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# **MARITIME RESCUE COORDINATION CENTRE COLOMBO**

## **ANNUAL REPORT 2021**

### **MRCC Colombo in Brief**

1. Geo-strategic location of Sri Lanka is situated in the middle of the Indian Ocean, approx. 17 nm from the Indian Subcontinent and traffic Separation Scheme located approx. 3 nm from Dondra Head Light at southern tip of Sri Lanka. It is the busiest sea route joining East-West, transferring trade and other essential goods.
2. Sri Lanka Navy (SLN) has become the national responsible authority for conducting of Maritime Search and Rescue (SAR) operations around Sri Lanka's SAR region from 10<sup>th</sup> April 2014. Maritime Rescue Coordination Centre (MRCC) Colombo is manned 24x7 by qualified and trained staff at the Naval Headquarters under the Directorate of Naval Operations (DNO). The main purpose is to monitor and assist distress vessels by all possible means.
3. For better coordination at a distress occurred in a vessel/Aircraft, Air Rescue Coordination Centre (ARCC), Department of Fisheries and Aquatic Resources (DFAR), Colombo Radio (Presently at the same location at MRCC Colombo) and adjacent Rescue Coordination Centre (RCCs) are acting as the alerting posts. SLN, Sri Lanka Air Force (SLAF) and Sri Lanka Coast Guard (SLCG) perform as major SAR facility providers. Maritime SAR facilities are provided by SLN and SLCG, whilst SLAF provides aeronautical SAR facilities. The most resourceful maritime arms of the country is an added advantage for MRCC operations in several capacities ranging from access to Maritime Domain Awareness (MDA) tools to timely deployment of SAR assets.
4. During the year 2021, 318 distressed incidents were reported to MRCC Colombo and all the incidents have been handled swiftly by the staff with proven standard operation procedures. Among 318 incidents, 180 were reported by Sri Lankan Fishing Vessels (SLFVs) and 54 by Merchant Vessels (MVs) which is 56.6% and 16.9% respectively whilst 26.5% of others from foreign fishing, pleasure, military and Aircraft. The strenuous effort made by the MRCC Colombo was rewarded with saving 42 lives of seafarers in 2021.

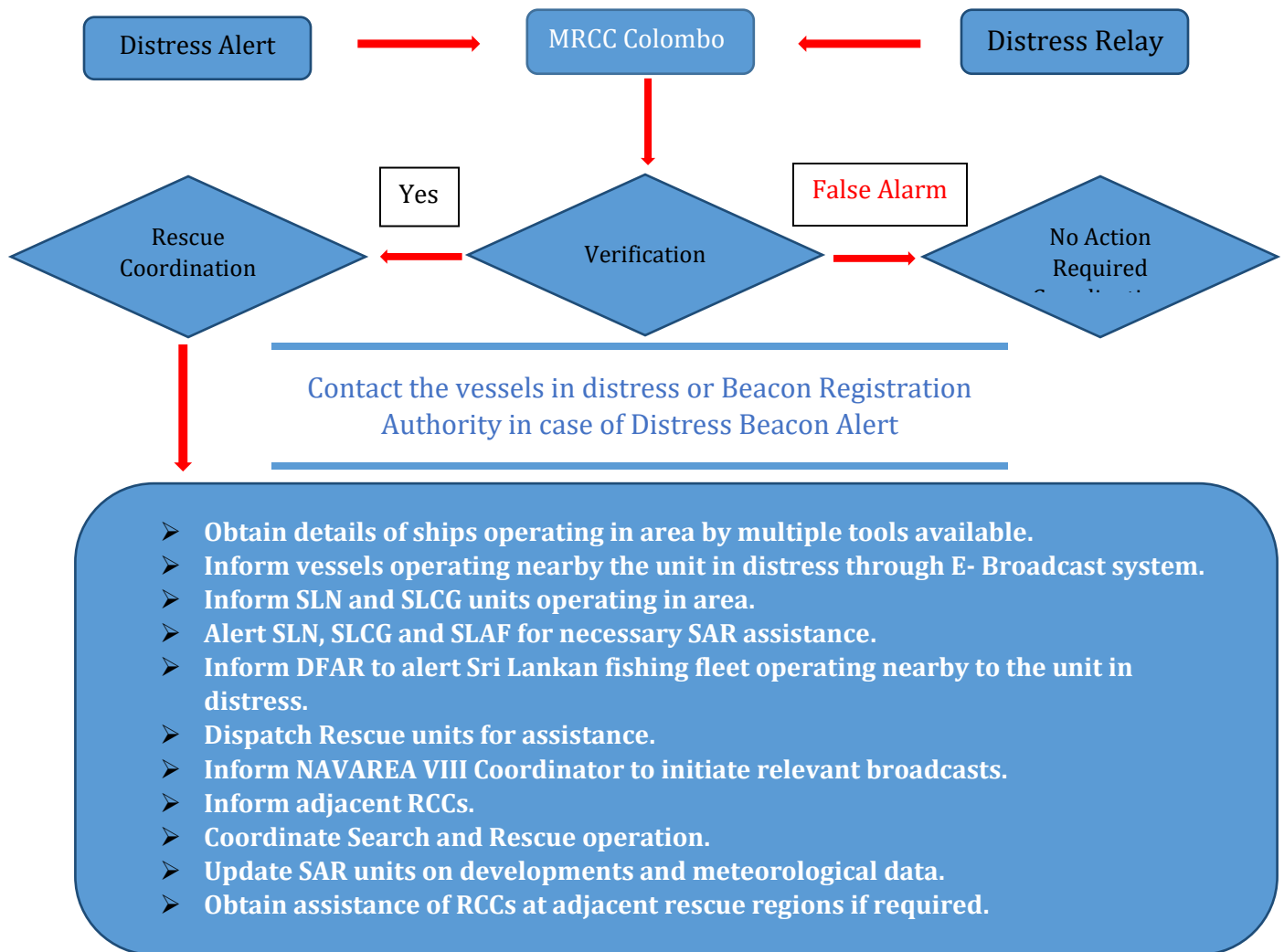
### **Operation Procedure of MRCC Colombo**

