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Sri Lanka Navy Journal

Sri Lanka Navy Journal is a bi-annual publication which provides the opportunity to discuss matters relevant to national interest and current global affairs. It serves as a potent medium for all serving members of the Navy to present their ideas, express their opinions and share their insights on subjects of national and global importance whilst enabling them to improve their writing skills and broaden the knowledge horizon of their knowledge.

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FOREWORD



I was truly delighted when I received an invitation from the Editorial Board to pen down a brief foreword for the sixth edition of the Sri Lanka Navy bi-annual journal. I highly admire the incredible progress made by this journal during the past couple of years. Both the fledgling writers and Editorial Board put in a praiseworthy effort for bringing the standard of this bi-annual publication to the next level, along the way.

Published in two issues per year, the Sri Lanka Navy Journal (SLNJ) is the principal magazine of the Sri Lanka Navy, which provides prospective wordsmiths of the Sri Lanka Navy an opportunity to circulate their research articles, book reviews and other academic articles within the naval family. As such, the latest publication is inclusive of compilations written on a wide range of themes such as; world maritime security affairs, international affairs and professional attributes.

Not only does writing help in the professional world, but it is also good for you as an individual. Writing is a method of self-exploration as well as a means of observing the universe. Gliding a pen tip across a piece of paper is freedom, freedom to write whatever your heart and mind desire. It is in this backdrop, I would like to invite you to enjoy the reading of this edition of SLNJ which includes eight compilations of budding writers of the Sri Lanka Navy and offer a word of appreciation to the prospective writers, encouraging them to be engaged in continuous writing.

I am sure that the SLNJ is a fruition of months of hard work when it comes to editing, compiling, designing and printing the final publication. Therefore, I would like to place on record the commendable job done by the Editorial Board headed by the Chief Editor. In short, the SLNJ is yet another invaluable opportunity for you to express yourself whilst imparting knowledge to the rest of the naval family. I sincerely believe that this impressive effort will continue many more years, with even greater intensity.

A handwritten signature in black ink, appearing to be 'Ranasinghe'.

SS Ranasinghe, WWV, RWP, VSV, USP, ndc, psc, AOWC
Vice Admiral
Commander Of the Navy

MESSAGE FROM THE EDITORIAL BOARD

In today's wired world information is available at the click of the button, courtesy to the Internet. Navy Journal gives the audience larger than that of any subscription-based journal in the maritime field, no matter how prestigious or popular, and probably widens the wisdom and impact of rational thinking. Further, we believe that it gives barrier-free access to the literature for research and increases convenience and retrieval power.

Driven by wide-spread adoption of smart phones, tablets and other wireless devices, mobile computing and communication systems have proliferated every aspect of human activity, creating a new era of pervasive writing and reading aspects among audience.

There are trade-offs for everything in life, but reading a lot on creative writing is not dangerous. The hunger for wisdom seems to be the only desire that we can satiate. There is not a risk of overindulgence. After enough reading, we become charged with good ideas and courage to go out and explore the world. Once we get fueled up on enough wisdom, we become inspired to embark on our next hero and heroine's journey. This means we are guaranteed to get direct experience in the real world without some technological filter.

We consume much more than we create, we read much more than we think, and it should be the other way around. We have to make sure we consume the things that truly matter to us, but only so that we have time to create something that matters to someone else. Either you will be a loser that always relies on inspiration from others to get to work, or you will rule over yourself and do what you set out to do. If you are going to write, rule over yourself. Nobody is perfect at it, but the writers who are even modestly successful at ruling over themselves are the ones that dominate the contemporary writing.

The sixth edition of Sri Lanka Navy Journal comprehends with both articles and research of Naval personnel interested on various fields and the winning entries of the Admiral Clancy Fernando Essay Competition 2017 which will make an avenue to encourage creative writers of the Sri Lanka Navy to persist with their habit of writing which would undoubtedly be beneficial for personal and career development as well. Further, we are much grateful of the thoughtful guidance and the inspiration given by the Commander of the Navy in continuing this worthy cause.

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THE UNNOTICED SERVICE OF 'FAST GUN BOAT' SQUADRON

RearAdmiralWDEMSudarshana,RSP,USPpsc,ndu



"The importance of the FGBs still remains as it is, amidst the expansion of the SLN fleet with more and more larger vessels joining the fleet and the paradigm shift of the role of the fleet to meet new maritime challenges. In reality one can never deny the unparalleled role played by the FGBs throughout the whole spectrum of the conflict from its inception to the very end; before the conflict, during the conflict and in the post conflict period. Gun Boats have never become a burden or a liability to the Navy."

The sound of the engines of the Sri Lanka Navy's Fast Gun Boats (FGBs) is so loud and noisy; the service these war machines have rendered is so silent and unnoticed. Ever since the first FGB was inducted to the SLN fleet in 1972, these vessels have done and are still doing a remarkable service to the Navy. One can argue that the acquisition of Fast Gun Boats in early 1972 marked the re- birth of the diminishing fleet of the Sri Lanka Navy.

These FGBs were acquired as a consequence to the insurrection in 1971 where the government felt that the country needs a 'NAVY'. The emergence of the LTTE terrorism that followed demanded a stronger Navy for the island nation. The quest for a reliable and suitable platform for the Navy demanded more and more FGBs to join the SLN Fleet to combat terrorism at sea, support naval bases ashore and provide NGFS for troops fighting on the ground. This yeoman service rendered by the Gun Boats is conspicuous throughout the whole spectrum of the conflict fought in multiple layers and also very much in the service in the aftermath of conflict era, combatting present day challenges in the same spirit. It is a kind of vessel that cannot be sidetracked or distracted from the Sri Lanka Navy at any point of time, now or in the future and is so linked to the existence of the fleet. However, like the Navy goes as a silent service, so does the role played by the Gun Boats; silent and unnoticed. The purpose of this note is to highlight some of its unseen and untold service.

Acquisition and Commissioning

At a time when major vessels or Fast Attack Craft were not in the inventory of the SLN, specially the period from 1972 leading up to mid-1990s, it was in fact a Gun Boat navy. When the first FGB joined the fleet, the only major vessel left with the SLN fleet was SLNS Gajabahu; a river class frigate, which was dedicated only for cadet training.

The SLN acquired its first two FGBs from Peoples Liberation Army Navy (PLA Navy), China in February 1972. These two Shanghai II Class or Sooraya Class FGBs were initially commissioned as Her Majesty's Ceylon Ship (HMCyS) Sooraya and Weeraya later to be renamed as SLNS Sooraya and SLNS Weeraya after the second republican constitution in 1972. Thereafter, another three more FGBs of the same class joined the fleet in the month of December the same year. They were commissioned as SLNS Ranamakee, SLNS Dakshaya and SLNS Balawatha. These acquisitions took place during the Premiership of

Mrs Sirimavo Bandaranayake. So it is the general belief that those FGBs were named after late Prime Minister SWRD Bandaranaike applying his initials; S - Sooraya, W – Weeraya, R – Ranakamee, D – Dakshaya and B – Balawatha.

Just before the outbreak of conflict with terrorists in 1980, two more FGBs of the same class were acquired to enhance the fleet and were commissioned as SLNS Jagatha and SLNS Rakshaka. SLNS Jagatha is still in service while Rakshaka was de-commissioned. These acquisitions were took place when HE JR Jayawardena was the President. Similarly these FGBs were named after late HE President JR Jayawrdena. J – Jagatha, R – Rakshaka.

SLNS Sooraya was destroyed by the LTTE in a suicide attack launched in Trincomalee in 1995. The ship had been secured at the Three- Fathom jetty when the LTTE attack was launched. This suicide attack marked the beginning of the Eelam War III.

After decades of service to the nation, Dakshaya, Balawatha and Ranakamee were de-commissioned and disposed by sinking in deep waters off Trincomalee, according to the naval customs and traditions. SLNS Weeraya is still in service and operational remaining as the oldest ship of the SLN Fleet. Hopefully, she will remain in the service until she celebrates her Golden Jubilee in February 2022.

In 1991 three more FGBs of Shanghai III Class joined the SLN Fleet. These were the successors of Shanghai II Class. The configuration of these ships was a little different, with improved habitability, to Shanghai II Class. They were commissioned as SLNS Ranasuru, SLNS Ranawiru, and SLNS Ranarisi. Out of these three FGBs, Ranasuru was destroyed along with SLNS Sooraya by the LTTE attack at Trincomalee harbour in 1995. SLNS Ranaviru sank due to enemy suicide attack off Mullative in 1996 when she was deployed to support Army troops at Mullative military complex. At that time, SLNS Ranaviru was commanded by late LCdr Parakarama Samaraweera who remained onboard till the last moment holding on to the enemy and went down with the ship keeping the Navy's great tradition at the highest place as a real hero. He was posthumously promoted to the rank of Commander. Out of these three only Ranarisi is in service at present.

In 1995 three more FGBs of a different class (Haizhui Class) joined the fleet. These FGBs were commissioned as SLNS Ranajaya, SLNS Ranadeera and SLNS Ranawickrama. All these three FGBs are still in service. They also have experienced the bitter taste of the conflict and immensely contributed to the war effort like other sister FGBs.

In 1997, two more FGBs of Lushun Class (Udara Class) joined the fleet. These two ships are slightly bigger than the older versions, more spacious with different configuration to provide much better habitability. Though they were acquired in 1997, due to some reason those ships have been commissioned only in 2000.

There had been an agreement with the Chinese shipbuilder to undertake major refit of initial Shanghai II class FGBs. However, the SLN could not spare the FGBs for refit as some of them were already destroyed by enemy action and it was essential to keep remaining

FGBs for operational availability. Having understood the situation, the Chinese ship builder has provided the SLN with three more of older generation Shanghai II Class FGBs with little modification to the bridge and accommodation area in lieu of undertaking the refit. These three FGBs joined the fleet in 1998 and were commissioned in year 2000 as SLNS Edithara II, SLNS Wickrama II, and SLNS Abeetha II. The names were given to these ships as a mark of respect to the three Surveillance Command Ships Edithara, Wickrama and Abeetha who led the SLN Fleet in one era and did a remarkable service in needy hours to combat terrorism and illegal activities at sea.

Since the inception in 1972 to date, sixteen Gun Boats have joined the Navy at different intervals and out of which three were destroyed due enemy action while four FGBs were decommissioned due to various reasons.

The 'Udara' Class Gun Boats are the biggest out of all types. They are of 45.43m in length, 212 tons in displacement and having the maximum speed of 28 knots. The 'Rana' class is 41m in length, displacement is 170 tons, and capable of achieving a maximum speed of 26 knots, while the old 'Sooraya' Class has achieved a maximum speed of 24 knots and whose displacement is 135 tons. All these ships are commonly called Gun Boats in the SLN because they are fitted with many effective medium caliber guns on that tiny deck. One can only see guns when boarded on the deck of these vessels. Invariably, they are fitted with two 37 mm Guns in forward and aft of the deck, two 25mm or 14.5mm guns amidships and many other 12.7mm guns and 40mm grenade launchers. The fire power that can be produced by these guns is tremendous.

The Role

Gun Boats are such kinds of ships that have been very flexible as far as their role in SLN is concerned. Virtually, FGBs were performing well almost all the jobs what the Navy wanted it to be performed. During the last thirty years, it is hard to find a day that a Gun Boat has not been out at sea. They have been employed in multi faceted duties such as routine patrols, transferring of army troops for deployments along the coast and for amphibious assault operations including induction of troops in hostile shores. In an era where there were no Passenger Carriers, the Gun Boats were utilized to transfer personnel on leave from SLNS Elara - situated in Karainagar and naval personnel onboard ships and craft in north to Trincomalee and back. At that time the most sensible way of going on leave was going by a Gun Boat which is reliving after the northern area patrol. It was a journey of one night on the deck exposed to sea and wind. This mode of transport was usual for the officers and sailors attached to Northern Naval Area those days.

At the beginning of the conflict, the newly introduced FGBs were perceived as deadly war machines out at sea. Even the LTTE were feared at the sight of Gun Boats. It was a nightmare not only for the Sea Tigers but for the cadres fighting ashore. Naval Gunfire Support directed towards coastal enemy gun points brought sigh of relief to troops deployed along the coast many a times.

During the height of the conflict, as there were no land routes opened connecting Jaffna peninsula with the South, the Government had to transport almost all the essential supplies required to maintain civilian life in the North using chartered merchant vessels. The LTTE targeted those supply vessels to prevent supplies reaching the North in order to disrupt normalcy and make the civilian life a difficult one. Therefore, the SLN was tasked to ensure the safe arrival of these supply vessels. The FGBs had to undertake this task of escorting these chartered ships. Most of the time, these vessels had to be escorted from Baticaloa area up to Kankasanthuirai or Point Pedro. If any of these supply ships were attacked by the LTTE, it could have created a disaster and a logistic nightmare in maintaining normal civilian life in the north which could lead to a humanitarian issue where the Government would have been put into a highly disadvantageous position.

Whenever the fishermen are in distress, hundreds of miles away from the coast, the Gun Boats were the best option for search and rescue missions as they are so flexible in terms of speed, size, sea keeping ability, economy of fuel consumption etc.

Gun Boats have sailed to Maldives on flag showing missions and for Cadet and Midshipmen training for several times in the history. Even today, Gun Boats stand good in providing best training for officers and sailors as one can feel the real hardship undergone by a sailor serving onboard a FGB and it is one of the best platforms for Cadets to learn ship's husbandry, Midshipmen to learn practical coastal navigation, and Middle level officers to learn ship's handling.

Deploying Gun Boats along the International Maritime Boundary Line (IMBL) between Sri Lanka and India has shown comparatively better results in addressing the issue of poaching of Indian trawlers in Sri Lankan waters.

There has never been any Sail Past, Fleet Review or Fleet Exercise where the Gun Boats have not taken part in recent history. This shows the importance of the FGBs in the SLN fleet.

Anti-Terrorist Operations

Commanding Officers of Gun Boats, past and present, have many stories to tell about their experience whilst serving onboard these ships. A few of these incidents that the author knows where the Gun Boats played a vital role during the war against terrorism, are described here briefly.

'Operation Thrivida Balaya' was one of the first amphibious assault operations carried out by the armed forces of Sri Lanka when the Army at Jaffna Fort was under siege. All the islands in the North other than SLNS Elara Base in Karainagar, were under the control of the LTTE. The operation to reinforce Jaffna Fort commenced from Karainagar Island. On 23rd August 1990 at first light SLNS Ranakamee and SLNS Sooraya provided gun fire support against the enemy positions for the Army to capture the Ceynor Jetty of Karainagar and the Kyts pier which were under the control of the LTTE, on their way to Jaffna.

‘Operation SEA BREEZ’ was launched to end the besieged of Mullaitivu Army Complex. It was a proper joint Operation with the involvement of all three services. Whilst SLNS Sooraya and SLNS Weeraya effectively providing NGFS and targeting enemy Gun Points, SLNS Kandula and SLNS Pabbatha beached three nautical miles north of Mullaitivu and troops were landed. It is one of the most successful amphibious operations ever to be carried out by the Sri Lankan military during the war.

On 11th June 1990, the LTTE attacked Valaivadi Fishing Village and the adjoining Army detachment. The enemy attacked the Army detachment and village. The attack was so fierce and heavy that they could not hold on to it. SLNS Sooraya went very close to the location and provided with gun fire support to evacuate the whole fishing community in that village and the army personnel. A total of 225 people were carried on the tiny deck of SLNS Sooraya and had transferred them safely to Trincomalee.

Operation Balawegaya can be considered as the most successful amphibious operation that was carried out by the Sri Lankan armed forces during the war against the LTTE. Amphibious assault landing was the only option available to reinforce the besieged Elephant Pass Army Complex. The operation was planned and, carried out by deception and launched within a period of 48 hours. The enemy has wrongly guessed that Vettalaikeni is a possible landing point and they had highly fortified the beachhead with a large number of gun points aiming at sea. On 14th July 1991 SLNS Weeraya, Ranakamee, Rakshaka and Sooraya provided NGFS effectively to neutralize the heavy enemy fire. If not for the amphibious landing at Veththelakerni, Elephant Pass Army Complex could have been overrun by the LTTE.

In March 1991, Silavathurai Army Camp came under enemy attack. Reinforcement by ground troops was not possible. The Navy and the Air Force had to undertake the task of carrying out reinforcement. SLNS Ranakamee took a risk, maneuvering through the reef off the coast of Silavathurai, and provided with fire support and neutralized the enemy gun fire which allowed own troops to land and evacuate casualties. This was one of the operations that was carried out by a Gun Boat under very difficult conditions.

On 19th April 1995 SLNS Ranasuru and SLNS Sooraya were berthed alongside the Two Fathom Jetty of Trincomalee harbour along with SLNS Jagatha and SLNS Ranaviru. It was the night that LTTE broke the 100 day truce with the Government. Ranasuru and Sooraya were sunk at the jetty by LTTE mines killing all the sailors who were in quarter deck area of Ranasuru.

On 15th July 1995 SLNS Ranakamee with some other FAC attacked and destroyed a cluster of LTTE boats off KKS harbour while those boats were coming to attack the KKS harbour, foiling the enemy plan. However, SLNS Edithara was exploded at KKS harbour due to an LTTE mine that night.

On 9th August 1995, SLNS Ranakamee detected a fast moving target approaching towards the convoy off Alampil area whilst escorting the Trinco bound convoy. SLNS Ranakamee started approaching towards the target and identified it as a fast moving suicide

craft. Gunboat along with P 455 engaged and chased the craft towards the land. When the Gun Boat approached towards the land, it came under heavy enemy fire from the land. There were six LTTE attack craft on the beach and Gun Boat fired at them and destroyed three of those attack craft.

The LTTE attack on MV Pride of South gives a comprehensive account on the role of the FGBs in providing escort duties. On 15th September 2001, the LTTE launched an attack on MV Pride of South 35 NM off Point Pedro. It was the main body of the North bound convoy carrying 1300 personnel onboard. SLNS Udara and Edithara II were providing escort to the main body. Meantime, SLNS Jagatha was also on her way from Kankasanthurai to rendezvous the convoy. At around 0330 hours, the LTTE launched the attack. FGBs fought back fiercely giving no room for the LTTE attack and suicide craft to reach the main body. Eventually, the LTTE withdrew disarray with heavy damages, casualties and loss of boats failing to withstand FGB fire power that was reinforced by the FACs joined later. The confrontation lasted for almost eight hours. Fierce fighting took place with 22 LTTE craft and LTTE suffered heavy casualties during this sea battle. Around 35 personnel onboard 'Pride of South' were injured. However, MV Pride of South was safely escorted to the KKS harbor by 2200 hours on 16th September 2001. In recognition of the role played by FGBs in this confrontation, SLNS Udara was ceremonially welcomed in Trincomalee whilst the band was in attendance.

FGBs were also deployed in surveillance missions to monitor enemy movements at a time reliable intelligence was hard to come by. FGBs intercepted enemy movements many a times whilst patrolling hundreds of miles away from the coast.

There are many successful interceptions of illegal activities by the FGBs. In 2016, SLNS Ranajaya apprehended the largest haul of gold ever to be seized by a Sri Lankan naval vessel, weighing approximately 45 kg. A boat was attempting to smuggle gold to India when it was intercepted by the FGB in northern waters. Further, FGBs involved in apprehension of Kerala Cannabis frequently in its attempt to curb the drug trafficking in the Palk Bay and Gulf of Mannar.

FGBs played a major role in providing security to the major ports during the time of war. For this purpose FGBs were deployed off Trincomalee, Colombo, Galle and Kankasanthurai to provide security to the ports and merchant vessels those entering, leaving and stationed at anchorages. Port of Colombo is the commercial hub of the country and its security was of vital importance for the national security. Further, any attack launched against the Trincomalee strategic harbour would have had devastating effects to the war effort of fighting against the LTTE in the northern area. This Trincomalee – KKS Sea Line of Communication was the lifeline that kept the Government troops fighting in the North.

Flag Showing Missions

In international relations and politics, the term 'Gunboat Diplomacy' refers to the conspicuous display of naval power in support of its foreign policy. However, SLN never used these Gun Boats for this purpose, but they were certainly used for friendly diplomatic missions.

As mentioned earlier until early 1980s FGBs constituted the major vessels of the SLN fleet. Therefore, FGBs had to take part in goodwill visits and flag showing missions. Following are some of the foreign visits undertaken by the FGBs.

- In 1973, SLNS Balawatha sailed to the Maldives with SLNS Gajabahu.
- In 1977 SLNS Sooraya and Ranakamee sailed to the Maldives.
- In 1978 SLNS Balawatha and Weeraya sailed to the Maldives.
- In 1981 SLNS Jagatha and Rakshaka sailed to the Maldives.

Above are some of the significant instances where the Gun Boats have contributed directly. As mentioned before, there are many such incidents, many interesting stories and memories with the officers and men who have served onboard Gun Boats.

Life Onboard

The life onboard a gunboat is a unique one compare to all other types of vessels of the SLN. It is hard and challenging, but at the same time very exciting. The smell of Diesel, blended with rough seas and sea breeze provides one with an inimitable experience. A crew of 60 to 70 surviving days with only one thunder box for both types of nature calls is also another experience one cannot forget easily compared to the life on other ships and craft. It is believed that sailors served onboard Gun Boats can serve and survive on any type of craft in the world. A Commanding Officer, who completes his Command of a Gun Boat and gained experience, will be fit enough in all respect to Command any type of ship in the Navy when he grows up with seniority.

The importance of the FGBs still remains as it is, amidst the expansion of the SLN fleet with more and more larger vessels joining the fleet and the paradigm shift of the role of the fleet to meet new maritime challenges. In reality one can never deny the unparalleled role played by the FGBs throughout the whole spectrum of the conflict from its inception to the very end; before the conflict, during the conflict and in the post conflict period. Gun Boats have never become a burden or a liability to the navy.

This unnoticed and silent legacy of Fast Gun Boats should be written in golden letters and go down in the history of the Navy as an important and dedicated component of the Sri Lanka Navy.

Let this small note on FGBs be a tribute to fallen heroes, officers and sailors belonging to the fraternity of Gunboats.....

(I sincerely acknowledge all the assistance rendered by Capt(H) Kosala Warnakulasooriya, Cdr (G) AAC Karunasena in compiling this article and some of the details were obtained from the book 'Diamond of the Silent Blue' – (un published)

ROLE OF OVERSEAS PRESENCE TOWARDS ACHIEVING REGIONAL/GLOBAL EMINENCE INDIA, CHINA AND US IN THE INDIAN OCEAN REGION A VIEW FROM THE PEARL OF THE INDIAN OCEAN

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"Whoever controls the Indian Ocean, dominates Asia. This ocean is the key to the seven seas in the twenty-first century, the destiny of the world will be decided in these waters."

Rear Admiral Alfred Thayer Mahan, USN

The Indian Ocean Region (IOR)

The 21st century is regarded as the Asian Century. With China and India, the rising Asian giants, rapidly expanding their economies and becoming increasingly dependent on the Indian Ocean for trade, the third largest ocean in the world has never been more important than today. Spanning 20% of the water surface of the planet, the Indian Ocean extends to an area of more than 73,556,000 square kilometres. On the North it is bordered by the Indian sub-continent and extends all the way to the Antarctic in the South. On the West it is bordered by East Africa and the Arabian Peninsula while to the East a number of countries including Thailand, Indonesia, the Malay Peninsula and Australia demarcate the boundaries of this vast expanse of water. Approximately 35.39% of the world population, more than one third live in the 36 countries that encompass the Indian Ocean Region. It is estimated that more than 60,000 ships and half of the world's containerized cargo ply the waters of this ocean, 80% of which is traded outside the region. All these figures underline the significance of the Indian Ocean to the world.

The Asian Region has been dominating world news and events for decades. The rise of China and India, their massive investments in Africa, the discovery of oil, natural gas and minerals in the seabed of the Indian Ocean have put Asia in news headlines. Constant natural disasters such as the 2004 Tsunami and the 8.9 magnitude earthquake in Japan in 2011 have also attracted the attention of the world. Terrorism in a number of countries is also significant. The 2008 and 2011 Mumbai blasts, suicide attacks in Pakistan and the assassination of its Prime Minister Benazir Bhutto in 2007 caught global attention. Drug trafficking, particularly in Burma, Thailand and Laos and human trafficking in Asia, have all contributed adversely, giving negative media coverage for this Region.



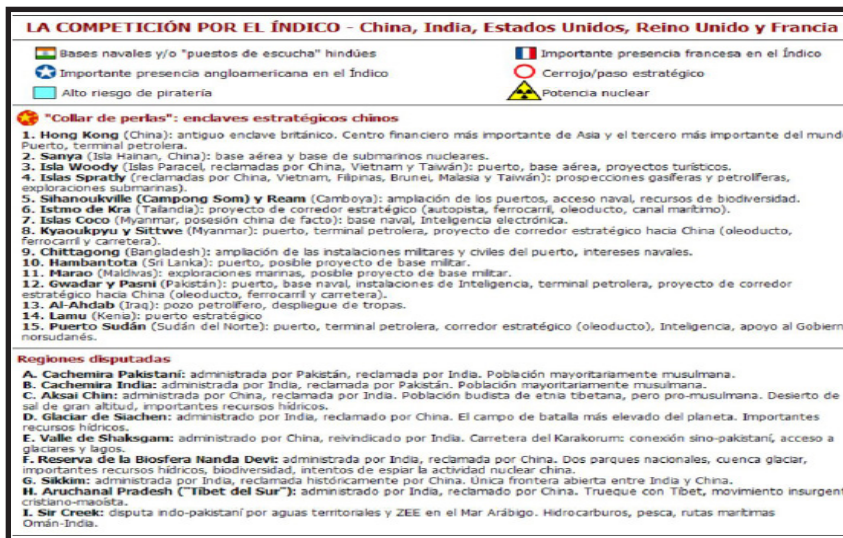


Figure 1: The presence of India, China & US in Indian Ocean Region

The trade routes that cross the Indian Ocean Region connect the West to the East. They transport oil and raw materials from the Middle East and Africa to Asia and function as a supply route of manufactured goods to the western countries. The expanding economies of China, India, Japan as well as South Korea are heavily reliant on these routes for their energy supply. Hence, the economies of the Indian Ocean countries depend on these Sea Lanes of Communications (SLOCs), which connect the world. They provide massive opportunities in terms of trade, port and transshipment activities. Cargo, crude oil and LP gas transportation by sea is much cheaper than transportation by means of road, rail, pipe line and air. Therefore, future trend of using main sea routes around the world by ships is on the increase. This means that the number of ships calling ports in Indian Ocean Region will increase. Further, expanding economies of China, Japan and other South East Asia countries will accelerate this trend in the Indian Ocean Region.

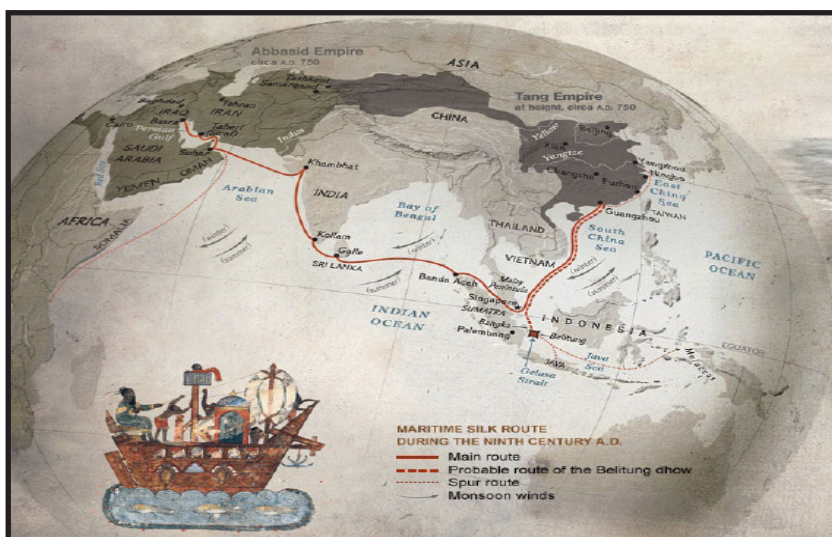


Figure 2: Ancient maritime Silk Route

Chinese Expansion

China is heavily dependent on Indian Ocean sea routes for its export and import trade. Therefore, security of Sea Lanes of Communications (SLOCs) is a main concern of China. To achieve this, China is working towards redeeming its lost ancient Maritime Silk Route (MSR) concept for trade. Therefore, China is heavily investing for improving infrastructure facilities along these sea lanes. The rise of China and India as the world's leading manufacturing hubs has increased their demand for energy, resulting in a large number of ships traversing the busy sea-lanes of the region. In order to reduce its dependence on the Malacca Strait, China is constructing deep-water ports in a number of locations in the Indian Ocean such as Gwadar in Pakistan, Chittagong in Bangladesh, Sittwe in Myanmar, Djibouti and Hambantota in Sri Lanka. China is building these ports in the hope that it will be able to use these facilities for bunkering, warehousing and other port facilities for their commercial goods. All these goods are shipped to the West, the Middle East and Africa across the Indian Ocean. In addition to these projects, China is also providing considerable military and economic support to all these nations, where it is improving ports and other infrastructure. Further, China's Look West Policy and vertical expansion aiming to create a "String of Pearls" concept which is connecting and encircling vital locations in the Indian Ocean Region by making the presence in Hong Kong, Sanya in Hainan, Woody Island, Spratly Island, Cambodia, Isthmas of Kra in Thailand, Coco Island, Sittwe in Myanmar, Chittagong in Bangladesh, Hambantota in Sri Lanka, Maldives, Gwadar in Pakistan, Al-Ahdab in Iraq, Kenya, Sudan and Djibouti to secure the Sea Lanes of communications (SLOCs) in the Indian Ocean Region.

Indian Expansion

Alerted by these Chinese port projects, India is also making considerable investments in strengthening its maritime power with building up of a quadruple relationship among, US-Australia-India-Japan. India also conducted a joint naval exercise with the participation of Singapore-Malaysia-Australia-Thailand-India-Cambodia on May 2015 and Malabar Exercise with the participation of India-Japan-USA on October 2015 to showcase its dominance in the Indian Ocean Region. India is mainly aiming at maritime power balance in the Indo-Asia Pacific Region by building up of a quadruple relationship among USA-Australia-India-Japan. India's Look East Policy and the horizontal expansion in the Indian Ocean Region to counteract the Chinese encirclement is enunciated by its presence in Chabahar in Iran, Mauritius, Seychelles, Oman, Saudi Arabia, Singapore, Malaysia, Australia, Thailand, Cambodia, Vietnam, Japan, and Madagascar to secure the Sea Lanes of Communications (SLOCs) in the Indian Ocean Region.

US Interests & Involvements

At present, US is the lone super power in the world with the largest economy and military. Since the Indian Ocean Region is gaining constant importance and relevance in the 21st century as stated by Robert D. Kaplan in his bestselling book "Monsoon", US is making its efforts to keep a strong foothold in this region. Therefore, US is mainly focusing on building up strong relations particularly with India (being the largest economy, military and democracy). Further, US has always shown interest in strong relations with Sri Lanka due to its geo-strategic and geographic

location (what was used by the British rulers during the colonial period). The US has its presence in Djibouti, Seychelles, Mauritius, Saudi Arabia, Oman, Singapore, Philippines, Japan, Australia, Iraq and South Korea to maintain her world power status. The US strategy in the IOR centres around three main imperatives to promote peace, prosperity, stability and security in the Asia-Pacific and the IOR;

- Secure Indian Ocean for international commerce (SLOCS).
- Avoiding regional conflicts on issues of strategic choke points in the IOR.
- Dealing with Sino-Indian competition in the IOR by building up coalitions with Australia-Japan-Philippines-India-Vietnam.

Sri Lanka: The Pearl of the Indian Ocean

"Sri Lanka is uniquely positioned to leverage its opportunities to become a hub for the Asian Century."
Sri Lanka- Asia's next wonder

Sri Lanka, located right at the centre of the Indian Ocean just ten nautical miles away from major sea-lanes (demarcated by a traffic separation scheme which accounts 200 – 300 ships traversing daily) is a land of tremendous opportunity. Its location is important both in terms of military strategy and economy, as it forms a gateway to Far East Asia and main entry point to rapidly developing South Asia. Centuries ago, the Silk Route, an ancient network of trade routes that spanned across Europe, Africa, the Middle East, China and the Indian Sub-continent shaped the history of global trade and commerce. At the centre of this global trade network, was an island in the middle of the Indian Ocean known as 'Serendip'. Today, hundreds of years later, Serendip, better known as Sri Lanka is rewriting history to come full circle to be the maritime hub that it once used to be. Sri Lanka and its ports also matter because the country is located approximately 32 kilometers from the southern tip of India. India being the fastest growing economy in the world since last year, Sri Lanka is an ideal place to reach both the East and West coast of the Indian sub-continent. This proximity to India is a crucial factor supporting Sri Lanka's trade and economic potential. The country is also located on China's Indian Ocean Trade Route. This route supplies China's energy and raw materials from the Middle East and Africa. It is also the route that transports China's manufactured goods to Europe and other markets across the world. Therefore, Sri Lanka is the perfect location to reach out to the world's emerging markets, even though the country has only a comparatively small market of only 20 million people. The easy access it provides to both India and China makes a strong case for creating Sri Lanka a global hub.



Figure 3: Connectivity from the Colombo Port

Understanding the Relevance of Overseas Presence in IOR

Future of the Indian Ocean: Robert D. Kaplan, in his world famous book “Monsoon”, clearly described the future of the Indian Ocean and its rise fuelled by large expanding economies like China, India, Japan, Singapore, Malaysia and South Korea. He had explained that the importance of Pacific Ocean is shifting towards the Indian Ocean gradually in the 21st century. Therefore, Indian Ocean is becoming, the most important ocean amongst other oceans around the world in the 21st century. Availability of ports, its sufficient depths to accommodate all class of ships, proximity to SLOCS, stability of host nation and well spread inland connectivity are crucial factors to dominate this situation over others.

Rise of India and China: Rise of India and China and their economies are the main contributing factors for upsurge growth of IOR littorals. Giant economies and populations of China and India create great opportunities for these littorals. As these littorals grow, their energy requirements mainly depend on crude oil from Middle East and main exports are reaching towards the US, Europe and Middle East markets through sea transport using ships. Interdiction of these supply lines would directly impinge upon the growth story of either China or India. Being aware of the Malacca Dilemma, China has invested heavily in ports which would allow its alternative access to other ocean and land-route connectivity through relatively less developed Western Province of China.

Sino-Indo Competition: According to Kaplan, China expands vertically and India horizontally. With the expansion of China and India towards oceans, eventually competition for dominance in the Indian Ocean Region is clearly evident. This competition opens opportunities for strategically located countries in the Indian Ocean Region like Sri Lanka to attract more Foreign Direct Investments mainly for port and infrastructure developments. While nomenclature “Base” has intrinsic military context attached with it, these ports would rather serve as economic and trade gateways which are essential for rise of both the host country and the power investing in such port infrastructure.

Energy Security: Oil and natural gas being the lifeblood of the present day industrialised economies, access to these resources play a significant role in the Indian Ocean. This is particularly true for the rapidly expanding economies like India and China, which require an unhindered supply of energy.

Regional Cooperation: These ports would allow regional actors greater possibility of trade/economic, cultural and security interaction which in term would focuses on regional cooperation and stability. While Indian Ocean Rim Association for Regional Co-operation (IOR-ARC) and Indian Ocean Naval Symposium (IONS) are two such mechanisms in the Region with increased actors owing to larger overseas presence in the IOR, more such initiatives may develop in future.

Shifting Balance of Power: As India and China compete for the place of eminence in the IOR, the confluence of Look East Policy of India and Look West Policy of China is likely to affect most of the IOR littorals. This confluence would be most prominent in the vicinity of Overseas Presence of respective actors and greatly assist the littorals in attracting investments. However,

host nations would need to play the critical balancing role before these two giants in the Region. Additionally, the principal focus of the US in the IOR is also visible through its expanding role, policy shifts and increased capacity in the overseas bases in the IOR.

Security of Chokepoints: The Indian Ocean Region is home to a number of choke points. The Strait of Hormuz is undeniably the world's most important chokepoint. Over 17 million barrels of oil (roughly one fourth of the world's total oil consumption) travel out of the Persian Gulf through this waterway daily. Strait of Malacca is the shortest sea route between the Middle East and South East Asian markets. It facilitates the shipment of nearly 80% of the oil to China, Japan, and South Korea. Almost 12 million barrels per day are shipped through this route. Bab el-Mandeb is another important passage from the Indian Ocean to the Suez Canal complex and the Mediterranean Sea. Three million barrels of oil per day flow through the strait. Thus, ensuring stability of the region, particularly at the choke points is imperative for the stability of the world economy. This major challenge could be best overcome by permanency of presence which is allowed by Overseas Presence.

Conclusion

Sri Lanka's trade and economic development is inseparably linked to the Indian Ocean. Thirty years after gaining independence from the British Colonialism, Sri Lanka had to fight the LTTE, one of the "most dangerous and deadly extremist" organisations in the world. The Country is just emerging after thirty years of war. The Government has made it a priority to catch up on three decades of lost opportunities. In post-war Sri Lanka, the economy is rapidly expanding, with massive infrastructure projects undertaken with the assistance of China, India and a number of other states such as Malaysia and the United Arab Emirates (UAE).

