

## Maritime Security and Theories of Naval Warfare: Way Ahead for a Professional Navy

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**Abstract**— Sri Lanka was engaged in a long drawn conflict for nearly three decades. The ocean around the country played a crucial role in this conflict. The government of Sri Lanka paid dearly for not maintaining maritime security at the desired level. The LTTE having appreciated the potential of the ocean for their growth and sustenance used it strategically. The Sea Tigers grew up to be a force to reckon with and was able to threaten the dominance of the Sri Lanka Navy. Theories on naval warfare have been in existence for a long time. For the purpose of this research the theories of sea control, asymmetric warfare and operational art will be examined. Navies in the world give a higher precedence to achieve sea control and exploit it to the fullest advantage. Once achieved, sea control allows a force to use the sea area for own purposes and deny the same to the adversary. Asymmetric warfare is defined as 'warfare in which opposing groups have unequal resources, and the weaker opponent uses unconventional tactics to gain upper hand'. The operational art occupies an immediate and indispensable position to act as a bridge between policy and tactics. This paper is based on the author's research for a PhD. The research is to evaluate the rise and fall of Sea Tigers and regaining sea control by Sri Lanka Navy using the concept of operational art and to develop an exploratory model to fight against threats to maritime security of a state. The data collection is based on qualitative interviews and focus group discussions. Research findings will be analysed with literature on naval theories.

**Keywords**— Maritime Security, Naval Warfare Theories, Sri Lanka

### I. INTRODUCTION

The Sri Lankan conflict which had been going on for more than 25 years came to an end in May 2009. The Liberation Tigers of Tamil Eelam (LTTE) though started as an insurgent force, fought near-conventional battles with Infantry, artillery and limited armoured capability. The LTTE developed these capabilities by exploiting the deep ocean to their advantage. Although it was not a classic naval war, the ocean was used widely by both, the Sri

Lanka Navy (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 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 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 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.

### II. MAIN QUALITATIVE RESEARCH STEPS ADAPTED

This research utilizes the six key steps introduced by Bryman (2008) 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 attempts to solve a major research problem which evolved with the LTTE Sea Tigers. 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 as; how the LTTE Sea Tigers evolved on capitalizing on the SLN's drawbacks? How Sea Tigers sustained a three decade battle? What are the contributory factors which led the SLN to transform from a conventional mindset to an asymmetric fighting force? And how did some key theoretical concepts contributed 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.

*C. Step 3. Collection of relevant data*

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 has spent in studying this unique LTTE Sea Tiger culture, the research can be easily categorized as 'ethnographic'. Qualitative in-depth, open ended 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. In addition, seven focus group discussions were also conducted with the participation of naval officers in various naval area commands.

*D. Step 4. Interpretation of data*

Interpretation of data was carried out by using interpretive paradigm and 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 SLN 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.

*F. Step 6. Findings/conclusions*

Data analysis will be carried out based on research questions and research objectives. The main areas of focus will be as follows:

1. *Organizational drawbacks of SLN*
2. *Development of LTTE Sea Tigers*
3. *Determinants of success behind SLN's gaining of sea control*
4. *Application of theories of naval warfare to the conflict*

### III. ASYMMETRIC WARFARE (AW) AT SEA AND 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. Here

we see a range of asymmetric and unconventional tactics being used by both sides to good effect. The Sea Tigers would also take shelter amongst the civilian fishing boat clusters to target SLN units at sea. When they were not in battle with the SLN they would act as civilian fishermen.

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. The following definition explains some of the essential components of Asymmetric warfare.

Acting, organizing, and thinking differently than opponent in order to maximize one's own advantages, exploit an opponent's weaknesses, attain the initiative, or gain greater freedom of action. (Metz and Johnson, 2013, p.5)

It can be seen that Asymmetric warfare seeks to unsettle, disorient and misdirect the conventional military leaders. The situations and conditions remain volatile, uncertain and complex at most of the time. The LTTE used these complexities to greater extent to develop their war-fighting capabilities and become a significant threat to the SLN at sea. They realized that SLN would be vulnerable to asymmetric threats. Until such time the SLN changed their thinking and concepts, they were not winning.

### IV. SEA TIGERS AND CONCEPTS OF ASYMMETRIC TACTICS

Furthermore, 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, p.17).

The conflict in Sri Lanka encompassed all these aspects of Asymmetric warfare. The power of the LTTE was the Tamil people. Their recruitment, expertise, technology all came from Tamil people. The Sea Tigers benefitted immensely from Tamil youth who were coming from fisheries back ground. Not developing a strong navy, being an island nation is cited as 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

prolong period. As Clausewitz brings out, the delicate nature of asymmetric nature of warfare;

Where the weaker side is forced to fight against odds, its lack of numbers must be made up by the inner tension and vigor that are inspired by danger....If an increase in vigor is combined with wise limitations in objectives, the result is that combination of brilliant strokes and cautious restraint that we admire. (Thomas, 2011, p.1)

In the case of the LTTE, initially they were much smaller and weaker against the formidable force levels of Sri Lankan armed forces. They did not have enough cadres to fight and they were in great danger of capture by the armed forces. The only way they could develop was by vigour and determination of their 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. Although Thomas spoke about limited objectives, 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 Tamil diaspora. The LTTE Sea Tigers posed a serious threat to the SLN'S dominance at sea or in harbour, and, they were able to use the oceans for their advantage, whenever they needed to do so. They engaged asymmetric tactics such as suicide boats, suicide underwater saboteurs, swarming tactics, underwater limpet mines, and submersibles against the much superior SLN and threatened the very survival of it.

