

# 2022 Annual Report



## **MRCC - COLOMBO**

**MARITIME RESCUE CO-ORDINATION CENTRE - COLOMBO**

## TABLE OF CONTENT

Title Page	i
Content Page	ii
List of Tables	iii
List of Graphs	iv
List of Figures	v
<b>MRCC Colombo in Brief</b>	<b>1</b>
<b>Operation Procedure of MRCC Colombo</b>	<b>2</b>
<b>Overview of Year 2022</b>	<b>3- 9</b>
Number of Distress Incidents Reported to MRCC Colombo	3-5
Types of Platforms Reported in Distress	3- 5
Geographical Distribution of Incidents	4
Types of Incidents Reported at MRCC Colombo	5-6
Errors in Navigation	6-7
Actions Initiated by the MRC C Colombo	7- 8
Assistance Provided by the Sri Lanka Navy	9
Issuing of Maritime Safety Instructions	9
Alerts Generated by Distress Beacons	9
System Effectiveness and Efficiency of MRCC Colombo	9-10
Case Studies	10-12
<b>Comprehensive Comparison from Year 2018-2022</b>	<b>13-16</b>
Number of Distress Incidents Reported to MRCC Colombo	13
Types of Platforms Reported in Distress	14
Types of Incidents Reported at MRCC Colombo	14-15
Actions Initiated by MRCC Colombo	15
Assistance Provided by the Sri Lanka Navy	15-16
Comparison of Lives saved and Cost Incurred by the Sri Lanka Navy for Assisting Distress Incidents	16
<b>Conclusion</b>	<b>16- 17</b>

## LIST OF TABLES

<b>TABLE</b>	<b>TITLE</b>	<b>PAGE</b>
Table- I	Actions Initiated by MRCC Colombo in 2022	7
Table – II	Incidents Reported at MRCC Colombo from 2018 to 2022	13
Table – III	Comparison of Lives Saved and Cost Incurred by SLN	16

## LIST OF GRAPHS AND CHARTS

<u>GRAPH</u>	<u>TITLE</u>	<u>PAGE</u>
Graph - I	Number of Distress Incidents Reported per Month During 2022	3
Chart- I	Types of Platforms Reported in Distress in 2022	5
Chart - II	Types of Incidents Reported in 2022	6
Graph - II	Area wise Distribution of Incidents resulted due Error in Navigation	6
Chart - III	Action Initiated by MRCC Colombo in 2022	8
Chart - IV	Types of Platforms Assisted by SLN in 2022	8
Chart - V	Types of Incidents Assisted by SLN in 2022	9
Graph - III	Comparison of Incidents Reported at MRCC from 2018 to 2022	13
Graph - IV	Comparison of Platforms Reported in Distress from 2018 to 2022	14
Graph - V	Comparison of Type of Incidents Reported from 2018 to 2022	14
Graph - VI	Types of MRCC actions from 2018 to 2022	15
Graph - VII	Types of Assistances Provided by Sri Lanka Navy	16

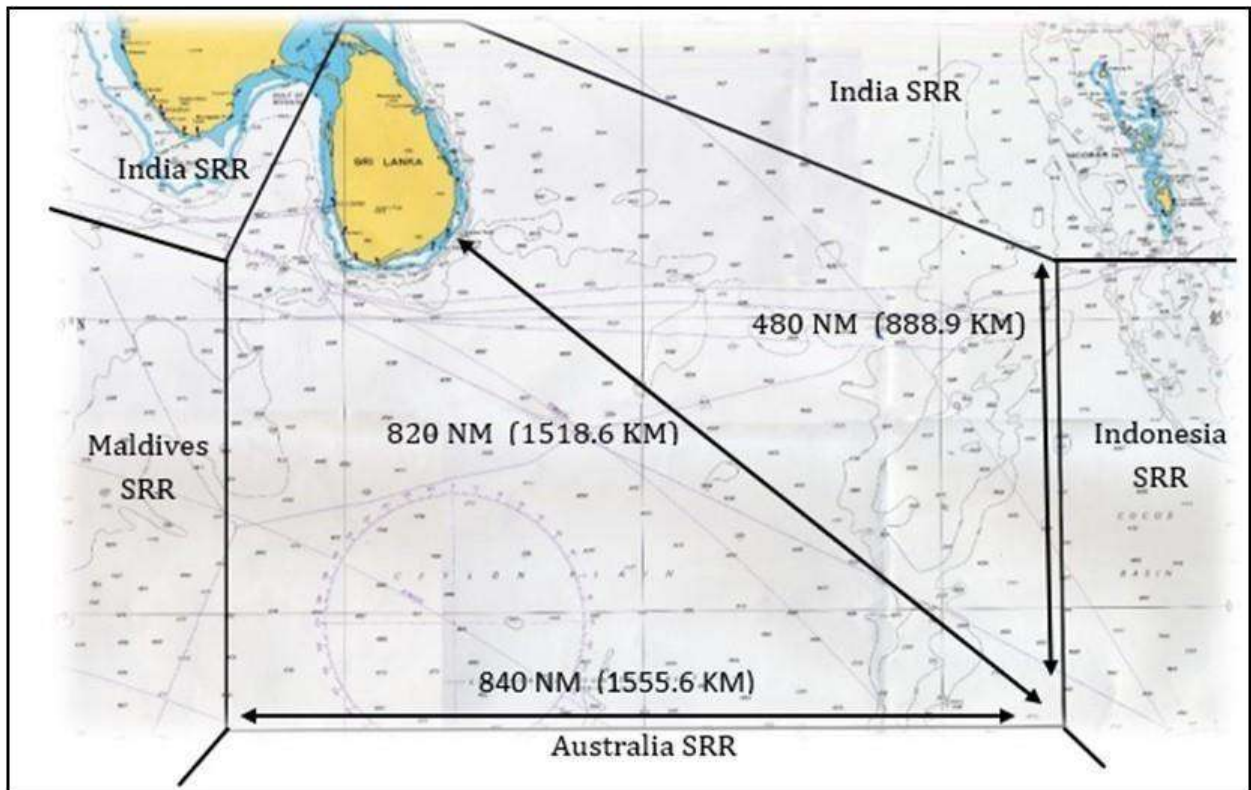
## **LIST OF FIGURES**

<b><u>FIGURE</u></b>	<b><u>TITLE</u></b>	<b><u>PAGE</u></b>
Figure- 1	Sri Lanka Search and Rescue Region	1
Figure- 2	Operation Procedure of MRCC Colombo	2
Figure 3	Geographical Distribution of Incidents	4
Figure 4	Geo Positioning of Incidents Resulted due Error in Navigation	7
Figure 5	Planned Rescue Coordination Centre Network	17

**MARITIME RESCUE COORDINATION CENTRE COLOMBO**  
**ANNUAL REPORT 2022**

**MRCC Colombo in Brief**

1. Sri Lankan Government is vested with the responsibility over 1,778,062.24 km<sup>2</sup> of maritime Search and Rescue Region (SRR) which is approximately 27 times of the landmass and share boundaries with India, Indonesia, Australia and Maldives. Figure 1 denotes the Sri Lanka SRR.



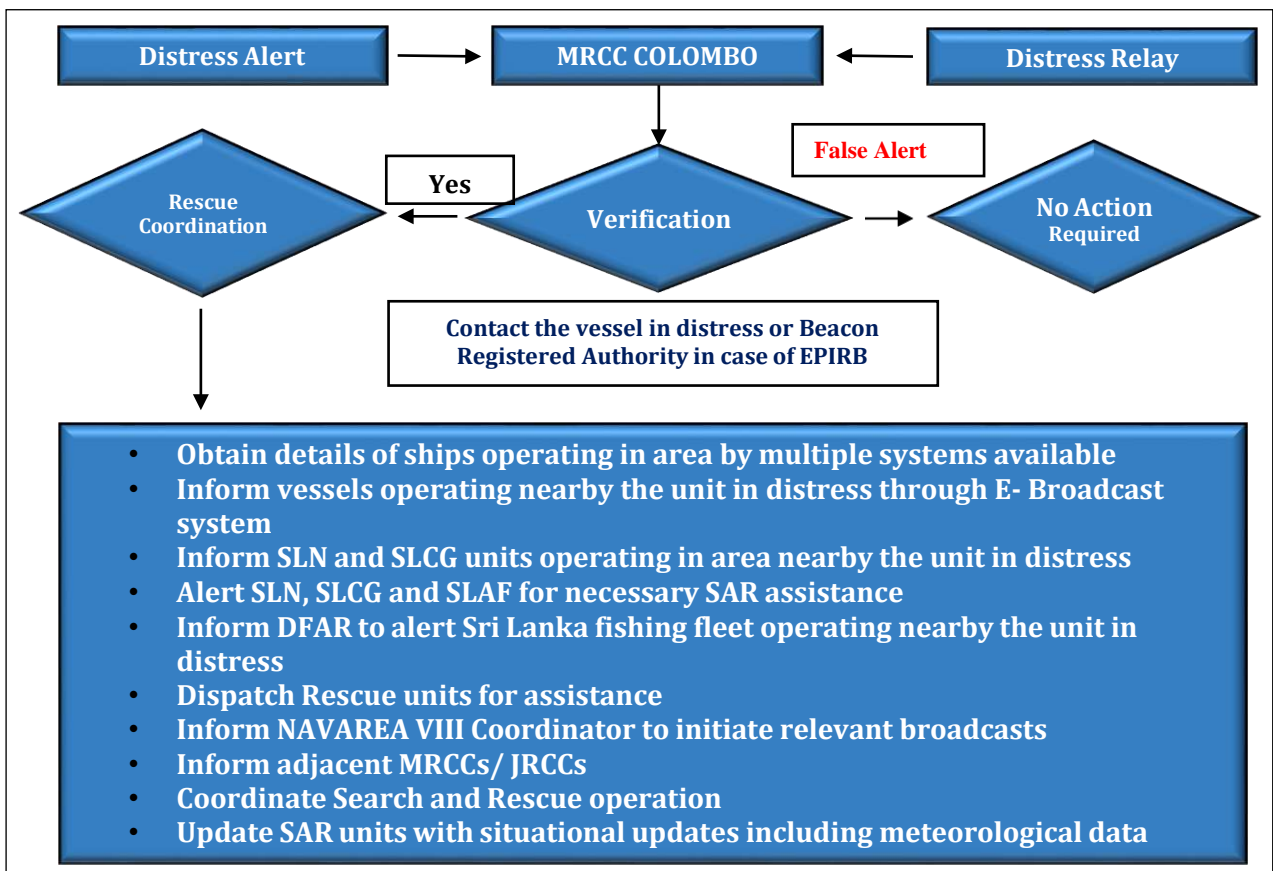
**Figure 1:** Sri Lanka Search and Rescue Region

