the FACs. The Sea Tigers were considered as a great threat to the security of the maritime domain, especially in confined littorals. But they ventured into the deep sea as well.

4.3 Theory of Sea Control

Sakhuja describes the security concerns at sea as “warfare at sea is traditionally concerned with safeguarding SLOCs, maritime interdiction, sea denial, sea control, and defence of maritime infrastructure” (Sakhuja, 2006, 6). The theory of Sea Control (SC) is usually recognized as the navy’s capability to use an area of sea for its own determinations for as long as it is essential to realize those purposes and to deny that ability to others. In essence, SC remains the precondition for all other major and minor activities at sea. One who has a greater degree of control over sea will have greater freedom in using it. This is the very reason why almost all the navies have the tendency to give a higher precedence to achieve SC and exploit it to the fullest advantage. The traditional approach of obtaining SC has focused on the capacities of one navy over the capacities of another. This has in turn created competitiveness
in the maritime strategy of the navies. Looking at the most powerful navies in the world today, it can be seen that all of them are in the process of developing ways and means of exercising the functions of sea control, even though they do not discuss this openly.

Once achieved, SC allows a force to use the sea area for freedom of action for its own purposes for a period of time. This also gives freedom to deny the use of the sea for opponents if and when required. Australian Maritime Doctrine (2010) defines SC as follows:

Sea control must necessarily include the air space above the sea’s surface, together with the water mass and seabed below and the electromagnetic spectrum. To an increasing degree, this concept also includes consideration of knowledge, space-based and other external assets that provide fused information to the commander at sea (Australian Maritime Doctrine, 2010, 72).

Maritime strategists have noted on a number of occasions that naval battles are fought only for the effect the navies can secure ashore. Certain activities that take place out at sea may have the possibility of indirectly being linked to activities on land. Sea control when accomplished has a greater impact on ground strategies to move ahead so that maritime forces can later shape, influence and control events as required.

Scholars who were interested in the maritime affairs and maritime warfare knew the advantages a country holds with the successful use of the sea to further enhance its dominance and prominence in the world map. The examples from the 15th century onwards of the Spanish, together with the Portuguese, and later the Dutch and English, illustrate the advantages of a nation supporting maritime expansion with maritime warfare. Early exponents of the strategic theory of maritime warfare that developed in the nineteenth century were concerned with the use of such warfare to advance ‘dominance’ for a state. These developments led to the construction of the ‘command of the sea’ concept which many considered a prime corner stone of any naval force operating in the maritime domain.

Further ‘command of the sea’ concept can be described simply as the ability of a nation to conduct its own operations without any hindrance from any other elements at sea and on the same lines to prevent an opponent the same for his purposes. With these developments that were taking place in the maritime environment, many tend to view the concept of ‘command of the sea’ as achievable simply by the destruction or neutralization of the opponent. Even
though this seemed achievable in the past, rapid developments that took place in the maritime warfare environment made it look not so easy to gain full stature of the concept.

The concept of ‘command of the sea’ limits down further to identify the value of having control over the movement at sea. In comparison with the land, the sea does not remain static but evolves over in a much dynamic way. Attempts made to hold sea areas with no immediate strategic application, were found to be a mere waste of naval assets mainly in terms of ships. Chapter three of the General Maritime Strategic Concepts compiled by the South African Navy defines SC as follows:

Control of the sea can be limited in place and in time and the required extent is determined by the task to be done. Sea control is defined as that condition which exists when one has freedom of action to use an area of sea for one’s own purposes for a period of time and, if required, deny its use to an opponent. The concept includes the air space above, the water itself, the seabed and the electro-magnetic spectrum. It may also include the control of assets in space such as navigational satellites or reconnaissance devices (South African Navy General Strategic Maritime Concepts, 2006, 29).

As reported in ‘Proceedings’ April 2012, an article written by Yoshihara and Holmes explains sea control as:

According to Rear Admiral J. C. Wylie, there are two broad ways to think about strategy: “sequential” and “cumulative.” The sequential, or linear approach comes naturally to strategists. Operations unfold in stepwise fashion. One action follows logically from the previous one. Sequential operations often can be plotted on a map or nautical chart, making them easy to follow. Wylie observed that ‘Maritime strategy normally consists of two major phases. The first, and it must be first, is the establishment of control of the sea. After an adequate control of the sea is gained comes the second phase, the exploitation of that control by projection of power into one or more selected critical areas of decision on the land (Yoshihara, Holmes, 2012).

Another term that deserves attention is sea denial (SD) which is related to SC. This is defined as follows:
That condition that exists when an adversary is denied the ability to use an area of sea for its own purposes for a period of time. A nation may simultaneously be involved in Sea Control in one area and Sea Denial in another area. Sea Denial can take many forms, from the maintenance of a blockade of enemy forces, through the operation of exclusion zones to campaigns against an adversary’s trade or logistics (South African Navy General Strategic Maritime Concepts, 2006. 29).

Certain maritime powers focus on preventing the use of the sea rather than taking control of it. Sea denial too can be limited to a place and time as similar to sea control. Maritime forces have the ability to conduct sea control operations in certain maritime spaces while conducting sea denial in another area. Found to be a quite effective tool, sea denial generally takes many forms such as maintaining maritime blockades, establishing maritime exclusion zones and conducting specific campaigns against the trade or logistics network.

Fleet in being is another concept of sea control. These are the tactics a weaker maritime unit can use against a superior power by way of avoiding a head-on confrontation with larger maritime forces. This will assist in preserving the weaker one’s strength and compel the more powerful force to divert naval assets to provide additional protection for key vulnerable areas to achieve containment. The Sea Tigers were not always fighting at sea. They would select when to fight and when not to fight, whereas the SLN had to be deployed in full combat readiness at sea. The Sea Tigers would give wide publicity to the activities carried out by them at sea, including attacks against the SLN units. They would also use propaganda videos about their capabilities and wanted the SLN to believe that they had a large number of different types of craft capable of fighting at sea. This led the SLN to overestimate the Sea Tigers and concentrate on their assets in defending large sea areas, harbours and approaches to harbours. By showing larger than real force level, the Sea Tigers compelled the SLN to commit many resources to guard the sea areas and this is part of the tactic of fleet in being.

With this understanding of the concept of SC, it is important to analyse other theoretical developments that have taken place in the maritime warfare domain, to better understand the concepts which have a direct link to the research. Looking at how Admiral Mahan developed his theories on sea power, his observations of the Great Britain’s Royal Navy’s contribution in
ensuring Britain’s success in the establishing of its industries, maritime commercial networks and importantly its imperial expansion are significant. Mahan concludes that;

Sea power is the key to world power and requires the ability to safeguard one’s own maritime access (sea control) and to prevent such access by enemies (sea denial). Mahan’s ideas shaped the great sea power rivalries of the late 19th and early 20th centuries and were studied and applied by German and Japanese officers as well as by proponents of American imperialism, including Theodore Roosevelt (Gompert, 2013, 22).

Taking a different viewpoint on the subject matter of sea power [which include the discussion of sea control], a renowned personality on the maritime affairs, Sir Julian Corbett has viewed the sea power concept through a broader approach to maritime warfare by focusing on the confrontational aspect as well as the international relations and political/economical magnitudes of warfare. The object of naval warfare, in Corbett’s perspective, is to establish control over maritime communications for both military and commercial purposes and places equal, if not greater emphasis on the deceptive nature of warfare. (Fitzsimmons, 2007). The high emphasis that most of the prominent maritime scholars have placed on the area of Sea Command is important to Sri Lanka in understanding the impact of the near three decade conflict and its relations to the asymmetric nature of one of the most outstanding maritime warfare conflicts ever witnessed in the recent history; i.e. between the SLN and the Sea Tigers. In this context, the value of maritime communications has been discussed extensively. These SLOCs have a unique impact on maintaining the national life ashore. So these maritime communication lanes do have a significant impact on a country and they are quite different from the land lines of communication mostly used by the Army during times of conflict. The main purpose of gaining control over its maritime communication is to both use one’s own commerce without any hindrance and to prevent the enemy from using the sea to achieve his objectives.

“Mahan is of the opinion of achieving victory only through the concentration of fleet and believed in this as one of the most important principles in maritime warfare. Mahan insists that a fleet should never be divided and that victory at sea is only possible by fleet concentration” (Gough, 1988.56). In his view, if the concentrated fire of the battle fleet is the
principle means by which naval power is to be asserted, the preferred target of such fire is the enemy fleet (Crowl, 1986). The focus on sea communication was another important area that Mahan paid his attention to in his discussion of sea power and related theories. His thinking on the path of developing strategic sea lines and its connection with strategic points was seen as an important connectivity that prevailed in the maritime warfare environment.

As a naval historian, Mahan envisions two ways to achieve and maintain command of the sea through decisive battles and successful blockades:

He asserted that the primary mission of a battle fleet is to engage the enemy’s fleet. … control of the sea by reducing the enemy navy is the determining consideration in a naval war. Mahan firmly believed that acquisition and control of the sea’s communications could be obtained only in a decisive and clear-cut victory, which came to be known as the decisive battle. He wrote that the success is achieved less by occupying a position than by the defeat of the enemy’s organized force; his battle fleet. The same result will be achieved, though less conclusively and less permanently if the enemy fleet is reduced to inactivity by the immediate presence of a superior force, but decisive defeat, suitably followed up, alone assures a situation. Mahan’s emphasis on fighting decisive battles led many navies prior to 1914 and also afterward to overemphasize the importance of tactics and technology while operational warfare was either neglected or even ignored (Vego, 2009, 11).

The above elaboration clearly states the key factors of achieving sea power in which SC is a limited but a major component. His accurate assessment of the navies’ over confidence on tactics and technology and its impact on the overall outcome due to neglecting operational warfare is seen in many conflicts that are similar to the Sri Lankan case study.

When comparing the writings of both Mahan and Corbett, the latter seems to have a much more developed knowledge on the command of the sea. Corbett attempts to distinguish various stages of the command of sea when framing plans for major battles or campaigns. Vego highlights that:

For the purpose of framing a plan of war or a campaign, it must be assumed that command of the sea may exist in various states and degrees. A general command may be permanent or temporary. In his view, mere local command, except in very
favourable geographical conditions, should hardly ever be regarded as more than temporary, since normally it is always liable to interruption from other theatres so long as the enemy possesses an effective naval force. Even permanent general command of the sea can be in practice absolute. In his view, no degree of naval superiority can ensure one’s communications against sporadic attack from detached cruisers or even raiding squadrons if they be boldly led and be prepared to risk destruction (Vego, 2009, 13).

Corbett also highlights that having permanent control of the sea is not an assurance that says that the enemy cannot do anything, but explains that the enemy has the capacity to impede a country’s maritime affairs to a greater extent. When the command is in dispute, general conditions may generate a stable or an unstable equilibrium; the power of neither side preponderates to any appreciable extent. It may also be that command lies with the enemy (Vego, 2009). “Such preponderance will not depend entirely on actual relative strength, either physical or moral, but will be influenced by the interrelation of naval positions and the comparative convenience of their situation in regard to the object of war or campaign” (Corbet, 1918,91).

Corbett and Mahan hold two different viewpoints on securing sea control. While Mahan emphasizes that a decisive battle is not always required to realize command of the sea, Corbett believes that imposing naval blockades is the prime way which can lead to securing the control of the sea. Mahan states:

Under certain conditions, therefore, it may not be the primary function of the fleet to seek out the enemy’s fleet and destroy it, because general command may be in dispute, while local command may be with us, and political or military considerations may demand for us an operation for which such local command is sufficient, and which cannot be delayed until we have obtained a complete decision (Gough, 1988, 14).

Potter and Chester, the two leading 20th-century scholars have defined sea control as the ‘ability to use the sea in defiance of rivals’. In a vast region of capable nation-states and economic vitality, where sea-borne trade is crucial, a policy of sea control can invite challenges: After all, one state’s sea control can be seen by others as a threat to their own
access, i.e., sea denial (Gompert, 2013). Economic, political, technological and geographical factors are seen as vital components in forming the sea power element. These interconnected factors prompt nations to compete with each other. The necessity of having naval power is more significant in this context.

Sea control is a term used to describe a navy’s ability to use an area of the sea for its own determinants. The ability to exercise effective sea control, hence, can be viewed as a precondition for a navy to operate in the sea area of interest. Once sea control is achieved, it provides a navy to exercise the freedom to use it and at the same time to deny the use of it for the enemy. Sea control must include the surface of the sea, the air space above it and the water mass below, up to the seabed. For any navy, it is necessary to study and understand various functions of sea control. When analysing the nearly thirty year old long conflict in Sri Lanka, the exercise of sea control was not between two navies, but between an established navy and a small but fearsome sea unit of an insurgent force. The Sea Tigers from a small fibre glass boat operating unit developed into a daunting force; purpose designed small craft, submersibles, under water saboteurs, and even acquired a fleet of merchant vessels capable of operating even in international waters and ports. Sea Tigers were able to challenge the sea control enjoyed by the SLN by employing asymmetric tactics, in order to counter-balance the SLN. With asymmetric tactics at sea, the Sea Tigers were able to reduce the ability of the SLN to maintain effective sea control and, was able to use the sea area of their interest, to develop the LTTE into a near-conventional military status. SLN was shocked and confused at the Sea Tiger tactics and was acting, reactively, most of the time. The Sea Tigers exploited the ocean to their advantage by using various asymmetric tactics at sea, even pioneering some. Although the Sea Tigers did not have the ability to destroy the SLN, it caused considerable damage to the SLN units and affected the morale of its personnel. The Sea Tigers effectively challenged the concept of Sea Control enjoyed by the SLN and succeeded in achieving their limited objectives.

4.4 Operational Art (OA)

Looking at the evolution of the OA, it is important to view various theories presented by prominent scholars. Naveh, who is also considered as one of the most in-depth writers on OA, points out that all militaries are an open system that constantly interacts with its
environment. “The military as a system is complex, it acts as a whole, and the whole is greater than the sum of its parts” (Naveh, 1998, 1-23). The system has two main characteristics; the first is the nonlinear interaction of the systems component parts. The second is the absolute dominance of the system's aim (Naveh, 1998, 5-6). He has highlighted and offered some important insights on how best one could apply OA. Key elements derived from his theory are:

a. Dominance is the aim not destruction of the force  
b. Deep structure and hierarchic logic of action  
c. Divide and fragment a system’s structure  
d. Simultaneous attacks along the structure  
e. Centre of Gravity  

Epstein is yet another scholar who contributed in presenting a different look at the theory of OA. Epstein describes OA “by sighting the characteristics of operational campaigns and explains that victory is achieved by the cumulative effects of tactical engagements and operational campaigns” (Epstein, 1992, 11). This thinking of Epstein is still observed in the doctrinal definition of operational art today (Piatt 1999, 7) and he defines OA as “the process of action and thought performed at the operational level of war” (Epstein, 1992, 8).

Another interesting theory on the subject of OA was presented by James J. Schneider through two theoretical papers (Schneider, et al. 1988; Schneider, et al. 1991). He cites industrial revolution as one of the main causes which originated OA and defines it as “the employment of military forces to attain strategic goals through design, organization and execution of campaigns and major operations” (Schneider, 1988, 2). According to Schneider, OA is a unique style of military art. OA, Schneider claims, “became the planning, execution and sustainment of temporally and spatially distributed manoeuvres and battles, all being viewed as an organic whole” (Schneider, 1991, 30). As per Schneider, essential elements of OA are: friction, logistics, terrain, centre of gravity, decisive and objective points, the central position and line of operations and theatres of interest (Schneider, 1991, 17-33).

Schneider in his paper titled The Loss Marble- and the Origins of the Operational Art, published in Parameters March 1989, speaks about two main characteristics of OA; These two particular characteristics-simultaneous and successive operations-are in fact in the heart of OA. The Simultaneous character would require the distribution of forces in a lateral manner but in
a synchronized manner and the successive character would require the deepening of the theatre of operations.

Commander Jeff Huber-US Navy writing to Proceedings August 2002 argues that the centre of gravity exists all over the place- and that it keeps changing. He suggests a more practical approach to cut through the fog of planning. Three principles of this approach to centres of gravity are;

a. Centres of gravity are selected objectives
b. Centres of Gravity can change across all levels of war
c. Centres of gravity may change over phases of operation (Huber, 2000, 38-39).

In war, what matters most is the understanding of the enemy’s centre of gravity, which is standing between us and our objective. If we can appreciate these centres of gravity correctly and then if we can focus our attention sufficiently on them, we should be able to find a way to attack them with a view of defeating the enemy’s ability to wage war. Our resources alone are not enough to defeat the enemy, but how we concentrate our resources with a clear objective, will help defeat the enemy. It is therefore of critical importance that we identify the most effective way of overcoming the obstacles to attack the centres of gravity of the adversary. There can be some critical factors such as strengths, weaknesses and vulnerabilities, which may hinder us in achieving our objective. It is therefore necessary to understand the difference between these critical factors and the centres of gravity. “The centres of gravity should be determined by objectives, and strategies should be built around centre of gravity” states Huber. Huber also suggests four questions that we must ask ourselves before determining the objectives;

a. What strategic change do we want in the belligerent leader’s behaviour?
b. What operational objectives can our military attain that will produce this strategic behaviour (suitability)?
c. What tactical actions can our military perform that will attain our operational objectives (feasibility)?
d. Is accomplishing our strategic objectives worth the size of the bill that comes with it (acceptability)? (Huber, 2002, 41).
OA occupies an immediate and indispensable position between policy on the one hand, and tactics on the other. It serves both as a bridge and as an interface between these two areas of study and practice (Vego, 2000). Usually, strategic objectives are wide and tactical actions are narrow. Hence, another aspect linking the two is essential. The operational art is to synchronize and link the two; strategy and tactics. The strategy can be laid down and tactics may come from experience and training. The OA is not easy to write down or pass as an order. It depends on the individual Commander and the success of operational objectives will certainly have a bearing on OA. Whilst the strategy may not be directly engaged in the battle field, the OA and tactics are always there. Superior number, good weapons, technological advances alone may not win a war and achieve ultimate victory. The military leaders need to develop a great understanding of OA and that could be the key for winning a war. The normal tendency for military commanders is to use strategy and tactics to defeat the enemy. But if the OA is disregarded, victory may not come in an economical manner. Especially, when the enemy is using Asymmetric tactics, it is very difficult to develop one’s own strategies with a conventional mind-set to defeat the enemy, as it is not easy to understand the latter’s objectives and tactics. In the Sri Lankan context the SLN was neither winning nor completely losing. However, the Sea Tigers were able to use the sea when they wanted and to develop their organization. SLN during the protracted conflict experienced many different strategies and tactics, but the winning strategy was never there, until around 2005. In a long drawn out conflict it may not be possible to achieve victory over the enemy by winning one battle, but one needs a continuous victory stream to defeat them comprehensively. The application of OA is the secret tool for the transformation that the SLN went through. Understanding the enemy and the strengths and identifying the enemy’s centres of gravity is crucial to the success of war. As Frederic the Great stressed “War is not an affair of chance, a great deal of knowledge, study and meditation is necessary to conduct it well” (Vego, 2000, 1). Unfortunately it can be said that studying, analysing and understanding the war was lacking in the Sri Lankan context and most of the actions were reactionary. However, years of fighting the LTTE gave enough experience to the armed forces to understand the nature of the conflict and the capabilities of the LTTE. Some officers had spent their entire military career fighting with the same enemy. It can be seen that this experience became very useful during the final phase of the war that saw the demise of the Sea Tigers at the hands of SLN.
Vego provides a definition for OA in Naval War College USA book on Operational Warfare; “As a component of military art concerned with the theory and practice of planning, preparing, conducting, and sustaining major operations and campaigns aimed at accomplishing operational or strategic objectives in a given theatre” (2000, 2.). It is therefore necessary to study the war and understand various aspects of it and envisage practical implications of one’s own action and inaction. It can also be observed that the military leaders need to be creative and innovative in order to apply the OA to good effect. The commander needs to understand the potential of OA and order his thoughts when designing concepts for major operations. He needs to develop a broad vision and improve the ability to envisage possibilities and effective implementation.

Vego states that:

The art of warfare at all levels is to obtain and maintain freedom of action—the ability to carry out critically important, multiple and diverse decisions to accomplish assigned military objectives. This is accomplished by limiting or, if possible, completely denying the enemy the ability to act, while keeping one’s options open to accomplish the assigned military objectives. The term operational factors refer to factors of space, time and force in a given theatre or operations (Vego, 2000, 29).

Any successful military commander has to understand these factors and what they imply to one’s own forces as well as enemy forces. He should also comprehend fully what the strengths and weaknesses of their forces are and the speed at which he should move against the enemy. These operational factors may not act in harmony at all times, but the commander has to evaluate them and arrange them in a mutually rewarding manner. It can be observed that the LTTE enjoyed the freedom of action due to the non-effectiveness of the SLN and a major reason for that is the lack of understanding of the Force of LTTE. The LTTE also enjoyed space, especially at sea to carry out their activities in the absence of effective sea control by SLN in the areas of their interest. They also enjoyed the advantage of time as the SLN was most of the time, on a defensive and hence the LTTE enjoyed the initiative. With the loosing of military bases along the coastal areas in most parts of the Northern and some Eastern provinces, the space to deploy the SLN assets was denied and hence the LTTE enjoyed freedom of movement in the coastal as well as ocean areas. Without space, the commanders were not
able to deploy the naval assets to counter the threat of the LTTE. “Maritime Campaigns usually encompass vast areas of the ocean and the adjacent sea” (Vego, 2000, 35). When this is applied to the conflict in Sri Lanka, it can be said that SLN was not able to maintain effective domination of the entire sea area around the country and the LTTE exploited this situation to their advantage. The LTTE, during the latter part of the war, was able to use ocean areas thousands of nautical miles away from Sri Lanka to position their floating Warehouse ships, till they were ready to arrange mid-sea transfers for onward movement to the coastal areas of their interest.

“The farther the attacker advances into the defender’s controlled territory, the more he deprives the defender of the means of conducting the war, which one can then use for his own benefit” (Vego, 2000, 36). During most parts of the war, the LTTE tried, sometimes successfully to enter and carry out sabotage activities in the areas which were not even under their control. There was a period when the SLN units were not safe anywhere; at sea or in harbour and the LTTE were able to infiltrate even areas further away from their dominated areas. This situation compelled the SLN to defend large land areas, and also harbours.

Any military action during war or peace requires the most serious consideration of the factor of time. “Time is one of the most precious commodities in the conduct of warfare and is closely related to the factor of space” (Vego, 2000, 47). The decisions regarding wars are normally made by the political authorities and hence the commanders may not have much choice on the timing. As Vego points out, “the factor of time dealing with operational decisions, planning, preparation, and conduct of a campaign or major operation are directly influenced by the actions of the operational commander’s staff and actions, or lack of actions, by the subordinate commanders” (Vego, 2000, 48). This can be achieved by having a good leadership and a good staff. It is necessary to keep the decision-making cycle as short as possible so as to implement the strategic decisions arrived at. The commander needs all the information to make decisions and to convey those decisions to the subordinate commanders. Also important is the obtaining of the feedback of action being taken. Reliable communication, effective intelligence and character traits of the commanders are important factors and play a crucial role in achieving success.

The factor of force is another major contributor in war. As Vego points out:
The factor of force plays a critical role in the accomplishment of military objectives at any level of war. It is evaluated at the strategic, operational and tactical levels. The factor of force encompasses a number of elements that are physical in character, such as the number of personnel and weapons and equipment, physical mobility, firepower, command organization, logistics, and quality of weapons and equipment. These elements are for the most part easily measurable. Some elements of the factor of force, specially training and combat readiness may be quantified somewhat, but not as easily as purely physical elements. Human elements of a force, specifically leadership, morale, discipline, small-unit cohesion, combat motivation, and doctrine are, in contrast, extremely difficult to quantify with any degree of confidence (Vego, 2000, 59).

This statement clearly brings out that when studying your own or the enemy’s force level, it is necessary to study multiple factors and not just simple figures of force, weapons and equipment. During the most part of the war only the force levels and other clearly known elements were studied but no other unquantifiable but important factors. At any time there was no proper study done on the combat potential of the enemy. Quite often the enemy’s potential was over-estimated and one’s own potential was under-estimated. As Vego argues, “the human element and its associated manifestations are the most important in evaluating the factor of force as it has direct bearing on combat potential and combat power. The psychological element of power is perhaps the most important in combat. Any fighting is essentially a test of physical and psychological endurance” (Vego, 2000, 68). It is a normal tendency that the human element is not given due consideration in appreciating the strength of the enemy. The LTTE was a well-motivated fighting unit and its cadres were willing to die for their cause and also in the event they were caught, in order to prevent information being extracted by the armed forces. To motivate armed forces to fight such a highly-motivated enemy, it needs exceptional leadership qualities and continuous monitoring of the human element; their welfare, wellbeing and needs. Quite often, these aspects were not given due consideration and therefore the war dragged on for decades.
Vego says that “For the armed forces as a whole, and for the individual services, combat motivation is significantly affected by several other factors, notably, the character of war, justness of the cause, the war’s legitimacy, ideology, patriotism and a sense of national honour” (Vego, 2000, 70). The LTTE being a non-state actor used these criteria effectively to keep their cadres combat-motivated and it was very difficult to apply the same to the armed forces.

It can be concluded that factors of Space, Time and Force are interrelated and form a very important aspect of OA. The Commander must be able to understand each component of himself and that of his enemy and try to balance the three so as to obtain a strategical and tactical advantage.

The enormous advances in information technology in recent years have elevated information as a common link among the factor of Space, Time and Force. “Some military theoreticians and practitioners go even further and claim that information has emerged as the fourth factor in addition to the three traditional operational factors” (Vego, 2000, 95). In today’s warfare context, it is not possible to depend only on traditional operational factors where the commander needs to pay attention to a host of other conditions, which affect the decision-making process. Information influences the decision making process and without proper and tangible information, the advantage will always be with the opponent. In the Sri Lankan conflict, the military intelligence, especially the navy intelligence really lacked the capability to find out what the enemy was doing. Vego explains information as “data collected from the environment, processed, and put into a context” (Vego, 2000, 95). However, the basic information coming from the environment may not be very useful in military warfare. The sources of information need to be cultivated and the information thus obtained need to be accurate, relevant, timely and usable. It should be complete and precise as well.

Sound Command and Control should ensure unity of effort, provide for centralized direction and decentralized execution, provide an environment for applying common doctrine, and ensure interoperability. Unity of effort is one of the main prerequisites of successful performance of command (Vego, 2000, 187).

Operational Command and Control warfare is understood as the integrated use of operations security, military deception, psychological operations, electronic warfare, and physical destruction; all mutually supported by intelligence to influence, degrade, deny
information, or destroy adversary command and control capabilities, while protecting one’s command and control capabilities against such actions.

As OA explains how best the military resources can be applied to accomplish strategic aims, the human component has a significant value along with the commanders’ instinct. Although the term OA include the word ‘Art” a combination of art and science is required to achieve desired end states. “The recommended methodology to achieve the end state comprises of three parts; Operational Analysis (OA), Operational Design (OD) and Operational Planning (OP)” (Piatt, 1999, 34). In the process of obtaining an analytical picture of what is OA, many tend to view the theory as an easy way of winning a war. Curtis states on the OA analytical picture:

The operational art analytical picture is different from the classical tactics-strategy-Centre-of-gravity analytical picture of the 19th century. The operational picture is most applicable when a decisive trial of strength between main forces is not expected to occur in the course of the campaign, and victory in either of its senses can be achieved nevertheless….Tactics and strategy were logically connected in that tactics were temporally prior but conceptually posterior to strategy, and both together were aimed at overthrowing the enemy’s Centre of gravity (Curtis, 2012, 41).

The British Army Publications titled ‘Operations’ published under the Ministry of Defence United Kingdom define OA as:

Operational Art translates strategic direction into tactical execution. It is the orchestration of a campaign, in concert with other agencies to convert (at operational level) strategic objectives into tactical activity and employment of forces, in order to achieve a desired outcome. Operational Art translate mission into success, through a combination of judgment and labour, art and science, analysing and intuition. The term OA emphasizes the importance of a more intuitive alignment of ends, ways and means than provided by science alone. It is realized through a combination of commander’s skill, and the staff-assisted process of campaign design and campaign management together translating creative and innovative thinking into practical action.
Looking back at many past sea battles, the application of naval OA has contributed to the success of many, as OA has a significant impact on the combat activities in a much broader context. Zielinski highlights the following components as the main tasks of naval OA (Zielinski, 2000, 77).

a. examination of recent maritime operations as well as the determination of preconditions for its success;
b. effective manner for the use of forces during maritime operations and systematic combat activities;
c. effective co-operation with different branches of naval forces and co-operation with other services during common activities;
d. working out an effective methods for commanding forces using modern means;
e. drawing up of principles for versatile assistance during naval operations;
f. working out of operational possibilities as well as standards of use of versatile naval forces during naval operations and systematic combat activities;
g. drawing up of operational justifications for directions of development as well as requirements for future naval forces and means;
h. improvement of methods for planning of naval operations using research methods and computer techniques.

The above listed concepts and components can be used by a navy to effectively understand the situation at sea and to take necessary remedial actions to counter the threats. When compared with the SLNs’ engagements with the Sea Tigers, it can be observed that there was no proper application of these components and concepts for a very long time, which resulted in the Sea Tigers becoming a considerable force at sea.

With the emphasis that has been placed on the development of naval doctrines by various navies, many have begun to question the role of such a doctrine in naval operations. “As OA is directly linked to the designing of operational plans at all levels, it is imperative that OA is given serious consideration when considered along with the broad definition of OA; the employment of military force to attain strategic goals in a theatre of war or theatre of operations” (Durham, 1998, 1).

As many definitions of OA are largely U.S. oriented, it is worth looking at some of the developments that have taken place in other countries too. Even though U.S. scholarly work
has taken the lead role in the works of OA, “Soviet military experts had realized as early as 1920s of the impact in making additional complexities into the art of war fighting” (Durham, 1998, 3). While maintaining a focus on large scale operations, the Soviets perceived “that the strategy of a nation at war forged unavoidable links between large forward fighting fronts and the supporting rear infrastructure” (Menning, 1997, 7). They recognized that military strategy must expand in scope to embrace an extensive host of activities that included the development of a broad national strategy, the management of diverse resources and the accurate identification of specific military objectives if military actions were to match the goals of the state (Menning 1997, 8).

Soviet military thinkers recognized that “the realities of modern warfare had rendered obsolete the initial assumptions on which Napoleonic warfare was based, and some new approach to warfare was required” (Schneider, 1988, 12). In large scale operations, “tactical actions (battles) would provide the building blocks from which operational advances would be constructed, always moving in the direction dictated by the overall national strategy” (Menning, 1997, 9). Svechin, in his 1927 work Strategy, first proposed the concept of operational art as “a distinctly separate category of military art, bridging the gap between national strategy and tactical actions” (Durham, 1998, 4). The Soviets have aimed at achieving desired end results by effectively coordinating different components of combat power. “The object of the Soviets was to attack an enemy nearly simultaneously throughout his depth to effect the complete disintegration of the ability and will to fight” (Menning, 1997, 11).

Zielinski summarizes the importance of OA and how it combines the policy, strategy and tactics:

Operational art occupies an intermediate and indispensable position between policy and strategy on one hand, and tactics on the other. It serves both as a bridge and as an interface between these areas of study and practice. The strategic and operational objectives cannot be accomplished by tactics alone. Tactical perspective is too narrow and strategic perspective too broad, to ensure the most effective use of military and non-military sources of state power in the accomplishment of strategic objectives. The principal role of operational art is to sequence and synchronize or, simply to ‘orchestrate’ the employment of military forces and non-military sources of power to accomplish strategic and operational objectives in a given theatre of action. Strategy is
not concerned with actual fighting, but operational art and tactics are (Zielinski, 2009, 88).

The tactical actions become useful and war-winning only when combined with a design and a strategy and when it is conducted by operational art. Superior force levels, modern equipment and brilliant tactics may not ensure victory in war. A sound and comprehensive strategy combined with operational art will be the key to winning wars, in the future as well as was the case in the past.

The operational art, as the term implies, is a form of art, which should be understood by military commanders. The OA translates a commander’s strategy into operational design, and, finally, tactical action by integrating all relevant key activities at all levels of conflict. The military commanders need to understand the concepts of OA and years of training and experience can become very useful in developing an appreciation of OA. A navy is a complex organization. It has many aspects and system components. The SLN evolved through long years of conflict, battling the Sea Tigers. SLN suffered heavy casualties, lost platforms at sea and in harbour and lost the morale to fight at sea. Until 2006, the SLN was engaged in a surviving battle at sea. The SLN strategy was mainly focused on surviving at sea and denying the use of sea to LTTE Sea Tigers. The tactics of SLN were also mainly developed for this strategy. However, the leadership of SLN changed this defensive mind-set and transformed itself into a winning organization. One of the key elements of OA is attacking the centre of gravity of the enemy. The SLN focused and designed strategies and developed tactics to attack the centre of gravity of the LTTE, that was their logistic network. The LTTE depended totally on the ocean supply route to sustain their military capabilities and fight against the government forces. By understanding and using concepts of OA, SLN was able to break the fighting and operational efficiency of the Sea Tigers and the LTTE and finally the SLN became victorious.

4.5 Completion

Asymmetric warfare is considered as a conflict deviating from the norm. It is also an indirect approach to affect a counter-balancing of force. In the case of the Sri Lankan conflict, a huge asymmetry existed between the SLN and the Sea Tigers. The LTTE from the early stages of the conflict understood the potential of the ocean for their growth and survival, and
finally to achieve their objectives. The formation of Sea Tigers as a unit specialized for sea operations was a major step in that direction. The Sea Tigers exploited the weaknesses of SLN through asymmetric strategies and tactics and, it took a very long time for the SLN to understand what was happening. The Sea Tigers were considerably small even at the final stages. But they were clever enough for acting, organizing and thinking differently than SLN, and were able to maximize their own advantage and posed a grave threat to the dominance of the sea hitherto enjoyed by the SLN. The Sea Tigers by using asymmetric tactics were able to use the ocean effectively for their purposes. What Otto Von Bismarck said in late 19th century “we live in a wondrous time in which the strong is weak because of its morale scrupulousness and the weak is strong because of audacity” (Applegate, 2006, 6), became true in the case of Sea Tigers. Sea Tigers used not only innovative asymmetric tactics against SLN, they used unwavering bravery in battles against SLN units at sea. They used the Sea Tigers with asymmetric tactics at sea to keep the SLN fully occupied and away from their logistic operations and succeeded to a greater extent.

Sea control is considered as the main role of a navy and in the case of SLN, it was no exception. Sea control implies the ability of a navy to use the sea area for its own determinations and at the same time deny the use of the sea to the adversaries. In the case of SLN, it was built upon a conventional framework and was expected to maintain effective sea control by using conventional naval methods. The LTTE on the other hand, started as an insurgent force at sea, but was able to challenge the sea control exercised by SLN. The Sea Tigers were not interested in maintaining sea control for prolonged periods across the vast expanse of the ocean. They were interested in achieving their objectives of receiving logistic supplies uninterruptedly. The Sea Tigers posed a considerable challenge to SLN’s efforts in maintaining sea control. As sea control necessarily includes the air space above and the water mass below the sea surface, the Sea Tigers tried with a high degree of success to target SLN assets from underwater. They were experimenting with different types of submersibles and if succeeded further, would have posed a serious threat to SLN. SLN was not only unable to effectively maintain sea control, they were unable even to deny the use of the sea to the Sea Tigers as well.

Many scholars have emphasized the need to maintain effective sea control, in order to achieve victory on land. Unlike the land the sea does not remain static, but evolves in a much
dynamic way. The SLN attempted to maintain sea control and sea denial with varying degrees of success. In the nearly three decade old conflict in Sri Lanka, sea control and asymmetric warfare tactics of the Sea Tigers had a direct impact on the war. Instead of using the SLN as an effective tool, in the Sri Lankan context, most of the time the SLN had to play a defensive role and react to the Sea Tigers.

The operational art is the employment of military forces to attain strategic and/or operational objectives through the design, organization, integration, and conduct of campaigns, major operations and battles. It is a proven fact the resources alone are not sufficient to win a war. This can be translated to sea as referring to naval resources alone are not sufficient to win a war. But how we use these platforms and other resources in defeating the enemy will determine the final outcome of war.

Operational art combines the strategy and tactics in determining the outcome of war. The battle for sea control by using asymmetric tactics by the Sea Tigers compelled the SLN to deploy a large force at sea. However, even this large force could not achieve effective sea control as the Sea Tigers were able to operate at sea and transferred the much needed war-fighting equipment for the LTTE across the sea. The SLN became effective towards the final stages of the war and was able to wrest control of the sea from the Sea Tigers. Years of understanding the conflict and the capabilities and tactics of the Sea Tigers, helped the SLN to cripple the activities of Sea Tigers at sea.

The use of operational art by the commander and other tactical commanders of SLN, understanding the centre of gravity of LTTE and attacking it, could be considered as turning points of the war against the Sea Tigers. The application of operational art could be considered as the secret tool of SLN, which tilted the balance in favour of them. The factors of time, space and force were critical in winning the war at sea. SLN with years of experience fighting with the Sea Tigers at sea, used operational art effectively in winning the war. The Sea Tigers were considered as the sea unit of the most ruthless terrorist organization in the world.

It is intended to evaluate the concept of asymmetric warfare, sea control and operational art with the outcome of ‘data analyses’ in chapters five and six of this thesis in more elaborate details, deriving key lessons for victory at sea by the SLN.
CHAPTER 5

THE ORGANISATIONAL DRAWBACKS OF THE SRI LANKA NAVY AND THE DEVELOPMENT OF LTTE SEA TIGERS.

5.1 Research Analyses

The next two chapters will analyse the data gathered by the researcher mainly in the form of qualitative interviews and feedback obtained from Focus Group Discussions. These are considered the most important chapters of the thesis as the data collected through a long and detailed process is now required to be analysed in order to find answers to the research questions. The analysis of these qualitative interviews and results of focus group discussions were done keeping the research questions set out in Chapter One in mind.

5.2 The Organisational Drawbacks of the Sri Lanka Navy

The LTTE waged a terrorist campaign against the Government forces for a long time. Starting as a small militant-political group, the LTTE was able to develop near-conventional military capabilities towards the end of the conflict. The LTTE activities were not limited to the territory of Sri Lanka, but spread to neighbouring India and other parts of the world as well. The growth of the LTTE as a land combat force, together with a small navy and a small air capability should be seen as significant achievements of the organization. The study of such developments will be of immense use to practitioners of military, subject matter experts in legal and International relations, as well as maritime security experts. This section analyses the major drawbacks of the SLN in its engagement in the conflict by dissecting expert comments made by various professionals during in-depth interviews conducted. The SLN’s drawbacks are discussed through policy level, strategic and tactical downsides which resulted in the rise of Sea Tigers in a conventional maritime environment. The Food and Agriculture Organization (FAO) of UN defines policy as follows: “Policy is a set of coherent decisions with a common long term purposes. Policies have to be long term. Policy is not a highly defined concept, but a flexible one, used in different ways in different occasions” The same repository describes following as well:
a. Policy Objectives- these are the ‘ends’ of a policy and reflect the overall purpose or long term aim(s). What policy intended to achieve

b. Policy Instruments- These are the ‘means’ of a policy, the actions used to carry it out and methods by which its objectives are achieved

c. Policy formulation- defined as the process of considering alternative policy options and deciding to implement one or several of them

d. Policy implementation- defined as the process of carrying out the policy

(FAO Repository)

From the above definitions it can be seen that a clear policy, determining present and future decisions is mandatory for the success of a mission, whether it is political or military. For developing effective policies, it is necessary to identify the main concerns and analyse them so as to respond to the concerns with solutions. In this policy formulation as Torjam indicates, “the solutions should be assessed against a number of factors such as probable effectiveness, potential cost, resources required for implementation, political context and community support” (Trojam, 2005, 4). It is doubtful that these factors were considered in formulation of government and military policies as the conflict dragged on to almost 25 long years. In this research, the focus is on how the Government policy, or lack of a clear policy till 2005 prolonged the conflict for nearly three decades and contributed to the culmination of the LTTE becoming a well-structured militant insurgency movement within Sri Lanka. The Merriam- Webster on-line dictionary also describes Strategy as “the science and art of employing the political, economic, psychological, and military forces of a nation or group of nations to afford the maximum support to adopted policies in peace or war” and “the science and art of military command exercised to meet the enemy in combat under advantageous conditions”. As seen from the definition for strategy, a good strategy must be therefore the effective exercise of military command. Brodie describes strategy as: “strategy by comparison, is devoted to discovering how the resources of the nation, material and human, can be deployed and utilized for the end of maximizing the total effectiveness of the nation in war” (Brodie, 2011,13). It can be seen that a clear strategy is necessary for a country to make the optimum utilization of the resources it has in possession to achieve a particular objective. Therefore it is necessary to understand the importance of strategy for a country to embark on any venture and
especially so when in a war situation as human lives are at risk. Brodie goes on to say that, “there is a clear hurdle between clear understanding of the principles applicable to a problem and the practical resolution of that problem (Brodie, 2011, 16). This understanding is very important to military commanders as well. Brodie further explains this as, “military planners are obliged to make far-reaching decisions on issues concerning which there is little or no directly applicable experience” (Brodie, 2011, 11). *The Merriam – Webster* dictionary describes tactics as “the science and art of disposing and manoeuvring forces in combat” and “the art or skill of employing available means to accomplish an end”. Captain Hughes indicated tactics in war as follows: “warfare is deadly conflict. Tactics, being the devices of battle, are conceived and executed at the physical and metaphorical centre of this violence. Tactics are the more visceral in the consummation than policy, strategy, operational art, or logistics” (Hughes, 2000, 27). The blog posting of Jeremiah Owyang (2013) compares strategy and tactics as in Table 1.