Sri Lanka is of great importance to both China and India. Sri Lanka would remain the closest entry point to the many sea routes in the Region. Sri Lanka is also significant to countries such as the United States, the UAE and Iran. As the ports would always form an essential prerequisite for growth, Sri Lanka would prefer to invite countries whom will be participating in co-operative development with technological and financial capability and long term commitment towards the Pearl of the Indian Ocean.

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THE RISE OF THE SMALL BOATS

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"The LTTE fought to create an independent Tamil state called Tamil Eelam in the North and the East of the island. This war was fought on land, on sea, and in the air, in conventional and unconventional ways over a period of 26 years. Finally, in 2009, the government of Sri Lanka successfully defeated the LTTE militarily and the civil war came to a close. What naval lessons can we learn from the Sri Lankan Navy as it battled and defeated the LTTE at sea?"

Any national counter-terrorism strategy for a country with maritime borders to safeguard and protect is inherently flawed and dangerously incomplete without a plan for countering terrorist threats at and from the sea. Too many of these strategies have neglected the nuances and threats of the maritime domain in favour of the easier and more definable land domain out of convenience, ignorance or both. However, terrorists can and do plan and execute attacks on maritime targets, often with devastating effect. This article will discuss motivations behind maritime terrorist attacks, share the Sri Lankan Navy's experience with battling terrorists at sea, and, finally, conclude with insights and recommendations on how navies, large and small, may want to consider a less costly but potentially more effective change in their strategy by creating or upgrading the use of small boats to combat the terrorist threat on water.

Why Terrorists use the Sea and the Tactic of "Swarming"

The motivation and likelihood for terrorist actions at sea can be measured by a number of factors. These include the degree of state sponsorship a terrorist organization may have, how well networked the organization is with other terrorist networks and organizations, the degree of involvement in drug trafficking, and whether the terrorist organization owns land from which to base operations from so-called safe havens.¹ Any one or more of these factors can motivate terrorist organizations to initiate or mature their maritime strategies to achieve political goals through violence.

Such terrorist attacks at sea have taken many forms. Land-based teams can be employed to place improvised explosive devices onboard ships either by trained divers, attack craft, suicide craft and even sea mines. Supporting technologies have ranged from speedboats, scuba, sea scooters – all helped typically by GPS, according to one report.² In one study, some 15 different terrorist groups, including Hamas, al-Qaeda, Abu Sayyaf Group, and the Liberation Tigers of Tamil Eelam (LTTE), conducted at least one maritime attack over the period 1998-2005.³ The LTTE will be discussed in greater depth later in the article.

¹ Victor Asal and Justin V. Hastings, "When Terrorism Goes to Sea: Terrorist Organizations and the Move to Maritime Targets, Terrorism and Political Violence," *Terrorism and Political Violence*, 27. 4 (2015): 722-740.

² Rohan Gunaratna, "The Asymmetric Threat from Maritime Terrorism," *Jane's Navy International*, September 24, 2001, 2.

³ Asal and Hastings, "When Terrorism Goes to Sea", 731.

For many terrorists, the sea is undoubtedly an attractive place to carry out activities and operations that support their objectives. According to Norman Cigar,⁴ the sea can be seen as a theater for an attack against high-value maritime targets such as a warship, oil platform, or other maritime facility such as a port. The sea can also be seen as an avenue of approach, as a line of communication and as an economic asset.

He writes that the sea can serve as an avenue of approach for attacks against the land as well as a line of communication for the combat service support element integrated at the operational level, being used to transport personnel and equipment for current or future land operations.⁵

Terrorists can use the sea as a line of communication to routinely move equipment and personnel from one location to another in support of their operations. For example, the sea can also be used as an escape route, providing a way for terrorists to quickly leave an area once operations have been conducted typically on land. Economically, the sea can also be viewed as an asset by terrorists who can control (and profit) from illegal activities such as sea-based smuggling operations to including the human trafficking, illegal oil shipments and other oil-related trade.

Because of many of the reasons and motivations stated, terrorist organizations have, over the years, conducted numerous successful attacks on high-value maritime targets. The most high-profile maritime terrorist attack was the attack on the USS Cole in 2000, an al-Qaeda planned attack that killed 17 US sailors. However, there have been others. In 2002, al-Qaeda undertook its first successful attack against a commercial French super tanker Limburg with small boats packed with explosives. The attack was launched when the Limburg was just 12 nautical miles off the coast of Yemen, which killed one crew member, injured 12 others, and caused a spillage of 90,000 barrels of crude oil along 45 miles of coastline.⁶ Pakistani naval facilities were also attacked by terrorists in 2009 and 2011. An attack on an Egyptian naval vessel was carried out by an organization supported by or directly linked to al-Qaeda or the Islamic State of Iraq and Syria (ISIS) in 2015. But it is the Sri Lankan government's fight against the LTTE where we have the richest source of documentation and history regarding terrorist maritime attacks. At the height of the LTTE's military effectiveness, the LTTE destroyed approximately one-third of Sri Lanka Navy Coastal Patrol Craft, Ocean Patrol Vessels, Fast Attack Craft and Gunboats.⁷

From the onset, the LTTE likely needed to conduct such devastating terrorist operations at sea because they required secure sea lines of communications to supply their forces with the apparatus of modern warfare and used the open maneuver space of the sea to attack the Sri Lankan armed forces, government and economy.⁸ The first maritime

⁴ Norman Cigar, "The Jihadist Maritime Strategy: Waging a guerilla war at sea," Middle East Studies – Marine Corps University, 8, May 2017, 24.

⁵ Ibid.

⁶ Author Unknown, "http://news.bbc.co.uk/2/hi/middle_east/2334865.stm," accessed on December 6, 2017 & 16 October 2002.

⁷ Author Unknown, "Liberation Tigers of Tamil Eelam (LTTE)," Jane's Navy International, June 6, 2013, 10

⁸ Paul A. Povlock, "A Guerilla War at Sea: The Sri Lankan Civil War," Small Wars Journal, September 2011, 2.

terrorist operation in Sri Lankan waters took place in 1990 when the LTTE launched its first suicide missions against the Sri Lankan Navy Surveillance Command Ships Abeetha and Edithara. In 1994, a suicide attack was launched against a Sri Lanka Navy Patrol Vessel.⁹ This Vessel, the Sagarawardana, was Sri Lanka's built largest warship under the Offshore Petrol Vessel class.¹⁰ In 1995, the LTTE damaged and sunk two Sri Lanka Navy Fast Gun Boats and in 1998, LTTE suicide attack carried out against naval ferry, killing over 20 navy sailors.¹¹ In 2000, LTTE suicide attack craft conducted seven separate attacks on Sri Lankan Navy vessels, destroying four fast attack craft and killing or missing 39 and wounding 9 sailors. In 2006, LTTE suicide attack craft conducted nine separate attacks, destroying three Inshore patrol craft, one Coastal Patrol Craft and five Fast Attack Craft, killing or missing 63 and wounding 38 sailors.¹² In these cases and others not mentioned for the sake of brevity, swarm tactics were used to conduct the violent and coordinated actions.¹³ One author has written that the LTTE's suicide craft, "often indistinguishable and hidden among [the] attack craft, were used in swarm and suicide boat attacks."¹⁴ An understanding of swarm tactics is of particular relevance to other navies struggling to understand the terrorist threat at sea.

Swarming, according to one RAND study,¹⁵ is an ancient form of fighting which finds an increasing popularity in the modern era. Swarm organizations typically show characteristics of autonomous or semi- autonomous behavior, an amorphous but coordinated way to strike from all directions with sustainable pulsing of force or fire, stand-off and close-in capabilities, and attacks designed to disrupt the cohesion of the adversary.¹⁶ According to the study, a key requirement for the swarm is to be able to strike at the target from different directions. There must be relatively large numbers of small units [or in our case, attack craft] that are well connected, from a communications or networked perspective as well as from a geographic or physical one.¹⁷ Like the wolf pack in the animal kingdom or German U-boats and Japanese kamikaze pilots during the World War II,¹⁸ terrorist groups can "swarm" on the open water and high seas by coming together at the precise, opportunistic moment and location to inflict damage and then disperse quickly afterwards.

The implications for us, as Arquilla and Ronfeldt warn, are that "...militaries may need to reexamine their close-in fighting capabilities and doctrines."¹⁹ They observe,

⁹ Author Unknown, "Maritime Threat: Tactics and Technology of the Sea Tigers," Jane's Navy International, May 9, 2006, 3.

¹⁰ Ibid., 21.

¹¹ Ibid.

¹² Sri Lankan Ministry of Defence, "Humanitarian Operation Factual Analysis: July 2006-May 2009," July 2011, 146- 148.

¹³ Author Unknown, "Maritime Threat," 3.

¹⁴ Justin O. Smith, "Maritime Interdiction in Sri Lanka's counterinsurgency," Small Wars & Insurgencies 22, no. 3 (2011): 3.

¹⁵ For background on swarming theory, see John Arquilla and David Ronfeldt, "Swarming and the Future of Conflict," Santa Monica, CA: RAND Corporation, 2000.

¹⁶ Ibid., 21.

¹⁷ Ibid., 22.

¹⁸ Ibid., 33.

¹⁹ Ibid., 39.

for example, that terrorist groups such as Hezbollah used swarming tactics to confront Israeli commando raids in southern Lebanon where Hezbollah's (swarming) tactic was to converge on targets of opportunity within a particular area, only to disperse quickly after such precision strikes.²⁰ As such, this may explain Israel's tactical withdrawal from southern Lebanon perhaps due to some measures of inability to adapt to their adversary's swarming practices. These swarming tactics are unconventional to the conventional military. This is particularly true with the challenges that our navies around the world face in combatting terrorist threats from the sea. In the case of the Sri Lanka Navy that faced numerous terrorist attacks from the LTTE at sea, the Navy grappled with how to develop doctrine and tactics that best countered the early successes of the LTTE at sea with their swarming tactics. The Sri Lanka Navy's experiences with the LTTE small boats can hopefully inform other navies that are struggling or may be struggling with this type of warfare waged by unconventional and non-traditional adversaries.

The Sri Lankan Experience and the Rise of Small Boats

Sri Lanka's maritime challenges are vast within the context of the South Asian region. For example, the region sits above a vital sea line of communication along which significant amounts of trade, including energy, travels from Southwest Asia,²¹ via the Malacca Strait, to industrial Asia. Thus, the strategic location of Sri Lanka in the Indian Ocean makes it not only important to the Indian Ocean region, but also to global commerce, much of which flows through in the form of shipping in sea lanes just south of Sri Lanka. A strong Navy, then, is paramount in protecting economic interests. How has Sri Lanka grown its Navy over the years?

Sri Lanka Navy and its experience in actual combat is noteworthy. As long as the maritime perspective, the Falklands War in 1982, between the United Kingdom and Argentina, is the last known conventional naval conflict, where the two Navies engaged each other on the high seas. Thus, in the modern era, practically all other navies have limited conventional combat experience repelling and destroying aggressors at sea. Since 1982, however, the Sri Lanka Navy has been the only navy in the world to engage in actual military naval combat operations of any significance, size and scope. And these operations were against a credible threat - the LTTE during Sri Lanka's civil war where the LTTE fought to create an independent Tamil state called Tamil Eelam in the North and the East of the island. This war was fought on land, at sea, and in the air, in conventional and unconventional ways over a period of 26 years. Finally, in 2009, the government of Sri Lanka successfully defeated the LTTE militarily and the civil war came to a close. What naval lessons can we learn from the Sri Lanka Navy as it battled and defeated the LTTE at sea?

During the height of the civil war, the LTTE fielded a sizeable naval capability to combat the Sri Lanka Navy and the government of Sri Lanka. The LTTE or "Sea Tiger"

²⁰ Ibid., 52.

²¹ Christopher Snedden, "Shifting Geo-Politics in the Greater South Asia Region," Honolulu, HI: Daniel K. Inouye Asia-Pacific Center for Security Studies, 2016, 11.

fleet consisted of over 4,000 personnel organized into various sections of operations, logistics, communications, intelligence, and suicide operations, etc. The fleet fielded a number of indigenously built, fiber glass fast attack vessel types such as the four-man Thrikka class craft, the six-man Suddai class craft, the Muraj class craft, and finally, the two-man Idayan class small boats that were used primarily for suicide attacks on maritime targets.²² All craft, except for the Idayan class small boats, were fitted with one or more heavy machine guns. The Idayan class small boats were outfitted with explosives designed to detonate on impact with the target. ²³Small boats were deliberately employed for a number of good, tactical reasons.

Small boats are hard to be detected by most sensors – they lie low in the water.²⁴ Small boats can take any shape or size. Additionally, the enemy's decision as to the choosing of the time, place and mode of attack against a naval or commercial platform is made easier by his ability to move a small boat or groups of small boats quickly to an area. Moreover, an innocent looking fishing vessel, a jet ski, a pleasure boat or any other specially designed small fast boat could easily be converted to a lethal suicide boat to carry high explosives to inflict heavy damages. Small boats have the advantage of maneuver in places where vessels have to maneuver at slow speeds, such as maneuvering through channelized shipping lanes or in other areas with traditionally high numbers of vessels. Armed with a high explosive payload, a small boat could cause extensive damage and destruction at the most inconvenient location and at the most inconvenient time.

In short, small boats are a perfect and deadly tool of choice to employ devastating swarming tactics to achieve desired violent effects at the sea. Small boats disguised as typical fishermen in certain traffic congested areas can easily target merchant ships. As the vast majority of global commerce is carried out in the oceans, a single such attack on an oil or chemical tanker or even a passenger ship or a cruise liner would have major impacts, politically as well as economically. In Sri Lanka's case, if a terrorist organization wanted to jeopardize the international maritime trade of Sri Lanka, they could easily do it by damaging or sinking large container ships such as a Maersk Triple E-class ship in the Sri Lanka's capital and main home port, Colombo, using well-placed and highly connected small boats. A naval fleet can also easily be targeted by small boats especially at choke points such as going in and going out of harbours. A delay in harbour operations for even a few days, let alone weeks, would also be devastating.

Because of these reasons and the associated devastating effect that the sea-borne LTTE suicide small boats had on the Sri Lanka Navy, changes in strategy and a doctrine had to be made. Admiral WKJ Karannagoda developed a creative approach, the "Small Boat Concept", based on new equipment and new tactics.²⁵ In effect, the new tactic was to out guerilla²⁶ the guerilla. New tactics were desperately needed to combat the LTTE's use of swarm tactics through the use of numerous LTTE- deployed small boats, some of

²² Pavlock, "A Guerilla War at Sea," 19.

²³ Author Unknown, "Liberation Tigers," 15.

²⁴ Author Unknown, "Maritime Threat," 3.

²⁵ Smith, "Maritime Interdiction," 457.

²⁶ Pavlock, "A Guerilla War at Sea," 45.

which were the Idayan suicide boats. The Sri Lanka Navy doctrine evolved to address how to combat LTTE's small attack boats with a much larger number of its own small boats - swarm against swarm. Thus, the Small Boat Concept was to counter the LTTE's swarming and suicide tactics with high-speed, heavily armed Inshore Patrol Craft.²⁷

According to one of the authors who participated in combat operations against the LTTE, the Sri Lanka Navy's strategy and thinking behind the Small Boat Concept was heavily inspired by none other than a theory developed by a British engineer during World War 1. Lanchester's Square Law²⁸ asserts that with regard to aimed fire, when confronting an enemy in battle, the numbers of fighting units are more valuable than fighting quality. He further stated that a commander was better off with twice as many units of force than with twice the rate of effective fire power. This theory and set of principles fully supported the initiation and fielding of the Sri Lanka Navy's small boat units.

The Sri Lanka Navy at beginning of 2006 recruited officers and sailors from the naval community to operationalize this Small Boat Concept, by Lanchester's Square Law. Two types of units were created – firstly, the Special Boat Squadron (SBS) and then the Rapid Action Boat Squadron. Individuals recruited for the SBS underwent extensive training, including some advanced training from US Navy Seals, US Green Berets, and Indian Commandos.²⁹ Their mission was primarily to use their small boats to conduct reconnaissance and surveillance inside LTTE-held territory. The other unit, the Rapid Action Boat Squadron, was trained to operate small boats using swarm tactics, employing as many as 25-30 craft³⁰ during combat engagements against the LTTE Sea Tigers. The implementation of Small Boat Concept crippled the LTTE into a greater extent and it could be identified by a steady and then sharp decline in the number of maritime attacks on the Sri Lanka Navy by the LTTE from the period of 2006-2008.³¹ According to one author, the cumulative effect of the new small boat tactics shattered the Sea Tigers.³²

One researcher commented that the pivotal element of the government victory was the evolution of a successful maritime interdiction strategy by the SLN [Sri Lankan Navy]...the campaign of maritime interdiction required the SLN to attack the LTTE ... maritime terrorism.³³

Way Forward

While the initial adjustments to the Navy were commendable, the Sri Lanka Navy continues to evaluate and plan improvements in the short and long term. Sri Lanka's journey may be instructive, particularly to nations with developing navies that face traditional and non-traditional threats from the sea.

²⁷ Smith, "Maritime Interdiction," 457.

²⁸ For background on Lanchester's law, see Frederick W. Lanchester, "Aircraft in Warfare: the Dawn of the Fourth Arm", London: Constable and Company, 1916

²⁹ Pavlock, "A Guerilla War at Sea," 32.

³⁰ Ibid.

³¹ Ibid., 38.

³² Ibid.

³³ Smith, "Maritime Interdiction," 449.

According to Sri Lanka Navy Captain Damian Fernando ³⁴ a senior officer with combat experience against the LTTE at sea, the Sri Lanka Navy deliberately chose to rebalance the size and scope of its naval fleet composition with more focus and spending on building up its small boat fleet after its experiences with the LTTE at sea, examining how its naval capabilities could be maximized through the proper ratio and configuration of its fleet. For example, the concept of combining smaller fleet units with bigger vessels gave the Sri Lankan Navy the ability to better protect its traditional vessels such as OPV's and AOPV's while at the same time provided a robust defensive capability through the small boats to address unconventional attacks from terrorist attacks at sea.

As vigilant as the Sri Lanka Navy has been when examining its military capabilities, there must be greater awareness on the civilian front, within the fisheries community about the importance of their role at sea. Fisherman should feel obligated to identify and report any suspicious or illegal activities. Failure to do so should be met with real consequences under the rule of law. Proper vetting and accreditation of local fishermen and their fishing vessels would likely improve the law enforcement agencies' ability to not only communicate more effectively with registered parties but also be better positioned to solicit fishing community support for reporting suspicious behavior. Along a similar theme of awareness and collaboration, education and coordination between the Navy and the Coast Guard and the Police can always be improved as each service understands the capabilities of the other and, perhaps, participates in more strenuous and rigorous joint exercises to test out integrated and joint capabilities against various threat-based scenarios.

Another important consideration moving forward is to create more opportunities for shared dialogue with relevant stakeholders in this important region. For example, Sri Lanka Navy holds an annual international maritime symposium called the "Galle Dialogue", providing an appropriate setting to discuss the terrorist threat on the maritime domain. From the South Asia regional perspective, this topic could and should be part of the agenda at the South Asian Association for Regional Cooperation (SAARC), providing opportunities to engage in discussions that lead to bi-lateral or multi-lateral arrangements and resource sharing agreements.

Last but not least, Sri Lanka like other developing nations has opportunities to engage in like-minded partner nations such as Japan, Republic of Korea, India, the United States, etc. to pursue joint training, education, and intelligence sharing to better collaborate against terrorist threats that are global in nature. As Sun Tzu said, the art of war teaches us to rely not on the likelihood of the enemy's not coming, but on our own readiness to receive him; not on the chance of his not attacking, but rather on the fact that we have made our position unassailable. ³⁵

A counter-terrorism strategy evolves based on the threats that a government must consider. While the land domain has been the scene of many terrorist events in the past, we should not rule out that the maritime domain may receive more attention from bad actors

³⁴ Captain Damian Fernando, Sri Lankan Navy, interview by co-author, Honolulu, HI, August 3, 2017.
³⁵ Sun Tzu, "The Art of War" (translated by Lionel Giles), April 7, 2017, Greyhound Press.

in the future. The Sri Lankan Navy's experiences of fighting the LTTE at sea should give much consideration to prevent terrorist attacks to ports, harbours, waterways, and even on the open ocean. The use of small boats, although not high-tech or glitzy, should resonate with developing nations who are grappling with as how to resize, refit, and rebalance their naval forces to prepare for the worst case scenario.

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The views and opinions expressed in this article are those of the authors and do not necessarily reflect the official policy or position of any agency of the Government of the United States of America or of the Sri Lankan Defence Department.

GLOBAL MARITIME ISSUES



Commander(ND)HPRP Amarasinghe, RSP&bar, psc, BMS, PG Dip in CPS, DIK(UK), Dip in Mgt, Dip in LR, Dip in D & WA, MIM(SL), JP (Whole Island)

“Although more than 500 million maritime containers move around the world each year, accounting for 90 percent of international trade, only 2 percent are inspected. Strengthening customs and immigration systems is essential.”

- Ban Ki-moon (former Secretary General of the United Nations)

Introduction

All activities related to the sea or oceans can be considered under Maritime Activities. Impacts of the maritime activities in the world are conversably high due to a number of factors. The most prominent factors are:

- Seventy-one percent of the globe is covered by the oceans, and that becomes a major source for the globalization.
- Around ninety percent of world trade is carried out by the international shipping industry.
- Ocean/sea is the only answer for the scarcity of resources due to the ever increasing world population.

Therefore, ‘Global Maritime Issues’ to be discussed and prompt actions to be taken to curtail further expansions. Following maritime issues have been recognized by a number of scholars as the most important amongst a lot:

- Sea piracy, maritime terrorism and trafficking.
- Illegal, Unreported and Unregulated fishing (IUU).
- Marine environmental pollution.

Sea Piracy

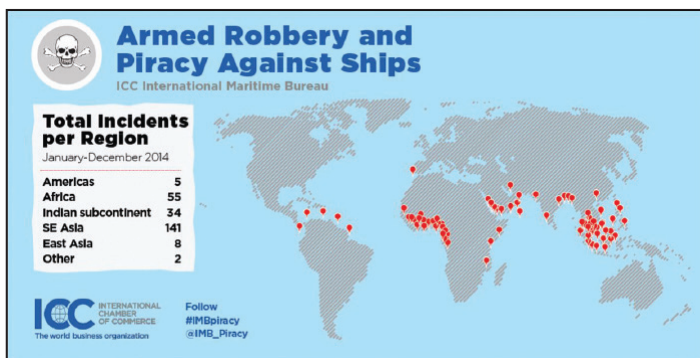


Figure 1: Armed robbery and Piracy against ships – 2014
(Source: ICC International Maritime Bureau)

Sea piracy has become a prominent threat for the economy of the whole world during last few decades. Due to continues piracy activities; the Gulf of Aden, Malacca Strait and Gulf of Guinea have been recognized as the hot spots of the world's piracy map.

However, the situation was worst in Gulf of Aden few years ago and the whole world had to find an answer collectively. Success was achieved by deploying Combined Naval Task Forces in this region, and piracy in the Gulf of Aden is very rare news today. Similarly, the neighbouring countries in the Malacca strait also combatted piracy successfully due to the combined naval deployments. But still Nigeria couldn't find an acceptable solution in the Gulf of Guinea being the leading nation of the region.

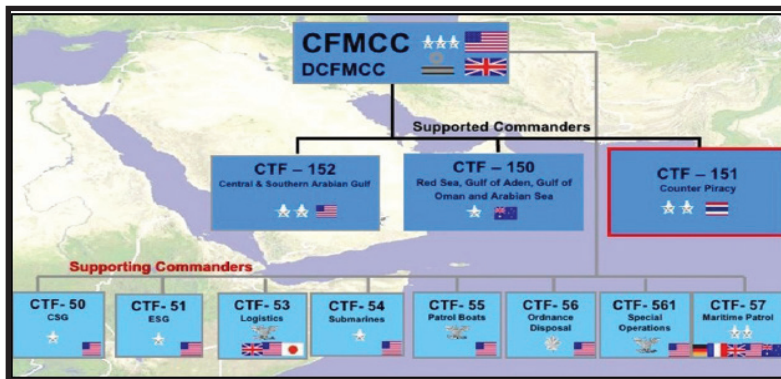


Figure 2: Combined Maritime Forces for Somali piracy
(Source: US Naval war college's presentation on piracy)

Maritime Terrorism

Maritime terrorism is defined by the Council for Security Cooperation in the Asia Pacific (CSCAP) 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." The motivation for these acts may differ from organisation to organisation or person to person. Therefore, this subject should be thoroughly studied prior planning for anti-terrorism or counter-terrorism acts.

The International Ship and Port Security (ISPS) code was introduced to the world on 01st July 2004, as a result of 9/11 attack in the USA. This code has created a worldwide security measure to protect all maritime activities giving prominence to the harbours/ports and ships. International Maritime Organisation (IMO) is the foremost organisation to coordinate all maritime related activities including the ISPS code. The International Convention for the Safety of Life at Sea (SOLAS) and Convention for the Suppression of Unlawful Acts against the Safety of Maritime Navigation (SUA Convention) are also the conventions going hand in hand with the ISPS code to ensure the safety of men and material at sea. In addition, some regional measures were adopted to fight against maritime terrorism like the ASEAN convention on counter-terrorism, additional protocol to SAARC regional convention on the suppression of terrorism, etc.



Figure 3: Article on first Maritime Terrorism incident - Portuguese Passenger ship Santa Maria
(Source: <http://visualizingportugal.com/opp-vn5-1-santa-maria/>)

Trafficking

This is another burning matter in the world due to scarcity and unequal distribution of resources. Though the land is used for trafficking intermittently, oceans and seas are the main mode for illegal transportation. Trafficking can be described under three main categories as:

- Arms trafficking
- Drug trafficking
- Human trafficking/smuggling

Arms Trafficking

Arms trafficking or gunrunning is the transportation of weapons and ammunitions illegally. This business flows mainly from developed countries to developing countries or terrorist groups. This is a confidential and secret business and is difficult to maintain exact statistics. However, a light knowledge can be acquired by studying the global arms market in general.

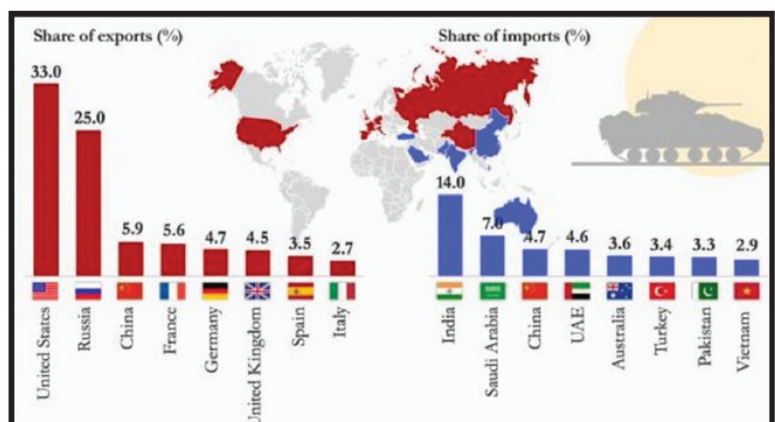


Figure 4: Toparms importers and exporters (2011-2015)
(Source: <http://www.independent.co.uk/news/business/news/arms-trade-exporter-importers-weapons-transfers-sipri-a6891491.html>)

As a country which eradicated terrorism militarily, Sri Lanka has contributed immensely to cut down gun trafficking in the Indian Ocean by destroying the floating armouries of the Liberation Tigers of Tamil Eelam (LTTE). The support of the world and regional powers against arms trafficking was a considerable factor for this remarkable achievement at the sea without even having the blue-water naval capabilities.

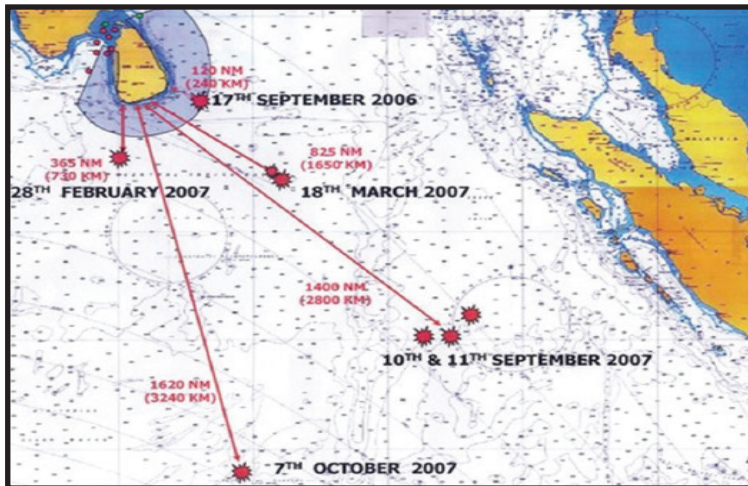


Figure 5: Destruction of LTTE's floating armouries by the Sri Lanka Navy
(Source: <http://archives.sundayobserver.lk/2010/05/16/victory15.asp>)

Drug Trafficking

Drug trafficking can be defined as the illegal transfer of hard drugs like heroin, cocaine, marijuana, etc. from one place to another. This is another global maritime issue for which a sustainable solution could not be found to date. Drug trafficking is a mafia and only the side roots are punished. Main culprits are protected due to their financial and political powers. Countries like Afghanistan, Myanmar, Mexico, Colombia, Peru, Bolivia, Bahamas, etc. cannot be sustained without this business and the governments have to support and protect drug dealers to maintain the country's economy. The United Nations Office on Drugs and Crime's World Drug Report 2005 estimated the size of the global illicit drug market was about US\$ 321.6 billion in 2003. This shows the impact of drug trafficking on the world.

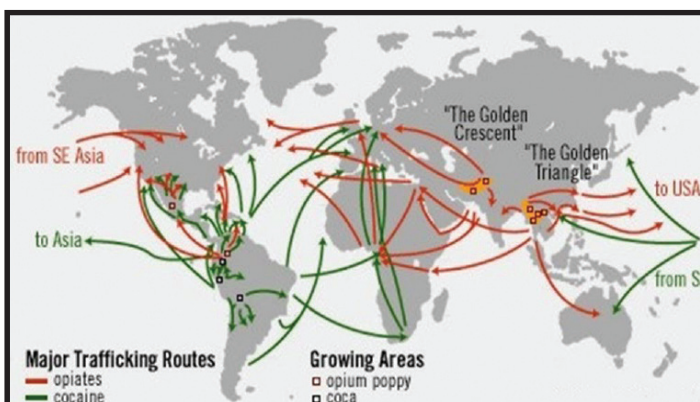


Figure 6: International Drug Routes
(Source: https://en.wikipedia.org/wiki/Illegal_drug_trade)

Almost all the nations in the world, need to find a permanent solution for drug trafficking. But, it has become very difficult since its expansion around the world and positive economic effects on some developed countries. However, this maritime issue affects countries badly in different ways such as:

- Increasing of crime rate.
- Sexual assaults and quarrels.
- Health problems and expenses for medicines.
- Family problems.
- Spreading of diseases like HIV/AIDS.
- Alienation and unproductive society.

Human Trafficking/Smuggling

Human trafficking rarely occurs in today's world since it should be done against the victims will, threat, use of force, coercion or deception against the victim involved. But the human smuggling is common all around the world due to terrorism activities, and ever shaking economic and political situations. Some people tries to seek asylum due to life threat and some are seeking for better opportunities by illegal means since they do not have the required prerequisites to enter the respective country. However, people have unanimously selected the sea routes without considering the life threat or difficulties.

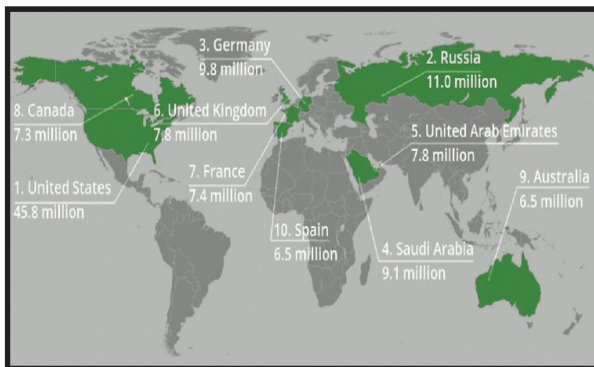


Figure 7: Prominent destinations for international migrants
(Source: <https://curiousmatic.com/wp-content/uploads/2014/02/migrantdestinationmap.jpg>)



Figure 8: Prominent origin countries of international migrants
(Source: <https://curiousmatic.com/wp-content/uploads/2014/02/migrantoriginmap.jpg>)

One of the best examples for the human smuggling is the boat people of Sri Lanka who illegally travelled to Australia and New Zealand during the last phase of the internal

conflict. Even, Australia had to amend the constitution to find a better solution for boat people and change the laws. Most of the boat people were Tamils and more than 90 percent of them travelled illegally to find a better lifestyle and not because of life threat. However, these journeys were hectic, and some had to die on the way. Sometimes, countries in the region had to change maritime activities due to these migrants. For instance, merchant ships had to save lives of these people by disturbing their routine activities. Hence, human trafficking and smuggling also can be considered as a global maritime issue.

IUU Fishing

IUU fishing is a global problem that threatens ocean eco systems and sustainable fisheries. If this pattern continues without concerning about the sustainability, future generations will have to deal with a dead sea lack of resources. Therefore, some world and regional organisations started to be proactive against the IUU fishing. Food and Agriculture Organization of the United Nations (FAO) is the main body of these activities. Port State Measures (PSM) and vessel inspection are some prominent processes which show a considerable reduction of IUU fishing in the world. Indian Ocean Tuna Commission (IOTC) is a regional body working against IUU fishing.

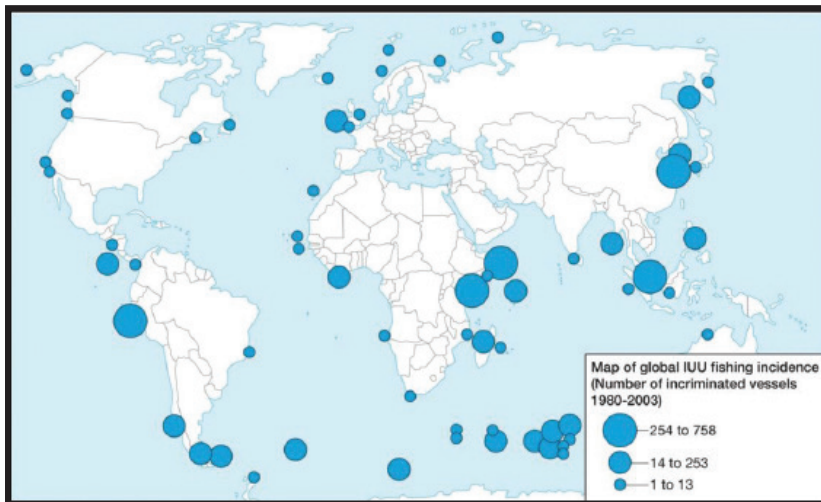


Figure 9: Map of global IUU fishing (1980-2003)

(Source: <https://www.ejiltalk.org/first-global-treaty-against-iuu-fishing-enters-into-force>)

India's IUU fishing in Sri Lankan waters is a good example from the Asian region. They use illegal fishing methods and equipment from the ancient time. Especially the bottom trawling causes much damage to fauna and flora while destroying even fish eggs and young fish stock. The Tamilnadu fishing fleet is enormous, and almost all the fishing boats engaging in IUU fishing, even without considering the FAO regulations. So, a prompt action should be taken to protect the Palk Strait and neighboring waters in this scenario. Similarly, FAO should act strictly to curtail IUU fishing to protect a resourceful ocean for the future.

Marine Environmental Pollution

“Marine pollution occurs when harmful, or potentially harmful, effects result from the entry into the ocean of chemicals, particles, industrial, agricultural, and residential waste, noise, or the spread of invasive organisms.” All these substances harm the marine environment including fauna and flora. The ways of marine pollution can be described under five main categories. Such as:

- Direct discharge waste into the sea.
- Runoff due to rain.
- Shipping pollution.
- Atmospheric pollution.
- Deep sea mining.

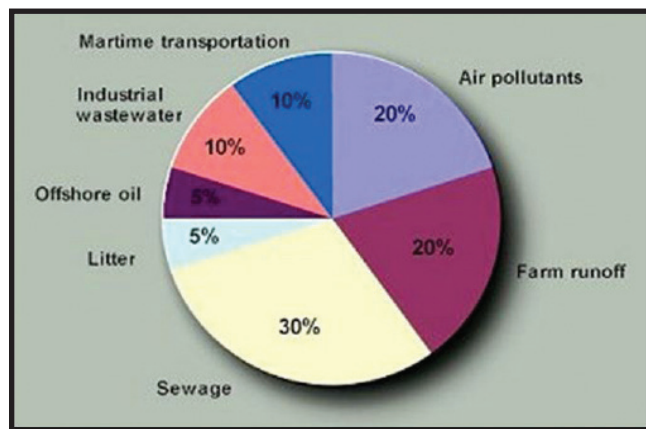


Fig 10: How pollutant entering the ocean?