#### V. TRANSFORMATION OF 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. A senior naval officer spoke about the use of the asymmetric tactic by Sea Tigers effectively

The LTTE used asymmetric warfare to face the formidable threat posed by the navy, especially against the Fast Attack Craft (FAC) that was the lead fighting platform and deadly threat to Sea Tiger craft. The asymmetric response was the swarm tactic (also referred as Wolf pack attack), a unique maneuver that LTTE had designed to counter the fire concentration of the FAC. This was bringing to bear 15-20 attack craft along with at least two suicide craft in the pack.

The SLN focused full attention on the development and enhancement of FAC fleet as it was considered the major fighting platform against the Sea Tigers. The FAC enjoyed many advantages against that of the Sea Tiger craft. FACs had better sea keeping qualities, higher speed, and better 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 asymmetric warfare tactics. A retired Rear Admiral speaks about this transformation; "the SLN began to adapt an asymmetric or non-conventional approach to warfare that provided better outcomes and success at sea". This is quite contrary to what Thomas said about the weaker side forced to fight against odd. In fact it was the stronger side, the SLN, which was threatened by the smaller Sea Tiger force and SLN 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 near-conventional land fighting capability coupled with a force to reckon with at sea and a minor air capability. Sea Tigers did not allow the SLN to rest even once inside a harbor as they carried out clandestine saboteur attacks against SLN platforms, again by using the audacity to achieve their strategic objectives.

The use of Asymmetric tactics by the Sea Tigers was indeed a shock and confused the SLN to a greater extent. SLN took a long time to understand that it needed to think differently. SLN was very reluctant to adapt non-traditional tactics and equipment or technologies and concentrated heavily on standard conventional platforms to fight with the Sea Tigers. 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.

#### VI SUCCESSFUL OF LEADERSHIP IN SLN

The main reason for this successful change in the SLN is attributed to the leadership of then Commander. A strong leadership is a must for changing from decade old

conventional mind-set to a winning strategy for the SLN, though it meant to be fighting at sea the same way the Sea Tigers fought against the SLN. The SLN was losing sea control and Sea Tigers were gaining dominance at sea. The LTTE was able to receive almost all warfighting supplies for the fight against the armed forces from across the sea. The SLN was hesitant to try an all-out asymmetric war against the LTTE Sea Tigers, but when they tried, 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. Colonel Ancker and Lieutenant Colonel Burke of the U.S. explains this phenomenon as:

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. (Ancker & Burke, 2003, p. 12).

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, despite the common belief, that asymmetric tactics are normally used by the smaller and weaker force against a much stronger force, with greater success. Yes it was the case in the beginning, but when the SLN started using asymmetric tactics, the complex of the warfare changed; now in favour of the SLN.

#### VII. 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. However 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 Sea Tiger 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 SLN's efforts to maintain a life line to the Northern Peninsular through the sea. The Sea Tigers carried out number of underwater saboteur and suicide attacks

against naval ships berthed inside the naval area of the Trincomalee and Kankasenthurai harbours. 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, and, even that did not deter the Sea Tigers effectively. 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 sophisticated equipment was not possible for varying reasons. 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 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 FACs to patrol areas around the edge of territorial sea and utilized small boats positioned in various advantages 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 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, p. 21) 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 the lost prestige and the fighting efficiency at sea.

#### VIII. THEORY OF SEA CONTROL: SRI LANKA NAVY 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". (Gompert, 2013, p. 21) It is interesting to find out how these concepts were used in combination and in competition and conflict by the SLN and LTTE. Sri Lanka being an island nation is blessed with deep water harbours and a long coast line of 1585 Kilometers. 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 hardcore 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 have grown with the sea as a medium of livelihood and a way of life. Initially when the insurgents started training their cadres in Tamil Nadu, they used boat movements to transfer them between the two coasts.

The LTTE was an organization which used the ocean around Sri Lanka extensively for sustenance and 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 interviewing of a key LTTE international figure and an Ex Sea Tiger amply describe how they depended on the ocean for their sustenance of the war against the government forces. A senior LTTE international figure explains quoting what Prabhakaran said that "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" This statement points to the strategic thinking of the LTTE leadership. The LTTE leader has clearly understood the need to exercise sea control, not only on the coastal areas but even in the 'middle of the sea'. Although Gompert 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 pulled by tractors and pushed by bulldozers to launch and recover their Sea Tiger boats.

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 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 completely destroyed their international logistic network and combat capability of Sea Tigers.