**Table 1: The Difference between Strategy and Tactics**

<table>
<thead>
<tr>
<th></th>
<th>Strategy</th>
<th>Tactics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purpose</td>
<td>To identify clear broader goals that advance the overall organization and organize resources</td>
<td>To utilize specific resources to achieve sub-goals that support the defined mission</td>
</tr>
<tr>
<td>Roles</td>
<td>Individuals who influence resources in the organization. They understand how a set of tactics work together to achieve goals</td>
<td>Specific domain experts that manoeuvre limited resources into actions to achieve a set of goals</td>
</tr>
<tr>
<td>Accountability</td>
<td>Held accountable to overall health of organization</td>
<td>Held accountable to specific resources assigned</td>
</tr>
<tr>
<td>Scope</td>
<td>All the resources within the organizations, as well as broader market conditions including</td>
<td>A subset of resources used in a plan or process. Tactics are often specific tactics with limited</td>
</tr>
</tbody>
</table>
It is necessary for the strategy and tactics to work together if desired results are to be achieved. A great strategy will not deliver results if good tactics are not associated with it. At the same time, good tactics alone cannot work if it is not applied according to a good strategy. It is necessary to educate one’s organization regarding the strategy that should be applied and the tactics to be used to achieve the strategy. Economy of effort can be achieved only with a balanced employment of forces by combining a good strategy and tactics. Then only an effective concentration of all resources can be achieved at the decisive time and location. The conflict in Sri Lanka dragged on for a long time and the LTTE was able to develop into a formidable terrorist group with near-conventional military capabilities, a sea unit with international maritime capability and limited air capability over a period of time. On the other hand, the Government of Sri Lanka allowed it to grow with those capabilities until they were finally defeated in 2009. This demands a serious examination, especially in relation to the policies of the Government, various strategies adapted by the armed forces and tactics used vis-a-vis the LTTE during the entire period of the conflict and then to see how these instruments changed into a winning formula.
5.2.1 Policy Level Drawbacks

The policies of a government and the military doctrine are two essential criteria for a successful military campaign. This section will examine the policy level drawbacks, which resulted in dragging the war with the LTTE for a considerably long period.

5.2.1.1 Not Developing a Strong Navy and Increasing the Strength of the SLN

A former commander of the Sri Lanka Navy, pointed out that “not developing a strong navy though being an island nation was a major reason for the substantial growth of sea tigers and their ability to challenge the SLN at sea and to sustain the war for a prolonged period”. As the country is surrounded by the sea, maritime defence should have been given a top priority. However, successive governments did not pay sufficient attention to the development of naval capabilities. Navies and air forces are capital-intensive forces and cannot be developed over night. It takes a long time to identify the platforms, evaluate the capabilities and go through the procurement process. It also takes a long time to manufacture the identified platforms and equipment and to undertake user and maintenance training. SLN has suffered from a lack of strategic and visionary policy understanding by the governments and was not able to develop faster than the sea tigers.

It is observed that the SLN development was at most a response to that of the Sea Tigers and not a proactive one. A former air force commander and Chief of Defence Staff (CDS) describes the predicament of the navy and Air force in; “if the enemy had this, we had to buy that to protect us”. Most of the time the SLN was in a defensive mode rather than thinking of an offensive. As a senior international law expert Rohan A Perera remarks, “the initial period was characterized by perhaps ad-hoc responses which gave LTTE a lead time to exploit that situation”. He goes on to state that “one of the paradoxes is the fact that for an island nation, historically, we have paid less attention to the development of the naval capabilities, both from a security point of view and
from an economic point of view, even for the purpose of safeguarding our maritime resources”.

Particularly, a conflict with an international maritime linkage should have resulted in making the SLN a formidable force capable of maintaining dominance at sea. Basically, the SLN was not preventing the logistics reaching the LTTE and “not terrorizing the terrorists at sea”, as described by a former Army commander, who was at the thick of the battle field. Hence, most times in the conflict, the initiative at sea was with the Sea Tigers. The realization that maritime security should be given priority came only towards the end of the war. Even India started laying greater emphasis on maritime security, specially littoral and coastal security only after the infamous Mumbai attack by suspected Pakistani terrorists on November 26, 2008. Sri Lanka is geographically located in a very advantageous position in the Indian Ocean. The major East- West trade route is passing just 12 Nautical Miles south of the country. That situation was exploited effectively by the LTTE sea tigers to bring in arms and ammunitions and other war-fighting materials to the country. Also the north- west and northern coasts of the country are located close to the Southern Indian coast and these rich fishing grounds bring in a large number of fishing craft from both Sri Lanka and India and this too was exploited by the LTTE. Another major factor was that SLN was not seen as a stand-alone force but as a supporting force to the army and air force. The major tasks performed by the SLN was transporting much needed troops and other equipment to the army and air force deployments in the north and north- east of the country. This was a special requirement as the connectivity between the north and the south of the country was severely affected due to the war. The army and the air force were heavily dependent on the SLN to maintain sea supply lines. The SLN developed considerable amphibious capability to support the Army deployment along the eastern and northern coasts. On the contrary, the LTTE made their highest priority the development of the Sea Tigers and a fleet of ships to engage in International voyages. As a former Sea Tiger explained, “towards the latter part of the conflict, almost all the needs of LTTE ground forces, Sea Tigers and the Air
wing came from the sea”. That was the main reason for sustaining the war for long and developing a near-conventional status by the LTTE. There was a time in the history of the conflict when both forces fought conventional battles by employing foot soldiers supported by heavy artillery and other mechanized infantry formations. It was observed that even the heavy artillery and large calibre ammunition for the LTTE came from the sea. The LTTE paid great emphasis on developing the Sea Tigers with multifaceted capabilities such as suicide craft, underwater demolition and suicide combat divers, mine laying and submersibles etc. The large number of boats, World War II torpedoes, partly built submarines captured after the end of the war from LTTE held areas clearly indicate the ocean policy of the LTTE. If the war progressed for another year or two, the LTTE would have definitely threatened the SLN at sea more effectively.

Another area where policy was lacking was the non-enhancing of the strength of the SLN although they were expected to perform many naval as well as non-naval roles, including defending all commercial ports and holding land areas liberated by the advancing army. In general, all the armed forces suffered from a lack of sufficient man power to undertake many of the tasks expected from them, especially during the Cease Fire Agreement (CFA) period from 2002 to 2005; the strength of the armed forces was not increased as there was a ceasefire agreement going on and no justification could be found to increase the strengths. However, according to the focus group of naval and maritime academy, the force level of the SLN was subsequently increased from 36000 to 54000 personnel after 2006 in order to cater to additional requirements the SLN was expected to undertake including coastal domination and defending area liberated by the advancing army. Also the budgetary provisions were increased by 33.485 in 2005 and 60.57% in 2007 and this helped the SLN to acquire much needed additional equipment and their boat building project.

A former commander of the Special Boat Squadron (SBS) brings out the argument that the naval policy did not result in maintaining a balanced naval fleet. SLN focused on destroying Sea Tigers at sea and their platforms and
equipment were mainly focusing on that purpose. However, when the SLN wanted to go into the deep ocean to look for LTTE warehouse ships, which were used to stockpile arms, ammunition and other warlike materials they purchased from international markets, the SLN realized the need for much bigger platforms capable of longer endurance. Whilst the SLN was focusing attention on fighting in the near-coastal battle space, the LTTE was engaged in ship-to-shore transfer of illegally acquired weapons; even thousands of nautical miles from our coast. The LTTE used various front organisations located in various capitals around the globe to carry out these logistic operations and they used funds collected by them in other parts of the world to purchase these illegal weapons. The LTTE ships carried out some legitimate businesses as well to earn money and used opportune moments to carry out their intended mission in support of LTTE ground forces. A former commander of the Fast Attack Flotilla also agrees with this observation:

I think the navy put so much of effort and confidence on the FACs. We failed to see anything beyond that. As a result the FAC Flotilla was the work horse for the navy. I used to say if the FAC turn back the fleet turns back. When the fleet turns back, the navy turns back. When the navy turns, back the whole country turns back. So much of reliance or the dependability was on FAC. I would say we could have thought of another kind of fleet or Flotilla that is for example the Offshore Patrol Vessels (OPV). At one point of time OPVs were looked as a kind of a burden, high value assets you have to protect but merely doing surveillance and nothing else. But it proved its mettle in the destruction of the warehouses. For the navy you need a various types of vessels capable of undertaking different roles. But having total reliance on one aspect only is a mistake. There was a time that the FACs could not tolerate the high casualty rate and the aspirations of the command.

If the policies of successive governments were directed towards developing naval capabilities, the conflict would have ended much earlier as
the LTTE would not have been able to sustain the war efforts without supplies reaching them by sea. “The LTTE focused their attention on defeating the country economically, militarily and politically. They were also focusing on defeating the will of the people to fight the war”, states a former Air Force Commander. The LTTE was carrying out a long term plan systematically to destabilize the country.

A former Army commander and CDS sums up the policy drawback of not strengthening the navy as:

I am quite sure of that. I think till about 2006, I don’t think our navy was capable of detecting any LTTE shipment. I don’t blame. Not only the navy, even our intelligence agencies, they didn’t have the capability of preventing procurement from overseas and coming to Sri Lanka, when they used something new only, we knew that they got something from overseas. But not knowing from where and how all that came, all the agencies of our government failed.

The LTTE not only obtained small arms and ammunition across the sea; even large calibre 130 mm Artillery guns and ammunitions for the organization came from the sea. The former CDS says:

Those mortars and artillery, are ‘mass destructive’ weapons, in fact mortars, I could believe in transporting even in a small boat as its man-portable. But when we realized that they were even using artillery against us, the artillery weapons, especially 130mm, I know in my army career we never lost a 130mm to the enemy. But we recovered so much of 130 guns including brand new guns at the end of the war.

This means that the LTTE enjoyed so much freedom in purchasing and transporting even large calibre weapons by sea and the SLN was not capable of intercepting these arms shipments reaching the shores. These arms shipments not only gave the LTTE near-conventional fighting capabilities but also made them capable of sustaining the war. The heavy weapons possessed by the LTTE
resulted in causing large scale casualties to armed forces and halted or retarded their advances on most occasions. A former CDS concludes the impact of heavy artillery as:

I think casualties from artillery and mortars were the highest on our side.
I think it was more than 50 percent. We know if you fire a battery of artillery together, that is 6 guns together, you cover one big square. That is the capability of artillery. So you can imagine what happen to anybody who is unprotected within that square. There was a lot of heavy artillery fire and we could only move our troops for day time operations, because of heavy mortar and artillery fire there were lot of delays. It took about, if I remember correctly, eight months to advance through one front.

This clearly indicates that the failure of SLN to prevent the LTTE supplies coming from the sea was in fact affecting the entire security situation, and the LTTE was able to fight not only like a guerrilla force but also like a near-conventional army. The SLN was trying its best in maintaining some degree of sea control of the whole sea area around the country but was not focussing sufficiently on preventing large scale supplies reaching the LTTE. This can be cited as a major policy as well as strategic drawback of the entire military mechanism. As pointed out by a former CDS the “lack of coordination between the air force and the SLN in maritime surveillance was another policy draw back of the conflict”. It is known that many of the tasks earlier performed by the navies can now be undertaken by the air force with the advances of sensors carried by air craft. Better coordination between the air force and the SLN could have produced a more effective tactical situation by saving many resources and would have contributed effectively in maintaining effective surveillance at sea. There should have been a clear policy of developing a maritime strategy combining land, air and sea strategies. All forces were, most of the time, fighting their own battle and not a combined battle against the common enemy.
The lack of blue water capability for the SLN when they needed it most was another negative aspect of the war. The SLN fleet mainly consisted of FACs. The FAC fleet was developed greatly with higher speed and better sensors and stabilized gun platforms. However, the SLN did not have larger ships with more endurance and other required capabilities to undertake missions at distances far away from the land. The LTTE studied this lack of suitable ships for long distance missions in the SLN and made their plans for gun running ship movements accordingly. The SLN focus was mainly on territorial waters and within the Exclusive Economic Zone (EEZ). The LTTE ships were positioned outside the EEZ and would come closer only when they wanted to transfer their lethal cargo. A former director general of engineering (DGE) in the SLN indicates three engineering requirements that should be considered when a ship is required to proceed to long distances away from the land; operational state of the machinery, condition of the hull structure and systems and the endurance. The main engines, auxiliary machinery and other systems are to be of optimum operational status and the commanding officer will have confidence on the ship. The condition of the hull is of critical importance as the ship may encounter rough sea conditions and no shelter will be available. To achieve this hull status, it is necessary to conduct periodic inspections and routine under water maintenance and necessary repairs. The third most important factor is endurance and that is linked to the carrying capacities of fuel, lubricants, water and other logistics. Endurance will also depend on the most economical speed that the ship is proceeding on and it is always advisable to keep a reserve stock to meet any contingencies.

5.2.1.2 Absence of Political Leadership and Political Resolve to End the War

As per Rohan Perera, the political will to engage with the international community is a must for winning a conflict of this nature, which was not limited only to the territory of Sri Lanka. He says that:
Number one, there must be the political will to cooperate among states, primarily in the exchange of information and intelligence. Terrorist financing is a critical issue. Trans–frontier flow of funds for illegal actives such as purchase of arms, need to be countered, and collectively greater collaboration in these areas is necessary. Number of States are parties to the Terrorist Financing Convention, but there must be a genuine effort to implement.

Towards the end of the conflict, it was clearly evident that “the government of Sri Lanka was able to gather the much needed international collaboration and support to fight against the menace of terrorism. They were able to take advantage of the Global War on Terror (GWOT), a concept pioneered by the USA and other regional initiatives in combatting maritime terrorism”, states a former commander of the navy.

Another policy drawback for not winning the war for a long period is attributed to heeding to international pressure to stop military advances. As mentioned by the former head of national Intelligence, the political leadership had to be determined to defeat the LTTE militarily. Especially the government after 2005 did not succumb to international pressure to halt the military offensive. This in fact provided the much needed moral support for the military leadership to defeat the LTTE comprehensively.

A former commanding officer of the SBS indicates this predicament faced in the latter part of the war:

By the beginning of hostilities in the last phase of the conflict many members of the defence seems to have been demoralized and lacked enthusiasm for they have seen the conflict been dragged mainly in the absence of sound military and political policies and strategies. Many thought that the war was unwinnable and the only answer was resolving through negotiations. From time to time, we have seen incompetency in defence as well as lack of tenacity in political leadership.
The lack of Visionary Leadership during most parts of the conflict is cited as another major strategic drawback for not winning the war much earlier. Although the previous leaders of the country tried to resolve the conflict by employing various strategic measures, victories were not forthcoming. There were few instances of political will to win the war by the leaders of the country. There were some instances of clear and unambiguous military will to finish the war too. A former Commanding officer of the FAF points out, the reason for major setbacks in the war against the LTTE was the “lack of synergy of both political and military will”. To battle an insurgency like that carried out by the most ruthless terrorist group in the world, a synergy of all efforts is a must. The political and military will have to be mutually enforcing and rewarding. As the military is an extension of politics, the efforts can only bear favourable results only when these two understand each other well and work in combination with one aim and one mission.

A former CDS, opines that the major difference after 2005 was leadership, starting from the President himself. He further states that “there was a clear framework to work and we had an aim. We had to finish this war on terrorism and be the victors”. A former chief of national intelligence, calls this as the political will. The military now had a clear strategic objective; that is to eradicate terrorism from the Sri Lankan soil. The military was promised the necessary increased cadres and hardware to battle with the LTTE. There was a clear selection of an aim, and the military now had to carry out their activities to defeat the enemy. The president also gave the assurance that he would handle all outside pressure. “In short we had a very clear task and we were able to carry out our duties without getting distracted by anybody or anything” says a former CDS, while a senior naval officer indicates the changes which took place after 2005:

I believe for most part our rationale has been simply clouded by past experience and over estimation of LTTE. But that rationale quickly changed after few months when we had more ground information and
having realized the steadfast political resolve and the policies of the leadership.

A former CDS highlights this transformation in the war:

The Secretary of Defence, Mr Gotabaya Rajapakse was at the helm coordinating all the activities of the three forces and this too provided a comfortable working environment. The momentum was starting to build up little by little; victory after victory, with gains initially at a slow pace but rapidly increasing later on. The media played a vital role by supporting the forces. This made the whole country take part in this humanitarian operation with the population giving their support to the armed forces and police and other forces which were engaged in the battle.

A senior naval officer sums up this change as:

The tempo of operations swiftly changed the attitude of defence personnel from a defeated mentality to a victors’ and moral remained very high despite occasional setbacks. Even the general public too was very supportive of combat action. However, the ground strategy alone did not win the battle. For instance, the destruction of sea tigers, especially sinking of floating warehouses destroyed LTTE’s logistics completely and shattered their war fighting capacity add strength to the ground strategy.

5.2.1.3 The Dearth of Effective Intelligence and Intelligence Coordination

The success of any war would depend largely on effective intelligence. The LTTE invested heavily on gathering and analysing information and used them effectively to carry out missions against the military. The military intelligence for the most part of the war was in its infancy. A former CDS indicates the status of intelligence gathering in the military as follows:
However, during humanitarian operations under the initiative of Defence Secretary, coordinating of all the intelligence agencies took place. He used to put all the intelligence together, summon them into conference and then share intelligence. So this helped a lot. I know at the final stage of the humanitarian operation, I heard that they were even gathering information of LTTE’s foreign procurements, they were monitored and then it was shared with the Navy. Also they knew everything before the movement of ships, they are being loaded and moving from one port to another port and then we could prevent some of those movements. That was success, that the Navy got that capability, I have never seen in the navy before.

A former CDS observes the lack of coordination among Intelligence gathering organisations as a major policy and strategic drawback. Most of the government and military intelligence gathering organisations were engaged in a competition to gain prominence. They were not ready to share even relevant input with other organisations and some of the input provided by them were out dated and not timely. A former head of national intelligence says that at times he was reluctant to give critical information to anyone else but to the commander himself, as he feared that it would be compromised. There had been instances where the intelligence was leaked out to the media before the operation could be carried out.

The intelligence community also did not go out of the way to gather valuable information but depended purely on some selected agents. Drawbacks could even be seen in evaluating intelligence and dissemination in a secure and timely manner. Until the intelligence network acted in a very professional manner, the LTTE was able to exploit all situations and especially they took advantage of carrying out illegal ship to shore movements. The LTTE arms shipments were able to move in the open ocean carrying their lethal cargo transferring them to shores under the LTTE control without many problems.
5.2.1.4 Corruption and the Lack of Proper Evaluations in Procurements

A former Navy Commander points out that corruption and the lack of clear policy in purchasing weapons was a major drawback for the success of the war. The war was going on for a considerably long time and the governments and people were getting used to the war and hearing casualty figures. The arms dealers were exploiting the situation and arrived in the guise of trying to help to win the war. However, they were here for doing business. There were instances of buying the wrong equipment, wrong ammunition, excess quantities of ammunition, wrong vessels etc. Some of the decisions would have been due to the negligence or lack of understanding. But most of the deals were due to corrupt practices and some people were making huge commissions. A former Chief Executive Officer of the Lanka Logistics and Technologies Limited (LLTL) Jayantha Wickramasinghe, confirms that there were many concerns about compromising national security through the military procurement process. He goes on to states that:

Allegations of corruption due to third party involvement and paying of commissions and inducements to intermediaries in the military procurement process were rampant. Information security was at risk, potentially enabling the LTTE to gain strategic advantage. There had been instances of supply shortage and substandard equipment being supplied.

Military procurement is a specialized area and a great deal of secrecy should be involved in the process so as to prevent the enemy from gaining valuable information regarding the specifications, numbers of weapons ordered and capabilities of such weapons. The open tender system, though intended for transparency and fair play may not be the most suitable system for procurement of war fighting equipment. The former CEO of LLTL states; “most countries do not follow a system of open tenders. Either you deal with a short listed manufacturers of government agencies”. What was practised in Sri Lanka was
the open tender system and it is possible that the LTTE made use of the large number of registered suppliers who had the information about the needs of the armed forces. The LTTE must have forced, through their international network, certain countries not to provide arms and ammunition to the government forces.

5.2.1.5 Non-evaluating the Capabilities of the Armed Forces

Studying the capabilities of the armed forces as a combined force meant that fighting against the LTTE was not successfully done during most parts of the war. Quite often, the individual services were evaluating their capabilities and requirements on their own rather than understanding the possibilities for mutual benefit and possible interference. There was no effort to do joint studies of the equipment needed; especially in the case of maritime surveillance. A former CDS states:

If the Sri Lanka air force and the navy could have worked together, and if the air force could have done continuous surveillance and the navy had the capability to get to an area quickly in deep sea when the SLAF sees enemy activity, and if the air force had long range bombers to interdict enemy boats, I think this enemy would have looked very small. The enemy became big because we allowed them; because we did not do our surveillance work properly due to lack of assets. The enemy exploited this.

The lack of joint training was another policy level drawback which hampered joint efforts against the common enemy. All the military efforts began to be undertaken in a much more coordinated manner only after 2006. The service Commanders after consulting with their senior commanding officers on the field worked in harmony among the services where jointness was seen to a certain extent, says a former CDS.
5.2.1.6 Non-Application of Modern Technology

The lack of application of developments in modern technology is cited as another policy level drawback for not winning the war much earlier and allowing the LTTE to develop to the potent force it was towards the end of 2005. The LTTE took the initiative to use whatever new technologies available to further their course. They were very capable of using ‘dual use’ technology equipment. A former Director General of Electrical and Electronics (DGL) in the SLN points out that till about 1996 the technical sailors in the electrical branch were not sufficient to perform the tasks entrusted to them. There was a time when most of the sophisticated equipment had to be sent abroad to the manufacturer for major servicing and at times even for routine maintenance. This lead to additional costs and the non-availability of crucial equipment for a certain period.

Also the SLN could not apply the foundation and theoretical knowledge that the technical personnel acquired during their training abroad. There was no proper high quality workshop in the SLN to undertake the repair and maintenance of equipment such as thermal images and thermal cameras and hence they had to be sent abroad for repairs too. There was no weapon engineering branch in the SLN till about 1996. Further, research and development work was not given due priority in the SLN. Also the SLN did not have a proper data network to connect various sensors and communication channels at most important locations such as naval headquarters and command headquarters. The development of the tactical picture was not possible and the command had to rely on basic communication procedures to obtain valuable input and their decisions and directives had to be sent back to the theatre commanders through the same basic methods. SLN started the first data network in the navy in 2000, states a former DGL. Network centric capability is an effective tool to coordinate and guide a war. Real-time reliable information helps the tactical commanders greatly in directing war efforts. The commanders can observe the battle and advice or support the units at the scene to effectively fight the enemy. But the SLN was lacking this facility until much
later in the conflict. Also for harbour security tasks, SLN was not fully equipped with the necessary technologically advanced equipment. This is in the backdrop where the LTTE was determined to target all the ports in the country in order to cripple the economy, disrupting supply lines to the military.

5.2.1.7 Not Developing/ Acquiring Integral Air Capability

The Indian Maritime Doctrine 2009 describes the importance of having one’s own air capability for a navy as follows:

Integral air power at sea extends the combat reach and rapid response capability of the force. They are used for surveillance, anti-submarine warfare (ASW), anti-surface warfare (ASuW) and air defence (AD) tasks, and a force multiplier, essential war-fighting and any operational task necessitating force protection, either at or from the sea (Indian Maritime Doctrine, 2009, 128).

This statement amply demonstrates the important role which can be played by having integral air craft for a navy. The SLN took the bold decision to acquire OPVs in 2000 and that was a major shift in SLN policies not to depend mostly on FACs.

A former navy commander, Admiral Cecil Tissera speaks about this as follows:

We are an island nation. For an island nation, the first line of defence should be the sea. We have an EEZ seven times the land area. To cover that huge water space we needed big ships. Then we took a bold decision to go for bugger platforms which were capable of longer endurance and hence we were able to operate far from land.

The OPVs acquired by the SLN had facilities to operate helicopters as they had helicopter decks for landing and taking off helicopters and hangers to store them when not in use. Many navies in the world are operating their own air craft, especially helicopters due to the multiple use and as a force multiplier.
Admiral Thissera states that: “we needed to introduce air craft for our sea battle. We had intelligence to suggest that the LTTE was experimenting with small air craft. So we had to be ready, the air wing could have changed the situation for us”. This is a clear strategic foresight of a naval commander. He envisaged the need for acquiring air capability for navy and the potential of it. He wanted to make use of the existing capabilities of OPVs to accommodate helicopters.

He also speaks about the positives of a naval helicopter that he was trying to acquire:

Endurance of helicopters that we were trying to acquire had 500 nautical miles. We could have effectively and economically used these helicopters for maritime surveillance. The naval use of helicopters is different from air force operating air craft for maritime surveillance. Naval pilots would have understood the theatre of operation much better that air force pilots.

Throughout the conflict in Sri Lanka, maritime air reconnaissance was done by air force pilots together with naval officers. But having a helicopter at sea, which can be launched when there is a need, would have given additional capability for the naval platforms, especially when they were deployed quite a distance away from land. Indian Maritime Doctrine speaks further about the integral air craft and maritime surveillance as follows:

Maritime reconnaissance air craft are invaluable assets for keeping large areas under surveillance and enabling development of MDA. In their long range maritime patrol (LRMP) role, these platforms deploy a wide range of sensors and weapons to conduct Anti-Submarine Warfare (ASW) and Anti Surface Warfare (ASuW) operations at extended ranges from own shores. These air craft are also capable of extending cooperative engagement by guiding maritime strike at sea by other air craft, ships and submarines (2009, 129).
Although the foundation was laid for acquiring helicopters from India for SLN, it never materialized. Admiral Tissera further states that; “we were almost getting there. Agreements were signed between governments of India and Sri Lanka to acquire helicopters. We started training our people. We built a hangar at Welisara naval base to keep helicopters”

However, despite the fact that there was a clear understanding about having integral air power for SLN and having gone through the initial formalities, the concept did not become a reality. This can be considered as a major policy level drawback of the government and specially the SLN.

5.3 Strategic Level Drawbacks

A good strategy is essential for any successful campaign. No sensible military would go to a war without a clear laid out strategy. However in the case of Sri Lanka, It was the LTTE who went to war with the government forces and the armed forces were compelled to react to developing situation rather than having a grand strategy to win.

5.3.1 The Lack of a Grand Strategy

The absence of a Grand Strategy during most parts of the conflict must have affected the progress of the military against the LTTE. Most of the time, there was no clear grand strategy but only ad-hoc individual strategies of respective arms of services. There was no merging of land, air and maritime strategies which should have led to the creation of a grand strategy. This resulted in the military not going on the offensive with a clear strategy since the formative years of the LTTE, thereby allowing the latter to develop into a force to reckon with.

On the contrary, the LTTE seems to have worked with a clear strategy. The result was the gradual gaining of sea control by the LTTE Sea Tigers towards 2005, and the claim they made for the legitimate right to use the seas off so called LTTE controlled areas during the infamous cease fire agreement signed in 2002. The gradual entry into the air space by the LTTE flying wing also bears testimony to the LTTE grand strategy. It is a fact that many a serviceman paid with his life without even gaining substantial victories on ground or at sea, due to the lack of a carefully selected
grand strategy. There were many occasions where, after a successful military operation, the army lost ground to counter attacks launched by the LTTE. A former CDS says:

The armed forces were not able to hold onto the gains in a meaningful manner and that really confused and demoralised them. Due to lack of strategic direction sometimes we went for operations and on successful completion, came back to our camps. After a few months the same operation was done and we come back again without holding the area liberated. It was demoralizing and confusing for the armed forces.

There was even a severe recruitment issue for the army as the young aspiring men were reluctant to join the army as they were not sure of the outcome of the war as it had been going on for a long time with no sign of a clear victory. Due to the shortage of manpower, the armed forces were unable to engage the terrorists on many fronts and the terrorists on most occasions decided where and when to fight.

“Addressing only the symptoms and not the root causes of the problem was another major strategic issue which adversely affected the SLN”, states a former commander of the navy. The LTTE used many different methods to send their military cargo from overseas. Initially the boat movements were between the southern coast of India and northern coasts of Sri Lanka. However, when the organisation was growing and they were losing safe heavens in Tamilnadu, they shifted their focus to bring in supplies by using multi-day fishing trawlers and logistic craft escorted by attack and suicide craft of the Sea Tigers. They developed an ocean going fleet for these illegal arm smuggling runs. Until such time the SLN decided to seek and destroy the LTTE floating warehouses, which were underway thousands of nautical miles away from Sri Lanka, the LTTE enjoyed the freedom of bringing in the military hardware to fight and sustain the war efforts.

Another area where a grand strategy lacked was that the government’s inability to secure the south of the country, although there was no actual battle going on there. The LTTE was able to infiltrate the south and carry out IED attacks at many places; mostly the public places such as economically important targets, bus stops, railway...
stations, busy junctions and places of worship. That led to a fear psychosis in the country where no place was seen as safe.

5.3.2 Necessity for Understanding Concepts of Asymmetric Warfare Employed by the LTTE Sea Tigers

Fighting an asymmetric war with a fully conventional mind-set was another strategic mistake done by the armed forces. A former Director General Engineering in the SLN states:

During the initial stages of the war, the SLN adopted the conventional warfare approach at sea. However, the approach proved ineffective in the fight against the LTTE, which was a ruthless terrorist organization that did not heed internationally accepted rules and laws such as the Geneva Convention. They made improvisations in warfare and undertook suicidal missions that took a heavy human toll, showing little or no regard for the value of human life. In this context, a conventional warfare approach seemed less effective to counter the LTTE Sea Tigers. Therefore, the SLN began to adopt an asymmetric or non-conventional approach to warfare that provided better outcomes and success at sea.

Like any other major navy in the world, the SLN was developed with a conventional mind-set. The SLN was trained and equipped within a conventional framework. The thinking and planning in the SLN for the most part was conventional. However, the LTTE being a non-state terrorist organization was never confined within a conventional mind set. The Sea Tigers always exploited the weaknesses of the SLN and stayed ahead of the competition. The initial response of the SLN was rather conventional and they never wanted to act like a guerrilla group at sea. The force level, large calibre guns and other equipment were all catering to a conventional naval mind-set, while the LTTE did not have to confine themselves to a conventional mind set and principles; they were free to experiment new innovations at sea. With the results they thus achieved, they continued on the same mind set and became a real threat to the conventional SLN. The LTTE was very much ahead in improvisation and their own
Research and Development (R&D). They acquired this expertise from captured SLN boats, through intelligence gathering and by open sources in the world. They were determined to deny the freedom of movement at sea to the SLN. The SLN found it extremely difficult to counter the threat posed by the Sea Tigers’ asymmetric strategy with a conventional strategy. The Sea Tigers were capable of modifying their boats, weapon outfit and tactics more effectively and when they saw the results, they were confident of their approach and continued to do even better. The application of asymmetric strategies by the LTTE Sea Tigers paved the way for them to achieve near-conventional capabilities on land, at sea and limited capability on air.

5.3.3 Lack of Coordination among Armed Forces

A former commander of the navy explains the lack of coordination between the service commanders as another strategic drawback. This situation was prevalent, especially 2006 onwards. The army and navy commanders were not at all in good terms and that affected the progress of the military advance and specifically the obtaining of mutual support. However, the relations between other service commanders and police remained fair. Although there was no coordination between the top brass of the navy and army, the ground commanders remained in close contact with each other and worked together enabling mutual support. It was evident that even the President and the senior members of the Security Council were aware of this rift and somehow controlled the situation so as to have a common objective in winning the war. This misunderstanding even spread to the media. There was also a battle to claim credit for victories by the two commanders. A former CDS states that “as a tactical commander [he] could have finished this much before if [he] could use the navy more effectively”.

Specially during the final stages of the battle, there were restrictions on the positioning of naval boats and as a result, the small naval boats were always kept at sea and the crew changed by swimming to and from the boats during turnaround time. Also the optimum utilisation of naval sensors for the advancing army columns did not happen. All this took place due to the rift that existed between the navy and army commanders.
The lack of joint efforts by the armed forces at a desired level was a major strategic level drawback experienced during the whole conflict. There was never a proper national command centre where maritime, ground and air intelligence and intelligence from other sources could be collected for making strategic decisions. The security council which was sitting almost on a weekly basis with the participation of the President, the Prime Minister, secretary to the president and secretary to the ministry of defence, secretary to the ministry of foreign affairs and service commanders, IGP, chief of national Intelligence discussed strategic issues and provided the necessary policy and strategic directives to the armed forces and police.

The lack of coordination among the armed forces at the strategic and even at tactical level is also cited as a drawback in the battle against LTTE terrorism. A former commander of the Air Force talks about the lack of coordination and planning when the LTTE introduced few light aircraft to the battle space:

I always used to think that the navy was having a solution, for that was not to air to air. Because we had only fast aircraft to intercept fast aircraft. So you can’t intercept a small air craft with a low radar signature, but navy had the radar guided guns that could have given a better indication so you could have planned on those terms, either use it as it is or remove the gun and make use of it.

Even in this occasion where the LTTE light attack crafts were trying to terrorize Colombo —the capital of Sri Lanka— the most needed coordination among the armed forces was lacking.

5.3.4 Paucity of Strategic Communications

Strategic Communications play a clear role in any campaign. Strategic Communication refers to policy-making and guidance for consistent information activity within an organization and between organizations. During the most part of the conflict, there was no evidence of using strategic communications effectively to gain victory over LTTE terrorism. Government communications were mainly aimed at satisfying the local population and not aimed at achieving long term strategic
objectives. Strategic communications need advance planning and a clear knowledge of the objectives. The combination of the message, the media channels and the audiences were not fully understood or coordinated in an effective manner. There were also no properly organised efforts to combine and bond military and governments communication efforts. The LTTE was very much ahead in strategic communications and used the social media and the internet in a very meaningful manner propagating their message to the masses here in Sri Lanka and Tamil diaspora communities abroad. They used strategic communication very effectively in raising funds, especially to purchase weapons and other war fighting materials including duel use equipment from various countries around the globe. Through these efforts they were able to portray the LTTE as a liberation movement and the GOSL as an oppressive regime. They were also able to convince certain sections of the international community that they were genuinely harassed by the government and they were fighting merely to survive. In fact they were able to get away from large scale atrocities committed by them against the Sinhala dominated south and their own people living in areas which were under their control.

Likewise, the LTTE was ahead in strategic communications and effectively used various lobbies and fronts. They also exploited the liberal rules in western countries to carry out the propaganda and raise funds to sustain their war-fighting efforts. A former Director General of National Media Centre, Laxshman Hulugalle describe this situation stating that “the government agencies were logging onto Tamil net to obtain information about the conflict”.

5.3.5 **Shortcomings in Maritime Security**

Maritime security is of paramount importance for an Island nation like Sri Lanka. As former DGL points out, “the SLN did not fully understand the strategic importance of dominating the near coastal and coastal areas, especially off the areas which were under the control of the LTTE”. The Sea Tigers took advantage of this situation and focussed on denying the use of the sea areas adjacent to the coastal areas under their domination by employing various tactics and effectively using suicide attack craft against naval platforms. Naval craft chose to stay away from this sea area
which was up to about 5 nautical miles from the coast and the sea tigers enjoyed freedom of uninterrupted movement across that area. When they wanted to move into the deep ocean they used different tactics and were able to observe the naval presence and exploit the gaps for their movements. According to a former DGL, “SLN really underestimated the enemy’s maritime capability and ignored the potential until it became a real threat”. The over-confident attitude of the SLN of considering the sea tigers as an insignificant threat paved the way for the latter to develop to a maritime force to reckon with at sea. Incidentally, the LTTE was the only terrorist organisation in the world which had a vast array of potent naval capabilities which were effectively used to gain and maintain a certain degree of sea control of certain sea areas. It was the lack of strategic appreciation on the part of the SLN which helped them to grow into a force with such capability. LTTE gave priority to the development of sea tigers as they clearly understood the importance of the sea around them to the sustenance of their movement. They progressed gradually from ordinary fibre glass dinghies (FGD) to the sophisticated attack crafts making good use of the sea area off their coasts. A former DGL also points out to the weakness of acquiring proper modern sensors such as Radio Aid for Direction and Range (RADAR) and communication equipment during the early stages of the conflict as a reason for not having the edge over the Sea Tigers for a long time.

Insufficient coastal defences was another negative aspect of the war against the LTTE. Sri Lanka is an Island nation and the coast line around the country is 1340 kilometers. The LTTE in their map of Eelam claimed nearly 2/3rd of the coastal belt as part of their territory. This area included large stretches of Eastern, Northern and North western coats.

5.3.6 Shortcomings in Dominating Areas around Military Installations

Another strategic error committed by the military was to confine themselves to certain geographical locations. A former CDS highlights the predicament of armed forces in Jaffna thus:

It is probably they (LTTE) had thought strategically, the only way to siege Jaffna or to take power of the city was to put the army in the defensive, and to
cut off Jaffna through land routes. In that situation they thought they have to counter the routes by sea and air and accordingly developed counter measures to make the Sri Lanka navy and the air Force ineffective. Having achieved that task, again like how they developed the land-based force, probably they developed naval capability and finally air capability.

There were many military installations along the eastern coast during and before the LTTE started the battle for Eelam. But gradually these camps became bigger but were limited to certain areas. One example is the Mulaithivu army base. The terrorists focused large scale attacks and finally overran the defences of the largest military camp on the north eastern coast. Once the Mulaithivu army camp was lost for the military, the LTTE had a free run in the area and soon became a potent threat to the SLN units patrolling the area, since the Sea Tigers could then use the coastal and sea areas freely without any interference from the armed forces. They also used this area effectively to receive military hardware brought in by LTTE ships. Also they were able to use the surrounding area to carry out their clandestine boat building projects and to position suicide boats along the coast so as to become a threat to the naval craft operating close to the coast.

Till about 2005, most of the military bases in the operational areas geographically isolated themselves. A former CDS sheds light on this aspect by saying that:

I feel that one huge mistake that the army made was to confine themselves to their camps and depended on the navy and air force for their supplies, defence and movement of personnel without dominating the road which gave the terrorists freedom to dominate surrounding areas. Although the reason for this confinement was purely to minimize own casualties due to enemy ambushes and land mines, it resulted in even more casualties subsequently. In this scenario the terrorists grew in strength, capability and confidence while we became defensive in protecting our camps.
This situation was a major strategical blunder committed by the armed forces. Most of the armed forces’ camps confined themselves to the boundaries of their establishments. They depended on sea or air movements to sustain the camps. This provided ample opportunities to the insurgents to surround the military installations and enjoy freedom of movement around the camps. The military lost the tactical advantage and did not know what was happening around them till such time it became a potential threat. The LTTE enjoyed freedom to carry out their boat building, launching and recovery from many coastal areas and overcame the drawback of not having enough harbours. This became an additional burden to the navy and air force as they had to use most of their valuable assets to provide replenishments to the isolated military camps and even to defend them against enemy attacks. A former CDS says:

This resulted in the enemy identifying certain areas as their land and the Forward Defence Line (FDL) concept came in to being. Then the nature of battle took on a conventional form gradually and lasted till the end. However, I must mention that there were elite units in the Army doing operations deep into un-liberated areas controlled by the LTTE. These were the Long Range Reconnaissance and Patrol (LRRP) teams that were successful in instilling great fear in to the LTTE, mainly their leadership and managed to put into disarray many terrorist operations.

5.4 Tactical Level Drawbacks

Even with a clear strategy, good tactics plays a crucial role in winning a war. Here again the SLN’s tactics were mostly responsive to the tactics of the LTTE Sea Tigers. There has to be a clear understanding between policy, strategy and tactics for a success in a war situation. Some of the tactical drawbacks this research discovered are as follows;

5.4.1 Dearth of Coordination among the Armed Forces at the Tactical Level

The above is yet another drawback cited in the battle against LTTE terrorism. A former commander of the air force talks about lack of coordination and planning when the LTTE introduced a few light aircraft to battle space:
I always used to think that the navy was having a solution, for that was not to air to air. Because we had only fast aircraft to intercept fast aircraft. So you can not intercept a small air craft with a low radar signature but navy had the radar guided gun that could have given a glimpse so you could have planned on those terms either remove the gun and come to the basement and make use of it.

Even on this occasion where the LTTE light attack craft were trying to terrorize the country, the most needed tactical coordination among the armed forces was lacking. The armed forces fought, mostly individual battles and not in a combined manner with a combined objective. The LTTE on the other hand considered all of the Government forces as one enemy and their tactics were aimed at defeating all military establishments.