(Source: <https://sewageoceanpollution.weebly.com/statistics--graphs.html>)

The whole world has understood this disaster and implemented few actions such as the Oslo Dumping Convention, the international convention for the prevention of pollution from ships, the convention for the protection of the marine environment of the North-east Atlantic, etc. But, still the marine pollution is done by both developed and developing nations. Therefore, the global programme to protect marine environment should be implemented with following activities like:

- Strengthening the science-politics interface for research, policy designs, monitoring.
- Cooperation with tourism sector, fishing industry or port authorities for specific measures to reduce pollution.
- Collaborative and regulatory instruments for mobilizing productive industries to reduce pollution.
- Integrated awareness raising approaches for biodiversity conservation and reduction of pollution.
- Economic incentives for reduced use of substances and products polluting the oceans.

Conclusion

The area covered by the seas/oceans is more than the land and percentage of resources explored/identified are less than ten percent. Also, the resources in the land are disappearing day by day due to the ever increasing population and requirements. Hence, the future of human being and all living things will depend according to the level of protection of seas/oceans. The importance of the seas/ocean should be conveyed to all concern and all efforts should be implemented with passionate intensity to protect seas/oceans for the future. Facing the global maritime issues is a global matter, and implanting of actions also should be global. Cooperation and coordination between nations are of paramount importance to succeed all the challenges.

Abbreviations and Acronyms

ASEAN	- Association of Southeast Asian Nations
CFMCC	- Coalition Force Maritime Component Commander
CSCAP	- The Council for Security Cooperation in the Asia Pacific
CSG	- Carrier Strike Group
CTF	- Combined Task Force
DCFMCC	- Deputy Coalition Force Maritime Component Commander
ESG	- Expeditionary Strike Group
FAO	- Food and Agriculture Organization of the United Nations
ICC	- International Chamber of Commerce
IMO	- International Maritime Organization
ISPS	- The International Ship and Port Security
IUU	- Illegal, Unreported and Unregulated
LTTE	- Liberation Tigers of Tamil Eelam
SAARC	- South Asian Association for Regional Cooperation
SOLAS	- The International Convention for the Safety of Life at Sea
SUA	- Suppression of Unlawful Acts

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RELEVANCE OF HYDROGRAPHY TO A NATION

Lieutenant Commander (H) MDS Hemachandra, RSP



“According to the International Hydrographic Organization (IHO) hydrography is defined as the branch of applied sciences which deals with the measurement and description of the physical features of oceans, seas, coastal areas, lakes and rivers, as well as with the prediction of their change over time, for the primary purpose of safety of navigation and in support of all other marine activities, including economic development, security and defence, scientific research, and environmental protection (IHO, 2016).”

Introduction

The seas have been the arteries of trade, transport and conquest for man from the day the human first fashioned the craft to sail. Thereby, the sea chart became the indispensable tool, which was converted from an aesthetic guide to a precise record for safe and timely navigation. The Italian merchant-venturers of the early thirteenth century developed the earliest “portolan” pilot charts of the Mediterranean. The subsequent speed of exploration by European seafarers to the New World, around the Cape of Good Hope, and on trade routes to the East, India, and the Spice Islands were results of the development of the sea chart. By the eighteenth century, the discovery and charting of the coasts and oceans of the globe had become a strategic naval and commercial requirement.

Preparation of a sea chart was only needed some skills in surveying and hydrography during that era but today nearly every activity that human carries out in, on or under the sea is essentially required to have a comprehensive knowledge on the subject to meet the end user’s aspirations. Knowingly or unknowingly, hydrographic data is being used by many people who are connected with the sea. They require this information to know the nature of sea floor, its characteristics and hazardous situations. Therefore, today hydrography is heavily involved in the following disciplines.

- Safe navigation of ships.
- Building of ports and harbours.
- Development of coastal infrastructure.
- Implementation of marine environmental plans.
- Coastal and island defence.
- Marine rescue operations
- Development of undulation models of the ocean.
- Delimitation and enforcement of maritime boundary.

The Origin of Hydrography

The origin of hydrography started with seafarers who dared to sail into unknown seas. They used a piece of chart, sketch of landmass when they were sailing to new waters where they have not previously ventured. These charts were based on the information provided by their predecessors who had sailed to the area. Hence, these were considered as private properties of individuals who made those and even held secret. With the increased completion of transoceanic trade and conquering of other nations, European countries like Dutch, France and British started hydrographic survey as their own enterprise and the commissioning of surveys was increasingly done by governments and special hydrographic offices. However, to date, the oldest known navigational chart is called 'Carte Pisane'. The chart was so named as this was bought by the Bibliotheque Nationale, the National Library of France from a Pisan family in 1829. It has been drawn on an animal skin and period is believed to be in 13th century, probably in Genoa where a school of marine cartography had been established. There had been similar schools in Venice and Majorca. The charts produced by those schools were found to be similar in the style and characteristics, which included interconnected rhumb lines originating from a compass rose representing 32 wind directions. The entire Mediterranean coastline was depicted in these charts (IHO, 2005).

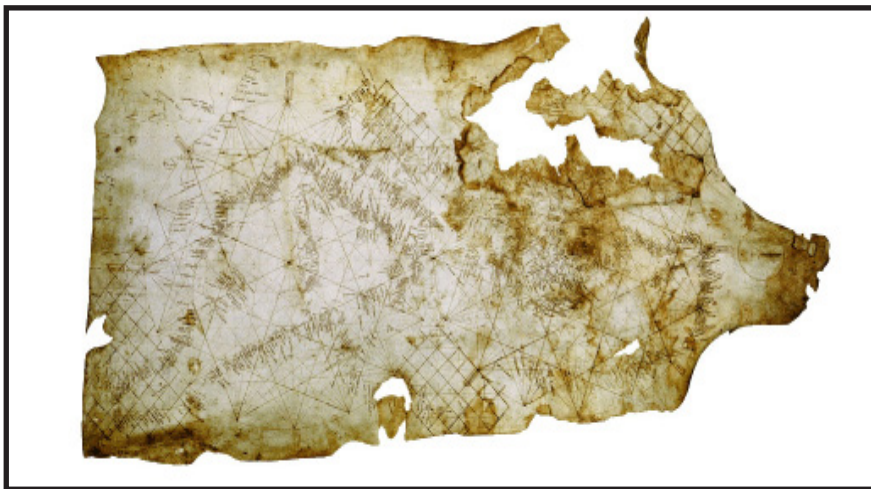


Figure 1: Carte Pisane

At present, hydrography does not limit to the navigation and the spectrum of the subject has broadened vastly to evolve into fully fledged science. According to the International Hydrographic Organization (IHO) hydrography is defined as the branch of applied sciences which deals with the measurement and description of the physical features of oceans, seas, coastal areas, lakes and rivers, as well as with the prediction of their change over time, for the primary purpose of safety of navigation and in support of all other marine activities, including economic development, security and defence, scientific research, and environmental protection (IHO, 2016).

Evolution of Hydrography

The hand-held lead line was the primary mean of measuring the depth of the water in the early stage of hydrographic surveys. Measuring the depth by using hand-held lead line was not an easy task as it consumed much time to cover a larger sea area as well as deeper depths. However, with the development of the technology, the techniques used in hydrography also developed rapidly. Invention of the single-beam echo sounder replaced the hand-held lead line which made hydrographic surveyor's task comparatively easier and accurate. At present, multi-beam echo sounder, another leap of the technology is extensively used for hydrographic survey activities. The advantage of the multi-beam echo sounder is that it can measure a larger sea area at a time when comparing with a single beam echo sounder. Accurate positioning was also another challenge that hydrographic surveyors faced in early days. The Sextant was used to find the position of the ship whilst measuring the depth. However, today, Global Navigational Satellite System (GNSS) technology, GPS introduced by the US has immensely contributed to improve the standards of surveying with high quality and accuracy.



Figure 2: Hand held Lead Line

Importance & Utilisation of Hydrography

The importance of hydrographic surveying for the safety of navigation had been well understood throughout the history and today despite this mainstream, hydrographic survey contributes to many other activities which include playing of a key role in maritime-delimitation, exploration and exploitation of natural living and non-living resources, tourism industry, various recreational activities and coastal zone and marine environment management.

More than 80% of the global commerce is conducted through the sea. During the past three decades, the annual average growth rate of world seaborne trade has been

estimated as 3.1%. At this rate, the global seaborne trade is expected to increase by 44% in 2020 and double by 2031, potentially reaching 11.5 billion tons and 16.04 billion tons, respectively (UNCTAD, 2008). In light of this, maritime trade is believed to be one of the most important aspects of the economy of a country in the future. Commercial shipping purely depends upon current nautical charts and time is money for shipping. A good chart can provide the shortest direct route between two destinations which will allow shipping companies to reduce the transit time and related cost. Not only that, it will decrease the chances of grounding and will permit to operate vessels with deeper draft facilitating to carry more cargo in one run. However, it has been observed that there is an inadequacy of data and information to produce updated nautical charts in most parts of the world thus opening avenues to enhance surveying.

It has been estimated that about 40% of the population in the world live within 100 km from the coast. As population density is higher in the coastal zone, economic activities are also high within this region. Therefore, effective management and systematic development of the coastal zone is vital for sustainable development of a nation. Under coastal zone management and development, study on the feasibility of constructing new ports and maintenance and development of existing ones, dredging operations to maintain required depths of channels or other water ways are being conducted. This also includes the regular monitoring and controlling of coastal erosion, land reclamation, demarcating and monitoring dumping grounds for wastages, extraction of mineral deposits, developing of aquaculture industry, transportation and other public and private construction activities near the shore.

Highly accurate and updated large-scale charts or any other type of bathymetric depiction is a prerequisite for all these activities. In addition, the coastline and the adjacent sea areas are often a dynamic environment due to the very nature of sea wave actions with the shoreline. Therefore, frequent monitoring and surveying the area is required in order to analyse and assess the changes taking place within the environment. Therefore, the use of hydrographic information is not limited to traditional navigation and its usage extends to various other areas as described.

Global population is increasing rapidly at a rate of 83 million people annually or 1.1% per year. Resources available on the land will not be sufficed for future needs of the mankind. Only feasible answer to the problem is to find the resources available in the ocean which covers 71% of the earth surface. Natural resources, which are abundance in the ocean, could be utilized for the benefit of the mankind. Hydrographic surveys play a vital role in this regard through exploration and exploitation of uncovered resources in the ocean floor and subsoil.

When considering the living resources presence in the ocean, fishery industry can be considered as a significant source of nourishment to a nation. In modern fishing industry, the fishermen need hydrographic inputs for safe navigation to avoid losing of equipment and fishing vessels on undetected or poorly charted obstructions to identify rich fishing grounds by the depth of water, bottom type and roughness, oceanic and tidal

currents and to designate areas where fishing is limited or prohibited.

Hydrographic survey can provide information required to the state authorities for their claiming on maritime zones and also the fundamental data used for determining of maritime boundaries between countries. Further, in a situation where there is a dispute on the maritime boundaries between two states, courts will invariably rely substantially on the positions and delineation of offshore islands, reefs and outcrops determined by detailed hydrographic surveys.

Coastal nations require enforcing law and order within their maritime jurisdiction in order to ensure the security and defence of the state. Seas around the coastal nation are strategically important to the nations as it has economic, military and defence implications. Therefore, Coastal nations generally desire to monitor maritime activities and conduct law enforcement and defense operations within their territorial waters and EEZ. Not only the small navies and coast guards with limited assets are in a struggle to defend their maritime boundaries from multidimensional threats from various threat scenarios, even larger navies who have sufficient resources are in a melee to deal with the host of threats found in today's oceans.

Piracy, human smuggling, drug trafficking, Illegal Unreported Unregulated fishing (IUU fishing), gun running and proliferation of terrorism are the major threats to the economy, security and defence of maritime nations in today's context. Therefore, a maritime nation will take every endeavour to prevent these transnational criminal activities in order to protect its commerce, marine resources and the population. In light of this, the knowledge provided by a hydrographic service of a country cannot be underestimated in terms of its ability to enable 'Maritime Power'. The maritime power ensures the good order at sea. It in turn, permits the freedom of manoeuvre including free flow of seaborne trade. The free flow of trade not only improves economic growth by opening the most efficient routes and thereby cutting transportation costs but also minimises other economic losses.

Accurate charts provide increased freedom of manoeuvre for the law enforcement agencies of coastal states; a tactical advantage when dealing with the threats discussed above. In addition, hydrographic surveys can provide critical information for submarine warfare, amphibious warfare and mine warfare applications. High-resolution bathymetry and acoustic imagery that is gathered during hydrographic surveys tremendously supports in this regard.

Conclusion

Today, hydrography underpins almost every activity that takes place within the ocean. The science, hydrography evolved from the very basic drawing that is a sketch of land mass drawn on a piece of paper to a digital map displayed on a computer screen. Today, every coastal state reaps the benefit of this science for their economic development, military and other scientific activities. However, few important activities of the discipline have been discussed here but there are many other activities that support coastal states and

maritime nations. As the population of the world increases continuously, the resources in the land are becoming scarce day by day. Many countries are in a competition to explore the resources beyond the continent. Oceans in the world are believed to be rich in resources, living and non-living that can be utilized more conveniently.

Maritime transportation sectors are blooming rapidly as it has become a cheap mean of intercontinental trade. Ships are becoming larger and deeper draught to increase the amount of goods that they are carrying at a time. Further, many countries are in a race to control the ocean for their strategic advantage. For all these purposes a comprehensive understanding of bathymetry, texture and composition of the sea bottom and presence of navigational hazards in the area of operation is mandatory since hydrography provides all such information to interested parties. This discipline has become more important to coastal and maritime nations more than ever.

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VIOLENT EXTREMISM AS A NEW GLOBAL TREND

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“There could be many reasons to create extremism in the society. However, some scholars have brought up three factors which are governing the violent extremism and those three factors are categorized as push factors, pull factors and contextual factors.”

Introduction

According to the definition of oxford dictionary, the extremism is defined as “The holding of extreme political or religious views; fanaticism” (Oxford Dictionaries English, 2017). The term is commonly used across the globe in a political or religious sense in referring to an ideology which considers a new shape of attitude of the society. Moreover, extremism is further defined as a “show of strong disapproval over a developing or already developed issue”. According to the modern, understanding of the religious extremism, it simply teaches a perception between groups who do well (moderate) and do bad (extremist). Not only the religious point of view but also political agendas too define the extremism. It includes those from the far left politics or far right politics. Moreover, radicalism, fundamentalism and fanaticism are also defined similar to extremism.

However, the concept is a complex phenomenon. According to some political analysts in the contemporary world, it is defined in many ways based on the idea of beliefs, attitudes, feelings, actions, strategies of a character far remote from the ordinary.

It is clearly seen that the extremist activities in the present day world are increasing very rapidly like no other time in the world history. The extent of the extremist activities is enormous and similar activities have created serious impact on the interest of the nation states. Unlike in the 1960 and 1970's, the trend of spreading the violent extremism in the world has a giant approach in these days due to super developed technology in the world.

All these, extremist concepts are evolving more violently to accomplish their intentions. According to the Federal Bureau of Investigation in United States, violent extremism is defined as “encouraging, condone, justifying or supporting the commission of a violent act to achieve political, ideological, religious, social, or economic goals” (Cve.fbi.gov, 2017). Rather than any other types of extremism, the religious extremism has activated more violently in these days due to nature of those concepts. Especially, within the religious extremism, Islamic extremism is very significant as the concepts that use to achieve the intentions are seen as more violent in nature. Similar kind of violent extremist activities can be heard and seen everywhere in present-day world and it spreads across the nations states as a new world order.

Discussion

As discussed in the previous paragraphs, more radicalize spread of violent extremism has seriously disturbed the international community over the last several years. Violent extremist groups are posing a direct assault on the United Nations Charter and the Universal Declaration of Human Rights, and are undermining the efforts to maintain peace and security, foster sustainable development, promote the respect for human rights and deliver much needed humanitarian aid. (Un.org, 2017)

Violent extremist groups have the ability to expand themselves and project their ideologies beyond the borders. During last decade or so, the development of extremism that later became violent in nature are the best examples. In spite of the origin of Al-Qaeda in Syria and Saudi Arabia, they still carry out their activities more violently almost all the places in the Middle East countries and in some parts of Asia, North America, Africa and elsewhere. On the other hand, Al-Shabaab and Boko Haram are also very significant due to their violent activities in the region and those extremist groups are responsible over thousands of lives that lost due to violent extremism. These groups mobilize same hate filled ideology cadres via online across the state borders or allowing the people to join willingly those who have the same ideology who live in other states. Although, the world is highlighted this as a new concept, violent extremism is merely not a new phenomenon and solely does not associate with radical religious beliefs too. For an instance, killings in Cambodia to establish a communist peasant society and the beginning of World War II due to Nazism that was a violent dictatorial ideology, which crossed transnational borders and took the lives of millions of civilians around the world could be taken as examples.

Unlike in the past, violent extremist groups that exist in contemporary world are much different from each other. Use of modern communication technology such as social media has been extensively used in addition to the more traditional networks such as universities, religious communities, social groups etc. Method of attacks of these groups are very unpredictable due to the arbitrary selection of targets which are varies from a night clubs, social gatherings, sport events, girls schools, towns, clinic, or an office party etc. Devices and methods that are used for killings very significant as they apply tactics that varies from lethal weapons including devices that can inflict mass destruction and vehicle ram over public. According to some scholars, these types of violent extremist actions can be taken place due to radical ideas of the society.

However, when discussing the subject in length, it is obligatory to understand the difference between Radicalization and the Extremism. The radicalization happens when a person's judgment and actions became much different comparatively with the members of the society and community views on social issues and participate politically. Because of changing nature of judgements and actions, this can adversely affect diverse range of ethnic, national, political and religious group in the society. In contrast, the violent extremism can emerge when “a person or group decides that fear, terror and violence are justified to achieve ideological, political or social change, and acts accordingly”. In addition, the violent extremism is a further extension of radicalized society beginning to express their belief by using the violence to attain a set goal.

Apart from the groups of radicalized and the extremists, ideological extremism must understand as a concept goes with hand in hand. These concepts are having unique identifications among each other. The ideological extremism is generally nationalistic, political or religious in nature. Considering the facts that apply to extremism, ideological approach for extremism could lead to more violent in nature in connecting with all extremist concepts. Further, key similarities of these groups can be listed down as;

- Justification of the violence over their opinions
- Common uniformity or unique identification over the ethnic diversity
- Common goal over individual freedom
- More focus on giving orders rather than interpersonal dialogue

The issue can be emerged due to specific cause. Issue-based activities may be disruptive while starting with very peaceful manner to get the attention over the issue. When people want to get their cause more specific, the violence, threatening behaviour or causing damages in criminal nature are promoted. Root causes for violent extremism are needed to understand when dealing with the subject in this nature. However, it is difficult to draw some relevant points or else since there is no any single point to highlight the pathway for radicalization or vulnerability for radicalization. Ethno-nationalist or separatist extremism may also be involved in violent political or independent activities on the concepts of race, culture or ethnicity. The concept of Liberation Tigers of Tamil Ealam in our country is one of the best examples for ethno nationalist extremism that later operated in more violent nature.

There could be many reasons for the creation of such extremist situations in the society. However, some scholars have brought up three factors which are governing the violent extremism and those three factors are categorized as push factors, pull factors and contextual factors.

Due to limited access or zero access to standard education, removal of own rights and freedom in the society and other environmental factors such as socio economic grievances have led individuals to push themselves to behave in a violent nature and to come up with the violent extremism. This concept is called the Push Factor. Due to existence of organized and established violent extremist groups which facilitate services, employments to get the membership. On the other hand same groups can also mobilize new members by creating the trust over the extremist groups, addressing the grievances of the members. By practicing the same way, they can establish a supportive social network which ultimately is able to pull the members in to the group. This concept is called the Pull Factor. Other remaining factor is the contextual Factor that facilitates a favourable atmosphere for violent extremist groups to emerge. Weak states, absence of good governance, corruption and dictatorship are the reasons for contextual factors to take place.

Individuals with under mentioned experiences are more vulnerable and could be easily exploited for potential radicalization. Those are,

- Sudden break up with long lasting relationships
- Sudden termination of education due to unavoidable reasons
- Change in actions related to food, clothing, language or finances.
- Drastic changes in attitudes and actions towards others: antisocial comments, refusal of power, refusal to cooperate in public etc...
- Habit of viewing internet regularly and participation in social media networks that support radical or extremist ideologies.

Violent extremist groups in the world have become a major threat to many countries in the world. Their actions have created new world order and the same actions are able to destabilise the peace and security of the world. Therefore, countries in the world collectively attempt to find measures to address the problem effectively. Unlike other situations, we being the members of the military have to understand that military solutions through military actions will not create sustainable solutions over the issue. So far, no military action has ever succeeded against the violent extremist groups. Although it could temporarily address the situation, same ideology may emerge in different shapes. Promoting more sustainable solutions will pave the way in achieving the goal. Therefore, it is necessary to understand the ways and means in resolving the problem and those strategies can be identified as follows;

Multi Stakeholder Approach - The relevant government itself cannot resolve the issues alone. The government needs to get the assistance of private sector to take part by investing and creating more job opportunities in the society. Policy makers must need to implement policies in favour of both government and extremist requirements to create a win-win situation that will facilitate both parties to move forward without any barrier.

Address the Motives of Extremism - Since there is no any single motive for being radicalized and later become violent extremist, it is required to understand the possible root causes such as cultural, social, economic, psychological and political background. These factors are to be considered in order to address the issue effectively covering the entire state that is subject to the violent extremism. Moreover, facilitating the education system to function properly, providing a good job market while addressing the existing disparities properly will be able to counter the violent extremism.

Use of Military Strategies - Although military approach is not the sole answer for combating the violent extremism and extremists, it can positively use to gather information in such situations. Moreover, having identified the problem in advance, it can assist the society to get away from extremist ideologies. Not only that, by conducting civil military coordination events, it may help to hold the uprising temporary until the government come up with reasonable solutions. Finally, applying interdisciplinary approach for a modern military concept in combination with both soft and hard measures are also advised as a viable solution.

Introducing New Laws - Introducing new legal conventions to existing legal framework for preventing violent extremism; and countering violent extremist propaganda can be used as strategies to counter the spread of violent extremism.

Promote Youth Relationship - Promoting mutual understanding of youths in the state through youth summits, cultural events, sports events by connecting the link among religions, races and even among the states could address the problem effectively and efficiently.

Religious Leaders as 'Messengers' - Religious leaders can play a significant role by delivering the right message correctly to the society whilst challenging and rejecting the extremism concepts.

Conclusion

As the violent extremism spreads very rapidly in the modern society, there may be considerable challenges in combating the path to radicalization although there are many factors existing and facilitating it to happen. Further, it is very difficult to address this since individuals have different nature of motives within themselves. Although the paper discussed a few strategies to counter the violent extremism, there may be a wide range of counter strategies to deal with the issue.

Moreover, government policies of relevant states also pave the way for extremism. Therefore, it is necessary to understand those driving factors to address the problem. Finally, it is realized that effective counter-radicalisation programs are required to be included within the local minority communities and their leaders. Top-down policies are not always suitable and same approach is unlikely to succeed in modern day environment. Therefore, most appropriate and viable strategies as mentioned above will be more effective amidst ongoing efforts. Further it is required to understand the concepts and the motives behind the violent extremism in order to battle against and resolve the threat successfully.

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CHALLENGES OF POST-CONFLICT PEACE BUILDING IN ORDER TO PREVENT FUTURE OUTBREAKS OF CONFLICTS; CASE STUDY OF SRI LANKA & IT'S PEACE RESOLUTION PROCESS

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“Peacebuilding comprises the identification and support of measures needed for transformation toward more sustainable, peaceful relationships and structures of governance, in order to avoid a relapse into conflict” - United Nation

Peace building – Introduction

The concept of “Peacebuilding” was firstly introduced by the former United Nations Secretary-General Boutros Boutros Ghali in 1992 by his “Agenda for Peace” and as per the views of Johan Galtung and other leading peace researchers. Peacebuilding is connected with the post-conflict period and can be defined as “Action to identify and support structures which will tend to strengthen and solidify peace in order to avoid a relapse into conflict” (Secretary- General of the United Nations 1992).

After the 1990s, the concept of peacebuilding became more controversial and was driven in all over the world by incorporating in to the roles and missions of the post conflict societies to peaceful transitions. Boutros Ghali’s idea of an Agenda for Peace in 1992 introduced an agenda for pre-conflict prevention, actions during warfare, and post-conflict measures and also proved that peacebuilding is not only for de-escalation of war, but also it addresses the root causes of the potential conflicts. To witness a successful peacebuilding process, the key actors need to ensure the institutionalize peace, absence of armed conflict and a degree of participatory politics. Post-conflict peacebuilding is the key action commences after the ending of an armed conflict. With the immediate absence of an armed conflict, the actions of peacebuilding should be prioritized with the best practical sense of international and local actors to gain maximum outcome of it.

Most of the conflict affected countries went through difficult phases of post conflict reconstruction and sometimes have resulted in intrastate violence instead of peacebuilding process. Long term armed conflict brings new challenges as well as opportunities for complex peace building process in affected and divided societies for their successful transformation. The process of peace building can be affected by human interactions and their sensitivity as well as social environment. It can take plenty of psychological and structural obstacles to overcome durable and sustainable social reconstruction, rehabilitation as well as reconstruction processes that can make victorious peace process (Galtung, 1998).

Every peace process is not the same but general concepts and analytical approaches can be encourage to identify actions and gaps to achieve good peace building process in a post conflict society. It is necessary to understand strategic importance of the peacebuilding process in different dimensions that can witness the structural and behavioral changes in post conflict societies. The process of peacebuilding is heavily complex and it goes beyond the institutional framework. Under the reconstruction programmes, it is needed to build

up their democratic institutions and economy through market oriented policies. Most of the peace building processes ended up in the introduction of economic recovery packages with the establishment of new governments. In that scenario, the stable political structure is essential for rebuilding damaged social and economic foundations to establish democracy and successful political transition. Political transition with new governments is important for processing of peacebuilding, because existing political, social and economic structures may be barriers to neutralize imbalances between conflict affected societies. It is better to understand the real value of different dimensions of the complex process of peacebuilding in order to enhance the supporting capacity of each other to rebuild divided societies by political, social and economic backgrounds.

The main task of the government of Sri Lanka after the end of war in 2009 was to deal with the psychological and ethical situations resulted with the conflict. Every type of violence including threats of violence will not stop immediately after the conflict and it is important to focus on the physical safety of those war affected people. Soon after the end of war many social problems sprang into action among the communities and those could be obstacles to the process of peacebuilding. Defeating physical, emotional and mental challenges of war affected people are also important factors to consider before the commencement of the peacebuilding operations.

Post conflict peacebuilding can be started when the level of conflict controll reached to the degree of normal social activities and reconstruction of war affected societies can be commenced. By the practical way, the peacebuilding process should be implemented between two hostile parties as the violence becomes lesser and controlled. The proper management of peace building is an important task to transform societies in a positive way to prevent the disruption of peace process and continue with peace settlement process. In this process, trust and confidence building measures should be given more weightage to buildup cooperation and positive attitudes to make suitable environment for the effective peacebuilding operations. The process of the post conflict peacebuilding depends on the progress of inter community relations and rebuilding relations between communities. It is better to promote training workshops and dialogue sessions between communities to stop violence and build the peace. The root causes of the issue should be addressed to avoid recurrence of war. Otherwise, failure to find out solutions for the root causes of war enable countries to searching of peace continuously in war affected society. With the process of peacebuilding, they should be able to create new strategies to prove or demonstrate the negative aspects of war and the value of a long lasting peace process to people. That strategy should be focused on addressing the political, economic, social and ethnic imbalances which are core causes of the conflict in vulnerable societies. As per the former UN Secretary General Boutros Boutros Ghali, the process of peacebuilding has described in terms of supporting structures which are used to buildup and set up long lasting peace in order to avoid violent conflict (Boutros-Ghali, 1995). As per the scholar's view, the peace building may comprise various functions and roles in following dimensions:

- Dynamics, Behavioural and Structural Dimensions
- Confidence Building and Demilitarization
- Political Transition

- Social Reconstruction
- Development

Sri Lankan Case Study

Sri Lanka had to suffer one of the brutal protracted armed conflicts in the world that endured close to three decades. A historical factors show how the Sri Lankan society divided through that conflict in to several segments. Uncertain citizenship of the Tamil community resulted in deadly response of Tamil youth towards the country. Very famous and immediate root cause was the 1983 communal riots and that led to violent armed conflict against the Liberation Tigers of Tamil Elam (LTTE) by the Government of Sri Lanka (GOSL). But history says that the communal tensions between two ethnic groups dates back to the beginning of the British rule in the island. In pre-colonial era, there was no record of intense situations between Tamils and Sinhalese other than accommodating different ethnic, religious and caste groups. During the British rule they have used “Divide and Rule” theory to govern the country and that concept fuelled the hatred between the communities for future conflicts (Lecamwasam, 2015).

After entering in to the market economy, the traditional ruling elite transferred in to new social group and this group consisted of Anglicized English educated people who later entered in to politics. They only wanted to secure their personal caste/class interests, not the national interests. Class politics continued successfully all over the island under the British rule and that system clearly supported to hold the state power by helping the cunning politicians to increase ethnic tensions in post-independent Ceylon. Sinhalese initiated violence against Tamils in 1957, 1977, 1981 and 1983. After 1977, the acts of violence were increased and became more frequent. After analyzing armed conflict in Sri Lanka, the violence against Tamils increased due to following reasons with the LTTE attack on a group of soldiers in Jaffna in 1983 (Gunasinghe, 2004).

- Failure to provide a political solution to armed struggle led by Tamil military groups.
- Armed struggle was wrongly interpreted by most of the Sinhala media as a fight between Sinhalese and Tamils.
- Politically motivated gangs took the law in to their hands and the law and order collapsed in the country.
- Organized Sinhalese extremists wanted to hit the Tamil commercial base.

The Sri Lankan conflict penetrated deep in to the entire society since 1983 and thousands of people died and hundreds of thousand people became refugees or left the country. Lots of tensions were created among all the communities and small island nation separated in to many parts due to protracted conflict. After 2009, GOSL vested with the post conflict peace building task and facing with following challenges to achieve successful peace resolution process in Sri Lanka.

Dynamics, Behavioural and Structural Dimensions

Implementing the peace agreements was not in order and was not assured of the expected outcomes, but the process of conflict resolution needed to be extended to a comprehensive and durable process. Continued hostilities and mistrust of both parties ended up with renewed fighting. It was not easy to bring every party engaged in conflict to the negotiation table or reach to an agreement. It was a collective responsibility to ensure and maintain individual commitments to save the conditions in the agreement. Implementing those agendas brought lots of political crisis and cheatings and rigid terms erupted with the disputes.

Commitments and Motivations

The genuine commitment will lead to a successful transition through peaceful relations without difficulty. The military parties will not change their behaviours and systems just after peace agreements and the essentiality of the peace enforcement can be assessed by the degree of the commitments from engaged parties. The continued prejudice of other parties can be a good sign of transformed violence, and the promise of nonviolent problem solving has to be carefully assessed with the evolution of new situations. If the parties do not have enough chances to engage with the peace process, the commitments of both parties will be weak and the peace process may break without any type of external support (Jett, 2000). Successful resolution of violent conflict depends on the commitment of engaged groups to decide their political future but not by military tactics. In 2002, the LTTE used the peace agreement to their advantage to strengthen them further militarily and broke the agreement with surprise attack causing huge losses on government forces. The process of peace building should be originated by mutual vision with understanding and the unified requirement to solve problems. In this process, being faithful to conditions of the agreement to avoid violations is key to success.

Differences Resolve Mechanism

Differences and unresolved issues in the process of peace need to be renegotiated to reform the political institution and economy. Identifying and managing incompatible areas with continued confidence in the process of peace building need good mutual commitment and understanding. Negotiations will be the best mechanism to deal with crucial points in the process of implementation of agreements rather than threats posed by the peace building. Supportive relations can be built up by consultations and understanding to prevent weak settlement processes from outbreak of violence. Conciliation commissions in different groups can provide an impartial forum for the peaceful negotiations of armed conflicts by resolving differences in each party and these mechanisms can investigate related incidents and hold public hearings on community problems to build up their peace. The Norwegian peace mediators did not much focus on community based problems during the peace process in Sri Lanka.

Reforms for Democratic System

Divided societies ended with armed conflicts should re-establish their fundamental rules of governance to change the system in to democratic institutions. Democratic governance systems and free market economies will prevent violence and conflicts in such nations. Reform for democratic system focuses on establishing rules for political version through elections and that type of mechanisms will avoid political competition without significant consideration of fundamental social issues. Reforming democratic system should address the perspectives and interests of the people by allowing them to influence over the state power with representations of various groups and regions.

Justice and Peace

Long lasting peace cannot be achieved without establishing local and international system of justice which is addressing the basic human needs (Peck, 1996). Principles of justice can be the best mechanism to allow people to express their needs and grievances. In addition, forming political entity of multiethnic and multicultural configurations would require respect for greater independence and diversity.

Confidence Building and Demilitarization

Normalization of relations can be promoted through confidence building measures with the acceptance of mutual security. Confidence building can be seen by reduction in military forces and armaments which will help to mitigate intra-state conflict situations (Garver, 1997). Attractions between former adversaries and people can lead to buildup confidence across ethnic divides and it needs to promote nonviolent expression of interests to resolve differences/ strength to constructively handle the conflict. Reintegration of former combatants into the civilian society by demobilization is essential in post conflict peace building. The process of demobilization should be done with proper agenda to suit the normal community life to avoid social instability. Military spending is better be reduced and convert in to develop social programmes for minimizing the military influence over the political process.

Political Transition

With the end of an armed conflict, all the participants should be taken in to the political process for peaceful mobilization of leaders and their supporters. The legislative influence for supporters of former conflict parties has to be converted into their influence on government policies by drafting new constitution, holding regional and national elections and creating new political structures. Forming new governments by peaceful transition should be acceptable for all the involved parties to address their expectations and interests. The controversial issues of political legitimacy of the government are needed to be solved by holding free and fair elections without ethnic, gender and racial differences. Elections are the first step towards the peaceful political system and that cannot be achieved immediately without stable institutional relations and consensus on political values.

Social Reconstruction

Social stability and reconstruction can be enhanced by strengthening community networks and cultural traditions by promoting peace and justice among the communities. Reconciliation and development can be promoted by proper coordination between the national and community level and also controversial relationships can be overcome reducing inequalities among the communities. Participation of the process of social and economic development should be extended and previously demarcated people should be vested with own decision making power to achieve desired goals in peace building (Peck, 1996).

Human Rights

The protection of human rights is the primary goal for reforming public and political institutions to adapt new standards for future human rights certification. The protection of human rights must be continuously monitored to prevent future violations and seek/obtain international advices to enhance further. The protection of human rights is very crucial in the process of social reconstruction to build peace among communities and it immensely help to gain the confidence on the new political system. The protection of human rights would not be practical without having properly reformed judiciary system and infrastructure to have satisfactory legal and administrative mechanisms in war affected societies. The absence of a fair and powerful judicial system will result in increasing the human rights violations.

Reconciliation

A war affected society cannot be healed without a proper process of reconciliation to acknowledge past abusive relationships. Mutual aggression and mistrust between parties are not possible to eliminate by the formal political process. Reconciliation helps to return to the normal life and the acceptance of an apology and forgiveness will make up important factors of reconciliation. Truth and accountability for past actions need to be revealed to prevent future violations and assistance could be obtained from international authorities to assess the truth and evidence. Truth commissions are formed in many occasions to find out human rights violations, but those are not ended up with criminal proceedings to avoid confrontation from former abusers. The process of reconciliation may not be practicable and compatible with the same regime responsible for past crimes.

Social Rehabilitation and Empowerment

Strengthening civil society by empowering local population can be used to change political and economic structures and it is better to promote participation of ordinary people to build up own communities to develop both cultural and material resources. Religious and community leaders in different aspects can be used to play as important roles in social rehabilitation. Religious, development and professional associations are real means to restore fragile peace with a wealth of experience in negotiation with authorities (McKay, 1998).

Development

Post-war economic reconstruction has to be improved to overcome unfair socio-economic conditions to reinitiate economic development halted by violent conflict. It will take time to rebuild the systems, but inadequate development of resources will weaken the community's ability to recover from war wounds. Major attention should be paid to increase production in agriculture, manufacturing and construction along with the establishment of small enterprises and commerce to overcome economic problems erupted by the conflict. The process of development could be utilized to build bridges between different communities instead of controversial competition for resources to improve living standards through economic cooperation. Long term economic planning will be practicable for building new functional relationships that discourage the violence among the different communities. Sustainable development projects must be promoted with the aim of protecting the environment that supports the survival needs of local populations (Harris, 1999).