2. On 10<sup>th</sup> April 2014 Sri Lanka Navy (SLN) became the national responsible authority for the conducting of maritime Search and Rescue (SAR) operations in Sri Lanka SRR. Executing the responsibility, Maritime Rescue Coordination Centre (MRCC) Colombo at Navy Headquarters coordinate assistance to vessels in distress by all possible means. The facility is staffed with qualified naval personnel and functions round the clock under the supervision of the Director General Operations (DGO) and Director Naval Operations (DNO).

3. MRCC Colombo being functioning under one of the most resourceful maritime arms of the country, has become an added advantage in several capacities which ranging from access to Maritime Domain Awareness tools to timely deployment of SAR facilities. In the process of coordinating maritime distress incidents reported at the facility, Aeronautical Rescue Coordination Centre (ARCC), Department of Fisheries and Aquatic Resources (DFAR), Colombo Radio and other Rescue Coordination Centres act as alerting posts whilst the SLN, Sri Lanka Air Force (SLAF) and Sri Lanka Coast Guard (SLCG) providing the Search and Rescue Units (SRU).

## Operation Procedure of MRCC Colombo

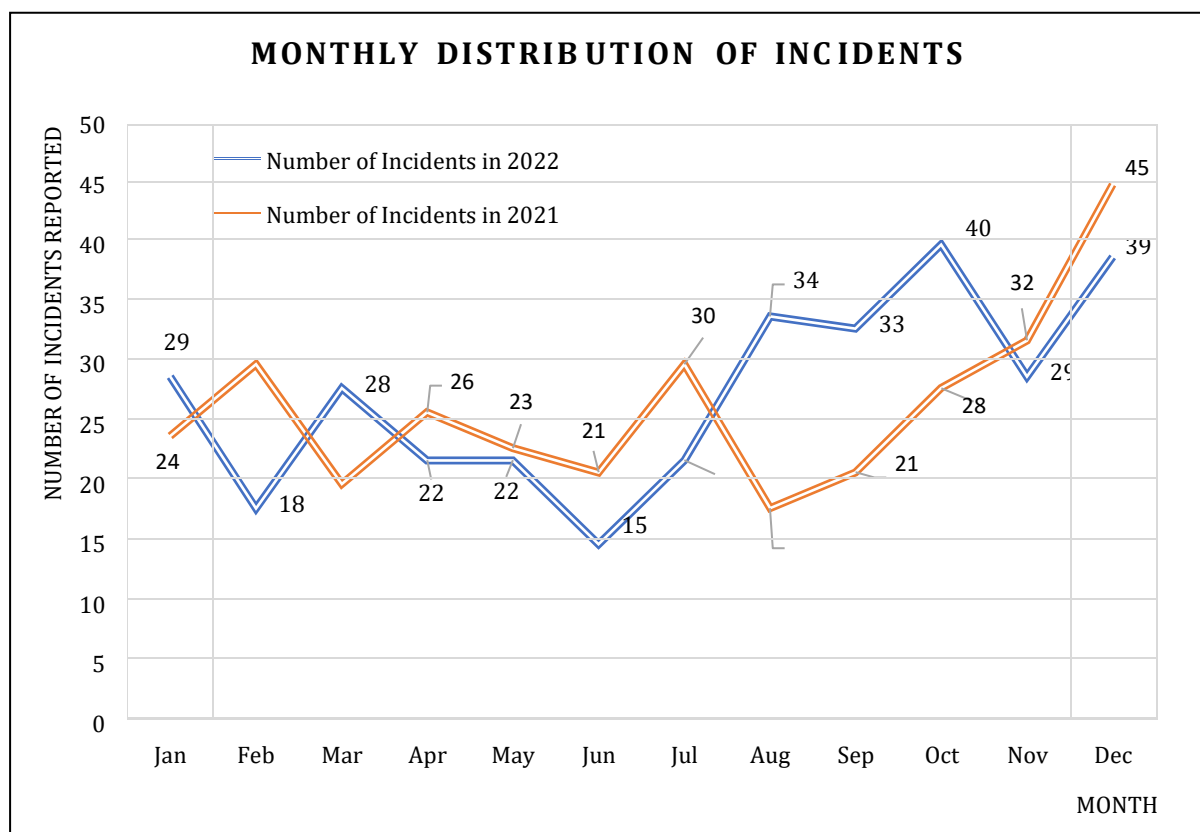
4. On receipt of a distress alert at the MRCC, following procedure is adopted to ensure prompt and precise response to the distress incidents. Collaborative operations with adjacent MRCCs have synergized the effort made by the MRCC Colombo.
5. As the initial step, each incident reported at MRCC Colombo is recorded in a log sheet which will be the checklist of MRCC operations. All necessary details related to the maritime distress will be collected and all possible means to coordinate SAR operation will be considered at the MRCC. Upon verification, the best course of action will be triggered ensuring safety of the life at sea.
6. Whilst continually monitoring the situation, MRCC will issue relevant broadcasts alerting the maritime traffic in area and continue to feed SRUs with necessary operational instructions. In parallel, the developments will be shared with adjacent RCCs as necessary.
7. With the intention of improving future SAR operations, all incidents coordinated by MRCC Colombo are kept recorded with sequence of events and survivor feedbacks. Reports are generated in weekly, monthly and annual basis and disseminated among the stakeholder agencies.
8. Operation procedure of the MRCC Colombo is scrutinized at figure 2.



**Figure 2:** Operation Procedure of MRCC Colombo

## Overview of Year 2022

9. **Number of Distress Incidents.** During the year 2022, MRCC Colombo received 331 incidents with an average of 27 incidents per month. Graph I show the number of incidents reported in 2022 including a comparison with 2021 data. The geographical distribution of incidents is presented in the Figure 3. Of the 331 incidents reported, 51 incidents (15 %) occurred within the territorial waters, 101 incidents (31 %) occurred between territorial waters and Exclusive Economic Zone (EEZ), 139 (42%) incidents occurred beyond the EEZ and 40 incidents reported without location details. Compared to 2021, the total number of incidents in 2022 increased by 4%.

