THE STRATEGIC IMPORTANCE OF THE SHIPBORNE AIRCRAFT FOR ENHANCING SRI LANKA NAVY'S MARITIME SECURITY

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ABSTRACT

Sri Lanka's strategic location in the Indian Ocean and its expansive Exclusive Economic Zone (EEZ) present both immense opportunities and significant vulnerabilities. Maritime threats such as piracy, drug trafficking, illegal fishing, arms smuggling, and human trafficking have intensified in recent years, requiring enhanced maritime surveillance and rapid response capabilities (Bandara, 2018; Hapugoda, 2020). This paper critically evaluates the Sri Lanka Navy's (SLN) development of shipborne aircraft as a strategic solution to these challenges. Drawing on qualitative data, the study explores the operational effectiveness of shipborne helicopters, the prerequisites for their deployment, and the broader implications for national security and regional stability. The findings highlight that acquiring shipborne air power is vital to increase effectiveness of operations, and the capability of ships to operate them as well. However, it emphasises of fulfilling other requisites such as training of crew and pilots, requirements of ground support and frequent joint operations with Sri Lanka Air Force (SLAF). The paper concludes by recommending implementing increased spending on shipborne aircraft, comprehensive programmes, infrastructure development, staged execution and inter-service cooperation in order to increase effectiveness of operations.

INTRODUCTION

Sri Lanka's strategic geographical position in the Indian Ocean makes its EEZ a vital economic and security zone, stretching approximately 200 nautical miles and comprising over 500,000 square kilometres (United Nation, 1982; Sakhuja, 2021). As threats such as illegal fishing, piracy, smuggling, and maritime terrorism increase, the SLN recognizes the need to strengthen its maritime surveillance and response capabilities to ensure security in the waters around Sri Lanka (Sri Lanka Navy, 2021; Ministry of Defence, 2021). Traditionally, surface vessels and patrol boats have been primary assets; however, their limited range and endurance restrict operational scope in vast maritime areas (Nanayakkara, 2019). The concept of deploying shipborne aircraft, mainly helicopters, offers promising advantages due

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to their flexibility, speed, and superior surveillance capabilities (Gunasekara et al., 2016). This study evaluates the effectiveness of shipborne aircraft in protecting Sri Lanka's EEZ, exploring their technical specifications, operational integration, challenges, and potential for future enhancement (Kumaragre et al., 2018). Understanding these factors is essential for policymakers and naval strategists aiming to develop a robust, sustainable maritime security architecture. Moreover, a single nation could not be able to ensure the security of maritime sea lanes as the threats are emerging rapidly with the advanced technology. Therefore, cooperation between countries will increase capacity building and sharing knowledge and intelligence have become key weapon to address the treat.

METHODOLOGY

This research employs a qualitative approach anchored in expert interviews, document analysis, and thematic analysis (Bryman, 2004). The unique experiences, beliefs, and values of these individuals influence their perspective on the development and deployment of shipborne aircraft, which is acknowledged in the study. As a result, the research philosophy will direct the efforts of study to acquire a deeper comprehension of these individuals' perspectives and experiences. This methodology facilitated a comprehensive understanding of both technical and strategic aspects of deploying shipborne aircraft within Sri Lanka's maritime security framework. The key components include:

- **Participants:** High-ranking officers, Subject Matter Experts (SME), pilots and operational commanders from the SLN and SLAF with experience in naval aviation.

- **Sampling Technique:** Purposive sampling ensured selection based on expertise and involvement with shipborne aircraft development and operations (Bryman, 2004). The sampling strategy involved identifying individuals who have direct knowledge and experience of the SLN's shipborne aircraft capabilities and their effectiveness in protecting the country's EEZ.

- **Data Collection:** This study primarily collected data through semi-structured interviews. Those interviews ensured that specific research questions were addressed while still allowing for conversational flexibility. Depending on the participant's availability and preference, the interviews had conducted in person, over the phone and even via video conferencing.

- **Data Analysis:** Transcripts from interviews and relevant policy/literature documents were coded and analyzed using thematic analysis identifying recurring themes, patterns, and insights. In order to ensure that the analysis is accurate and meaningful, it was ensured to maintain an open and reflexive attitude throughout the process of data analysis. This also enabled the willingness to change or improve the analysis based on feedback from study participants or other stakeholders and remaining open to new and unexpected findings.

- **Reliability Measures:** Triangulation with document sources and maintaining an audit trail ensured validity and trustworthiness of data.