5.4.2 Necessity of Proper and Secure Naval Communications

A former commander of the navy indicates the lack of proper tactical communications as a major tactical drawback for not winning the war for a long period. There had been major communication shadow areas off Mulaitivu and south of Delft sea areas and naval craft in patrol found it difficult to convey messages or receive vital information and operational instructions from the command operation centres when they were in some sea areas. Communication plays a key role in the success of any operation at sea, air or land. Naval craft heavily depend on radio communications on Ultra High Frequency (UHF) and Very High Frequency (VHF) for tactical communications. When a ship is on patrol at sea, one of the most common and economical methods to stay in touch with the command centres is to have radio communication. Having effective tactical communications provide the officer in command with confidence that he can rely on them to seek necessary assistance or to keep the command centre informed of a developing situation. When the officer in command feels that he cannot rely on communication, he tends to stay away from danger areas, thereby losing the effectiveness of the patrol.
5.4.3 The need for Capable Officers as Leaders of Human Resource

The officers in the armed forces play a key role in getting their men to undertake many a mission for achieving the final objectives. The officers are carefully selected, trained and given exposure and responsibility at various levels under varying circumstances to mould them, to lead their men and units in battle or any other developing situation. A former commander of the air force points out that “in the air force, suitably qualified and experienced people were given key positions so that they could teach and motivate those under their command. Vital training was carried out uninterrupted and operating procedures were changed to give us an advantage. Achievers and hard workers were recognized appropriately”. In the armed forces, seniority and merit play a crucial role in the career of an officer. The promotions, advance training courses, appointments and attending special programs depends on a system based on merit and seniority. A former commander of the navy identifies that this system did not provide enough opportunities to extraordinarily brave offices. He explains the changes he made: “I made it very selective and I also identified there are certain people who are good at certain areas. So I selected them and appointed them for that particular area to develop and it worked”.

5.4.4 Paucity of Night Fighting Capability

Since the beginning of the war against the LTTE, lack of night fighting capability was a major drawback. At the initial stages of the conflict the navy had to depend on less sophisticated RADAR images and ordinary binoculars and the human eye to fight with the sea tigers at sea. A former commander of the navy explains how this situation was overcome at sea: “When the navy realized that they needed to see through the darkness, a powerful search light called Xenon, with its 1000 candela-power illumination, was introduced. So when they picked up something on the radar, they used Xenon lights to illuminate the target and then on positive identification, it would be engaged by fire power”. Then the LTTE introduced the suicide boat and regained the tactical advantage. The Sea Tigers also used large number of boats to attack the SLN craft in order to gain the numerical superiority, and the naval craft found it difficult to engage with all the Sea Tiger craft simultaneously. Then the navy
introduced the thermal camera so as to ensure better night fighting capability to the FACs. A former commander of the navy describes this process; “The Navy introduced the thermal camera; the Multi Sensor Integrated System (MSIS) with a stabilized gun called the ‘Typhoon’. With this system coming into the SLN, the LTTE was totally taken by surprise and the SLN destroyed many LTTE boats at sea at will, because we could see and they could not see us clearly”. This compelled the Sea Tigers to develop advance suicide boats to counter naval craft.

5.4.5 Under-utilization of Special Forces

Special Forces activities, especially in the navy was not given due consideration and not used to good effect. In fact, there was a lack of understanding of their abilities and competences. This was a clear tactical disadvantage to the navy. Although the navy had developed the elite Special Boat Squadron (SBS), they were not effectively deployed till about mid-2005. The navy took a decision to increase the number of SBS cadres. But the SBS training is a very tough one and only about 50% of the personnel volunteering to join SBS would be able to go through the rigour of the training and overcome many challenges to become a SBS member. The only alternative was to increase the numbers in one intake and even that was limited by the number of qualified instructors available to undertake specialized training.

5.5 The Development of the LTTE Sea Tigers

Basically the LTTE, from the time of the inception of their Sea Tigers, really understood that if they wanted to fight on land they should have a stronger sea transportation system to get the required war material to support them. Being mostly a coastal community, the LTTE cadres had more affinity with the ocean, as the major livelihood activity of their community was fishing and other activities related to the sea. A former commanding officer of the FAF describes the expertise of this fishing community who later became members of the LTTE and specially the Sea Tigers:

I think they quite cleverly understood the value of the ocean by being a coastal community and before the assassination of Rajiv Gandhi they were mostly depending on the Tamil Nadu coast line for their supplies. So it was a familiar turf for them. They
will go to Tamil Nadu, come back, and again go back. So these cross-Palk Strait runs have given them lot of confidence. And with that, they knew that they needed their own shipping capabilities. They needed to bring items across the ocean and they already had the expertise.

By this time the LTTE had developed a good network of contacts in Tamilnadu and used their expertise for movement between the two coasts. Then they flourished and expanded their activities to international shipping as well. As per the Focus Group of North Western Naval Command (NWNC), the first large Sea Tiger craft was named ‘Kadalpura’ and it was equipped with a RADAR, some communication equipment and a concealed compartment to hide weapons. This craft had been used to transport men and materials from merchant vessels around the coast of Tamil Nadu. The first Sea Tiger headquarters was established in Velvetiturai on the northern coast in 1989, and it was named as ‘Kadalpura’ in the memory of their first boat. “The first successful suicide attack against a SLN ship at sea took place on 10th July 1990, when a FGD filled with high explosives rammed Sri Lanka Navy Ship Edithara, which was anchored off the northern coast”, according to the report of Focus Group NWNC.

The Focus Group of Naval and Maritime Academy (NMA) refers to Sea Tigers as the ‘Umbilical code’ of the LTTE, which helped to strengthen the organisation throughout the conflict. The Focus Group NMA also observes that initially the Sea Tigers linked South India and Northern Sri Lanka and later connected the LTTE to the world. The Sea Tigers provided the LTTE with sustainability through a continuous logistic supply.

5.5.1 Use of Asymmetric Tactics by the Sea Tigers and the Employment of Suicide Boats

A former commanding officer of the SBS states that the, “like any other terrorist organization in the world, they knew that the armed forces, always work in a symmetrical way, and take time to react to any fluid situation”. This statement brings out two important aspects of the success of LTTE Sea Tigers. The LTTE leader fully understood the need to dominate and use the sea areas off the land area that they controlled and the possible success of asymmetric tactics against a conventional navy like the SLN. The LTTE had a long term strategy for developing the Sea Tigers. The
SLN was more on a reactive strategy; that is, when the LTTE used or experimented with a new tactic, the SLN would look for counter measures for the same. The LTTE changed their tactics based on the experience they gained by fighting at sea and by analysing the conventional tactics of the SLN. A former commanding officer of SBS also points out “the total dependence and concentration of the SLN on the FAC fleet as another reason for the Sea Tigers’ growth”. In the early stages, the Sea Tigers did not come into direct confrontation with the SLN, but at latter stages of the conflict, there were occasions where the SLN was compelled to stay away from fighting or withdrawing from engaging Sea Tigers at sea.

A former commanding officer of the SBS goes on to state:

The suicide boat of the LTTE Sea Tigers created a different scenario for the SLN. The SLN had to destroy the suicide craft when detected at sea in order to be safe. There had been many instances that the suicide craft was not detected till such time it hit the SLN craft and at some occasions, even when you have seen the incoming suicide boat the SLN craft could not do much but succumb to the attack.

The LTTE made improvements to the suicide boats, with higher speed, armour protection and stealth technology. The suicide boat of the Sea Tigers made even the most potent platforms of SLN, the FAC, vulnerable. That gave a lot of confidence to the LTTE and it was a morale booster to the Sea Tigers to keep on improving these much feared suicide tactics. A former commanding officer of FAF describes that the losses of FACs due to suicide boats gave the navy a “Sinking Feeling” and “that affected the morale of the SLN personnel deployed at sea”. The SLN was in a real predicament as to what they needed to look for and how to treat the targets at sea; whether to consider them as hostile or innocent. The SLN was on a back-foot and became more defensive. The Sea Tigers exploited each and every aspect at sea. They would experiment and launch attacks using even small fishing boats, ‘theppan’ [a basic wooden dug out] to destroy SLN platforms. During the latter stages of the conflict the LTTE were experimenting with submersible craft and that confused the SLN even further.
A former commanding officer of the FAF explains further that “the Sea Tiger attack craft even used RADAR to control their forward guns with increased firing efficiency. They had used a small RADAR with a six inch display and used the Variable Range Marker (VRM) to set the effective firing range. It is a very simple but effective mechanism which enables the forward gunner to wait until the SLN target comes inside the effective firing range of the weapon”. They also experimented with a human torpedo; that is a man guided small fibre glass construction propelled by a low powered OBM. This type of craft is very difficult to detect at sea by using RADAR due to the extremely low silhouette of the target. This can be an ideal weapon against stationary or slow moving targets in confined waters. A former commanding officer of the SBS describes the development of Sea Tiger craft thus:

Also the LTTE build their boats very robustly to carry multiple weapons and fibre glass construction caused the hits to penetrate through the material without causing serious damage unless high explosive projectile had exploded on the boat. Secondly, inflammable fuel was carried in aluminium tanks placed below the water level thus reducing the risk of fire and explosion on hitting the fuel tank. More importantly, the hull profile of the attack craft served for a steady ride even in considerably rough sea conditions.

The LTTE did not have any harbours under their domination to operate their craft. However, they adopted an improvised technique of launching and recovering their craft to and from the sea using tractors and cradles from the coats under their control. This gave them an advantage, to launch and recover their crafts as and when they required them for sea battles, and camouflage/conceal them when taken ashore to prevent detection from aerial reconnaissance and raids, observes the Focus Group of Defence Services Command and Staff Collage (DSCSC).

The Focus Group Southern Naval Command (SNC) indicates that the Sea Tigers managed to adopt an offensive nature and the element of surprise in their attacks at sea. That was the main reason for the success of the Sea Tiger operations. They enjoyed the freedom to choose the time and place of attacks at sea, whereas the SLN had to be on guard at all the times at sea or in harbour.
5.5.2 The Swarming Tactics of the Sea Tigers

Swarming tactics or a large number of boats coming to attack the SLN FACs from different direction was pioneered by the Sea Tigers. A former commanding officer of the FAF discusses the swarming tactics used by the LTTE Sea Tigers as follows:

It was in mid-nineties that is 1995-1996 onward that the swarming came up nicely because earlier it was a maximum of 2 boats or a two boat groups. But since 1995, they came up with this formation of swarming attacks, there always will be three boats together, operating as one unit and there will be a number of such units.

Swarming tactics adopted by the Sea Tigers were yet another problem for the SLN craft patrolling at sea. The SLN units found it very difficult to engage with more than one or two targets simultaneously. The Sea Tigers were going for numerical superiority as they were unable to match the fire power and the speed of SLN units. They used their boats like in a swarm and when the boats in a swarm were approaching from a number of directions, the SLN unit found it very difficult to engage in battle. That concept also divided the risk factor for the Sea Tiger boats in the Swarm as the SLN craft now had to deal with multiple targets. Another advantage enjoyed by the Sea Tiger craft was the bigger size of the SLN craft; as they could see it even visually better than the SLN craft saw them. A former commanding officer of the FAF also states that:

These tactics succeeded. I would say from in 1990s and 2000 even up to the ceasefire it was a success and we found it very difficult to deal with this swarming attacks. Own analysis in every encounter where 1 FAC deals with 3 enemy groups, 1:3 ratio we lost the FACs. But in all 1:1 encounters we destroyed the enemy.

The introduction of suicide craft to the Sea Tiger swarms became a nightmare for the SLN as now, not only did they have to fight with the Sea Tiger attack craft, they also had to evade or destroy the suicide boats too. This tactic was a great success for the Sea Tigers and destroyed about 20 SLN units at sea.
That was a clear indication for the SLN unit to decide whether to fight or not. However, if the SLN unit was engaged in protecting a convoy, that choice was not there. They had to engage the enemy no matter what, and the number of craft they came in. By about 2006, the SLN casualty rate due to Swarming and Suicide attacks was becoming unbearable. The officers who were commanding the FACs were getting injured and it was difficult to find replacements.

5.5.3 **Attacks against Naval and Merchant ships in Harbour**

The LTTE knew that the SLN was enjoying the shelter, security and facilities of harbours. They also understood that the life line to the northern peninsular was the sea route and harbours played a key role in that. Then they decided to carry out attacks against naval as well as merchant targets in harbours, especially in Trincomalee and Kankasenthurai. The LTTE started targeting ships in the harbour starting from 1995. “Three gun boats were attacked by LTTE suicide divers in the port of Trincomalee. The launching pad for that operation was a small island within the harbour named Sober Island which was at a close distance to where the ships were berthed” indicates a former commanding officer of the SBS. The SLN did not have any presence on the strategically important island and hence the LLTE underwater saboteurs could use it to guide their attack against the three ships in the harbour. SLN did not have a concept of preventing launching of Sea Tiger attacks and once a suicide mission was launched, it was very difficult to thwart it. The LTTE also attacked a number of SLN ships in Kankasenthurai harbour and there were two attempts to attack Colombo harbour and one attempt to attack the Galle harbour. It was a very challenging task for the SLN to guard the harbours against LTTE attacks. It was the navy that the LTTE was targeting for a number of reasons. “They believed that if the navy was neutralized the rest of the operations would be much easier to attain” states a former sea tiger. ‘Various types of waterborne IED’s used by sea tigers’ are placed as Annex ‘E’.
5.5.4 Development of Sea-lift Capabilities of the LTTE; The Sea Tigers and International Shipping Fleet

The LTTE realised the need to develop their sea lift capability as they were unable to do any air lifts. They realized from the early stages of the conflict that the organization had to rely on the sea for their sustenance. For these tasks, the Sea Tigers had to acquire various types of craft suitable for fighting at sea and transporting logistics and personnel. Focussing too much on sea lift requirements for the army and air force took away the focus of the SLN till about early 2000. The land route was completely cut off to the north and mainly the army had to depend on the sea lift of equipment and personnel to sustain the war efforts against the LTTE.

A former LTTE overseas operative, Selvarasa Padmanathey commonly known as ‘KP’ brings out the beginning of the LTTE struggle and link to the sea as:

Actually when we started this arms struggle we did not think much about the ocean. Actually at the beginning we only transported our small arms from South India to the north of Sri Lanka. And also sometimes we escaped from the north to South India. For that reason we only used small boats. We did not think about the ocean. Actually this stared after 1984 when we were in south India. Then we were based in Madras, and we were exploring the diaspora. Especially we visited Malaysia and Singapore. Then we started to concentrate about the ocean. Until 1984 no one thought about it.

Initially the LTTE hired some fishermen to do the movements by boat and gradually they started training their own cadres selected from the coastal communities to do that task. According to the LTTE overseas operative the initial training was conducted in South India and the coastal cities of Valvetithurai and Mailady in northern Sri Lanka.

KP explains the beginning of the LTTE international shipping network in the following:

In 1983 we met a ship captain in India. Actually he was working in a commercial ship. At that time we discussed about transporting equipment from Singapore to South India. Initially we used some commercial ships. Some of
those commercial ships actually transported some smuggled goods from Singapore to South India. Then we thought this is sometime difficult, why we cannot start our own service? So finally we came to a conclusion. We had to buy a ship. Because we have already established some network in our coastal villages. Also we knew that some seamen who were working in shipping lines were there. So this captain also knew some people. So we bought a second hand ship from Singapore. It was a very old ship and was around 500 tons. We took the ship from Singapore, repaired it and selected the crew from our villages. Then we took the ship to South India and that was the beginning.

He goes on to say that “he and the ship captain had been in charge of this network which was based in Singapore and when the Singaporean government started applying pressure to close down the office they moved to Malaysia”. When pressure was applied in Malaysia they had moved to Thailand and finally settled in Indonesia. The LTTE had also established an office in Greece to transport items purchased in Europe and Lebanon. By 1991, the LTTE had around 6 ships and the crews who were specially selected from the villages in the north were trained on board. By 2003, the LTTE had 12 ships in their fleet. According to him, Hungary, Lebanon, Ukraine and North Korea had been major source countries for purchasing war like materials for the LTTE. Also, despite the common belief that the LTTE purchased weapons from the black markets, they had purchased most of the weapons directly from the manufacturer as it was reliable and cheap.

KP further states that as North Korean ports were under US surveillance, they selected some northern Chinese ports to load items coming from North Korea and brought them to Indonesian waters. They never kept any of the lethal cargo in a port as it was not safe but kept it at sea on board their ships in international waters. They took bunker, provisions and water from Indonesia but the main warehouse ships did not go to the port and they used other service boats for replenishment. They also selected some old tankers as they were more stable at sea when ballast water was filled and these ships transferred the items close to Mulaithivu and by using speed boats, the items were transported ashore. In the initial stages, the LTTE ships had arrived some 30-40 nautical
miles from the Mulaitivu coats to transfer the items. But as the SLN surveillance increased, the ships did not come that close and also shifted the meeting points to other parts of the eastern coast and the north western coast. When it was difficult for the LTTE to transfer items off the eastern coast by ship to speed boats, they started using multiday fishing trawlers to do the ship-to-shore transfers. This was the case especially during the CFA. He explains further the motive behind the growth of the LTTE shipping network quoting what Prabakaran had said; “In the future the war is not going to be only in Mullathivu, not on land and also not in the coast of Sri Lanka but it is going to the middle of the sea”

The LTTE leadership anticipated acquiring OPVs by the navy as a clear sign that the SLN would venture into the deep ocean to look for LTTE ships. The LTTE understood that unless they brought in the supplies from abroad by sea, the organisation could not sustain the war against the government forces. The LTTE was collecting sufficient funds from the Tamil diaspora and was able to purchase weapons from different sources. They had to bring the weapons thus purchased across the sea to LTTE controlled areas.

KP elaborate the beginning of Sea Tigers in the following:

Prabakaran has said that ‘as long as you do not dominate the sea, you are not going to win’. The formations of Sea Tigers was initially done by Shiva Kumar alias Kittu who was from the northern coastal city of Velvettithurai. They did not even have a special name for the group but slowly developed it. Kittu was originally a fisherman and a smuggler. He knew the sea very well and he knew the seafaring community of the northern peninsula. After the demise of Kittu, It was led by Kundappa and then by Ragu and Shanker and finally by Soosai. It was during Soosai’s time that the Sea Tigers grew to its potential.

Soosai was also from the coastal areas of Valvettithurai and was a determined personality. Soosai led the phenomenal growth of the Sea Tigers. “Initially they built boats locally by using fibre glass materials. But later on they got high speed boats made in Singapore and Thailand and transported them to Sri Lanka. Thereafter they copied
the design and built a large number of boats locally”, says KP explaining the gradual growth of the Sea Tigers. OBM, RADARs, guns for the speed boats; all was bought abroad and sent here for assembling before operational deployment. These boats used satellite telephones for communication and Global Positioning System (GPS) for navigation.

Another LTTE Sea Tiger leader, Seelan that this researcher interviewed had received basic combat training in the Vanni jungles in 1996 for a period of six months. Thereafter, the entire batch of 300 LTTE cadres were taken into the Sea tiger wing and were given further six months of training. He shed light on LTTE boat construction. The Sea Tiger boats had been built in Pudukudiirripu jungles about 30 kilometres from the coast. He had received boat building training in Vishvamadu and worked at the Pudukudiirruppu boat yard. The fibre glass materials for boat constructions had come from Thailand and OBM were bought from Japan. They were building two types of boats, Mirage and Thalrage.

He had also undertaken logistic runs from ship to shore off Chalai. They had six boats in a convoy to transfer items from ships which were coming to approximately 45-60 nautical miles from the coast. As per Seelan, the ship’s name was ‘Showa Maru’ and its Captain was Ravishanker. The former sea tiger had been engaged in these movements from 1997 to 2000. Then he joined the Black Sea Tigers, the suicide cadres at sea and received a further three months of training. He had participated in the Galle harbour attack and was sent to work on a LTTE gun running ship. They had bought weapons from North Korea and other items like OBM, communication equipment from Singapore and Malaysia and transferred these items to Indonesia for loading.

The crew on board a LTTE ship would normally stay for about 5 years and then only disembark to prevent information from leaking. During the stay on board, they would be provided with food and no payments would be done. They all worked for the LTTE and for the cause. Seelan went on to say that the LTTE used fishing trawlers during 1998-2000 to bring the weapons ashore. They had even used Sinhala fishermen, on payment as part of the crew to talk to the SLN, if they were challenged. A fishing boat with a Sinhala crew may not arouse the suspicion of a naval patrol boat as much as that of a Tamil crewed boat. They had also brought the trawlers to the south Indian
coast and then to Kachchathivu and then to Vedithalathivu on the north western coats of Sri Lanka. The LTTE had purchased fishing trawlers in the name of Sinhala businessmen and used them to carry out ship-to-shore transfer of war like materials. Once these transfers were done, the trawlers would go for fishing and return to Negambo with the catch, like an ordinary fishing trawler. This modus operandi had not aroused any suspicion among the intelligence community or the navy for some time. This had been going on till about 2007. The LTTE Sea Tiger leader had asked them to attack harbours in Galle and Colombo in order to divert the attention of the SLN away from the eastern coast as they were finding it difficult to bring in weapons to the areas under LTTE control in that coast. They had launched seven suicide boats to attack Colombo Harbour and five returned to Arippu safely. One suicide boat had exploded near a container ship and the other capsized. The LTTE wanted to target ports in the country with the intention of damaging the economy and thereby forcing the government to abandon the war and allow them to create the separate state they were fighting for, highlights the former sea tiger.

Also the LTTE focussed specially on attacking Trincomalee harbour for two main reasons: first is to prevent supplies going to the North and secondly because they considered this harbour as located in their territory that is the state of Eelam. The LTTE had tried a number of times to attack the SLN troop carrying ship ‘Jet Liner’ but was not successful in achieving this, as the speed of the ship and the convoy was as high as 40 knots and that was about the maximum speed the LTTE boats also could achieve. The former Sea Tiger says that during the final stages not only weapons but medicine, cement, food items, cloths were also received by sea. Seelan had brought some medicine from South India even in 2009. According to him, he had come by a fishing trawler from India to about 30 km from Rameshwaram and had transferred himself to a smaller suicide boat and brought the items to Vellimullivaikkal, which was still under LTTE control. He speaks about the Sea Tiger leader Soosai with pride; “he was a good leader, he spoke with the people. Soosai always thought about people and the country [Eelam]. He protected the people even more than Prabakaran”. Seelan also spoke about the payload of suicide boats; “In a Mirage boat we fixed two unexploded Khafir bombs [used by the air force] in front and claymore mines or otherwise we put 150 KGs of C4
explosives. In Murrage boat we put 200 KGs of high explosives”. The LTTE also experimented with submersibles; they were not really submarines but had about 1 ½ feet of small ventilation pipe out of water. “They had tested a 32 meter submersible which can carry four people and goods weighing 1-1 ½ tonnes. Sea Tigers and the Charles Anthony brigade also tried to build these submersibles”, states the former Sea Tiger. But this was towards the last phase of the military operations and the LTTE could not obtain much use from these boats.

He went on to describe that the Sea Tigers were headed by Soosai and there had been two others; Narian looking after the combat and Vinayagam looking after the administration. The Sea Tiger women platoons worked under these leaders.

The Sea Tigers exploded a naval auxiliary ship called A 520 in Trincomalee harbour by using a suicide diver and a V shaped fibre glass made limpet mine. The C4 explosives had been inside. This bomb could be exploded by a timer and a fuse wire. The former Sea Tiger says the unit called the ‘Computer Unit’, which was functioning under the son of Prabakaran, Charles Anthony, was responsible for developing improvised sea mines and limpet mines. Another person named Elilan master was working under Charles Anthony who had expertise in sea mines, states the former Sea Tiger. According to him, sea mines had not given them much success. He also speaks about the RADAR positions in Chemmalai, Cahlai, Nagar Kovil, and mobile RADAR units used in Nayaru areas during operations, mostly for gathering information about the SLN movements at sea. They could monitor a sea area approximately 70 nm from the coast and even used 250 KW RADARs for this purpose. The LTTE was also very good in monitoring radio transmissions of SLN and obtaining details about planned operations at sea.

Seelan attributes the LTTE Sea Tiger successes to the lack of naval intelligence too. He says that naval intelligence knew nothing about the Sea Tiger operations and though he was in the LTTE intelligence, he could not find any naval intelligence activities in most of the operational areas.

Another former member of the LTTE Imran Pandian group, [This group was set up to provide close protection to the LTTE leader] states about the LTTE leader:
Prabakaran watched every attack we did on video. If he sees any mistake we had done he said all the time if we do this again he will go to the place and do it by himself. If he had something to do he did it without sleep. Whatever happens he got up at 4.00am. Thereafter he was at the office by 06.00am. Always he had in his mind where to attack and where is the weak place. He always thinks about the trainings and the places where we can go forward in the war. He read books which are written about foreign wars. Even his wife should wait at his door. She waits until somebody takes her in. He was a person who thinks his work should be done by himself. And also he learnt something new every time. He had a good idea what to do.

This is a clear statement about the dedication and commitment of the LTTE leader.

5.5.5 The LTTE’s Exploitation of the Political Situations in the Country

The LTTE always exploited the political situation in the country for their benefit. A Former director general of the MCNS attributes an important reason for the growth of the LTTE:

In 1990 when the government of Sri Lanka fed them with money and arms, that was the time that they got really strong. Then the Cease Fire Agreement (CFA) also made the LTTE a strong and a recognized organization.

The LTTE not only exploited the system in Sri Lanka, but was able to get the support of various countries and governments to further their cause. The image of Sri Lanka was very unpopular, especially after the 1983 riots. The LTTE made use of the Tamils who left Sri Lanka and were accepted in many western countries to form the Tamil Diaspora and to support their war efforts. The foothold they enjoyed in many capitals around the globe also helped them to establish various front companies to purchase weapons and to ship them to Sri Lanka. That gave rise to the development of near-conventional capabilities of the LTTE. That was the main reason for the LTTE continuing its battle against the government forces, just like a conventional army, a
small navy and a small air force. This situation helped them to rise to a very strong position against the government forces and to become the most dangerous terrorist organization in the world. This situation directly affected the military campaign especially at sea because the Sea Tigers too became very strong. The Sea Tigers were able to challenge the supremacy of the SLN at sea.

5.5.6 Indigenous Boat Building of Sea Tigers

They graduated from operating fibre glass fishing boats to purpose-built craft and structured themselves in a similar manner to that of a professional navy. A former DGE explains this growth of sea Tigers as:

In my opinion, the LTTE Sea Tigers experienced a gradual development in their progress because they were able to increase the number of sea going craft in their inventory. For example, they first started with simple fishing craft called the Dinghy boat, and later developed their own attack craft in various sizes, particularly fibber-glass boats, that were fitted with sophisticated fighting weapons and equipment. Their gradual progress and skills in building suicide craft greatly threatened the SLN. As a result, the Sea Tigers were able to acquire more sea control after surrounding attacking SLN craft, and increased their presence in vital locations along the North-East coastline.

This statement sums up the growth of the Sea Tigers in a very professional way. This is a clear indication that the Sea Tigers always worked with a strategic plan and that they had far reaching objectives. It is relevant to note that the Sea Tigers were able to maintain sea control in certain sea areas for a certain period with their innovative and strategic thoughts. The Focus Group, Northern Naval Command (NNC) describes the growth of the Sea Tigers as follows:

The LTTE Sea Tigers was a formidable force, whose armoury included logistic craft, attack craft, suicide craft, and other weapons and equipment. Duel use technologies such as Global Positioning Systems (GPS), Satellite Communication Systems, and water-sport and scuba diving equipment as part of their inventories. They were known to use a variety of weapons from knives
to IEDs. Whilst most other maritime insurgent forces perform two tasks, carrying out raids and delivering supplies covertly, the LTTE engaged in the additional task of ship protection and temporary sea-control, both functions of a conventional navy.

This is a clear indication that the Sea Tigers were the most dominant terrorist group who achieved certain capabilities of a conventional navy. Whilst the LTTE was experimenting on constructing their own craft, the SLN was concentrating on getting the craft that they required from contractors abroad or here in Sri Lanka. This was a clear disadvantage for the SLN as the process of enhancing the fleet was taking a longer time than expected. At the same time, the boats built by the LTTE had good sea keeping qualities and their weapon outfit was similar to that of FACs. A former DGE sums up this aspect saying that:

Actually, when you consider the performances at sea, they were fighting really well with our FACs. Having bigger weapons like 23 mm and sometime even 30 mm, we only had those guns on bigger platforms. But they were using these guns on small platforms. The fire power was high. Accuracy may be not much precious like which was controlled by stabilized systems and fire control systems. But still they were hitting us.

The LTTE really benefitted from this boat building project as they were able to improve their performance through trial and error. A former commanding officer of the FAF speaks about the development of the Sea Tigers in this regard:

For them it is an exercise of evolving under trial and errors basis. They had the necessary ingredients, in the sense the people; basically fishermen from the fishing community. So the sea is a familiar environment for them, boat handling is something they already knew from their childhood and taking a boat from one place to another is already a known science for them. With this background, they gradually developed.
They experimented with improvised suicide boats, fixing three of four OBMs to gain high speed, fixing larger calibre weapons like 23mm, 30mm guns and succeeded in inflicting significant losses to the SLN. ‘Various types of the Sea Tiger boats built by the LTTE’ is placed as Annex ‘F’.

5.5.7 Effective use of Cease Fire Agreement (CFA) by the LTTE

The LTTE exploited the CFA signed in 2002 to develop their organization. This period was used by the LTTE to bring in large stocks of arms and ammunition and to consolidate their organisation. Says the former LTTE overseas operator. Also they used the CFA period to gather vital intelligence about military installations and other economic targets. Even the post Tsunami period (December 2004) was exploited by the LTTE, especially to develop their boat building capacity by using materials received as aid for tsunami victims. There were negative effects on the LTTE due to the CFA as well. Seelan talks about the CFA period and the negative impact it had on the progress of the LTTE in the following extract:

Yes, after a long time, people have started to walk in the villages because of the freedom. People visited Jaffna, Trincomalee and other places. Then people understood that there can be better living conditions. It also was another reason to change the people’s mind.

A former commander of the navy points out that: “one of the main advantages for the military, of the CFA was the breakaway of Karuna faction from the LTTE. Though Prabakaran was the leader of the LTTE, it was Karuna who was considered as the fighting leader. The CFA made a rift within the LTTE organization”. Chandraprema highlights following factors and outcomes of the CFA, which were detrimental to the LTTE:

- The mind-set of the LTTE middle level ranks and fighting cadres had changed and they got used to a normal life. They had grown soft, leading comfortable lives in big houses
Prabakaran himself had become a more of a political leader, talking on a regular basis to representatives from Tamil diaspora with dinners and meetings. His life style changed even without him noticing it.

- The top military leaders of the LTTE were ageing and were past their prime and no longer able to do what they were able to do in their youth.
- The LTTE tried to function as a government and a state power with police stations, courts, prisons, a system of taxation and emigration and immigration regulations etc. This was a recipe for disaster as a government that wields power, loses popular support as time goes on (Chandraprema, 2012, 330-331).

It can be concluded the CFA from 2002 to 2006 had negative as well as positive impact for the LTTE and the government of Sri Lanka. The LTTE was able to acquire large quantities of war-fighting materials during this period and became even more formidable than before the CFA. However the government was able to make good use of the rift within the LTTE organization and exploit it to finally defeat the LTTE.

5.5.8 Sea Tigers and the Ocean

The LTTE really understood the value of the ocean for their sustenance. The LTTE leader had stated on a number of occasions that the command of the sea was essential for the development, growth and sustenance of the organisation and to achieve their end state, the Eelam. By using the expertise of the fishing community, [some of them later became members of the LTTE] it was possible for them to develop the Sea Tigers to be a force to reckon with at sea. The Sea Tigers posed a serious threat to the SLN, by using asymmetric concepts and challenged their supremacy at sea. The LTTE expanded their international shipping by purchasing some old general cargo ships and tankers and then transporting weapons, ammunition and almost all the items they needed to effectively fight against the armed forces. Gradually the LTTE developed their arsenal including heavy artillery and mortar launchers and ammunitions, which are normally used by regular armed forces. The Army advances were greatly affected by the LTTE artillery and mortar fire. The LTTE’s strategy of bringing supplies across
the ocean succeeded greatly and during the final stages of the war they depended heavily on this mode of transportation. The Sea Tigers used purpose built craft and ordinary multi-day fishing trawlers to transfer the cargo from LTTE ships to shore areas under their control very successfully.

Indeed, the development of Sea Tigers, Black Sea Tigers, under water saboteurs were all part of the LTTE strategy to deny the use of seas to the SLN and to use the same for their growth and advantage. The LTTE developed the international network for raising funds, purchasing weapons and transferring them by sea to sustain the battle against the armed forces. The LTTE ships were operating in international waters and used as warehouse ships to store the acquired items till such time they were transported closer to Sri Lanka, ready for the final ship-to-shore transfer to the LTTE dominated areas. The LTTE always understood the importance and the dependence of the organisation on the ocean and used it very strategically and even tactically. The LTTE R & D work was also mainly aimed at developing capabilities, whether it was suicide craft or submersibles, to use the ocean for themselves while denying the same to the SLN. The strategy of using the ocean effectively, resulted in the LTTE benefitting and developing and acquiring ‘Near Conventional Capability’ to fight with government conventional armed forces.
CHAPTER 6

THE DETERMINANTS OF SUCCESS BEHIND THE SLN’S GAINING OF SEA CONTROL

6.1 Victory of the SLN

The SLN became victorious at the end of the protracted and bloody war. It was the SLN’s action that attacked the centre of gravity of the LTTE. The SLN finally managed to regain the dominance at sea from the Sea Tigers and they ensured that the necessary level of sea control was established around the country as well as within the EEZ. The SLN was able to defeat the formidable LTTE Sea Tigers and reduced them to a non-entity towards the final stages of the war. SLN actions speak volumes of their commitment and their understanding of the concepts of unconventional or asymmetric warfare which the LTTE had mastered with such authority. The SLN was able to come out of a purely conventional mind-set and deal with the situation combining unconventional and asymmetric methods; basically they were able to, for the first time in the long drawn out war, to instil a fear psychosis in the mind of the Sea Tigers, especially after 2005. This chapter will analyse the determinants of success in gaining sea control by the SLN and conclude the data analysis chapters.

6.1.1 Developing the SLN

Since the inception, the SLN was a ceremonial navy like the other two services in Sri Lanka. They were not meant to fight a big war but mostly to deal with internal security issues. A former commander of the navy explains that:

The SLN and even the army were mere ceremonial forces till about 1970s except in the case of 1971 insurrection, but the navy had a role to play by preventing illicit immigrants, search and rescue operations at sea, assistance to fishermen in distress, that kind of role and also assistance to the government in the times of national calamities, such as flood, landslides or riots. Then, since early 1980s, I would say, particularly after 1983 riots, the Navy started transforming gradually into a different role.
The SLN focused on developing their capabilities at various stages of its history. The SLN initially started with some patrol craft built in the United Kingdom and some fast gun boats from China. There were also some patrol boats built locally. In 1985, the FAC was introduced to counter the small boat threat of the LTTE Sea Tigers. The FAC introduced high speed, and a good weapon out fit to the SLN. This was the time during which the LTTE was carrying out sea movements between the northern coast of Sri Lanka and the southern coast of Tamil Nadu, as locations in the southern coast of India provided them with safe heavens to carry out training and stockpiling of weapons and explosives. With the introduction of FACs the SLN enjoyed an advantage over the slow moving LTTE boats. A former commander of the navy confirms this point by saying that “we had the advantage at the initial stages with the speed of new FACs coming in and from Israel, Colombo Dockyard, and USA”.

FACs were grouped as a separate squadron with a Commanding officer, Executive officer and Training commander. It was a pride to get an appointment to command a FAC and officers were specially selected for these positions. A former commanding officer of the FAF indicates that the “FACs were looked up as formidable platforms, un-sinkable and un-destroyable” The LTTE’s counter measure against the formidable FAC was the introduction of the swarm tactics and the Black Sea Tiger suicide boat. Then there were gradual improvements introduced to the FACs such as the Automatic Grenade Launcher (AGL), powerful Xenon search light, Typhoon fire control system etc. SLN considered the FAC as the main work horse and paid a lot of attention to the development and enhancement of the FAC fleet. Towards the end of the war, the SLN had acquired more than 50 FAC from various sources. The FAC also took the brunt of Sea Tiger suicide attacks as they were the first to engage in battle with the Sea Tigers in many confrontations. The LTTE also improved the suicide boat with higher speed, armour protection and stealth technology. A former commanding officer of FAF states in this regard:

There was a continuous battle between the FAC and suicide boats. At the end of the war SLN had suffered 20 FAC lost in battle with the LTTE Sea Tigers. Sea Tiger boats were equipped with 23 mm calibre anti air craft guns. FAC
also evolved with new tactics to counter the threat posed by the Sea Tiger suicide boats.

The SLN through specially selected officers and sailors somehow maintained the edge through dedicated training, evaluating incidents, studying the Sea Tiger capabilities and improvising their own tactics. A former commanding officer of FAF, who was also the training officer for the squadron indicates the how they conducted training to improve fighting efficiency:

Through training we improved the knowledge, through knowledge we gave the confidence. And the confidence ensured the victory. The knowledge was given in a series based on the 3 Ps that is physical, professional and psychology and ultimately we were getting the results. So I would say the training is the most important thing, especially in asymmetric warfare.

Having a large number of operational units and the need to keep them at sea encompassed more engineering commitments too. The ships and craft had to be at an optimum operational state at all times and ready to proceed to sea at short notice; this was so because the confrontations or any other operational requirements could come up at any time. To maintain a large fleet, it requires special logistic commitment as well. However the SLN’s technical personnel lived up to this challenge well. They combined years of experience, innovative methods and did the job well. A former explains:

We enhanced our slipping capacities. For example side slips arrangements at Dockyard Trincomalee, then Galle, and getting FAC slipping facility at Kankasenthrurai. Like that we could manage our docking schedules. Half yearly, yearly, 18 monthly, depending on the paint scheme and other requirements. So we were maintaining and that is how we sent our big ships so many miles from our ports. They never failed. Though people were saying that, these were old ships, like 40 plus years old. Still we knew, if we maintained those correctly and they were not going to fail.
The maintenance of fleet units was of utmost importance as the commanding
officers who were managing them needed to be given confidence that their platforms
were reliable and ready for any task at sea.

The technical department wanted to maintain FACs with 100% reliability and
hence they used only original spare parts from original equipment manufacturers
(OEM), as they could not afford to make even one engine non-operational at sea; then
the entire craft could become vulnerable to Sea Tiger attacks. They tried their best to
maintain the highest possible level of operational state and it came with lot of hard
work, commitment and leadership attributes. There was excellent coordination between
logistics and technical branches, which was a necessity in order to ensure that the
maintenance could be undertaken without any interruption. The requirement was to
have maximum possible sea units for immediate deployment. It was not only routine
maintenance which had to be done but emergency repairs as well. When a craft returned
after a battle, there would be some additional requirements to undertake emergency
repairs and the technical personnel had to be ready for that contingency. These repairs
had to be done at any time of the day as the required operational state had to be
maintained at all times, since the enemy would not wait for the SLN to take its own
time to make the craft ready. Sometimes there was a requirement to work on two shifts
and work day and night to make the craft available for battle again.

The SLN did not focus on developing ocean going fleet till about 2000. SLN
was most of the time concentrating on enhancing the FAC fleet but not the offshore
vessels. The LTTE understood this dearth of ocean surveillance of SLN and exploited
that weakness to carry out their logistic movements. In this context, a former director
general electrical and electronics speaks about the development of the Offshore Patrol
Vessel (OPV) fleet:

We had 200 nm barrier, protected by OPV’s. But the thing is, you know how
difficult to police a large area by an OPV out at sea. OPVs like Sayura,
Samudura, Suranimala, Nandimithra, Sagara came in to play and that was an
advantage for us. This development was a gradual process. SLN was fortunate
to be given two OPVs from Indian navy and one from US Coast Guard. Then
two Fast Missile Vessels (FMV) were bought from Israel. These units provided
the SLN with a limited blue water capability and SLN was able to patrol the 200 nautical miles EEZ much more effectively. With the addition of OPVs to the fleet, SLN was able to deploy them in patrolling areas long distances away from the coast line on a continuous basis.

When the SLN acquired a sufficient number of OPVs and deployed them to patrol beyond the territorial waters up to EEZ, the Sea Tigers found it difficult to bring in their merchant vessels closer to the shore to transfer items. The LTTE ships were then kept at quite a distance from the coast and they used fishing trawlers and small boats to carry out the transfer to shore. Also the LTTE was forced to shift their operations from the eastern coast to the north western coast.

A former Sea Tiger, Seelan speaks about the effectiveness of these OPVs and the effect they had on Sea Tiger operation:

We had a ship which was attacked by the navy which came to guard the Mullaitivu side. So we did not receive any weapons. Then Soosai called and said that we should attack other side [of the country] to get the navy ships away from Mullathivu.

This is a clear indication that the operations carried out by the OPVs were producing results. The LTTE was compelled to make alternative arrangements to bring in weapons and ammunitions by sea to areas other than Mullaitivu, which was their best stronghold and the weapons were mostly needed there as it was bordering the armed force in the Wanni and Jaffna peninsula. The OPVs played a key role in the final destruction of LTTE floating warehouses long distances away from Sri Lanka.

6.1.2 Political Leadership, Resolve and Synergizing the Political and Military will

As indicated by a former commanding officer of the FAF, during the period of war between the LTTE and the military, the political and military will was not synergized until about 2005. Successive governments tried different strategies to defeat the insurgency and military leaders too from time to time tried to squash LTTE
terrorism. A former commander of the navy points out that “With the commitment of the leadership of his Excellency the President Mahinda Rajapaksa, who was determined to defeat the LTTE, there was the political will. The Defence Secretary & the Service Commanders had the military will”. So when the political & military will synergized, it became a formidable force which the LTTE had never experienced during the conflict.

