

Strategy to Overcome Maritime Blindness: The Sri Lankan Case

R Joseph

Sri Lanka Navy

albion907@gmail.com

factor in ensuring maritime security, under the broader realm of National Security

Abstract— *The strategic location of Sri Lanka in the Indian Ocean not only make the island a vital connecting nod for the East-West maritime traffic, but also behaves as a centre to monitor the entire ocean space that spans to the southern tip of the globe. The importance of knowing the activities that are taking place in a country's ocean space is a very critical factor in ensuring maritime security. The vastness of the ocean space and the inability to monitor each and every inch of the ocean is a major challenge faced by many navies. Further Increased apprehensions have made impacts on drug trafficking, human smuggling, gunrunning, piracy, etc. Within this context Sri Lanka Navy has taken measures to tackle those illegal activities.*

The Sri Lankan ocean space comprised of an EEZ that is seven times larger than the land, continental margin around twenty one times larger than the land and a search and rescue region around twenty seven times larger than the land area. By every means it shows that this is a huge area to conduct effective surveillance by utilizing assets and sensors. As a consequence of that limitation there are number of illicit activities that take place in surface and subsurface water Therefore, an effective maritime surveillance strategy is essential to minimize the strategic maritime blindness Sri Lanka is facing at present.

The prime objective of this research is to formulate a strategy to reduce the maritime blindness in the Sri Lankan ocean space with the assistance of regional as well as global partners. When formulating a strategy, it is essential to analyse existing maritime surveillance mechanisms and advanced sensors used by other navies. However, the strategy should also focus on how best the navy could use available assets as well as new acquisitions under three dimensional visibilities (Above, Surface and Subsurface) on ocean affairs.

Keywords: Maritime Security, Maritime Blindness, Maritime Surveillance.

I. INTRODUCTION

The strategic location of Sri Lanka in the Indian Ocean not only make the island a vital connecting nod for the East-West maritime traffic, but has the potential to monitor the entire ocean space that spans to the southern tip of the globe. The importance of knowing the activities that are taking place in a country's ocean space is a very critical

With the military defeat of enemy in 2009, the maritime space of Sri Lanka became free from maritime terrorism. We do not have a visible enemy out at sea at present. Yet, this does not mean that our seas are safe and secure (Joseph 2015). At present we have maritime security threats and challenges that are quite common to many regional countries. Drug trafficking, human smuggling, IUU fishing, marine pollution, responding to SAR, oil/chemical spills, piracy etc., are some of the common challenges which take place mostly utilizing the high seas.

The sensors and platforms the Sri Lanka Navy (SLN) is in possession today is only capable of conducting maritime surveillance in the near shore areas and up to a certain extend in the Exclusive Economic Zone (EEZ). The Sri Lankan ocean space comprised of an EEZ that is seven times the land, continental margin around twenty one times the land and a search and rescue region around twenty seven times the land area. By every means this is a huge area to conduct effective surveillance utilizing assets and sensors available at present. Apart from the limited surveillance capabilities of the ocean surface, we are completely blind on subsurface activities that take place in terms of submarine operations. The increased presence of Chinese submarines has created tension especially among Indian officials (Mahadevan 2014).

When vital information pertaining to the activities that are taking place in the maritime space as well as adjacent highs are not available with decision makers, it leads to a number of issues such as; difficulty in implementing the national maritime strategic policies, achieving navy's maritime strategic ambitions, ensuring safety of sea lines of communication (SLOCs), continuity of trade and energy lines etc. Therefore, as a maritime nation that aspires to become a leading maritime hub in South Asia, Sri Lanka is in need of an effective maritime surveillance strategy to minimize the maritime blindness in order to achieve broader maritime objectives (Joseph 2015).

This research therefore looks at the problem statement of 'as to what extent does the introduction of a strategy to minimize maritime blindness would address key strategic maritime concerns of Sri Lanka? The prime objective of undertaking this study is to formulate an effective strategy to minimize the maritime blindness by way of introducing additional platforms to the navy, incorporating advanced maritime surveillance sensors/equipment, formation of a cooperative strategic maritime surveillance architecture

with the assistance of regional as well as other partners, fusion and sharing of vital sensory information with regional navies and maritime law enforcement agencies.

II. METHODOLOGY/EXPERIMENTAL DESIGN

The research design for this study has been formulated based on the research design concepts introduced by Sekaran and Bougie (2010). Having identified the key variables in this study, the research design looked at identifying methods required to gather data, how analyses have to be done and finally to arrive at a solution. The research is based on ascertaining the characteristics of the variables of interest.

In this study a very basic research methodology is followed in order to analyse the present capabilities of the Navy in effectively conducting maritime surveillance in the near shore areas as well as in the much important high seas. The study is descriptive in nature and follows a correlation investigation method. The researcher has a very minimal interference with the study and was done in a non-contrived setting and data was gathered just once over a period of one year.