DATA PRESENTATION

During the interviews, it was discovered that all experts accept Sri Lanka's friendly and non-alliance foreign policy (Ministry of Defence, 2021). The friendly and non-aligned approach of Sri Lanka's foreign policy sets it apart from nations that align themselves with particular power blocs or forge strategic alliances. In addition, economic diplomacy and trade relations are emphasized in Sri Lanka's foreign policy (Bandara, 2018). Not at all like nations that focus on political contemplations over monetary participation, Sri Lanka tries to lay out commonly helpful financial associations paying little mind to political arrangements.

During interviews, it was revealed that Sri Lanka's strategic location as an island nation in the Indian Ocean places it at the crossroads of important maritime routes (Sakhuja, 2001). Policymakers can develop effective strategies to mitigate these threats and safeguard Sri Lanka's maritime security by comprehending the unique difficulties and potential dangers along these maritime routes. Sri Lanka is a crucial transit hub for international shipping and a hub for maritime activities due to its proximity to crucial maritime chokepoints like the Suez Canal, the Malacca Strait, and the Strait of Hormuz (Attri & Bohler-Mulleris, 2018). The maritime threat factors in Sri Lankan waters were divided into the following subcategories on the basis of the information gleaned from professional interviews and research.

- Maritime terrorism and piracy
- Exploitation of maritime resources and illegal fishing
- Smuggling and drug trafficking

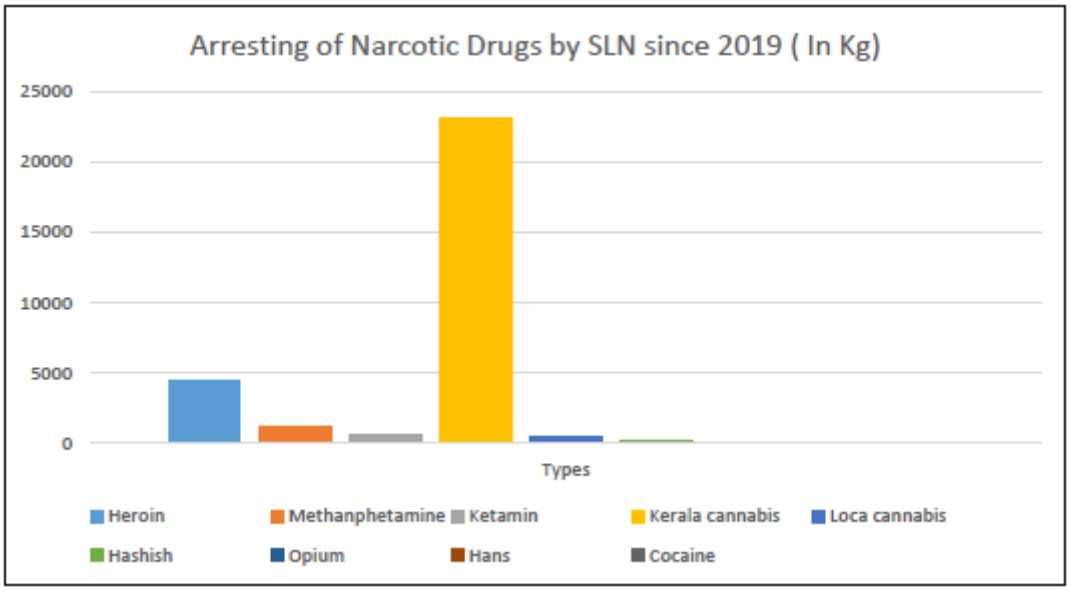

Figure1: Arresting of Narcotic Drugs by SLN since 2019 (Author Developed, 2024)

Considering above data and interview records, it is evident that the country is facing a critical threat due to these non-traditional threats. The following chart depicts the quantities of drugs arrested by SLN from 2019 to 2022 in Sri Lankan territorial waters. The chart has considered only the leading drug types and there are smaller scale arrests were taken place. This chart derives that the Kerala Cannabis are the most trafficking drug type. Moreover, every type of drug has increased its arrested quantity in 2022 compared with 2019.