5. On receipt of distress alert to MRCC Colombo, the following procedure is adopted to ensure a prompt and precise response to the distress incidents. Collaborative operations with adjacent MRCCs have synergized the effort made by the MRCC Colombo.
6. As the initial step, each incident reported to MRCC Colombo is recorded in a log sheet which will be the checklist for the 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 Colombo Operations Room. Upon verification, the best course of action will be triggered ensuring the safety of lives at sea.

7. With continuous monitoring of the situation, updates of the locations relating to distress vessels will be shared with adjacent MRCCs and the E-Broadcast facility will be utilized to inform MVs operating in the same area to obtain possible SAR assistance. Derived information including meteorological details pertaining to the interested sea area, will be shared with the SAR units to strengthen the SAR operation.

8. Records are maintained with the sequence of events and the get feedback from the survivors to improve future SAR operations. Reports are generated monthly/annually and disseminated among entities involving/assisting SAR operations.

9. Operation procedure of the MRCC Colombo is scrutinized in Figure I below.



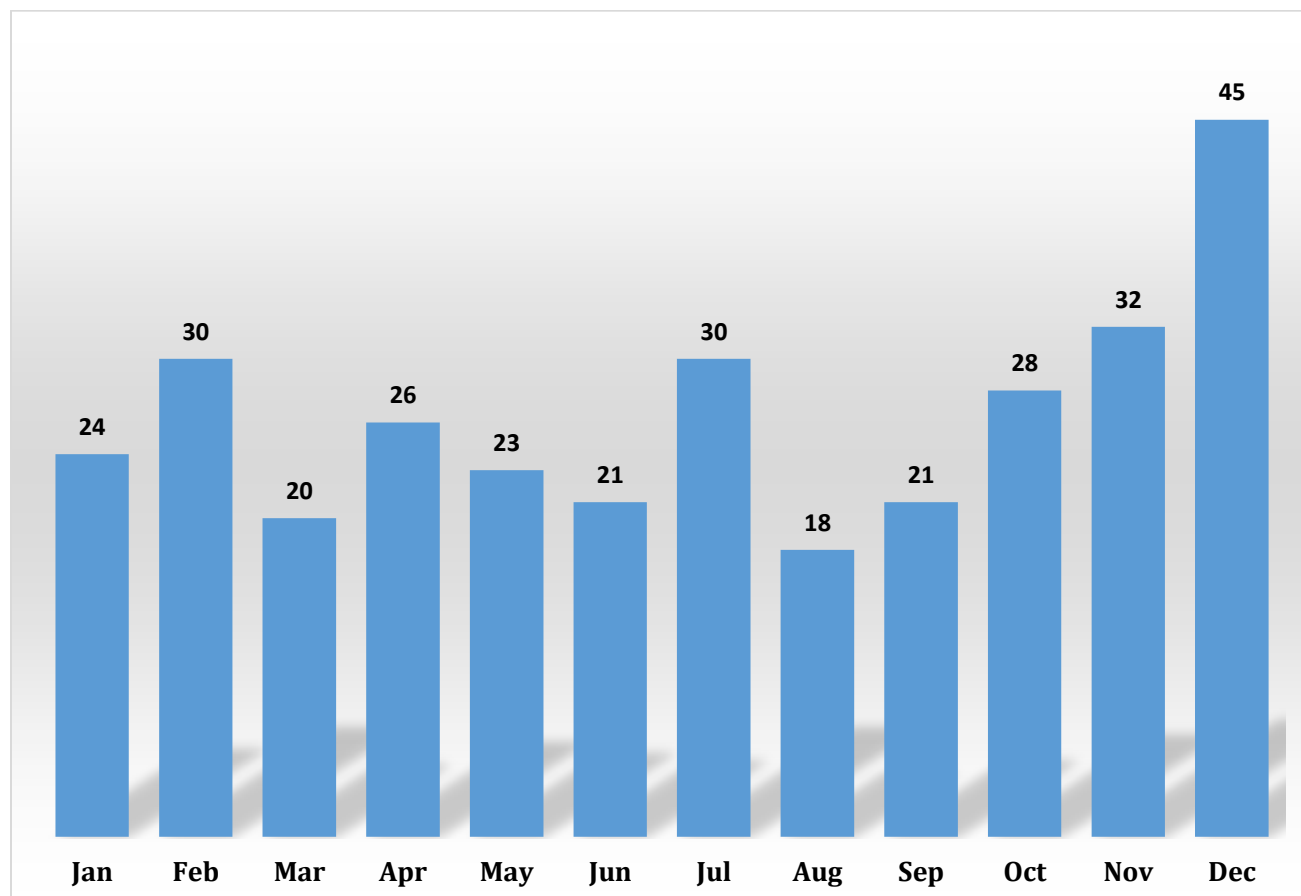
**Figure - I: Action Plan of MRCC Operations**

10. **Log/ Registers Maintained at MRCC Colombo.** The undermentioned logs and registers are maintained by the MRCC Colombo.

- |    |                    |   |   |
|----|--------------------|---|---|
| a. | MRCC Register      | - | List of incidents reported to MRCC Colombo.                       |
| b. | MRCC Log           | - | Detailed report on the incident reported.                         |
| c. | MRCC Daily Records | - | Daily update of all events until the completion of SAR operation. |

## **OVERVIEW OF THE YEAR 2021**

11. **Number of Distress Incidents Reported to MRCC Colombo.** During the year 2021, MRCC Colombo received 318 incidents with an average of 27 incidents per month. A graphic presentation of the number of distress incidents reported per month in 2021 is placed in Graph I and pictorial appearance of nature of distress reported in year 2021 available in Figure II.