The military fought a very long battle against LTTE insurgency. Although the governments changed according to the will of the people, the militaries remained the same and engaged in battle for nearly three decades. The military suffered the worst in terms of personnel, territory and equipment. The political leadership after 2005, galvanized the whole country including the media in every possible way, which was not there on previous occasions. The entire country was mobilized towards the war.

All these factors contributed to the final victory. It can be said that it was the same military and the same enemy which fought even after 2005, but what changed was the political leadership. The government which came to power in 2005 gave a very clear indication to the armed forces that they wanted to see an end to terrorism in the country. The CFA was in effect at that time, though there were so many violations committed by the LTTE. The LTTE had a high morale as they were able to reorganize even after the 2004 Tsunami and equipped themselves well. They were controlling sizable land areas and were able to carry out training and prepare for war. As former commander of the navy points out:

The LTTE, even during post-tsunami period strengthened their boat building capacity. We were told that some foreign countries have come up and were helping them (the LTTE) in guise of NGOs who have come to help the development and constructions of fishing boats. What they built in fact were craft for LTTE sea tiger wing.

The 2004 Tsunami destroyed large coastal areas, which were under the LTTE control—together with their sea tiger capabilities. However, the LTTE exploited the support they were receiving from many foreign countries and Non-Governmental Organizations (NGO). They were able to rebuild their capabilities even better than what
it was before. The LTTE violated the CFA in a big way when they closed the sluice gate at Mavilaru, an anicut, which was providing water for irrigation and day to day requirements of a large number of families in the eastern province. The military operations to clear the eastern province started in 2006 with the attempt to reopen the anicut and gained momentum bringing success after success to the armed forces. One of the most outstanding aspects of the political leadership was that they were able to gain the confidence of the military leadership that the battle would be carried to the end. When the military leaders were confident of the government’s resolve and the greater possibility of winning the war, the entire format of war began to change. That confidence filtered down to the lower ranks of the military and they were ready to fight till the end. The government was willing to provide what was needed by the armed forces and a former commander of the navy states in this regard that:

Whatever we asked we got from the leadership of the President and the Secretary Defence. Whenever we found that there were any shortages of funds, when I brought it up in the Security Council and the Secretary of Defence would discuss with the Treasury Secretary and the issues were sorted out. I knew the fact that however much the government was prepared to give; we could not buy boats or ships overnight. That was what led me to develop the small boat concept. The political leadership galvanizing the support of the entire population behind the forces was one major aspect of the success of this war. Another important aspect of the political leadership was that they thwarted the international pressure.

Donald J Hanle, indicates the importance of political will for the success of a war as: “War is an act of lethal force between organized political entities for the purpose of achieving political goals by compelling an enemy to modify or surrender his own political objectives through weakening or destroying his will to resist” (Hanle. 1989,11). The government understood the complexities of the war and the repercussions of using force to destroy the LTTE and was willing to take that risk in order to eradicate terrorism from the soils of Sri Lanka. The LTTE was always of the opinion that the government would not go full out to use forces to win the war and they
could compel the government to stop any military advances by using human rights, international players or even India. But the government which assumed power in 2005 was different and took the challenge and became successful in defeating LTTE terrorism.

The LTTE overseas operative, KP concludes the aspect of political and military leadership, which prevailed during the final stages of the conflict as:

war finished because the political and military leadership got united. They worked well. Earlier, 30 years period most of the time they failed because the political and military leadership was not close. So they didn’t understand each other. So what military leaders needed was the political leadership. They did not have an understanding. This is the first time in the Sri Lankan history that they got united and that worked well.

6.1.3 The Development of a Grand Strategy

Framing a grand strategy for a country necessitates a holistic view of security and a forward-looking vision for the country that accounts for both threats and opportunities (Venkatshami, George, 2012, 4). Sri Lanka was engulfed in a protracted civil war for a considerable long time. The primary responsibility of a government is to provide a secure environment for all its citizens. The country became an unsecure place for all communities as terrorism spread its wings in almost all parts of the country, though the actual insurgency fighting was limited to the northern and eastern provinces of the country. Successive governments tried to resolve the conflict by various means but all those attempts failed to ensure a peaceful resolution of the conflict. The strategy can be seen by various people differently based on the practical applications of it. Some of the definitions of the strategy as described by some eminent scholars are as follows:

“Strategy is the art of distributing and applying military means to fulfil the needs of the military” – Liddell Hart

“Strategy is a plan of action designed in order to achieve some end; a purpose together with a system of measures for its accomplishments”- JC Wylie

“Strategy must now be understood as nothing less than the overall plan for utilizing the capacity for armed coercion-in conjunction with economic,
diplomatic, and psychological instruments of power-to support foreign policy most effective by overt, covert and tacit means- Robert Osgood” (Baylis, Wirtz, 2013, 5).

Above definitions on strategy amply demonstrate the relevance and link of strategy with military operations. It appears that during most parts of the conflict, there was no clear political strategy which could have translated into a military strategy. A major reason for this deficit is that although the LTTE remained as one organization determined in achieving one desired end –state, which is a separate state for themselves, the political and military leadership was changing in quick succession. Various political leaders had different strategies to end the conflict. Some favoured the military means, some favoured political solution and some looked at a combination of both. The LTTE was led by one person from the inception to the end and hence maintaining a grand strategy was quite possible for them. The military is a political arm of a country and will not be able to design a grand strategy on its own. “An effective grand strategy must address not only external challenges of foreign policy considerations but pressing internal concerns as well” (Venkatshmi and George, 2012, 5).

The Sri Lankan conflict had both domestic and international dimensions. The LTTE was not limited to Sri Lanka as it had expanded its network to many capitals of the world. Hence the strategy of the government had to address both these dimensions. When analysing the conflict in Sri Lanka, it is difficult to find whether a clear and unambiguous strategy existed and that must have been a reason for the protracted conflict. When a country does not have a clear strategy, it affects the performance of the military in a negative manner. The Sri Lankan armed forces were going through a difficult time as the policies and strategies of successive governments changed drastically from time to time. Sometimes military advances had to be halted and the gains had to be nullified, due to the ad-hoc strategies of governments. On the other hand, the LTTE worked with a clear strategy, gradually becoming a force to reckon with. During the latter stages of the conflict, the LTTE was able to engage in conventional battles with the armed forces. That was a graduation from the small scale guerrilla tactics the LTTE employed during its formative years. The LTTE was able to
have a de facto navy, the Sea Tigers and a small air capability, which could terrorize the entire country.

Strategy provides the link between the political objectives and the military means and a combination of both is essential in winning a war. As mentioned by a former commander of the navy: “The leadership of the President, who was determined to defeat the LTTE…” The political leadership after 2005 had a clear vision and a desired end state for the country and hence was able to have a resolve to eradicate terrorism in the country. The grand strategy especially after 2005 catered for increasing the strength of armed forces, liberating of areas which were under the domination of the LTTE in a systematic and gradual manner, holding onto liberated areas by armed forces, police and Civil Defence Force (CDF), and to continue with the military thrust from multiple fronts. Also the grand strategy catered to appraising the international community and regional key players like India, uniting the country in a war-footing, keeping the morale of armed forces and other forces high with a clear indication that terrorism must end in the country defeating the LTTE. A former commander of the navy considers ‘thwarting international pressure’ as a key contribution to this grand strategy. Not only thwarting international pressure but the assistance of some major powers in the world could also be obtained to fight the war against the LTTE. The grand strategy also provided for balancing concerns of the international community and convincing them that the war must end for the sake of peace in the region.

Former commanding officer of the FAF confirms the importance of having a clear grand strategy in the following; “Before 2006, we had lot of confrontations, we were winning isolated incidents and confrontations. But we were losing on the overall strategy”. The grand strategy of the government translated into the military strategy and in the case of the SLN, to the development of a comprehensive maritime strategy, which aimed at regaining sea control and denying the same to the Sea Tigers. This brought success in destroying the LTTE logistic network and reducing the Sea Tigers’ ability to fight at sea. Further, it was possible to merge the land, sea and air strategies as part of the grand strategy to win the war against terrorism. This resulted in taking a proactive approach to military strategy and thereby denying the LTTE the initiative to launch attacks and making them defensive and thereby making them vulnerable to
military advances. The SLN specially changed their tactics and denied the freedom of the ocean to the Sea Tigers and not only prevented LTTE logistics needed for them to fight with the advancing army, but also prevented the escaping of the LTTE leadership by sea, thereby making them easy targets for the military offensive. The SLN developed their capabilities and tactics with a clear strategy to identify the most critical aspects of the Sea Tigers’ successes and used the same tactics to defeat them at Sea.

The government’s overall strategy also resulted in maintaining security in southern parts of the country without allowing the LTTE to launch terrorist attacks to instil a fear psychosis in the mind of the population. A former air force commander highlights the theory of dominating the south as:

Extremely effective, by doing this strategy of strengthening Colombo, putting CDF and the holding role by the Police, Navy and the Air Force played a tremendous role because there were enough troops and gave the freedom for the army to advance more quickly.

Having a clear and well thought out strategy especially after 2005 helped to transform the SLN to a winning outfit. A former SBS commanding officer summarizes the use of a grand strategy as:

The Navy played a vital role in the grand strategy to defeat the LTTE; namely, search and destruction of LTTE’s logistic bases at sea, keeping the SLOCs open through eastern and northern waters to ferry logistics and troops to northern peninsula while keeping the sea control and lastly gaining the littoral sea command in a layered blockade that prevented the LTTE’s logistic supplies from the sea and seaward offensive action on sea tigers that ultimately brought it to knees. The first was a centre of gravity of the LTTE, while other two also dealt with critical factors that were very vital in the grand strategy.

The Focus Group South Eastern Naval Command (SENC) sums up the development of the SLN; “LTTE logistic system was highly disrupted and poor logistics diluted LTTE fire power on land. SLN patrolling pattern around the Island,
coastal surveillance and effective utilization of naval intelligence as a winning strategy for SLN”.

6.1.4 Adaptation of Asymmetric Tactics

SLN was mainly built on a conventional mind-set from its inception. Their planning, training and forecasting, all were based on this conventional mind-set. The LTTE was a guerrilla force and they were the smaller and weaker force. The LTTE understood that it was not possible to develop a conventional navy with big ships; though they controlled some land areas, they did not have control of even a single harbour for their use. Without a proper harbour it is not possible to develop a navy, as ships need to be berthed inside a harbour for protection, repair and maintenance, rest and recuperation. As per a former Sae Tiger states “LTTE boat building facilities were some 30 km inside the land from the coast”. He also confirms that the LTTE used bulldozers to push Sea Tiger boats on cradles and tractors to pull the boats from the seashore on completion of operations at sea.

The LTTE developed non-conventional asymmetric tactics to greater effect. They pioneered the swarm tactics, suicide boats, limpet mines and underwater suicide saboteurs, semi-submersibles and was experimenting even with mini-submarines. As explained by a former commanding officer of the FAF, “when the SLN had to recruit people and train them, the LTTE had the advantage of using experienced fishermen to undertake their Sea Tiger operations”, especially in the formative years. LTTE experimented with multiple OBM to increase the speed in order to either get away or catch up with high speed SLN FAC. The LTTE Sea Tigers knew the behaviour of the ocean, the swell, current and wind much better than SLN personnel as they were living with it for a longer time. From small boat operations, they graduated to operating in the high seas. It was quite opposite to that of the development of the SLN. A former commanding officer of the FAF says that the FACs were looked up to as formidable platforms, and after the first successful attack on a FAC in August 1993, the unsinkable and un-destroyable FAC was lost to a small Sea Tiger suicide boat. The LTTE developed the suicide boat with speed, armour protection and destructive capability.
There had been many designs of the Sea Tiger suicide boats. He further explains this concept:

To retain the Sea Control, LTTE needed a weapon that would deter the navy. That weapon was the suicide boat. From the very basic fishing dingy to the custom made suicide boats, they came up with variety of designs; some were bigger, some were small, some were flat and in different sizes and shapes. But all these designs were leading to the same mission; mission to commit suicide with the target.

The LTTE used their hatred ideology to motivate their cadres to carry on suicide missions at sea. “SLN was at a confused state for not knowing what their tasks should be”, states a former commanding officer of the FAF. The SLN was looking down from a bigger platform to the much smaller platform of the LTTE. It was difficult to detect the Sea Tiger boats even with RADAR or other sensors due to the low silhouette, and the low cross section of the target. The LTTE was determined to fight with the SLN to take the initiative at sea. Sea Tiger boats were difficult to detect by any fire control system as they would be protected by the vagaries of the ocean from the sensors. SLN never let the LTTE to have total freedom at sea. However the LTTE was able to use the sea quite effectively to develop their fighting efficiency.

SLN’s response to the growing threat until about 2005, was to try and acquire platforms capable of higher speed, better weapons and fire control systems, but this did not deter the Sea Tigers. They were coming in large numbers and among them would be a number of suicide boats. In about 2006, SLN started thinking differently. SLN changed their tactics. The conventional approach would expect the SLN to fight when there were Sea Tiger boats coming to attack. The SLN thought that they would decide when to fight and whether to fight and how to fight. In some confrontations the FACs left the suicide boat and fought with other craft, whereas in the beginning, the suicide boat was the number one priority. A former commanding officer of the FAF explains this situation in the following:

So when the confrontation was taking place we were trying to avoid the suicide boats by staying away from him. We would let him run around but not try to hit
him but rather try to hit someone else. So there were a couple of occasions where we succeeded and then we realized the suicide boat is getting desperate. Although the platform is very portent with explosives and speed, what matters is the man who is riding it. It is a missile with a human brain. So, we thought that we need to address the man. So we would avoid him, try to take another boat out and let the suicide guy go back. So our experience was that in 4 or 5 months’ time in 2006, especially the suicide guy became very desperate. He would try to run here and there, try to get a target somehow and ultimately he would run out of petrol.

These were unconventional tactics which worked in SLN’s favour. Once a boat has ran out of fuel, it becomes a sitting duck, very vulnerable to any attack and even the sea-swell.

The SLN counter to swarm tactics was to operate in pairs. A swarm of Sea Tiger boats fitted even with 23mm ZSU guns had a formidable firepower against the FAC, even when they operated in pairs. The LTTE boats in a swarm was able to multiply the fire effect and at the same time reduced the risk factor for their boats. To counter this swarming cum suicide tactics, the SLN came up with the small boat concept. The former commanding officer of the FAF also says:

The SLN came up with the small boat concept that is to deploy large number of units to fight with the Sea Tigers with a numerical superiority. SLN was by this time building their own boats, IPCs, Wave Riders and Arrow boats and deploying at various locations closer to LTTE dominated coats. Now the LTTE Sea Tigers had to fight with large number of targets with similar speeds, similar weapon outfit but much better coordinated. The SLN was able to wrest the initiative away from the Sea Tigers and gradually the number of confrontations reduced drastically.

Another asymmetric tactic used by the SLN was deploying small boats for a barrier during the final phase of the battle. The Army was advancing from a number of directions; the LTTE was getting cornered with nearly 300000 civilians they used as a
human shield and the only possible way for the LTTE leadership to escape was by sea. A former commander of the navy speaks about this layered defence concept:

we made our ring stronger and we had four layers; first layer was with arrow boats and wave riders and we used officers in those boats fitted with thermal cameras and radars removed from some of the non-operational Dvoras, because we had to ensure anything that is coming in to the sea from Mullaitivu beach or Nandikadal beach that we get early warning for all the other craft at sea allowing time to get prepared. At any given time we had about 10 or 12 boats at sea and they were sent from Chalai and Pulmudai.

In the first line of this layer, the small boats performed the most difficult role. They were close to the battle area and hence susceptible to ground fire and the Sea Tiger suicide boats. They did not have proper sleeping facilities and were not protected from elements of weather. However, they did not give up. The battle was nearing the end. A former commander of the navy proudly admits that “by this time we had captured 900 plus boats coming out of Mullaitivu area with genuine refugees, and also LTTE in the guises of refugees to escape including the wife of Soosai and two leader’s wives and children”. It was a risky endeavour for the SLN small boats, but the results they produced were great. Seelan, who was at the battle zone until the final stage confirms the effectiveness of the SLN small boat layer:

I will explain the reasons. I am the person who went to India and came back last. After that I had plans to send the wife and son of Soosai and Pottu Amman to India but we missed it. We checked it by sending a decoy and it was caught. Yes, we saw them. There were a lot of arrow boats we saw them through the jungle. We couldn’t sail through them. If we sailed we had to use suicide boats. More than that we thought that we could escape through the jungle.

This effectiveness of the small boat layer confined the LTTE leadership to a small stretch of land where the advancing army could destroy them completely.

Hanle argues that “The instant a combat unit began to break up, its combat power rapidly dwindled to nothing, and victory was assured for the side remaining
intact” (Hanle, 1989, 21). Despite the long suffering and the losses and casualties, the SLN did not break up but continued the fight. However, when pressure was applied on the Sea Tigers from various directions and continuously, they began to break up and the SLN became victorious.

6.1.5 Invigorating Leadership of the SLN

When the political leadership was working with a firm resolve and commitment, the military leadership also needed to be equally up to the task. Political leadership was very firm that the war should be won and the LTTE should be militarily defeated. Therefore, the military leadership needed to meet the aspirations of the political leaders and translate the vision to attainable objectives and ensure that those objectives were met by the respective armed force. Fortunately naval leadership rose to the occasion well and it was another major contributory factor for the overall war victory. As a former commander of the SBS points out:

The Commander of the Navy certainly had a very clear assessment of the ongoing situation at that time and from the moment of assuming the command pursued a chain of actions to put the navy effectively against the Sea Tigers. His sound judgement and astuteness is what one must appreciate and the navy quickly grasped the control when hostilities broke up. Initially, steps were afoot to heighten the moral of the navy and brought back the fighting spirit and then through next three years kept the tempo of action right to the end.

As is made clear by the above statement, the morale of the SLN was a key factor for winning the war. This was a time when the winning spirit of the SLN was at a low ebb. SLN was suffering substantial losses at the hands of Sea Tigers and was gradually loosing sea control of the areas where the land was dominated by the LTTE. Hanle indicates the importance of morale for sustaining fighting against an adversary as “Moral represent the ability to resist demoralization and to initiate and sustain combat in the face of great personnel danger” (Hanle, 1989, 18). Another former commander of the SBS also speaks about the naval leadership in the following:
Then we had a Commander who went and presented himself. It was like Machiavellian type. He used to run with the threats, but it worked. But the most important factor, I have seen in him was even though he was tough with us and the officers, he had a soft corner towards the men. He considered losing one man as his fault. That gave him tremendous respect from the men he commanded. At the same time he was very particular about the officers who were doing their job and controlling men and materials for the war. At the same time he was very acceptable to innovative ideas, new changes. You can see a lot of innovations and improvisations at that time. For example, when we have to go thousand miles away from the coast, we knew that we didn’t have the capability of re-fuelling out at sea. But we were able to do it making makeshift fuel tankers for us.

Sometimes it is necessary for a military leader to use threats in order to get the job done. When the subordinate leaders are expected to meet deadlines and come up with solutions rather than problems, it trickles down to the lowest level and everyone starts working even harder. This kind of leadership approach is especially needed to be applied by a war time commander, the former DGE opines:

One of the defining factors in defeating the LTTE at sea that is worth mentioning was the strong leadership, effective strategizing, and the firm hand by the Commander of the Navy, during the latter part of the conflict. He personally selected officers based on merit, rather than on seniority alone, for key appointments within the SLN, particularly for the commanding positions of the fighting units.

The commander specially selected officers for various tasks not based on seniority and merit alone but based on capabilities and the ability to deliver. Those who performed well were recognised and given special privileges. The DGL indicates that:

The naval leadership, honestly and fortunately, we had a great leader. He wanted things to be done and whenever he thought to have something, somehow he will get it. That type of backing we had. It was very easy for us to work.
Even when we convinced him on technical aspects, he never doubted our integrity, no questions asked and money was not a problem. At the end of the day, it paid dividends by finishing the war.

A leader has to listen to the good advice of his subordinate leaders as they are expected to provide professional opinion, having worked out all the plusses and minuses and options. The commander of the navy gave due recognition to his heads of departments where a great team spirit was created and this resulted in many of the great achievements during this period. He believed in showing his authority when needed and showing that he was part of the team when needed to fight as one cohesive unit.

These important traits of leadership helped to instil team spirit and the commander earned a lot of respect from all naval personnel. The commitment of the leader was very clearly seen by the subordinates and that contributed positively to winning the war.

At the most crucial hour of the country, the SLN had a leader who rose to the occasion and changed the mind-set of the entire navy to meet the aspirations of the command. This leadership made the entire navy to fight as one unit and most importantly, created a fighting spirit and the desire to win. He worked hard to increase the naval cadre required to undertake additional tasks entrusted to the SLN. He was able to win the confidence of not only the political leadership but of the entire SLN and men were willing to fight with him. This leadership transpired to the lowest level and created team spirit and the SLN started working and fighting as one unit.

6.1.6 The Destruction of the LTTE Floating Warehouse Ships

It is clearly evident that the LTTE understood the importance of the ocean for their development and sustenance. The LTTE paid special attention to improving the Sea Tiger capabilities and their international shipping network. Initially the boat movements were between the southern coast of India and the northern coast of Sri Lanka. Gradually they extended their operations to the sea even beyond the territorial waters of Sri Lanka. The fleet of merchant vessels of the LTTE became the only lifeline for the group to sustain the war against the government of Sri Lanka. A former Sea
Tiger, Seelan indicates the impact of loss of LTTE gun running ships “When Army fired a shell we fired about 20 shells. We fired a lot of shells like mortars and artilleries. But at the end we didn’t have enough shells to attack the Army”. A former army commander confirms this assertion; “Casualties on artillery and mortars were the highest on our side. I think it was more than 50 percent”.

In 2001 the “Operation Waruna Kirana”, a barrier patrol by OPVs commenced 200 nautical miles away from Mulaithivu on the North-Eastern coast. Then the LTTE encountered difficulties in bringing a ship near the coast. They started bringing in items to other parts of the country such as the south-east and north-western coasts. The LTTE also started doing ship-to-shore movements by using ordinary multi-day fishing trawlers. The SLN knew that these bogus gun-running ships were coming to the EEZ to transfer the items to fishing boats or the Sea Tiger logistic craft. A former commander of the navy goes on to say that:

National Intelligence Bureau (NIB), State Intelligence Services (SIS) and Army were giving us some information. Our own navy intelligence also was gathering. When this information was given to us, we were able to analyse and narrow down to a particular area and we did send our vessels three or four times for operations, twice as close as to Indonesian EEZ, but they came back empty handed.

The SLN started becoming more confident and their own intelligence was able to provide accurate, actionable information about LTTE “Floating Warehouses”. In 2006, the SLN destroyed a LTTE gun runner off Kalmunai in the eastern coast and then at the beginning of 2007, another ship was destroyed off Dondra off the southern coast of Sri Lanka. Now the commanding officers of OPVs were getting more and more confident and they were waiting for information to go after the LTTE ships. A former commander of the navy says, “I felt that we could do this and what they wanted was assistance in refuelling. With some innovative arrangements we were able to dispatch a task force of ships, in March 2007, closer to Indonesian waters and were able to destroy two more gun runners”.

201
Subsequently, with the help of precious information gathered through these maritime operations and other available ground intelligence, from arrested LTTE cadres and naval intelligence, SLN was able to locate all other LTTE ships and destroy them in three subsequent maritime operations during the year 2007. LTTE floating warehouses were not normally kept in the international shipping lanes but away from them, so as not to be seen by a large number of ships using the shipping lanes. That became an advantage for the SLN to locate them easily. The navy exploited the Global War on Terror concept of the USA and requested help from the US Ambassador and the Defence Attaché in Sri Lanka and they agreed to provide necessary target information after verifying the tactics and methods used by the SLN to attack these floating warehouses. The LTTE was aware that their ships were being attacked by the SLN and took all precautions to prevent being monitored. They stopped communicating on satellite systems and stayed far away from known shipping lines. A former commander of the navy explains this process further:

The US side wanted assurance that we will not attack any innocent ship or civilians unless they are 100% LTTE combatants. Once the procedure was explained they were satisfied and positioned a satellite into the probable area that we gave them. Then one day in September 2007, we got an intelligence report saying that they (Americans) had detected some suspicious vessel in the area. This was a major challenge to SLN. The OPV fleet was ready go after the LTTE floating warehouses even to distances that they have never been. But endurance was a main issue.

For a war ship to undertake a long distance operation, it is necessary to have sufficient endurance to go that distance, operate and come back. Also the state of the machinery and hull condition are other key requirements, says former DGE of the SLN. The SLN OPV fleet did not consist of new ships. They had done a long service first to the country of origin and then with the Sri Lanka Navy. They were going to sail in high seas where the sea condition could be very rough. A former DGE explains this as “endurance is connected with many products; fuel, oil, lubricants and also logistics. Endurance is not only the fuel, because you have large numbers of people on board.
They need water, food and consumables and so many things”. Normally when war ships are deployed for long distances away from one’s own country, they would take necessary replenishment form another country or from auxiliary ships. But in this case, SLN ships could not go to another country as it would give away the secrecy of the mission and they did not have proper auxiliary ships. The capacities on board a ship to carry fuel is limited and one cannot use all available fuel because one has to keep a safe reserve at all times to cater to any contingency. In some SLN ships, internationally accepted connecting mechanisms for fuel hoses were not available and the SLN had to undertake some modifications. These modifications were done at command levels maintaining a high level of engineering efficiency and standards. The SLN positioned some logistic ships at the equator, as the sea is generally calm there and arrangements were made to refuel the OPVs. Then the OPVs were ready to proceed to the required location and come back to the location near the equator for refuelling before returning to Sri Lanka. This operation was a total success. SLN units located the flotilla of LTTE warehouse ships at a distance of approximately 1400 nautical miles from Sri Lanka and engaged them following internationally accepted procedures and finally destroyed them.

For SLN ships to attack these floating warehouse ships, there were no large calibre guns or anti-ship missiles. The LTTE ships were engaged using available main armaments on board OPVs. On some occasions small boats were used to destroy these LTTE ships. A former SBS commanding officer describes the involvement of the SBS in these operations in a very innovative manner:

The SBS also had partnered in the search and attack operations for LTTE floating warehouses. SBS teams were carried on board during each of these operations and it had been these teams that got close on a combat rubber raiding craft (CRRC) to fire Rocket Propelled Grenades (RPG) to sink vessels in the final kill.

A former director of naval intelligence indicates what was carried by the LTTE floating warehouse ships:
LTTE ships were destroyed along with military hardware including artillery ammunitions (large quantity of 152 mm, 130 mm and 122 mm artillery shells and 120 mm mortar rounds in addition to other arms and ammunitions on board), electronic warfare (EW) equipment, communication equipment, Higher powered outboard motors (OBMs), Water Scooters, Jet Skies, swimmer delivery vehicles, Radars, global positioning systems (GPSs) and other war-like materials with the intention of unloading in the Sri Lankan coast. During the last phase of the war, the LTTE did not have large number of artillery and mortars as they could not unload them into land before these pieces were destroyed with ships. MV Koshia that was destroyed in September 2007 alone had about 29,000 artillery shells on board after unloading 6,000 artillery shells into land. MV Matsushima had torpedoes, bullet-proof vehicles, light aircraft, tons of explosives and artillery pieces on board.

The destruction of these LTTE warehouse ships by the SLN created a major uproar in the tiger hierarchy. Further, such destruction gave a severe blow to the LTTE international arms shipments network and drastically reduced its fire power. A former Commander of the Navy explains the success of these destructions:

Each area commander, battle commander, ground commander sent their casualties, numbers of troops deployed for various operations, arms and ammunitions they fired, arms and ammunitions fired by the enemy and types of ammunitions etc, to the Joint Operation Command HQ every day and they summed it up and was given to the army, navy, and air force. SLN plotted these information graphically just to understand the enemy firing patterns, so we can have a good idea whether the enemy still receiving arms and ammunitions or it is declining. That was a measurement to check our effectiveness at sea; how well we had sea control. The destruction of each vessel gave a different pattern and the best results came in 10th and 11th September 2007, when we destroyed 3 vessels and October 17th the fourth last one. LTTE firing of mainly
artillery and 122 mm mortars reduced drastically and when the army was approaching Kilinochchi, the LTTE had only about 150 or 200 odd numbers of 130 and 155 mm. After the destruction of the last four vessels in September and October, LTTE did not have any vessels. Our analysis clearly showed that their fire power, their effectiveness had gone down and the army was now able to advance very rapidly.

Destruction of merchant ships belonging to the LTTE was indeed a very challenging task for the SLN. They could not afford to do any mistakes and had to be 100% sure of the identification of the bogus ships. By any chance, if an innocent merchant vessel in the high seas were accidentally attacked it would have resulted in grave repercussions to the SLN. An international legal expert, Rohan Perera speaks about the legality of this operation:

Legally it’s a difficult and very complex issue. I initially assumed that it was somewhere within the 200 nautical mile zone, but it was much beyond that. Legally, the only rationale one can make is the fact that, the nature of that threat with a large amount of arms involved in the floating warehouses has a greater impact on the security of the State; Sri Lanka. Had you waited till that vessel approached our waters, it would have perhaps magnified the situation to one beyond our control. So it is on the basis of an apprehension of a grave threat to the national security, perhaps on the basis of an act of necessity that we have to address the issue under the existing law.

Usually an episode of that nature should have provoked a whole series of diplomatic protests. The fact that these ships were bogus gun running ships belonging to the LTTE, and that there were no civilians on board but only LTTE combatants and they were engaged in illegal operations at sea, did not result in any protest by any one. A chart indicating the ‘Destruction of the LTTE logistic warehouse ships in 2007 by SLN’ is placed as Annex ‘G’ and photographs of ‘Some of the LTTE ships destroyed by the SLN’ is placed as Annex ‘H’.
A former air force commander concludes on the destruction of LTTE ships by the navy and the positive impact it had on army and air force as “The supply and their (LTTE) confidence were shattered and also we suspect that it helped the air force and the army to continue with their operations and win unhindered because of this destruction”.

The LTTE could not simply sustain their war efforts when their much depended supply line was severed. The Focus Group NNC describes this great effort as:

The destruction of LTTE floating warehouses and disruption of logistics for LTTE can be regarded as one of the most successful maritime interdiction missions that contributed effectively in counterterrorism operations in Sri Lanka.

Without the much needed supplies reaching them, the LTTE could not maintain the necessary capacity to resist the army advances, and that was a key turning point in the war. A graph showing the ‘Reduction in use of indirect weapons by the LTTE from July 2006 to October 2007’ is placed as Annex ‘I’.

6.1.7 Development of Network Centric Capability

Information sharing is a key component of warfare today. The use of information technology based applications in warfare is quite common now and there are various concepts of network centric capabilities for application in war. The Sri Lankan military lacked this important capability for most parts of the conflict. A former commanding officer of the FAF mentions the development of network centric capabilities:

It made decision making very effective. Earlier, the command was not aware of what was exactly happening on the battle front. So I guess in one way the network centric warfare gave a glimpse of what was actually happening on the ground to the command and at the same time it gave so much of confidence to the operators.
Then directorate of electrical & electronics was very successful in integrating RADARs and other sensors at various locations such as area commanders’ operation rooms and naval headquarters operation room. So in any battle scenario the SLN could monitor what was happening at sea and was able to guide or provide necessary assistance to the fleet units at sea. The naval operations rooms became battle coordinating centres. With the availability of various inputs from many sensors, a tactical picture was now available to the commanders at various levels to monitor the activities at sea. The fighting at sea became even easier for the SLN units as they were able to obtain valuable inputs regarding the disposition of the enemy as well as their own units.

The network centric concept developed by the SLN using available facilities and off the shelf equipment not only saved a large amount of money but provided the theatre and tactical commanders an effective tool in coordinating battles at sea. A former DGL states:

After 2000, the SLN developed an island wide electronic surveillance network and then gradually we developed networking areas and by 2005 we could complete in Eastern and Northern Naval Areas. We had a microwave data backbone covering the whole Island. All the RADARs, Cameras, CCTV (Closed Circuit Tele Vision) and many other sensors were connected to Microwave backbone and then we could see the real time picture from either at naval headquarters or any area headquarters.

Earlier, the development of the tactical picture was not possible and the command had to rely on basic communication procedures to obtain valuable input, and their decisions and directives had to be sent back to the theatre commanders through the same basic methods. “Basically we started our first data network in the navy in 2000” states a former DGL. Network centric warfare is an effective tool to coordinate and guide a war. Real-time reliable information helps the tactical commanders greatly in directing war efforts. Information networks really help the commanders to understand the order of battle and warn the units of the possible dangers and to organize whatever assistance and support even from other forces. It would also help the
commander to understand the mind-set of the theatre commander and gives confidence to the tactical commander that he can depend on his superior, and assistance will be available should there be a need. The Focus Group of eastern naval command (ENC) observes that “improvement in the maritime domain awareness and networking that the navy established between 2007 and 2009 paid dividends and aided the fleet in its operations as information flow and command awareness of the battle space improved”.

6.1.8 Enhancing Maritime Security with Coastal Defences, Harbour Defences and Underwater Defence Systems

Maritime security is of paramount importance for an Island nation like Sri Lanka. As pointed out by a former DGL, the SLN did not fully understand the strategic importance of dominating the near coastal and coastal areas especially off the areas which were under the control of the LTTE. The LTTE exploited the coastal areas under their control to the fullest. Since the LTTE had a clear strategy to use the sea to its advantage, they were quick to use the coastal stretches to carry on with their day to day activities. Coastal domination was an on-and-off activity for the armed forces. During the initial stages of the war, there were some coastal deployments along the northern, north-eastern and north-western coasts. However, as the war progressed and the LTTE became more dominating in these areas, the military started losing coastal domination gradually.

When it came to 2005, there were very limited coastal deployments in the north-eastern and north western coasts of the country for the armed forces but the LTTE enjoyed freedom of action in these areas. They used the coastal areas to launch the Sea Tiger swarming boats, to launch attacks against military establishments and merchant vessels passing those areas, training of sea tigers, movement of their cadres between coastal points, logistic runs, casualty evacuation and providing reinforcement for their operations and receiving military hardware from LTTE ships effectively. The LTTE also used the coastal areas to launch underwater saboteurs to attack military targets in harbours. The result was that the SLN was trying to stay away from LTTE dominated coastal areas keeping at least 5 nautical miles, thereby giving freedom of movement to the Sea Tigers.
The concept of dominating the coast to prevent the LTTE from launching attacks, a former commanding officer of FAF says, came fairly late in the war. The LTTE used suicide craft in almost every operation carried out by them and it was very difficult to defend these boats as they came ready to die. Therefore, it was important and essential to prevent those launching attacks, and dominating and maintaining coastal surveillance was of paramount importance. SLN tried to dominate coastal areas with equipment as well as presence on the ground. As harbours were one of the priority targets of the LTTE, coastal areas on either side of the harbours had to be dominated. In some instances, like in the case of protecting the Colombo harbour, 30 kilo meters north and south of the harbour had to be dominated by a combination of physical and equipment based surveillance, indicates a former commanding officer of the SBS. Seelan confirmed that some boats were launched from Negambo, which is 30 kilo meters away, to attack the Colombo harbour and that is a clear indication that the LTTE planned to launch from quite a long distance to attack harbours.

Fishing marshalling locations were also set up along many coastal areas to monitor the activities of fishermen and not to allow this livelihood to be exploited by the LTTE. This enhanced coastal surveillance system coupled with the physical domination and fishing marshalling locations effectively contributed to protect harbours, other military establishments and vital installations and denied the LTTE the much needed launching areas for their terror attacks.

A former commanding officer of the SBS, who was also a harbour defence officer in Trincomalee describes the effectiveness of the harbour defence system towards the end of the conflict:

During final stage of humanitarian operation, harbours had been well defended and LTTE failed to initiate sabotage acts in harbours. Heightening of defences were however achieved through extensive deployment of man power, surveillance, access control and innovative improvisation to place deterrence against underwater threat where purchase of expensive and sophisticate equipment was not possible for varying reasons. In general, harbour defence organisation enveloped afloat protection by harbour patrols, immediate, adjoining and
surrounding perimeter defences, Island defences where applicable, surveillance systems including electro optical surveillance, RADAR, sound operated navigation and range (SONAR) and hydrophone surveillance and visual search light surveillance, weapon systems and surface and underwater barriers.

6.1.9 Small Boat Concept and Operations by the SLN

The SLN constantly placed their main emphasis on the FAC squadron. FACs were seen as the answer to many tasks called upon to be performed by the SLN. There was a time in the SLN, where the bigger platforms like were seen as a vulnerability as they needed to be protected against the Sea Tigers at all times and FACs had to do that task too. The FACs were at a crucial stage due to the high casualty rate to the squadron as well as to the officers who were commanding them. “FACs were struggling and we could not meet command expectation of the sea control. It was a too much of a deployment, some innovative ways should have come into rescue” says a former commanding officer of the FAF.

Years of fighting, suffering casualties and inflicting damages to the Sea tigers, helped SLN to evolve through studies, experiences, research and to realize that to defeat the Sea Tigers at sea, fresh thinking and adaptation of new tactics were necessary. A former DGE says that “the SLN began to adopt an asymmetric or non-conventional approach to warfare that provided better outcomes and success at sea”. In 2006, the SLN started questioning the wisdom of fighting the Sea Tiger craft at sea mainly with the FACs. In many of the sea encounters, the Sea Tigers enjoyed numerical superiority with their swarming tactic incorporating suicide boats. SLN thinking was to go for higher calibre guns, fire control systems and higher speed, but it was losing FACs at sea battles. The commander of the navy asked the following question about the small boats; “Always we were outnumbered. So now we have to outnumber them. So we need more number of small crafts. As Director General Engineering, can you construct and produce this?” He was thinking of fighting the Sea Tiger boats with a large number of similar type boats, but with better firepower and speed. Years of experience gained in the SLN operating in lagoons and closed sea areas and near-coastal areas became
useful at this juncture and also the study of captured Sea Tiger boats. Their design, weapons and propulsion systems were studied and the SLN came up with three designs; second generation inshore patrol craft (IPC), third generation IPC called “Wave Rider”, the design of which was influenced by Sea Tiger boat called “Indumathi” and first generation Arrow boat using their own research and development concepts. The new boats had to be built fast and equipped and ready for deployment at sea. The SLN Engineering department rose to the occasion. They obtained whatever possible assistance from outside boat-builders to construct certain hulls and moulds, expedited the logistic process to obtain machinery and other equipment, increased the number of engineering personnel and obtained un-skilled personnel to help the technical personnel, enhanced the boat building yard facilities. The entire process was coordinated and controlled by the engineering department from naval headquarters.

This process resulted in building 150 Arrow boats and 30 IPCs and 30 wave riders. These boats were ready to be deployed at a very short time. The other advantages of these boats were high quality, and speedy construction. Another major advantage was that these boats required a less number of personnel to man, were easily transportable and deployable when compared with FAC. A former commander of the navy says that “When we have 10 FACs at sea the LTTE used to put about 20 to 30 of their boats including suicide boats. To match this numerical superiority, we did not have enough FACs”.

The in-house construction of a large number of small boats by SLN provided the answer to regain this numerical superiority at sea against the Sea Tigers. The first Arrow boat squadron was stationed at Point Pedro on the north eastern edge of the country and trained extensively with FACs and during the first encounter on 19th June 2007, SLN was able to deploy a combined force of 40 FACs, IPCs and Arrow boats to 25 of LTTE boats, sums up a former commander of the navy. It was a huge success and SLN was able to capture one of the biggest boats which was used by the Sea Tigers called “Indumathi”, which later provided impetus to the development of Wave Rider IPC. The small boat concept of SLN was a huge success, as a former commander of the navy states that the LTTE did not come to fight with the navy for the next three months. This victory provided the much needed confidence to the SLN. After the
introduction of the small boat concept by the SLN, a number of encounters at sea with the Sea tigers reduced drastically and a former commander of the navy describes this success:

In 2006 there were 22 encounters at sea, with the small boat concept was introduced in the year 2007, this came down to 11 encounters. When I say encounters, the major encounters that lasted more than 12 hours, most were 14 hours or so. The encounters were reduced by 50% with the introduction of new concept.

A former Sea Tiger, Seelan confirms the effectiveness of the small boats as:
The Navy increased the boats and we could not face the arrow boats because we could not locate where they came from. When we fought them some time, they changed the location. Dvoras were also launched to attack. So the arrow boats were a problem for us. Therefore the attacks were limited gradually.

This is a clear indication that the introduction of small boats, launching them from many locations, out-numbering the Sea Tiger boats in a confrontation, did change the war fighting at sea and the SLN was gradually becoming victorious. In the meantime, the army advancing from many directions resulted in the reduction of the launching areas for Sea Tiger boats, states a former Sea Tiger. All these factors contributed to the erosion of sea dominance by the LTTE. Also the destruction of Sea Tiger bases by air bombing helped the SLN greatly, as gradually the LTTE was losing launching pads for Sea Tiger boats.