The primary data for this research was gathered by analysing the surveillance capabilities of the naval platforms as well as other shore based sensors located around the coastline of Sri Lanka. Figure 1 shows the present coverage of surveillance areas around Sri Lanka based on the detection range (in red and blue). This figure very clearly depicts that there are considerable number of areas which does not have surveillance at all.

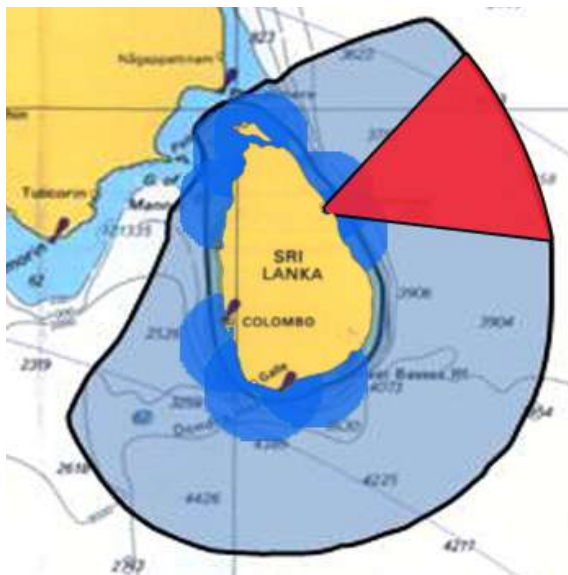


Figure 1. Present surveillance coverage
Source: Directorate of Naval Operations

Figure 2 shows the apprehensions made by the Navy out at sea during the last year. It clearly depicts that almost all

the apprehensions are made well within the territorial waters of Sri Lanka.

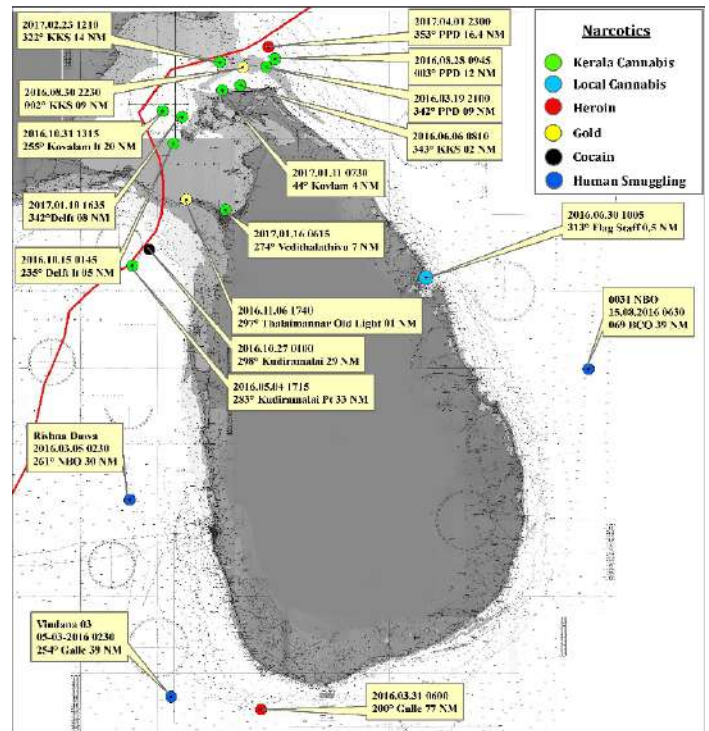


Figure 2. Maritime apprehensions by Navy
Source: Directorate of Naval Operations

Naval platforms which are capable of operating in deep seas numbered to nearly nine with the expected new acquisitions. SLN's Maritime Strategy 2025 document (non-public limited circulation) looks at forming a twenty ship Navy by 2025 mainly comprising of frigates and offshore patrol vessels. Navy does not have a single underwater vessel or sensors which are capable of detecting submarines at a considerable range. In addition, the Air Force does not have a single dedicated long range maritime patrol air craft to carryout air surveillance covering the vast ocean space.

III. RESULTS AND DISCUSSION

The above situation is one of the main reasons why there are so many blind spaces in our EEZ as well as the adjacent high seas. We have no clue what so ever of what is taking place or who is out there in the areas where no surveillance is available. This directly affects the maritime security of Sri Lanka which in turn has a direct impact on the broader aspects of National Security.

Analyses of data pertaining to maritime apprehensions during the last year clearly shows that navy's apprehensions have been primarily in the territorial waters or in the EEZ. When we look at the human smuggling arrests made in the deep seas, they are result of the high level of bilateral cooperation between Sri Lanka-Australia (Colombo Declaration, submitted by Sri Lanka 2017). Highly reliable and timely intelligence have

enabled the naval units to intercept human smuggling boats in the deep seas.