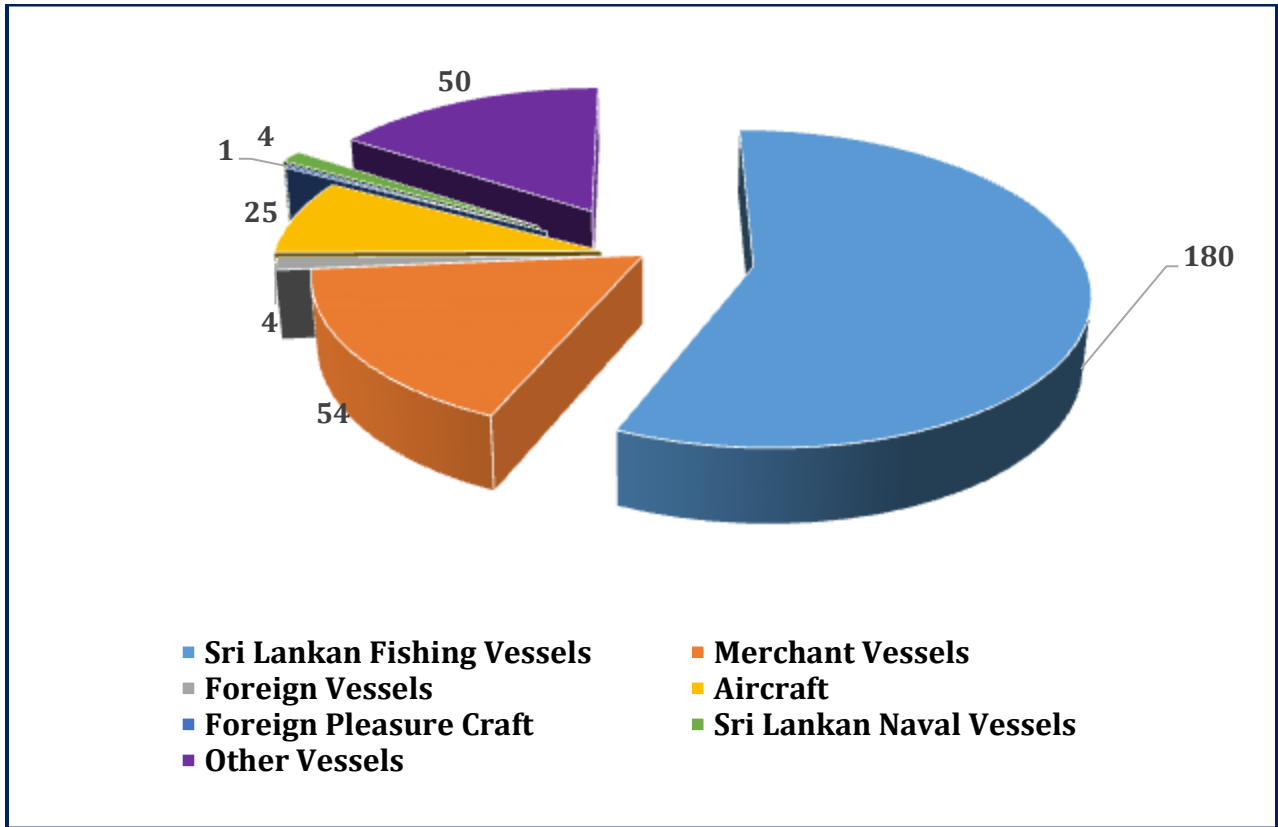


**Graph - I: Number of Distress Incidents Reported per Month During 2021**

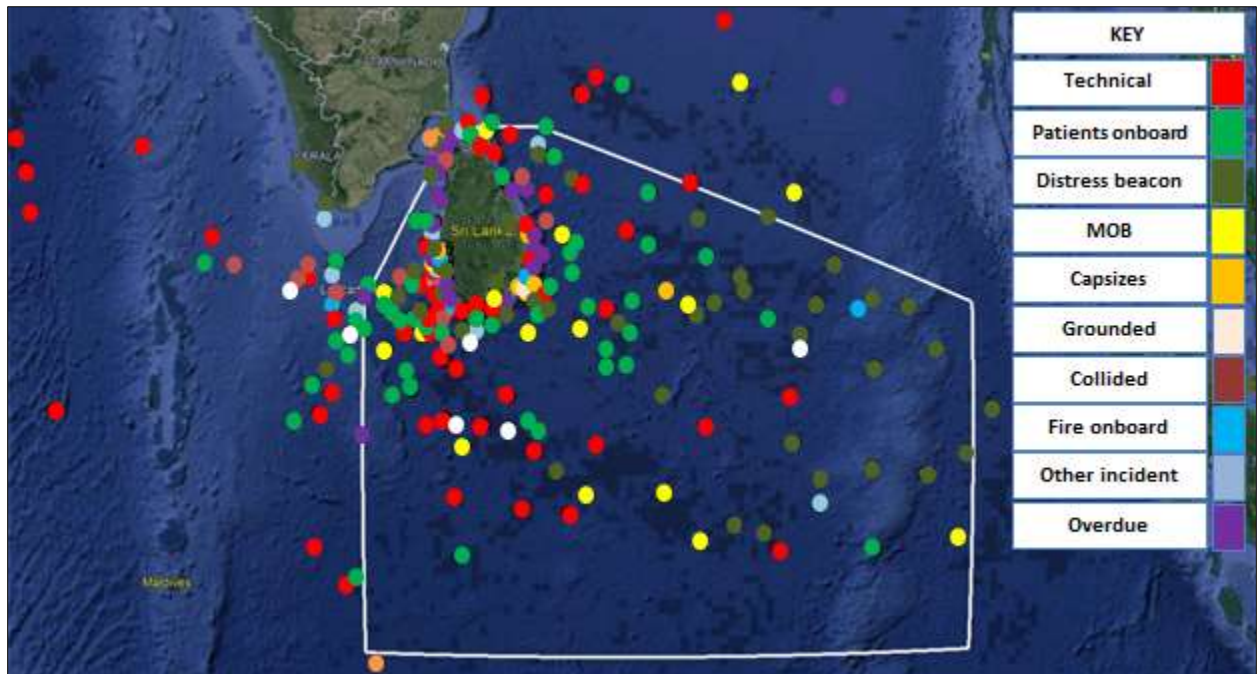
12. **Types of Platforms Reported in Distress.** Categorization of 318 distress incidents reported to MRCC Colombo in 2021 is indicated, based on the type of platform and graphically presented in Graph II below. The distribution of incidents reported in 2021 is illustrated in Figure II.