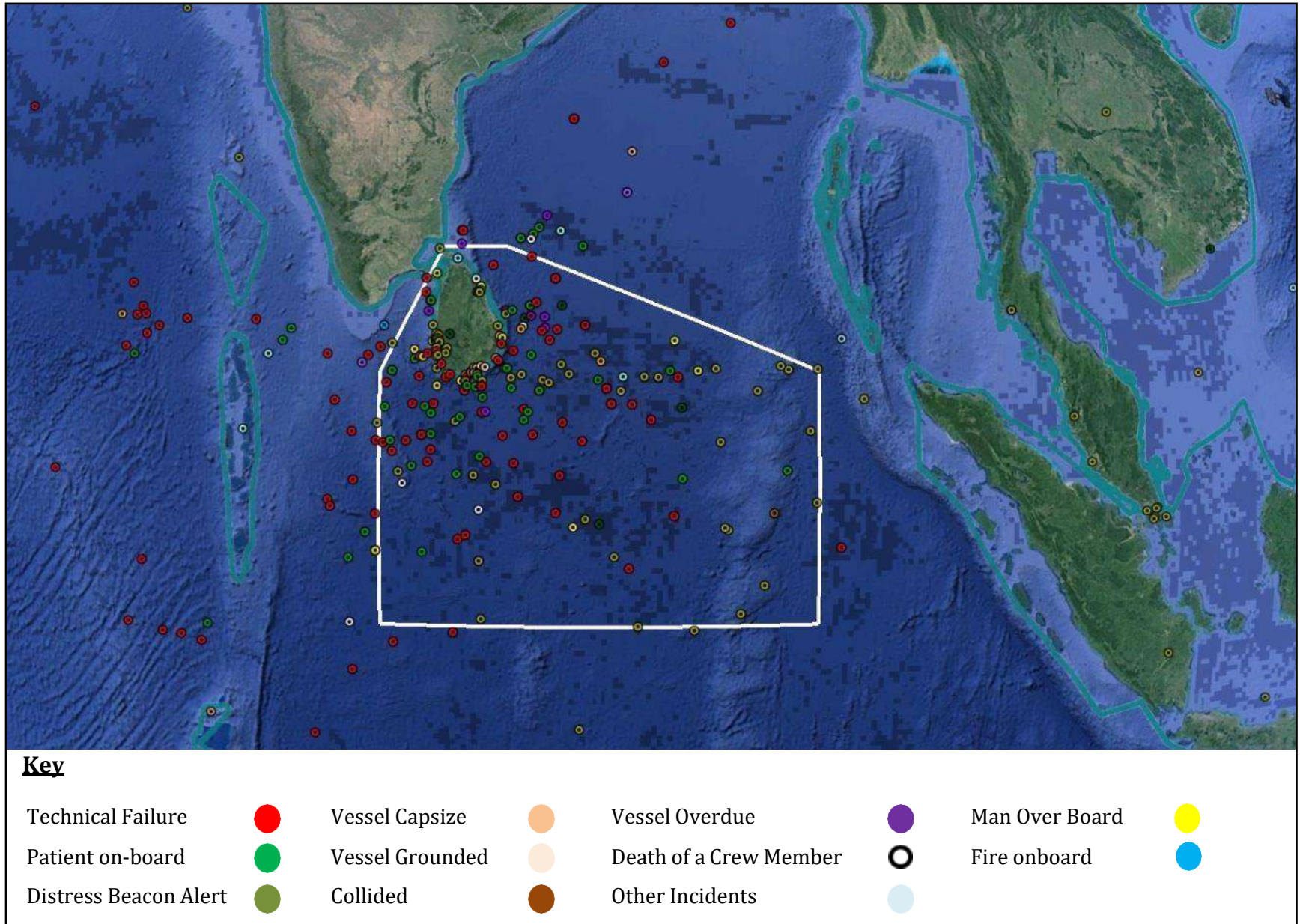


**Graph - I:** Number of Distress Incidents Reported per Month

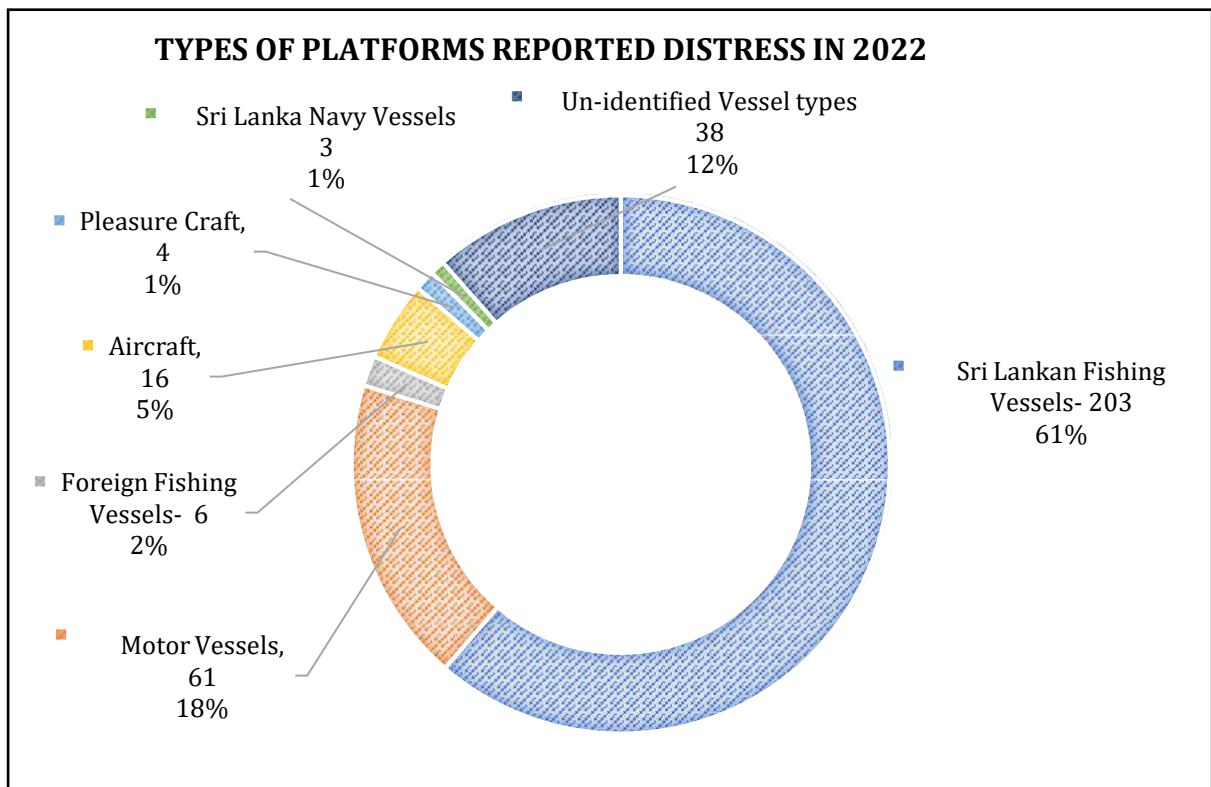
10. **Types of Platforms Reported in Distress.** The majority of the incidents reported at MRCC Colombo in 2022 are from Sri Lankan fishing vessels which accounted for 73.79% of total incidents. In comparison with 180 Sri Lankan fishing vessels in 2021, it marks an increment of 12.7 %. Chart I shows the categorization of total incidents under following seven categories.

- a. Sri Lankan Fishing Vessels - 203
- b. Merchant Vessels - 61
- c. Foreign Fishing Vessels - 06
- d. Aircraft - 16 (Emergency Locator Beacon alerts)
- e. Foreign Pleasure Craft - 04
- f. Sri Lankan Naval vessels - 03 (EPIRB alerts)
- g. Unidentified Vessel classes - 38





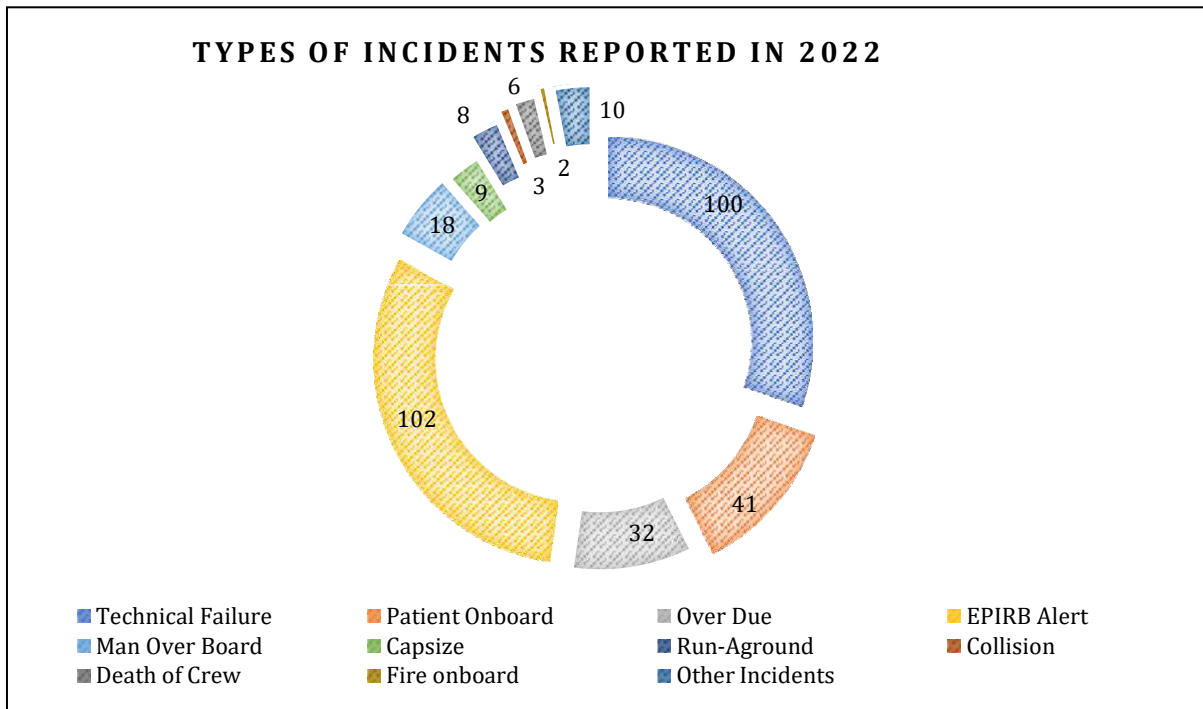
**Figure 3:** Geographical Distribution of Incidents