A former commanding officer of the SBS summarizes the success of this concept in the following:

That was what we learnt from sea tigers and turned the tide on them. The navy developed the small boat concept to respond the swarm attack with smaller and stable craft that could bear formidable fire on the enemy. The boat groups of the navy had better command and control than the LTTE and they had borne on the enemy in large numbers similar to they had been attacking FAC previously.
Scott writing to Janes International Defence Review summarizes the present day asymmetric threats at sea as follows:

The asymmetry that navies must confront stems from the effective coordination of multiple assets. By synergizing characteristics of speed, mass or coordinated manoeuvre, law signature, and concealment, operational commanders seek to exploit their local ‘sea space’ to achieve tactical surprise and saturate a ships defences. Thus, while the individual fast inshore attack craft may be limited in terms of reach and effect, it is its ability to integrate as part of a larger offensive force, manoeuvring hard and approaching along several axis that multiplies the potential of the ‘swarm’ threat to overwhelm maritime forces of a notionally higher order (Scott, 2015. 40).

This statement clearly demonstrates the rationale behind the Sea Tiger ‘swarming tactics’ and the success derived by the SLN in adapting the same tactic against the Sea Tigers.

6.1.10 The Development of Effective Intelligence and Intelligence Coordination

Intelligence gathering and sharing plays a crucial role in any war. The LTTE placed a lot of attention on gathering information about the armed forces, government installations and senior politicians as well as military officers. According to a former Chief of National Intelligence (CNI), “the CFA in 2002 was crucial for the LTTE. The LTTE declared a unilateral ceasefire on 24th December 2001 mainly due to the continuous military operations which were carried out by the Sri Lanka army in the north”. The LTTE found it difficult to hold onto the area in the north though both sides suffered heavy casualties. A former CNI says that the leader of LTTE, Prabakaran summoned all his area leaders and told them, “I will give you five years, within five years you prepare to fight”. The intelligence agencies knew that the CFA was not going to be working and the LTTE used it to bring in large quantities of heavy weapons and ammunition. The intelligence personnel also enhanced their capabilities. The
requirement of a good strategic intelligence network was the objective. “The intelligence agencies started collecting all possible data from targets, sea tiger bases, LTTE training bases and ammunition dumps. They also corrected grid maps used for military operations. They also developed the collecting of intelligence on the sea activities of the LTTE”, says a former CNI. Later the Intelligence agencies were able to provide accurate information about LTTE Sea Tiger targets, especially the gun running ships to the SLN and there were many successes. One by one, the LTTE gun running ships were targeted and the LTTE became desperate for supplies to maintain the battle against the government forces. KP also confirmed this aspect and indicated that was why he was asked to run the LTTE overseas operation once again in 2008, but by that time only two ships had been left of the LTTE fleet.

A former Director Naval Intelligence (DNI) says:

After 2005, I saw the political leadership had realized the importance of the Navy, realized the importance of curbing the supply through the sea to LTTE. They developed the Sri Lanka Navy and gave the responsibility. Likewise, the government had taken so many steps, getting the various State intelligence agencies into one umbrella and controlled by the secretary, ministry of defence, and under him appointed CNI with a view to share information and valuable real time intelligence.

According to a former Director of Naval Intelligence (DNI), Intelligence agencies were responsible for convincing south eastern governments, especially Thailand by providing various credible input to force the LTTE operations to move away from Thailand. He explains further that:

Indonesia is an archipelago with hundreds of islands which helped them to conduct their activities with lesser expose to state law enforcement authorities. LTTE did not carry out their shipping activities very openly like in Thailand. But they had carried out certain activities very covertly. All ships they had acquired were international maritime organization (IMO) registered. Keeping one ship at Jakarta harbour for logistic transfers, all other ships were stationed out at sea in between international shipping lanes off Indonesia to store military
hardware. All Ships were manned by sea tiger cadres including one ‘Black Sea Tiger’.

This goes to prove the efficiency and effectiveness of government intelligence agencies. The LTTE ships became vulnerable as now their position was exposed and the SLN could target them. “Subsequently with the help of precise information gathered through those maritime operations and other available ground intelligence, our naval intelligence alone had been able to locate all other LTTE ships through own network and destroy them in three subsequent maritime operations during the year 2007” says a former DNI, indicating the success achieved by the SLN due to the breakthrough in intelligence. This success clearly indicates then the gradual development of naval intelligence as a stand-alone unit gaining experience from maritime operations and valuable input from arrested Sea Tiger operatives and combining technical sources and developing a complete picture of the enemy at sea. The development of actionable intelligence helped SLN to attack the LTTE overseas’ logistic supply chain, which was the main life-line of the LTTE fighting capability. Also the assistance received from other foreign governmental agencies in locating the LTTE warehouse ships played a key role in targeting these LTTE gunrunning ships.

A former commander of the navy also speaks about how he developed the Intelligence branch in SLN with their own and joint training with military and police intelligence units and how the naval Intelligence operatives were deployed:

In fact we had naval operatives working at places where LTTE had their strongholds. The LTTE tried to attack Colombo harbour thrice and we realized that they were operating from Colombo and Negambo. At Negambo there are large number of Tamil people, Tamil organizations and pro-LTTE groups. We were able to deploy navy people to work in some tea boutiques, carpentry shops, and even in some ‘fish wadis’ [Temporary Fishing Villages] as fishermen, carpenters and tea vendors. They were naval intelligence operatives and they were gathering and giving us very good human intelligence [HUMINT].
Pieces of information thus gathered helped to develop a complete picture and facilitated the study of the LTTE mind-set and patterns of operations. It was also important to develop one’s own naval intelligence capabilities as no other unit, even with best intentions and input, would be able to comprehend the vagaries at sea, like the navy says a former DNI. A photograph of ‘One of the LTTE ships captured by the SLN’ is placed as Annex ‘J’.

The Focus Group defence services command and staff college (DSCSC) also brings out the fact of the defection of the LTTE senior military leader ‘Karuna’ as another positive contribution to gaining critical information about the LTTE strong holds, tactics and Sea Tiger operations.

6.1.11 Minimizing Corruption and the Proper Evaluations in Procurements

In order to prevent corruption in the system of procurement of arms and ammunition and other war fighting equipment to the armed forces, one central authority functioning under the ministry of defence was created as Lanka Logistics Technologies Limited (LLTL). They were mandated to prevent corrupt practices of military arms procurement as well as to streamline the whole process. A former CEO of LLTL, Wikramasinghe indicates “When the LLTL was created, there was an advisory board consisting of CDS and service commanders who would go through the requirements. Then they decide as to which items LLTL should focus on procuring”. This process introduced standardization of weapons and ammunition requirement for the armed forces. Earlier there had been many different types of weapons and ammunition and there was a major compatibility issue. According to the former CEO of LLTL, “the LLTL signed long term rate running contracts through which the prices were fixed for a specified period of time”. This must have resulted in not calling for tenders every time there was a requirement for the armed forces as the evaluations and testing completed, prices agreed upon, quality testing done and they could obtain the required quantities through LLTL. The economy of scale had been achieved as larger quantities were now being ordered and even the shipping cost would have come down. Wickramasinghe also mentions:
After the LLTL’s establishment, we were able to streamline procurement process and lower the cost of procurement. We established links with our counterparts in friendly nations, and facilitated procurement through them on a ‘government to government’ basis. This enabled us to maintain external secrecy in military procurement. Internal transparency was achieved by the standing cabinet appointed procurement committee (SCAPC).

Setting up of a single point authority strictly under the ministry of defence but subjected to SCAPC must have ensured that the military procurements of war fighting equipment was streamlined and carried out in a more professional and discrete manner, subjected to government laid down procedures. Creating the LLTL can be considered as another important aspect of the war victory. Wickramasinghe also points out that the establishment of a company like LLTL was initially suggested by a committee report in 1999, but the actions were taken only in 2006.

6.1.12 Evaluating the Capabilities of Armed Forces

During most parts of the war, there were no proper studies carried out to evaluate the capabilities and requirements in a joint forces manner. Quite often the individual services were evaluating their capabilities and requirements on their own rather than understanding the possibilities for mutual benefit and assistance. There was no effort to do joint studies of the equipment needed, especially in the case of maritime surveillance. A former air force commander and CDS states that:

If the Sri Lanka air force and the navy could have worked together, and if the air force could have done continuous surveillance and the navy had the capability to get to an area quickly in deep sea when the SLAF sees enemy activity, and if the air force had long range bombers to interdict enemy boats, I think this enemy would have looked very small. The enemy became big because we allowed them; because we did not do our surveillance work properly due to lack of assets. The enemy exploited this.
It is observed that the SLN and the air force should have worked together in utilizing more air assets for maritime purposes, such as having some helicopters on board SLN OPVs for deployment at sea. All the military efforts began to be undertaken in a much more coordinated manner only after 2006. The service commanders after consulting with their senior commanding officers on the field worked in harmony with all the services, and jointness was seen to a certain extent says a former air force commander and CDS.

6.1.13 The Application of Modern Technology, Research and Development (R&D) Work Undertaken by the SLN

Developments in modern technology and their applications for military use provide great advantages to the forces engaged in battle. KP confirmed that OBMs, engines, RADARs, guns and communication equipment for Sea Tiger boats were bought by him from Singapore, Japan and Malaysia and sent here for final assembly. The SLN would either import the fully configured boats from abroad or locally from builders. This was costing SLN more and the time taken to obtain the service of a craft was also long. The LTTE was known for reverse-engineering; they brought a lot of equipment from abroad and tried to make similar things in areas under their control. A former DGL indicates technological advances of the SLN as a major contributory factor for winning the war. SLN embarked on enhanced coastal surveillance by using modern RADARs, basing them at various locations around the country and by a land based new technology High frequency short wave radar (HFSWR), which gave an effective range of 250 nautical miles. He also points out that the command was receptive to new and innovative ideas, which opened fresh and open thinking among the SLN where many new proposals were coming up for consideration.

A former DGL also points out to the acquisition of modern technology by the SLN: “Then again after 1996, new technology was introduced. We got super Dvora MK II, superior engines, night fighting capabilities, better radars and Fire Control Systems (FCS) better known as multi sensor integrated system (MSIS) or Typhoon systems”. SLN always asked for a training package whenever a new ship or new equipment was acquired. A large number of technical personnel were sent abroad for
training and they received training from original equipment manufacturers, states a former DGL. The in-house training programmes in SLN training institutions were also going on and all this knowledge came in full use when the SLN needed it the most. SLN never compromised training even during the height of the war. Also the required number of technical sailors were enlisted and provided with necessary training and opportunities to gain relevant experience and they too played a crucial role in maintaining the operational and fighting efficiency of the SLN. SLN began undertaking repairs, servicing and maintenance of sophisticated military equipment which were earlier sent abroad to the manufacturer for the same. “A new branch called the weapon engineering branch was created in 1996 and became a fully pledged branch towards the latter part of the war”, states a former DGL.

In the beginning, not much attention was paid to the development of one’s own technology and experimenting on their expertise. A former commander of the navy, states that R& D work was carried out for the installation of bigger calibre weapons on FACs, such as 30 mm guns, 107 mm rocket launchers, single and nine barrels configuration. “In fact, this was also in response to the fact that the LTTE acquired 23 mm guns when the SLN was mainly using 20 mm guns”, indicates the Focus Group (NWNC). In the case of FACs, the existing Typhoon system was used to accommodate a bigger calibre weapon such as 30mm guns. Then an experiment was carried out to fix a single 107 mm rocket launcher to the same typhoon system. The Focus Group DSCSC indicates that “when a 107 mm single barrel rocket launcher was test fired on a FAC, the front glasses on the superstructure shattered due to the immense back fire. But later this was corrected by having armoured plates to protect the toughened glass from being getting cracked”. The Focus Group North Central Naval Command (NCNC) indicates that the SLN even experimented with a remotely operated explosive laden boat, which can be compared with an un-manned suicide boat with limited success.

A former commander of the navy goes on to say:
Even in the line of Communication, R&D was done, we hired outside assistance. We recruited outside people to the volunteer force and they developed antennas to increase the range of communication of FACs and other vessels. Then in various areas to act as force multipliers, R&D played a big role
with specialized persons from University of Moratuwa coming and working with us. In fact we ultimately developed an unmanned explosive boat. These technology evolutions contributed immensely to the final victory. The Focus Group NW confirms the effectiveness of research and development modifications done by the SLN to enhance the fire power capability of ships:

This made a huge impact on the morale of personnel who went to the sea on board FAC. By taking another step ahead, sea borne stabilized rocket launchers were installed on board Gun Boats. Further, to intercept the target effectively, 25 and 50 KW RADARs were installed and that contributed immensely to the detection range of naval platforms.

The Focus Group North Western Naval Command (NWNC) also considers the modifications done to the multi barrel rocket launcher (MBRL) – essentially an area weapon mostly used by land forces, to fit onto the Fast Gun Boats (FGB) – as another major R&D break-through which provided an enhanced effective range as the main armament with an area destructive capability. This was done by using an existing 30 mm GCM A03-2 stabilized gun mount on board Fast Gun Boat (FGB) and the results were impressive. This modified MBRL instilled more confidence in the ship’s crew and was seen as a counter to Sea Tiger swarming tactics as well. Further, this confused the Sea Tigers where they now they had to contemplate on another dimension of the SLN threat.

In the case of the 30mm cannon upgrading to the existing 20 mm Typhoon system, the SLN undertook to design and fabricate the cradle, ammunition feeding arrangement, upgrading of existing software, design a user friendly control panel and installation of a gun control unit (GCU) indicates the Focus Group NWNC. These modifications would have cost much more money and time if undertaken by the original weapon and mount manufacturer. But the SLN was able to do it at a fairly a low cost and the product was available immediately. This modification gave FACs an enhanced effective range than previously available and confidence to fight with the Sea Tigers more effectively. Twenty such systems were upgraded within a very short period of nine months, Focus Group NWNC reports.
6.1.14 Enhanced Coordination among Armed Forces

Although government armed forces had been engaged in fighting a long battle against the LTTE, at most times their efforts were not coordinated in a meaningful manner. There was a Chief of Defence Staff and a separate joint staff headquarters. In order to overcome this lack of coordination, weekly National Security Council (NSC) meetings chaired by the President were conducted. These NSC meetings contributed effectively to coordinating the war effort by all agencies involved. In the NSC meetings, all commanders were expected to provide briefings about their areas of operations, progress made and drawbacks experienced. Intelligence matters were discussed and all participants were brought to a higher level of understanding of the overall campaign. Important decisions were made and communicated to Heads of all agencies. A former commander of the air force and CDS concludes the effectiveness of these efforts.

The President made very important decisions at the Security Council meetings after inputs were received. The Intelligence agencies made a huge contribution at the NSC which helped the President to make those important decisions. These meetings usually commenced at around 10.00 am and went on till 3 pm or later. It was intense and important.

A former army commander and CDS comments that “as a tactical commander I could have finished this war much before, if I could use the navy more effectively”, which shows the predicament of the lack of mutual cooperation which prevailed at that time. If more mutual support was available, the war could have ended even earlier and some casualties could have been avoided. If more naval assets and sensors had been used, it would have helped the army to progress even more rapidly. However, the relations between other service commanders and police remained fair. Although there was no coordination between the top brass of the navy and army, the ground commanders remained in close contact with each other and worked together enabling mutual support. However all efforts were combined with a view to win the war.
6.1.15 Effective use of Strategic Communications

A former director general, Laxshman Hulugalle of the national media centre explains the main reason for forming the media centre for national security in 2006, which was to make a single point for war-related news dissemination. The prolonged conflict in the country had its ups and downs for both the military and the LTTE. However the government was unable to use the gains effectively as there was no policy of national level strategic communications. The LTTE on the other hand invested very well in an international level media campaign to gain support from the Tamil diaspora and various lobbies to further their cause. The government was lagging behind. Although there were military spokesmen from all the services, there was no concentrated effort in the dissemination of information. Hulugalle explains further:

With the directions of the President and the secretary defence, the national media centre started functioning well. After forming the institution our main task was; this was when the Mawil-aru sluice gate was closed by LTTE, to announce that LTTE had forcibly closed the sluice gates, that was the first news we had to announce. From there onwards, we were able to give the right news and we won the hearts of the people and the journalists locally and foreign. So that was my role and after those three months, everybody had confidence when we say something, it was taken very seriously.

This new media policy helped to create an awareness among the general public as well as military analysts. The result was bringing the entire country to a war-footing and giving hope and confidence that this war was winnable. Access was also provided to selected media personnel to report from the front line where live action was taking place. Defence media became widely accessible and it was able to compete even with media giants such as the BBC, CNN Al-Jazeera for news on the Sri Lankan conflict, states a former director general of the national media centre.

Likewise, defence media was seen as a credible and updated source of information. It helped to boost the morale of the armed forces, especially among the lower ranks. The general public became more aware about the contribution and sacrifices made by the armed forces and respected the armed forces personnel more.
and more. The armed forces personnel were seen and accepted as war heroes and protectors of the nation. The notion that the armed forces personnel were fighting to save the country was well established. The needs of armed forces personnel were studied and provided by the government as well as the general public. Religious dignitaries started blessing the armed forces personnel by conducting various religious offerings at many places of worship.

Indeed, not only were the members of the armed forces given due recognition, but also their families were respected. The nation began to be grateful even to the kith and kin of armed forces personnel. There were volunteer groups who came forward to look after the families of soldiers. All these resulted in giving courage to the armed forces to fight the common enemy of the country and save the country from the claws of terrorism. Even the foreign embassies in Colombo and the Sri Lankan mission abroad could now rely on defence media as a credible media centre. This was the effectiveness of the strategic communications. Anti-war media lost their ratings and people started rejecting them. The defence media was providing accurate incidents, figures without exaggeration. These efforts also resulted in making people aware that the LTTE was a terrorist organisation and not an organisation fighting for freedom. The image of the LTTE also changed from an unbeatable giant to an ordinary group who would run when they were attacked. That too gave lot of courage to the armed forces, concludes a former director general of national media centre.

Regular press conferences were conducted by the national media centre and whenever there was an incident in the battle zone, it was released to the press immediately. Also the media centre functioned 24 hours. With the help of the armed forces, police and special task force (STF) personnel attached to the media centre, it was possible to obtain accurate information as and when things happened in the operation areas. Another major attribute of the national media centre was that it did not provide opportunities for individuals to shine but prominence was given to the soldiers who were actually in the battle. So everybody was giving the credit to the President because the President led the country in the right way, states the former director general of the national media centre.
6.1.16 Dominating the Ground by the Military and Operations of Special Forces

When the military operations commenced in 2006, after the closing of the Mawilaru anicut by the LTTE, the army advanced in a number of fronts and gradually, the LTTE was losing the coastal areas which were under their domination. This loss resulted in restricting the LTTE sea tigers’ ability to carry out their activities and gradually the tactical advantage enjoyed by them and freedom of movement began to diminish. The military changed their tactics too. They started operating more and more inside LTTE controlled areas such as the Army’s Long Range Reconnaissance Patrol (LRRP). Navy’s SBS also began to operate by using sea launchings to penetrate deep behind enemy defence lines for the purpose of carrying out attacks and gathering of intelligence. “However, I must mention that there were elite units in the army doing operations deep into un-liberated areas controlled by the LTTE. These were the LRRP teams that were successful in instilling great fear in to the LTTE, mainly their leadership and managed to put into disarray many terrorist operations”, states a former air force commander and CDS on the effectiveness of these special forces operations. The combination of Army advances in various fronts simultaneously and operations carried out by special forces such as navy SBS reduced the freedom of movement of LTTE cadres and especially that of regional and other prominent leaders. As the LTTE was not highly trained like the government military, their successes were mainly due to the presence of their leaders. When the LTTE leaders lost the freedom of movement, it affected the fighting efficiency of LTTE cadres.

The SBS too played an important role in the conflict, working behind enemy lines and gathering important beach intelligence. SBS developed these capabilities through hard training and years of experience in the conflict. A former commanding officer of the SBS, describes the background to the SBS as follows:

The Special Boat Squadron came into effect during the 1990s. We had a detachment at Nagathevanturai in the main land on the southern side of the Jaffna lagoon. During that time, the LTTE had only one way to move their troops from the mainland to the Jaffna peninsula that is by crossing the Jaffna lagoon. One of the Commanders, who was killed by the LTTE, Admiral Clancy
Fernando had an idea of having a detachment at Nagathevanturai and fight with the LTTE with navy small boats inside the Jaffna lagoon, so that their troop movements can be disturbed and reduced. For that we started this detachment and we put our inshore patrol craft available at that time to fight in the lagoon.

Another former SBS commander clarifies the beginning of SBS further:

The need for special operation capability in the navy was a long felt need. At a time when the LTTE in small groups were attacking coastal detachments, if the navy pursued covert infiltration missions based on intelligence, a devastative impact on LTTE could have been possible. Indeed, late Commander Shanthi Bahar in eighties was the first to demonstrate effectiveness of small group operations inside the enemy lines. Unfortunately, his demise halted the spirit of special operations in the navy till early nineties when LTTE was freely operating across Jaffna lagoon, infiltrating in to the peninsular and supplying their cadres operating in Jaffna peninsula beside occasional hit and run raids on military defence lines on lagoon perimeter [the researcher led one such small group in 1980s].

During this time, the SLN was engaged in small boat battles with the Sea Tigers in shallow lagoon areas in the northern peninsular. With the experience gathered in these operations, despite many losses to the SLN, some key lessons regarding shallow water operations were learnt. One lesson was to fight the Sea Tiger boats with similar size boats and not bigger IPC type boats for obvious reasons; also to reduce the crew to the bear minimum in order to minimize the casualties in the battles. There were other lessons, which led to the development of the small boat operations concept during the final stages of the war. With training and gradual development, the SBS became a highly skilled and motivated unit which was capable of inflicting damages to the enemy, especially in riverine and coastal operations. “The SBS received training from the Army Special Forces and Commandos and later developed their own training doctrine”, states a former commanding officer of the SBS. During the latter stages of the conflict, the SBS was able to support army LRRP groups by inducting them secretly
behind enemy lines and providing them with ammunition, medical items, and fresh water, indicates a former commanding officer of the SBS. The SBS was able to make good use of the training they received from abroad combining with their own innovative training methods to develop their skills. The SBS was used to carry out clandestine beach reconnaissance, under water ordinance disposal, infiltrations, and attacks on enemy coastal defences. “SBS developed the four men and eight men team concepts and their training was extremely tough and the attrition rate was nearly 50%”, according to a former SBS commanding officer. They were given special recognition in the SLN and the successes they achieved made them really special.

Another commanding officer of the SBS describes the concept of SBS as:

The squadron grew up soon in to a versatile force capable of covert and overt operations on land and sea. Capacity building and rigorous training made the force capable of clandestine waterborne entry and even air mobile, to operate deep in the enemy controlled land. This versatility encompass pre assault special missions in amphibious landing and small boat tactics to battle with enemy in close quarter surface combat. SBS fought in heavily armed, highly manoeuvrable arrow craft.

The Special Boat Squadron and the newly formed Rapid Action Boat Squadron (RABS) were brought under a directorate of maritime Special Forces to fight the final battles against sea tigers. The small boats operated by these two units maintained the first line of the layered defence, which was in operation until victory was achieved on 19th May 2009.

6.1.17 Improvement to Naval Tactical Communications

In 2005, the navy identified communications as a weak area which needed immediate attention. There were shadow areas for naval communications in critical areas of the eastern and northern coastal areas and ships and craft operating in those areas could not communicate effectively with their command centres. This was surely hampering the operational efficiency of the SLN. This was mainly in relation to the
line of sight communications such as very-high frequency (VHF) and ultra-high frequency (UHF). A former DGL speaks about these developments in the following:

Since long time, we had a blind communication area between Mullaitivu and Point Pedro. Then by 2007 we installed two 120 meter height antenna masts at Kallarawa and Point Pedro and established the continuous communication form north to east. So we could see the battle on radar pictures and hear continuous communications. I think that gave some sort of technological advance and edge to the command.

The improvements to communications were linked to network centric efforts and there was a great boost to tactical communications in the SLN. The Focus Group of NWNC mentions in their report that:

The communications being the most vital point during any operation, establishment of cougar and UHF repeater network around the Island improved the ship to ship as well as ship to shore communication in confronted areas, which ensured a hassle free communication throughout.

The Focus Group NWNC also indicates the effectiveness of the R&D modifications done for the enhancement of naval tactical communication:

The communication coverage extended up to 70 NM from the land and used for Jet Liner movement [high capacity passenger ship] and the sensors fitted in strategically important land locations around the coastal belt immensely helped to improve the detection of enemy movements near the coast and helped initiate prompt actions to counter enemy’s domination at sea.

Thus, the enhanced communication facilities with a wide radar coverage coupled with a network centric data transfer, immensely helped the SLN to conduct maritime operations, whether it was normal patrolling or large scale troop transfers and also helped to maintain continuous surveillance on the sea area around the country.
This also helped the layered defence system operations carried out at sea during the final stages of the war.

**6.1.18 Creation of the Rapid Action Boat Squadron (RABS)**

The training to become a member of the elite unit, SBS was a rigorous and difficult one. Those who do not meet the strict SBS standards are still good enough for special deployments at sea or on land. It was decided to form another special unit by utilizing these SBS drop outs and it was named as the Rapid Action Boat Squadron (RABS). A former commander of the navy says that:

> If you take 200 volunteers to SBS, ultimately we would end up with 70-75 going through the training completely. All of them were volunteers; men who knew what they were to be trained for. Because many people could not match the physical demands of the SBS sailors or officers, although failed by SBS standards, they were of good quality too. They had the will power, courage and commitment to fight the enemy and do something for the county.

The SBS demanded the highest courage and ability to be a member of that elite unit, due to the nature of tasks assigned to them would be of high risk and would need precise coordination and the skills needed to perform such tasks. Since, the above would need only the best possible men, there was a large number failing those high standards. The RABS were given the same arrow boats developed by the SLN and used by the SBS. The advantage was that those who joined the RABS were almost equally well trained just like SBS personnel and they had the necessary skills such as boat handling, weapon training and they understood the vagaries of the waters that they were required to operate in the coastal and riverine waters. The Focus Group NWNC observes, “the only further training required was for the RABS to operate in combination with FACs and IPCs”. The RABS personnel also had high standards of physical fitness and swimming skills. Also the fact that they opted to join the elite SBS is an indication that they were mentally ready to face extra challenges. The Focus Group NWNC points out that RABS boats were equipped with required weaponry, global positioning systems (GPS), and night vision goggles (NVG), VHF headsets, and,
they too were given a special uniform to provide them with additional recognition. The RABS too were deployed at coastal locations with radar surveillance capability, where they could be deployed to fight with the Sea Tigers quickly. Hence, the RABS played a key role in the SLN’s small boat concept and became a threat to the Sea Tigers as they were able to challenge the Sea Tiger boats with a ferocity similar to the force that could be exerted by the SBS.

6.1.19 The Enhancement of SLN Sea Lift Capability

As pointed out by the Focus Group of NWNC, the SLN developed a limited sea lift capability since 1990s. Initially, the SLN acquired few landing craft mechanized (LCM) from Singapore to support the military deployment along the coastal areas in the north and north eastern coasts of the country. This was a new experience for the SLN, but they mastered the techniques of handling and beaching these LCMs very quickly. Then in the 1990s, SLN built two more LCMs locally and purchased two smaller Landing Craft Utility (LCU) from Peoples Republic of China (PRC). SLN also purchased a bigger Landing Ship Tank (LST) from PRC in 1996. With these fleets of landing ships, SLN was able to provide logistic support and transport military personnel to the military establishments along the coast. A former commander of the navy points out that after the A9 road—which was the main land route between the northern and southern part of the country was closed in 1990 due to the domination of that area by the LTTE, the 35000 strong military which was stationed in the north had to depend on air and sea for their sustenance. This was no mean task. Travel by air was heavily restricted due to capacity, weather and availability of aircraft for the air force to undertake the task. Hence the major portion of this task came to the SLN and the majority of the bulk requirements were transported by chartered merchant ships mainly from Colombo, though there were a number of Sea Tiger attacks against these ships. SLN protected these ships by deploying On Board Security Teams (OBST), a concept developed and pioneered by the SLN to a great success, which is presently being used to prevent sea piracy by merchant ships plying the High Risk Area (HRA) of the Indian Ocean.
However, transporting the troops who needed to proceed on leave or duty was a major and a continuous task. SLN had in possession three small fast passenger craft (FPC), with a limited carrying capacity of 250 personnel each. By 2005, the Sea Tigers with their innovations were getting much stronger and the possibility of a successful suicide attack on one of the smaller FPC was a real challenge for the SLN. SLN was under so much pressure to find a suitable solution to transport personnel to and from north. They had to take a calculated risk: that is whether to go for a number of high speed smaller passenger carriers or one high speed ship with a much bigger carrying capacity. Smaller ships meant undertaking regular voyages, thereby exposing the ship to Sea Tiger attacks, but risking only a smaller number. The big ship meant carrying at least 3000 plus troops at a lesser frequency. But if the Sea Tigers could have one successful attack, the losses would have been colossal and irrecoverable. “Finally, SLN acquired a High speed passenger ferry from Indonesia and when the vehicle deck was also used, it could carry more than 3500 troops in one voyage. Fortunately for the SLN this worked, although escorting the ships up and down had to be done with a large number of smaller naval ships, and even by air craft of the air force”, states a former commander of the navy. According to a former Sea Tiger, Seelan they tried to attack this big ship a number of times, but they had not been successful and they had been reprimanded by the LTTE leader as well. Seelan says that the speed of the Jet Liner was the major problem they encountered in trying to attack it.

A former commander of the army and CDS sums up the effectiveness and the importance of the naval convoy with Jet Liner as:

Jet liner and they (SLN) did a tremendous job. I used to monitor what is happening on the eastern coast, which was under my area. If there are LTTE movements I used to inform air force even before passing it onto the SLN. I knew the convoy was taking place, entire country was on alert and all the resources were pooled and kept on alert to support the navy, especially the aircraft and helicopters for the protection because at that time if something happened we would be turned back.

This statement clearly sums up the predicament of undertaking troops transfer by the SLN using Jet Liner. However, the task undertaken by the SLN was a success.
They would concentrate most of their resources to conduct the Jet Liner movement once a week, and for rest of the days they were free to perform other naval tasks at sea.

### 6.1.20 Enhanced Combat Logistics

The Focus Group NWNC discusses the role played by the Combat Logistics in the victory against the Sea Tigers. Logistic are the key to the sustenance of any military whether it is the SLN or the LTTE. Naval logisticians were able to provide necessary equipment and spares in order to maintain the operational availability of ships and craft and that helped to increase the readiness of the fleet. With all the technological advances, in-house R&D work and in-house large scale boat construction programs, the naval logistics had a key role to play to ensure that the required items were available at the right place at the right time. Their task was made much more difficult as road transportation to some operational areas was not at all available and they had to depend on limited air lift and sea lift capabilities. Also in some locations, unloading from ships was difficult due to the non-availability of pier facilities and they had to improvise quick unloading methods. Foreign procurement was another major area of concern to the logisticians. “There were some embargoes implemented by some western countries and the Tamil diaspora was campaigning to prevent necessary supplies being received by the SLN through their effective campaign work in western capitals. The SLN had to find compatible and alternative sources to keep the SLN fleet and weapons operating at the optimal capacity”, concludes the Focus Group NWNC. The SLN had to improvise cradles, mount for guns and also to find compatible ammunitions on some instances due to these embargoes. Some of the components had to be manufactured locally by the SLN and outside factories and the logistic department had to coordinate all these efforts. Further, it was not always possible to follow the procurement guide lines due to the nature and urgency of the requirement and the logistic department had to regularize the payments and acquisitions maintaining the trust placed on them by the command. There were instances that the SLN had to develop software programs to run the systems acquired from certain countries as they were not providing the necessary spares. This was a herculean task for the SLN logistic branch but they rose to the occasion and delivered.
6.1.21 Effective and Decentralized Medical Support

The Focus Group NWNC also acknowledges the vital role played by the SLN medical personnel in winning the war. They observed that the medical plan was integrated with that of the operational plan of the SLN and had flexibility, proactive adaptation, performance orientation to the needs of the hour. The Focus Group NWNC further points out that improvements to pre-clinical trauma care at the battle field led to decreased deaths and complications due to war fighting. Development of on board advance acute trauma management combined with long distance operations at sea helped carry out those sea operations to destroy LTTE warehouse ships at distances thousands of nautical miles away from the shore bases.

The Focus Group NWNC also observes that decentralisation of Colombo based advance medical care management during 2006 resulted in managing more than hundred war casualties in the East. Even orthopaedic surgeries were carried out in the East. There were also preventive medicine programmes conducted by SLN medical teams in the field through vaccination programmes, and that resulted in avoiding communicable disease epidemics in naval bases. “The SLN medical personnel were also responsible in maintaining the physical as well as mental health of naval personnel which resulted in an incidence of post-traumatic stress disorder (PTSD) to a very low level of 01% in the SLN when compared to more than 10% in the army”, according to the Focus Group NW. The naval medical personnel also treated a large number of the Tamil population who escaped from the final battle ground in 2009, concludes NWNC.

6.2 Outcome of the Data Analysis

This research, by way of qualitative data gathering through in-depth interviews and focus group discussions generated a large and valuable set of data. This was achieved due to the nature of the case study and the intention of the researcher to immerse in the social world and to derive ideas and perceptions of research participants. This ‘valuable data base’ was analysed using the grounded theory and the aim was to carry out a true analysis of the transcripts. The collection of data and analysis proceeded in tandem. As the research was progressing, more interviews were needed to cover areas arising out of the preliminary data analysis. The idea was not to look at the theories of naval warfare first, but to allow the analysis
of the data to point towards the theories. Although the grounded theory is to generate theories, in this research concepts were derived more than the theory. However, new values were added to existing theories.

As Bryman points out “coding is one of the most central process in grounded theory” (Bryman, 2008, 542). All the interview and focus group transcripts were subjected to reviewing by ‘selective coding’ having asymmetric warfare as the core category and theories and concepts of sea control and operational art as related categories. Further coding was carried out for concepts of organizational drawbacks of the SLN, developments of the Sea Tigers and determinants of success in gaining sea control by the SLN. Whilst the coding was taking place, labels were given to selected and appropriate codes and these labels were then used to identify various concepts during the compilation of the thesis. This coding and labelling was a success as large number of determinants of success and many lessons were derived from this case study ‘Asymmetric Warfare at Sea: The Case of Sri Lanka’. The data analysis also proved the applicability of theories of naval warfare even to an insurgency at sea involving a non-state actor, though these theories were conceptualized for conventional battles at sea between navies. It was also proven that understanding various theories and concepts of warfare at sea is of critical importance to any navy and that would save lot of lives and ships at sea. The grounded theory and coding and labelling helped the researcher to derive the best possible outcome from the large data base and also not to miss any relevant observation or perception made by research participants.

The LTTE organisation began in the late 1970s as a small insurgent militant outfit, consisting of a small number of disgruntled Tamil youth. The group was led by ‘Prabakaran’, a determined and dedicated leader, who was able to develop the organisation to be a force to reckon with, especially in the Sri Lankan context. The Times magazine (January, 2009) speaks about the LTTE in the following:

The Tamil Tigers of Sri Lanka are undoubtedly one of the most organized, effective and brutal terrorist groups in the world. They invented the suicide vest and, according to the FBI, are the only terrorist group to have assassinated two world leaders. The rebels, based in northern and eastern Sri Lanka, have been waging a violent offensive against the central government on and off for more than 20 years.
This is a very clear statement of the phenomenal growth of the LTTE as a dominant insurgent group and a trend setter, especially in maritime terrorism. The success and growth of the LTTE is mainly attributed to the Sea Tigers. The Sea Tigers were created with a clear objective of dominating the ocean space, which was of significance to the LTTE, mainly to carry out logistic runs, initially between the southern coast of Tamilnadu and the northern coast of Sri Lanka. The Sea Tigers were also tasked to carry out troop transfers between the coasts and casualty evacuation, and to escape from law enforcement authorities. The Sea Tigers became a serious threat to the SLN at sea and over a period of time, they were able to challenge the dominance of the SLN, whether at sea or in harbour. The Sea Tigers pioneered the suicide boat tactics, under water saboteurs, limpet mines and sea mines, in contemporary history. The most potent weapon in the Sea Tiger arsenal was the Black Sea Tiger suicide boat, which can be compared to a human guided, lethal, sea-skimming anti-ship missile, capable of inflicting substantial damages to SLN units at sea and in harbour. The Sea Tigers improved the Suicide boat with higher speed, armour protection and stealth technology and was responsible in sinking more than 20 SLN units. The Swarm tactics used by the Sea Tigers, combining attack and suicide craft created a near panic situation in the SLN. The Sea Tiger victories gave lot of confidence to the LTTE and they used it as a propaganda tool to raise funds from overseas; especially from Tamil diaspora communities from many countries in the world. The funds thus raised were used to buy war-fighting materials from abroad. Also the Sea Tiger victories resulted in generating a very low morale in the SLN. There were some instances where the SLN evaded Sea Tigers without engaging in battle at sea. The Sea Tigers were able to expand their international maritime logistic network even beyond the Exclusive Economic Zone of Sri Lanka, too far away locations as North Korea. The phenomenal growth of the LTTE to gain a near- conventional status is mainly attributed to the effectiveness and efficiency of the Sea Tigers.

Whilst the Sea Tigers were gradually growing into a dominant force at sea, the SLN was also growing up, albeit reactively. The policy makers of Sri Lanka did not pay sufficient attention to the development of the SLN. A capital intensive organisation like a navy cannot be built overnight. It takes years of planning and preparation and long term financial commitment to develop a navy. Being an Island nation, the ocean frontier should have been considered as the first line of defence where external threats or assistance could be arrived at.
However, successive governments did not pay attention to the development of the SLN. There was no long term policy objective to develop the SLN. It can be argued that the decision makers, both in the government and SLN failed to understand the importance of a robust maritime strategy to defend the territorial integrity of the country. The growth of the SLN was mainly due to the growth of Sea Tigers, and hence the initiative was with the Sea Tigers, most of the time.

The SLN saw a progressive development through the conflict, although at most times in response to the Sea Tiger threat. SLN acquired ships and craft throughout the conflict and notably among them is the FAC in 1985 and OPVs after 2000. The capabilities of the FAC, the weapon outfit and sensors were upgraded from time to time, and so were the training, tactics and deployment pattern to maintain sea denial to the Sea Tigers. The OPV Fleet of the SLN was deployed to maintain surveillance beyond territorial waters up to the EEZ of 200 nautical miles. The OPV fleet became very useful in destroying the LTTE ‘floating warehouse’ ships. Some of the destructions took place at distances which were unimaginable for a small navy like the SLN. The destruction of these LTTE logistic ships resulted in reducing the fighting capabilities of the LTTE drastically, and contributed to the grand victory in a very positive manner. The sea-lift capability of the SLN was enhanced by acquiring a high speed passenger ferry with higher carrying capacity to cater to the increasing demand of the military in the northern area and moves were conducted safely, although Sea Tigers attempted to target this large scale move on a number of times. The SLN logistic, technical, and medical and all other special branches joined the progress and delivered what was expected of them to make the SLN a fighting and winning navy. The SBS played their role in carrying out beach reconnaissance and attacking from behind enemy lines and even supporting the special forces of other services.

An all-inclusive government approach to end the war and bring peace to the country was not seen until 2005. A visionary and strong leadership, which is able to withstand LTTE propaganda, international pressure and maintaining the domestic law and order situation was the need of the country. In 2005, the much needed visionary political leadership and resolve to end the long drawn out conflict was finally available, with a mandate from the people to end the war. The political will was clearly seen and was able to synergize the efforts of the armed forces and many other stake holders in the war against LTTE terrorism. The political leadership
of the president and the secretary of defence was able to unite the entire country on a war-footing and withheld the international as well as domestic pressure to stop the war. For the first time in the history of the conflict, a sense of victory prevailed and the LTTE was not seen as unbeatable anymore. Gradually the dominance of the LTTE was reducing and gains by the military were increasing. The morale and confidence of the armed forces was at an all-time high and they were convinced that the war was winnable.

The LTTE used suicide craft in almost every operation carried out by them at sea and it was very difficult to defend oneself against these boats as they came ready to die. Therefore, it was important and essential to prevent those launching attacks and dominating and maintaining coastal surveillance was of paramount importance. SLN implemented effective coastal domination by combining both physical and electronic surveillance measures towards the final years of the war, after 2006. An island-wide electronic surveillance network combining RADAR, cameras and CCTV was installed in strategic locations and was connected with a microwave backbone. This information was made available at the Naval Head Quarters (NHQ) and other operational command headquarters. This combined operation picture helped the commanders to see the virtual battle on real time and to provide necessary assistance and directions to the units in battle at sea. SLN also deployed some innovative measures such as anti-diver barriers, small sonars, hydrophones, fish finders, IEDs such as scare charges and a variety of small boats to maintain 24/7 surveillance of the harbours. These measures combined with stretches of coastal domination prevented the Sea Tigers from launching successful attacks against harbours by using suicide craft or underwater saboteurs.

The Intelligence agencies were brought under the authority of the ministry of defence and coordination was maintained at the top level to make it more effective and efficient and something to rely upon. The SLN was able to exploit it to their advantage and completely destroyed the LTTE fleet of ships carrying large stocks of war-fighting materials on board. The human intelligence methods used by the state intelligence agencies helped in maintaining security in the south of the country and the LTTE was prevented from launching successful terrorist attacks, where they were gradually losing safe houses and informants they once enjoyed.