Conclusion

The ending of armed conflict raises the challenges of true conflict resolution occurring in the context of post-conflict peacebuilding in order to prevent future outbreaks of violence. Post conflict societies are facing more complex and diverse challenges in the process of peacebuilding and it needs more broad approaches to overcome. The existence of selfishness political groups, limited legitimacy of political leaders and confidence on a new political process will add uncertainties to the process of peacebuilding. All the conflicted parties need to reflect needs and interests of peacebuilding. That means the war torn society has the ability to change the dynamics of the cycle of conflict in to the sustainable peace. Social empowerment and trust building will improve the chances of successful reconstruction in war torn society.

Peacebuilding is not a technical task to run by government institutions, providing judicial services and establishing new economic infrastructure. Those conflict affected society needs to understand the physical, social, emotional and spiritual aspects of conflict system. The political structures and culture cannot be transformed by bureaucratic, administrative approaches and political negotiations. Those aspects will always ignored by the human dimensions of peacebuilding. Fundamental needs and interests of local communities are the foundation of peacebuilding activities and peace will come up with the cultural transformation of societies including elimination of dominated power relations.

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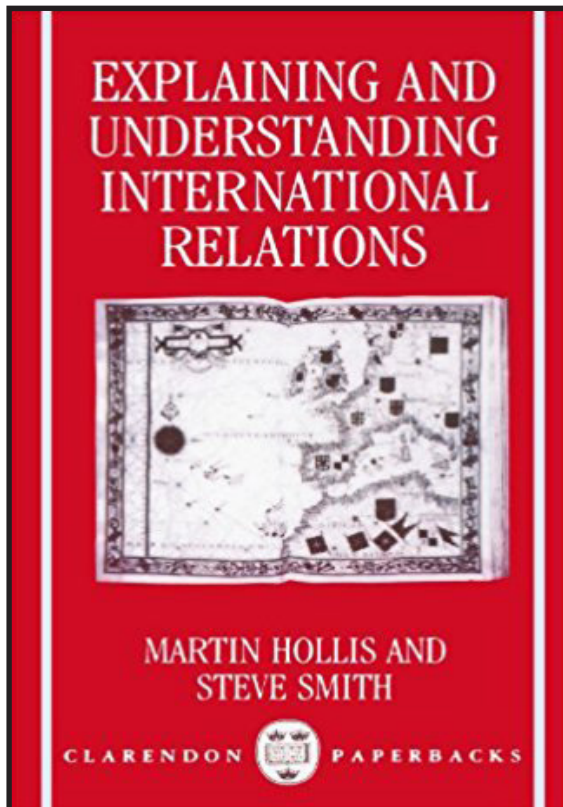
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BOOK REVIEW**“EXPLAINING AND UNDERSTANDING INTERNATIONAL RELATIONS”****BY MARTIN HOLLIS AND STEVE SMITH-NEW YORK, OXFORD UNIVERSITY PRESS INC., 1990**

Lieutenant Commander (VNF) SR Sudusinghe, psc, MSc (D&SS), MSc(Mgt), BA(Gen)



The book was first published in 1990 and reprinted in 2009. There are nine chapters in the book where Martin Hollis and Steve Smith are explaining the international relations in an advanced manner. Each chapter has included a brief introduction at the beginning of the chapter and a brief conclusion at the end as well. This book is best suited for academics and students those who are studying international relations in advance courses.

The development of two traditions in the international relations, are discussed in the introductory chapter as ‘natural sciences’ in the sixteenth century and the ‘social sciences’ in the 19th century. Explaining is the key term of natural sciences and understanding is the key term of social sciences.

According to the argument of the book, there are three layers in the international level of analysis as first debate, second debate and third debate. The first debate is between international systems vs. nation states. The second debate is between nation state vs. bureaucracy. The third debate is between bureaucracy vs. individual.

The growth of international relations focusing on idealism, realism and behaviorism are discussed in the chapter two. There is a debate whether the nation state is still the major actor on the international scene when considering the wealth of some transnational companies, international financial institutions and non-state actors in the international arena.

Leading ideas in the history and philosophy of science, which is significant in the international relations are discussed in the chapter three and it is suggested that the goal of international relations should be understood rather than explanation.

Chapter four describes the way of understanding the differences in the international relations. Natural science has changed the social actors and world order by discovering nuclear energy, which was the turning point of the world order in the international relations. Chapter five discusses the way of international society which becomes an international system, multi polarity and bipolarity of the world.

Chapter six describes the game theory and its effects on the international relations which created crisis behavior and arms race. Chapter seven describes the roles and reasons of international actors while chapter eight describes the games which nations play. Chapter nine elaborates the importance of explaining and understanding of international relations which finally conclude with an unfinished debate of views within each discipline. Martin Hollis as a philosopher defends his concept by understanding mode and Steven Smith as a social scientist defends his concept by explaining mode.

Martin Hollis was born in 14 March 1938 in England. While he was in the Oxford University, he worked under two philosophers namely Professor AJ Ayer and Professor PF Strawson. On completion of his degree with first class honours he could able to obtain the fellowship at Berkeley and Harvard Universities. Martin continued his studies and obtained a lectureship at the East Anglia University where he started lecturing. He worked as the head of Philosophy in his university as well as Pro Vice Chancellor.

Martin Hollis as a social philosopher had written many books. First book was 'Rational Economic man' in 1975 where co-authored by economist Edward Nell. 'Philosophy and Economic theory' 1979, 'The Theory of Choice: A critical Guide' 1992, 'Rationalism and relativism' 1982 co-written with four colleagues in the university of East Anglia, 'Models of Man' 1977 was addressed issues related to sociological theory.

Professor Steve Smith as a social scientist had written, 'Invitation to Philosophy' in 1985, 'The Philosophy of Social Science' in 1994, and 'The Cunning of Reason' in 1987. When considering the content of previous writings of both Martin Hollis and Steve Smith, all their writings can be categorized as non-fictional similar to the "Explaining and understanding International Relations."

IUU FISHING IN THE PALK STRAIT: CHALLENGES TO SRI LANKA NAVY AND WAY FORWARD

Commander(C)NDahanayake,psc/MSc(D&SS)



Introduction

Fishing is a major component of food and a vital factor to the economy of many countries which are located with access to the sea. Presently, the world's fish stocks are not only under threat from intensive legal fishing activities, but also it is at a risk from illegal, unreported and unregulated (IUU) fishing. As this is a black market, however, estimates are bound to be unreliable. Some experts put the annual figure at around 11 million tons and some reports say it may be as high as 26 million tones equal to 14 or 33 percent respectively of the world's total legal catch. IUU fishing also accelerates the problem of over fishing because IUU vessels even operate in marine protected areas where a total fishing ban has been imposed. However, the main reason why IUU fishing is particularly a critical issue today is that many fish stocks have already been overexploited by legal fishing activities. IUU fishing therefore puts fish stocks under additional pressure. If stocks were being managed sustainably, IUU fishing would no longer exacerbate an already difficult situation to the extent that it does today.

The Palk Bay is the South- western portion of the strait which is a small stretch of ocean in the Bay of Bengal located between Northern Sri Lanka and South- eastern India. The strait is 64 to 137 km wide and 136 km long. The average depth is less than 100 metres. The international maritime boundary line (IMBL), which is officially demarcated with the agreement of both countries India and Sri Lanka in 1974 and 1976, separates sea areas clearly. But, the Palk Bay has become an area of escalating fishery conflicts and a serious political issue that has important implications for relations between Sri Lanka and India.



Figure 1 – Fishing areas in Palk Bay

Before 1970s there was harmony among Sri Lankan and Indian traditional fishermen, but after 1970s with the Norwegian aid, Indian fishing fleet tremendously became large and powerful with mechanized vessels (most of vessels are bottom trawlers). This continuous bottom trawling caused depletion of the fishing stocks in the Indian side of the IML and gradually Indian vessels started to cross the IML and fish in SL waters. And also this is a typical example for IUU in the Palk Strait. In addition to social, economic and political issues, poaching by Indian trawlers can have serious implementations for the conservation of marine environment. Bottom trawling method of fishing used by the Indian fishermen could be very harmful to marine habitats on the sea bed.

What is IUU Fishing?

From the fishermen's perspective, IUU¹ fishing is highly attractive and lucrative as they pay no taxes or duties on their catches. A further reason why IUU fishing takes place on such a large scale is that, it can often be practiced with impunity. This is mainly the case in the territorial waters or exclusive economic zones of countries which cannot afford to set up costly and complex fisheries control structures. The situation is especially difficult in the developing countries. In a comprehensive analysis of IUU fishing worldwide, researchers conclude that IUU fishing is mainly practiced in countries which exhibit typical symptoms of weak governance, large – scale corruption, ambivalent legislation, and a lack of will or capacity to enforce existing national legislation. There is a detailed list of various causes of IUU fishing as follows;

- There are insufficient and inadequately trained personnel in the relevant authorities.
- The authorities' motivation to invest in relevant personnel is poor. Financially weak states set other priorities.
- Salaries are low, and vessel owners take advantage of this situation to make irregular payments to observers/ fisheries administrators to cover up their activities.
- The purchase, maintenance and operational costs of patrol boats and aircraft are very high. For effective control, there must be sufficient time spent out at sea or in the air. However, in some states, even though they are available, they are not operational due to logistical problems – lack of fuel, proper maintenance regime, etc.

Illegal fishing refers to activities - onducted by national or foreign vessels in waters under the jurisdiction of a state without² the permission of that state, or in contravention of its laws and regulations.

Conducted by vessels flying the flag of states that are parties to a relevant regional fisheries management organization but operate in contravention of the conservation and management measures adopted by that organization and by which the states are bound, or relevant provisions of the applicable international law; or in violation of national laws or

1 National oceanic administration, "NOAA fisheries", [Http://www.nmfs.nmfs.noaa.gov/ia/iuu/iuu_overview.html](http://www.nmfs.nmfs.noaa.gov/ia/iuu/iuu_overview.html), (Accessed 25 Sep 2017)

2 Ibid

international obligations, including those undertaken by cooperating states to a relevant regional fisheries management organization.

Unreported fishing refer to fishing activities - Which have not been reported, or have been misreported, to the relevant national authority, in contravention of national laws and regulations; or undertaken in the area of competence of a relevant regional fisheries management organization which have not been reported or have been misreported, in contravention of the reporting procedures of that organization.

Unregulated fishing refers to fishing activities - That are conducted by vessels without nationality, in the area of application of a relevant regional fisheries management organization or by those flying the flag of a state not party to that organization, or by a fishing entity, in a manner that is not consistent with or contravenes the conservation and management measures of that organization ; or in areas or for fish stocks in relation to which there are no applicable conservation or management measures and where such fishing activities are conducted in a manner inconsistent with state responsibilities for the conservation of living marine resources under international law.

IUU Fishing in Palk Strait

Basically only Sri Lankan and Indian fishermen are fishing in the area of the Palk Strait. As long as reported incidents are concerned, comparatively a large number of occasions have been reported that Indian fishermen are crossing the IMBL and poaching in SL waters and such allegations for SL fishermen are very less. Recently, allegations of IUU fishing against Sri Lanka were cleared and now Sri Lanka find itself fighting a battle against thousands of Indian trawlers from Tamil Nadu which allegedly commit IUU fishing violations in Sri Lankan waters with regularity and impunity. A 2015 report by the Food and Agriculture Organization (FAO) of the United Nations Asia Pacific Fishery Commission lists the Sri Lankan territorial waters in and around the Palk Strait as the fifth largest IUU hotspot in Asia, ranked by both total catch and value. According to the FAO, the Sri Lanka Navy, satellite images and extensive reporting on the issue, thousands of trawlers from the Indian state of Tamil Nadu cross the strait regularly, using damaging methods such as bottom trawling to fish for shrimp and crab, without any established rights to the fishery or permission from the Sri Lankan Government. As per the analysis done by Sri Lankan government officials, eventually curbing IUU fishing is estimated to cost as much as USD 42 million (EUR 38 Million) annually. The following series of pictures clearly show how Indian fishing fleet does IUU fishing in SL waters.

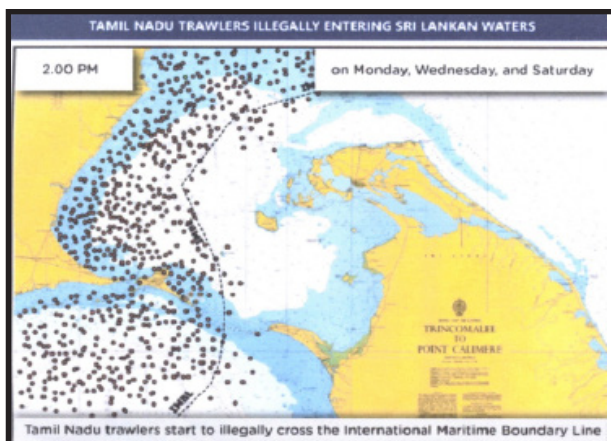


Figure 2³ - Indian trawlers' movement toward Sri Lanka waters by 1400hrs

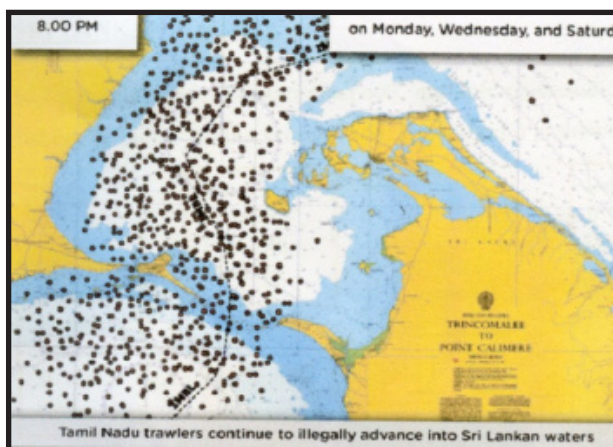


Figure 3⁴ - Indian trawlers are trawling in SL waters by 2000 hrs.

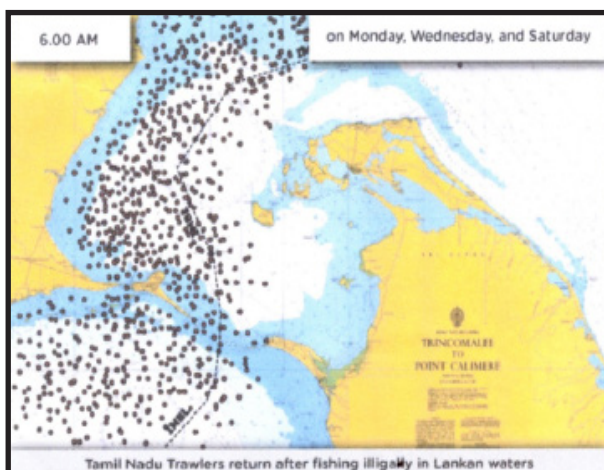


Figure 4⁵ - Indian trawlers are returning after fishing by 0600 hrs. on following day

3 Gazala Anver, "Ammas deception", <http://roar.media/english/report/ammas-deceptions-sri-lankan-perspective-indo-lankan-fishery-issu/>, Accessed on June 12, 2017

4 Ibid

5 Ibid

Repercussions of IUU Fishing by Indian Fishing vessels in Sri Lankan waters

In view of Sri Lankan prospects, multiple repercussions have arisen with IUU fishing by Indian fishing vessels in SL waters and it is shown in the diagram below.

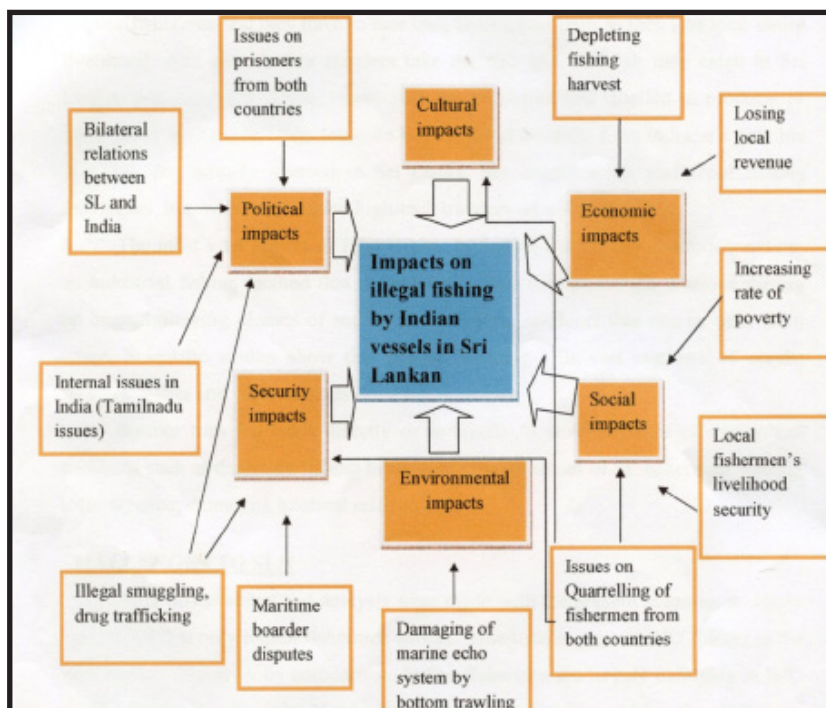


Figure 5 – Impact of illegal fishing by Indian fishermen in SL waters

It is extremely damaging due to its enormous impact on the poor fishing communities of Northern Sri Lanka. Approximately 5,000 bottom trawlers exist in Tamil Nadu and on average 2,500 trawlers fish three days per week. This huge fishing fleet engages in bottom trawling and damaging the fishing gears of poor fishermen and they have to face long lasting problems as they lose their entire livelihood. And also, Indian trawlers take the fish and shellfish they catch in Sri Lanka waters back to India, where they are processed and labeled as products of India. Most of the time when someone buys seafood products from India, it is possible that they are actually sourced in Sri Lanka, not caught using traditional fishing techniques, but with mechanized high-tech trawlers on a massive scale.

The most vital impact of IUU fishing by Indian fisherman is bottom trawling and industrial fishing method that drags large, heavy nets across the seafloor stirring up huge, billowing plumes of sediment on shallow seafloors that can be seen from space. Scientific studies show that bottom trawling kills vast numbers of corals, sponges, fishes and other animals.

Bottom trawling leads directly or indirectly to several of unresolved problems such as: depleting fishing harvest, livelihood issues of SL fishermen, losing local revenue, damaging bilateral relations, etc.

Challenges to SLN

After observations and analysis were made with the present scenario, it clearly manifested that only Indian fishermen and SL fishermen engage in IUU fishing in the Palk Strait. However by comparison, Indian fishermen are largely indulging in IUU fishing in the Palk Strait. Hence, SLN should particularly address the challenges which involve both Indian and SL fishermen. The identified challenges can be mentioned as follows;

- Protection of national jurisdiction.
- Prevention of IUU fishing in the Palk Strait.
- Stopping and seizing of fishing vessels engaging in IUU fishing.
- Surveillances, data collection, analysis and report to the concerning authorities.
- Provide protection for our own fishing community and helping them.
- Maintaining diplomacy at sea with Indian Navy and Coast Guard.

Prevention of IUU Fishing in the Palk Strait

As previously discussed, the main allegation will be raised toward Indian bottom trawlers with regard to the IUU fishing. Hence, particularly SLN can initiate following remedial actions in order to prevent IUU fishing in the Palk Strait.

Strengthening IMBL with patrol vessels -Patrol could be carried out by SLN patrol vessels in order to give a deterrent effect as per the density of Indian fishing fleet, its direction of moving and situation arisen after observations made by shore established radars.

Establishing physically visible IMBL - Physically visible boundary line such as floating buoys, illumination buoys could be established along the IMBL in order to make clear demarcation and it could be easily identified by the fishermen in both day and night hours.

Comprehensive awareness/ publishing program - Comprehensive awareness/ publishing program could be carried out in liaison with other concern government bodies such as the Ministry of fisheries in order to educate local fishermen with regard to the IUU fishing and its impact.

Stopping and Seizing of fishing vessels engaging in IUU Fishing

If any Indian fishing vessel which has crossed the IMBL despite SLN barriers and resistance are found, those vessels should be apprehended and further legal actions should be initiated. Also for any local fishing vessels which are engaging in IUU fishing, necessary actions are to be taken to initiate further legal actions in liaison with local authorities.

Surveillance, Data collection, Analysis and Report to the Concerning Authorities

SLN and Coast Guard being prime government bodies which are well equipped with many surveillance facilities with shore based Radars, ships and craft, fishing marshaling

points, Operational Rooms, etc., the resources can contribute to conduct surveillance on many activities, particularly in the Palk strait with regard to the IUU fishing. At the same time, collected data over long period can be analyzed utilizing the knowledge and expertise of the Navy in order to identify the development, pattern, hot spot areas, etc., with regard to the fishing in the Palk Strait. Further, this knowledge can be shared with concerned Foreign and Local authorities such as FAO (Food and Agriculture Organization of the UN), APFIC (Asia-Pacific Fishery Commission), and ICES (International Council for the Exploration of the Sea) to assist banning IUU fishing. Further, maximum evidence should be provided to concerned local authorities to develop a national legislation system against IUU fishing.

Provide Protection for our own Fishing Community and helping them

Indian fishing fleet is extremely stronger and larger with mechanized trawlers than Sri Lanka fishing fleet. When thousands of Indian trawlers are bottom trawling in SL waters (where SL fishermen are also supposed to fish in the same waters), SL fishermen severely suffer with heavy damages to the fishing gears, craft and sometimes their lives due to pair and bottom trawling. Hence, SLN and Coast Guard must have to have a comprehensive program to protect our own fishermen. Subsequently, same proactive action can be used to repel/weaken the Indian fishing fleet.

Maintain Diplomacy at sea with Indian Navy and Coast Guard

In recent years, the problem has worsened as the Sri Lankan government has taken more appropriate and prompt measures to halt the IUU fishing, making arrests and confiscating boats. It recently changed its policy from allowing owners to pay a fine to repatriate vessels involved in IUU fishing to confiscation them, and it currently has more than 120 such boats in its custody. And also, diplomatic initiatives such as JWG's (Joint Working Groups) and fishermen to fishermen talks have not seen the desired results for the last several decades. There is no common understanding between the two sides, one driven by profits and greed the other by poverty and desolateness.

Hence, SLN and Coast Guard, particularly as parties of prime concern, have to have a comprehensive program in order to extend and maintain diplomatic relations with Indian Navy and Coast Guard in order to succeed in joint operations with regard to the IUU fishing and other disputes pertaining to fishing in the Palk Strait.

Conclusion

The historical legacy of the Navy's role in maritime governance and protecting economy routes was the first priority. Historically it often seems to correlate with the country's economic and industrial power. Indeed, eminent naval personalities like Admiral Alfred Thayer Mahan tended to argue that "economic power has often been based on naval strength". But in the present day we can argue that above statement which Admiral Mahan stated is valid and applicable vice versa. Particularly, for a developing country like

Sri Lanka, not only the navy but also the entire military power is solely dependent on the economic strength of the country. Hence, SLN has a core responsibility to impede poaching of our marine resources by other party and it will eventually contribute to the growth of our economy and fishery industry. Also, SLN leads its men and materials across the Palk Strait to protect the maritime environment and acts to suppress all overt and malign influences which would weaken the maritime environment. In home waters, the SLN supports other government departments which are responsible for fishery protection and preventing IUU fishing as well as regional Navies with dedicated staff, ships and craft, Search and Rescue, Diving supports. This is another area where the SLN is showing successful collaboration

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TRANSNATIONAL CRIME IN THE INDIAN OCEAN REGION AND SRI LANKA'S RESPONSE

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Dip in IR, Dip in D & WA, MIM(SL), JP(Whole Island)



The expansion and sophistication of transnational crimes represent one of the most dangerous threats we confront in the next millennium.”

- Rand Beers, an American government official

Introduction

Ever increasing population in the world and scarcity of resources made people to find ways to fulfil own requirements by unethical and illegal methods. These types of activities are common in Asian region due to excessive population; especially in India and China. Indian Ocean Region (IOR) is also influenced in this regard directly due to the activities in Sea Lines of Communication (SLOC) and attention of other regions towards the existing resources. Sri Lanka being an island located geographically significant position in the Indian Ocean with diversified resources made it vulnerable for all these illegal activities.



Figure 1: Indian Ocean

(Source: <http://www.yourchildlearns.com/online-atlas/images/indian-ocean-map.gif>)

Indian Ocean is the third largest ocean in the world which connects the Pacific and Atlantic Oceans. It spans Asia, Africa, Australia and Antarctica. The IOR is open to the other parts of the world from a number of choke points such as the Bab el Mandeb, Strait of Hormuz, Lombok Strait, Strait of Malacca and Palk Strait. All these entrances directly affect the development of the region as well as attract illegal activities. Lengthy coastal belts and low level income of the people are some of the prominent factors for the illegal activities in

IOR. Though Sri Lanka is a small nation in the IOR, it's also named as a transit hub for legal and illegal activities alike.

Transnational crimes are violations of law that involve more than one country in their planning, execution, or impact. These offenses are distinguished from other crimes in their multinational nature, which poses unique problems in understanding their causes, developing prevention strategies, and in mounting effective adjudication procedures (Oxfordbibliographiesonline.com, 2017). Transnational crimes can be categorised as follows:

- Illicit goods such as drugs and arms trafficking, counterfeiting and trafficking stolen properties.
- Illicit services such as commercial sex and human trafficking.
- Infiltration of business and government by fraud, money laundering, racketeering and corruption.

History of Transnational Crimes

Even though the transnational crimes had been in the existence for a long period of time, legally this name was introduced during mid-1970 by the United Nations (UN) to conduct certain criminal investigations under the international jurisdiction. In 1995, eighteen categories were identified by the UN to be treated as transnational or organised criminalities. They are money laundering, terrorist activities, theft of art and cultural objects, theft of intellectual property, illicit arms trafficking, aircraft hijacking, sea piracy, insurance fraud, computer crimes, environmental crimes, trafficking in persons, trade in human body parts, illicit drug trafficking, fraudulent bankruptcy, infiltration of legal business, corruption and bribery of public or party officials. With this categorisation, UN has redefined the transnational crime as 'offences whose inception, prevention and/or direct or indirect effects involved more than one country'.

Similarly, the individuals and organisations who engaged in transnational crimes have expanded their networks and activities with the development of technology, trade liberalization and globalisation. Though these activities were conducted secretly in the past, present trend is to conduct them openly to gain income. Some countries involved in transnational crimes to develop their nations with the blessings of the government. Also the name 'Transnational Organized Crimes (TOC)' had been reintroduced for the same activities due to the direct involvement of criminal groups. Hence, the developing of international legal system to counter TOC not succeeded fully to date. But the whole world is actively engaged today to minimize transnational crimes due to their direct and indirect impacts on the humanity as a whole. The Memorandum of Understanding (MOU) between the UK and Malaysia which was signed in 2011 is one of the best examples for efficacious activation against the transnational crimes in the region today.



Figure 2: Home Secretary of UK and Malaysian Minister of Home Affairs sign an MOU on transnational crimes on 14th July 2011.

(Source: https://upload.wikimedia.org/wikipedia/commons/thumb/0/04/Memorandum_of_Understanding_on_transnational_crime.jpg)

Describing the ‘Organised Criminal Group’ is paramount for legal activities and the United Nations Office on Drugs and Crime (UNODC) has defined it as:

- A group of three or more persons that was not randomly formed.
- Existing for a period of time.
- Acting in concert with the aim of committing at least one crime punishable by at least four years’ incarceration.
- In order to obtain, directly or indirectly, a financial or other material benefits.

However, the definition of ‘transnational organized crime’ encompasses all profit-motivated criminal activities with international implications. There may be activities within a nation, but its affects can be extended towards another nation. Then, these incidents can also be categorised under the TOC. TOC is not reported to any legal body due to the power of illegal groups and almost all the victims engaged in these activities by knowing its illegality. Most importantly, it is difficult to identify what share of the victims is detected and whether these people are representative of the TOC as a whole. Engagement of developed nations and world recognized organisations are also another difficult factor to counter transnational crimes.

World’s Trend on Transnational Crimes

UNODC is the prime world body to act against the transnational crimes. Conducting conferences by gathering all responsible persons from the nations, arranging awareness programmes, developing data banks and publishing reports and magazines are

some of the significant activities against the transnational crimes in the world. A worldwide survey had been conducted in 2010 by the UNODC to identify the existing situation of the transnational crimes and findings were published as a report.

All these findings were developed on the basement of the United Nations Convention against Transnational Organized Crime entered into force in 2003. Main attention was extended to human trafficking, migrant smuggling, heroin trafficking, cocaine trafficking, firearms trafficking, environmental resources trafficking, counterfeit goods trafficking, maritime piracy and cybercrime, during the survey. This became the major source to find global flow of transnational crimes and individuals/organisations who engaged in TOC's. Further simplification of subject made researchers to gain required knowledge easily and 'Transnational Crime' was defined as "any serious transnational offence undertaken by three or more people with the aim of material gain."

Few significant transnational crimes were recognised as a burden for the whole world when compared to the remaining crimes (United Nations Office on Drugs and Crime, 2010):

- Drugs related activities in Central America, the Caribbean and West Africa.
- Collusion between insurgents and criminal groups in Central Africa, the Sahel and South-East Asia.
- Smuggling of migrants and modern slavery in Eastern Europe as much as South East Asia and Latin America.
- Cybercrime treats against all types of activities.
- Activities of pirates.
- Counterfeit goods undermine licit trade and endanger lives.
- Money-laundering and worldwide irregularities in economic sectors.

Also this study has revealed few measures to be taken to minimize transnational crimes in the world. Those are:

- Counter threat by developing networks among neighbouring countries.
- Consider a global threat and counter it with the help of developed nations.
- Disrupt the market not only the criminal groups.
- Strengthening the security and rules of law.
- Maintain a reliable system to evaluate transactions and private details of all bank customers.
- Filter all trade routes as feasible.

Transnational crimes become a headache today for all nations in the world irrespective of its size or power and this can be proved by following statistics:

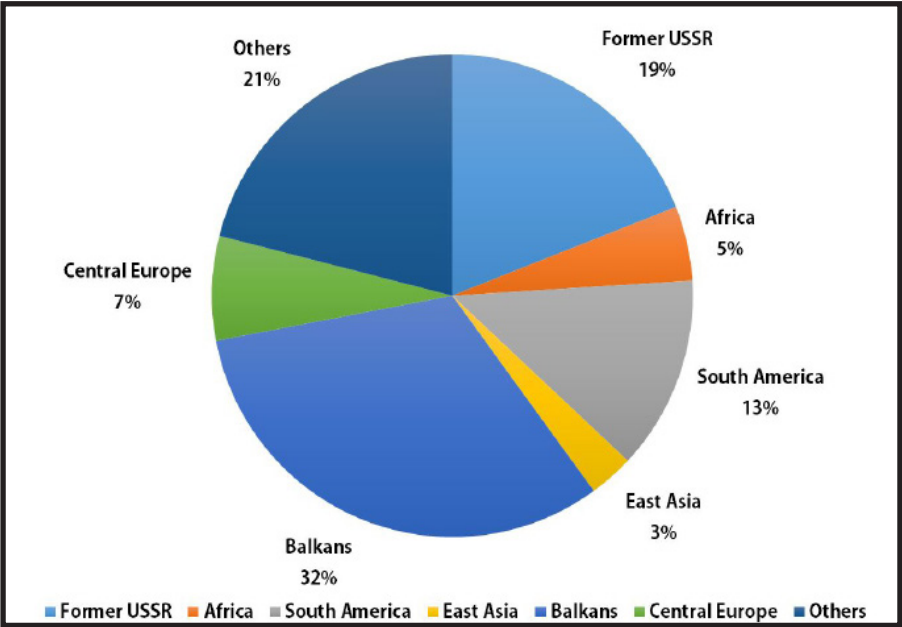


Table 1: Origins of Trafficking Victims Detected in West and Central Europe
(Source: Elaboration of UNODC-UN.GIFT d)

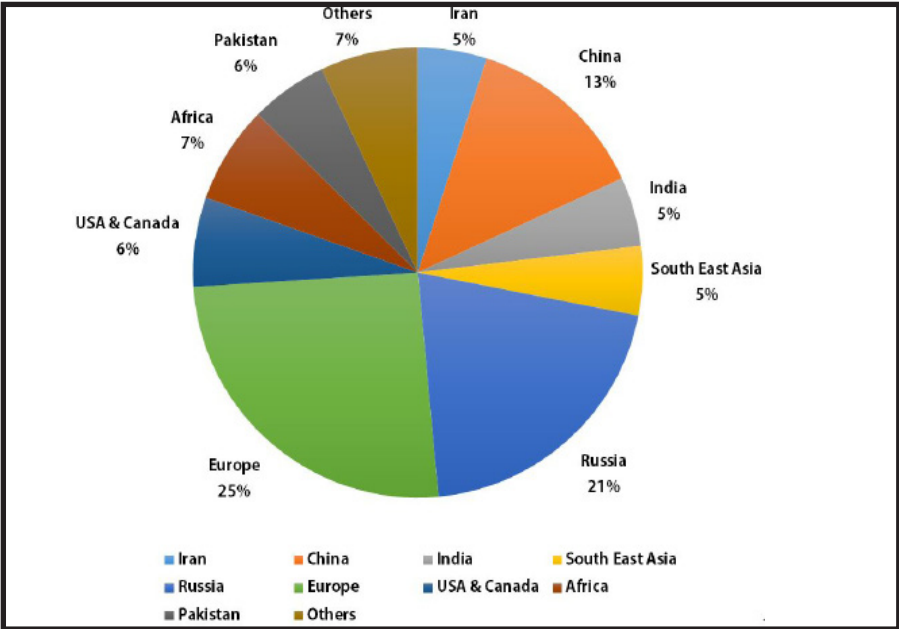


Table 2: Global Heroin Consumption in 2008
(Source: UNODC)

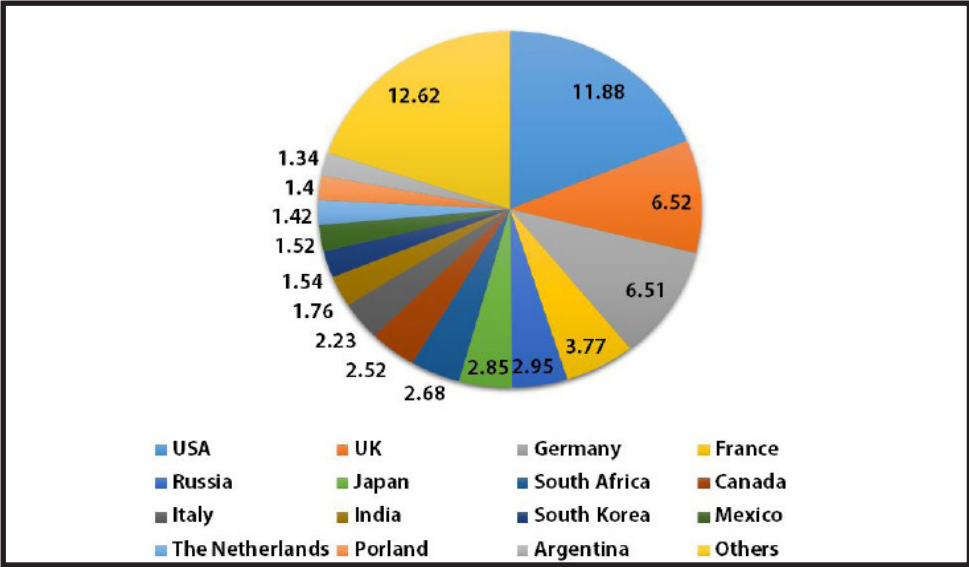


Table 3: Total Crimes in the world in 2002
(Source: <http://www.nationmaster.com/country-info/stats/Crime>)

Transnational Crimes in IOR

The IOR is one of the busiest regions in the world since the past. A lot of explorers and businessmen like Christopher Columbus, Vasco da Gama, Fa-hien, Lourenco de Almeida, Ibn Battuta, Ferdinand Magellan, Marco Polo, Zheng He have visited this region to fulfil their ambitions. ‘Silk Route’ was the main entrance to the IOR in the past and today it is re-defined as the ‘One Belt One Road (OBOR)’ concept of China

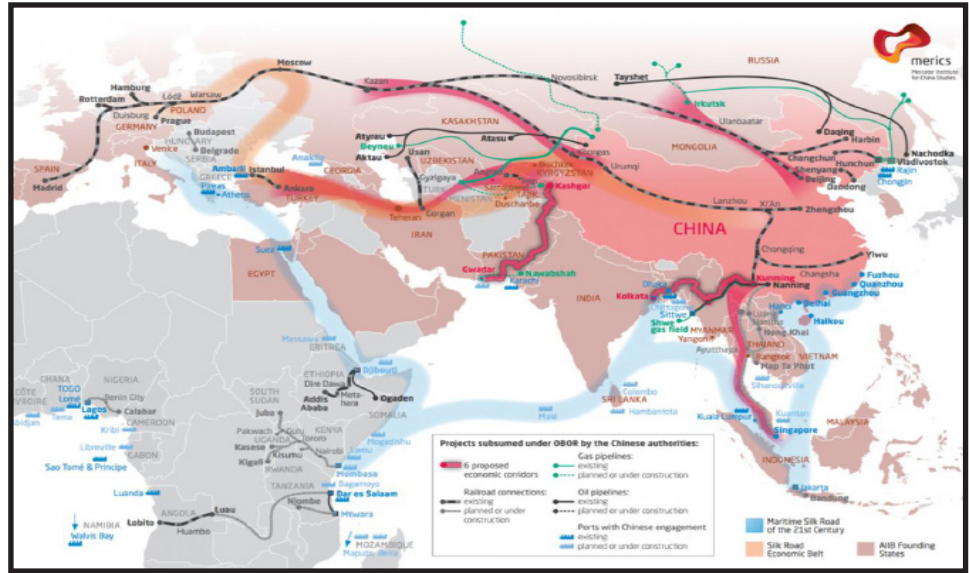


Figure 3: OBOR Concept of China
(Source: <http://combined-transport.eu/wp-content/uploads/2017/01/Bildschirmfoto-1024x694.png>)

The IOR is mainly recognised as a transit hub for most of the transnational crimes. The sea area expanded up to the Antarctic gives the freedom for all criminal gangsters to engage in their illegal activities in secrecy. Level of poverty and internal conflicts within the nations of the IOR are further considerable facts for using this region as a medium by remaining regions for their illegalities. The hidden clashes between nuclear powered nations (India vs. China and India vs. Pakistan) is also another factor for the rising transnational crime rate in the IOR. SLOC in the IOR is the most significant factor and it can be used positively and negatively for the development of the region. Criminals have also very well understood about this phenomenon and use the SLOC to do their illegal activities under the cover of legal movements. For instance, the floating armouries which were freely used by the Liberation Tigers of Tamil Eelam (LTTE) during the internal conflict of Sri Lanka was a headache for all regional countries till they were fully destroyed by the Sri Lanka Navy (SLN).