**Chart - I:** Types of Platforms Reported in Distress in 2022

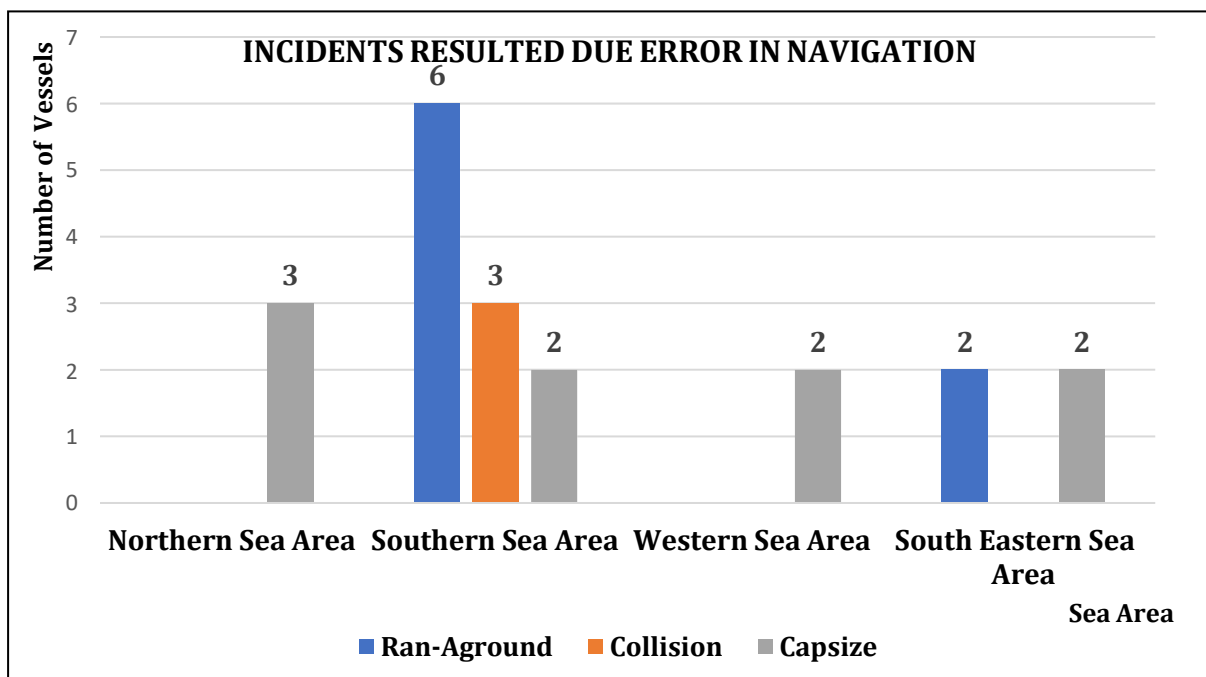
11. **Types of Incidents reported.** In 2022, distress incidents reported at the MRCC Colombo are of following categories. Compared to 2021, technical breakdowns have significantly increased by 25% in 2022. It may have connection to the existing financial constraints and import restrictions of the country. Chart II graphically presents the same data.

a.	Fishing vessels drifting due to technical breakdown	-	100
b.	Patients onboard who required medical assistance	-	41
c.	Fishing vessels ceased communication or overdue	-	32
d.	Alerts generated by Distress Beacons	-	102
e.	Man fallen Over Board	-	18
f.	Capsizing of vessels	-	09
g.	Vessel run-aground	-	08
h.	Collision	-	03
j.	Death of a crew member	-	06
K	Fire on board	-	02
l.	Other incident types	-	10

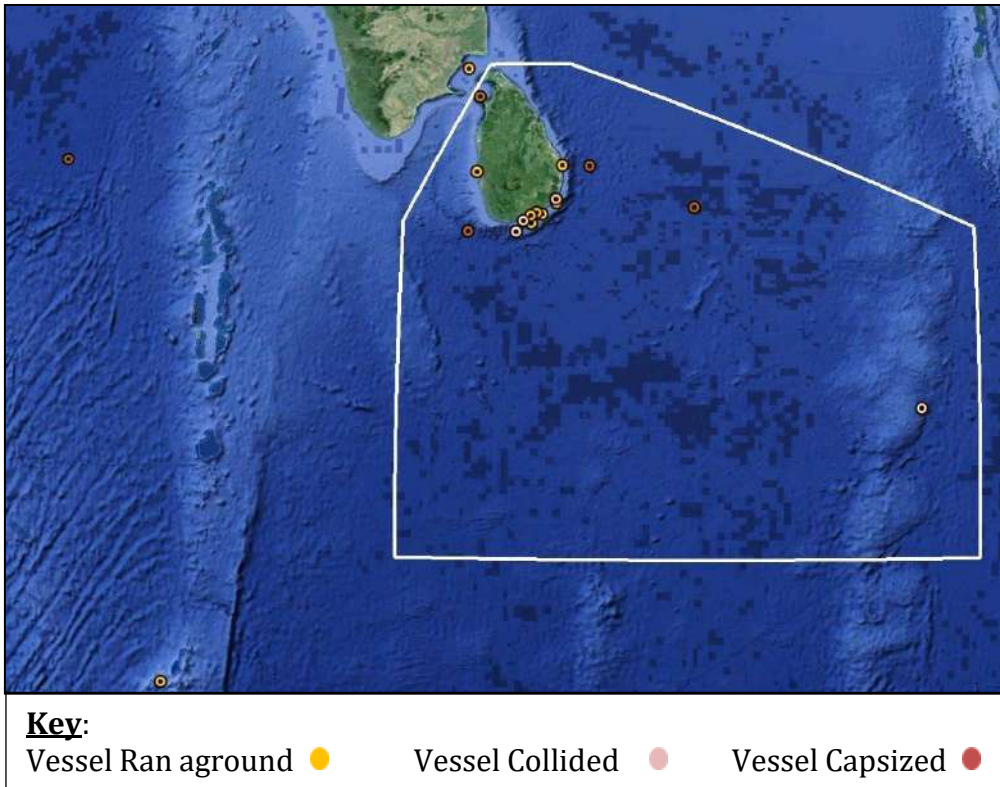


**Chart - II:** Types of Incidents Reported in 2022

12. **Errors in Navigation.** In 2022, 20 incidents have resulted due navigational errors. It shares 6% of total incidents and mark 25% growth compared to 16 such incidents reported in 2021. All incidents are of Sri Lankan Fishing vessels including nine capsized vessels, three collisions and eight vessels run-against. According to the geographical distribution, 55% of incidents reported in the Southern Sea area, 23% in Western Sea area, 20% in Southeastern Sea area, 10% each in Northern and Western Sea areas and 5% in Northwestern Sea area. One vessel ran-against and 11 capsized vessels were abandoned later with the development of situations. Relevant Maritime Safety Instructions were issued to prevent further hazards to navigation. Graph II graphically compare the incidents and Figure 4 illustrates the geo positioning of incidents.



**Graph II:** Area wise Distribution of Incidents resulted due Error in Navigation



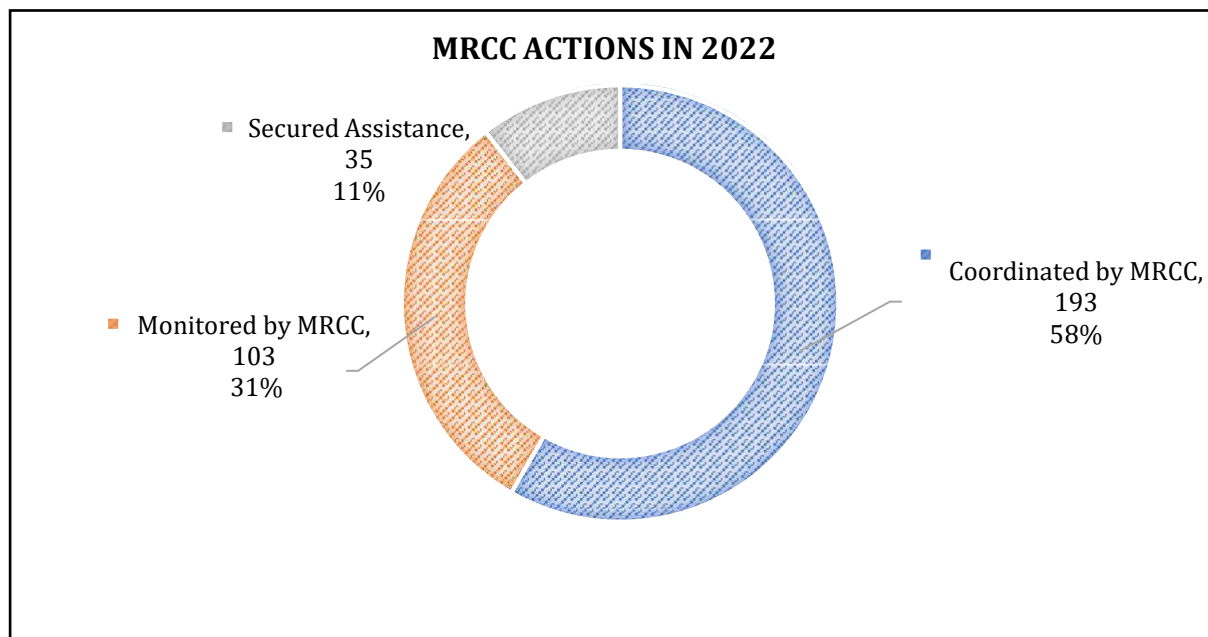
**Figure- 4:** Geo Positioning of Incidents Resulted due Error in Navigation

13. **Actions initiated by MRCC Colombo.** Upon receipt of a distress alert, MRCC Colombo evaluate and categorize it under the emergency phases of Uncertainty, Alert and Distress. Thereafter, MRCC actions are decided based on the severity and associated developments such as weather in the area. Such actions initiated in 2022 are presented in the Table I and graphically presented through Chart III and IV.