After 2005, SLN embarked on an enhanced coastal surveillance system, which provided a long range maritime and coastal surveillance capability to SLN. Superior weapons
with better sensors and fire control systems were also purchased. Night fighting and stabilized firing capabilities were improved. The in-house R&D projects were effectively used to implement innovative ideas such as integrating larger calibre weapons and even rocket launchers to existing stabilized platforms, which provided a better range and area destruction capability to SLN. Tactical communications were improved with additional masts located around the coast and by fixing sensors and networking all the input for better direction and coordination. All these technological advances helped in regaining a competitive edge over the LTTE.

The selection and maintenance of a ‘Grand Strategy’ could not be seen during the most part of the conflict from the government side. The political leadership after 2005, worked with a clear strategy to end the war. First, they enhanced the strengths of the armed forces, then they started liberating areas, which were under LTTE control, starting from the east where the LTTE was at its weakest. Then the strategy catered to advancing in a number of fronts dividing the concentration of the LTTE and maintained a continuous thrust, thereby denying the LTTE an opportunity to regroup and reorganise. Thereafter, the logistics to the LTTE were cut off from the sea, which starved them and affected their ability to sustain the fight against the advancing armed forces. The air strategy carried out precise bombing where key LTTE facilities were bombed and the army LRRP groups instilled a fear psychosis among the LTTE leaders, which denied the freedom of movement for them even within the territory under their control; the maritime and naval strategy resulted in gaining sea control back from the Sea Tigers, whilst denying the same to the Sea Tigers. Then there was a strategy to balance international and regional concerns. Finally, the LTTE leadership was cornered to a small land area having lost everything they built for nearly three decades; thereafter they were easy targets for the military.

SLN was a conventional, small navy performing traditional naval roles. However, the Sea Tigers, though much smaller in terms of size, number and capabilities, enjoyed the freedom of action at sea with their innovative tactics, daredevil action and determination. The SLN was gradually losing the sea control of ocean areas, which were of interest to the LTTE. The tide only changed in favour of the SLN, after 2005, when they changed tactics and started thinking like a guerrilla force at sea. The SLN came up with the small boat concept, where they started producing a large number of better quality smaller IPCs and Arrow boats, which were similar to Sea Tiger craft and stationed them along the coast in strategic locations. The SLN used small
boats with SBS and RABS personnel who were well trained and conversant with small boat operations. The asymmetric tactic of using small boats by the SLN changed the game for the disadvantage of the Sea Tigers, and the SLN was able to wrest sea control from the Sea Tigers. The layered defence concept employed by the SLN by using small boats in a barrier towards the final stages of the battle prevented the LTTE leadership from escaping by sea. A barrier patrol at sea is normally done by using bigger units. However, the SLN used small boats for a barrier at sea with good effect.
CHAPTER 7

THEORIES AND PRACTICE; THE OUTCOME

7.1 Winning an Unwinnable War

Chapter four of this thesis deals with various concepts and theories of naval warfare. In order to analyse the rise and fall of LTTE Sea Tigers and the regaining of sea control by SLN, which resulted in defeating the LTTE at sea, three theories of naval warfare were used. The SLN’s action was scrutinized in relation to theories of asymmetric warfare, sea control and operational art. The operation art was seen as the bridge between strategy and tactics. As the war lasted a considerable time, it was necessary to find out the reason for victory. When looking back at the war retrospectively, it is seen that the theories and concepts of operational art had played a key role in this grand victory.

Chapters five and six of this thesis were dedicated to analysing qualitative interviews and focus group discussions with the objective of finding answers to the research questions. Chapter five discusses the organizational drawbacks of the SLN and the development of the Sea Tigers. It was quite clear that the organizational drawbacks at policy, strategic and tactical levels resulted in the Sea Tigers gradually gaining limited sea control status to carry out their operations in support of their grand strategy. Further, the dedication, motivation and use of asymmetric tactics at sea by the Sea Tigers helped them to develop near-conventional military status. Chapter six discusses the determinants of success behind SLN regaining sea control. The qualitative data analysis reveals that there were many tangible and intangible reasons for SLN’s regaining of sea control and the demise of the Sea Tigers at sea and the resulted loss of combat power for the LTTE. It is now necessary to study the relation between the theories and the outcome of war at sea involving an insurgent group which mastered asymmetric tactics at sea. This chapter will analyse the determinants of success for regaining sea control by SLN in relations to theories of naval warfare.

The propositions selected for this thesis assumed that at the earlier period of the conflict, the naval forces could not establish and maintain sea control due to the lack of understanding of the nature of the threat posed by the LTTE and the lack of understanding of
asymmetric concepts at sea. It was also assumed that the motivation, determination and leadership of the LTTE resulted in developing the Sea Tigers into a force capable of fighting with the much formidable SLN. The study also assumed the transformation of strategies by SLN and political and military resolve and leadership as key components of the grand victory against the Sea Tigers. The theories of naval warfare will be analysed keeping these propositions in mind, so as to find their connection to the research findings.

When two forces are fighting, the outcome will not merely depend on the strength of the force or the fire power they possess. The success would depend on many other factors. Theories and war-fighting are interrelated. But the question is whether one applies the theory first or fights to win and then look back and see how the theories were applied. It appears that in the case of SLN, they fought hard and won the battle. In this work, the researcher tried to analyse how the theories of warfare were applicable to the outcome of the war with the LTTE. It is an established fact that the LTTE was comprehensively beaten militarily on the soil of Sri Lanka. One of the most organized and ruthless guerrilla organisations in the world was beaten by the Sri Lankan military. The contributions made by SLN in defeating the Sea Tigers at sea and cutting off LTTE logistics line completely are seen as “vital contributions of the SLN in Eelam war IV at sea were pivotal in the destruction of the military power of the LTTE on land” (Hashim, 2013, 165). This provides a classic case study of how an insurgency can be defeated by military means against the conventional wisdom that insurgencies should be dealt with by political means. This case study also provides a great opportunity to test the theories of naval warfare selected.

Is going to war always a great evil? Doesn’t war sometimes settle issues? What are the negative consequences of not finishing war? These are some of the questions which arise when one looks at the Sri Lankan conflict. Luttwak mentions how a war should be fought in order to achieve positive results:

an unpleasant truth often overlooked is that although war is a great evil, it does have a great virtue: it can resolve political conflicts and lead to peace. This can happen when all belligerents become exhausted or when one wins decisively. Either way, the key is that the fighting must continue until a resolution is reached. War brings peace only after passing a culminating phase of violence. Hopes of military success must fade for accommodation to become more attractive than further combat (Luttwak, 1999, 1).
The Sri Lankan conflict which had been going on for more than 25 years came to an end in May 2009, as a result of the comprehensive defeat of the LTTE. The LTTE though started as an insurgent force, fought near-conventional battles with Infantry, artillery and limited armoured capability. The LTTE developed their near-conventional capabilities by exploiting the deep ocean to their greater advantage. As Luttwak suggests, the Sri Lanka military won decisively and destroyed the LTTE together with all their leaders, including the LTTE leader Velupillai Prabakaran. If that victory did not come at that juncture, the conflict would have dragged even to date, bringing more killings and sufferings for people of Sri Lanka, from both sides of the ethnic divide. Although it was not a classic naval war, the ocean was used widely by both, the SLN as well as the LTTE to fight the war. Especially in the case of the LTTE, they used the oceans extensively to transport weapons, ammunitions, explosives, medicine, and fuel and basically everything they needed to sustain the war efforts. The LTTE Sea Tigers being the smaller and weaker maritime component had to innovate and experiment to become a potent threat to the much formidable SLN. The Sea Tigers challenged the supremacy of SLN at sea and became victorious and inflicted heavy casualties at times. They were able to use the ocean to carry out their gun running activities evading the SLN. They not only had maritime fighting capabilities closer to the shore line but a fleet of international ships plying in international shipping routes as well. Adaptation is a basic requirement in a long drawn out conflict. The LTTE adapted to the changing situations really well and the armed forces were more reactive to the threats posed by the LTTE rather than being pro-active. This was especially the case with the SLN.

7.2 Asymmetric Warfare at Sea and the Defeat of the LTTE

The SLN- LTTE war at sea was not a war between two comparable forces battling against each other using conventional concepts and conventional weapons. This was a war fought by using different types of weapons, often improvised. Therefore, the war between SLN and LTTE did not limit itself to an established model or framework. Here we see a range of asymmetric and unconventional tactics being used by both sides to good effect. This was a war amongst the people. Combat could take place anywhere and everywhere. It was not limited to a certain geographical boundary but spread to the entire country, though the majority of direct fighting was limited to the northern and eastern provinces. It was not always possible to
differentiate civilians from combatants especially in the case of the LTTE as they were fighting from among the civilians even at sea.

The Sri Lankan armed forces were created as conventional forces and they were not immediately ready to change their thinking afresh with creativity and ingenuity. The war against the LTTE needed some out-of-the-box thinking as the LTTE was always one step ahead in the fight. The need to think differently was the need of the hour to defeat the formidable LTTE.

It can be seen that Asymmetric warfare seeks to unsettle, disorient and misdirect conventional military leaders. The situations and conditions remain volatile, uncertain and complex most of the time. The LTTE used these complexities to a great extent to develop their war-fighting capabilities and become a significant threat to the SLN at sea. This situation prevailed for a long time. Initially it was a matter of survival for the LTTE. But with the success gained by their activities, they made it their strategy to fight with the SLN as they realized that SLN would be vulnerable to asymmetric threats. Until such time the SLN changed their thinking and concepts, they were not winning. SLN needed a leadership that would be adapt to the changing situation quickly. This leadership was available with the navy in 2005 to transform the SLN into a fighting one. With political leadership giving the motivation and right directions, the SLN leadership changed their approach to win the war. The years of experience in fighting with the LTTE also became very useful for SLN at this juncture.

The SLN began to study the LTTE Sea Tiger operations and identified their strong points whilst understanding their own drawbacks. The SLN realized that as a retired commander of the navy says, “there was no point in treating the ‘symptoms’ but addressing the root causes”.

The SLN small boat concept can be named as a classic out-of-the-box thinking to make the Sea Tigers disoriented and attack when they were in a confused state. SLN prepared well with innovative thinking and combining years of engineering and operational experience to enhance their own boat constructions. Until that time, the main focus of SLN was to use FACs to fight against the Sea Tigers. But FACs were suffering heavy losses and casualty rates among the officers commanding them was high. FACs were more expensive and the small boats were much cheaper to build and were assembled in the SLN yard. The small boats became an ideal platform to fight when the confrontations were taking place near coastal areas. Earlier, SLN
tried to stay away from the 5 nautical mile belt off LTTE controlled areas. But with a large number of small boats strategically positioned along the coastal locations near LTTE controlled areas, they were able to lure the Sea Tigers into battle. This is exactly what Sun Tzu meant when he said “to avoid when the enemy is strong and lure them into battle when you are strong”. The SLN by this time enjoyed the numerical superiority of small boats. As the LTTE was facing problems with receiving items by sea due to the destruction of warehouse ships, the operation efficiency of their boats gradually began to deteriorate. Also the morale of the Sea Tigers was at a low ebb and they were being used to fight on land to defend against the advancing Army. This made the situation even worse for them. Gradually the Sea Tigers were unable to come out and fight against the SLN.

### 7.2.1 Sea Tigers and Concepts of Asymmetric Tactics

The conflict in Sri Lanka encompassed all aspects of Asymmetric warfare; evaluating and defeating asymmetric threat, conducting asymmetric operations, understanding cultural asymmetry and evaluating asymmetric cost (Buffaloe, 2006, 17). The power of the LTTE was the Tamil people. Their recruitment, expertise, technology, all came from the Tamil people. The Sea Tigers benefitted immensely from Tamil youth who were coming from fisheries backgrounds. A former Commander of the navy points out that “not developing a strong navy, being an island nation was a major reason for the substantial growth of sea tigers and their ability to challenge the SLN at sea”.

In the case of the LTTE, initially they were much smaller and weaker against the formidable force levels of Sri Lankan armed forces. The LTTE knew that the armed forces, always work in a symmetrical way, and take time to react to any fluid situation. This was the strategy the LTTE adopted from the beginning. They didn’t have enough cadres to fight and they were in great danger of being captured by the armed forces. The only way they could develop was by vigour and determination of the LTTE leadership.

When the LTTE armed struggle commenced no one thought that they would become such a formidable militant force. When they were threatened and their organization was in danger of being destroyed by the armed forces, they started acting
with vigour and became a force to reckon with. The LTTE always had a grand objective; that is to achieve a separate state for Tamils and they did everything possible for attaining it. That became a combination of ‘brilliant strokes’, which won the admiration of the Tamil diaspora as well as some western countries.

7.2.2 The Transformation of the SLN

The SLN was developed with a conventional mind-set and it was difficult for them to change and adapt to the changing situation quickly. The SLN focused full attention on the development and enhancement of the FAC fleet as it was considered the major fighting platform against the Sea Tigers. The FAC enjoyed many advantages against those of the Sea Tiger craft. FACs had better sea keeping qualities, higher speed, and a better weapon outfit and fire power. The SLN also enjoyed sheltered harbours on the eastern and northern coasts where they could launch these FACs from. The Sea Tigers did not have a single harbour, they had to use improvised launching and recovery methods to use their boats for tasks at sea. Despite all these odds, the Sea Tigers threatened the dominance of SLN FACs by employing asymmetric tactics such as swarm tactics and suicide boat. Years of fighting, suffering casualties and training received from abroad and own studies and evaluations by SLN, made them realize that to regain sea control and to defeat the power of the Sea Tigers, it was necessary to shift from a conventional mind-set to that of an asymmetric mind-set. The SLN began to adopt an asymmetric approach to warfare that provided better outcomes and success at sea. This is quite contrary to the normal belief about the weaker side forced to fight against odds. In fact it was the stronger side, the SLN, which was threatened by the smaller Sea Tiger force and had to confront many odds and renew its vigour and to use the inspiration to win, with the strategic objective of defeating the Sea Tigers at sea. This has been admired by many and resulted in reducing the fighting capabilities of the LTTE as an insurgent force, who enjoyed not only guerrilla fighting capability, but a near-conventional land fighting capability coupled with a substantial force at sea and a minor air capability. As Otto Von Bismarck said; “We live in a wondrous time in which the strong is weak because of his moral scruples and the weak grows strong because of his audacity” (Applegate, 2001, 6). The audacity of the LTTE and that of Sea Tigers
paved the way for them to innovate their own tactics at sea and resulted in threatening the dominance enjoyed by the SLN at sea. Sea Tigers did not allow the SLN to rest even once inside a harbour as they carried out clandestine saboteur attacks against SLN platforms, again by using the audacity to achieve their strategic objectives. Shelton writes more about asymmetric applications at all levels of warfare:

Asymmetric approaches generally seek a major psychological impact, such as shock or confusion that affects an opponent’s initiative, freedom of action, or will. Asymmetric methods require an appreciation of an opponent’s vulnerabilities. Asymmetric approaches often employ innovative, non-traditional tactics, weapons, or technologies, and can be applied at all levels of warfare strategic, operational, and tactical and across the spectrum of military operations (Shelton, 1999, 14).

The use of Asymmetric tactics by the Sea Tigers was indeed a shock and confused the SLN to a great extent. SLN took a long time to understand that it needed to think differently. However, this changed especially after 2006. Years of experience and understanding the enemy capabilities and tactics better, SLN transformed itself, and adapted to asymmetric tactics well.

### 7.2.3 Successful Leadership within the SLN

The main reason for this successful change in the SLN is attributed to the leadership of the then Commander. A strong leadership is a must for changing from a decade old conventional mind-set to a winning strategy for the SLN. The SLN was losing sea control and Sea Tigers were gaining dominance at sea. The LTTE was able to receive almost all military supplies for the fight against the armed forces from across the sea. SLN was hesitant to try an all-out asymmetric war against the LTTE Sea Tigers, but when they tried this, the results were immediate. SLN was able to regain the initiative, surprise and the Sea Tigers started losing the battle for supremacy at sea against SLN.

During the initial stages of the conflict, it was the LTTE Sea Tigers who introduced many new tactics and achieved near total surprise against the SLN.
However, with the changing tactics of the SLN, the Sea Tigers were surprised and could never recover from it and gradually started losing the battle at sea. Although the SLN was on the receiving side of asymmetric tactics, they were able to change the trend and surprised the Sea Tigers in terms of ends, ways and means. Whether it was the small boat tactics, destruction of LTTE floating warehouses thousands of nautical miles away from the country, establishing barrier patrol at sea with the first layer completely manned by small boats, the SLN was able to wrest the initiative back from the LTTE Sea Tigers. SLN was able to disprove the common belief that asymmetric tactics are normally used by the smaller and weaker force against a much stronger force, with greater success.

7.2.4 The Use of Asymmetric Tactics by Other States

SLN is not the only state to apply asymmetric tactics at sea in the recent history. Iran is using asymmetric tactics very effectively against the much stronger and formidable US forces in the regions of the Persian Gulf and Gulf of Oman. Robert Kaplan writing to the October 2008 issue of “The Atlantic” compares the asymmetric warfare situation combining the past and present in relation to Iran:

Iran is bringing 21st century warfare to the seas by planning small-boat suicide attacks that would resemble in some ways the aerial and naval suicide missions launched by Imperial Japan during its last desperate days in the Second World War. Iran, is threatening a purely unconventional naval war, including attacks on U.S. military targets and on international maritime traffic (Kaplan, 2008).

This is another classic example which shows that asymmetric tactics at sea are not always employed by non-state actors, but can be applied by militarily weaker states against stronger militaries. In the case of Iran, they are challenging the world’s biggest naval force with asymmetric tactics and have been able to keep them away. In the situation of Iran, they do not hide their intentions and even indicate their tactics. It may be that they want the US and other forces against them to stay away from interfering with their system of governance and affairs in the Persian Gulf. So far, Iran has been able to hold the forces against them at bay, by using faith and motivation as a strong
tool. In a similar manner, the LTTE used asymmetric tactics to compensate for conventional weaknesses and became a considerable threat to the armed forces. LTTE also used the faith in the organization and was able to motivate their cadres; a large number of them for suicidal missions. The Suicide Boat of the Black Sea Tigers was the most potent weapon used by the LTTE against the SLN. From the very basic fishing dingy to the custom made suicide boats, they came up with a variety of designs; some were bigger, some were smaller, some were flat and in different sizes and shapes. But all these designs were leading to the same mission; the mission to commit suicide while destroying the target.

7.2.5  **SLN’s Response to the Growing Sea Tiger Threat**

SLN’s response to the growing threat until about 2005 was to try and acquire platforms capable of higher speed, better weapons, fire control systems, but this did not deter the Sea Tigers. In the beginning, the SLN would always target the suicide boat first, but later on they fought with the attack craft keeping an eye on the suicide boat so as to make him desperate. This tactic worked as then the suicide cadre got nervous and either ran out of fuel or lost the direction and then become vulnerable to the SLN FAC fire power.

The LTTE understood the importance of harbours for the SLNs efforts in maintaining a life line to the Northern Peninsular through the sea. The LTTE tried to restrict the use of harbours for the SLN when they attacked and sank some big ships in Kankesanthurai harbour—which was the only harbour in the northern coast of Sri Lanka—thereby restricting the manoeuvring space inside the small harbour. It was not possible for the Sea Tigers to undertake the same tactics in Trincomalee harbour as it is relatively a much big harbour. However, the Sea Tigers carried out a number of underwater saboteur and suicide attacks against naval ships berthed inside the naval area of the Trincomalee harbour. Even in these instances, when the SLN ships in the harbour were getting attacked, the SLN focused on defending the jetties and surrounding areas where the ships were berthed, that did not deter the Sea Tigers effectively. The Sea Tigers proved that asymmetric tactics can be applied even in underwater medium with innovation and commitment. During the final stage of the
humanitarian operation, harbours had been well defended by combining years of experience and some innovative ideas by SLN, while the LTTE failed to initiate sabotage acts in harbours and freedom of operation remained intact for SLN to prosecute effective offensive action in the sea area of operation.

In about 2006, SLN started thinking differently albeit reluctantly. SLN started using small boats and tactics effectively, as used by the LTTE against them. SLN focussed on using all platforms available for them in a very innovative manner. They used the bigger platforms to go after the LTTE floating warehouse ships and FAC to patrol areas around the edge of the territorial sea and utilized small boats positioned in various advantageous locations to attack sea tiger formations in littorals. SLN’s changed tactics of applying asymmetric ways and means, resulted in gradually reducing the freedom at sea enjoyed by the Sea Tigers, and their dominance began to diminish, and, finally they became a spent force, unable to deliver what their leader expected them to do. The much feared Sea Tigers began to break up. Their morale was low and the dominance at sea was greatly reducing. The status enjoyed by the Sea Tigers as the most formidable insurgent force at sea began to change and the SLN became superior again and regained their lost prestige and the fighting efficiency at sea.

7.3 Theory of Sea Control: SLN vs LTTE Sea Tigers

As Gompert describes in an April 2013 RAND publication “Sea power is the product of economics, politics, technology, and geography: necessitated by economics, textured by politics, enabled by technology, and shaped by geography. From international economics comes the need to transit the oceans safely and predictably. From international politics come confrontations and hostilities that may prompt nations to interfere with other nations’ sea-borne trade, giving rise to the need for navies” (Gompert, 2013, 21). It is interesting to find out how these concepts were used in combination and in competition and conflict by the SLN and the LTTE. The ocean links the world and it is the key to the economic development of most of the countries including Sri Lanka. Sri Lanka being an island nation is blessed with deep water harbours and a long coats line of 1585 Kilometres. The LTTE understood the value of the sea for their growth and sustenance greatly. Being mostly a coastal community, the LTTE cadres were more affiliated with the sea. Especially at the initial stages most of them were fishermen
and some of them were hard-core smugglers. They knew the sea, the weather patterns, the deep sea routes, closets points on either side of the Palk Strait and they enjoyed a close network with their Tamil Nadu counterparts. They had grown with the sea as a medium of livelihood and a way of life.

The Primary function of a government is to defend and protect the sovereignty of the country, whether the threat is external or internal. For an island nation, protecting the entire coast line from possible invasion is of prime importance. The invasion need not necessarily come only from another country, but it can be an internal actor using the ocean to develop their military capabilities to fight against the armed forces of the country. The coast of an Island nation is used by many of its people, mainly as a livelihood activity. Therefore it is necessary to protect the borders from aggressors as well as your own people, who will exploit the lack of regulation using the vastness of the area for illegal activities, whether it is for smuggling of humans and weapons, drugs, illegal fishing, coastal environmental degradation and marine pollution.

The LTTE was an organization which used the ocean around Sri Lanka extensively for sustenance and the development of their organization and the prominence given to the Sea Tigers shows the importance the LTTE leadership placed on the use of the sea. As Gompert points out, the LTTE combined their economics, politics, technology, and geography, to develop their main organization. The statements of former LTTE overseas operative, KP and sea tiger, Seelan amply describe how they depended on the ocean for their sustenance of the war against the government forces. The LTTE leader had clearly understood the need to exercise sea control, not only on the coastal areas but even in the ‘middle of the sea’. He selected the leaders of Sea Tigers, especially from coastal areas such as Kittu and Soosai. Although Gompet indicated geography as a major factor for exercising sea power, the LTTE did not enjoy even a single harbour in the area under their control. In the beginning, they had to use small fishing sheltering locations, but later developed a very innovative and practical method of using cradles pushed by bulldozers and pulled by tractors to launch and recover their Sea Tiger boats. This was a very successful method of launching and recovery of their boats as they could carry out this operation very quickly and hide the boats deep inside the jungle away from the watchful surveillance of reconnaissance air craft. The LTTE enjoyed a phenomenal growth of the Sea Tigers and their international shipping network and carried on
the war against the army with great success. Here again the geography did not help them, but they overcame the disadvantages and operated even a fleet of ocean going ships taking advantage of the freedom of navigation in international waters. The fact that the majority of casualties, nearly 50%, as mentioned by a former CDS, suffered due to LTTE mortar and artillery firing, bear testimony to the efficacy of Sea Tiger operations of bringing large consignments of war fighting equipment, including large calibre ammunition. The mobilization of supply across the ocean could be considered as the major contributory factor for the growth of the LTTE.

The success of the LTTE and the freedom they enjoyed at sea started diminishing after the 2006, when the SLN changed their tactics and started using asymmetric tactics and concentrated on a simultaneity of thrust against the LTTE. The ‘Sea Control’ enjoyed by the LTTE was waning and finally the SLN regained total supremacy at sea and not only disrupted the flow of supplies to the LTTE, but also completely destroyed their international logistic network and combat capability.

7.3.1 Components of Sea Control and the SLN's Victory

As indicated by the Australian Maritime Doctrine 2010, Sea Control must necessarily include the air space above the sea surface, together with the water mass and the sea bed below and the electromagnetic spectrum. The sea control encompasses many aspects associated with the ocean and not only the surface water body. Hence it can also be argued that maintaining total sea control for a prolonged period is practically impossible for even a very powerful navy such as the US Navy, as they have to focus on many areas in order to maintain a full degree of sea control. What is practically possible, therefore, is to maintain sea control for a limited period for a limited sea area for the purpose of carrying out desired naval operations and deny the sea to the enemy during that period. The concept of sea control becomes vulnerable, specially, when non-state actors using asymmetric tactics are vying for it, such as the case in reference. The LTTE never tried to maintain sea control by using large warships, but used small boats including ordinary fishing boats. The employment of Sea Tiger suicide boats against SLN platforms compelled the navy to defend themselves vigorously against it. The LTTE was interested in gaining sea control, especially when
they needed to carry out a ship-to-shore logistic transfer. They did not keep their boats at sea to maintain sea control at all times. They would only deploy their boats when it was necessary for them to carry out an operation. However, they used shore based RADARs and other methods of surveillance to monitor the SLN deployment and movements and would launch attacks when their operations were threatened. On the contrary, the SLN had to deploy a large number of different classes of ships and craft to try and maintain sea control, as they would not know when the Sea Tigers carried out their operations. The Sea Tigers meantime enjoyed the freedom to choose when to launch their boats and when to do ship-to-shore transfers and the lack of proper and effective naval intelligence also played a key role in the development of Sea Tigers as confirmed by Seelan.

In conventional sea control, the traditional approach is to focus on the capacities of each other. But in the case of the LTTE, as is the case with many non-state actors, the capacities were never matched and SLN retained numerical superiority at all times. In order to balance the forces, the LTTE used asymmetric tactics very successfully. Therefore, there was no competition to match force against force, but it was about tactics and counter-tactics, innovations and counter innovations. For the LTTE, it was survival and sustenance and for the SLN, it was safeguarding the territorial integrity of Sri Lanka. However, when the policy makers in the government were not sufficiently focusing on the development of the navy, the LTTE was determined to make the Sea Tigers one of their main fighting units. The LTTE leader paid personal attention to the activities of the Sea Tigers and depended heavily on the logistic supply as well as keeping the SLN at bay from coastal areas under their domination. There was competition for strategy; the LTTE had a long vision and a stagey and until about 2005, SLNs’ strategy was more reactive than proactive.

Once sea control is achieved, it allows the maritime forces to use the sea area for their objectives and can enjoy freedom of action at sea. This was the situation that prevailed towards the end of the conflict. As per Seelan, they could not even launch a boat to sea, mainly due to the presence of the small boat barrier, which was located in a very close proximity to the final battle area. As the fighting spirit of the Sea Tigers was gradually diminishing, the SLN could now focus its attention on guarding the
entire sea area with renewed enthusiasm. The SLN was determined that it would not allow the LTTE leadership to escape by sea. The first layer of this defence line at sea was the small boats such as IPCs and Arrow boats. This is a unique way of maintaining sea control by using small boats. Normally, sea control would be achieved by large ships, submarines and aircraft. But in this instance, a group of small boats of SLN was effectively used in regaining and maintaining sea control. The efficacy of this small boat sea control was evident from the fact that this barrier was able to arrest more than 900 small boats including decoys sent by the LTTE. It was a large scale humanitarian rescue mission at sea. The SLN carried out this task under the most difficult conditions, even changing crew mid-sea. Seelan, who was the last Sea Tiger to undertake a journey from India to Mulaithivu, stated that they wanted to escape from the sea but could not do so as they could clearly see the large number of arrow boats through the jungle. Gaining and maintaining of sea control by SLN small boats prevented the LTTE leadership from escaping and cornered them to a small area on land as the Army was advancing from different directions focussing on Mulaithivu. The LTTE leadership became vulnerable to attack and all their plans including the one made to escape by sea be undertaken and finally perished in the battle. This can be termed as a very innovative, most economical but effective exercise of ‘sea control’ enforced and maintained by SLN. When Admiral Mahan said “sea power requires the ability to safeguard one’s own maritime access [sea control] and to prevent such access by enemies [sea denial]” (Gompert, 2013, 22), he would never have imagined sea control of the nature exercised by SLN at the crucial stage of the battle. The fact that LTTE was completely denied access to the sea was proven by the incident where the leader of the Sea Tiger Soosai’s family was arrested by the SLN small boat defensive layer. Even the other defensive layers of SLN were effective; that is the second layer with FAC, third layer with FGBs and fourth layer with OPVs. KP, who had a plan to rescue the LTTE leadership by bringing a ship closer to land and then fly a helicopter for the rescue mission, could not carry out the plan and he said “The Sea you have already sealed. How can they escape? You have not let even an inch of the sea [open]. Then how can they escape?” This goes to prove that effective sea control would not depend on large sophisticated platforms alone, but the utilization of what you have with
ingenuity. In fact, this was the same tactic used by the Sea Tigers, to exercise sea control to attend to their purposes, which was successful at most times until the SLN changed tactics in 2006.

The main purpose of having control over its maritime communications is to both use one’s own commerce without any hindrance and on similar lines to avoid the enemy’s use of it to achieve his end objectives. In the case of the Sri Lankan conflict, SLN managed well to exercise sea control to deny the use of the sea to the enemy by destroying the LTTE floating warehouse ships at distances more than 3400 km from the southern coast of Sri Lanka. The SLN, during most parts of the war, was not successful in interrupting supplies reaching the LTTE, though they were able to destroy some of the gun running ships and trawlers. SLN then had to venture into an area even outside their jurisdiction, namely the international waters, that too a long distance away from Sri Lanka, and destroy all the remaining LTTE floating warehouse ships in September and October 2007. Although the sea area where the LTTE positioned their warehouse ships were in faraway international waters, it became an area of interest to the SLN. The SLN needed to gain a favourable maritime situation in that area till such time they could destroy the LTTE ships. As per Admiral Wylie, once sea control was obtained, SLN was able to exploit that control and projected its power to destroy the LTTE bogus ships, and that action led to the reduction of fighting efficiency of the LTTE, which ultimately led to their demise on the land. As Admiral Mahan said “if navies, as all agree, exist for the protection of commerce, it inevitably follows that in war they must aim at depriving their enemy of that great resource” (Grompert, 2013, 21). This was exactly what the SLN did; they not only gained sea control but denied the same to the LTTE and that was a major reason for the grand victory.

Another aspect of the LTTE strategy was to deny the freedom of Sea lanes of communication to the SLN platforms and other merchant vessels engaged in voyages around the country. During the height of the war, the road network connecting the north and south was not available for transportation of goods especially to the northern province of the country. The government had to depend on sea transportation for almost all requirements. Even the military who were stationed in the Jaffna Peninsula had to depend on the navy for sustenance. Hence the LTTE developed their strategy to deny
ocean transportation to the north. In this endeavour the LTTE attacked merchant vessels, civilian passenger ferries, at times even ships carrying humanitarian assistance. (A Photograph of a merchant vessel hijacked by the LTTE is placed as Annex G) The SLN had to deploy most of its assets to maintain the freedom of commerce around the country and to defend harbours from LTTE attacks. SLN employed on board security teams (OBST) to protect merchant vessels sailing in conflict affected areas. The SLN never allowed the Sea Tigers to exercise sea control fully, but managed to carry on with its missions and maintained at least a favourable maritime situation at most times.

7.3.2 Sea Denial and SLN

Another aspect of sea control is sea denial. In the Sri Lankan conflict, both sides were engaged in sea denial at certain stages. The LTTE during much of the time was trying to enforce sea denial rather than trying to maintain sea control. The Sea Tigers would show their presence and position suicide boats on shore locations simply to prevent the SLN from approaching those areas of interest for them to carry on with their activities, whether it is ship to shore transfers, training of the Sea Tigers or testing and carrying trials of their own construction of small boats. The LTTE realized that maintaining total sea control was not possible for them as they did not have enough ships and boats and they became vulnerable when at sea, as they were exposed to maritime and air surveillance. The Sea Tigers tried their best to deny certain sea areas to the SLN with minimum effort by instilling a fear among the SLN that 5 nautical miles from land was not safe for them.

The LTTE also tried to deny the sea to SLN units by trying to enforce blockades in harbours. They carried out attacks against naval as well as merchant ships berthed or anchored inside harbours with a view to preventing the SLN using those harbours and succeeded in carrying out underwater saboteur attacks as well as suicide attacks against naval targets.

7.3.3 Force in Being and the Sea Tigers

Force in being is another concept of Sea Control. This is a variation of the sea denial concept. This concept describes how a weaker maritime force pretends to be
having a large number of powerful units with them but do not deploy them. This keeps
the enemy guessing as he is unable to judge the exact nature of the threat or the
capabilities of his adversary. The LTTE used this concept to keep the SLN units at
bay. They carried out a misinformation campaign to show larger than life self-portraits
about themselves to instil fear among the SLN. The LTTE would also talk about various
types of attacks, logistic craft that they were having and submersibles and other
improvised suicide boats; all these to prevent the SLN carrying out effective patrolling
in the sea areas adjacent to the coast dominated by them. Also with the threat of LTTE
Sea Tigers attacking the harbours, SLN was compelled to deploy a large number of
personnel as well as assets to safeguard them. The LTTE did carry out certain attacks
on harbours but most of the stories of impending attacks never took place.

7.3.4 Sea Control, Asymmetric Warfare at sea and Offensive Action

Admiral Mahan had the opinion of achieving victory only through the
concentration of fleet and believed in this as one of the most important principles in
maritime warfare. Admiral Mahan insisted that a fleet should never be divided and that
victory at sea is only possible by fleet concentration (Gough, 1988). However in the
case of Sri Lanka, victory could not be achieved through one decisive battle. As the
LTTE Sea Tigers had developed asymmetric tactics rather than conventional tactics, it
was not possible to concentrate on fighting the Sea Tiger fleet at once. SLN had to carry
on with a prolonged battle in many spheres and theatres using the units they had,
appropriately. SLN had to maintain sea control mainly for two reasons; the first being
the need to maintain maritime surveillance for Sea Tiger movements and their
activities, other being the destruction of their gun running ships. Finally after years of
evolving through the conflict, the SLN managed to achieve both these tasks; denied the
Sea Tigers freedom of action at sea and destroyed their floating warehouses.

Admiral Mahan mentions that the primary mission of a battle fleet is to engage
the enemy’s fleet. It is necessary to examine how this was applied in the case of SLN.
It is evident that the development of SLN was at most times a response to that of Sea
Tigers and not a proactive one. It can be observed that SLN should have been much
more proactive and should have engaged the Sea Tigers at sea and prevented the
logistics reaching the LTTE. Most of the time in the conflict, the initiative was with the Sea Tigers. That gave them a lot of confidence, and gradually, they developed into a considerable force at sea. The LTTE developed their capabilities to such a level that SLN at times had to withdraw or decide not to engage the Sea Tigers at sea. A former army commander and CDS sums up this situation by stating that “SLN was not terrorizing the terrorists at sea”. This is a clear indication that SLN was not sufficiently engaging the enemy’s fleet. This contributed immensely to the unhindered growth of Sea Tigers. The Sea Tigers were able to use the ocean for their purposes. As Corbett suggested, “For the planning of war campaign, it must be assumed that command of the sea may exist in various state and degrees” (Vego, 2009, 31). The SLN was unable to formulate strategic war plans as it was not fully able to maintain command of the sea.

This situation arose mainly due to the lack of offensive planning, among many other reasons, by the SLN. In the absence of an effective command of the sea, it was not possible to disrupt supplies reaching LTTE controlled areas, thereby allowing the LTTE to engage the Sri Lanka Army effectively.

The situation changed drastically after 2006. The SLN began to engage the Sea Tigers offensively and from that point onwards, the Sea Tigers became defensive and gradually, their ability to fight at sea reduced. By now, years of experience and learning lessons from actual battles at sea provided SLN a much deeper understanding about the capabilities, tactics and vulnerabilities of Sea Tigers. SLN was able to destroy the LTTE international shipping network almost completely. The shipping network of the LTTE was the lifeline for their sustenance. The LTTE and Sea Tigers invested heavily and depended totally on shipping to carry on with the war. The moment this supply network was destroyed, they lost the ability to continue with the battle. SLN combined their experiences with their own improved intelligence and support of other agencies to track down and engage and finally destroy the LTTE fleet at sea. This can be considered as the big battle that Admiral Mahan indicated as needed in order to win the war. SLN even without ‘blue water capability’ ventured more than 1490 nautical miles and challenged the LTTE merchant fleet which was loitering in the high seas off Indonesia and Cocos Island.
Further, the SLN came up with the small boat tactics on their own and once deployed, that really confused the Sea Tigers. Sea Tigers always enjoyed the numerical superiority against the SLN. Suddenly they found that their fleet was completely outnumbered by the SLN. Until that time, it was the Sea Tigers who used asymmetric tactics against the SLN. SLN then used asymmetric tactics against the Sea Tigers by moving away from a conventional mind-set and using the Sea Tiger tactics against them in a much more coordinated and effective manner. The SLN built a large number of small boats by using their own boat construction yard, and the speed with which these small boats were built was beyond comprehension of any strategist. The number of engagements with the Sea Tigers reduced gradually and SLN was able to regain nearly total command of the sea.

SLN also used their own Research and Development projects to maximize the advantage for them against the Sea Tigers. Some innovative concepts were used in this work such as installation of 30mm guns, 107mm single rocket launchers on Fast Attack Craft, improvements to communication capabilities, networking various sensors and thereby increasing the coordination and morale and fighting efficiency of the SLN fleet. SLN also used improvised methods to refuel at sea and enhanced the endurance of its ocean going fleet, which was used to destroy the LTTE gun running ships. All these factors contributed to gaining sea control by SLN whilst denying the same to the Sea Tigers in a very innovative and unconventional manner. It is evident that the command of the sea played a crucial role in the prolongation of the conflict. Regaining sea control by SLN was a turning point of the conflict. After the destruction of the LTTE floating ware-house ships, they were never able to engage in land battles with ferocity and combined fire power, in the same way they used to do.
7.4 Theory of Operational Art and Success against Sea Tigers

“Warfare is the greatest affair of the state, the basis of life and death, and the way to survival or extinction. It must be thoroughly pondered and analyzed”

Sun Tzu

In a war environment, the theory of ‘operational art’ plays a significant role in understanding the nature of the conflict, strengths and weaknesses of the enemy, the mind-set of the opponent and to enhance one’s own capabilities against that enemy. A key component of operational art is understanding and attacking the enemy’s ‘centre of gravity’. Commander Jeff Huber of US Navy argues that the centre of gravity is changing and hence suggests three principles upon which we should look at it: Centres of gravity are selected objectives, centres of gravity can change across all levels of war and centres of gravity may change over phases of operation (Huber, 2002, 38). In war, what is most important is understanding the centres of gravity. This understanding can provide a force with the edge to win the war. Operational art can assist the commanders in understanding these centres of gravity and to deal with them effectively. “Operational art occupies an immediate and indispensable position between policy on the one hand, and tactics on the other. It serves as a bridge and as an interface between these two areas of study and practice” (Vego, 2000, 1).

7.4.1 Synergizing Political and Military Will for a Successful Campaign and some key Factors of OA and Victory of the SLN

When analysing the conflict in Sri Lanka, it can be seen that the policies at the top level were not always conducive to win the war. The war in Sri Lanka dragged onto nearly three decades and many political and military leaders tried on many occasions to finish the war. However, despite all these efforts, the military was not winning. In 2006, the political and military will synergized in a manner that contributed immensely to the final victory. The military commanders were now confident that the resolve of the unwavering political leadership was available and the opportunity had finally arrived for the final battle against the LTTE, having exhausted all possible avenues for resolving the conflict in a negotiated and political settlement.
Simultaneous and successive operations, are in fact two key factors in the heart of operational Art. The simultaneous character would require the distribution of forces in a lateral manner but in a synchronized manner and the successive character would require the deepening of the theatre of operations (Schneider, 1989). The simultaneous and successive nature of operation was never the case with the armed forces of Sri Lanka until 2006. When the government decided to fight against the LTTE, they ensured the carrying out of operations simultaneously and successively. This was the case with the navy too. SLN was engaged in the destruction of LTTE floating warehouse ships, engaged in asymmetric warfare with the Sea Tigers at sea and at the same time defending highly vulnerable targets such as ports and some main supply routes. Naval intelligence was engaged in gathering and evaluating valuable information and converting them into actionable intelligence. Navy SBS troops were engaged in behind the enemy line operations and gathering beach intelligence. The coordination between the armed forces was at an all-time high though there had been some differences between army and navy commanders. The Sri Lanka army was advancing from many directions and the LTTE now had to engage them simultaneously. The operational art was working at its best.