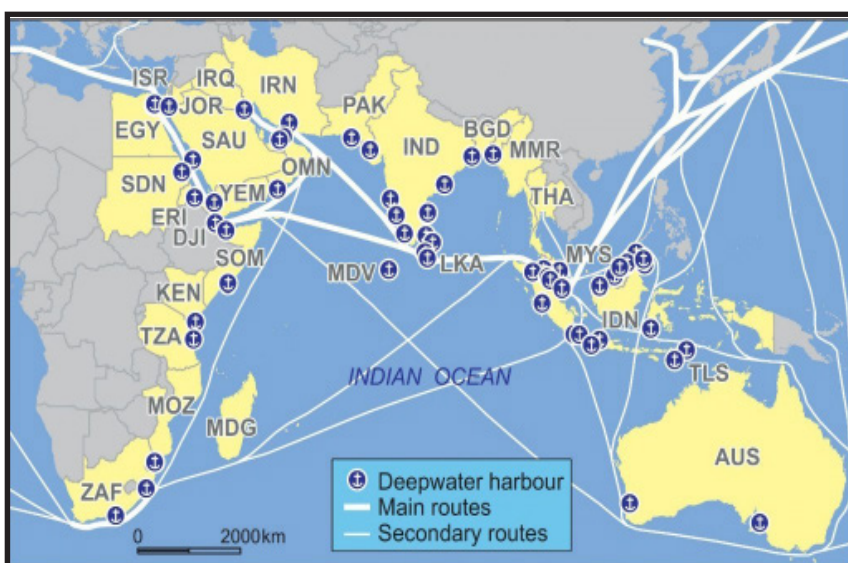


Figure 4: Routes and Harbours of IOR

(Source: <http://www.indiafoundation.in/wp-content/uploads/Map.jpg>)

Even though, The IOR is a common platform for all types of transnational crimes, few salient crimes can be identified in the IOR due to its geographical situation, poverty level and demography. Those are, maritime piracy, Illegal Unreported and Unregulated (IUU) fishing, illicit narcotic and weapon movements, and illegal cross border movements.

Maritime piracy in the IOR was suppressed satisfactorily by coordinated efforts of several nations. The endeavour made by the UN and regional countries to stifle this chaos was remarkable. Hence, the pirates' activities cannot be observed regularly today even in Malacca Strait and Gulf of Aden. Shipping community had to spend more on insurances and ship's safety. Armed security contractors were placed on-board and ships were covered by using 'Concertina Razor wires'. Sri Lanka also earned considerable amount of foreign currency by providing armed security guards during the previous government. Similarly, we had to pay more on shipping activities due to its risk involvement. Though, any pirate attack

has not been reported in nearby seas during recent past, all regional countries had suffered their activities in choke points. Sri Lanka as an island has to develop the economy with the sea. Therefore, SLN and SLCG should be equipped to protect SLOC while maintaining a piracy free region.

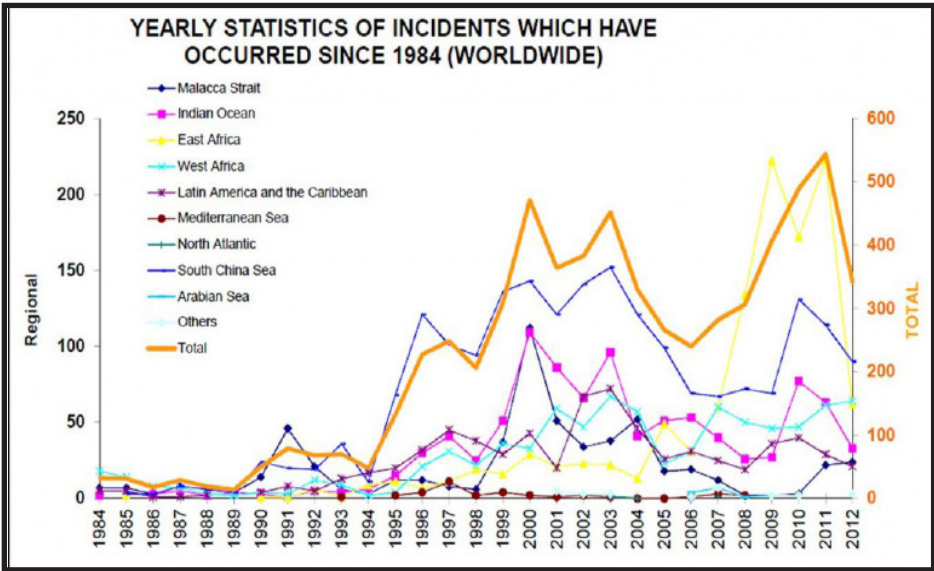


Table 4: Worldwide Attacks by Sea Pirates (1984-2012)
(Source: <http://cimsec.org/wp-content/uploads/PIRACY-Figure.jpg>)



Figure 5: Piracy and Armed Robbery in 2016
(Source: <http://keyassets.timeincuk.net/inspirewp/live/wp-content/IMB-Piracy-and-Armed-Robbery-Map-2016.jpg>)

In the Indian Ocean, a significant amount of catch qualifies as IUU and it has a direct impact on the sustainability of fish stock. Indian Ocean Tuna Commission (IOTC) is the main regional body which was established under the supervision of Food and Agriculture Organisation of the United Nations (FAO) to counter IUU fishing in the region. Though there is a considerable reduction in IUU fishing with these implications, there are still some fishermen who are prone to continue the illegalities. Even the European Union (EU) has imposed a fishing ban on Sri Lanka in 2015 due to IUU fishing and could lift it after a lengthy dialogue process in 2016. Also this is a familiar transportation mode for human smuggling, transfer of illicit narcotics and weapon movements. For instance, the LTTE has used fishing trawlers to transfer warlike materials to land for the suicide missions during the internal conflict of Sri Lanka. Also they have used the same mode to transfer people towards Australia and New Zealand illegally.

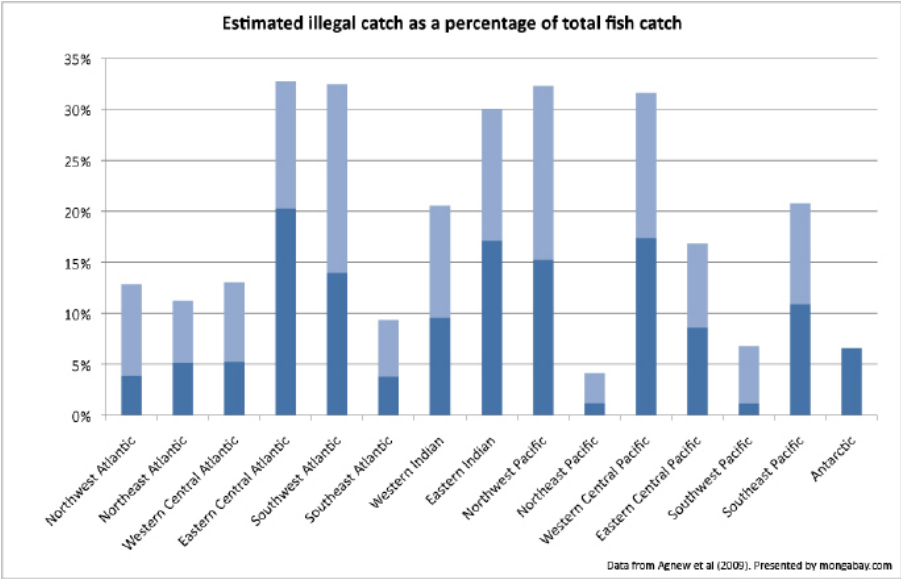


Table 5: Estimate IUU catch as a percentage of total catch
(Source: <https://news.mongabay.com/2009/02/illegal-fishing-estimated-at-10-24b-per-year>)

Sri Lanka has become a transit hub for narcotics due to its noteworthy location in the Indian Ocean closer to the East-West SLOC. This fact has clearly identified by the UNODC and executed several programmes with the support of Combined Maritime Forces (CMF) and the Global Maritime Crime Programme (GMCP) to seize illegal drugs in the region. Also a number of awareness programmes have been conducted by offering prominence to maritime law enforcement, capacity building for purity testing, training in controlled deliveries, establishment of transnational organized crime units and analytical software tools. Sri Lankan government also extended its fullest support to conduct these activities while offering required provisions to the authorities. The Presidential Task force for Drug Prevention (PTFDP) which was established to eradicate this ongoing issue on import, export and usage of drugs; is the best example for the government’s optimistic approach. Through all these measures, Colombo harbour is considered as a safe transit point in the world.

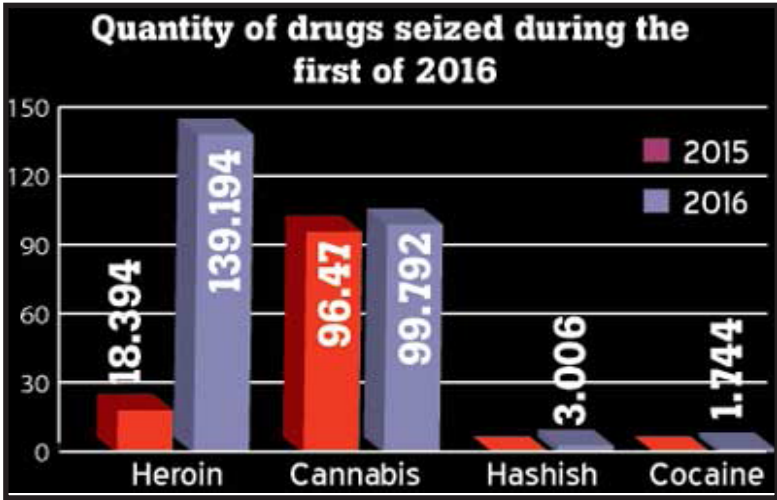


Table 6: Quantity of drugs seized in Sri Lanka during 2015 and 2016
(Source: <http://static.dailymirror.lk/media/images/image.jpg>)

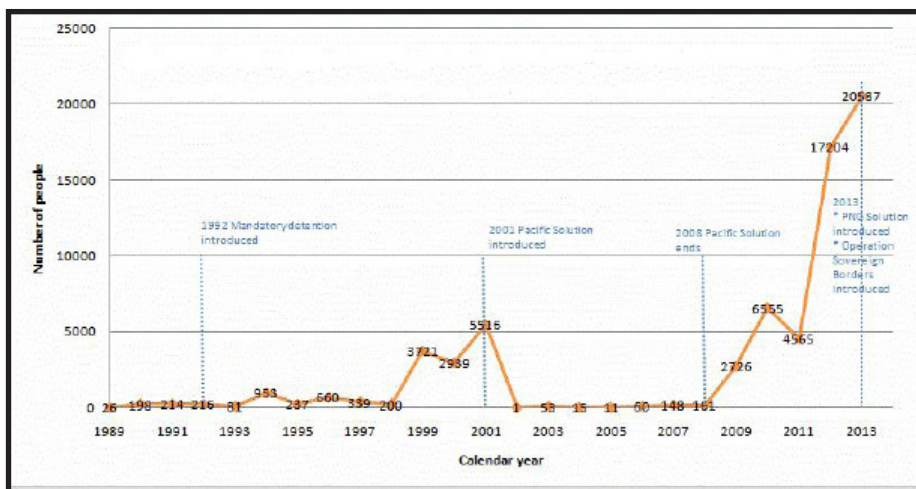
Floating armouries of the LTTE was a disaster in IOR prior May 2009. But SLN had fought bravely and eradicated terrorism from the nation by putting the full stop to LTTE's arms running in the region. But, still the other terrorist groups are maintaining their networks in the region due to the existing internal conflicts and insurrections. Sometimes these weapons are purchased in lawful way, but they are also widely employed by criminal gangs and other illicit actors due to fragile policies of the rulers. Developed countries also need to maintain this market to sell their products and test their weapons. However, Sri Lanka has to maintain the state which was gained by sacrificing lives and resources for three decades to establish sustainable peace.



Figure 7: A huge arsenal of illegal weapons seized by French Navy in IOR
(Source: <http://keyassets.timeincuk.net/inspirewp/live/wp-content/uploads/sites/22/2016/03/Screen-Shot-2016-03-30.png>)

Human smuggling is another familiar activity in the IOR as a result of the poverty. Earlier the trend was towards the Europe and it was shifted towards Australia and New Zealand since 2008. However human trafficking is rare at present though it was common when Europe countries were ruling the countries in the region. After eradicating terrorism from Sri Lanka in 2009, Tamils started to flee towards Australia and New Zealand as asylum seekers. SLN again had to work tirelessly with support of the Australian government to curtail these illegal moves. Even Australia was keen enough to offer two 'Bay class' vessels to SLN to act against these 'Boat People'. However, Australia is also lack of labour force since the country accepts only professionals. For instance, Australians do not like to do labour jobs like cleaning carbon in plants and also they do not have any mean to bring people from other countries according to the constitution. This was the hidden truth and Australia accepted a massive number of 'boat people' for their labour force. Therefore, this transnational crime should also be stopped in collaboration with all the regional nations.

Table 8: Number of 'Boat People' arrived in Australia (1989 to 2013)



(Source: <https://upload.wikimedia.org/wikipedia/BoatArrivals.gif>)

Conclusion and Recommendations

Transnational Crimes is a devastation in the IOR similar to other regions in the world. Poverty level of the people, internal conflicts and vast populations are some of the root causes for these illegal activities. Relevant world and regional bodies are positively acting today to eradicate these disasters and following recommendations can be suggested for further improvements of Sri Lanka as well as the IOR:

- Conduct island wide awareness programmes about transnational crimes and its impact on the nation.
- Develop Sri Lanka Coast Guard (SLCG) and utilize SLN only for naval duties by enhancing blue navy capabilities.
- Discuss the matter bilaterally and multilaterally and implicate decisions to minimise transnational crimes.
- Ensure the safety of SLOC and choke points in the region by deploying

multinational naval task forces at sea and the coast.

- Encourage the deployment of navies of developed nations in IOR with laid down agreements (Eg: The fifth fleet of US Navy in Indian Ocean).
- Positively support the regional bodies to protect the IOR from external forces.
- Conduct bilateral and multilateral military exercises to enhance the awareness and use them practically when required (Eg: Cormorant Strike – Sri Lankan annual joint military exercise).
- Strengthen the legal system and offer required powers to the authorities (Eg: Sri Lanka Police, Sri Lanka Customs, Department of Excise, Department of Prisons, Department of Forest Conservation, Department of Wildlife Conservation, Department Immigration and Emigration and Commission to Investigate Allegations of Bribery or Corruption).
- Maximise dialogues and forums to discuss matter and convey the existing situation to the world and gain required support (Eg: Galle Dialogue, Colombo Defence Seminar, and Colombo Air Symposium).
- Acquire the latest technology as feasible for all authorities to detect and minimise all transnational crimes in the region (Eg: Conduct reconnaissance by using Unmanned Aerial Vehicles (UAV) prior deploying ships).
- Settle maritime disputes peacefully with greater cooperation and collaboration to maintain international legal order.
- International and regional cooperation in maritime law enforcement and combating transnational maritime crimes to maintain order in the regional seas.
- Advanced training should be provided and the capacity of the law enforcing agencies to be enhanced to counter ever increasing technology level of the criminal groups.
- Use armed security contractors aboard vessels transiting the high risk areas as successfully practiced few years ago.
- Enforce the law against corrupted official and all involved despite of the position or rank.
- Efforts should be made to bring ocean industries together, for exploration and sustainable development of mineral resources, fisheries development, aquaculture, underwater tourism, offshore renewables, etc.

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SRI LANKA NAVY ESSAY COMPETITION 2018 -COMMANDER & ABOVE CATEGORY

FORCE STRUCTURING: SHOULD SL NAVY FOCUS ON ACQUIRING THREE DIMENSIONAL CAPABILITIES

Captain(G)SPKathriarachchi,RWP,RSp&Bar,psc,MSc(DS)Mgt,LLB,BSc(DS)hons

**Introduction**

Sri Lanka is an island, located in the centre of the east west nautical corridor across the Indian ocean, dangling down from the southern tip of the regional super power, India. The Indian Ocean is the third largest ocean in the world and the only ocean named after a country; the Indian subcontinent, which has been famously, referred to as Ratnakara "the mine of gems" in ancient Sanskrit literature. Sri Lanka has been the cynosure of all eyes since ancient times for its geo-strategic importance being in the centre of east-west maritime trade route and being the fairly legitimate heir to most portions of this vast, resourceful and ostensibly virgin ocean whose potential is by far at the nascent stages of exploitation by any nation in the world.

Sri Lanka has a proud maritime history which shows that we had maintained maritime links not only with the geographically closest neighbour but with the East, Middle East and the West under varying capacities and interests. The island claims to have the world's fifth largest natural harbour; Trincomalee, where King Parakramabahu I used as his eastern port to launch a successful invasion of Burma in the 12th century. Thus, the island, boasting about more than a 2500 year long written history, shows ever increasing desires to be a fully capable maritime nation giving considerations to its economic ambitions subject to the dynamic world order today. As Sri Lankans, being islanders, we are all children of the sea, travellers since ancient times, unafraid of outward migration and the search for new horizons.

The roots of the modern Sri Lanka Navy date back to 1937 when the Ceylon Naval Volunteer Force was formed and after independence from British colonial rule in 1948. The then incumbent government believed an island nation should possess a strong navy to be its first line of defence. Therefore, on 9 December 1950 the Royal Ceylon Navy was formed and ever since Sri Lanka Navy (SLN) has been contributing to the country in all dimensions of national security besides its classic role of defending the country from any maritime threat. After an outstandingly chivalrous tour of duty during the Sri Lankan War on Terror, through a span of three decades, it has been felt that the SLN needs to revamp its force structure which will best suit the country's futuristic ambitions. Furthermore, Sri Lanka claims authority over a sea area as large as 7 times of its land area and with the claims for Extended Exclusive Economic Zone (EEEZ) it is expected to be increased to 22 times of the land area.

What is meant by a Three Dimensional Navy?

Navy of a country (be it a coastal or a land locked one) has two major constituents viz. the Naval Force and the Merchant Navy, of which, by virtue of its purpose and existence, only the former is permitted to carry guns to the sea immaterial of the size and displacements of its vessels vis-a-vis the latter. Similarly when we speak about a country's navy, it is often and naturally referred to the Naval Force of that country where reference to the other naval element is made with the qualification of "merchant". Navy being the armed maritime force claims to be the only of such kind which can operate within all mediums such as Sea (Surface and Subsurface), Air and Land thus making it unarguably the best suited for interoperability within itself and with their other armed services and the global counterparts alike. A navy is further capable in amphibious operations thereby adding more currency to justify its superiority and being a *sine qua non* in a country's defence forces.

Therefore, depending on the number of mediums it is capable of operating which is classified as a multidimensional Navy. That is to say, other than Surface Ships/craft, having subsurface vessels such as submarines, and naval aviation, will earn a navy the classification of being a three-dimensional navy. However, in some cases, having a fully-fledged naval land forces (Patrolman, Marines or naval infantry and Naval Elite Forces) is referred to as the fourth dimension of a naval force. But in the given case in discussion here, the three dimensions will be Surface, Subsurface and Air where the surface force is constituted of the surface vessels and the naval land forces in toto. By such merit the SLN is a single dimension navy with only surface capabilities; the fleet, naval patrolman, Marines and Special Boat Squadron.

As stated earlier it is clear that we do have a vast ocean area to cover in terms of sea control and sea denial where presence, protection, power projection, deterrence, dominance and law enforcement take precedence. In classifying what navies are, there are not only books but whole libraries have been written on this deceptively simple question. Perhaps the most sophisticated and elaborated one has resulted in a nine-fold hierarchy with "major global force projection navy - complete" e.g. the US Navy, topping the list and running down through the list with "medium global projection navy" e.g. the French and British navies, to the "constabulary" and "token navies" finishing the list. Though this classification is not exhaustive itself, SLN falls under the constabulary category despite its show of unmatched littoral superiority and victory against the "sea tigers" of the then the world's most ruthless terrorist organisation; LTTE.

With all such pride and conspicuous proof, the SLN showed the world what they are capable of with bare minimum capabilities yet with highly motivated, persevering and chivalrous comrades in arms vis-à-vis other top class navies with the pomp of state of the art naval assets struggling hard to achieve in the present largely asymmetric maritime domain.

The maritime environment we live in

The economic, political and military affairs of South Asia are being shaped by the Indian Ocean maritime order which is subject to constant change due to attraction it draws from the countries located around virtually all points of the compass for reasons ranging from very obvious to the ever obscure. The Indian Ocean Region (IOR) comprises of 24 ocean territories, 38 littoral states and 17 landlocked countries. Booming populations, ever increasing demand for energy and other resources, and depletion of such commodities, rising prosperity, organised crime and hegemonic ambitions epitomise the IOR as the most dynamic ocean in the world. Thus the SLN has to deal with such vicissitudes of the IOR. It is always easy to fight with a known enemy yet it is ever so challenging and weary to fight the unseen or unexpected. These challenges are neither totally new nor we are completely ignorant of, but it is something we must be ready for and guard up against.

Geopolitical Landscape

The IOR is getting more and more dynamic with the intervention of super powers and the regional powers into the geopolitical aspirations of the insular actors of the IOR per se. Hegemonic rivalry of Indo-China and other nations taking sides of these two regional giants with Japan and the USA extending their maritime interests interwoven with “isolation policies” or curbing the sphere of influence China is aiming for supplemented by the traditional and non-traditional issues like perennial boarder issues, maritime terrorism, piracy, gunrunning, smuggling, possession of land based Anti-Ship Missiles amongst non-state actors such as Hezbollah in Palestine and Houthi rebels in Yemen as examples, where both groups have used advanced guided missiles to strike coastal shipping and naval vessels – which is a major escalation, drug trafficking, sea pollution, Illegal Unreported and Unregulated (IUU) fishing inter alia make the IOR a repository of challenges to all nations alike. Also it must be brought to the notice, as we are simply “unaware” that navy has to respond to a massive SAR zone for air traffic assigned by the International Civil Aviation Organisation (ICAO).

The country's economic and political aspirations

Given the geostrategic location of Sri Lanka and its potential to prosper with abundant resources both on land and at sea, with impediments of socio-economic and political instability and victimisation of being a proxy of key players in the region, usher in both elements of goodwill and ill-will in varying forms and proportions. It is apparent that Sri Lanka has economic and political ambitions as opposed to military ambitions of other actors. However, National Security can never be compromised as we all have learnt from the past that dignity and freedom have no price. We cannot afford to fight another war as the country's socio-economic and political status quo is in tatters after a series of bitter civil wars.

What the SLN must project?

What must be done must be done today, plan well ahead for the apparent and for unforeseen eventualities alike. SLN must research and understand the requirements in conformity with the National Defence Policy (if there is one) and the political will and economic affluence of the government coffers. The naval policy makers and drafters of the future SLN must prudently and convincingly give more considerations to Asia's naval expansionism, what lies beyond the horizons and beneath the waves, preserving what has been bestowed upon us by the nature. They must not be servile to the political hierarchy or extol their myopic, omniscient bigotry about the national security and endeavour to preserve the dignity of a navy of a maritime nation in projecting its maritime ambitions.

Naval Fleet - Augmentation of the naval fleet with sufficient OPVs, Littoral Combat Ships (LCS), with state of the art Electronic Warfare (EW) capabilities to monitor undesired and potentially prejudicial communications of harmful elements at sea (EW/SIGINT and access to near-real-time/ real time satellite imagery is vital to build a comprehensive situational awareness picture and such capabilities will be more cost-effective and efficient than increasing the number of costly seagoing platforms), and underwater detection capabilities, and required number of FACs with shallow water capabilities is the call of the day rather than going for extremely expensive and underutilised weapons and systems. As the burden on the national defence budget is so high, these requirements must be projected without cynical whims but with due considerations to all aspects of the national aspirations.

On the other hand, it is a known fact that the country's oceanicity is such that two major monsoons namely the North East and South West batter our coastlines and during two seasons of the year. Thus the battle worn limited number of Fast Attack Craft and the Off-shore Patrol Vessels cannot take the brunt effectively. Furthermore, the radar and other sensory capabilities are so limited which even vitiate the surface fleet's efforts. In addition to all such the costs of acquisition of new surface platforms, sensors, their incidental running and maintenance costs are staggering and quite undesirable for a third world country.

Naval Aviation - SLN took a great step ahead in year 2000 by planning to establish its own air wing; NAU or the Naval Air Unit. However, due to various known and few unsayable reasons the efforts couldn't really "get off the ground". But subject to prudent and rational analysis it is deemed high time for the SLN to think about taking the Navy into the air. The Naval Aviation has distinct advantages over a mere surface fleet. They are;

- The ability to cover a large area relatively quickly and effectively.
- Superior Intelligence, Surveillance and Reconnaissance (ISR) capabilities.
- Not often affected by the weather conditions usual in the region.
- Deterrent effect on the potential perpetrators.
- The confidence the sea going vessels' crews will have at times of difficulties.
- Versatility in usage; transportation, deployment of troops, augmenting surface action, fisheries protection, Naval SAR, HA/DR operations etc...
- Bird's eye view of situations can make decision makers' job and command and control much easier.

Many regional Navies have naval aviation as a force multiplier. However, forming of a Naval Air Wing is not that easy as it looks on write-ups on paper. It requires intricate and meticulous planning, large amount of money to acquire Helicopters and Aircraft, train naval aviators and aircraft technicians, building of infrastructure essential for Naval Aviation and all other routine expenses to function it effectively and efficiently. It is also possible to initially go for a joint venture with SLAF and then slowly absorb it fully into the SLN as far as crew training and experience of functioning such will have been acquired by then to an appreciable level. It is worthy to note that all our OPVs and the yet to come have helidecks which are hardly made use of. Such space on a ship is useless if it is not used for the very purpose it exists.

Another alternative is to go for Unmanned Aerial Vehicles (UAV) which will help ISR capabilities with greater stealth and lesser costs and labour. The Chinese PLA Navy, Pakistan Navy, the US, Australian and Indonesian navies and many other navies currently use this technology. As the SLAF has been using this technology for a considerable period, the SLN may get their assistance in establishing their one. There are efforts to build home grown UAV technologies by many: government, private and academic institutions in Sri Lanka. The coastal lines are prone to smuggling and narcotics, especially in the West and North West coasts of Sri Lanka where there is high intensity of fishing activities, it is very effective to use UAVs to spot the culprits without being seen or noticed by them that they are being watched, especially at night. Further UAV's can mount persistent surveillance at a fraction of the cost of employing a number of vessels to cover the given area (cost effective – budget friendly). The ability to transmit real time visuals to the command centres will enhance situation awareness and naval intelligence as well. Can also be used to monitor, guide SLN/CG to intercept and gather evidence for court proceedings on IUU fishing by Indian / foreign fisherman etc...

Submarines - Submarines are extreme war machines. The use of submarines though seem to be easy and very utilitarian at times of conventional war or to leverage naval power even during peace time it is not pragmatic or militarily prudent to think of such for SLN in the foreseeable future. Apart from the daunting costs, the training and ability to rescue if a submarine is in distress and above all the utility and relevance in the present context is against the national requirement and to the SLN's ability to counter the public outcry opposing such enterprise is untenable. Thus it is hopeless and unworthy to think of such at this juncture. Submarines will end up being white elephants – due to enormous servicing and operational costs. Sri Lanka cannot afford to make ill-advised acquisitions which will have little operational outcomes and very low operational readiness and availabilities. Only concern can be to acquire more sonar and underwater detection capabilities for OPVs so as to keep our waters safe from intruders and maintain the maritime legal order under the UNCLOS III.

Naval Infantry - Coastal defence has been another rather different emphasis in the development of thinking about maritime operations and it has tended to be of particular interest to weaker and smaller navies. Even though the naval infantry is not considered here as a dimension in naval force structure, it is imperative to note that with the advent

of SLN Marines the naval patrolman branch will be moribund soon. Nonetheless, there are many virile officers and men who can fit into the ranks and files of the Marines and do a more effective infantry role. They must be geared with amphibious capabilities such as Light Landing Craft Air Cushioned (LCAC), Air Boats, Amphibious Tanks, Armoured Personnel Carriers (APC), All-Terrain Vehicles (ATV) for mounted reconnaissance on coastal terrain as dismounted reconnaissance is very less effective/efficient and Tracked Articulated Vehicles such as Bv 206 so that they can establish firm foothold on the vulnerable points along the coast and even marshy and muddy land areas where disaster response by another force is arduous and less effective. As the role of the Army is being diversified and focused into more HA/DR roles, it is the naval infantry that must be improved and enhanced with capabilities to do amphibious and inland operations. Also the Marines can be rapidly deployed overseas for HA/DR missions to assist regional friends which will in turn improve Sri Lankan Soft Power.

Recommendations

Pondering about the above depicted facts and reasons, it is quite rational and prudent to make the following recommendations.

- Acquire sufficient number of surface vessels from friendly countries without placing the entire naval modernisation in the hands of one country where a break in diplomatic ties can cripple the entire fleet if spares and other services are stopped. In the future when funding is more available, SLN can embark on a planned acquisition system, where the SLN will get shipbuilders to compete to design and build LCS / OPV and other specialised vessels.
- Should maintain non-aligned policy and must navigate carefully in the efforts to modernise the SLN; if not it might ruffle a few feathers in the “closest neighbour’s” defence headquarters.
- Conduct research into acquisition of air assets focusing on existing logistical, training and maintenance chains by the SLAF to reduce start-up cost and modernising the naval infantry with minimum budgets without compromising the defence requirements.
- Draft a suitable Naval Doctrine for the next 20 years which shall be reviewed periodically to suit the changing order.

Conclusion

Sri Lanka is a third world country which has strong economic ambitions over military ambitions to be a formidable navy emulating other affluent naval powers. SLN must work out its plans to form a Naval Air Wing along with a UAV command. It is not prudent to think of acquisition of submarines as it falls short of our naval strategy. Submarine acquisition at this stage will financially cripple the country for many years which is deemed an unwise move. Navy must focus on going two dimensional instead of becoming three dimensional which is far unrealistic at this juncture. The Naval infantry need to be modernised to suit any asymmetric threat from seaward and to establish

substantial coastal surveillance and defence to support maritime operations at sea and HA/DR Operations.

However, modernising the navy comes at an overwhelming cost which has to be justified against the results expected to be reaped. Meticulous and intricate planning subsequent to research into various areas and consultation of defence policy makers are of extreme concerns, if not the future recorder of the SLN might well say that the SLN failed because it could not adapt to the changing demands in the country and the region especially after the war.

PICTORIAL



Figure 1: ATV with Tandem Seating



Figure 2: BV 206 crossing swampy boggy terrain. Very useful in HADR. STF got one during Tsunami



Figure 3: Air Boats for Naval Infantry for the use in shallow, swampy and inland water ways.

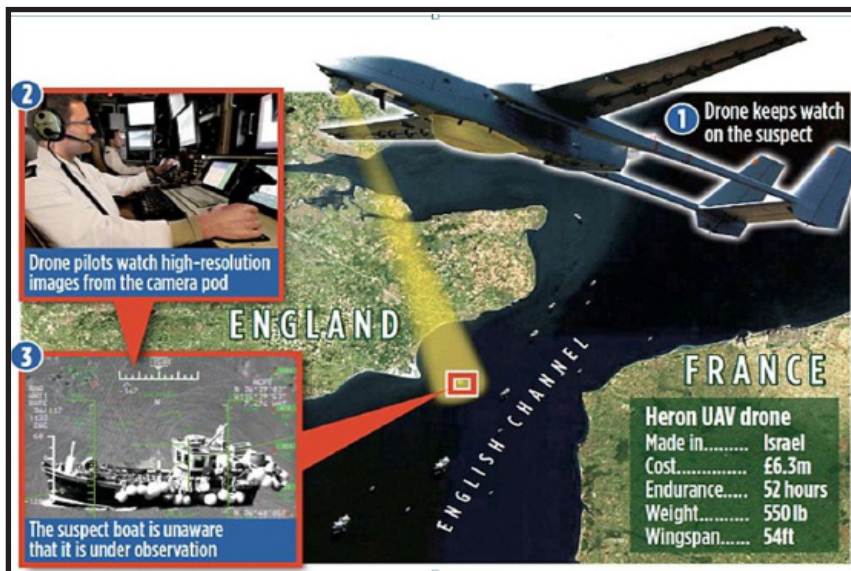


Figure 4: Use of UAVs as a force multiplier cum a deterrent.

SRI LANKA NAVY ESSAY COMPETITION 2018 -LIEUTENANT COMMANDER & BELOW CATEGORY

IUU FISHING IN THE PALK STRAIT: CHALLENGES TO SRI LANKA NAVY AND WAY FORWARD

Lieutenant Commander (G) WMS Chinthaka, RSP & Bar



"Illegal Unreported and Unregulated (IUU) fishing is a global problem in the present world. According to the United Nations Food and Agriculture Organization's (UNFAO) records, this unlawful act is committed increasingly by the people who engage in fishing all over the world."

Introduction

The Palk Strait is an inlet of the Bay of Bengal which is surrounded by the two neighboring states of Sri Lanka and India. This marvelous water stretch can be seen as shallow semi enclosed sea water strip and it is separated by the mutually agreed and clearly demarcated International Maritime Boundary Line (IMBL) which divides both territorial waters of neighbors. This water strait is 40 to 85 miles wide and 85 miles long. The depth is always less than 20m and the sea bed is endowed with three marine eco systems of Corals, Sea Grass beds and Mangroves. In addition to that, this shallow water stretch is splendid with variety of sea mammals (Kariyapperuma, P. 2016). Some marine species play an essential role to keep the stability of marine eco systems in the sea area and some species are economically of high value in terms of sea food production.

Illegal Unreported and Unregulated (IUU) fishing is a global problem in the present world. According to the United Nations Food and Agriculture Organization's (UNFAO) records, this unlawful act is committed increasingly by the people who engage in fishing all over the world. The way of fishing in the Palk Strait without considering territorial rights of neighbors is the existing problem that has been raised today. Comparatively, though it is a limited sea area for both countries, the important factor of this area is the high density of expensive fishing harvest available throughout the year. A large numbers of fishing cluster from the Tamil Nadu trespass through the IMBL, claiming their traditional rights to fish in the Palk Strait, has not decreased yet. Claiming of their traditional rights to fish in Sri Lankan waters is not a matter to excuse them. According to the agreement of 1974 and 1976, the government of India does not allow their fishers to cross the IMBL. However, the problem exists yet. In this paper, the writer attempts to elaborate the nature of this issue and prospects to effectively control this situation from the side of Sri Lanka Navy.

Illegal Unreported and Unregulated Fishing

IUU fishing can be recognized as one of the major threats to the marine bio diversity and it has long term effects on the sustainable fisheries in the world's oceans. As

a matter of fact, most of the fishers from the coastal states are practicing this unlawful act as a trend without adhering to the rules and regulations implemented by the National and International levels. It is not confined to the fisheries in high seas. It also occurs in the Exclusive Economic Zone (EEZ) or territorial waters by the national or foreign vessels in an area of particular coastal state or any sea area in the world (Fao.O, 2017).