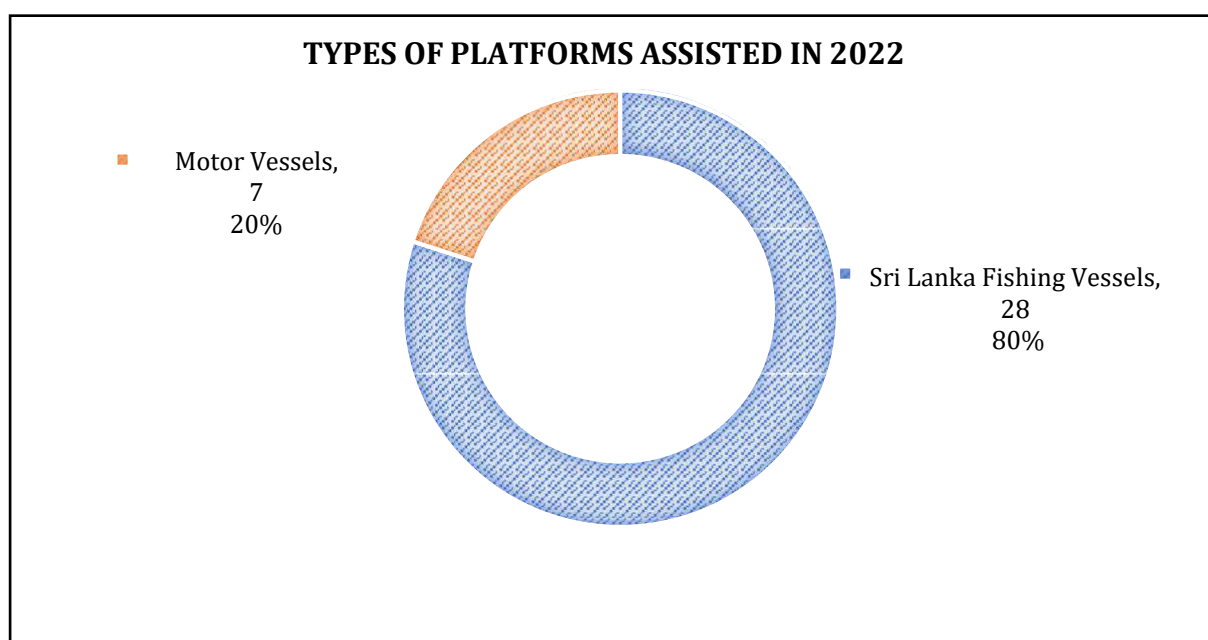
Ser.	Month	Incidents Reported	MRCC Action			No. of Lives Saved
			Secured Assistance	Coordinated	Monitored	
1.	January	29	02	13	14	6
2.	February	18	03	10	05	6
3.	March	28	04	15	09	4
4.	April	22	02	13	07	15
5.	May	22	01	14	07	1
6.	June	15	00	11	04	0
7.	July	22	04	11	07	60
8.	August	34	05	22	07	8
9.	September	33	06	16	11	11
10.	October	40	02	25	13	0
11.	November	29	0	21	08	0
12.	December	39	06	22	11	115
<b>Total</b>		<b>331</b>	<b>35</b>	<b>193</b>	<b>103</b>	<b>226</b>

**Table- I:** Actions Initiated by MRCC Colombo in 2022

14. On completion of the evaluation, MRCC Colombo revealed that no immediate intervention is required for 92 incidents, constituting 31% of the total incidents. Therefore, owners of such vessels were educated to arrange relief, whilst MRCC continually monitoring the developments taking place and updating the vessels operating nearby to extend assistance. Due to the distress position, incomplete distress message, less clarity of information and involvement of several other stakeholders; MRCC Colombo coordinated 196 incidents with relevant domestic/ foreign agencies. The number accounted for 58% of total incidents. Considering the involvement of life-threatening risk, MRCC Colombo secured assistance for 35 incidents leading for saving 226 lives in year 2022. Among these, 34 incidents were assisted by the SLN, whilst MT Shogun (IMO No. 9242443) recovered 03 Sri Lankan Fishermen stranded at sea. MRCC actions initiated in 2022 is graphically illustrated through Chart III and the types of platforms assisted are denoted by Chart IV.

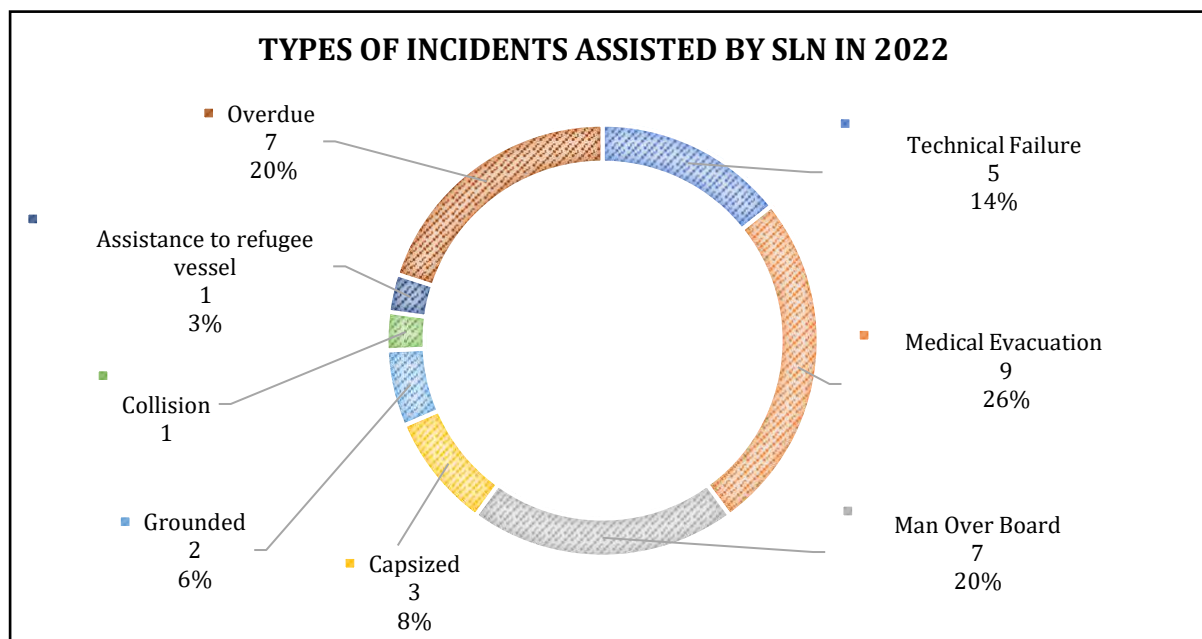


**Chart III:** Action Initiated by MRCC Colombo in 2022



**Chart IV:** Types of Platforms Assisted by SLN in 2022

15. **Assistance Provided by the Sri Lanka Navy.** Sri Lanka Navy is the designated Search and Rescue Unit (SRU) provider of the country. On the request of MRCC Colombo, Sri Lanka Navy deployed SRUs to assist 34 distress incidents in 2022 with a total expenditure of Rs. 98934614.39. Chart V demonstrate the nature of assistances provided by the SLN



**Chart- V:** Types of Incidents Assisted by SLN in 2022

16. **Issuing of Maritime Safety Instructions (MSI).** During 2022, MRCC Colombo issued 89 MSI in Inmarsat 'C' terminal through 'Australia Maritime Safety Agency (AMSA) E-Broadcast' system with the intention of preventing further casualties and secure assistance in search efforts. In addition, 06 MSI broadcasts were made through NAVAREA VIII coordinator for the incidents which exerted danger to maritime traffic in area.

17. **Alerts Generated by Distress Beacons.** MRCC Colombo receive distress alerts generated by Distress Beacons such as Emergency Position Indicating Radio Beacon, Emergency Location Transponder and Personal Locator Beacon through COSPAS-SARSAT Mission Control Centres (MCC) and associated RCCs. MRCC staff verifies the distress alert directly from the subjected platform or by contacting relevant authorities as per the situation demands. In 2022, 102 distress beacon alerts received at MRCC Colombo and all confirmed false after verifying through aforesaid process.

**System Effectiveness and Efficiency of MRCC Colombo.**

18. System effectiveness and efficiency of a SAR system describes how well the programme has minimized the loss of life and property. The success rate of MRCC Colombo was calculated as per the following formula available in the chapter 5 of IAMSAR manual Volume 1.