As explained by Vego, factor of force is a major contributor in war. Some of the attributes of the factor of force such as the number of personnel, weapons, logistics, command etc. can be evaluated. But there are some elements which can be measured only in a limited way. However “human elements of a force, specifically leadership, morale, discipline, small-unit cohesion, combat motivation, and doctrine are, in contrast, extremely difficult to quantify with any degree of confidence” (Vego, 2000, 59). Major changes have taken place to improve these non-measurable factors of force after 2006. The grand strategy was clear. There was a clear end state: to eradicate terrorism from the country. The strength of the armed forces was increased, simultaneous military thrusts were launched from many fronts, international community and regional key players like India were engaged and kept informed. Gradual liberation of areas, which were under LTTE control was taking place and the moral of the armed forces was at an all-time high.
7.4.2 The Strategy and Operational Art and Leadership

A former commanding officer of the FAF confirms the importance of having a clear grand strategy; “Before 2006, we had lot of confrontations, we were winning isolated incidents and confrontations. But we were losing on the overall strategy”. The grand strategy of the government translated into the military strategy and in the case of SLN, into the development of a comprehensive maritime strategy, which aimed at regaining sea control and denying the same to the Sea Tigers. This brought success in destroying the LTTE logistic network and reducing the Sea Tigers’ ability to fight at sea in support of LTTE’s grand strategy.

Further, it was possible to merge the land, sea and air strategies as part of the Grand Strategy to win the war against terrorism. This resulted in taking the fight into the LTTE and denying them the initiative to launch attacks and making them defensive and thereby making them vulnerable to military advances. The SLN, specially changed the tactics and denied the freedom of ocean to the Sea Tigers and not only prevented LTTE logistics needed for them to fight with the advancing army, but also prevented the escaping of the LTTE leadership by sea, thereby making them an easy target for the military offensive. The SLN developed their capabilities and tactics with a clear strategy to identify the most critical aspects of Sea Tigers’ success and used the same tactics to defeat them at Sea. Since the government had a clear strategy, it translated into a clear doctrine as a very important and unmeasurable component of operational art and the changes were evident.

Another unmeasurable component in operational art is leadership. It is evident that the naval leadership was at its best and keeping in line with the political leadership. The SLN leadership was able to lead from the front and was able to motivate the navy to fight as one cohesive unit, with a very clear aim, that is to defeat the Sea Tigers at sea. This leadership contributed greatly in defeating the Sea Tigers and the subsequent demise of the LTTE as a fighting force. The operational art suggests that the leaders should be creative and innovative in order to apply the concepts of operational art to good effect. The naval leadership during the final phase of the conflict, which is after 2006, was very innovative and always willing to accept good out of the box proposals and not afraid to try new concepts. Most of the research and development projects being
undertaken by themselves and utilizing the knowledge of experts in relevant fields, helped the SLN to gain an upper hand against the LTTE. The SLN experimented with installing larger calibre guns, single multi-barrel rocket launchers, which are normally used for land based applications, producing a large number of small boats, enhancing tactical communication and developed network centric concepts to obtain details of the tactical picture; and all these helped to disrupt, confuse and finally to defeat the Sea Tigers. It can be seen that the naval commander had developed a great understanding about the capabilities and limitations of the Sea Tigers and exploited these to the advantage of the navy.

The morale of the entire navy was uplifted to a new level and the SLN was ready to fight to achieve victory and not just to engage the Sea Tigers. It was also pointed out that at times the commander used threats to get the job done. That tactic also worked. At the most crucial hour of the country and the most decisive phase of the war, SLN was fortunate to have a very effective leadership, which transformed the entire navy to fight as one cohesive unit with a high morale and good fighting spirit and a team spirit.

SLN moving away from a typical conventional mind-set and embracing asymmetric tactics tilted the balance in their favour. The application of operational art can be seen as the secret tool which transformed the SLN in to a winning institution and becoming pro-active. Studying, analysing and understanding the war helped the SLN to devise necessary strategy and tactics to defeat the Sea Tigers at sea.

As operational art suggests, the human element of the force is the most important factor in a war victory. During the final stages of the war, almost the whole country was united in efforts to defeat the LTTE. The population was behind the armed forces, mainly thanks to the efforts of strategic communication. The new media policy of the government helped to create an awareness among the general public as well as the military analysts. Defence media became a great success and widely accessed. This strategic communication campaign became a huge success and armed forces personnel were considered and treated as war heroes. The blessings of the country were with the armed forces to end the war and to liberate the country. The armed forces rose to the occasion and accepted the challenge.
7.4.3 Freedom of Action for SLN, Factor of Time and the Defeat of Sea Tigers at Sea

Describing the concepts of operational art further, Vego states that: the art of warfare at all levels is to obtain and maintain freedom of action—the ability to carry out critically important, multiple and diverse decisions to accomplish assigned military objectives. This is accomplished by limiting or, if possible, completely denying the enemy the ability to act, while keeping one’s options open to accomplish the assigned military objectives. The term operational factors refer to factors of space, time and force in a given theatre or operations (Vego, 2000, 29).

During most parts of the conflict, SLN did not enjoy the freedom of action as they were being responsive to the threats posed by the Sea Tigers. It was the Sea Tigers who enjoyed freedom of action as they were able to select the location and timing of engaging SLN and not vice versa. When the SLN changed their strategy and tactics, especially after 2006, they began to enjoy freedom of action. Gradually Sea Tigers were losing their freedom of action in the face of SLN gaining and using it to defeat the Sea Tigers. SLN began to exercise many options that were aimed at destroying the capabilities of Sea Tigers. The operational factors of space, time and force were exploited by SLN to its own advantage. The Sea Tigers were losing their control of the sea whether it was logistic transfers or attacking naval and other targets.

The LTTE was in a very difficult situation after the SLN attacked the arms shipments and used small boat operations against the Sea Tigers. For the first time in the history of the conflict, except in the initial period, the SLN was enjoying the freedom of action, and they were able to exercise sea control and sea denial effectively. This situation helped the SLN to accomplish its military objectives and contribute to the success of grand strategy.

The operational art also indicates that “further the attacker advance into the defenders controlled territory, the more he deprives the defender the means of conducting the war, which one then can use for his own benefit” (Vego, 2000, 36). As the SLN was reactive to most of the Sea Tiger threats, the Sea Tigers enjoyed a lot of
freedom in the sea areas of their interest. SLN strategy was to stay away from near coastal areas under LTTE control and tried to attack Sea Tigers when they venture out into deep sea. It was the Sea Tigers who enjoyed initiative and forced the SLN to the defensive posture. However, when the SLN started going on the offensive and challenged the control of the Sea Tigers, they could no longer enjoy the freedom of action but was compelled to guard against the SLN operations at sea.

It can be argued that the factor of time was not given due consideration during the protracted conflict, as it had been continuing for nearly three decades. However, after 2006, the tempo of the armed forces operations increased and they achieved simultaneity and that forced the LTTE to keep defending themselves against the government forces at all times from many different fronts. Earlier, on most occasions, it was the LTTE which maintained the thrust and government forces did not enjoy the advantage of time. When the army was advancing, the SLN rose to the occasion by continuously deploying naval craft, naval surveillance equipment to be on par with that advance. During the final stages of the operations, SLN ensured that the harbours were well protected and that was important as the armed forces as well as the government depended on the harbours to maintain the logistic line for the fighting units and the civilian population in the north. This also gave the SLN the freedom to operate at sea to engage the Sea Tigers. Another major development which helped the SLN to use the factor of time to its advantage was the development and deployment of the island wide electronic surveillance network.

This electronic surveillance network helped the SLN to see the tactical picture of most of the battle scenarios at sea. This also helped SLN to monitor and dominate the coastal areas and especially to take action on a developing threat and to provide reinforcement to the fleet at sea, whenever there was a necessity. It also helped the commanders to coordinate various units and shore based facilities to fight against the Sea Tigers. This network acted as a tool to warn the fleet units regarding developing threats so that they could take appropriate counter action. The advantage of the factor of time was now available to the SLN and that contributed immensely to the defeat of the Sea Tigers at sea, especially in the littorals.
7.4.4 Legitimacy and Just war

Vego says that “For the armed forces as a whole, and for the individual services, combat motivation is significantly affected by several other factors, notably, the character of war, justness of the cause, the war’s legitimacy, ideology, patriotism and a sense of national honour” (Vego, 2000, 70). The LTTE being a non-state actor and having only one leader in its complete journey, used these criterion effectively to keep their cadres combat motivated and it was very difficult to apply the same to the armed forces. After 2006, this situation changed, especially with the political leadership giving the confidence to the armed forces that LTTE terrorism should be defeated and there was no turning back, no matter what pressure was applied. Also the strategic communication campaign carried out by the government provided a sense of legitimacy to the war. The war against the LTTE was seen as a ‘Just war’ and essential to save the country from the clutches of terrorism. During most parts of the conflict, it could be seen that the LTTE was very cleverly using strategic communication by using new trends in information sharing to win the ideology battle against the armed forces. The new media policy and campaign of the government, after 2006, was able to create an awareness among the general public as well as military analysts about the nature of war and especially atrocities committed by the LTTE. This united almost the whole country in a war-footing and the defeat of the LTTE was seen as the only way to end the conflict.

7.4.5 Information Technology for Battle and Effective Command and Control

Vego describes the developments that have taken place in information technology and the use of the same in battle space:

The enormous advances in information technology in recent years have elevated information as a common link among the factor of Space, Time and Force. Some military theoreticians and practitioners go even further and claim that information has emerged as the fourth factor in addition to the three traditional operational factors (Vego, 2000, 95).
The SLN was very effective in creating network-centric capabilities to develop the tactical picture and use it effectively to defeat the Sea Tigers. The SLN used not the most expensive and latest equipment but what it already possessed with necessary innovations and through trial and error. Before the final phase of the conflict, SLN depended a lot on basic voice communication procedures to obtain relevant information from the theatre commanders and relay whatever the instructions back to the fleet through the same procedure. This was time consuming and susceptible to enemy monitoring and interference and also to atmospheric conditions. The enhanced use of information technology helped the SLN to maintain their tactical communications with real time data transfer between fleet units and headquarters. The tactical picture was now available to the commander of the navy and area commanders and they could provide necessary directions, guidance and support to the fleet units at sea. It also helped the navy to obtain support from army and air force as well and to share valuable real-time input with other forces. In addition to the use of electronic space through information technology for their own operations, the SLN was capable of using the same to monitor LTTE transmissions and obtain valuable information regarding impending operations of the group. This provided SLN with necessary early warning time to get organized and face the LTTE manoeuvres. Naval intelligence used this facility very effectively and contributed to the victory in a substantial manner. The effective use of information technology helped the SLN to have very effective command and control and that translated into an effective unity of effort.

During the final phase of the conflict, SLN was able not only to have effective command and control but to disrupt the command and control of the Sea Tigers. A perfect example was how SLN launched the operation to destroy the LTTE floating warehouses. The LTTE merchant fleet was taken by total surprise when the SLN fleet approached and challenged them. One aspect is that, the LTTE never ever imagined that the SLN would try to target them at such a long distance away from the Sri Lankan coast and the other is that the highest level of secrecy was maintained by SLN during the whole operation. The development of intelligence gathering and evaluating them into actionable intelligence was carried out by using technology. Of course the
advancement of the Sri Lanka Army in many fronts caused a lot of disruption to the LTTE command and control as well.

7.4.6 Operational Analysis, Operational Design and Operational Planning

“Operational art and operation design provide a bridge between strategy and tactics. Operational design extends operational art’s vision with a creative methodology that helps commanders and staffs understand the nature of operation environment, the problem facing them and possible broad solutions to the problem” (Planners hand book for operational design, 2011, iii-1). Following these steps will ensure that the military resources can be applied effectively and economically to achieve objectives. SLN experienced a perfect combination of these three aspects during the final phase of the conflict. The SLN efforts were not ad-hoc but based on careful planning, which was the outcome of careful analysis and design. SLN combined all the expertise gained since the beginning of the conflict in early 1980s and that was only possible as the top management of the SLN had either joined or been with SLN since that time. This group of senior officers were at area commander level or heading respective departments during the final stages of the conflict. They could comprehend the process of analysing and design very quickly and come up with effective planning to defeat the Sea Tigers. The domination of ground by the government armed forces, especially the domination of coastal stretches by SLN, resulted in the LTTE and Sea Tigers losing the facilities they enjoyed before, to launch attacks against SLN. The effective use of SLN’s special units such as SBS, RABS and the use of asymmetric tactics became a real threat to the Sea Tigers. The combined activities of army advances on many fronts, effective air campaign and SLN efforts resulted in tilting the order of battle in SLN favour. The SLN’s main contribution through crucial analysis, proper design and meticulous planning was the destruction of LTTE logistic lines. No war can be continued without logistics reaching the troops who are engaged in the battle. SLN was able to identify the centres of gravity of the LTTE and concentrated on attacking them and finally succeeded in crippling the LTTE’s logistic network. The Sri Lanka army was now able to advance much easily without fearing barrages of enemy mortars and artillery coming at them. It was a perfect example of joint efforts of all armed forces in
battle against a common enemy and with a common objective. The strategic objectives were converted into tactical activity by using operational art concepts. Tactical action became the building blocks from which strategic goals could be achieved. Tactical actions became useful as these were done according to a design and plan.

As Sun Tzu always spoke about attacking enemy’s strategy. The SLN took a long time to understand the LTTE’s strategy of using the ocean to develop their, military capabilities and to sustain that at a desired level, so as to be a potent threat to the government forces. SLN was focusing only on the immediate battle space and trying to defend themselves in that area. Unlike the LTTE, the SLN platforms became vulnerable to Sea Tiger innovations and suffered heavy casualties at sea. The SLN successes came only after they started attacking the LTTE’s main strategy; that is their overseas supply network. SLN shifted their focus from solely trying to defeat the enemy at sea to cut off their logistics. SLN developed intelligence and capabilities to seek the LTTE floating warehouses thousands of kilometres away from the Sri Lankan coast and they succeeded. That was a clear attack on the LTTE’s strategy. It dealt a severe blow to the much talked about LTTE weapon smuggling operation. SLN action resulted in the LTTE not receiving weapons, ammunitions, artillery rounds and other war-fighting materials to use against the advancing army from a number of directions. The army attack became much easier as they were no more subjected to heavy indirect fire from the LTTE. That changed the entire battle scenario and resulted in the defeat of the much formidable LTTE.

7.5 Culmination; Theory and Practice

The planners hand book for operational design indicate the importance of theory in military warfare referring Henry E. Eccles Military Concepts and Philosophy as, “All too often, the critical importance of military theory either is not well understood or is completely ignored by many officers. A reason for this is their apparent lack of knowledge and understanding of the relationship between theory and practice and the real purpose of military theory. Many officers are also contemptuous of theory because they overemphasize the importance of technology.” (Planners Hand Book for Operational Design, 2011, ii 1).
Military forces when employed in combat would result in either killing or destroying things. Military force can be used by state or by non-state actors. The armed forces personnel are professionals and trained in military science and related fields. They gain experience as they grow up in their careers. The militaries are expected to understand the context through which they have to apply force and quantity of force to achieve objectives. When two forces are fighting, the outcome will not merely depend on the strength of the force or the fire power they possess.

Theories of warfare have been formulated by military historians, academics, and senior military officers alike. Some of these theories are tested and proven for generations. Logically, senior military commanders should study these theoretical concepts and apply them to warfighting. However, quite often, militaries just fight without looking at the theories and basing their decisions on experience. It is reported that the LTTE leader was influenced by watching western movies and that is basically learning the art of war.

In the Sri Lankan conflict, it is a known fact that the LTTE, which grew up to be a deadly and one of the most ruthless terrorist organization in the world, mastered the asymmetric tactics and became a real threat to the armed forces of the country. The SLN, founded and raised with a conventional military mind-set was reluctant to change tactics and fought with the Sea Tigers for a few decades without much success. On the contrary, the Sea Tigers grew from a small unit to be considered as a trend setter in maritime terrorism. They pioneered many asymmetric tactics at sea such as suicide boat, suicide under water saboteurs, submersibles, mines and other forms of Waterborne improvised explosive devices (WIED). They were able to threaten the dominance of the much stronger force level of SLN with great success. The tide changed in favour of SLN only after they started thinking, acting and organizing differently, having understood the capabilities and weaknesses of the Sea Tigers.

In asymmetric warfare, it is the weaker side that is normally forced to fight against odds. But in this conflict, SLN being the much stronger side was forced to adopt asymmetric tactics to fight with the Sea Tigers. That move was indeed a brilliant stroke for SLN. It resulted in reducing the fighting efficiency of the Sea Tigers. The shock and confusion associated with asymmetric warfare were brought to bear on the Sea Tigers. Then onwards the Sea Tigers lost the initiative and freedom of action that they had enjoyed earlier.
The strong naval leadership was able to change the decade old conventional mind-set of SLN and gradually they started regaining sea control. Until about 2006, the Sea Tigers were able to use the ocean to further their cause. However, with the changing tactics, SLN was able to surprise the Sea Tigers and they could never recover from it. SLN never broke down in spite of suffering heavy losses in the hands of the Sea Tigers. But losing of logistics, and small boat operations by the SLN resulted in the Sea Tigers’ losing dominance at sea. The SLN then regained the supremacy at sea again.

SLN especially after 2006, tried various asymmetric and new concepts to gain and maintain sea control and deny the same to the Sea Tigers. The SLN even used small boats to effect sea control. The small boat barrier during the final stages of the war prevented the LTTE leadership escaping across the ocean. During the earlier period, the SLN lacked effective political and military leadership and offensive planning. This was exploited by the Sea Tigers to grow in strength and reach. However, the SLN evolved through the passage of time, and was able to take the war on to the Sea Tigers. Gradually the Sea Tiger encounters at sea were decreasing. SLN used innovation and ingenuity combined with years of experience to regain sea control and deny the same to the enemy. This was the turning point of the war.

The theory of operational art is considered as the bridge between policy on one hand and the tactics on the other. A key component of operational art is understanding the centres of gravity. The SLN rightly identified the centre of gravity of the LTTE as their international logistic network across the ocean. After 2006, a synergized political and military will was available like never before. The war dragged on to nearly three decades and many political and military leaders tried to finish it with little success. Only after 2006, the synergy of efforts was clearly seen and felt. This synergy translated into a war winning strategy and even to the lower rates in the armed forces and there was a strong will to end the war. As a result of this synergy, two key factors of operational art, simultaneous and successive operations, were carried out on land and at sea. The LTTE could not cope with this new thrust of offensive action and finally crumbled down.

The grand strategy of the government and military was clear; the war had to end. There was a clear end state. The strengths of the armed forces was increased; the human element was given due consideration. The aim was to eradicate terrorism from Sri Lanka. The land air and maritime strategies were linked to the grand strategy. The entire country was united in the war
efforts. It was considered a ‘just war’ that had to be won to preserve the territorial integrity of the country. The fight was taken to the LTTE. The SLN kept the thrust at sea. The SLN overcame the ‘sea blindness’ of the leaders and the people by showcasing what they were doing at sea to defeat the Sea Tigers. The initiative and freedom of action were now with the SLN.

As dictated by operational art, the operation analysis, design and planning were at its best at all levels of the SLN after 2006. The senior leadership of SLN at area commander level and director general level had spent their entire naval career with the war. Hence they were able to comprehend the events unfolding and came up with solutions to defeat the enemy at sea. The SLN was gaining sea control and the Sea Tigers were losing their ability to use the ocean for the sustenance of the LTTE combat power.

As the conflict had progressed for a long time and the LTTE grew from strength to strength, and even threatening the dominance of the SLN at sea, it can be concluded that the SLN was not winning the battle. The SLN evolved through the war and finally came on top and defeated the mighty Sea Tigers at sea. When this research look back at the events analytically, it is evident that the SLN did not fully comprehend the prospects of theories of asymmetric warfare at sea, sea control and operational art for a very long time. Only after 2006, SLN changed their thinking and planning and succeeded in defeating the powerful Sea Tigers at sea. SLN was seen following various theoretical concepts and doing the right things even without knowing that they were doing it.
CHAPTER 8

THE END OF A LONG BATTLE AT SEA; CONCLUSIONS, LESSONS LEARNT AND RECOMMENDATIONS

8.1 Prelude

Mahnken and Mailo state that: “Those who do not learn lessons of the past are condemned to repeat them” (Mahnken, Maiolo, 2011, 34). The Sri Lankan conflict was a protracted conflict which inflicted a huge casualty figure and the near destruction on the country. The LTTE which started as a small group of disgruntled young Tamil youth from Jaffna peninsula grew up to be a force to reckon with and battled with government forces for nearly three decades. The leader of the LTTE had a long vision and strategy and fully understood the potential of the ocean for their growth and sustenance. The LTTE enjoyed a phenomenal growth from 1970s to 2005. The Times magazine referred to the LTTE as “undoubtedly one of the most organized, effective and brutal terrorist groups in the world” (Time, 2009). The LTTE grew to be a dominant insurgency group and a trend setter, especially in maritime terrorism. The success and the growth of the LTTE can be attributed, among many other reasons, to the success achieved by their naval wing, the Sea Tigers. The Sea Tigers became a serious threat to the dominance of the SLN at sea. They were able to enjoy the freedom of the ocean and a favourable maritime situation for themselves, thereby making the task of the SLN extremely difficult. The Sea Tigers invented and pioneered the suicide boat, female suicide cadres, under water suicide saboteurs, improvised limpet mines and sea mines, in contemporary history. The Sea Tigers developed swarming tactics; a large number of small attack craft and suicide boats in a cluster attacking the SLN FACs, gaining numerical and fire power superiority and was responsible for destroying more than 20 FACs alone. The most potent weapon of the Sea Tigers was the ‘suicide boat’. Over the period of the conflict, the Sea Tigers designed and developed suicide boats of different design, size and speed. The Sea Tigers improved the suicide boat with higher speed, stealth technology, and armour protection. They used an in-house boat design and building program to produce a large number of suicide boats. The innovative approach of the Sea Tigers confused the SLN and created a demoralizing effect.
On the contrary, the Sea Tiger successes provided them with confidence and courage, and also to use it as a propaganda tool to enhance recruitment and fund raising, especially from Tamil diaspora communities living abroad. The funds thus raised were used by the LTTE to procure much needed war-fighting equipment from overseas markets and transport the items to the coastal areas which were under their control. The LTTE Ocean going fleet consisted of 12-15 ships, and, they became the only terrorist group which operated a fleet of ocean going ships in the world. These ships were operating in international waters and used commercial harbours of different countries. During the latter part of the conflict, the LTTE depended almost totally on their fleet of ships not only to sustain their military operations but even the day-to-day living.

Clausewitz writing on a passage in ‘On War’ insists that; “the first, the supreme, the most far-reaching act of judgement that the statesman and commander have to make it to establish… the kind of war on which they are embarking; neither mistaking it for, nor trying to turn it into, something that is alien to its nature. This is the most important of all first strategic questions and the most comprehensive” (Mahnken, Maiolo, 2011, 34). Did the SLN understand the nature of war that they were getting into against the Sea Tigers? Was it due to a wilful blindness, or lack of understanding of the concepts? How did the Sea Tigers develop into such a formidable force? Whilst the Sea Tigers were gradually growing into a dominant force at sea, the SLN was also growing up, albeit reactively. The policy makers of Sri Lanka did not pay sufficient attention to the development of the SLN. A capital intensive organization like a navy cannot be built overnight. It takes years of planning and preparation and long term financial commitment to develop a Navy. Being an Island nation, the ocean frontier should have been considered as the first line of defence where external threats or assistance could have been arrived at. However, successive governments did not pay attention to the development of the SLN. There was no long term policy objective to develop the SLN. It can be argued that the decision makers, both in the government and SLN failed to understand the importance of a robust maritime strategy to defend the territorial integrity of the country. It can be seen that the growth of the SLN was mainly due to the growth of Sea Tigers, and hence the initiative was with the Sea Tigers, most of the time.

This concluding chapter revisits the research questions and research objectives so as to ascertain whether the research questions have been answered and objectives were achieved.
This chapter will include the conclusion of the case study incorporating the theories of naval warfare used for this research; that is the theories of asymmetric warfare, sea control and operational art and their applications on the outcome of the war. A summary of organizational drawbacks of the SLN under policy, strategic and tactical aspects will be included and also the development of the Sea Tigers. The determinants of success behind the SLN’s gaining sea control and the lessons learnt from the exploratory research model will be the highlight of the research and will be included. The limitations of the study and the initial propositions used for the research and research findings will be the next. This Chapter will conclude with suggested prospects for future research based on this case study.

8.2 The Research Questions and Objectives

This research was aimed at finding answers to some important questions regarding the phenomenal growth of the Sea Tigers vis-à-vis the SLN and finally the victory of the SLN. The research questions thus raised at the beginning were as follows;

8.2.1 Research Questions

The following research questions were formed to unpack the research problem:

  e. What are the organizational drawbacks of the SLN under the conventional environment against the rise of LTTE Sea Tigers using unconventional (asymmetric) concepts?
  f. How did the LTTE exploit the ocean to develop into an almost ‘conventional’ military force and continue the battle against the Government of Sri Lanka for nearly three decades?
  g. What are the factors that influenced SLN to transform from a conventional approach to an asymmetric approach that minimized the failures and assured the successes of the war-winning formula?
  h. How did the concepts & theories such as ‘Sea Control’, ‘Asymmetric Warfare’, and ‘Operational Art’ contribute to the transformation of the SLN’s conventional strategy and the ultimate demise of Sea Tigers?
8.2.2 Research Objectives

The prime objective of the research was to formulate an explorative research outcome to counter asymmetric warfare at sea, taking key lessons from the SLN. To achieve this objective, the following secondary objectives were also focused on:

e. To examine the organizational drawbacks of SL Navy’s application under a mind-set of conventional naval warfare.

f. To research and evaluate how LTTE Sea Tigers exploited the oceans for their advantage.

g. Identify the determinants of success in gaining sea control.

h. To research the concepts & theories of naval warfare in relation to the Sri Lankan context.

8.3 The Case Study

The Exploratory research model was adapted in this research. This was taken as a case study. In this case study, two organizations were selected; that is the SLN and the LTTE Sea Tigers. The collection of data was based on the qualitative research method and on participant observations and unstructured interviews. The requirement was to generate an intensive and detailed examination of various factors that favoured the Sea Tigers to become such a dominant force being a non-state actor and finally regaining supremacy by the SLN, albeit, after a prolonged period. The case study was developed carefully, with a view to ensuring that the reliability of data gathering and validity of research findings were achieved. Bryman describe this as a ‘comparative design’, and goes on to explain: “the comparative design entails studying two contrasting cases using more of less identical methods” (Bryman, 2008, 58). The researcher tried to understand the social phenomena, with regards to the rise and demise of the Sea Tigers in relation to the decline and rise of the SLN. This case study has a ‘longitudinal’ element as the research was focused on many junctures, over a prolonged period. The researcher had a distinct advantage as he had spent major part of his naval career, from 1978 to 2009 engaged in the conflict, at various levels of seniority and capacity, and witnessed the evolution and resolving of the conflict at sea. Although the SLN vs Sea Tiers was a case study that took place in and around Sri Lanka, it will have external validity as many countries today have become vulnerable to maritime terrorism. Hence, the lessons derived from this case study
can achieve ‘generalizability’ and would be useful to policy makers as well as practitioners of maritime security.

8.4 Theories of Naval Warfare and the Sri Lankan case

For this research, three well-developed theories of naval warfare were used to better understand the circumstances in which the comparative two cases evolved. The theories used for this research were; theory of asymmetric warfare, theory of sea control and theory of operational art.

8.4.1 Asymmetric Warfare and the Sea Tigers

Asymmetric warfare is seen as a conflict deviating from the norm. It is also an indirect approach to affect a counter-balancing of force. In the case of the Sri Lankan conflict, a huge asymmetry existed between the SLN and the Sea Tigers in terms of manpower, equipment and facilities. However, by using asymmetric tactics and weapons, the LTTE was able to bridge the gap and, thereafter became a significant threat to the freedom of sea of the SLN. The LTTE realized from the very early stages that in order for them to achieve their desired end-state, which was a separate state for Tamils in Sri Lanka, they had to exploit the ocean. Initially the Sea Tigers had only ordinary fibre glass fishing boats with few basic weapons. When the Sea Tigers were undertaking sea movements between the northern coast of Sri Lanka and the southern coast of Tamil Nadu, for transferring their cadres to and from training bases in Tamil Nadu, the SLN did the right thing by acquiring FACs. The FACs was a much superior platform at sea with better stability, higher speed, and awesome fire power when you compare them with what the Sea Tigers were operating at that time. The Sea Tigers were able to develop their tactics with great motivation and based on separatist ideology, to counter the threat posed by SLN FACs. They were able to maximize their advantage by asymmetric tactics, coupled with suicide boats, which were the most deadly weapon at sea in this conflict. Also they combined swarming tactics well. Gradually the Sea Tigers were able to minimize the advantage enjoyed by the SLN at sea, and was able to inflict losses of FACs and high casualty figures in encounters at sea. The SLN focused on developing the FAC fleet, clearly with a lack of understanding...
of the potentiality of the threat. The Sea Tigers not only used innovative asymmetric tactics at sea against the SLN FAC, but they also exploited the entire maritime domain to further the land fighting capability of the LTTE. They used their ocean going fleet to obtain the much needed war-fighting logistics across the ocean. The Sea Tigers combined their unwavering bravery to challenge the superiority of the SLN with great success. It took a considerably long time for the SLN to understand that in order to regain sea control and supremacy at sea and to defeat the Sea Tigers, they too would have to adapt asymmetric tactics. The conventional mind-set of the SLN was changing and they were ready to experiment with asymmetric tactics against the formidable Sea Tigers. The SLN developed many capabilities, using years of experience gained from fighting with the Sea Tigers albeit without much success. The small boat concept launched by the SLN was a perfect counter measure to the Sea Tiger swarming tactics and the suicide boat threat.

8.4.2 Sea Control and the SLN

Sea control implies the ability of a navy to use the sea area for their own determinants whilst denying the same to the adversaries. Sea control is considered as the prerogative and the main role of a navy. In the case of the SLN too, it was their main task. The SLN, which was built on a conventional framework, like any other navy in the world, was trying to maintain sea control by conventional platforms and tactics. The Sea Tigers, which started as a small insurgent force at sea, was capable of challenging the sea control enjoyed by the SLN and was able to use the ocean for their purposes. The Sea Tigers were not interested in maintaining sea control for prolonged periods. During the initial period, the Sea Tigers were quite happy to achieve a favourable maritime situation to carry out their activities. That was basically to receive their logistics consignments, transport and evacuate cadres and casualties in battle, and subsequently they were trying to deny certain sea areas to the SLN. The Sea Tigers were responsible for not only attacking the SLN ships and craft at sea but also merchant vessels sailing in northern and eastern waters of the country. They also attacked ships in harbours including the main commercial harbour in Colombo much away from their area of operation. As sea control involves not only the surface of water, but the air
space above the water and the water column below, the Sea Tigers attempted with a high degree of success to target the SLN vessels from underwater as well. They used submersibles, under water saboteurs and limpet mines. The LTTE was on a major program to build even submarines and that was evident by the framework of submarines recovered by the armed forces after the end of the conflict. The LTTE gained experience with light aircraft and probably would have used their limited airpower against the SLN as well, if the conflict had continued.

The SLN attempted to maintain effective sea control with varying degrees of success. The SLN at times declared exclusive zones, surveillance zones, prohibited areas, and even restrictions on fishing, with a view to curtailing the menace of the Sea Tigers. However, the Sea Tigers were able to use the ocean for their purposes. It is emphasized that maintaining effective sea control has implications on land. In this case, the Sri Lanka military had to fight near-conventional battles with the LTTE on land due to the lack of effectiveness at sea. The SLN was trying very hard to maintain sea control of the sea around the whole island and to protect the harbours. However the Sea Tigers managed to carry on with their activities in support of sustaining war-fighting capability of the LTTE. Only after the SLN started thinking, acting and organizing differently, and changed their conventional tactics and adapted asymmetric tactics, the tide started changing, now in favour of them. The SLN was now in a position to understand the centres of gravity of the Sea Tigers and the positive effects of the Sea Tigers on land battle. By combining years of experience fighting with the Sea Tigers, the SLN was able to use their platforms and asymmetric tactics, which then confused the Sea Tigers and resulted in the SLN regaining sea control. Gradually, the once most dominant Sea Tigers became a spent force, unable to carry out their logistic runs, and fight with the SLN effectively at sea. This situation resulted in improving the fighting capability of the LTTE on land and finally paved the way for the complete annihilation of their combat power at the hands of government armed forces.

8.4.3 Operational Art and the Demise of the Sea Tigers

Operational art is the employment of military forces to obtain strategic and/or operational objectives through the design, organization, integration, and conducting of
campaigns, major operations and battles. Naval resources alone will not be able to win a war at sea, but how these resources are employed will determine the outcome of the war. Operational art combines the strategy and tactics in determining the outcome of war. The SLN mastered this concept towards the end of the conflict, and that was at a crucial stage of the war. The SLN was able to understand the centres of gravity of the Sea Tigers and tactics used by them in successfully operating at sea for their purposes. The understanding and application of the concepts of operational art can be attributed to the success of the SLN at sea and the resulted demise of the Sea Tigers. Operational art was the secret tool which tilted the outcome of the sea battles in favour of the SLN. The factors of time, space and force were critical in winning the war at sea, but how the concept of operational art were applied in this conflict was the key to the SLN’s success.

8.5 Organizational Drawbacks of the SLN

The LTTE waged an insurgency campaign with terrorist tactics against the armed forces for nearly three decades. The fact that the LTTE, from being a small outfit, developed into a near-conventional military con not be disregarded. How did such a small outfit in the late 1970s develop into a mighty force towards mid 2000s? What were the drawbacks of the SLN, which allowed the Sea Tigers to grow in strength and platforms over the period of the conflict? Obviously, there have to be some drawbacks of the SLN, which led to the unprecedented growth of the Sea Tigers. This research focussed on identifying those drawbacks, and, evaluate them under policy, strategic and tactical levels.

The policy level drawbacks revealed in this research are as follows;

a. Not developing a strong Navy and increasing the strength of the SLN
b. Absence of Political Leadership and Political Resolve to End the War
c. The Dearth of Effective Intelligence and Intelligence Coordination
d. Corruption and Lack of Proper Evaluations in Procurements
e. Non-evaluating the Capabilities of the Armed Forces
f. Non- application of Modern Technology
g. Not Developing/Acquiring Integral Air Capability
The Strategic Level Drawbacks observed in this study are enumerated below;

a. Lack of a Grand Strategy
b. Necessity for Understanding Concepts of Asymmetric Warfare Employed by the LTTE Sea Tigers
c. Lack of Coordination among the Armed Forces
d. Paucity of Strategic Communications
e. Shortcomings in Maritime Security
f. Shortcomings in Dominating Areas around Military Installations

The tactical drawbacks revealed in this research are as follows;

a. Dearth of coordination among the armed forces at Tactical Level
b. Necessity of Proper and secure Naval Communications
c. The need for Capable Officers as Leaders of human resource
d. Paucity of Night Fighting Capability
e. Underutilization of Special Forces

8.6 The Development of the Sea Tigers

The LTTE understood that in order to fight with the armed forces on land, they needed to develop sea lines of communication. The sea was extensively used by the Sea Tigers to further the cause of the LTTE. The Sea Tigers initially operated across the Palk Strait, and with experience gained by these movements, ventured into the deep ocean, even thousands of nautical miles away from the coast. They operated a fleet of merchant vessels in the high sea in international waters. The Sea Tigers thus became the umbilical cord of the LTTE. The findings of the research indicate following reasons as contributed to the growth of the Sea Tigers;

a. Use of Asymmetric Tactics by the Sea Tigers and the Employment of Suicide Boats
b. Swarming Tactics of the Sea Tigers
c. Attacks against Naval and Merchant Ships in Harbour
d. Development of Sealift Capability of the LTTE; the Sea Tigers and International Shipping Fleet
e. The LTTE’s Exploitation of the Political Situation in the Country
f. Indigenous Boat Building of Sea Tigers

g. Effective use of Cease Fire Agreement (CFA) by the LTTE

8.7 Determinants of Success behind the SLN’s Gaining of Sea Control

Since the inception, the SLN was a ceremonial navy and was meant to fight only internal security situations and perform some basic roles at sea. The SLN focused on developing their capabilities at various stages of its history. This research has derived following areas as attributed to the victory over the Sea Tigers;

a. Developing the SLN
b. The Political Leadership, Resolve and Synergizing the Political and Military will
c. The Development of a Grand Strategy
d. Adaptation of Asymmetric tactics
e. Invigorating Leadership of the SLN
f. The Destruction of LTTE Floating warehouse ships
g. Development of Network Centric Capability
h. Enhancing Maritime Security with Coastal defences, Harbour security and underwater defence Systems
i. The Small Boat Concept and Operations by the SLN
j. The Development of Effective Intelligence and Intelligence Coordination
k. Minimizing Corruption and Evaluations in Procurements
l. Evaluating the Capabilities of Armed Forces
m. The Application of Modern Technology, Research and Development (R&D) Work Undertaken by the SLN
n. Enhanced Coordination among Armed Forces
o. Effective Use of Strategic Communications
p. Dominating the Ground by the Military and Operations of Special Forces
q. Improvement to Naval Tactical Communications
r. Creation of the Rapid Action Boat Squadron (RABS)
s. The Enhancement of the SLN Sealift Capability
t. Enhanced Combat Logistics
u. Effective Decentralized Medical Support
The conflict in Sri Lanka involving the SLN and the Sea Tigers could be considered as a unique case of the significance and influence of a violent non state actor at sea. This conflict exposes a wide spectrum of activities which could be a threat to any navy or a coast guard. The traditional security paradigm where the states fight with another state at sea are no longer dominant in the international arena. The states now prefer to settle disputes by exploring political, diplomatic and other peaceful manners, rather than trying to engage in combat at sea. Non-state actors are now threatening the international order at sea. The armed groups with extremist ideology can be a real threat at sea. The 21\textsuperscript{st} century has seen an increase of violent armed groups using the ocean to further their causes.

The world has witnessed the effects of piracy and armed robbery in the horn of Africa and the western Indian Ocean even in the 21\textsuperscript{st} century. This was a classic example of how non-state actors can influence even world matters. Many powerful navies have to deploy their war ships to guard against pirates and the merchant vessels have to carry on board armed security teams to protect their ships from being pirated and taken hostage. A small group of Somali pirates took the world to ransom by their tactics at sea. The Mumbai attack in 2008 is another recent example of the effect of violent armed groups using the ocean. In this instance the terrorists took the commercial capital of India, which has the largest navy in the Indian Ocean, under its influence for a few days. The attack on USS Cole, one of the most sophisticated war ships at that time, in the port of Eden in 2000 is another incident of the effectiveness of armed non state actors. These incidents show the potential capabilities of non-state actors at sea. As the world depends heavily on seaborne trade for transport of good and energy, maritime security has gained a high priority in many nations’ agendas. The world is now witnessing a resurgence of armed groups at sea in the Gulf of Guinea and Malacca strait as well. Non-state actors have been responsible for a wide range of maritime terrorism and crime such as gun running, narcotic trafficking, human smuggling, piracy and sea borne attacks on merchant vessels and other maritime targets. The LTTE Sea Tigers had gained prominence as the most violent and effective terrorist organization at sea in the contemporary period. The Sea Tigers were responsible for large scale maritime terrorism and crime activities at sea. They were indeed a threat not only to Sri Lanka but to the entire region. The Sea Tigers pioneered many new tactics at sea and was considered as a trend setter in maritime terrorism. The Sea Tigers
invented and perfected the suicide boat, women suicide cadres, limpet mines, under water suicide saboteurs, and even operated fleets of ocean going ships in international waters.

The ocean is considered as ungoverned space due to its vastness. It is not well regulated as the land and it is not possible to effectively police such a large area of the earth’s surface. Implementing regulatory mechanisms and international law of the sea is a very difficult task at sea. There are other law regimes governing the ocean such as flag state law, coastal state law or treaty laws. However, application of law is an extremely a difficult task at sea. Therefore the navies, coast guards and other maritime security agencies find it nearly impossible to maintain the sanctity at sea. There is a large number of merchant vessels, fishing trawlers, leisure craft operating at sea from many nationalities and many companies from different countries and that make the regulatory efforts at sea even more difficult. This vacuum in law and order at sea favours the activities of armed and violent non-state actors such as the Sea Tigers to use the ocean for their purposes, thereby threatening the security of many nations.

The Sea Tigers not only used the ocean for various illegal activities but became a serious threat to the SLN and to the entire region as they attacked and hijacked even the merchant vessels on innocent passage. The Sea Tigers exploited the loopholes in the international system and were able to purchase large quantities of war-fighting materials and used the international trading system of ports and sea lanes to stock pile, and finally to transfer the items to areas under their control. The Sea Tigers had flouted the international maritime laws, end user certificate and various security regimes. If a small group like the LTTE could do that, the possibility exists for any other group to do the same.

As this was a unique case study, the lessons learnt can also be unique. Although no two situations will be the same, there can be many parallels which can be drawn from this case. These lessons can be very valuable for any navy, a coast guard, facing a similar situation presently or likely to face in the future. The key lessons which were derived as a result of this research are as follows.

8.8.1 The need to develop a Comprehensive Maritime Strategy

Strategy provides the link between the political objectives and military means and a combination of both is essential in winning a war or to progress as a country. An island or a littoral state should develop a comprehensive maritime strategy taking into
consideration, the enablers of maritime power, and aspirations of people and the objectives of the country. This maritime strategy should also have a risk assessment element to identify the present and likely maritime threats to achieve the strategic objectives. The ministries and other agencies having a stake at sea, should be made aware of the country’s maritime strategy. The maritime strategy should be part of the grand strategy of the country and it should cater to developing a maritime doctrine which should then lead to the development of maritime security policies.