According to the definitions published by various sources, the meaning of IUU fishing is as follows;

Illegal Fishing - refers to activities; “conducted by national or foreign vessels in waters under the jurisdiction of a state, without the permission of that state, or in contravention of its laws and regulations”

Unreported Fishing - refers to activities; “which have not been reported, or have been misreported, to the relevant national authority, in contravention of national laws and regulations”

Unregulated Fishing - refers to activities; “In the area of application of a relevant regional fisheries management organization that are conducted by vessels without nationality, or by those flying the flag of a state not party to that organization, or by a fishing entity, in a manner that is not consistent with or contravenes the conservation and management measures of that organization” (Imcsnet.O, 2017).

There are many advantages to practice IUU fishing all around the world. Fishers tend to net large fish catch using various illegal means and methods involving high technology than the traditional methods used in the past. We cannot expect all fishing activities are done in a responsible manner unless otherwise implementing proper and practical rules and regulations and continuous supervision by the national and international levels. Some fishermen and fishing communities are not respecting the rules and methods governing fishing. They often unmannerly breakup the rules, which are not applicable to fishing gear, fishing methods and fishing areas. Some of them use of destructive methods like chemical or explosive devices expecting to catch easily and a large quantity, failure to report their harvest to the proper authority, use of unauthorized types of nets, practicing of bottom trawling are popular activities that are taking place everywhere in the world (Colombage, J. 2012).

Sovereignty and beginning of Disputes

The relationship between these neighbors runs back to the past few centuries and goodwill and the cordial relations have been maintained through this small narrow sea strip. Both countries used this sea strip freely and shared its resources and fishing was one of the main livelihoods of the people in states of Tamil Nadu and the Northern part of Sri Lankan. Even before the United Nations Convention on the Law of the Sea (UNCLOS) came into force, these two governments concluded the IMBL agreement and demarcated their territorial waters. In this agreement, the island of Katchatheevu belonged to the Sri

Lankan waters. Later, this created a big issue in the state of Tamil Nadu and they were always blaming the Central government of India for this island that has been ceded to the Sri Lanka without any concern for the state of Tamil Nadu (Colombage, J. 2012).

Earlier, both the parties engaged in traditional fishing methods. When the upgraded fishing trawlers have been introduced by Tamil Nadu, first they started to venture in their waters for a period of time. However, high density of fishing vessels within that small stretch resulted depletion of fish stock in their area. Lack of fish catch made them gradually entering the Sri Lankan waters crossing the IMBL. With this move on, the fishers from the Northern Province of Sri Lanka faced much difficulty to challenge this huge fishing crowd with their traditional fishing methods. They found fishing in the Palk Strait with old methods was not an easy task and it was a threat to their lives and their boats. Ultimately the result was that this sea area was dominated by Tamil Nadu fishers (Goonetilleke, B. and Colombage, J. 2016).

Poaching in
Sri Lankan
waters

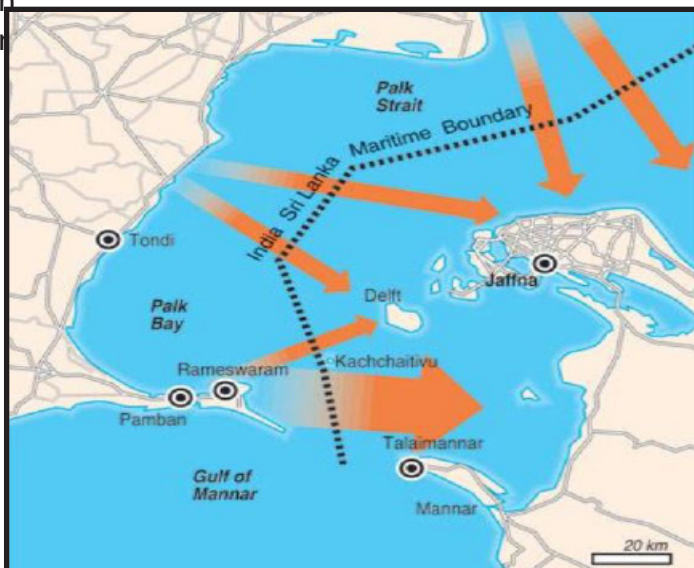


Figure 1 – Palk Strait and IMBL

Source: Chellappan, K. (2016). Indian fishermen poach in SL waters, and it is illegal Period. The Sunday Times, [online] p.1. Available at: <http://www.sundaytimes.lk/> [Accessed 14 Sep. 2017].

The cause of fishing dispute is large as a numbers of Tamil Nadu fishing vessels enter Sri Lankan waters each week and engage in unauthorized destructive bottom trawling and poaching the marine resources. Basically, it haphazardly dominates the Sri Lankan waters and avoids fishing for the locals. As described above, the fishermen from Northern Province find it extremely difficult to do fishing on days they trespass the IMBL. Sri Lankan fishermen complain this issue always to the relevant authorities of both countries. However, the truth is this large fishing fleet seriously disrupting livelihood

of people in the Northern Province in Sri Lanka. At present, this has become a multi-dimensional issue (Chellappan, K. 2016).

According to the Fisheries expert Dr. Steve Creech who addressed the forum- “India-Sri Lanka relations in the 21st century” - organized by the Bandaranaike Centre for International Studies (BCIS), Tamil Nadu fishing trawlers engage in fishing in Sri Lankan waters is the best example of IUU fishing. Also he has mentioned that the seafood companies of Tamil Nadu exports US\$ 41 million worth seafood per annum from the harvest obtained by the Tamil Nadu fishing trawlers owned by the politicians of Tamil Nadu. Further, there are 34 European Union registered exporters and they export their products from Tamil Nadu as “Product of India Seafood”. When this issue comes to the legal aspect, these alleged Tamil Nadu fishermen are often remanded for the offence of only violating boundary line under the Immigrants and Emigrant act of 1948 government of Sri Lanka rather than illegal fishing. That means this punishment is of very little action and it is high time to enact laws for IUU fishing in Sri Lanka (Nafeel, N. 2016).

Challenges to the Sri Lanka Navy

Coastal countries are susceptible to the impact of verity of activities out at sea in their boarders. Those sea boarders may be at risk from intense economic activities, natural resources, strategic impotency, political situation and social activities of the particular country. The security of a country may be influenced by different types of domestic factors as well as the condition of the neighboring country. It is clearly visible that due to this traditional and long term fishing dispute, the people who are living in Northern part of Sri Lanka are severely affected. Even though this issue existed for several decades, its appearance has changed to affect Sri Lankan fishermen when the Tamil Nadu fishing Trawlers started to use mechanized bottom trawling gear and ventured into the Sri Lankan waters. This action can be clearly defined as a violation of territorial rights of Sri Lanka and engaging in IUU fishing. Sri Lanka Navy (SLN) is the first responder to this issue. The primary role of the SLN is to defend the country from all threats both internal and external, maintaining the interest of the nation, its sovereignty and territorial integrity.

Traditional Challenges

Border Security - Trespass the IMBL by the Tamil Nadu fishing trawlers is a serious threat to maritime security of Sri Lanka. Irrespective of the agreements of IMBL, these fishermen and the trawlers regularly cross the boundary line in large numbers causing threat to Sri Lankan boarder security. Clearly it is a breach of the agreement by the neighboring state. From the point of view of Sri Lankan security, this substantial threat is directly related to the Sri Lankan Navy. Arresting the border violators from time to time on the ground of illegal act is not a permanent solution. Therefore, the Sri Lanka Navy has a major responsibility to protect its border against the illegal acts of Indian poachers.

Territorial Integrity - Territorial Integrity of a particular state is clearly defined in the International law where a state is considered as a person, who is subjected to international

law. Accordingly, a state has to have the following factors to be recognized as a state: “Permanent population, Define territory, Government capacity to enter in to relations with other states” (Adams, M. 2015). Therefore, it is evident that this fishing issue makes much impact on territorial integrity of Sri Lanka. As a first line of defense, the SLN has shouldered responsibility to maintain and safeguard the territorial rights of the country.

Sovereignty - The Treaty of Westphalia is the forum which introduced the sovereignty of a state in 1648, for the first time in the world. Basically it is “a system of political authority based on territory, mutual recognition, autonomy and control” (Adams, M. 2015). Accordingly the definition of a sovereign state, the state has rights to govern the people within its boundaries and do everything necessary to govern itself. But the Indian poachers continue to cross the IMBL freely, violating the territorial rights of Sri Lanka. As the first responder to this issue, currently the SLN has faced many difficulties both politically and on diplomatic levels whilst arresting these illegal poachers. Also the politicians in Tamil Nadu take this point as an opportunity to interfere in domestic affairs of Sri Lanka as well as to gain their hidden political agendas.

Citizen Security - Citizen Security is the security of individual or group of people against threat of crime or violence which are insecurity to the people in the society. This may associate with criminal behavior or organized crime (Adams, M. 2015). When concerning about this fisheries issue, the people who are living in the Northern part of Sri Lanka are the most affected victims under this citizen security. On trespassing of large amount of fishing vessels deep into the Sri Lankan waters, many illegal activities such as illegal fishing, smuggling of narcotics and cannabis, illegal migration and gun running are taking place. These activities are potential factors that may unstable the security of people. All these activities are taking place in the sea while the SLN continues to be the responsible party.

Political mileage over fishing issue - From the political point of view, this issue has widely spread internally in both the countries. It is a complex and with ethnic, nationalist and caste issues which are the leading factors that make this a morass. Often, the State of Tamil Nadu complains that their poor fishermen are severely suffered by the enforcement measures taken by the government of Sri Lanka. However, the fact is all most all people who are engaged in bottom trawling on board trawling vessels are contracted employees and these fishing vessels are owned by the large-scale businessmen who are close to the political hierarchy of this state. These vessels are targeting on specific type of fish catch. Mostly they concentrate on Prawns; it makes millions of dollars in USA, Japan and Western Europe markets. Therefore, Prawns fishing is attracted by many non-fishing communities to invest their money as it is a profitable venture. As a result, the number of fishing trawlers increases enormously. The factor here is once the Sri Lankan authority arrests these vessels poaching within the IMBL of Sri Lanka, there are large scale protests organized in Tamil Nadu and letters are written to the central government demanding necessary actions. In order to maintain the goodwill of neighbors, Sri Lankan authority releases the offenders and their boats to Indian Coast Guard at IMBL at regular intervals. This process is continued as a routine for a long time without a permanent solution for

both parties (Goonetilleke, B. and Colombage, J. 2016).

Marine Environment Conservation- It is obvious that the use of bottom trawling gear for the fishing causes serious damage to the marine eco system in the area. The mechanism of bottom trawling is designed to catch large quantities of fish by dragging weighted nets along the sea bed. These nets crush and smash everything on the path and haphazardly swallow large quantities of marine life. Further, this process endangers the fragile eco systems like rare coral reefs and marine species in a minute (Goonetilleke, G. 2016). Therefore, the responsibility comes to the SLN to control this destructive fishing method in order to protect the country's natural resources.

Operational Challenges

Lack of Infrastructure Facilities - Presently, most of anti-poaching operations are conducted by the SLN from the Northern Naval Command and North Central Naval Command. Frequently these operations use Fast Attack Crafts (FAC), Inshore Patrol Crafts (IPC) and Cedric Crafts due to the availability of vessels in SLN and other geographical constraint in the area. All these types of crafts have been designed for the close quarter battle purposes and mostly those craft are made of Aluminum or fiber materials. When these craft engage in anti-poaching operations they experience many difficulties in front of trawlers which are manufactured with strong hulls. Further, the SLN craft are not that much stronger to deal with fishing trawlers or to maneuver in rough sea conditions. However, a necessity has arisen to obtain specifically modified vessels to be used for effective anti-poaching operations in SLN.

Lack of Specific Training - Many incidents take place during anti-poaching operations. Among them injuries to the naval persons, damage to the SLN craft, damage to the foreign fishing vessels by SLN personnel, injuries to the fishermen etc are common. Further, it is found that there is no specific training program given for the personnel who engage in these duties serving FAC, IPC and any other vessels. Therefore, it is high time to introduce specific training programs for all SLN personnel who engage in anti-poaching operations.

Lack of Berthing Facilities in the area - The small harbour of Kankesanthurai is the only harbour available for Northern Naval Area and North Central Naval Area. The pier at Tallaimannar also shares limited berthing facilities for the SLN ships/ crafts. Basically that pier is opened to the Palk Strait and effectively it can be used only during one monsoon. Therefore, currently the SLN ships/ crafts face many difficulties while berthing in this area. Also, periodically this issue arises when finding berthing facilities for the arrested foreign fishing vessels.

Night Capabilities of SLN Vessels - It is observed that the Tamil Nadu fishing vessels mostly operate in Sri Lankan waters during night time. The SLN vessels experience many difficulties to control the incoming foreign vessels during night time because of poaching vessels coming in large numbers at a time and behave in an aggressive manner to find their harvest in their own way during their venture. Due to this reason, to control this

situation effectively, the SLN ships and craft have to operate very closely to these fishing vessels with advanced technology.

Sea Blindness - Comparatively Sri Lankan fishermen have not yet reached up to their maximum fishing harvest level by using their available resources. Because of this, foreign vessels have begun to venture into these areas presently. Lack of technology, attitude of fishermen, lack of proper guidance and instructions, inadequate support from the government are the major factors that aggravate this situation. Dominating foreign fishing vessels in Sri Lankan waters have a much impact on the national security of the country. Therefore, the SLN has to pay much attention to look after this serious matter.

Security of Local Fishermen - As described above under the third topic, currently fishing in the Palk Strait has been almost dominated by the huge Tamil Nadu fishing crowd. Besides, there have been several incidents reported on the security of local fishermen that they are frequently being harassed by the Tamil Nadu fishermen. Therefore, directly the responsibility lies with the SLN as long as the security of local fishers, is concerned.

Way Forward

As a way forward for this long term contentious issue, it is recommended that the SLN has to initiate and continue with following measures;

- Conduct joint well-coordinated regular patrols from both navies and Coast Guards.
- Joint monitoring from both parties.
- Avoid bottom trawl fishing with maximum force.
- Enhance existing intelligence process in this area by introducing specific intelligence training and equipment.
- Introduce specific anti-poaching training program for naval personnel who perform duties on board Fast Gun Boats, FAC, IPC and Cedric Craft.
- Enhance the basic knowledge on the importance of marine conservation in this region for naval personnel who engage in anti-poaching duties.
- Modify or introduce new specific vessels suitable for anti-poaching operations.
- Actions need to be initiated to reduce damages to the SLN vessels by increasing night capabilities and high endurance.
- Develop proper berthing facilities in this area for SLN vessels to be compatible with seasonal changes.
- Improve communication between SLN and local fishermen.

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TRANSNATIONAL CRIME IN THE IOR AND SRI LANKA'S RESPONSE

Captain (SL Army) WASL Wickramasinghe



Introduction

Seas and oceans are increasingly being understood to be drivers for the economy. Indian Ocean nations are demonstrating interest in devising strategies to create sustainable jobs and economic growth based on the sustainable use of the resources of the sea. The Indian Ocean has enormous potential for harnessing economical resources. Fisheries, offshore oil and gas, marine-based tourism and maritime industries are already making a significant contribution to the economies. Contemporary global environment is driven by economic and export led development. Globalization has enhanced the interdependencies between nations and there is considerable concurrence amongst security analysts, that though conventional conflict, if not a thing of the past, is extremely unlikely. So this interdependence has resulted an increased transnational crimes in the Indian Ocean.

The spectrum of the topic is large. Because of that the topic, Transnational Crimes in the Indian Ocean Region is discussed under few sub topics and few stages. The initial part of the essay deals with the concept of Indian Ocean, transit routes of the region, their geographical importance and main ports and Habours in the Indian Ocean Region. The second part of the essay deals with what the transnational crime concept is and what are the transnational crimes occurred in the Indian Ocean region. In the third stage the essay addresses the role and response of Sri Lanka to avoid transnational crimes in the Indian Ocean region. Finally the essay deals with the conclusion.

Indian Ocean Region

Indian Ocean Region covers diverse areas of rich ocean cover spreading over three continents and serves as a major link for trade, investment and technology cooperation between the littoral states. The countries in the Indian Ocean Region had very strong civilizational linkages manifested in maritime trade, cultural exchanges, tourism and pilgrimage, diplomatic relations and so on. Indian Ocean is a major sea route for the world connecting India, China, Far East, East Africa, South Asia and the Middle East. The Indian Ocean maritime system linked the lands bordering the Indian Ocean basin and the South China Sea. When it comes to trade of the Indian Ocean region, trade took place in three distinct regions. The first one is the South China Sea, dominated by Chinese and Malays and the second one is Southeast Asia to the east coast of India, dominated by Malays and Indians and the third one is the west coast of India to the Persian Gulf and East Africa, dominated by Persians and Arabs.

Geographical importance of the Indian Ocean region

As far as Indian Ocean is concerned one third of the world population lives in the region, including one quarter of the united nation members and most of the third world countries. Geographically, Indian Ocean area is 70.56 Million sq. km and it is covered by the third largest water body on the earth, washing the shores of 3 continents India, Australia and Africa, and covers around 2% of the earth's surface.

Indian Ocean contains a great degree of wealth in the form of abundance of oil, natural gas, minerals. The littorals contain more than 2/3 oil reserves, 35% of world's gas reserves and 60% of uranium and 40% of gold and 80% of diamond deposits and large variety of other mineral substances, oil, iron ore, tin, bauxite, gold, diamond, manganese, uranium, and chromium. More than 80% of the hydrocarbon requirements of the global economic powerhouses like China, Japan, South Korea and India are met from the imports from the Middle East which traverses through the Indian Ocean. Interestingly while 40% of the global trade passes through the Indian Ocean only 20% is conducted among the littorals while 80% is carried out by the extra regional countries.

Main ports and harbours in the Indian Ocean Region

There are some important main harbours and ports in the Indian Ocean which are doing a great assistance to the economical and marine activities in the Indian Ocean Region. The Port of Singapore is the busiest port in the Indian Ocean, located in the Strait of Malacca where it meets the Pacific. Mumbai, Trivandrum, Chennai, Kolkata, Kochi, Mormugao Port, Mundra, Panambur, Hazira, Port Blair, Alang, Visakhapatnam, Paradip, Ennore, Tuticorin and Nagapattinam are the other major ports in India. South Asian ports include Chittagong in Bangladesh, Colombo, Hambantota and Galle in Sri Lanka, and ports of Karachi, Sindh province and Gwadar, Balochistan province in Pakistan. Aden is a major port in Yemen and controls ships entering the Red Sea. Major African ports on the shores of the Indian Ocean include: Mombasa (Kenya), Dares Salaam, Zanzibar (Tanzania), Durban, East London, Richard's Bay (South Africa), Beira (Mozambique), and Port Louis (Mauritius). Zanzibar is especially famous for its spice export. Other major ports in the Indian Ocean include Muscat (Oman), Yangon (Burma), Jakarta, Medan (Indonesia), Fremantle (port servicing Perth, Australia) and Dubai (UAE).

Transnational crimes which are being occurred in the Indian Ocean Region

An activity which damages or destroys society, people or security of a country is known as a transnational crime. Because of the geographical importance and the other strategies such as economic importance, Indian Ocean has been a paradise for all the transnational crimes which are happened in the Indian Ocean. When we consider the transnational crimes which are being occurred in the Indian Ocean region, the following crimes can be considered as the major ones;

Maritime Terrorism - When the transnational crimes are concerned maritime terrorism takes the most important place among the other crimes. Maritime terrorism was prevalent in the region and Indian waters since mid-1980, due to the absence of an effective maritime safety mechanism. Cross-border terrorist networks are operating across the middle-East, Central Asia, South Asia, and South East Asia. Among the few terrorist organizations which have acquired maritime capabilities, the Liberation Tigers of Tamil Eelam (LTTE) stood as the most effective group until their defeat.

Drug Trafficking - The 2014 'World Drug Report' provides details pertaining to the regional trend in drug use. The data pertaining to Asia suggest that consumption of illicit drugs is at levels similar to or below the global average. Drugs can simply defeat a country without waging a war. The damage caused by drugs to the younger generation is enormous and irreversible.

At the same time during the civil war from 1983 to 2009, the influence of number of factors, both inside and outside the country, helped to create an environment in Sri Lanka that was highly conducive to drug trafficking. Those factors included poor border policing, the internal instability engendered by the Tamil insurrection, and the closing off of the traditional drug routes to Europe by the Afghan-Soviet (1979-1989) and Iran-Iraq (1980-1988) wars.

The drug is smuggled into Sri Lanka for both domestic use and transshipment along the route to Europe via Colombo and the Maldives. The two main entry methods used are via fishing boats from southern India (specifically Andhra Pradesh, Karnataka, Tamil Nadu and Kerala) across the Palk Strait to the west coast of Sri Lanka (Mannar, Kalpitiya, Negombo and Mullaitivu) or through couriers on international flights from Dubai and Pakistan, especially via Bandaranaike International Airport. Kerala is also known as the main transit hub of drug trafficking in the Indian Ocean region. Mainly few types of drugs have been exchanged through air and the waters of the Indian Ocean. Such as,

- Heroin

Heroin trafficked through Sri Lanka originates mainly in the 'Golden Crescent' area of Central and South Asia, and is often in the refined 'brown sugar' form. Smaller quantities of heroin and opium from the Golden Triangle region of Southeast Asia may also be involved. Between 2006 and 2012, heroin was the second most seized drug, by quantity, in the country.

- Cannabis (ganja/kansa)

Cannabis (known locally as 'ganja' or 'kansa') is the only drug known by authorities to be grown inside Sri Lanka, and it appears that it's almost entirely produced for domestic consumption. Official government figures on the quantity of drugs seized by law enforcement agencies indicate a steady increase between 2006 and 2011, with a decline soon afterwards. Between 2006 and 2012, cannabis (including hashish) was the most commonly seized drug in Sri Lanka.

- Cocaine

Cocaine doesn't appear to be a major issue in Sri Lanka, and the UNODC noted the drug's 'limited presence' in South Asia in a recent report. Sri Lankan Government data indicates that seizures of cocaine have increased significantly since the conclusion of the civil war, although the quantities involved are comparatively modest

Arms Smuggling - Illegal smuggling of weapons has become a serious security issue in the Indian Ocean Region. There is enough evidence to prove the links these weapon smuggling groups have with pirates, human smugglers, terrorists, drug traffickers, document fraud, money laundering and various other transnational crimes. When these weapons are smuggled via sea routes, apprehension becomes a mammoth task due to the vastness of the ocean space. This is a challenge we all need to address in a coordinated manner by way of sharing our resources, intelligence and information.

Throughout the civil war, arms smuggling in Sri Lanka was largely dictated by the LTTE's military requirements, which were met through a global network of front companies, freighters and logistics bases. Arms smuggled during that period included small arms, light weapons, ammunition and explosives, and dual-use equipment.

Maritime piracy - So far in 2015, 250 crew members have been taken hostage, fourteen assaulted, ten kidnapped, nine injured and one killed. Prior to Somali piracy, many ships used to call on a number of ports in the eastern coast of Africa. As piracy began to spread in the Somali waters, ships began to reroute towards harbours in the West. The Colombo port was benefitted immensely due to this.

Illegal Unreported and Unregulated (IUU) Fishing - There have been problems relating to the Illegal Unreported and Unregulated (IUU) fishing in the region. Sharing of fishery resources with neighboring countries, for instance, the intrusion of Indian fishermen in Sri Lankan waters is a huge challenge for the Sri Lankan navy. The eradication of the LTTE provided a greater leeway for fishing in territorial waters. Sri Lanka needs to capitalize in this regard and should dominate the northern waters enriched with fisheries resources.

Human Trafficking - What we have seen very clearly is the extreme exploitation of mainly children and women by a well knitted network of illegal human traffickers. Many countries in our region act as source, transit and destination countries. The use of maritime domain to a greater extent by these traffickers poses a much bigger challenge to regional countries. Imagine a situation where a human smuggling ship sinking with a considerable number of people onboard. Such a situation will test our ability to respond to a mass rescue situation.

The use of maritime domain to a greater extent by these traffickers poses a much bigger challenge to regional countries. Imagine a situation where a human smuggling ship sinking with a considerable number of people onboard. Such a situation will test our ability to respond to a mass rescue situation. The Indian Ocean Region is inhabited by some 2.49 billion people, representing 35.7 percent of the world's population in 2010. By 2030, this population will have ballooned by more than 27 percent, adding another 689 million

people. The maritime threats and challenges discussed above are of greater concern when viewed through these statistics.

Role and Response of Sri Lanka to overcome transnational crimes in the Indian Ocean Region

Although the largest influences on Sri Lankan transnational criminal activity have been domestic, the country's changing international circumstances have nevertheless played a role in dictating the form and quantity of that activity. Those changes have included deeper economic relations with Russia and China and the growing number of Sri Lankan guest workers sent to Middle Eastern countries. Role and response of Sri Lanka can be described as follows.

Sri Lanka lies near a regional super power in the close proximity to the main sea route connecting the West and the East - Sri Lanka's geographical location has, traditionally, represented a significant point in the Indian Ocean Region. Since ancient time, maritime domain has become an important factor to Sri Lanka. As an island nation, Sri Lanka lies near a regional super power in the close proximity to the main sea route connecting the West and the East. Further, it is observed that two regional powers - China and India have made their presence in Sri Lanka by various means such as ports, aviation and power plant constructions.

Co-operation with the other countries - Sri Lankan organized crime linkages with Russia have a long history. Between the mid-1980s and early 1990s, Russia was a transit point for Sri Lankan refugees and economic migrants attempting to enter Western Europe, attracting the involvement of the Russian mafia. More recently, there have been direct criminal implications arising from wartime arms deals between Russia and Sri Lanka. In March 2015, the Ukrainian Government alleged that a former Sri Lankan ambassador to Russia was involved in trafficking small arms to pro-Russian rebels in eastern Ukraine. He had previously been involved in major military procurement deals between Russia and Sri Lanka, and had served in his position for close to a decade.

Sharing maritime combat experience against piracy and terrorism - The next aspect Sri Lanka needs to consider as a major role is to ensure that maritime piracy will not take place in the Indian Ocean. There have been no major pirate attacks in areas closer to Sri Lanka or India in the recent past. The mammoth experience Sri Lanka Navy gained by confronting the LTTE Sea Tigers can be shared with regional navies, Coast Guards and even with merchant shipping agents. This wealth of experience when shared can be considered as one of the best proactive measures that can be used against piracy and maritime terrorism. The Sri Lanka Coast Guard was instrumental in training a number of sea marshals who were later deployed onboard ships that transited through the High Risk Area.

Responding to maritime Search and Rescue - Sri Lanka is vested with the responsibility of an ocean area that is 27 times the land mass as the maritime Search and Rescue Region. Yet, the navy does not possess a sufficient number of platforms capable of venturing out to high

seas when the situation demands. In identifying the importance of responding to Search and Rescue situations as it is an international obligation, the need for bigger platforms with long endurance is crucial. On the other hand joint search and rescue platforms will answer for the transnational crimes in the Indian Ocean region too.

Response to Illegal migration - Sri Lanka was once in the center of discussion on this matter and had enormous pressure being mounted to take control of the situation. The close cooperation Sri Lanka had with the Australian government proved that if operational and intelligence cooperation is available, these trafficking networks can be cracked down with ease.

The Sri Lankan-Australian cooperation has been regarded as a proven model in controlling human smuggling. Sri Lanka can play a major role in sharing the experiences with the regional countries. Donation of two Bay Class ships by the Australian government to Sri Lanka is a real testimony for close cooperation and gratitude Australia has for the Sri Lanka Navy.

Real time intelligence sharing, highest level of strategic and tactical synchronization has been identified as the key pillars of success. Sri Lankan experience for sure will be of immense value to the Indian Ocean Region.

Conclusion

The Indian Ocean is a very “active” ocean, perceived by many as the emerging center of gravity in the strategic world. In the words attributed to the maritime strategist Alfred Thayer Mahan: “Whoever controls the Indian Ocean will dominate Asia, the destiny of the world will be decided on its waters.” This is particularly true in the context of the struggle for gaining maritime influence in the region.

Transnational crimes, including maritime terrorism, arms smuggling, sea piracy, immigration control and drugs trafficking have spawned a multitude of additional “out of area” operational roles for regional navies, and have dramatically increased the maritime security challenges of the Indian Ocean Region. Countering these crimes and challenges requires consistent cooperation between the states affected and the associated maritime agencies.

Today, Sri Lanka is in a better economic, political, and security position than it has been prior to the start of the Sri Lankan civil war period (1983–2009). At the same time Sri Lanka has responded and taken many actions to avoid transnational crimes of the Indian Ocean region.

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HA/DRO OPERATIONS: A CRITICAL INSIGHT INTO SRI LANKA'S DISASTER RESPONSE CAPACITY WITH REFERENCE TO THE 2017 FLASH FLOODS AND LANDSLIDES

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**"Cry" Humanitarian Assistance, and Let Slip the Dogs of "War"**

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Introduction

Sri Lanka has a land area of 65,610 square kilometers and a population of 20.3 million. Since the end of the 27 year conflict in 2009 the possibility of a new period of sustainable peace and prosperity has begun. Despite the conflict, the 2004 tsunami and the impact of the global recession, the country has achieved middle-income status. While Sri Lanka's achievements towards development are in many respects impressive, living standards remain low for most Sri Lankans and a large share of the population remains vulnerable to poverty. A disaster is an event that seriously disrupts a society which often involves widespread human, material, economic, or environmental losses and impacts, which exceeds the ability of the affected community or society to cope with its own resources. Over the past few decades, disaster losses in Sri Lanka have increased substantially due to manmade activities. Sri Lanka is prone to natural disasters caused by floods, cyclones, landslides, drought and coastal erosion with increasing instances of environmental pollution related hazards. May 2017, incessant heavy rainfall brought by the southwest monsoon triggered flooding and landslides in 15 of the 25 districts of Sri Lanka and about 630,000 people were affected. National authorities confirmed 203 deaths and 96 people missing. The floods and landslides destroyed or damaged more than 9,000 houses and temporarily displaced 73,560 people to 354 locations and all disaster approaches aiming to National events threatening the nation's infrastructure and the safety of its citizens. The ultimate purpose of the military is to keep the citizens of its nation alive and protect the national infrastructure.

A successful disaster management has common characteristics. First, there are existing disaster preparedness organizations with planning and coordination capabilities connecting from the national level upwards to the international community, and downwards to the regional and local levels. Second, these organizations operate under focused civilian leadership that employs a preplanned and executable information collection and dissemination plan; and finally, there is an effective and coordinated use of available resources to include capitalizing on military support capabilities. Sri Lanka disaster management centre does not perform to achieve above key success factors, but they remain safe until such Sri Lankan Military forces doing their best contribution when a disaster occurred. Further, Knowledge Management Systems are vital for disaster detection, response planning, and management. These systems aid in early warning, and provide decision support for disaster response and recovery management through the integration

and collaboration from different organizations and agencies. Thus, in order to assist in all stages of disaster relief, the decision makers need a large variety of information, such as disaster situation, availability and movement of relief supplies, population displacement, disease surveillance, relief expertise, and meteorological satellite images or maps. The disaster management strategies are guided by the global development frameworks, Goal 11 of the sustainable development goals, new urban agenda 2030, builds back better principles The Sendai Framework for Disaster Risk Reduction 2015-2030 which is the successor instrument to the Hyogo Framework for Action 2005-2015, will have to be comprehensively adopted by Sri Lanka's national disaster management plan.

Role of Sri Lanka Military Forces during Flash Floods and Landslides in 2017

On May 2017, an area of convective thunderstorms in the Bay of Bengal started to converge, moving to the northeast and becoming "Cyclone Mora" which caused southwestern monsoon in Sri Lanka resulting severe flooding and landslides throughout the country in year 2017. The National Building Research Organization of Sri Lanka had issued a "Level 3 Red Alert" landslides warning for the districts of Ratnapura, Kegalle, Galle, Kalutara, Matara, Hambantota and NuwaraEliya. More than half a million people were affected by high winds, flooding and landslides in Sri Lanka, in what is reportedly the worst flooding in the country in 25 years. In the aftermath, extensive relief operations were conducted at national, provincial, district as well as divisional levels, significantly supported by the Sri Lanka Army, Sri Lanka Navy, Sri Lanka Air Force, civilian organizations, private sector as well as individuals. The Sri Lanka Army deployed more than 1700 Army personnel of 17 Battalions, Mechanized Infantry and Army medical personnel. The Sri Lanka Navy deployed over 120 search and rescue teams comprising 61 officers and 908 naval personnel along with 120 relief boats. The Sri Lanka Air Force deployed Mi-17, Bell 212, and Bell 412shelicopters to rescue the displaced community in affected areas. Also beach craft were deployed for continuous reconnaissance and observations over affected areas. This was the biggest deployment of troops during the peace time in Sri Lanka. India sent three ships, INS Kirch with relief materials, INS Shardul with specialized rescue, diving and medical teams and relief materials and the INS Jalashwa with additional relief materials. The People's Liberation Army Navy Ships Type 052C destroyer, Type 054A frigate and Type 903 replenishment ship arrived at port of Colombo with relief materials and medical teams for victims. Pakistan sent hospital and relief materials through two cargo flights, along with doctors. Pakistan's naval ship PNS Zulfiqar arrived in Colombo with relief materials and a medical team to assist relief operations. Australia sent high-grade inflatable boats and outboard motors for search and rescue missions. USS Lake Erie (CG-70) arrived in Colombo to join Sri Lanka Navy for post flood recovery operations. US Navy sailors worked with Sri Lanka Navy marines in Matara, Sri Lanka during humanitarian assistance operations. The military force, especially one that is highly mobile and responsive, can provide much needed first level Humanitarian Assistance and Disaster Relief (HA/DR), especially if the disaster involves massive destruction to infrastructure and lines of communications.

Regional Integration is the Key to Success in HA/DR Operations

“There is no other organization in the world that can get there, remain on station, and provide a number of support functions for relief efforts.” The U.S. government has the opportunity to exploit its success in HA/DR missions. It can do so by developing units capable of handling the spectrum of conflict, but specifically tailor-made to perform HA/DR missions. By doing so, it can prevent future wars by shaping the global areas that are vulnerable to instability. This strategy would shape the environment over the course of decades, by building partnerships with countries based on mutual interests. US- India Security Burden-Sharing which identified HA/DR as a functional area in which the United States could advance naval relations with India. This is due to the frequency with which natural disasters strike the region, especially the Bay of Bengal, and, for India, the relative domestic political palatability of working with the United States in the aftermath of natural disasters. Since the 2004 tsunami, the Indian government has allocated additional resources to improve India’s disaster management capabilities. The Indian Navy has increased its capabilities by acquiring new multi-functional tankers, amphibious ships, and frigates, in addition to holding multinational HA/DR naval exercises. Natural disasters are the most likely threat that the Bay of Bengal region faces, and it is one area in which the United States has significant capability and experience. Japan Disaster Relief Team Law was enacted in 1987, and which was later amended in 1992 to allow Japan Self Defense Forces (SDF) to participate in international disaster relief operations, the country has assisted in a number of International HA/DR operations. This capacity building support program has the potential to significantly strengthen strategic bilateral relationships between the militaries of South Asia and Japan’s SDF. China has rapidly promoted the modernization and expansion of the People’s Liberation Army Navy (PLAN) since the early 1990s. After this negative experience with the 2004 tsunami relief effort, China has sought ways and means to transform both the capacity and capabilities of the PLAN to respond to future HA/ DR contingencies. China has added other assets, including amphibious ships, air-cushion landing craft and an aircraft carrier, all indispensable components for conducting HA/DR operations in distant waters. Sri Lanka Navy should develop bilateral partnerships with these colossal forces while enhancing capacity building to secure the HA/DR operations in Sri Lanka.

Traditionally, there was a lack of emphasis in HA/DR operations at all levels of military because the armed forces have viewed HA/DR operations as “someone else’s job” and that its responsibility resides solely in winning a war and not winning the peace. Today world’s navies develop their platforms considering the HA/DR operation into grater calculus. Navies should invest not only for defence but also for responding effectively and efficiently to HA/DR Operations. Indian Ocean is one of the most vulnerable regions to disasters which require urgent HA/DR operations by navies. For this reason, capability building is emerging as a new area for HA/DR operations as region’s navies’ short term goals. Navies have played a major role in responding disasters in the Indian Ocean region over the past two decades. War ships with versatile platforms played a major role in these HA/DR operations. On several occasions, helicopters have been at the forefront in distributing aid to those affected by major disasters. Even the aid sent by ships, the distribution of it could be done only by helicopters during flood and landslide disasters. Thus, navies need

platforms that can carry a number of helicopters to provide help in a sustainable manner. The emergency of disaster relief operation requires that navies reach the disaster area within few days at least. In this context, vessels like small landing craft come to forefront with speed to station capability. These three capabilities helicopter vertical lift, shallow draft and speed to station can be evaluated as the utmost important ones considering the experiences lived and analysis done after these disasters. Especially for medical facilities, navies need hospital ships. In spite of their largest hindrance of having low speed to station, they are valuable assets in regions with limited health infrastructure and low acceptance of military naval power existence. Supply Ships are the backbone for the sustainability of the HA/DR operations and recovery of the disaster zone and also supply ships are inevitable part of an HA/DR task force group. When considering the Sri Lanka Navy's capabilities and limitations it is of paramount important to develop regional integration to achieve successful HA/DR operations.