- a. Programme effectiveness for preventing loss of life:  $EFF(L) = \frac{LS}{LS + LLA}$
- b. Programme effectiveness for preventing loss of property:  $EFF(P) = \frac{PLP}{PLP + PL}$

- Key:** LS- Life Saved  
 LLA- Lives Lost After Notification  
 PLP- Value of Property Loss Prevented (calculated estimated amount of property loss that would have occurred had the SAR system not rendered assistance).  
 PL: Value of Property Lost

19. In 2022, five patients reported dead prior assistance was coordinated by MRCC Colombo. Further, 17 men fallen overboard were also failed to locate and recover. In addition, 15 vessels have completely destroyed due error in navigation whilst five vessels were recovered through the assistance rendered. Therefore, the system effectiveness and efficiency of MRCC Colombo as follows:

- a. EFF (L):  $\frac{226}{226 + 22} = 91.13\%$
- b. EFF(P):  $\frac{51,300,000}{143,850,000 + 51,300,000} = 26.29\%$

### Case Studies

20. This section features the case studies of significant distress incidents reported at the MRCC Colombo in 2022.

### Medical Evacuation

Date and time of report: 17 March 2022 on 1315 hrs  
 Unit Reported: The Department of Fisheries and Aquatic Resources  
 Unit in distress: Sri Lankan fishing vessel 'Sanju Putha' (IMUL-A-0991 GLE)  
 Nature of distress: A fishing hook penetrated the right eye of a fisherman  
 Distress position: 10° 16'N, 082° 30' E (034° from Foul Point light- 128 n mile)  
 Incident in brief: MRCC Colombo secured assistance from the SLN. P 4442 recovered the patient at 1410 UTC on 17 March 2022, provided First Aid, brought to Port of Trincomalee and subsequently transferred to the Government Hospital Trincomalee.



## **Towing Assistance**

Date and time of report: 27 April 2022 on 1545 hrs  
Unit Reported: The Embassy of Republic of Iran in Colombo  
Unit in distress: Iranian flag fishing dingy 'AL Hansi' (Register No. 4/2559)  
Nature of distress: Risk of sinking with 11 crew members at position 05° 32' N, 083° 22' E (105° from Hambantota point- 141n mile).  
Incident in brief: MRCC Colombo secured assistance of MV 'Katori' (9892937) to locate and escort the vessel in distress until a dedicated SRU arrive on scene. Sri Lanka Coast Guard Ship 'Samaraksha' took over on scene Coordination at 0133hrs on 28 April 2022, attended basic damage control measures and safely towed the vessel to port of Galle at 1100 hrs on 30 April 2022.



## **Search and Rescue**

Date and time of report: 10 July 2022 at 0735 UTC  
Unit Reported: Department of Fisheries and Aquatic Resources, Sri Lanka  
Unit in distress: Sri Lankan fishing vessel 'IMUL-A-0301-MTR'  
Nature of distress: Vessel emitted a distress alert through Vessel Monitoring System.  
Distress position: 05° 40' N, 083° 27' E [105° from Great Basses light- 123 n mile]  
Incident in brief: MRCC Colombo secured assistance of MT 'Shogun' (IMO No. 9242443) to search and rescue three crew members. MT 'Shogun' rescued three crew members at 1410 hrs on 11 July 2023 amidst strong breeze of 23 kn and 2.7 m height waves and disembarked off port of Galle at 1225 hrs on 13 July 2022.





## Under Water Search and Rescue

Date and time of report: 10 December 2022 at 1313 UTC  
Unit Reported: Department of Fisheries and Aquatic Resources (DFAR)  
Unit in distress: Sri Lanka fishing vessel 'Himsara' (IMUL-A-0101 TLE)  
Nature of distress: Vessel capsized, three crew members rescued by SLFV 'Ran Putha' (IMULA-0425 TLE), one crew member expired and one crew member trapped alive in the submerged vessel.  
Distress position: 07° 21' N, 082° 33' E (065° Sangaman Kanda light- 46nm)  
Incident in brief: MRCC Colombo secured assistance of Sri Lanka Navy to deploy Specialised SRU. Sri Lanka Navy Ship 'Ranarisi' assumed On Scene Coordination and supervised the diving operation. SLN divers rescued the person at 0336 UTC on 11 Dec 22, provided First Aid and transferred all four survivors to the Government Hospital Kalmunai at 0929 UTC on 11 December 2022.



## International Coordination

Date and time of report: 07 November 2022 at 0400 UTC  
Unit Reported: Foreign fishing vessel 'Lady R3'  
Unit in distress: Foreign fishing vessel 'Lady R3'  
Nature of distress: Water ingress through four holes in under water area whilst carrying 303 Sri Lankan illegal immigrants on board.  
Distress position: 08° 58' N, 110° 58' E [113° from Vung Tau- 240 n mile]  
Incident in brief: Datum falls within the Singapore SRR and MRCC Colombo coordinated with MRCCs Singapore, Vietnam and Philippines to secure assistance to the personnel in distress. On the directives of MRCC Singapore, MV 'Helios Leader' (IMO No. 9476745) reached the distress site by 1141 hrs, rescued all personnel and disembarked at the Vung Tau Port in Vietnam at 1830 UTC on 08 November 2022.

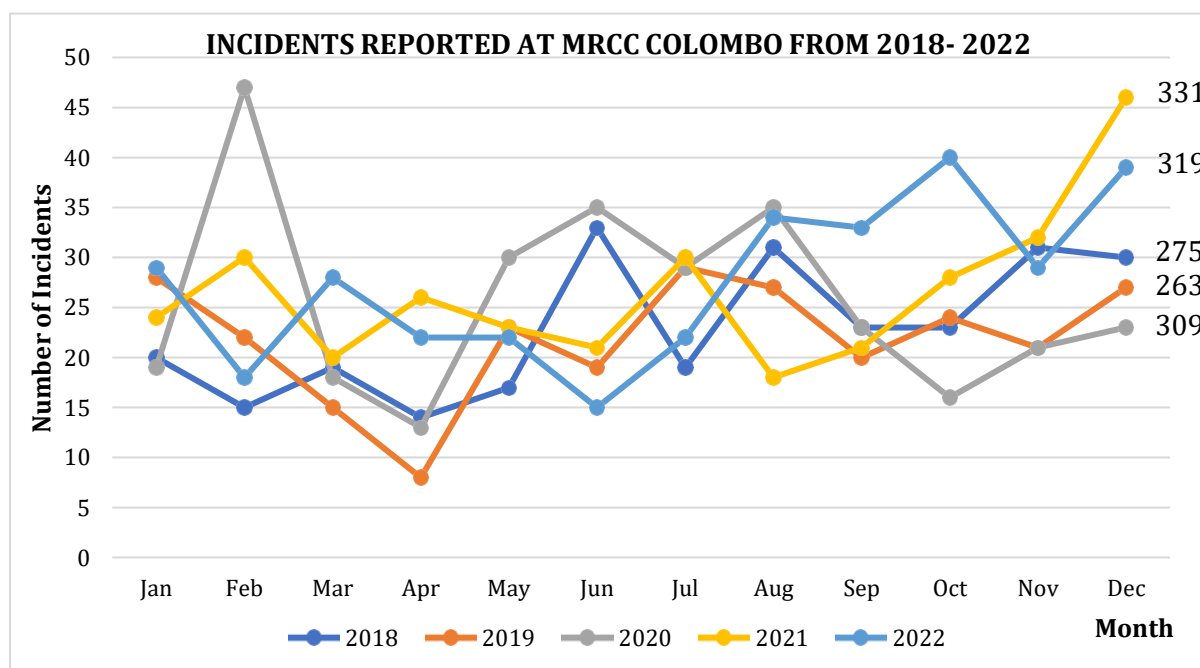


## Comprehensive Comparison from Year 2018-2022

21. **Number of Distress Incidents.** Over the last five years from 2018 to 2022, the number of incidents reported at MRCC Colombo varies between 263 to 331. Within the said period, 263, the lowest count reported in 2019 and the highest count marked 331 in 2022. The highest increment of 46 incidents reported between 2019 and 2020, an increase by 17.5%. The only declination reported between 2018 to 2019 by 12 incidents equal to 4.3%. The figures are placed under table II and graphically demonstrated in Graph III.

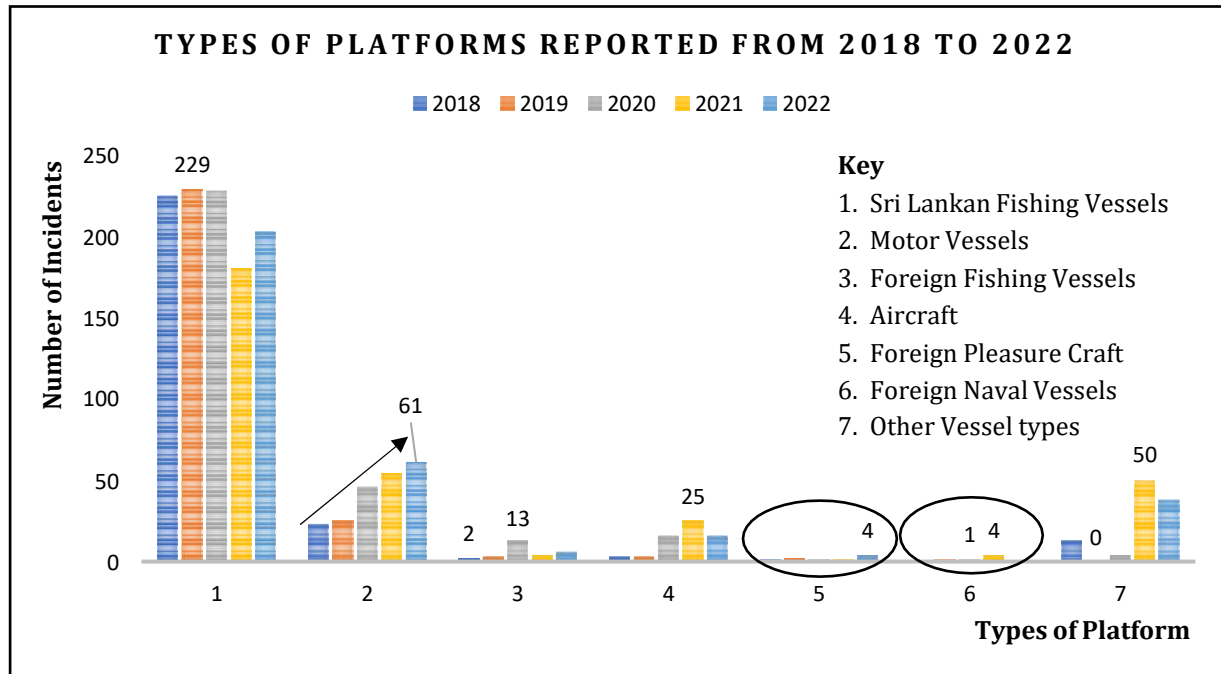
Ser	Month	YEAR				
		2018	2019	2020	2021	2022
1.	January	20	28	19	24	29
2.	February	15	22	47	30	18
3.	March	19	15	18	20	28
4.	April	14	8	13	26	22
5.	May	17	23	30	23	22
6.	June	33	19	35	21	15
7.	July	19	29	29	30	22
8.	August	31	27	35	18	34
9.	September	23	20	23	21	33
10.	October	23	24	16	28	40
11.	November	31	21	21	32	29
12.	December	30	27	23	45	39
<b>Total</b>		<b>275</b>	<b>263</b>	<b>309</b>	<b>318</b>	<b>331</b>