Apprehensions made by the Navy and repeated arrests made indicates that the illegal actors are using the lightly governed ocean space for their advantage. Most probably, knowing the limitations of the surveillance capabilities of the navy, they are increasingly moving to the maritime space to carry out illegal activities.

Except Sri Lanka, all the nations in the neighbourhood have acquired submarines to their naval fleets. The latest country to acquire a three dimensional force is Bangladesh. Leaving aside the availability of submarines in SLN fleet, we do not even have a single sensor which is capable of detecting a submarine at a considerable distance. This leaves the navy in a total blindness with regard to subsurface maritime affairs. The increase presence of especially Chinese submarines in the Indian Ocean has been discussed in length (Mahadevan 2014). The presence of Chinese submarines is known, but what about those that continues to frequent the Indian Ocean without being detected? This is indeed a grave concern for maritime security affairs of Sri Lanka as well as to the other regional countries. The inability to have a clear image on the activities that take place in the EEZ makes the country vulnerable to IUU fishing by foreign fishermen and probable exploitation of scientific data from the Sri Lankan EEZ.

The following strategy was formulated to minimize the maritime blindness the Navy is facing at present by formulating a layered approach to maritime surveillance. In this, the first layer which is the territorial seas are monitored using RADARs and by AIS shore based stations. The second layer, which is the EEZ is monitored using surface platforms, HFSWRs, and space based AIS. The third and final layer, which is the high seas (up to 1000-1200 nm) are to be monitored by space based AIS, space based RADARs, surface and air assets (Dyck 2013). The additional phase includes the integration of advanced submarine detection system to the main maritime surveillance architecture.

Having the above layered system itself will not serve the prime objective of minimizing maritime blindness. This requires synergizing with other regional partners to make the above surveillance architecture into a strategy by cooperating national maritime objectives, regional maritime security concerns, and the geo political dynamics in the Indian Ocean Region.

Improving cross-sectoral cooperation and interoperability with regional nations, strengthening cross border cooperation, and information sharing, and development of a common information sharing nod in the Indian Ocean Region will be other critical facets of this strategy (European Union Maritime Security Strategy 2014).

The SLN will be the key agency in this regard and with the establishment of a proper regional Maritime Rescue Coordinating Centre (MRCC) at Colombo under the purview of the Navy (Sunday Times April 2017), this strategy can be implemented with relevant funding considering it as a national requirement. Failure to implement this strategy will have dire impacts on the future of the country and its dream of becoming one of the leading maritime hubs in the region.

IV.CONCLUSION

The strategic location of Sri Lanka in the Indian Ocean reminds us that the future of this country lies primarily on the ocean that surrounds her. In order to ensure that our ocean space is not used by illegal actors and not exploited by others, having a broader visibility on the entire ocean space is very crucial. At present, SLN, which is the lead organization responsible for maritime surveillance has few platforms and few sensors that are capable of conducting surveillance in a limited ocean space. This situation leaves the nation left with huge maritime blind zones. The inability to effectively surveillance the air space over the maritime domain, ocean surface and subsurface possess a grave danger and has a direct impact on the maritime security which in turn reflect on National Security.

As there are huge gaps between what the country is capable of monitoring at present and what ideally a maritime nation must be monitoring, it is imperative that above recommended strategy be implemented considering it as a high priority national requirement.

A. References

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BIOGRAPHY OF AUTHOR



Captain Rohan Joseph joined the Sri Lanka Navy in October 1994 through the Kotelawala Defence University. On completion of his studies at KDU, he underwent initial Naval training at the Naval and Maritime Academy in Trincomalee. He has held number of staff and sea command appointments during his 23 year naval career. He has commanded several Fast Attack Craft, a Fast Gun Boat, Offshore Patrol Vessel and has also performed duties at the Joint Operations Headquarters, Naval Headquarters and at the Ministry of Defence. He is presently performing duties as the Naval Assistant to the Commander of the Sri Lanka Navy and Deputy Director Naval Research Wing. He completed his sub specialization in Sri Lanka becoming first in order of merit and completed his specialization in Pakistan. He is qualified in Navigation and Direction. Further, he has successfully completed his Junior Naval Staff course at the Sri Lanka Military Academy, becoming first in order of merit. Later, he completed the Staff Course at the Naval Command College, China where he excelled in his studies and graded excellent for overall academic performance. He was selected as the 'Honour Graduate' in the International Maritime Officers Course (Course no 46) conducted at the U.S. Coast Guard training centre Yorktown, Virginia. He is the first ever Sri Lankan naval officer to achieve this honour. Further he holds a Masters Degree in Conflict and Peace Studies (MCPS) from the University of Colombo. Captain Joseph's interests include reading academic articles related to world affairs, maritime security, and conflict resolution.