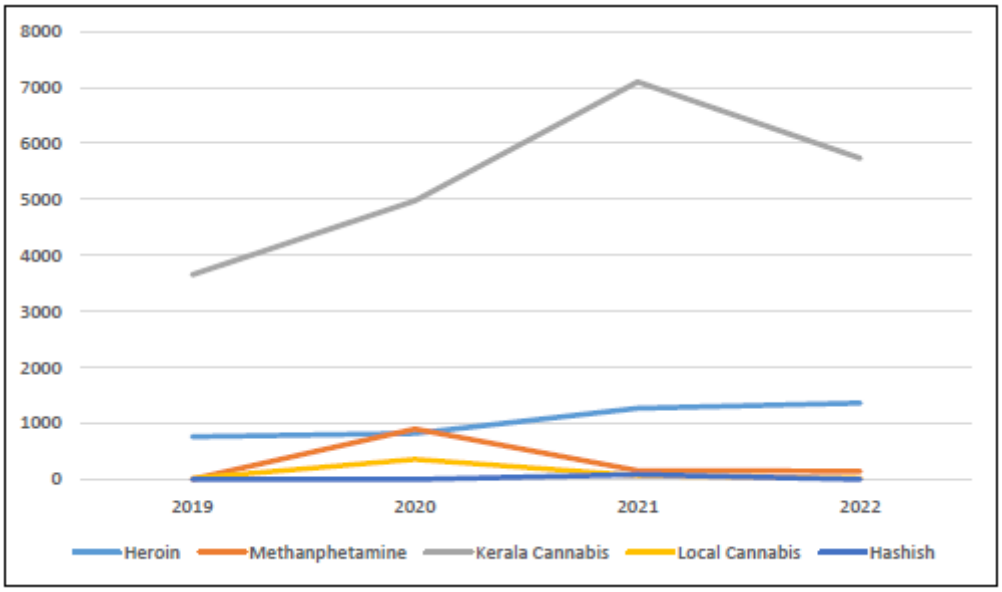

Figure 2: Quantities of drugs arrested by SLN from 2019 to 2022 (Author Developed,2025)

The Maritime Dominance of SLN

Even though the SLN only has the resources it needs to carry out routine maritime operations, it should have more advanced technology and resources to ensure its smooth operation (Hapugoda, 2020). However, experts believe that no nation can guarantee 100% maritime security. The SLN has established itself as a significant force in the maritime dominance of the region (Ministry of Defence, 2021). The Navy has developed into a modern, technologically advanced naval force capable of effectively safeguarding Sri Lanka's maritime interests over its decades-long history.

The Navy's maritime dominance has also relied heavily on cooperation and international partnerships. Sri Lanka actively fosters cooperative relationships with regional and global navies by participating in joint exercises, training programs, and information sharing. By utilizing shared knowledge, resources, and expertise, these collaborations not only improve interoperability but also strengthen Sri Lanka's maritime security (Sri Lanka Navy, 2021).

Assistance Could be Provided by SLAF to SLN Countering Maritime Threats

In the majority of both military and non-military operations, aircraft are unquestionably a potential weapon. Aircraft have the potential to be extremely useful tools in the fight against maritime threats due to their speed, maneuverability, role adaptability, and firepower (Gunasekara et al., 2016). During the expert interviews, it was emphasized that the SLAF gave the SLN a significant amount of support during the Elam War to combat the LTTE Sea Tiger threats (GlobalSecurity.org, 2022).

In addition to providing combat support, the SLAF has also provided SLN with surveillance assistance by effectively utilizing their unmanned aerial vehicles (UAVs) and surveillance aircraft like the B 200 (Gunarathna, 2020). The assistance provided by SLAF was further increased as a result of the SLN's transition from the brown water strategy to the blue water strategy. However, SLN specialists have determined that the SLAF's current capabilities are insufficient to meet the entire range of SLN requirements (Senevirathna, 2017). As a result, the Indian Ocean region's security spectrum has been compromised. At this stage, it is essential to take the right countermeasures to close the security gap.

Requirement to Acquire Air Power

Experts in the SLN explain that the SLAF's current capabilities are insufficient to meet the entire range of SLN requirements (Nanayakkara, 2019). Given the ongoing economic crisis and the government's current strategy, it stands to reason that the available air assets are insufficient to fulfill all SLAF air power projection requirements. As a result, having an organic air capability for the SLN will make it much easier to carry out counter-maritime threat operations like surveillance, search and rescue, maritime disasters, medical evacuation, and reconnaissance needs, all of which are frequently related to naval operations and Maritime Rescue Coordination Center (MRCC) operations (Kumarage et al., 2018).

Experts in the SLAF have emphasized the shipborne aircraft's potential to reduce unnecessary delays and improve maritime operations in light of the prospect. It is explained that having shipborne aircraft would undoubtedly improve the SLN's operational capability for maritime operations in light of these facts (Gunasekara et al., 2016). However, it is necessary to discuss the advantages and disadvantages of this proposal prior to making such a decision (Bajwa, 2018; Piumsiri, 2020). In order to better understand the situation, the benefits and drawbacks are listed here.