## IX. THEORY OF OPERATIONAL ART AND SUCCESS AGAINST SEA TIGERS

In a war environment, the theory of 'operational art' plays a significant role in understanding the nature of the conflict, strengths and weaknesses of enemy, the mindset of the opponent and to enhance own capabilities against that enemy. A key component of operational art is understanding and attacking the enemy's 'centers of gravity'. Commander Jeff Huber of US Navy argues that the centers of Gravity is changing and hence suggest three principles upon which we should look at it: "Centers of gravity are selected objectives, centers of gravity can change across all levels of war and centers of gravity may change over phases of operation" (Huber, 2002, p.38). In war what is most important is understanding the centers of gravity. This understanding can provide a force with the edge to win the war. Vego describes the importance of operational art as "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, p. 1). The successes of SLN against the formidable Sea Tigers, by using operational art concepts are summarized as follows;

### A. *Synergizing Political and Military will for a successful campaign*

When analyzing the conflict in Sri Lanka, it can be seen that the policies at the top level was not always conducive to win the war. As a Retired Admiral pointed out, synergizing political and military will was clearly seen only after 2006. 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

### B. *Key Factors of Operational Art and the Victory of SLN*

These two particular characteristics, simultaneous and successive operations are in fact 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 theater 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 that operations would be carried out simultaneously and successively.

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,p.59) Major changes have taken place in 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.

#### C. *The Strategy and Operational Art and Leadership*

The grand strategy of the government translated to the military strategy and in the case of 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. This strategy 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, 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 prevented escaping of the LTTE leadership by sea, thereby making them easy target for the military offensive.

It is evident that the naval leadership was at its best and keeping in line with the political leadership. The SLN had a leader for winning the war. The operational art suggest 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.

SLN moving away from a typical conventional mind-set and embracing asymmetric tactics tilted the balance in favour of them. 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. The SLN evolved through the war.

#### D. *Human Element*

As the 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 was with the armed forces to end the war and to liberate the country.

#### E. *Freedom of Action for SLN 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" (Vego, 2000, p.29)

During most part 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.

#### F. *Factor of Time*

Vego indicates that "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, 9. 47). 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 armed forces operations increased and they achieved simultaneity and that forced the LTTE to keep defending against the government forces at all the time 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.

#### G. *Legitimacy and Just war*

Vego brings out 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, p.70) The LTTE being a non-state actor and having only one leader in its complete journey, used these criteria 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 the LTTE terrorism should be defeated and there is no turning back, no matter what pressure is 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.

#### H. Information Technology for Battle and effective Command and Control.

The SLN was very effective in creating network-centric capability 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. The Focus Group of Eastern Naval Command observed that "improvement in the Maritime Domain Awareness (MDA) and networking that the navy established between 2007 and 2009, initially under a United States sponsored project paid dividends and aided the fleet in its operations as information flow and command awareness of the battle space improved". The enhanced use of information technology helped the SLN to maintain their tactical communication with real time data transfer between fleet units and headquarters.

#### I. 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 operational environment, problems facing them and possible broad solutions to the problem" ( Planners hand book,2011) 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. The SLN took a long time to understand the LTTE's strategy of using the ocean to develop their military capabilities. SLN was focusing only on the immediate battle space and trying to defend themselves in that area. Unlike the LTTE, the SLN

targets 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. That was a clear attack on the LTTE's strategy. The SLN action resulted in LTTE not receiving weapons, ammunitions, artillery rounds and other war-fighting materials to use against the advancing army from number of directions. The army attacks became much easier as they were no more subjected to heavy indirect fire from LTTE.

#### X. CONCLUSION

This research used theories of asymmetric warfare, sea control and operational art to evaluate the research questions; to understand the drawbacks of the SLN, development of the Sea Tiger capabilities and finally the determinant of success of the SLN in defeating the Sea Tigers at sea. The SLN was able to attack the centre of gravity of the LTTE. The LTTE lost the ability to sustain their combat power. As the conflict had progressed for nearly three decades 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 so.

#### REFERENCES

- Ancker, C.J. Burke,M.D (2003) Doctrine for Asymmetric warfare, *Military Review* July-August 2003, USA.
- Bryman, A. (2008) *Social Research Methods, Third Edition, Oxford University Press, New York.*
- Buffaloe, D.L. (2006), Defending Asymmetric Warfare, *The Land Warfare Paper number 58*, Institute of land warfare association of the United States Army.
- Gompert, D.C.(2013), Sea Power and American in Western Pacific, *RAND publication*, National Defence Research Institute.
- Hanle,D.J.(1989), The Newest form of Warfare, *International Defence Publications*, New York.

Huber, J. (2000), You Can't Deny the Laws of Gravity, *Proceedings*, August 2000.

Metz,S.& Johnson II, D.V. (2001), Asymmetric and US strategy: Background and Strategic Concepts, Army War College Strategic Studies Institute, Diane Publishing.

Robert, R.T. (2004) Relearning Counterinsurgency warfare, *Parameters*, spring 2004

Schneider, J.J. (1989), The Loss Marble and the Origins of Operational Art, *Parameters*, March.

Vego, M. (2000) *Operational Warfare*, Naval War College Publications, Rhode Island

#### BIOGRAPHY OF AUTHOR



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