8.8.2 Understand the Threats in the Maritime Domain and Commit Resources to Enhance Maritime Security

Most governments do not understand the potential or threats which can emanate from the maritime domain. This is due to the ‘sea blindness’ of people. No one can really see what is happening at sea and hence; lack of awareness about the ocean. If a country is an island state or a littoral, the significance of protecting the maritime domain is of utmost importance. Armed groups can impinge on maritime security in a big way, especially when the ocean space is not governed properly. Even when there is no existing threat at sea, the maritime space should be monitored and surveillance should be carried out by utilizing all available agencies such as navy, coast guard, marine police units and border protection agencies. Even non-military agencies such as ocean research units, fishing vessels, exploration units, and leisure activities at sea could be used to maintain surveillance in an indirect way. There should be a competent authority to coordinate all these agencies and efforts and also to study and forecast possible threats to the maritime domain. No one should get the feeling that the maritime space is free to do anything as it is not well regulated and policed. Domestic legislations should be enacted and upgraded as necessary. The maritime security paradigm should include all harbours, waterways, access to ocean such as river mouths, bays and coves, in order to ensure the freedom and safety of the maritime trade. It is also necessary to monitor the coast line to deny the use of it for unlawful activities whilst promoting the peaceful and legitimate use of the same. Sri Lanka paid dearly for not paying sufficient attention to maritime security for a long time. When the necessary attention was given, positive results were imminent and tangible.
8.8.3 Develop Regional Cooperation for Maritime Security

As the maritime domain encompasses national boundaries and international limits of other countries, the need to create a joint effort in regional maritime security is very important. There should be a regional and multi-lateral and collaborative effort to maritime security. Unlike on land, a threat can easily spread to another country by sea. There should be a good linkage between the agencies involved at sea, at diplomatic, political and even at the tactical level. The Sri Lankan conflict would not have dragged for so long if there was a better regional cooperation. There should be a regional approach to maritime security to curb the menace of maritime terrorism and crime. Even though there may not be any ideological common ground among various armed groups, there could be technology transfer for financial gains. Also a violent group in one country can copy the innovations and tactics used by another terrorist group. The great success achieved by the Sea Tigers could influence other groups to venture into the ocean and be a threat to the territorial integrity of their target country.

8.8.4 Understanding Theories and Concepts of Naval Warfare

Clausewitz writing on a passage ‘on war’ insists that: “the first, the supreme, the most far-reaching act of judgement that the statesman and commander have to make it to establish… the kind of war on which they are embarking; neither mistaking it for, nor trying to turn it into something that is alien to its nature. That is the first of all strategic questions and the most comprehensive” (Mahnken and Maiolo, 2011, 34). It appears that the SLN took a long time to make judgments about the nature of the war that it was fighting. Many lessons can be derived from past experiences and events. But the SLN took a long time to evolve through the war, after experiencing casualties, losses and nearly losing the war. Theories and concepts of naval warfare have been evolved over the history based on actual battles at sea and their implications on land. These theories are a combination of practical experiences and lessons learnt from various battles and actions and analysing these events by academia and naval professionals. These theories have been tested and recorded in various academic journals, books and other publications. The naval leaders need to understand the precise elements that they can absorb from theories based on other people’s experiences.
Bismarck observed: “fools say they learn from experience. I prefer to profit by other’s experience” (Mahnken and Maiolo, 2011, 36). The SLN tried to learn from its own experience and of course they did, but at a much higher cost. Sun Tzu said that: “war is a matter of vital importance to the state; the province of life and death; the road to survival or ruin” (Mahnken, Maiolo, 2011, 53). The SLN did not realize the need to study the war, deriving examples from other situations until fairly late in the war. When this research analysed the outcomes of the war and the determinants of success of the SLN against the Sea Tigers, it was clearly evident that the theories and concepts of asymmetric warfare, sea control and operational art were applied during the final phase of the conflict after 2006. Even then, the understanding of the theories was not there, but the practical experiences of long term fighting with the Sea Tigers, which became the determinant factor. It can be safely assumed that if these theoretical concepts were studied and understood from earlier on, the results would have come much earlier or the Sea Tigers would not have grown to be the potent force that they became at sea. If the concepts and theories were applied much earlier, the cost of war would have been much less.

8.8.5 Developing the Naval Capabilities in a Systematic and Proactive Manner

As Rexrode points out: “A navy is a technology based, capital intensive institution that does not transform quickly, even in the face of necessity driven by rapid changes in geopolitics and strategy” (Rexrode, 2004, 5). A navy cannot be developed overnight. It takes years of planning, evaluations, considering staff requirements and a process of building or acquiring necessary platforms, sensors and weapons. Then it is also necessary to develop strategies and doctrines and tactics to use this force against a possible threat. In the Sri Lankan case, successive governments did not pay sufficient attention to developing a stronger navy. This should have been a priority being an island nation, situated in an advantageous geographical location amongst the busiest shipping routes. However, most of the developments in the SLN were as a response to the threat posed by the Sea Tigers and not by having a pro-active approach. This resulted in the SLN losing the initiative they once enjoyed at sea, though they were the legitimate
guardian of the sea. The technologies are changing so fast in the modern world. It may be practically difficult for a navy to keep itself updated with all the latest inventions. But as far as possible, modern technology should be absorbed into the naval platforms as these may provide a tactical edge over the enemy. There are many ‘dual use’ technology items available in the world today. Navies can benefit by incorporating these items into their platforms. Research and development should be a key area for any navy. Innovation and improvisation is the way to go.

Further, naval capabilities should be evaluated and assessed periodically by professional panels, who understand the maritime strategy and see the naval picture better. When evaluating platforms or equipment for the navy, due consideration should be given to compatibility with other services, so as to ensure mutual support and to reduce mutual interference. The shipborne integral air craft can be used to perform many of the roles being done by the surface platforms. The integral aircraft can be considered as force multipliers. The navy understands the maritime domain much better than any other service as they live, work and rest in the sea environment. Hence, the navy should be given the responsibility of maritime surveillance.

8.8.6 Leadership

Leadership plays a crucial role in a navy to lead the men of war to fight, to maintain the first line of defence of an Island nation. Naval leaders are not just born, but evolve through years of experience and exposure to various training, courses, seminars, conferences, workshops and self-learning. The naval leader should be an intellectual as well. They should be able to undertake research on their professional field and present their findings to the betterment of the navy. Naval leaders should understand the policies and guidelines of the political leadership and work in harmony and should provide professional advice when needed to do so. They should understand the basic needs of naval personnel and the required tools to motivate them to perform their tasks with a positive team spirit. Leadership matters at all levels and not only at the top level. The subordinate leaders should be able to deliver the expectations of their superiors. Selecting officers to lead naval personnel should be carefully done and their promotions, appointments should be done according to time tested criteria. Bravery
should be given due consideration especially in war scenarios. Naval leaders should be good strategists and tacticians so as to understand various situations and guide their subordinate team to achieve the tasks. Naval leaders should also be receptive to new ideas and willing to implement them if found suitable.

8.8.7 Development of Effective Intelligence

In war situations especially in conflicts involving non-state actors, good intelligence is a must for winning against the adversary. The strategic and tactical intelligence is a must for a navy fighting at sea. You should know the enemy, their capabilities and vulnerabilities. This can come only from good intelligence. For a navy, only local intelligence may not be sufficient. It may be necessary to have access to information away for one’s own country as well. If good intelligence is available, lot of money, efforts can be saved and casualties minimized. It should be remembered that good intelligence can come from even unexpected sources and one only has to keep a receptive mind to see that.

8.8.8 Minimizing Corruption in Military Procurements

The arms dealers are waiting for a war to take place, for then only they will be able to sell their ware. They will be willing to spend lavishly to get a deal through. The navy could fall prey to some of these unscrupulous arms dealers and thereby even compromise the fighting efficiency of the force. Naval procurement processes should be very carefully done so as to maintain the integrity of the force and to obtain what is absolutely necessary and not what the arms dealers are trying to sell. Correct procedures should be developed, tested and applied strictly. As far as possible, purchases or acquisitions should be done on government to government basis. Attempts should be made to obtain economy of effort as well. The quality should never be compromised as there cannot be a runner up in war, but only one victor.

8.8.9 Use of Strategic Communications

Well strategized strategic communications can carry the correct message to the masses and also to the required target audiences. There is a general ‘sea blindness’ of
people including policy and decision makers about maritime matters as they generally do not see the sea. This is a phenomenon world over. The navy should endeavour to show the public the useful role that they perform at sea through strategic communication means and to harness their support to the development of the navy.

8.9 Use of the Explorative Research

The online *business dictionary* defines exploratory research as “Investigation into a problem or situation which provides insights to the researcher. The research is meant to provide details where a small amount of information exists. It may use a variety of methods such as trial studies, interviews, group discussions, experiments, or other tactics for the purpose of gaining information”. The research methodology net describes the exploratory research as which “intends merely to explore the research questions and does not intend to offer final and conclusive solutions to existing problems”. It was observed that at the beginning of this research, only a small amount of information was available in academic literature as no other researcher had undertaken a comprehensive study on the naval aspects of winning the war in Sri Lanka. The researcher used in-depth and open ended qualitative interviews of selected samples of key personnel who were involved in the war at crucial stages and focus group discussions in order to obtain insightful information for the reasons behind the victory against the Sea Tigers at sea by the SLN.

One of the most important and extensive stages of this study was the period of data collection. In that stage, the researcher tried to find answers to research questions. This research did not try to provide conclusive evidence but aimed at understanding the problem. The researcher was willing to change his direction as a result of new insights and opinions. The research topic was explored with varying levels of depth. It is envisaged that this is an initial research and it is hoped that more conclusive research will be conducted in the future focusing in detail on various aspects highlighted in the data analysis. The researcher had an idea of how the war against the Sea Tigers was won. He has also observed many aspects of the victory. However he endeavoured to understand various reasons for the victory and explore those reasons with existing theories of asymmetric warfare, sea control and operational art through other people’s perspectives and ideas. These theories have been in existence for a long time and various naval commanders and scholars have examined them against different scenarios.
This research embarked upon to find the applicability of various concepts of these theories to the war against the Sea Tigers by SLN. It is an established fact that the Sea Tigers grew to be a force to reckon with, with various innovative asymmetric tactics, and challenged the traditional role of SLN; the sea control. However, finally the SLN was able to take the initiative back to their side and dealt a severe blow to the Sea Tiger operations, which contributed effectively in defeating the LTTE.

The researcher was fully satisfied with the ‘exploratory’ method chosen for this research as it has given him the sufficient freedom to derive data and analysis to satisfactorily arrive at findings. The outcome of the research was identifying the ‘determinants of success behind the SLN’s Gaining of sea control’ and the ‘lessons learnt’ from this conflict. Based on the exploratory method used, the researcher believes that this research has successfully answered the research questions and achieved the research objectives set forth in the beginning of the research. This research has not discovered any new theory, but has re-defined and added value and significance to existing theories of naval warfare used to analyse the research findings; theories of asymmetric warfare, sea control and operational art. The findings will no doubt contribute to the knowledge and will be of great interest to present and future generation of naval officers, policy makers/advisers on maritime security domain, practitioners of maritime security, academics, who are interested in further studies in the maritime security domain, and anyone interested in studying the Sri Lankan conflict at sea; The SLN Vs Sea Tigers.

8.10 Limitations of the Study

The Long drawn out conflict in Sri Lanka ended on 19th May 2009, when the government forces defeated the LTTE war-fighting-ability comprehensively. It was indeed a grand victory gained through the combined effort of all the armed forces and the whole of the government approach and with the support of the masses. Many a decision was taken towards the latter part of the conflict and some of these may not be properly recorded with proper justification. This is a significant limitation in understanding the logic and rationale for these decisions, which contributed to the final victory. The research depends on declassified and unclassified documents, personal and individual experiences, in deriving the effectiveness of such decisions. Most of the key military leaders are now retired and it may be a difficult task
to obtain comprehensive interviews from them. A study of the conflict is not complete, if the research does not obtain input from the LTTE military top leaders. However, most in the Sea Tiger top leadership perished in the final stage of the battle and hence it is not possible to study their objectives, vision, tactics and how they exercised command and control. Further, no academic research has been conducted specially on the maritime aspect of the war, which is why this research has collected/gathered information and operational details from whatever sources available. Transforming war-experience in asymmetrical context to an academic endeavour is new, especially in the Sri Lankan Maritime context and hence there was a dearth of researched and published academic papers and books in this subject area. Also the non-availability of library resources, data bases, repository for wealth of experiences that were unique in many number of ways, was another challenge to the researcher.

8.11 Propositions Used and the Research Findings

In the beginning of this research, a hypothesis was not developed as this was going to be of an exploratory nature. Hence, the following three propositions were used for the purposes of research.

d. The study assumes that at the earlier period of the war, the naval forces were not able to deter the LTTE at sea, and could not establish the control of the seas because of a lack of understanding of the attributes of maritime warfare

e. Determination, leadership & motivation led the LTTE organization to transform itself from a rudimentary fighting force to a fighting force with near conventional capabilities

f. The leadership, resolve & transformation of strategies were the factors that influenced SLN to transform from a conventional approach to an asymmetric approach that minimized failures and assured the successes of the war-winning formula

The research findings have proven the propositions assumed. The policy, strategic and tactical level draw backs of the government and the SLN clearly indicate what was lacking in the approach to the conflict by the SLN and how it was possible for the Sea Tigers to exploit the situation to further their cause. The research has proven that the determination, leadership and ability to innovate helped the Sea Tigers to grow into a potent force at sea. The Sea Tigers
helped the LTTE to acquire near conventional capabilities and was a major strength behind the success of the LTTE organization. The use of asymmetric tactics by the Sea Tigers could successfully challenge the supremacy of the SLN at sea. The growth of the Sea Tigers to pose a threat to the much superior conventional force level of the SLN is a clear indication of their development from a rudimentary fighting force to one of the most successful non state actors at sea. Having learnt the lessons the hard way, the SLN navy was finally able to regain the lost sea control and defeat the Sea Tigers at sea. The political leadership and resolve and the innovative naval leadership are derived as two of the most important determinants of the success of the SLN. The change of approach from merely a conventional mind-set to asymmetric tactics to fight the asymmetry at sea helped the SLN to change the tide in their favour. The determinants of success for the SLN clearly indicate that attributes such as leadership, use of asymmetric tactics, small boat concept, destruction of warehouse ships as some of the key areas which attacked the centre of gravity of the LTTE and the Sea Tigers. This assured success and minimized failures for the SLN. The research findings clearly prove that the variables used in the propositions were correct and had a direct bearing on the outcome of the war at sea.

8.12 Prospects for Future Research

It is believed that this research is also a unique effort in understanding various aspects of the protracted conflict at sea between the SLN and the Sea Tigers. This is a classic case where a non-state actor threatened a legitimate navy for sea control. This is a case where a non-state actor used asymmetric tactics at sea to challenge the supremacy of a navy successfully. This is also a case where this non-state actor enjoyed even international connections to further their cause. This conflict was going on for nearly three decades and the Sea Tigers enjoyed a phenomenal growth from a mere small group of youth with fibre glass dinghies to a near-navy status, and performed many tasks that are being done by a navy. Therefore this research encompasses a vast area and many aspects of the nature of conflict at sea. Considering the usefulness to the future naval forces, based on the research findings, there are a few areas in which that further research could be undertaken, based on the same case study. These areas are as suggested below:

a. Asymmetric warfare at sea and non-state actors.
b. Use of asymmetric tactics to counter asymmetric tactics at sea.

c. Suicide Terrorism at sea and the Sea Tigers

d. Naval Leadership and Asymmetric warfare at sea

e. Innovations, improvisations and Asymmetric warfare at sea

f. Need for a comprehensive maritime strategy for an Island nation

g. Indigenous development of the LTTE Sea Tigers

h. The LTTE’s international financing and arms smuggling network

8.13 Culmination

The phenomenal rise of the LTTE Sea Tigers is a classic example how a non-state actor, using asymmetric tactics can become a serious threat to an established navy. The Sea Tigers have proven the potential for exploitation at sea by violent armed groups. The rise of the LTTE can be mainly attributed to the development of the Sea Tigers. However, learning from experience, the SLN managed to overcome the terror tactics at sea and regained the sea control, which is the legitimate right of a navy. There are various factors for the success of the SLN. The SLN was able to comprehend the strategies of the Sea Tigers and took the war back to them. The victory for the SLN came through strong political and naval leadership with a firm resolve to end the prolonged conflict at sea. The SLN having evolved through the conflict operated with professionalism and attacked the centre of gravity of the LTTE; their international logistic network, which was the life line of the formidable LTTE. When the logistics were cut off, the LTTE became vulnerable and lost the fighting efficiency. This research is an endeavour to find out what lessons can be learnt from the Sri Lanka Navy’s drawbacks and success at sea. In the contemporary world, the non-state actors are having more substantial influence in the global security domain and hence their influence in the maritime domain as well. The lessons learnt from the Sri Lankan experience can be valuable for anyone interested in understanding the nature of threats which can emanate from the ocean, especially of asymmetric nature.
References


Benn, M, Weinstein, M & Foard N (eds), 2006, A critical Introduction to social research. SAGE publishers.


Business Directory.com. Available at:

Caron, D.D, Oral, N (2014) Navigating Straits: Challenges for International Law, Koninklijke Brill Leiden, The Netherlands


Lindstrom, F. (2002) *Asymmetric warfare and Challenges for International Humanitarian Law*. Master’s Thesis in Public International Law, Uppsala University Department of Law, Fall Term


313
Annexe A - The demarcation of a separate state (Eelam) as demanded by the LTTE
Annexe B – The LTTE’s International Shipping Routes

Source: Sri Lanka Navy
Annexe C - Sample Letter and Questionnaire for Interviews

INTERVIEW FOR AN ACADEMIC DISCUSSION

1. I wish to respectfully inform you that I am presently reading for my MPhil/Phd at KDU and had selected the thesis on the topic on ‘An Exploratory Model to Counter Asymmetric Warfare at Sea; the case of Sri Lanka Navy’. In this academic quest, what I intend to achieve is to present a theoretical model based on Sea Control, Operational Art & Contributory Factors, in making a winning formula for asymmetric warfare at sea, based on experience in defeating the LTTE at sea, which contributed to the Grand Victory immensely.

2. I must acknowledge that you are one of the most eligible to be interviewed considering your wealth of experience especially as the Director General Electrical and Electronic. Your illustrious career saw the transformation of the Sri Lanka Navy from a conventional mind set to take the fight in to enemy’s doorstep, in a very unique unconventional way. The questionnaire enclosed which I have summarized broadly in support of your intrigue preparations for the interview. The board themes under which I sincerely expect your contribution is as follows;

   a. The Navy has been engaged in asymmetric warfare for over 2 ½ decades & clearly there’s some time-bound episodes namely; The period up to late 2005, Period from 2006 - 2009, In this context, as per your experience, what critical components were attributed in making the winning formula?

   b. You are aware that at a time of crucial juncture, Sri Lanka Navy comprehensively defeated the LTTE at sea who defied a state authority. How would you comment on the efforts of the Sri Lanka Navy in relating the practically to theory in defeating the enemy some thought was invisible?

3. Hence forth, be kind enough to indicate a convenient date and time at your earliest to meet you to conduct the interview. Your cooperation and assistance in this regard will be greatly appreciated, please.

   Thank You.

   Yours Sincerely,

Enclosure: Questionnaire for MPhil/PhD Programme.
Questionnaire for MPhil/PhD Programme.

Candidate: Vice Admiral Jayanath Colombage, Commander of the Navy

Sri Lanka Navy, having trained and aligned on conventional naval mind-set was found to be reactive in facing the development of LTTE Sea Tiger activities at sea using asymmetrical concepts. Inability to counter-act decisively in the face of highly dynamic & fluid situations found navy struggling in maintaining the Sea Control. However, at latter part, the years of evolution, leadership, innovation, ingenuity and organizational changes helped the navy to learn from the past, adjust and face enemy proactively and regain sea control which, resulted in the decline of Sea Tigers.

Personal Details:

01. What is your name, Present Rank/Status?
02. What is your country, service, arm of service?
03. What is your branch and specialization?
04. What is your present duty/ task?

Qualitative Interview Questions

01. What do you know about Sri Lankan Conflict?
02. Did you play a key role during the conflict in Sri Lanka?
03. What is your impression about progress of LTTE Sea Tigers? In your opinion, how did the LTTE benefit from exploiting the ocean to develop near-conventional capabilities at sea?
04. How do you see the effectiveness of the Sri Lanka Navy (SLN) at the early stages (1970s-1980s) of the conflict?
05. How do you see the progress of SLN in 1990s-2000s?
06. How do you see the involvement of SLN post 2005?
07. What do you see as major contributions of SLN to effectively exercise sea control and finally the defeat the LTTE at sea?
08. How do you see the effectiveness of following specific areas as contributed to victory against LTTE Sea Tigers?
   a. Destruction of LTTE floating warehouses
   b. Layered Defence during the final stages of the conflict
   c. Developing Combine Operation Picture for Maritime Domain Surveillance

09. How do you see the role of naval intelligence contribution for countering Sea Tigers?
10. How do you see the role of SBS during the conflict?
11. What is your view on the SLN concept of small boat operations during final stages of war?
12. What is the role of leadership in the SLN contributed to the success of the fight against LTTE at sea?
13. How do you see the experience of SLN in Asymmetric Warfare at sea?
14. What are the factors that influenced SLN to transform from conventional approach to asymmetric approach that minimized the failures and assured the successes of war-winning formula?
15. What role did the international/regional/bilateral cooperation play in countering the LTTE's maritime capabilities?
16. How do you see the political leadership and resolve as contributory factors of winning formula?
17. How do you see the strategic location of Sri Lanka in the Indian Ocean?
18. How do you see the link between maritime domain and national security of an Island nation?
19. Any other remark that you would like to make?

**Abbreviations**

LTTE - Liberation Tigers of Tamil Eelam
SBS - Special Boat Squadron
SLN - Sri Lanka Navy
FOCUS GROUP DISCUSSIONS


1. On successful completion of mini-symposiums at each Naval Area vide above reference, and also monitoring the conduct of Toast Masters initiative at Naval Areas, it has been decided to further enhance the endeavor in improving the academia of the Naval Officers.

2. The next step of the initiative is termed as ‘Focus Group’ discussions. Focus Group is defined as “A demographically diverse group of people assembled to participate in a guided discussion above a particular subject”. This is in simple term a ‘Brain Storming’ sessions which will document the thoughts & expressions in a logical manner. The Focus Group is expected to undertake preliminary research or study prior engages in the discussion.

3. Therefore, each Area Authority is to convene a demographically diverse set of officers from respective area with some level of experience during the period prior to May 2009, provide them with a time frame to engage in preliminary research / study and to conduct a focus group discussion at a forum where other officers could witness the event.

4. The proceeding of the focus group discussions need a moderator (a senior & well experienced officer than the members of the Focus Group, who will manage the discussions) & a recorder (who will compile the salient point of the discussion for the report) and the outcome of the proceeding should be submitted to Commander of the Navy as a Focus Group Discussion Report by 30th June 2013.
5. The Hypothesis for the Focus Group discussion is annex to this letter with a set of guidelines for easy understanding. Each Area Authority is to take personal interest in launching this initiative & to stimulate the focus group to critically analyze the given hypothesis.

6. Acknowledge.

JSDK COLOMBAGE, RSP, VSV, USP, rcds, psc
Vise Admiral
COMMANDER OF THE NAVY

Annex: Hypothesis for Focus Group Discussion.
Distribution: All Area Authorities.

Commandant, NMA (CN&MA to conduct a separate programme in Nav East involving JNSC & other suitable officers of NMA and submit a separate report)
**ANNEX TO**  
**COMMANDER OF THE NAVY’S LETTER**  
**NO. SLN.011 DATED 16TH MAY 2013**

**Hypothesis**

1. The gradual exercise of sea control by the LTTE at the *early stage of war* for transporting illegal arms and ammunitions, cadres for training and combat operations across Palk Strait and at sea helped the organization to grow into a substantive conventional military level which, threatened the territorial integrity and sovereignty of Sri Lanka for nearly three decades.

2. The gradual loss of sea control by the LTTE as a result of Sri Lanka Naval operations especially after 2006 at the *later (final) stage in war* resulted in weakening of LTTE’s ability to continue to wage war and resulted in the demise of them, at the hand of government military forces.

**Guidelines in formulating the Focus Group**

3. Above Hypothesis may be researched / studied on following points of discussion & bring up by members of the Focus Group Discussion. For the simplicity in handling the discussion each member is suggested to be allocated one or more of following topics for research/study & at the discussion the group may express their individual views on such points, enriching the thoughts & deliberations.

**Points to be considered for Hypothesis**

a. The progress of LTTE Sea Tigers  
b. How did the LTTE benefit from exploiting the ocean for their advantage  
c. Effectiveness of the Sri Lanka Navy (SLN) at the early stages (1970s–1980s) of the conflict  
d. The progress of SLN in 1990s – 2000s  
e. The involvement of SLN post 2005  
f. Major contributions of SLN to defeat the LTTE at sea  
g. The effectiveness of following areas as contributed to victory against LTTE Sea Tigers  
   1) Destruction of LTTE floating warehouses and disruption of logistics for LTTE  
   2) Layered Defence during the final stage of the conflict.  
h. The role of intelligence in SLN contribution for countering Sea Tigers
i. The role of SBS during the conflict  
j. The SLN concept of small boat operations during final stages of war  
k. The R & D projects undertaken by SLN  
l. Combat logistics  
m. The experience of SLN in countering Asymmetric Warfare at sea  
n. The strategic location of Sri Lanka in the Indian Ocean and regional security implications  

4. For example, the Focus Group may include Officers from several branches, varying experience/service duration, exposure in foreign courses, different intellectual capacities and gender. However, when submitting the Focus Group Discussion Report following details of the members of the Focus Group should be indicated;  
   a. Name, rank, off.number, branch age, experience/service duration, educational background (i.e. MSc, Diploma etc), service in operational areas.  
   b. Topics undertaken for research/study by individual members.  

Guidelines in conducting the Focus Group Discussion  
5. The discussion need to be conducted as a round table discussion where witnessing audience can clearly hear the deliberation. The moderator to ensure each participant member gets fare share of time and the participation of all of the round table. The quality of deliberations is directly dependent on the clear expression of thoughts & presenting of fact & figures. The Area Authority may express his views on completion of the Focus Group Discussion after moderator sum-up the deliberations. Where necessary the discussion may supported by few slides on the multi-media but not to dwell on power-point presentations.  

End state  
6. It is expected to compile all Focus Group Discussion Report in to a single document as a research material for the use of Naval libraries. Hence the Report to adopt following format when submitting to ensure uniformity;  
   a. Chapter 1: Introduction and composition of the Focus Group (with details as indicated in para Above)  
   b. Chapter 2: Approach to the discussion; timeline, places of deliberations, venue & facilities used for the final Focus Group Discussion  
   c. Chapter 3: Deliberations  
   d. Chapter 4: Sum-up by the moderator  
   e. Chapter 5: AA’s remarks  
   f. Chapter 6: Feedback & any other comment
Annexe E – Various Types of Waterborne IED’s used by the LTTE Sea Tigers

**SEA MINES**

Moored Type Wire Controlled Sea Mines Found In the Year 1989

- Total weight - 22 Kg
- Explosive weight of main charge - 15 Kg
- Type of explosive of main charge - ANFO
- Type of explosive of primer - TNT
- Fuse activating system(electrical) - Control
- Material of the body - Fiber glass

Laying arrangement of moored type wire controlled Sea Mines

Source: Sri Lanka Navy
Moored Type Contact Mine

- Total weight: 48 Kg
- Explosive weight of main charge: 25 Kg
- Type of explosive of main charge: Cast TNT/ANFO
- Type of explosive of primer: C-4
- Fuse activating system (Mechanical): Impact
- Material of the body: Cast Aluminum and steel

Laying arrangement of moored type contact sea mine

Source: Sri Lanka Navy
Features of Moored Type Electrically Initiated Contact Mine

- Total weight - 35.5 Kg
- Explosive weight of main charge - 25 Kg
- Type of explosive of main charge - Cast TNT
- Type of explosive of booster - TNT and C-4
- Type of explosive of primer - C-4
- Fuse activating system - Impact (Electrically detonated)
- Material of the body - Fiber Glass

Source: Sri Lanka Navy
Ground Mine

Explosion of a ground mine

- Total weight: 45 Kg
- Explosive weight of main charge: 30 Kg
- Type of explosive of main charge: Cast TNT
- Type of explosive of primer: C-4
- Fuse activating system (Mechanical): Impact
- Material of the body: FIBER GLASS

Limpet Mine

- Weight of full unit: 25.15 Kg
- Magnets (each 500 g) x 3: 1.50 Kg
- Holding force of magnets all together: 25 Kg
- Type of explosives: C-4
- Explosive weight: 15 Kg
- Fuse activating: Pressure and time system delay
- Material of the body: Fibre glass

Source: Sri Lanka Navy
Floating Mine (Bottle Mine)

- Total weight: 3.5 Kg
- Explosive weight of main charge: 2.75 Kg
- Type of explosive of main charge: C-4
- Primer: Non
- Fuse activating system (Mechanical): Vibrate
- Material of the body: Plastic

Explosive Charge Used By Suicide Divers

- Total weight: 35.5 Kg
- Explosive weight of main charge: 25 Kg
- Type of explosive of main charge: Cast TNT
- Type of explosive of primer: C-4
- Fuse activating system (Mechanical): Impact
- Material of the body: Fiber Glass

Explosive Charge Used By Suicide Divers - Improved Version

- Total weight: 35 Kg
- Explosive weight of main charge: 25 Kg
- Type of explosive of main charge: TNT
- Type of explosive of primer: C-4
- Fuse activating system (Mechanical): Impact
- Material of the body: Fiber Glass

Source: Sri Lanka Navy
Annexe F – Various Types of the Sea Tiger Boats Built by the LTTE

Logistic Boats

Miraj Type Logistic Boat

![Miraj Type Logistic Boat Image]

<table>
<thead>
<tr>
<th>Feature</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Length</td>
<td>45'</td>
</tr>
<tr>
<td>Breadth</td>
<td>18'</td>
</tr>
<tr>
<td>Speed</td>
<td>38 Knots (with load 18 Knots)</td>
</tr>
<tr>
<td>Colour</td>
<td>camouflage</td>
</tr>
<tr>
<td>Engines</td>
<td>4 x 250 HP OBM</td>
</tr>
<tr>
<td>Weapon</td>
<td>02 x 0.50mm</td>
</tr>
<tr>
<td>Crew</td>
<td>07</td>
</tr>
<tr>
<td>Communication</td>
<td>01 x hand set 01 x VHF</td>
</tr>
<tr>
<td>Radar</td>
<td>01 Anritsu</td>
</tr>
<tr>
<td>GPS</td>
<td>01 Furuno</td>
</tr>
<tr>
<td>Compass</td>
<td>01</td>
</tr>
<tr>
<td>Cargo capacity</td>
<td>06 tons</td>
</tr>
</tbody>
</table>

Kumudan Dovra Type Logistic Boat

![Kumudan Dovra Type Logistic Boat Image]

<table>
<thead>
<tr>
<th>Feature</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Length</td>
<td>36'</td>
</tr>
<tr>
<td>Breadth</td>
<td>10'</td>
</tr>
<tr>
<td>Speed</td>
<td>30 Knots</td>
</tr>
<tr>
<td>Colour</td>
<td>Black &amp; Green</td>
</tr>
<tr>
<td>Engines</td>
<td>2 x 200 HP OBM</td>
</tr>
<tr>
<td>Weapons</td>
<td>01 x RPG 01 x LMG small arms</td>
</tr>
<tr>
<td>Personnel</td>
<td>06</td>
</tr>
<tr>
<td>Communication</td>
<td>VHF</td>
</tr>
</tbody>
</table>

Source: Sri Lanka Navy
**Kuruvi Type Logistic Boat**

Length - 18’
Breadth - 9’
Speed - 35 Knots
Colour - Camouflage
Engines - 1 X 200 HP OBM

**Armour Plated Logistic Boat**

Length - 30’
Weapons - 01x.50"
          02 x RPGS
Engines - 02 x 250 HP
          02 x 150 HP

Source: Sri Lanka Navy
Air Duplication Type Logistic Boat

Length - 42’
Breadth - 16’
Speed - 30 Knots
Colour - CAMOUFLAGE & WHITE
Engines - 02 X 200 HP OBM
Communication - VHF
Personnel - 04

Carrying Small Arms. Used for transportation of vehicles from ships to shore.

Thirikka Logistic & Person Move Type Boat

Length - 30’
Breadth - 9’ ½’’
Speed - 35 Knots
Colour - Camouflage & Black
Engines - 2 X 200 HP
Personnel - 12
Weapon - 20 mm / .50 mm Weapon In Front And Rear. Small arms

Source: Sri Lanka Navy
Attack Crafts

Vella Type Attack Craft

Length - 48'
Breadth - 18'
Speed - 38 Knots
Colour - CAMOUFLAGE
Engines - 5 X 250 HP OBMS
Weapons - 01 X 14.5 mm
            04 X 0.50 mm
            01 X GPMG
            01 X LMG
            01 X RPG
Personnel - 12
Communication - 01 X HF (707 MODEL) X VHF (TITANIC)
Radars - 01 ANRITSU  01 AVELCO
GPS - 01 FURUNO
Compass - 01 SILVA

Source: Sri Lanka Navy
Sudai Type Attack Craft

Length - 48'
Breadth - 16'
Speed - 40-42 Knots
Colour - Camouflage
Engines - 5 X 250 HP OBMS
Weapons - 01 X 23mm
          - 02 X 0.50mm
          - 02 X GPMG
          - 02 X LMG
          - 01 X RPG
Personnel - 12 - 13
Communication - 01 X HF (707 Model)
               - 01 X VHF (Titanic)
               - 01 X Hand Held Set
Radars - 01 ANRITSU
         - 01 AVELCO
GPS - 01 FURUNO
Compass - 01 SILVA

Source: Sri Lanka Navy
Prisanth Type Attack Craft

Length - 55'
Breadth - 18'
Speed - 35 - 40 Knots
Engines - 4 X 250 HP OBMS
Weapon - 01 X 37mm, 01 X 23mm, 01 X 14.5mm, 04 X 0.50mm
          01 X RPG
          02 X LMG
Personnel - 16 - 17
Communication - 01 X HF
                02 X VHF
Radars - 01 Furuno
         01 Avelco
GPS - 01 Furuno
Compass - 01 Silve

Source: Sri Lanka Navy
**Madan Type Attack Craft**

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Length</strong></td>
<td>70'</td>
</tr>
<tr>
<td><strong>Breadth</strong></td>
<td>18'</td>
</tr>
<tr>
<td><strong>Speed</strong></td>
<td>40 Knots</td>
</tr>
<tr>
<td><strong>Colour</strong></td>
<td>CAMOUFLAGE</td>
</tr>
<tr>
<td><strong>Engines</strong></td>
<td>Inner Engines</td>
</tr>
<tr>
<td></td>
<td>03 x Propeller</td>
</tr>
<tr>
<td><strong>Weapons</strong></td>
<td>01 x 25mm, 01 x 14.5mm, 04 x 0.50mm, 01 x RPG, 02 x LMG</td>
</tr>
<tr>
<td><strong>Personnel</strong></td>
<td>16 - 17</td>
</tr>
<tr>
<td><strong>Communication</strong></td>
<td>01 x HF, 02 x VHF</td>
</tr>
<tr>
<td><strong>Radars</strong></td>
<td>01 Furuno, 01 Avelco</td>
</tr>
<tr>
<td><strong>GPS</strong></td>
<td>01 Furuno</td>
</tr>
<tr>
<td><strong>Compass</strong></td>
<td>01</td>
</tr>
</tbody>
</table>

Source: Sri Lanka Navy
**Fighter Type Attack Craft**

- Length: 39’
- Breadth: 11’
- Colour: ASH
- Engines: 3 X 250 HP OBM
- Personnel: 06

Disc model radar installed. Intend used for mid sea transfers. Still under construction stage.

**Sahada Type Attack Craft**

- Speed: 40 Knots
- Personnel: 10
- Colour: White & Camouflage
- Engines: 4 X 200 HP OBM
- Weapon: 50mm, 20 mm, LMG, 01 X RPG with 10 Shells Small Arms.
- Communication: VHF (Hand Set), VHF (Fixed Set)
- Radar: Disc Model
- GPS installed.

Source: Sri Lanka Navy
Water Jet Model Attack Craft

Length - 42'
Breadth - 12'
Speed - 35 Knots
Colour - Camouflage
Engines - 3 X 200 HP OBM
Weapon - 01 X 20 mm (Front)
          - 01 X 50 mm (Rear)
          - 01 X RPG with 10 Shells
          - 01 X LMG
Personnel - 14
Communication - VHF
Radar - Disc Model

Source: Sri Lanka Navy
Suicide Crafts

Vella Type Suicide Craft

Length - 32'
Breadth - 12'
Speed - 40 Knots
Colour - Camouflage
Engines - 3 X 250 HP OBMS
Weapon - 01 X LMG
Crew - 03
Communication - 01 X Hand Set
- 01 X VHF
Radar - 01 Avelco
GPS - 01 Furuno
Compass - 01
Claymore MINE - Large Claymore

Source: Sri Lanka Navy
Stealth Type Suicide Craft

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Length</td>
<td>18'</td>
</tr>
<tr>
<td>Breadth</td>
<td>10'</td>
</tr>
<tr>
<td>Speed</td>
<td>36 Knots</td>
</tr>
<tr>
<td>Colour</td>
<td>Camouflage</td>
</tr>
<tr>
<td>Engine</td>
<td>1 X 250 HP OBMS</td>
</tr>
<tr>
<td>Weapon</td>
<td>01 X LMG</td>
</tr>
<tr>
<td>Crew</td>
<td>01 / 02</td>
</tr>
<tr>
<td>Communication</td>
<td>01 X Hand Set</td>
</tr>
<tr>
<td>Radar</td>
<td>01</td>
</tr>
<tr>
<td>GPS</td>
<td>01 Hand Set</td>
</tr>
<tr>
<td>Compass</td>
<td>01</td>
</tr>
</tbody>
</table>

Source: Sri Lanka Navy
Kutti Miraj Types Suicide Craft

Length - 16’ & 26’
Breadth - 7 ½ & 09’
Speed - 30 Knots
Colour - Camouflage
Engines - 01 X 200 HP OBM
Personnel - 02
Weapons - 01 X T 81, 01 X LMG, Small Arms
Communication - VHF
Code Name - IDIYAN

Pipe Model

Source: Sri Lanka Navy
Super Sonic Type Suicide Craft

Length - 35’ & 26’ (2 Types)
Breadth - 11’ & 9½’
Speed - 30 Knots
Colour - Camouflage
Engines - 01 X 200 HP OBM
Weapon - Small Arms
Personnel - 02 OR 04

Kaffir Type Suicide Craft

Length - 30’ & 26’ (2 types)
Breadth - 9½’ & 7 ½’
Speed - 35 Knots
Colour - Camouflage
OBM - 01 X 200 HP
Personnel - 02 or 04
Weapon - 01 X LMG
Small Arms
Communication - VHF

Source: Sri Lanka Navy
Types of Sea Tiger Improvised Crafts

Use of ordinary fibre glass fishing boats to smuggle weapons & explosives in littorals

Use of ordinary fibre glass fishing boats packed with high explosives to carry out suicide attacks in littorals

Source: Sri Lanka Navy
Use of FGD fitted with medium calibre weapons to transfer war like materials

Source: Sri Lanka Navy
This vessel was arrested by Costa Rica Coast guard carrying a load of Heroin to USA on 26\textsuperscript{TH} Nov 2006.

A LTTE suspect also was presented in the vessel at the time of mid-sea arrest.

Use of Improvised devices (Human Torpedo) often packed with high explosives to attack harbour facilities.

Source: Sri Lanka Navy
Use of improvised platforms to approach targets stealthily

Source: Sri Lanka Navy
Annexe G - Destruction of the LTTE logistic warehouse ships in 2007 by SLN

Source: Sri Lanka Navy
Annex H – Some of the LTTE ships destroyed by the SLN

LTTE Gun running ships (floating warehouses) destroyed by the SLN

MV Kyoï

Source: Sri Lanka Navy

MV Seiyoo

Source: Sri Lanka Navy
MV Seishian

Source: Sri Lanka Navy

MV Manyoshi

Source: Sri Lanka Navy
One of the LTTE ships sinking after being attacked by the SLN

![Image](http://www.lankaweb.com/news/items07/120907-1.html)


**MV Matshushima**

The last of the LTTE ships, MV Matsushima, which was destroyed by the SLN on 7th October 2007

![Image](http://www.defence.lk/new.asp?fname=20071007_08)

Annexe I - Reduction in use of indirect weapons by the LTTE from July 2006 to October 2007

(Note the Destruction of LTTE Ships and Reductions)

Source: Sri Lanka Navy
Annexe J - One of the LTTE Ships Captured by the SLN

The Liberation Tigers of Tamil Eelam (LTTE) owned vessel "MV Princess Christina" is being displayed at the Gall Port for public viewing.

Source: http://www.colombopage.com/archive_091/Dec1261904718CH.html