S/No	Advantages	Disadvantages
1	Rapid Response	Cost and Resource Allocation
2	Enhanced Maritime Capabilities	Reduced Interoperability with SLAF
3	Commitment is high	Limited Scalability
4	Direct commanding ability	Malfunction due to environmental issues
5	Commitment to duty	
6	Flexibility in handling	
7	Tailored Training and Expertise	
8	Integration with Naval Assets	

Figure3: Advantages and disadvantages of having a shipborne aircraft fleet to SLN (Author Developed, 2025)

According to the analysis, equipping SLN vessels with aircraft would significantly improve the execution of naval operations, particularly in the face of Sri Lanka's current and potential maritime threats. The hypothesis that acquiring air power would improve the SLN's effectiveness was consistently supported by the literature review and expert interviews. The

investigation of Sri Lanka's foreign policy yielded useful insights into the strategic priorities of the nation and the significance of protecting its maritime interests. Sri Lanka faces numerous maritime challenges that necessitate the development of robust naval capabilities, including air power, due to its extensive EEZ and strategic location in the Indian Ocean.

FINDINGS

The study's key findings underscore the significant role of shipborne aircraft in enhancing Sri Lanka's maritime security:

- **Operational Effectiveness:** Deploying helicopters from naval vessels notably extends surveillance range, improves threat detection, and accelerates response times (Mehta, 2019). They bolster anti-piracy, anti-smuggling, and illegal fishing operations with superior reconnaissance and patrol capabilities. The presence of these aircraft can reduce illegal activities within the EEZ, lead to more effective patrolling, and serve as a force multiplier for the SLN.

- **Capabilities and Benefits:** Helicopters such as the Bell 212 and helicopters with vertical takeoff/landing capabilities prove versatile, supporting missions from search and rescue to logistical support (Gill, 2019). Their ability to operate from smaller decks makes them suitable for the SLN's fleet.

- **Challenges in Training and Ground Support:** Major obstacles include high procurement and maintenance costs, limited infrastructure (hangars and repair facilities), and training requirements. Weather sensitivity and limited endurance further restrict operational windows.

- **Opportunities for Joint Operations:** The integration of shipborne aircraft offers opportunities for increased deterrence, improved situational awareness, and enhanced inter-agency coordination with SLAF, Coast Guard and regional partners. The SLN and SLAF are able to maximize their capabilities and improve overall operational efficacy by sharing intelligence, expertise, and resources. Joint operations enable a comprehensive approach to maritime security by facilitating the seamless integration of air and naval assets.

- **Challenges in Implementation:** Financial constraints, capability duplication with the Sri Lanka Air Force, and interoperability issues pose significant hurdles. Strategic planning is required to address these.

RECOMMENDATIONS

Based on the positive findings regarding the acquisition of air power by the SLN, the following recommendations can be made to support and enhance its effectiveness:

- Increased Spending on Shipborne Aircraft. To improve its operational effectiveness and capabilities, the SLN ought to keep making investments in shipborne aircraft.

- Establish comprehensive programs of instruction. Pilots and ground crew members should receive specialized training in order to ensure that they have the knowledge and skills they need to effectively operate and maintain shipborne aircraft.

- Infrastructure Development. In order to provide shipborne aircraft with adequate storage, shelter, and maintenance assistance, the SLN ought to give priority to the construction of specialized hangars and maintenance facilities.

- Staged Execution Plan. The SLN ought to adopt a phased implementation strategy for the acquisition of shipborne aircraft in light of the significant costs involved.

- Enhance inter-service cooperation. Joint operations and collaborations with other sister services, particularly SLAF, should continue by the SLN. The seamless integration of air and naval assets in maritime operations will be ensured as a result of this improvement in coordination, communication, and joint planning efforts.

CONCLUSION

The development and deployment of shipborne aircraft, particularly helicopters, have demonstrated a marked improvement in Sri Lanka's maritime security posture. These assets significantly expand surveillance reach, enable rapid response, and bolster anti-threat capabilities within the EEZ. Despite challenges such as costs and infrastructural needs, the strategic advantages affirm their importance for the SLN's future operational planning. The study confirms that integrating shipborne aircraft aligns with Sri Lanka's maritime security

objectives, providing a critical force multiplier to combat emerging threats and secure vital maritime resources.

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