**Table- II:** Incidents Reported at MRCC Colombo from 2018 to 2022



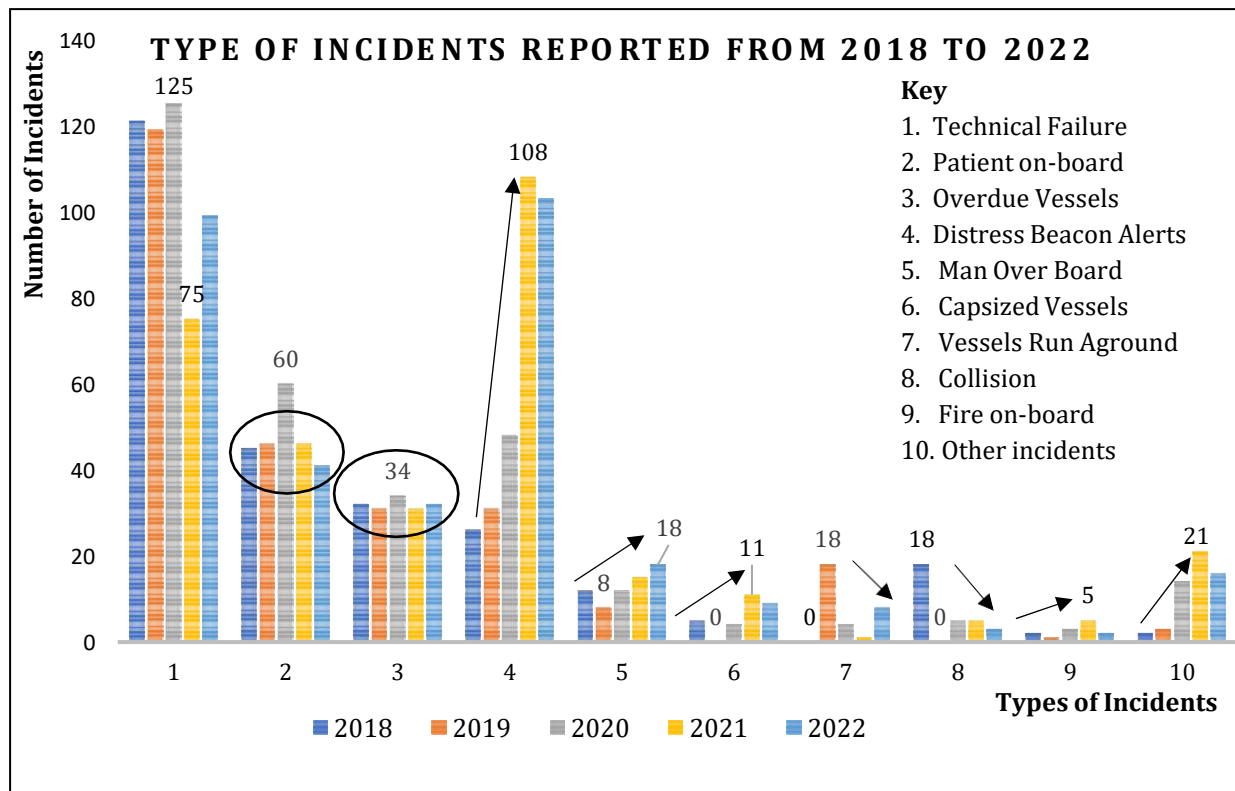
**Graph - III:** Comparison of Incidents Reported at MRCC Colombo from 2018 to 2022

22. **Types of Platforms reported in Distress.** MRCC Colombo receive distress alerts from various platform types and Graph IV demonstrates the details collected over the last five years from 2018 to 2022. As a fact of common, Sri Lankan fishing vessels mark the highest contribution in every year. Further, reports made by Motor Vessels have continually grown over the time whilst reporting from foreign pleasure crafts and foreign naval vessels marking the lowest count.