Training and Technological Advancements in HA/DR Operations

Military training has traditionally been geared towards a major theatre war. As the current operating environment develops into an asymmetrical warfare scenario, it continues to place demand on military troops. This focus limits a combat unit the opportunity for training and resources to be honed in HA/DR operations between the frequent deployments. Hence, modern military training is centered on fighting the current fight. As a consequence, units tasked with HA/DR operations have to relearn and reinvent the requirements of a successful HA/DR operation, even though previous units have tried and tested formulas. The table-top exercise at the U.S. Pacific Command Amphibious Leaders Symposium 2016 that explored sea basing operations and interoperability during future contingency operations, which would promote innovation, develops complementary capabilities, encourage joint operations. The U.S. has engaged Indian naval services on HA/DR operations primarily in the HABUNAG exercise, in joint exercise India, and in the SALVEX diving and salvage exercise. MALABAR is an opportunity for the U.S. to engage in higher end HA/DR interaction at sea with India. The Indian Navy is very proud of its bilateral cooperation with the U.S. Navy in MALABAR. RIMPAC included HA/DR training and certification for response to disasters, these exercises could be another important avenue for increasing U.S.-India cooperation. The Sri Lanka Navy and the Indian Navy conduct Joint Naval Exercise SLINEX. Pacific Partnership is the largest annual multilateral HA/DR preparedness mission conducted in the Indo-Asia-Pacific, and aims to enhance regional coordination in areas such as medical readiness and preparedness for man-made and natural disasters. This marked the first mission to Sri Lanka in the 12-year history of the annual civil-military operation, and the pacific partnership mission in Sri Lanka and will make follow on mission stops in Malaysia and Vietnam. Participants of this year's Sri Lanka mission were partner military and non-government personnel from the United States, Australia, and Japan. While in Hambantota, pacific partnership personnel worked side by side with Sri Lankan medical professionals, participated in civil engineering projects, also conducted HA/DR readiness and drills, and partnered in community engagements. The U.S. Navy hold its first exercise with Sri Lanka's navy. This will enable two countries deepen their military relationship. Sri Lanka Navy should deepen the relationship while training with international forces, which will create

avenues for capacity building, knowledge sharing and skills development.

In future global environment characterized by uncertainty, the best approach to prioritize development is to focus on technologies that can work in multiple environments. Neural networks and advanced processing technologies are two such areas which will advance future sensor capabilities and mitigate traditional constraints. Both areas are logical extensions of a HA/DR derived sensor prioritization methodology, but have equal use in the security applications. Data sharing, identification of available regional resources, increasing awareness of vulnerabilities and dangers, and skills development were recognized as disaster preparedness enablers. A growing body of literature on the subject can be found among Indian strategists and officers, who write about the soft-power benefits of India providing relief to countries in the region and even to Japan after the 2011 tsunami.

The communication requirements for HA/DR differ from a conventional combat operation. The military commander requires more unclassified, information sharing architecture to effectively collaborate and coordinate with the civilian agencies and organizations involved in such an operations. All combatant commands must be ready to respond to a humanitarian crisis or natural disaster and to do so one must effectively share information with civilian entities in the operating environment. In an HA/DR operating environment, a Joint Task Force (JTF) commander will put more emphasis on information sharing and unity of effort with his or her civilian counterparts and less emphasis on information security and effective utilization of social capital such as social networks, social cohesion, social interaction and solidarity in mitigating the consequences of natural disasters vital and important. The international community responds rapidly when a natural disaster strikes. For example, within 3 weeks of the Boxing Day Tsunami, approximately 228 NGOs were operating in Indonesia, Sri Lanka and Thailand. Dealing with NGOs, however, presents another set of problems. “One of the most intractable problems is the cultural difference between NGOs and military forces”. Interagency, NGO and IGO cooperation is crucial to the success of an HA/DR operation. “Interagency cooperation, coordination, and connectivity at all levels will better enable key organizations to orchestrate the total HA/DR effort.” Therefore, it is necessary for JTF commanders and their staffs to understand the interagency process and fully integrate the agencies into the military’s operation. Failure to do this can hurt the overall effort of an HA/DR operation. It is essential for JTF commanders to apply what is learned from past HA/DR operations and implement improved plans to correct these deficiencies in order to successfully minimize human suffering and loss of life.

Conclusion

Many would argue that the primary function of an armed force is to preserve the sovereignty of a country, and if necessary, wage a full conflict war; a confrontation where organized forces lock horns in sustained combat operation with the ultimate aim of annihilating the adversary. Military institutions and war fighting doctrines have traditionally emphasis and reinforce this biasness, that “real” war is primarily a conventional one. HA/DR operations falls under the realm of stability operations, and in essence, is classified as an unconventional form of war. Military have the moral duty to assist people in need and

few organizations outside a military force have the capability, expertise, and organizational structure to conduct massive humanitarian operations. While the war on terror and the fight against insurgencies continue unabated, the true purpose of a credible military cannot be forgotten. Hence, it is important to add HA/DR operations as a core competency in the catalogue of an armed forces. Only by promoting on HA/DR capabilities, one can then safely say that the military force is truly a full spectrum force. Sri Lanka Navy need to be equipped with robust strategic sealift, and heavy helicopter airlift capabilities comprise of rapid response units. Sri Lanka as an island and maritime nation, the sea provides the most effective medium to deliver response and relief aid in HA/DR operations. Therefore, Sri Lanka Navy must maintain ships that can operate in higher levels of sea states to ensure that it can deliver response and aid in times of calamities. Sri Lanka Navy should work with other nations to build capacity to respond against natural disasters. Therefore, preparedness is enhanced through the conduct of joint training exercises among regular units, reserve forces, civilian agencies, and relief organizations. Thus, capabilities and capacities for HA/DR operations will continue to be an essence in the future development of Sri Lanka Navy. Sri Lanka Navy being a professional entity of Sri Lanka Military forces need to achieve full spectrum force while enhancing collaborations, cooperation and capacities development with regional and global navies. Sri Lanka Navy needs to practice and exercise Incident Command System that would enable to exchange real-time knowledge sharing with global and regional forces. This will also enable Sri Lanka Navy to share information with governmental and non-governmental organizations during the HA/DR operations.

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ශ්‍රී ලංකාද්වීපය මෙලොවෙහි පාරාදීපයක් බඳු රටකැයි පිළිගැනීමක් ඇත. ඒ එහි පිහිටීම හා රට වටා ඇති සෞඳුරු වෙරළ තීරයත්, සෞම්‍ය දේශගුණයක් සහිත උස් කඳුකරයත්, ආගන්තුක සත්කාර ඉහළින්ම උගත් මිනිස් පරපුරක් වාසය කිරීමත් නිසාවෙනි. එහෙත් මැන කාලයේදී සිදුවූ ස්වාභාවික ව්‍යසනයන් දෙස බලන කල ඉහත කියමන පිළිබඳව හදවත් තුල යම් කුතුහලයක් උපදී. ස්වාභාවික ආපදාවන් සඳහා මූලික වශයෙන්ම මානව ක්‍රියාකාරකම් බලපාන බව අපට නොරහසකි. පුරාණ යුගයේදී මානවයා සොබා දහමේ පුරුකක් ලෙස පෙනුනද වර්තමානය වන විට මානව වර්ගයා විසින් ස්වභාව සෞන්දර්ය පාලනය කිරීමට තැත් කරන බවක් අපට පෙනී යයි.

ස්වාභාවිකව සිදුවන ආපදාවන් නතර කිරීමට නොහැකි වුවත් ඒවා නොවෙන තැනට වැඩ කිරීමට හැකිවේ නම් එය ජයග්‍රහණයකි. එම කර්තව්‍යයේදී නාවික හමුදාවේ උර මතට වැටෙන කාර්යභාරය අති මහත්ය. ඒ ජලය මුල් කරගෙන ඇතිවන ව්‍යසන ලංකාද්වීපයට වැඩි වශයෙන් බලපාන බැවිනි. එවන් පරිසරයක් තුල ස්වාභාවික ආපදාවන්හිදී නාවික හමුදාවේ කාර්යභාරය පිළිබඳව විවරණයක් කිරීමට සුදුසුම කාලය එළඹ ඇත.

ස්වාභාවික ආපදා සහ එහි බලපෑම පිළිබඳව පළමුව විමසා බලමු. ස්වාභාවික ආපදා යනුවෙන් ගත්කල ගංවතුර, සුළි සුළං, නාය යෑම, සුනාමි, භූමි කම්පා, නියඟය ප්‍රධාන වශයෙන් දැක්විය හැකිය. ස්වාභාවික ආපදාවන් නිසා සැලකිය යුතු මට්ටමේ භෞතික සම්පත් පරදු විමක්, විනාශයක්, ජීවිත හානි විමක්, උග්‍ර පාරිසරික වෙනස් විමක්, ඵදිනෙදා ජීවිතයට බාධා පැමිණීමක් සිදුවිය හැකිය. ඒ පිළිබඳව අපට උදාහරණ නැතිවීම නොවේ. පසුගිය කාල වකවානුව තුල අප රට තුල සිදුවූ ව්‍යසනයන් ඊට පිළිතුරු සපයයි.

ස්වාභාවික විපත් අතරින් ලාංකීය ජනයාට වඩාත් පීඩා ගෙනදෙන ගංවතුර ගැන කතා නොකරම බැරිය. ලක් මැණියෝ වනාහි ගංගා සියයකටත් වඩා වැඩි ප්‍රමාණයක් බිහි කරමින් රට ස්වයංපෝෂිත කිරීමට උත්සුක වූවෝ වෙති. එයින් ප්‍රධාන ධාරා 09ක් ගංවතුර තර්ජනය ඇති ඒවා බවට දැනටමත් සොයාගෙන ඇත. කැළණි ගඟ, කහ ගඟ, නිල්වලා ගඟ, ගිං ගඟ, අත්තනගලු ඔය, කිරිඳි ඔය, මාදුරු ඔය, කුඹුක්කන් ඔය හා හැඩ ඔය වාරිමාර්ග දෙපාර්තමේන්තුව මගින් නම් කොට ඇති එම ධාරාවන් වේ. සාමාන්‍යයෙන් ගංවතුරක් යනු ගඟක ස්වාභාවික නිම්නය උතුරා ගොස්, එහි ජලය ගංගා ආශ්‍රිතව තිබෙන ගොඩබිම් ප්‍රදේශ වලට වැදී ජීවිත හා දේපල හානි ඇති කිරීම ලෙස නිර්වචනය කළ හැකිය. අධික වර්ෂාපතනය, උදම්(වඩ්දිය, බාදිය) වල බලපෑම, වේලි කැඩී යාම ලංකාව තුල ගංවතුර තත්වයන් ඇතිවීමට බලපාන සාධක ලෙස දැක්වීමට පුළුවන. වසර 25 කට පමණ පසු ලංකාවට දැණුනු බරපතලම ගංවතුර ලෙස සැලකෙන්නේ 2016 වසරේ මැයි මාසයේ ඇතිවුණු ගංවතුරයි. 2017 එසේත් නැතහොත් මා මේ ලිපිය ලියන ආසන්නතම වකවානුව තුල ඊටත් වඩා දරුණු තත්වයක් ඇතිවී ඇති බව හැගේ. එය මා නාවිකයෙකු ලෙස මෙවර සක්‍රීයවම මුදාගැනීමේ මෙහෙයුම් සඳහා දායක වූ බැවින්, ගංවතුර තත්වය පහව ගිය පසු පෙර දැනුම්දීමේ සහ ගංවතුරින් මුදවා ගැනීමේ මෙහෙයුමේදී නමින් රත්නපුර දිස්ත්‍රික්කය

ආවරණය වන පරිදි ක්‍රියාවට නැංවූ අධ්‍යයනයට සහභාගී වීමට ලැබීමත් නිසා ලැබුණු අත්දැකීම් සම්භාරයත් ඇසුරින් ප්‍රකට වුණි.

දිනය ක්‍රි.ව. 2004ක් වූ දෙසැම්බර් මස 26 වනදායි. සියලුම නාවික කඳවුරුවල විශේෂ හදිසි පෙළ සෑදීම් කළේය. කිසිවෙකුටත් කාරණය කුමක්දැයි ඒ මොහොතේ ඒත්තු ගියේ නැත. අණදෙන නිලධාරීතුමන්ලාගේ උපදෙස් ලබා දීමෙන් අනතුරුව කඩිනමින් කුඩා කණ්ඩායම් සාදා පිටත්කර හැරියේ සහන සැලසීමේ කටයුතු සඳහාය. කරුණු සැලවූයේ එවිටය. එය නම් අන් කිසිවක් නොව සුනාමි ව්‍යසනයයි. ඔබට විශේෂයෙන් ඒ පිළිබඳ විස්තර කිවයුතු නැත. මක් නිසාද යත් මේ වන විටත් ඒ අත්දැකීම අප විඳි හමාර බැවිනි. රිච්ටර් පරිමාපකයේ 9.0ක් ලෙස සටහන්වූ භූමි කම්පාවක් ඊට හේතුවී තිබුණි. ශ්‍රී ලංකාවට කිලෝමීටර් 1600 කටත් වඩා දුරකින් ඇතිවුණු එම භූමි කම්පාව නිසා සිදුවූණු හානියේ නම් අඩුවක් නැත. නාවික හමුදා කඳවුරු කිහිපයකටද ඉන් හානි සිදුවූ අතර එයින් ශ්‍රී ලංකා නාවික නෞකා දක්ෂිණ ආයතනයට විශාල හානි සිදුවිය. එනමුත් නාවික හමුදාව මුදා ගැනීමේ මෙහෙයුම් සඳහා සක්‍රියව දායක වූයේ ලාංකික ජනතාවට නාවික හමුදාවේ සහය අවශ්‍යම මොහොතේ ඔවුන්ට සම්ප වෙමිනි. එම කාල වකවානුව තුල එම ප්‍රදේශයන්හි ධීවර, ප්‍රවාහන, නිවාස, ගොඩනැගිලි, සෞඛ්‍ය, අධ්‍යාපන සහ යටිතල පහසුකම් වගේ ක්ෂේත්‍ර ගණනාවක් අකර්මණ්‍ය වී තිබුණි.

මේ හැරුණාම වැස්සත් සමග එන අකුණු වලින් වන විපත්, කලාතුරකින් සිදුවන ටෝනේඩෝ ව්‍යසන, මුහුදු බාදනය ලංකාවට බලපාන තවත් ස්වාභාවික විපත් අතරින් කිහිපයකි. වාසුළු මගින් ඇති කරන සුළි සුළං ද ලංකාවට මහත් තර්ජනයක් ඇති විය හැකි දෙයකි. අතීත දත්ත විශ්ලේෂණය කිරීමේදී එය මනාව පිළිඹිබු වේ. 1978 ඔක්තෝම්බර් මාසය තුල ඇතිවූණු සුළි සුළං බෙංගාල බොක්කේ සිට මඩකලපුව දක්වා ඉතා දරුණුව පැතිරෙමින් ජීවිත හානි 915 ක් බිලිගෙන තිබේ.

අපේ පුරාණ ඉතිහාසයෙන් බැමිණිතියා සාගතය, එක්නැළි සාගතය ගැන ඇහෙන කතන්දර නිසා නියගයක් ලාංකික පොලොන්නලයට එතරම් දුරස් නොවන බව මනාව පැහැදිලි වේ. ගෝලීය උෂ්ණත්වය ඉහල යාමට අවිධිමත් වගා ක්‍රමවල වනාන්තර විනාශය, වැව් කැඩී යාම ප්‍රධාන වශයෙන් නියගය ඇතිවීමට බලපායි. මෙහිදී මානව ක්‍රියාකාරකම් ප්‍රමුඛතාවයක් ගෙන නැතැයි සිතීම අණුවන කමකි. නියං සමයේදී මිනිසුන් වෙත ජලය බෙදා හැරීම ප්‍රධාන වශයෙන් කෙරෙන කාර්යයකි. නාවික හමුදාවද ඒ සඳහා දායක වූ අවස්ථා ඇත. වන සතුන්ට පවා ජලය ලබා දුන් අවස්ථා පසුගිය කාලවලදී තිබුණි. මෙවන් තත්වයන් ඇතිවීම වැළැක්වීම සඳහා ගතහැකි පියවරයන් ක්‍රියාවට නැංවීමට හැකිනම් එය අපට ලබා ගතැකි ඉහල ජයග්‍රහණයකි. මේ සඳහා රුක් රෝපණ වැඩ සටහන් ක්‍රියාත්මක කිරීම හා නාවිකයින් දැනුවත් කිරීම කළ හැකිය.

මෑත කාලය වන විට ලංකාව තුල සීඝ්‍රයෙන් වර්ධනය වෙමින් පවතින තවත් ස්වාභාවික උපද්‍රවයක් නම් නාය යෑමයි. අධික වර්ෂාපතනය, කඳු බෑවුම්හි පිහිටි කුහර, ඉරි තැලීම්, වන විනාශය, අවිධිමත් වගා ක්‍රම, කෘතිම පිපිරවීම් වැනි කරුණු කිහිපයක් මෙම නාය අනතුර සඳහා බලපායි. මෙයින් හරි අඩකටත් වඩා මිනිස් ක්‍රියාකාරකම් නිසා සිදුවන ඒවා බව නොකිව මනාය. 2012, 2014, 2015 වර්ෂයන් වල හා 2016 අරණායක මහා බේදවාචකයද හැරුණු කොට 2017 වසරේ විශාල වශයෙන් නාය යෑම් ප්‍රවණතාවයක් දැකිය හැකිය. ආපදා කළමනාකරණ මධ්‍යස්ථානයේ දත්ත වලට අනුව මෙම වසර අධික ලෙස නාය යෑම් සිදුවූ වසරක් ලෙස දැක්වේ.

ස්වාභාවික විපත්හිදී නාවික හමුදාව අවශ්‍ය වන්නේ ඇයි?

ප්‍රධාන වශයෙන්ම ජලය ආශ්‍රිතව සිදුවන ආපදාවන් ග්‍රහණ රටක් වීම නිසා ලංකා ධරණි

තලය තුළ නාවික හමුදාවට සුවිශේෂී කාර්යභාරයක් පැවරේ. එම කාර්යභාරයන් මේ වන තුරු නොපිරිහෙලා ඉටු කිරීමට රාජකීය නාවික හමුදාව පැවති සමයේ පටන් මේ දක්වා ක්‍රියා කරමින් සිටීම නාවිකයෙකු වශයෙන් මා හටද ආඩම්බර විය හැක. මෑත කාලීනව විශාල වෙනසක් නාවික හමුදාව තුළ සිදුවූයේ මෙවන් තත්වයකදී සහාය දීමට පෙර සූදානමක් ලෙසයි. වෙරළාරක්ෂක බලකාය පිහිටුවීම, විශේෂ ජීවිතාරක්ෂක කණ්ඩායම් යෙදීම, හදිසි ප්‍රතිචාර දැක්වීමේ මුදවා ගැනීමේ හා සහන සැලසීමේ අංශය සෘජු ස්ථාපිත කිරීම. මැරීන් බලකාය ස්ථාපිත කිරීම වැනි කටයුතු ඊට උදාහරණයි. මනා සංවිධානයකින් යුතුව පෙර සූදානමින් සිටි නිසා නාවික හමුදාව මගින් ස්වාභාවික විපත් වූ අවස්ථාවන්හිදී විශාල කාර්යභාරයක් සිදුවූ බව නිසැකවම කිව යුතුය. ඒ හා සමගම පුහුණුවීම් සිදුකිරීම, අභ්‍යාසයන් සිදුකිරීම වැනි ක්‍රියා නිසා නාවිකයින් බොහෝ සේ අත්දැකීම් ලබාගෙන තිබුණි. නාවික හමුදාවේ ප්‍රධාන කාර්යභාරය හුදෙක් මුහුදෙහි ක්‍රියාත්මකයන් සිදුකිරීම යැයි යමෙකුට සිතේ. නමුත් එය හාත්පසින්ම වැරදි මතයකි.

දුපත් රාජ්‍යයක් වන ශ්‍රී ලංකාවට අත්‍යාවශ්‍යම ආරක්ෂක හමුදාව වනුයේ නාවික හමුදාවයි. ජාතික අවශ්‍යතාවයට ප්‍රමුඛතාවය දෙමින් රටේ ආරක්ෂාව පිණිස මුහුදු සංග්‍රාමික මෙහෙයුම් සඳහා දායකත්වය ලබාදීම නාවික හමුදාවේ ප්‍රධානතම කාර්යභාරය වේ. (උපුටා ගැනීම : නාවික හමුදා වෙබ් අඩවිය)

මෙහිදී ප්‍රධානතම කාර්යභාරය වශයෙන් එසේ දක්වා ඇතත් ගංවතුර සහන සැලසීම වැනි මානුෂික මෙහෙයුම් සහ ආපදා සහන සැලසීම යනුවෙන් නාවික හමුදා මෙහෙවරෙහි එක් අංගයක් ඇත. කුරිරු යුද්ධයක් පැවති රටක එය අවසන් වීමත් සමග පොදු මහ ජනතාවගේ ඒදිනෙදා ජීවන රටාවන්ට බලපාන ස්වාභාවික ආපදාවන්හිදී යුහුසුරුව ක්‍රියා කිරීමට නාවික හමුදාවට ශක්තියක් ඇත. ඒ විවිධ කුසලතාවන්ගෙන් හෙබි අංශ රාශියක් එකතු වී නාවික හමුදාව නිර්මාණය වී ඇති බැවිනි. පරිණත නායකත්වය, තාක්ෂණික දැනුම, පිරිස් බලය මීට ප්‍රධාන උදාහරණයි. එබැවින් ස්වාභාවික ආපදාවන්හිදී නාවික හමුදාවෙන් සිදුවන කාර්යය අති මහත් වපසරියකට විහිදී යයි. මෑත කාලයේ ආසන්නතම සිද්ධිය කළු ගඟ ආශ්‍රිතව සිදුවූ ගංවතුර තත්වයයි. එයින් රත්නපුර හා කළුතර යන දිස්ත්‍රික්කවල විශාල පිරිසක් පීඩාවට පත්විය. දකුණු පළාතේද එය එසේම විය. තමන් සතු සිය හැකියාවන් විදහාපාමින් අකාලයේ අහිමිවීමට ගිය ජීවිත රාශියක් බේරා ගැනීමට නාවික විරුවන් සමත්වූයේ කිසිම නාවිකයෙකුහට අනතුරක් නොවන අයුරිනි. එහිදී අපි ගේ ඇතුළේ හිරවෙලා ඉන්නේ අපිව බේර ගන්න යනුවෙන් ආ පණිවිඩ එකක් නොවේ. එවන් අවස්ථාවන් වල එම ස්ථානයන් කරා ළගා වීමට පිහිටට සිටියේ නාවික හමුදාව පමණකි. එසේ වූයේ ගුවන් යානා පවා පියාසර කිරීමට තරම් සුදුසු කාළගුණික තත්වයක් නොවුණු බැවිණි. ආපදා සහන සැලසීම සඳහා විදේශ රටවලින් පැමිණි හමුදාවන් හා සිවිල් සංවිධාන වෙත අවශ්‍ය පහසුකම් සැපයීම, ආරක්ෂාව හා සම්බන්ධීකරණය නාවික හමුදාව මගින් සිදුවිය. එහිදී සැලසූ සහනයන්හි සාරාංශයක් කෙටියෙන් උපුටා දැක්වීමට කැමැත්තෙමි.

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පාලම් පිරිසිදු කිරීම්	11

(උපුටා ගැනීම : සයුරුසර, 10 වෙල්ම, 33 කළාපය, 8 පිටුව)

මෙහිදී ගෙනහැර දැක්විය යුතු තවත් කරුණක් නම් මානුෂීය ආපදා සහන සැලසීම පිළිබඳව පුහුණු වැඩසටහන් හා නාවිකයින් දැනුවත් කිරීම සිදු කිරීම වැඩි කළ යුතු බවයි. නාවික හමුදාවේ බෝට්ටු ගිය නිසා මගේ ගෙයි බිත්ති පුපුරන ලදී යැයි යමෙකු කිවහොත් එය එතරම් යෝග්‍ය නැත. ජීවිත ආරක්ෂක කඩා නොපළඳවා මිනිසුන් ප්‍රවාහනය කිරීම, නාවික බෝට්ටු පැදීමට සිවිල් ජනතාවට අවස්ථාව ලබාදීම, නිසි නිළ ඇඳුමක් පැළඳ නොසිටීම වැනි කරුණුද මෙහිදී අවධානයට යොමු විය යුතුය. කිසියම් කාර්යයක් සාර්ථකව කිරීමට නම් පෙර සූදානමක් තිබිය යුතුමය. අතීතයෙන් උගත් පාඩම් නිසාවෙන්දෝ දැන් දැන් සිය ආයතන මේ සඳහා සූදානම් වන බවක් පෙනී යයි. නාවික හමුදාවද ආපදා ප්‍රතිචාර මධ්‍යස්ථානය නමින් ස්වාභාවික විපත් වලදී සහන සැලසීම සඳහා අවශ්‍ය උපකරණ ගබඩා කරමින් පසුගිය ජුනි මස සිට මධ්‍යස්ථානයක් පවත්වාගෙන යාමට කටයුතු ආරම්භ කළේය. 2017 ජූලි මස 25 වන දින නාවික හමුදාධිපතිතුමා අතින් විවෘත කිරීමට යෙදුනු මෙම හදිසි ආපදා ප්‍රතිචාර මධ්‍යස්ථානය තුළ ජංගම මුල්තැන් ගෙවල්, ආහාර පිසින උපකරණ, ආහාර උණුසුම් කිරීමේ උපකරණ ආහාර කුඩාරම්, ජල පොම්ප , කුඩා යාත්‍රා, පිටත දහන යන්ත්‍ර ඇතුළු තවත් බොහෝ උපකරණ ගබඩා කොට ඇත. ස්වාභාවික ආපදාවකදී කෙටි කලකින් එම ස්ථානය වෙත ළගා වීම හා ක්ෂණිකව එම ව්‍යසනයට ප්‍රතික්‍රියා දැක්වීම මෙම ආපදා මධ්‍යස්ථානය පිහිටුවීමේ අරමුණ බව කිව යුතුය. තවද භූගෝලීය තොරතුරු පද්ධති මගින් අතීත දත්ත එකතු කිරීම, එම දත්තයන් විශ්ලේෂණය කිරීම හා එමගින් ඉදිරි ආපදා තත්ත්වයන් සඳහා සූදානම් වීමට සුදුසු වැඩපිළිවෙලවල් සකස් කිරීමත්, එමගින් අනෙකුත් රාජ්‍ය ආයතන හා සම්බන්ධවී (උදා: වාරිමාර්ග දෙපාර්තමේන්තුව, ජාතික ආපදා කළමණාකරන මධ්‍යස්ථානය, මහවැලි අධිකාරිය, දිස්ත්‍රික් හා ප්‍රාදේශීය ලේකම් කාර්යාල) මනා කළමණාකාරීත්වයකින් කටයුතු කිරීමටත් හැකිවන බව මාගේ හැඟීමයි. වැඩි වශයෙන් ආපදාවන්ට ලක්වන ප්‍රදේශවල ජනතාව හට ජීවිත ආරක්ෂක ක්‍රම, පිහිනීමේ හැකියාව, පෙරහුරුවන් පැවැත්වීම වැනි කටයුතු කිරීමද සුදුසු බව මා යෝජනා කරමි.

නාවික හමුදාව සෑම වෘත්තියකින්ම සමන්විත වන ආයතනයක් වන බැවින් ස්වාභාවික ආපදාවන් සිදුවූ පසු පශ්චාත් කාල වකවානුවේදී සිදු කළයුතු ක්‍රියාවන්ටද සෘජුවම දායක වේ. පිරිසිදු කිරීම්, පානීය ජලය ලබා දීම, ලිං ඉසීම, වෛද්‍ය කඳවුරු පැවැත්වීම, කැඩිගිය පාලම් වේළු ප්‍රතිසංස්කරණය ඉන් ප්‍රධාන තැනක් ගනී. විවිධ වූ ස්වාභාවික ව්‍යසනයන්හි නාවික හමුදාවේ ක්‍රියා කිරීම සිව් වැදෑරුම් ක්‍රමයට අනුගමනය කිරීමට නාවික හමුදාවට හැකිය. මූලික සූදානම් අවධිය, හදිසි ආපදා අවධිය, පුනරුත්ථානාපන අවධිය හා ප්‍රතිසංස්කරණය කිරීමේ අවධිය යනු ඒවායි. මෙවන් සමයක නාවික හමුදාවේ අවශ්‍යතාවය රටට මහත්සේ දැනෙන්නේ සෑම අවස්ථාවකදීම නාවික හමුදාව සාම්ප්‍රදායිකව මෙවැනි අවස්ථාවන් සඳහා සූදානම්ව සිටීමත්, නිසි කලට පුහුණුවීම්/අභ්‍යාස කිරීමත්, නාවික හමුදාව සතු යටිතල ව්‍යුහය, ජංගමතාවය හා උපයෝජ්‍යතාවයන් නිසාවෙනි. පසුගිය ස්වාභාවික ආපදා පිළිබඳ දත්තයන් ගෙන බලන කල වෙරළබඩ සහ පහත් බිම් ආශ්‍රිතව ඇතිවූ ව්‍යසනයන්ට නාවික හමුදාව හැර අන් පිළිසරණක් නොතිබූ බව මනාව පැහැදිලි වේ. ගංවතුර වැනි තත්ත්වයකදී විශාල පරිමාණයෙන් මුදාගැනීම් හා භාණ්ඩ ප්‍රවාහනය කිරීම සඳහා පළමු පෙළින්ම සිටින්නේ නාවික හමුදාවයි. 2004 සුනාමි ව්‍යසන අවස්ථාවේදී වුවද ජීවිත ගලවා ගැනීම් මෙහෙයුම්, භාණ්ඩ ප්‍රවාහනය, වෛද්‍ය පහසුකම් සැලසීම,

නාවික හමුදාව මගින් සිදුවිය. මාර්ග අවහිර වී ඇති අවස්ථාවන්හිදී මුහුදු මාර්ගයෙන් ඉතා ඇත ප්‍රදේශ වලට පවා වැඩි ධාරිතාවකින් ප්‍රවාහන පහසුකම් ලබා දියහැකි වන්නේද නාවික හමුදාවටයි. එබැවින් ඉතා භාරදුර කාර්යයක් ශ්‍රී ලංකා නාවික හමුදාව වෙත නිරායාසයෙන්ම පැවරී ඇත. ඊට ප්‍රධානතම හේතුව වනුයේ සුදුසු මානව සම්පත්, දැනුම, යටිතල පහසුකම්, ජවය හා තාක්ෂණය ආදී බොහෝ ගුණාංග අනෙකුත් ආයතන සතුව නොමැතිවීමයි. මෙවන් වූ වාතාවරණයක් තුළ නාවික හමුදාව මුළු මහත් ජනතාව තුළ ප්‍රසාදයට පත්වීමටද ප්‍රධාන කරුණු කිහිපයක් බලපා ඇති බව මෙයින් අනාවරණය කරනු කැමැත්තෙමි.

ඒවා නම්,

- ඉතා හොඳ සැලසුමකින් සහ ආම්පන්නවලින් සපිරිව ප්‍රාථමික අධියරට සුදානම් වී සිටීම.
- උසස් අභිප්‍රේරණය සහ විනයගරුක බව.
- ඉතා කෙටි කලකින් ඕනෑම දෙයකට ප්‍රතිචාර දැක්වීම.
- වටිනා සම්පත් මනා ශික්ෂාවකින් හැසිරවීම.
- ඕනෑම අවස්ථාවක යාත්‍රා කිරීමට සුදානමින් සිටීම.
- දේශපාලනයෙන් තොර අව්‍යාජත්වය.
- කරුණාවන්ත භාවය.
- ඕනෑම පීඩාකාරී තත්වයකදී වුව ක්‍රියා කිරීමට හැකිවීම.
- සේවය කිරීමට ස්වේච්ඡාවෙන් ඉදිරිපත් වීම.

රාජකීය නාවික හමුදාවෙන් ගමන් අරඹා අද වන විට ශ්‍රී ලංකා නාවික හමුදාව නමින් මේ ධරණී තලයට රන් වැටක් බඳුව සේවය කරන නාවික හමුදාව ඉදිරියේදී ඇතිවිය හැකි ස්වාභාවික ආපදා සඳහා සැලසුම් සකස් කරමින්, දියුණු ක්‍රමවේද අනුගමනය කරමින් වඩාත් ඵලදායී මෙහෙවරක් ලක් මැණියන් හට සිදු කිරීමට හැකිවේවායි මා ප්‍රාර්ථනා කරමි.

ශ්‍රී ලංකා නාවික හමුදා රචනා තරගාවලිය 2018- ජයග්‍රාහී නිර්මාණ (නාවික අංශය)



මාරාන්තික ඩෙංගු රෝගය පිටුදකිමු

බල නැව් කේප්ටේන් කහතුඩුව

ලෝකයේ සර්ම කලාපීය රටවල විශේෂයෙන් ව්‍යාප්ත වී ඇති ඩෙංගු රෝගය වසංගතයක් බවට දැනටමත් පත්ව ඇත. ශ්‍රී ලංකාවේ ද සීඝ්‍රයෙන් බෝවන ඩෙංගු බිලිගන්නා ජීවිත ගණනද ක්‍රමයෙන් ඉහළ දමයි. දුර්වල පුද්ගල අවධානය හේතුවෙන් වාර්ෂිකව රටට අහිමිවන ජීවිත අපමණය. මිනිස් ආත්මයක වටිනාකම ඒ ඒ ආගම් තුළින් පෙන්වා දුන්නද මූල්‍යමය අගය මෙතරම් යැයි තක්සේරු කළ නොහැක. එබැවින් පෞද්ගලිකවත් සාමූහිකවත් මේ උවදුරෙන් ආරක්ෂා වීමට සෞඛ්‍ය අත් අය ආරක්ෂා කරවීම උදෙසා ඩෙංගු මැඩලීමට ශ්‍රමය, කාලය හා ධනය කැප කිරීම ජාතිකමය වගකීමක් යැයි පුනපුනා කීම වැදගත් වන්නේ ජීවිතය උතුම් නිසාවෙනි.

ලෝක සෞඛ්‍ය සංවිධානයේ සංඛ්‍යා දත්ත අනුව ලොව පුරා සමකය දෙපස රටවල් සියයක පමණ පැතිරී ඇති ඩෙංගු රෝගයට දැනටමත් මිලියන තුන්සිය අනූවක් පමණ දෙනා ගොදුරු වී ඇති බව හෙළිදරව් කරයි. වාර්ෂිකව පුද්ගලයින් විසි දෙදහසක් පමණ අකල් මරණයට පත්වන අතර ඉන් වැඩි පිරිසක් ළමයින් යැයි පෙන්වා දෙයි. අප්‍රිකානු කොංගෝ ප්‍රදේශයේ "ඇට කැඩෙන" හෙවත් Break Bone Fever යන ඉංග්‍රීසි භාෂාවෙන් ද හඳුන්වන ඩෙංගු වෛරසය හේතුවෙන් ශරීරයට අධික වේදනාවක් ගෙන දෙයි. තද උණ මස්පිඩු හා සන්ධි වේදනාව, සමෙහි ඇතිවන වේදනාව වැනි යට කී ලක්ෂණ යම් පුද්ගලයකුගේ දැකගත හැකිනම් ඩෙංගු රෝගියෙකු යැයි අනුමාන කරයි. දින තුනත් පහළොවත් අතර කාලයේදී වෛරසය ශරීර ගත වීමෙන් ඩෙංගු හා ඩෙංගු රක්තපාත වශයෙන් හඳුනාගත හැක. එනම් "ඊඩ්ස් ඊජිප්ටයි" හා "ඊඩ්ස් ඇල්බොපික්ටස්" යන මදුරු වර්ග දෙකෙන් එක් විශේෂයක් දෂ්ඨ කර ඇති බව නිශ්චය කරයි.

අප්‍රිකාව, ලතින් ඇමරිකාව, ආසියාව, මැලේසියාව, වැනි ප්‍රදේශයන්හි බහුල ව්‍යාප්තියක් පෙන්වන ඩෙංගු වර්ෂ එක්දහස් නවසිය හැටෙන් පමණ පසුව සැලකිය යුතු වර්ධනයක් අත්කරගෙන ඇත. ඇමරිකානු ජාතික රෂ් විද්‍යාඥයා විසින් එක්දහස් හත්සිය හැත්තෑ නවයේදී පමණ ඩෙංගු රෝගය නිශ්චිතවම හඳුනාගෙන ඇත. තාක්ෂණයේ හිනිපෙත්තට ගිය ලෝකයාට මේ දරුණු වසංගතයට ස්ථිර ප්‍රතිඔෞෂධයක් නිපදවීමට මිනිසා අපොහොසත් වීම විශ්මයට කරුණකි. මෙහිදී අපට පෙනීයන ලක්ෂණය නම් ජනාධික ප්‍රදේශවල වැඩි වශයෙන් මදුරු ගහණය සිදුවන බවයි.

මෙම කුඩා දේහධාරියා එක් පුද්ගලයකුගෙන් තවත් පුද්ගලයකුට බෝකරන නිසා ග්‍රාහකයෙක් ද වෙයි. උක්ත වර්ග දෙක පමණක් නොව අනෙකුත් මදුරුවන්ටද බෝකිරීමේ හැකියාව ඇත. පිරිසිදු ජලය එක්රැස් වන ස්ථානවල බිත්තර දමන මදුරුවා, ඊට පරිසරය සකසා ගැනීමට උපකාරී වන සාධක සැකෙවින් දැක්වීමේදී අධික ජනසන්තවය මත සිදුවන නාගරීකරණය, වෙළෙඳපල තුළ පොලිතින් හා ප්ලාස්ටික් භාවිතය ඉහළ යාම, අපද්‍රව්‍ය කළමනාකරණය නිසි පරිදි සිදු නොවීම, අක්‍රමවත් කසල බැහැර කිරීම, පොදු ස්ථානවල පිරිසිදුතාවය පිළිබඳ දක්වන නොසැලකිල්ල, පොල්කටු තැඹිලි කෝම්බ ටින්වර්ග වැනි පිහිලි ජලය රැඳෙන ස්ථාන නිසි ලෙස පිරිසිදු නොකිරීම මෙන්ම මහජනයා පුද්ගල සෞඛ්‍ය ගැන දක්වන අඩු තක්සේරුව, මිනිසාගේ කාර්යබහුලත්වය ද සෘජුවම බලපාන සාධක වේ. අපිරිසිදු ජලයේද මදුරුවා බිත්තර දැමීම නව ප්‍රවණතාවයකි.

පොදුවේ ඩෙංගු රෝගය එලෙස ව්‍යාප්තියට සාධක ලෙස දැක්වුවද ශ්‍රී ලංකාවේ ඩෙංගු වසංගතය එක්දහස් නවසිය හැටෙන් පසුව ඉතා දරුණුවට ව්‍යාප්තියක් ලබා තිබේ. ඒදිනෙදා ජන ජීවිතයද අඩපණ කරවන මේ මාරයාගේ ග්‍රහණයට ලක්වූ පිරිස සංඛ්‍යා දත්ත අනුව දැක්වීමේදී,

වර්ෂය	රෝගීන් ගණන	මරණ සංඛ්‍යාව
2013	32063	58
2014	47502	83
2015	29777	77
2016	55152	215
2017 අගෝස්තු දක්වා	80732	240

(උපුටා ගැනීම අන්තර්ජාලය ඇසුරෙනි)

පෙර වසරට සාපේක්ෂව රෝගීන්ගේ කැපීපෙනෙන වර්ධනයක් සිදුව ඇති අතර වැදගත්ම සහ අවධානය යොමු කළ යුතු කරුණ නම් දෙදහස් දහසයට වඩා අධික පමණ ප්‍රගතියක් මේ මාස අට තුළ ලබා තිබීමයි.

බස්නාහිර පළාතේත් යාපනය, අම්පාර, මඩකලපුව, හම්බන්තොට, ත්‍රිකුණාමලය වැනි දිස්ත්‍රික්ක වලද රෝගීන් සංඛ්‍යාවේ කැපී පෙනෙන වර්ධනයක් හඳුනා ගත හැක. එය අවාසනාවට කරුණකි. සාමාන්‍ය උණ සෙම්ප්‍රතිශ්‍යාව තරමට සුළු පටු නොවන්නා සේම සෑම රෝගීන් දහසකටම තිදෙනෙකු මියයාම එහි දරුණු බව මනාව ඔප්පු කරයි. පසුගිය මාස අට තුළ පමණක් මෙරට ඩෙංගු මරණ දෙසිය හතළිහක් බව සෞඛ්‍ය අංශ දත්ත වලින් ගම්‍ය වේ.

රටේ ශ්‍රම බලකාය මෙලෙස රෝගී වීම තුළ ආර්ථිකයට එල්ල කරන බලපෑම තක්සේරු කිරීමටද ආර්ථික විද්වතුන් මැලිකමක් දක්වන්නේ ජීවිතයක වටිනාකම ශ්‍රමයට හිලවී කිරීමට දක්වන අකැමැත්ත මතයි. එය දළ දේශීය නිෂ්පාදිතයට විශාල බලපෑමක් එල්ල කරයි. ඔවුන් වෙනුවෙන් සෞඛ්‍ය අංශ විශාල මුදලක් වැය කර හෝ ජීවිත බේරා ගැනීමේ දැඩි ප්‍රයත්නයක නිරත වෙයි. ආර්ථික සුභසිද්ධිය උදෙසා විදේශගත වන ශ්‍රමිකයින් ඩෙංගු රෝගීන්ගේ සංඛ්‍යාව ඉහළ දැමීමට රුකුල් වන්නේ මෙරටට පැමිණෙන විට යම් ප්‍රතිශතයක් රෝගීන් වී පැමිණෙන බවට ඇති දත්ත නිසාවෙනි. විදෙස් සංචාරකයින්ගෙන් සමහරෙක් ඩෙංගු රෝගය වැළඳී තිබියදී පැමිණීම තව දුරටත් බෝ කිරීමට ඇති හැකියාව වැඩි කරයි.

විවෘත ආර්ථිකය මෙරටද මුල්බැස ගැනීමත් සමග පුද්ගල කාර්යක්ෂමතාව වැඩි වීම, දෛනික කටයුතු හා රාජකාරිමය ස්වභාවය ද ඩෙංගු වසංගතයට සෘජුවම හා වක්‍රව බලපායි. මෑත කාලීනව විවිධ හේතුසාධක මත සෞඛ්‍ය අංශ සිදුකරන වැඩ වර්ජන, අකුරට වැඩ කිරීමේ ක්‍රියාදාමයන් මෙන්ම වෙනත් රෝගීන් වැඩිවීම හේතුවෙන් රෝහල් පහසුකම් ප්‍රමාණවත් නොවීම පරිසර දූෂණය ඉතා වැඩි වශයෙන් ඉහළ යාම, අවිධිමත් ජලය බැහැර කිරීමේ ක්‍රියාවලීන් හේතුවෙන්ද විවිධාකාරයෙන් ජීවිත හානි ඇති කරයි. දේශපාලන අධිකාරියේ නොසැලකිලිමත්කම, මතගැටුම් හා අවශ්‍ය ප්‍රතිපාදන නොලැබියාම ද බලපාන කරුණකි. රාජ්‍ය නීතිරීති වල පවතින අඩුලඟුකම්, පටු දේශපාලන වාසි ලැබීමේ අටියෙන් ගෙනයන විවිධ වැඩපිළිවෙලවල් ද සෘජුවම හා වක්‍රාකාරයෙන් ඩෙංගු රෝගීන් සංඛ්‍යාව වෙනස් කිරීමට පිටිවහල් වෙයි. මෙයට හේතුව තුන්වන ලෝකයේ වාණිජකරණයට ලක්වූ රටවල දැකිය හැකි කැපීපෙනෙන ලක්ෂණයක් වන සාමාජීය යුතුකම් හා වගකම් පැහැරහැරීම ශ්‍රී ලංකාවටද පොදු වීමයි. ධනවාදී ආර්ථික රටාව තුළ සියලුම සුභසාධන කාර්යයන් රජය තුළින් අපේක්ෂා කිරීමට අප ජනතාව හුරුවී සිටීම අවාසනාවට

කරුණු සපයයි. පෞද්ගලික අංශයද රජයට උපරිම සහයෝගය මෙවන් සමාජීය සත්කාරයන් සඳහා මනාව ඉටු නොවීමද විවිධාකාරයෙන් හේතුවෙයි. දේශන හා දැනුවත් කිරීමේ වැඩසටහන් කොතෙක් සිදුකළද ඒවා ගණන් නොගෙන සිටීමට තරම් ශ්‍රී ලාංකිකයන් පසුබට වීමද අභ්‍යාසයකි. ඩෙංගු රෝගීන්ට සමාජයෙන් එල්ල කරන බලපෑම මත හා නොදැනුවත්කම හේතුවෙන් වෙනත් අයගෙන් වෙන් වීමට දක්වන අකැමැත්ත බෝවීමට බලපාන තවත් ප්‍රතිඵලයකි.

ඩෙංගු පාලනය කරන්නේ කෙසේද?

- මදුරු කිටයා බෝවීම වැලැක්වීම.
- මදුරුවා දෂ්ඨ කිරීමට ඇති ඉඩකඩ ඇහිරීම.
- රෝගීන් හොඳින් රැකබලා ගැනීම අවධානය යොමු කළයුතු ප්‍රධානතම කරුණු වේ.
- විජලනය වැලැක්වීමට රෝගීන්ට දියරමය ආහාර ලබාදීම.
- පාසල් ලමුන්ට අත් වැසෙන සේ ඇඳුම් සකසා ගැනීමට අධ්‍යාපන අමාත්‍යාංශය ඉඩ සලසා දීම.
- නිවසේදී සෑම විටම කුඩා ළමුන් අඳුරු සහිත ස්ථානවල ගැවසීම හැකිතාක් අවම කිරීම.
- ශරීරය වැසෙන ඇඳුම් මුහුණු ආවරණ භාවිතය.
- අධික තරගකාරී අධ්‍යාපන රටාව හේතුවෙන් පාසල් දරුවන් ආහාර ගැනීම අඩුවීමෙන් ප්‍රතිශක්තිකරණය අඩුවීම.
- පොලිතින් ප්ලාස්ටික් බෝතල් නැවත පරිහරණය හෝ කසල ප්‍රතිචක්‍රීකරණය කිරීම තුළින් ඉවතලන ප්‍රමාණය අඩුකිරීම.
- ඔබ වටපිටාවේ ඇති අයිතිකරුවන් නොමැති හා තාවකාලිකව ඉවත් වී සිටින ඉඩම් පිළිබඳව විමසිලිමත් වීම හෝ ප්‍රාදේශීය සෞඛ්‍ය පරීක්ෂකවරුන් දැනුවත් කිරීම.
- රාජකාරි වේලාවෙන් යම් කාලසීමාවක් සේවා ස්ථාන ආයතන පරිශ්‍රය පිරිසිදු කිරීමට ආයතන ප්‍රධානීන් පාලන බලධාරීන්ගේ අවධානය යොමුකිරීම.
- වෛද්‍ය උපදෙස් නිසිලෙස පිළිපැදීම.
- පොල් හණසු ,මදුරු ගස් පුළුස්සා දුම ඇල්ලීම වැනි සාම්ප්‍රදායික ක්‍රම අනුගමනය කිරීමට උනන්දු කරවීම.

කෙසේ වුවද ශ්‍රී ලංකා රජය හැකි පමණින් සියලුම දේ සිදුකර ඇතිබවට සාක්ෂි ගෙනහැර දැක්වීමේදී ,

- බෝවන රෝග පිළිබඳව ජනාධිපති කාර්ය සාධක බලකාය තවදුරටත් පුළුල් කිරීම.
- රාජ්‍ය හා පෞද්ගලික මාධ්‍ය ඒකාබද්ධ ඩෙංගු මර්ධන වැඩසටහන් ක්‍රියාවට නැංවීම,
- විද්‍යුත් හා මුද්‍රිත මාධ්‍ය ස්වේච්ඡාවෙන්ම පුළුල් ප්‍රචාරණයක් ලබාදීම ,
- රතුකුරුස සිංහ සමාජය වැනි පිළිගත් ස්වේච්ඡා සංවිධාන මීට දායකවීම,
- ආණ්ඩු හා පරිපාලන ක්ෂේත්‍රයේ සිදුවන පුද්ගල මාරු වීම් හේතුවෙන් ප්‍රතිපත්ති හොඳ අතට හැරීම ද තුළින් පැහැදිලි වෙයි.
- සිලිසිලි කවර, ග්‍රොසරි බැග් , ලන්ච් ෂීට් , ඊ පී කෑම පෙට්ටි , සැප්තැම්බර් 01 සිට තහනම් කිරීම

අධ්‍යාපන ආයතන පාසල් පද්ධතිය ඩෙංගු රෝගයෙන් පාලනය කිරීමට ප්‍රායෝගිකව හා විධිමත්ව සන්නිවේදන මාධ්‍යක් බවට පත්කරීම උදෙසා විවිධ රචනා තරග, පොස්ටර් නිර්මාණ, චිත්‍ර තරග මෙන්ම වීදි නාට්‍ය, කෙටි නිර්මාණ ප්‍රදර්ශන ද හොඳ ප්‍රචණතාවයකි. සංචාරක කර්මාන්ත

උදෙසා නව නීති පැනවීම, සංක්‍රමණික ස්ථාන වල සෞඛ්‍ය පරීක්ෂණ අනිවාර්ය කරීම, ජාතිකමය වැඩ සටහන් වලට රාජ්‍ය අංශය නිතැතින්ම මැදිහත් කරවීම, ව්‍යවස්ථානකූලභාවය පසෙකලා කාලීනව නිවැරදි තීන්දු තීරණ ගැනීමට යොමුවීමද වැදගත් කරුණකි.

තරගකාරි ජීවන රටාව තුළ සියලුම පුද්ගලයින්ට සෞඛ්‍ය රක්ෂණාචරණයක් ලබාදීමට රාජ්‍ය මෙන්ම පුද්ගලික අංශයද කටයුතු කිරීම ආර්ථිකමය වාසියක් රෝගීන්ට ගෙනදෙයි. සමස්ථ දැනුවත් කිරීමේ ක්‍රියාවලිය තුළ හඳුනාගත් රෝගීන් රෝහල් වල වෙනම ඩෙංගු ඒකකයට යොමු කිරීමද වැදගත් වේ. ආරක්ෂක අංශ හා පොලිස් දෙපාර්තමේන්තුවද සෞඛ්‍ය අංශ සමග ඒකාබද්ධව සිදු කරන ගෙයින් ගෙට ගොස් පරීක්ෂා කර නීතිමය ක්‍රියාමාර්ග ගැනීමද විශේෂ වෙයි. පෞද්ගලික හා රාජ්‍ය මාධ්‍ය ආයතන ජනතාව දිරිමත් කිරීමට විශේෂ මුදල් ත්‍යාග පිරිනැමීම් ද රෝගය පාලනයට බලපා ඇත. නාගරික වෙළෙඳ සංගම් , ස්වේච්ඡා සංවිධාන, පොදු ස්ථාන රාජ්‍ය ආයතන ආශ්‍රිතව පරිසරය පිරිසිදු කිරීමට යොමුවීමක් ද දැකිය හැක. එකී කරුණු හා ක්‍රියාමාර්ග මෙරට තුළ ඩෙංගු උවදුර පාලනය කිරීමට ගෙන ඇති ක්‍රියාමාර්ග වෙයි.

නීතිරීති අණපනත් වලට සීමා නොවී “අපි අපේ” යන පුද්ගල සාමූහිකත්ව වදනට අනුව කටයුතු කිරීම හොඳම ක්‍රියාමාර්ගයකි . තමා ජීවත් වන වටපිටාව පිරිසිදුව තබා ගැනීම අවශ්‍යතාවයක් වන්නේ එය මනසට මෙන්ම ඇසටද ප්‍රිය උපදවන නිසාවෙනි . අපි ආයුධ වලින් පමණක් නොව කුඩා සත්වයෙකුටද මිනිස් ආත්මයක් නිකරුණේ විනාශ කිරීමට හැකි බව තේරුම් ගත යුතුය, මේ කාර්යයට දේශපාලන ආර්ථික කටයුතු වැදගත් නැත, තම කාලය ශ්‍රමය ධනයෙන් යම් ප්‍රමාණයක් වෙන් කිරීම ප්‍රමාණවත්ය , සෑම විටම සමාජයට තමන්ගෙන් ඉටු විය යුත්ත නොපිරිහෙලා ඉටු කළ යුතුය, එය අපේක්ෂා කරන දෙයකි, ශ්‍රී ලංකාව ඩෙංගු වලින් තොර වටපිටාවක් නිර්මාණය කිරීමෙහිලා සෞඛ්‍ය අමාත්‍යාංශයේ බෝවන රෝග ඒකකය රජයේ මෙහෙවර නොපිරිහෙලා ඉටුකරන අතර මූලික දැක්ම ඩෙංගු රටින් තුරන් කිරීමයි. ඊට ඔබගේ සහයෝගය ඉතා අවශ්‍යයි.

කෙසේ වුවද මෙරට පවතින සමාජ දේශපාලන ආර්ථික ක්‍රියාකාරකම් දෙස බැලීමේදී ඩෙංගු වලින් පුද්ගල ජීවිත බේරා ගැනීම අසීරු වී ඇත, මන්ද යත් දුප්පත් ජනතාවක් සිටින නිසා ඒදිනෙදා ජීවත් වීමට අවශ්‍ය ආහාර පාන ඕනෑ එපාකම් සරි කරගැනීමට සිතනවා විනා අන් යමකට අවධානය යොමුකිරීම අසීරුය, කාල පරාසයන් වෙනස් කරමින් දවසේ ඕනෑම වෙලාවක මදුරුවා දෂ්ඨ කිරීම නිසා මිනිසාට ආරක්ෂා වීම ලෙහෙසි නැත. විටින් විට ඇදහැලෙන අධික වර්ෂාව හේතුවෙන් ද ඒවා නිසි පරිදි කළමණාකරණය කරවීමද සංඛ්‍යාව අඩුකර ගැනීමට ඉතා වැදගත්ය, ආදර්ශයෙන් මගපෙන්වීමේ ආගමික මූලධර්මය යතාර්ථයක් කරමින් ජීවිත බේරාදීම විශාල ප්‍රණයකර්මයක් අත්පත් වෙයි. පුද්ගල ජීවිත ඇපයට තබා කරන වැඩවර්ජන කිසිසේත් අනුමත නොකරන අතර ඒවා හෙලා දැකිය යුතුයි. නිරෝගීව සිටීම සුවවීමට වඩා හොඳයි. (Prevention is better than cure) යුතුකම් හා වගකීම් මත පිහිටා එක්ව වැඩකිරීම තුළ මානසික සන්තුෂ්ඨියක් ලැබීම පමණක් නොව පැසසුමටද ලක්වෙයි. තම දුවාදරුවන්ද ඊට හුරු කළ යුතුයි.

නමුත් මේ ඩෙංගු මදුරුවාගෙන් දිවි ගලවා ගැනීමේ ක්‍රියාවලිය මූලිනුපුටා දැමීමට නොහැකිය. පටු දේශපාලන ආර්ථික වාසි මදකට අමතක කිරීමෙන් වර්ධනය අඩුකළ හැක. අවම වශයෙන් සතියකට පැයක්වත් මේ කාර්යයෙහි නිරත වීම අනිවාර්ය වන්නේය. තම අවට පොදු ස්ථාන පිරිසිදුව තබාගෙන අකලට මිලින විමට ඉඩ ඇති ජීවිතවලට වටිනාකමක් දී රටේම ඩෙංගු උවදුර පාලනය කරමින් ලොවට ආදර්ශයක් දුන් උතුම් රට බවට පත්වීමේ අභිමානය ලබා ගැනීමට හෙට අනිද්දා නොව අදම පෙළ ගැසෙමු.

ශ්‍රී ලංකා නාවික හමුදා රචනා තරගාවලිය 2018- ජයග්‍රාහී නිර්මාණ (නාවික අංශය)

නූතන සන්නිවේදන මෙවලම් භාවිතයට පෙළඹවීම මානව සබඳතා කෙරෙහි ඇති කරන බලපෑම

වෛද්‍ය සහායක ඩබ්ලිව් පීකේ වර්ණසූරිය



නූතන ලෝකයේ කාලයක් සමග නව සොයාගැනීම් අත්හදාබැලීම් ආදී දියුණු මිනිස් ක්‍රියාකාරකම් එකතු වීමත් සමග ඵ්දෙනදා කටයුතු අවශ්‍යතා වී තම අවශ්‍යතා සපුරා ගැනීමට හැකි වී ඇත. කෙටි කාලයක් තුළදී වැඩි කාර්යයන් ප්‍රමාණයක් ඉටු කර ගැනීමට හැකිවී ඇත. මේ ආදී හේතූන් නිසා නව සොයා ගැනීම් තමන්ගේ ජීවිතයට ඉතා ඉක්මනින් එකතු කර ගැනීමට මිනිසුන් හුරු පුරුදු වී සිටී. මිනිසා වර්මානයේ දී උත්සුක වන්නේ තමන් කරන කාර්යයන් තව තවත් කෙටි කාලයකින් සිදු කිරීමටය. එසේ වී ඇත්තේ මිනිස් පරිණාමයත් සමග මනස පෙළ සෑදී ඇති ආකාරයටය. මෙසේ දියුණුව ඇති සොයා ගැනීම් අතර සන්නිවේදන මෙවලම් වලට ප්‍රමුඛ ස්ථානයක් හිමි වී තිබේ.

නූතන සන්නිවේදන මෙවලම් අතර දුරකථනය, රූපවාහිනී යන්ත්‍රය, පරිගණකය සහ අන්තර්ජාලය ඉන් කිහිපයකි. වර්තමානය වනවිට මෙම මෙවලම් තවදුරටත් දියුණුවෙමින් පුළුල් කාර්යය පරාසයක් ඉටු කරමින් මානවයාට ඉතාම සම්ප්‍රභාවයකට පත්වී ඇත. යම්යම් සන්නිවේදන ක්‍රම තමන්ගේ ශරීරයේ කොටස් තරම්ම සම්ප්‍රභාවයක් පෙන්වයි. මෙසේ නූතන සන්නිවේදන මෙවලම් මිනිසුන් අතර ඉතා ඉක්මනින් බෙදී යාමට තවත් හේතුවක් වී ඇත්තේද මෙම සන්නිවේදන මෙවලමෙහි ක්‍රියාකාරී තත්වයන් නිසාමය. එසේ සිතා බලන විට සැබවින්ම නැගෙන ප්‍රශ්නය නම් මෙම නූතන සන්නිවේදන මෙවලම් කෙරෙහි මිනිසුන් පෙළඹවුවාද නැත්නම් ඔවුන් විසින් ම පෙළඹුනාද යන්නය.

ඒ කෙසේ වෙතත් මෙම සන්නිවේදන පහසුකම් ඇති වීමත් සමග කෙටි කාලයක් තුළදී වැඩි පිරිසක් හට පණිවිඩයක් ලබාදීම, දුෂ්කර ප්‍රදේශවල සිටින පුද්ගලයින් හා ඉතා කෙටි කාලයකින් සම්බන්ධවීමට හා තොරතුරු බෙදා ගැනීමට හැකිවීම, දුර බැහැර හෝ විදේශයන්හි සිටින සම්ප්‍රභාවයන් හා ඉතා කෙටි කලකින් සම්බන්ධ වී අදහස් බෙදා හදා ගැනීමට හැකිවීම, ස්ථාන දෙකක් අතර සිට තොරතුරු සහ විධියේ දර්ශන වැනි දේ හුවමාරු කර ගැනීමට හැකිවීම, ගමන් විඩාවක් නොමැතිව කාර්යාලය තුළ සිට හෝ නිවාසය තුළ සිට හෝ රථයක ගමන් කරමින් සිටින අතරතුර හෝ යම් කිසි කාර්යයක නියැලෙමින් සිටින අතරතුරකදී මෙම සන්නිවේදන මෙවලම් භාවිතා කිරීමට හැකි වීම ආදී විශේෂ වාසි රැසක් හිමි වී ඇත.

තවද, කාර්යාලයක් තුළදී ගත්කල තම සේවකයන් සිදුකරන රාජකාරිවල නිවැරදිභාවය තම අසුනේ සිට ආයතන ප්‍රධානියාට දැන ගැනීමට තරම් පහසු වී ඇත. එපමණක් නොව අනුශාසනාවන්හි සිටින ප්‍රධානීන් හා සේවකයන්ගේ රාජකාරි සහ කාර්යක්ෂමතාවන් තම කාර්යාලය තුළ සිට හෝ නිවාසය තුළ සිට තවත් රාජකාරි කටයුත්තක් සඳහා ගමන් කරමින් සිටින අතරතුරකදී සොයා බැලීමට හැකියාව සැලසී ඇත. ඒ නිසාම එම රාජකාරි කටයුතුවලට යම් තොරතුරු හෝ දත්තයන් එකතුකිරීමට හෝ දත්තයන් නිරවද්‍ය ලෙස සැකසීමට එම ස්ථානයට නොගොස් තමන් සිටින ස්ථානයේ සිටම සිදු කිරීමට හැකියාව ලැබී ඇත. මේ නිසා කාර්යාල කටයුතු තව තවත් පුළුල්භාවයට පත්වී වැඩි ආදායම් මාර්ග ප්‍රමාණයක් සැකසීම මෙන්ම වැඩි සේවා පරාසයක් සැලසීමටද හැකි වී ඇත. එසේම කාර්යක්ෂමතාවයද ඉතාමත් ඉහළ මට්ටමක පවතී.

එනමුත් කණගාටුවට කරුණක් වන්නේ නව සන්නිවේදන මෙවලම්හි පෙළගැස්ම

නිසාවෙන්ම ආයතන ප්‍රධානියා සමග එකඟ වදනක් හෝ මුහුණට මුහුණ හමුවී කතා නොකළ සේවකයන් බොහෝ වෙති. සේවකයන් සමග පුද්ගලික කාරණාවක් හෝ දැන හැඳුනුම්කමක් හෝ අදහස් බෙදාහදා ගැනීමට උත්සුක වන ආයතන ප්‍රධානීන් නොමැති තරම්ය. අතීතයේදී රාජකාරී ස්ථානයක එකිනෙකා අතර වූ එකමුතුභාවය හා රාජකාරී බෙදාහදා ගනිමින් ඉතා සතුටින් සේවකයන් තම රාජකාරිය ඉටු කළහ. එනමුදු අද ඇත්තේ තරඟයක් පමණි. තමන්ට පැවරෙන වැඩ කොටස හැකි ඉක්මනින් නිම කරන සේවකයෝ ඉතිරි කාලය තුළදී අන්තර්ජාලය භාවිතා කිරීම හෝ තම ජංගම දුරකථනය භාවිතා කිරීමට පුරුදු වී සිටිති. තමන් අසල රාජකාරී කරන පුද්ගලයාගේ නමක්වත් අඩුම තරමින් නොදනිති. ඔහු හෝ ඇය ගැටලුවක සිටින්නටද පුළුවන. එසේත් නැත්නම් යම් කිසි අපහසුතාවයක සිටින්නටද පුළුවන. නමුදු එම පුද්ගලයාට එය තනිව විසඳා ගැනීමට හෝ විදදරාගැනීමට සිදුවන තරම් අන්තර් මානුෂීය සබඳතාවයන් මේ නිසා ගිලිහී ගොසින්ය.

තමන්ට හිමි රාජකාරී ප්‍රමාණය තමන්ට නුහුලනා ප්‍රමාණයක් වුවද ඒ පිළිබඳව සොයා බැලීමට හෝ උදව්වක් ලබා ගැනීමට කෙනෙකු ඉදිරිපත් නොවන තරම්ය. එය එසේ වී ඇත්තේ නූතන සන්නිවේදන මෙවලම්හි ක්‍රියාකාරීත්වය හා දියුණුව නිසාවෙන්ම අසල සිටින සේවකයන් සේවය කරන අතරතුරදීම තමන් යටතේ සිටින වෙනත් ආදායම් මාර්ගයක සේවකයන් පිරිසක් දුරකථනය හරහා හෝ වෙනත් සන්නිවේදන උපාය මාර්ගයකින් මෙහෙයවනවා විය හැකිය. නැතිනම් එවැනි වෙනත් රාජකාරියක නියැලෙනවා විය හැකිය. ඔවුන්ගේ මනසේ නිරවුල් භාවයක්ද දැකිය නොහැක. එසේ වුවද ඉන් මිදීමක් හෝ සීමා කිරීමක්ද සිදුවන්නේ නැත.

නිවසක් තුළදී ගත්කල වර්තමාන අවශ්‍යතා හා උවමනා සපුරාගැනීම වෙනුවෙන් මව සහ පියා දෙදෙනාම කිසියම් රැකියාවක නියැලීමට සිදු වී ඇත. එම නිසාවෙන්ම තම දූදරුවන්ලා මැණිවරුන්ලා පියවරුන්ලා සහෝදරයින් සමග අදහස් හුවමාරු කර ගැනීම හා තොරතුරු බෙදාහදා ගැනීමට නූතන සන්නිවේදන මෙවලම් බෙහෙවින්ම උපකාරී වී තිබේ. එම නිසාවෙන්ම තමන් රාජකාරී කරන අතරතුරදී තම දරුවන් සිටින ස්ථානවල බිරිඳ හෝ සැමියා සිටින ස්ථානය දැන ගැනීමට හා සොයා බැලීමට හැකි වී තිබේ. එසේ හෙයින් වර්තමානයට අනුව මෙම සන්නිවේදන පහසුකම් මිනිසාට ජීවන චක්‍රය පවත්වාගැනීමට හා මානව සබඳතා අලුත්කර ගැනීමට ඉතාමත් පහසු කරන අතරම එම සම්බන්ධතාවල සීමාව ඉක්මවා ගොසින්ය. සමාජ වෙබ් අඩවි සහ වෙනත් දියුණු සන්නිවේදන ක්‍රම උපායන් නිසාවෙන් නොදන්නා පුද්ගලයන් සමග වුවද සම්බන්ධතා ගොඩනැගීමට හැකියාව ලැබී ඇත.

එසේ හෙයින් විවිධ ප්‍රදේශයන්හි විවිධ ආයතනවල පුද්ගලයින් සමග සබඳතා ගොඩනගා ගැනීම මගින් විවිධ උදව් උපකාර ලබා ගත හැකි අතරම සමාජ සේවා, ආගමික කටයුතු වෙනුවෙන් සහසම්බන්ධ වීමටද හැකියාව සැලසී ඇත. විවිධ දෙස් විදෙස් පුවත් හා කාලගුණ විපර්යාසයන් සැනෙකින් දැනගැනීමටද හැකියාව ලැබී ඇත. විවිධ රැකියා අවස්ථා සඳහා අවස්ථාව ලබා ගැනීමට හැකියාව ලැබී ඇත. නූතන සන්නිවේදන මාර්ග හා මෙවලම් ඔස්සේම රැකියා අවස්ථා උත්පාදනය වීම හා වැඩිදියුණු කිරීමේ හැකියාව ලැබී ඇත. එමෙන්ම නූතන සන්නිවේදන මෙවලම් නිසාවෙන්ම තම පවුල් පරිසරය සාර්ථක කර ගත්තවුන් මෙන්ම මානසික සුවය සහ සතුට වැඩි කර ගත්තවුන්ද බොහෝ වෙති.

නමුත් වැරදි ලෙස නූතන සන්නිවේදන මෙවලම් භාවිතා කිරීම නිසා මානවයාගේ පෞද්ගලික ජීවිතයට මෙන්ම පවුල් පසුබිම් වලටද නොයෙකුත් බාධා එල්ල වී තිබේ. වංචනික පුද්ගලයින් නූතන සන්නිවේදන මාර්ග භාවිතා කිරීම තුලින් නව සබඳතා ගොඩ නගා ගනිමින් ඒ හරහා මිනිසුන් හසු කර ගනිමින් ඔවුන් හට ඔවුන්ගේ ජීවන මාර්ග විවිධාකාරයෙන් අවුල් කරමින් කටයුතු කරගෙන යති. තවද මේ ක්‍රියාදාම හේතුවෙන් තම ජීවිත පවා අහිමි කර ගත්තවුන්

බොහෝ වෙති. තම සතුට සහ මානසික සුවය ද අහම්බ කර ගත්තුවත් බොහෝ සිටිති. තවත් පිරිසකට සමාජයට මුහුණ දීමට පවා අවස්ථාව අහිමි වී ගොසිනි. එසේම මේ මගින් ඇති වූ හානිකර තත්වයන් මෙසේද පැහැදිය හැක. දිනකට වතාවක් හෝ සතුව සාමිවියේ යෙදෙමින් එක් මේසයක් මත වාඩිවී ආහාර ගැනීමට තරම් වත් පවුලක් තුළ තිබූ බැඳීම ඉවත ගොස් ඇත. තාත්තා අන්තර්ජාලයේ කුමන හොඳ වැඩකය. නැතිනම් කුමන හෝ වැදගත් දර්ශනයක් නරඹනවා විය හැක. අම්මාට විවේකයක් ලැබුණු සැනින් ඇය රූපවාහිනිය ඉදිරියේය. දරුවන් කුමන හෝ සමාජ වෙබ් අඩවියක මිතුරන් සමග පිළිසඳරක විය හැක.

එය මඳකට නතර කිරීමටවත් තරම් නැත. නූතන මිනිසා ඒ තරම් සන්නිවේදන මෙවලමෙහි ගිණු වී ඇත. ආහාර ගන්නා අතරද දුරකථනය එක් අතකය. දරුවන් පාඩම් වැඩ කරන්නේද වෙබ් අඩවි හරහා පිළිසඳරේ යෙදෙමින්ය. නැතිනම් කෙටි පණිවිඩ හුවමාරු කර ගනිමිනි. දෙමව්පියන්ටද අන්තර්ජාලය හෝ එවැනි වෙනත් සන්නිවේදන මෙවලම් කෙරෙහි ඇති අවධානය නිසාවෙන්ම දරුවන්ගේ ගැටලු වලට සවන් දීමට කාලයක් වෙන් නොවන තරම්ය. දෙමව්පියන්ගෙන් දරුවන්ට ලැබිය යුතු ආදරය අහු සැමියන් අතර ඇති ආදරණීය සමීප සබඳතාවයන් මේ නිසාම ගිලිහී ගොසිනි. නැතිනම් සීමා වී ගොසිනි. පවුලක් තුළ පවතින සමගිය සතුට නූතන සන්නිවේදන මෙවලම් නිසා ගිලිහී ගොස් ඇත. අන්තෝන්‍යයන් කෙරෙහි ඇති ගරුත්වය හා සදාචාර සම්පන්න භාවයටද කැළලක් වී ඇති අවස්ථා බොහෝය. මනසට ගත් වැරදි ආකල්ප අදහස් බොහෝය. බොහෝ දෙනා ඒ ගන්නා අදහස් ක්‍රියාත්මක කිරීමට යාමෙන් ගැටළු රාශියක් ඇතිවේ.

එම නිසාවෙන්ම නූතන සන්නිවේදන මෙවලම් යහපත් අයුරින් භාවිතා කිරීම තුළින් ඇති කරන යහපත් ප්‍රථිපල මෙන්ම අයහපත් ප්‍රථිපලද එලෙසම වේ. අප නූතන සන්නිවේදන මාර්ග කරා පෙළඹවූයේ පියවරෙන් පියවර සන්නිවේදන මාර්ග ඔස්සේමය. ඒ සමාජය තුළින් ඉස්මතු වූ අවශ්‍යතාවයන් සපුරා ගැනීමටය. තවත් කෝණයකින් බලන කළ මානවයාගෙන් එක් කොටසක් තවත් කොටසකගේ යැපෙන්නන් බවට මේ නිසා පත් වී ඇත. නැතිනම් තවත් අයුරකින් පැවසුවොත් උගුලකට හසු වූ පිරිසකි. මිනිසාගේ වරද නම් නූතන සන්නිවේදන මෙවලම් භාවිතය මගින් තමන්ගේ මානව සම්බන්ධතා ගොඩනගා ගැනීම සහ කාර්යයන් ඉටු කර ගැනීම යන අරමුණින් නොනැවති එය තමන්ගේ ජීවිතය කර ගැනීමට උත්සාහ කිරීමය.

කරුණු කෙසේ වුවද නූතන සමාජ රටාව හා ගැටීමේදී නම් මෙම සන්නිවේදන මෙවලම් හි කාර්යභාරය ඉතා උසස්ය. මෙම සොයා ගැනීම් වෙනුවෙන් තම ජීවිත කාලයම කැප කළ පුද්ගලයන් වෙති. ඒ ගිලිහී යන මානව සම්බන්ධතා අලුත්කරදීමට ඔවුන් ගත් වෙහෙස මහත්සියයි. ඉදිරිපත් කිරීමට අදහස් බොහෝය. නූතන සන්නිවේදන මෙවලම් භාවිතා කරමින් සිදු කළ යුත්තේ තම කාර්යයන් හා පැරණි සහ නව මානව සබඳතා ගොඩනගා ගනමින් යහපත් සේවයක් සපයා ගැනීම විනා මෙතෙක් පවත්වා ගත් යහපත් මානුෂීය මානව සබඳතා බිඳ හෙලා ගනිමින් සංස්කෘතික සදාචාර සම්පන්න සමාජ රටාවක් තුළට පිවිසීමේ මංපෙත් අහුරා ගැනීම නොවේ. එම නිසා සමාජයක් ලෙසට නව සන්නිවේදන මාර්ග සොයා යා යුතුය. පවතින සන්නිවේදන මෙවලම් තව තවත් වැඩි දියුණු කළ යුතුය. එනමුත් පවතින ස්වර්ණමය මානව සබඳතා වලට ගිලිහී යාමට ඉඩ නොදිය යුතුය. ඒ තුළින් සදාචාර සම්පන්න මිත්‍රශීලී සමාජ රටාවක් ගොඩනගා ගත යුතු වේ.