**Graph - IV:** Comparison of Platforms Reported in Distress from 2018 to 2022

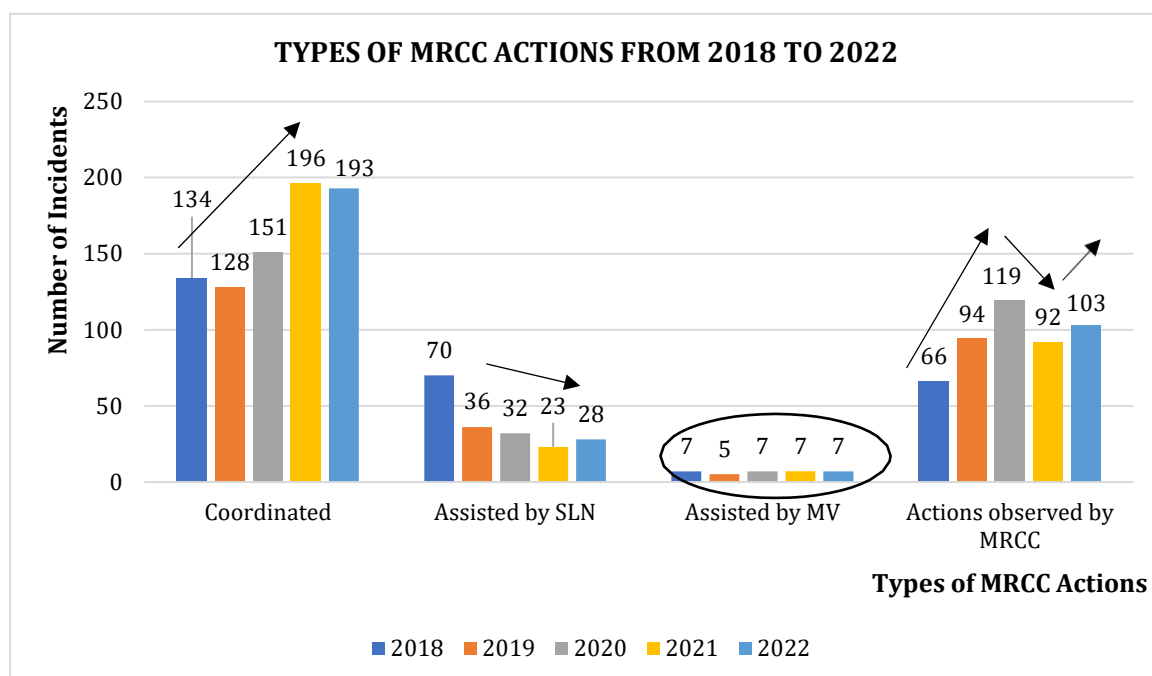
**Type of Incidents Reported**



**Graph - V:** Comparison of Type of Incidents Reported from 2018 to 2022

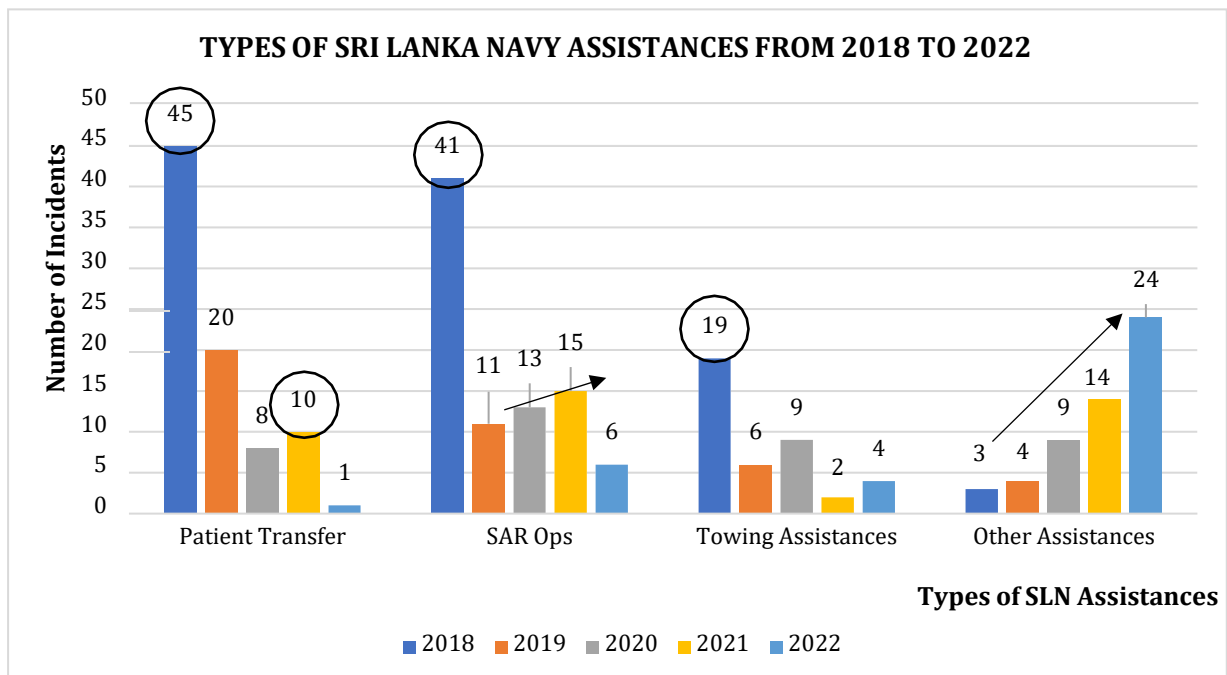
23. Incidents reported at the MRCC Colombo from 2018 to 2022 are categorised by nature of distress under the graph V. Except 2018 and 2022, technical failure is the most reported type of distress at MRCC Colombo. Reports on patients on-board and overdue vessels have maintained a similar trend with marginal deviations over the time. However, Distress Beacon alerts, Men falling Overboard, capsized vessels and other incidents demonstrate continuous growth whilst a rapid growth could observe of Distress Beacon alerts from 2020 to 2021. In contrast, the number of vessels run- aground and collisions have reduced over the period of time.

24. **Actions Initiated by MRCC Colombo.** Comparison of actions initiated by MRCC from 2018 to 2022 is demonstrated through Graph VI. Over the period of time, the number of incidents coordinated by MRCC Colombo have generally increased and display an insignificant declination in 2022. 2018 mark a sudden peak of SLN’s assistance, which has gradually declined up to 2021, the lowest figure in 6 years. Such reduction of SLN assistance may have a possible connection with the effects of COVID 19 pandemic during 2020 and 2021. The assistance provided by Motor Vessels remain constant over last five years whilst incidents observed by the MRCC have gradually grown up to 2020.



**Graph – VI:** Types of MRCC actions from 2018 to 2022

25. **Assistance provided by the Sri Lanka Navy.** Assistances provided by the SLN over the last five years are categorised under patient transfer, SAR Ops, towing assistance and all other types and demonstrated under the Graph VII. Except of other assistances, highest number of SLN assistances have been extended in 2018. In fact, the towing assistances and transfer of patients have been significantly reduced in 2021 and 2022 respectively. SLN involvement in SAR Ops have gradually increased across 2019 to 2021 and marked a 60% downfall in 2022. Further, towing assistances have been significantly reduced in both 2021 and 2022. The high-cost involvement in SAR operations may be the reason behind and however,



**Graph – VII:** Type of Assurances Provided by Sri Lanka Navy

26. **Comparison of Lives Saved and Cost Incurred by the SLN for Assisting Distress Incidents.** Table III compare the number of incidents assisted, lives saved and cost incurred for six years from 2018 to 2022. Highest number of lives have been saved in 2018 by assisting 90 incidents. However, 226 lives have been saved in 2022, through assisting 35 incidents, which is the second highest save of lives in a year.

Ser.	Year	Assistance secured by MRCC	Lives Saved	Cost incurred (Rs.)
1.	2018	90	466	241,278,776.89
2.	2019	41	103	28,029,294.05
3.	2020	40	117	287,217,093.87
4.	2021	30	42	49,000,495.24
5.	2022	35	226	98,934,614.39

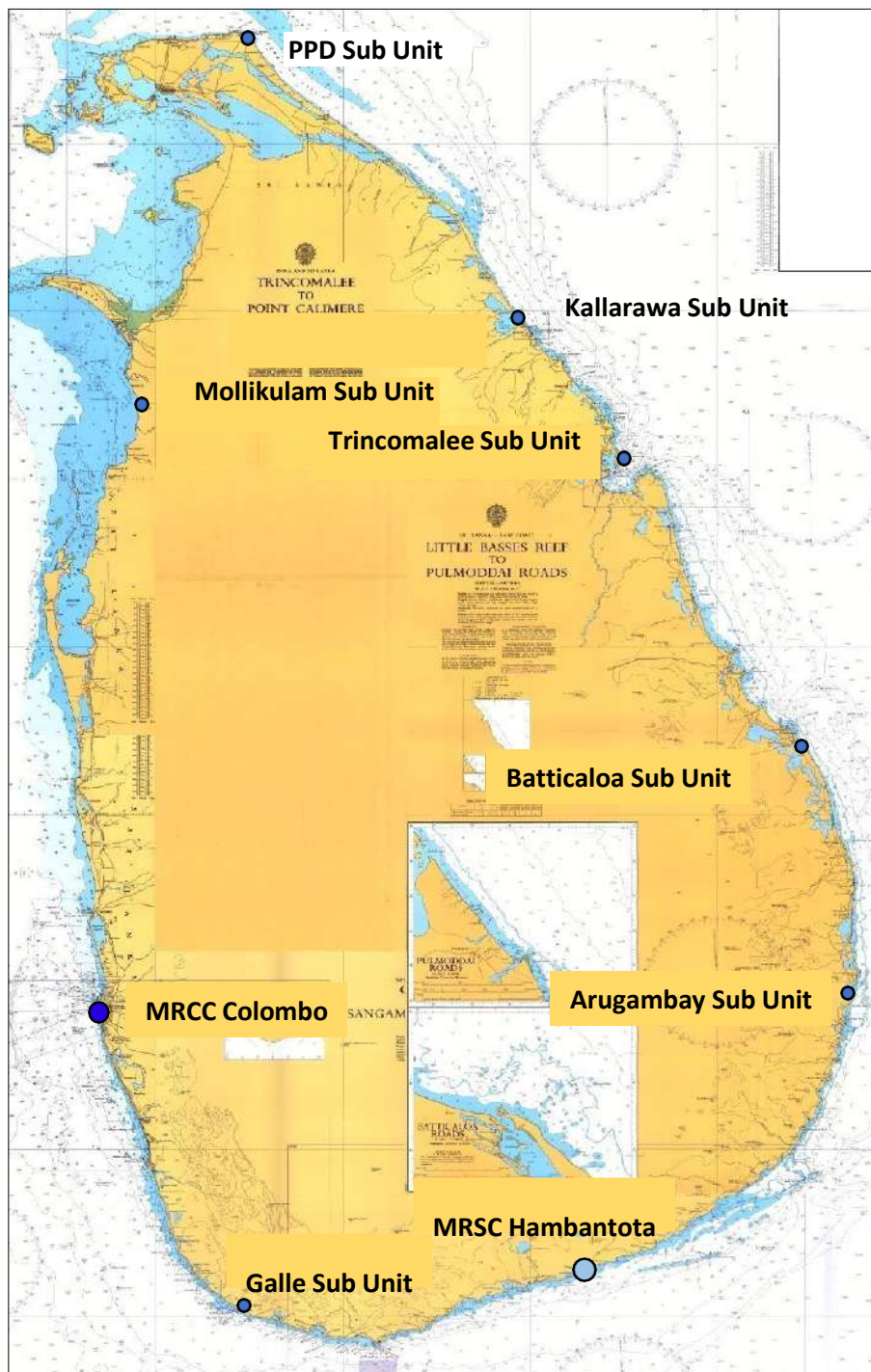
**Table- III:** Comparison of Lives Saved and Cost Incurred by the SLN

### **Conclusion**

27. Availability of one of the busiest trade routes at the Southern tip of the country and operating a deep draught hub port at Colombo maintain a considerable merchant traffic in Sri Lanka SRR across the year. Further, being an island nation functioning a fishing fleet of more than 5000 ocean going multi-day trawlers and nearly 32700 artisanal fishing vessels operating in coastal waters further complicate this maritime environment. In addition, attraction of recreational vessels and growing seaborne leisure activities in Sri Lankan

waters further aggravate the situation, forcing Sri Lanka to maintain a proper mechanism to ensure the safety of mariners operating in responsible waters.

28. Being a signatory to the 1974 Safety of Life at Sea (SOLAS) convention, Sri Lanka is obliged to implement and maintain numerous measures to ensure safety of lives within the SRR. Acknowledging the responsibilities, a project is ongoing to upgrade the Rescue Coordination Centre network which scheduled to be commissioned in latter 2023. On completion, the SAR coordination network will be strengthened with one MRCC, one Maritime Rescue Sub Centre (MRSC) and seven sub stations. Figure V illustrate the planned establishment of MRCC network.



**Figure- 5:** Planned Rescue Coordination Centre Network