- a. Sri Lankan Fishing Vessels - 180
- b. Merchant Vessels - 54
- c. Foreign Fishing Vessels - 04
- d. Aircraft - 25 (Emergency Locator Beacon Alerts)
- e. Foreign Pleasure Craft - 1
- f. SL Naval vessels - 4 (EPIRB Alerts)
- g. Other Vessels - 50





**Graph - II: Types of Platforms Reported in Distress 2021**

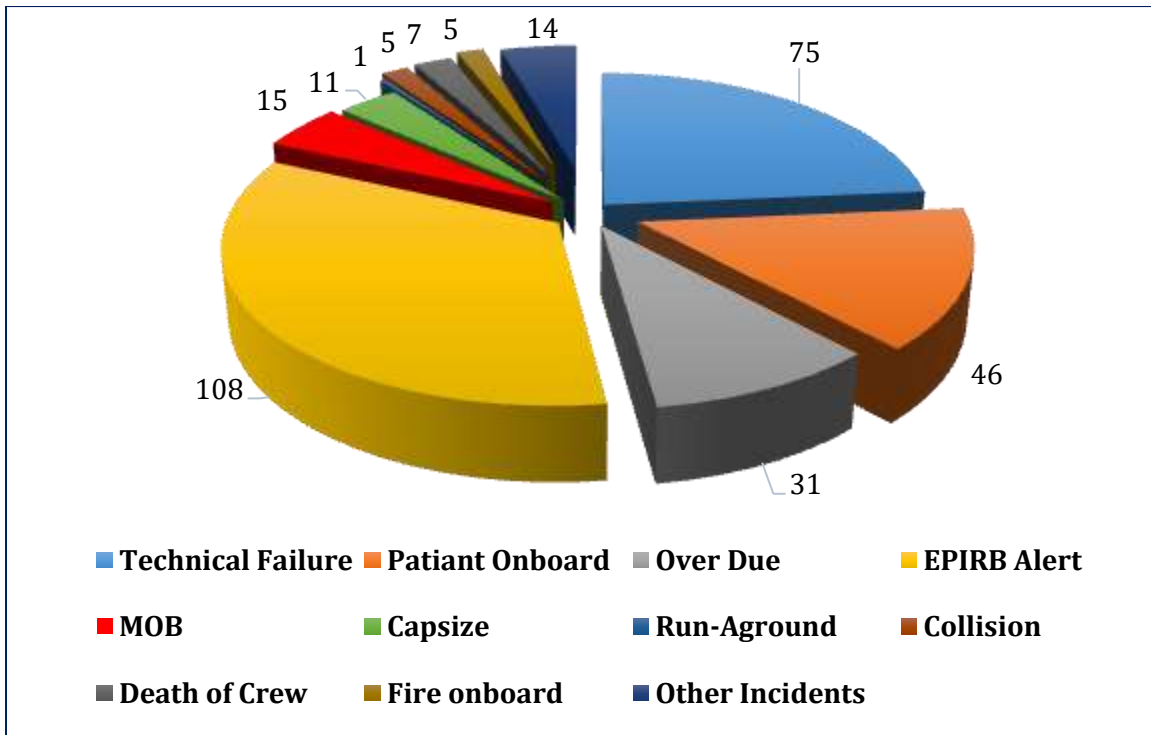


**Figure - II: Nature of Distress Reported in 2021**

13. According to the reports of DFAR, approximately 5200 Sri Lankan Multiday fishing vessels sail in high seas, and it is apparent that 73.79% of annual distress incidents happened among the Sri Lankan fishing vessels. However observed a decline of distress incidents in 2021 compare to 2020.

14. **Types of Incidents reported during the Year 2021.** Types of incidents reported to the MRCC Colombo in 2021 is listed below and graphically presented in Graph III.

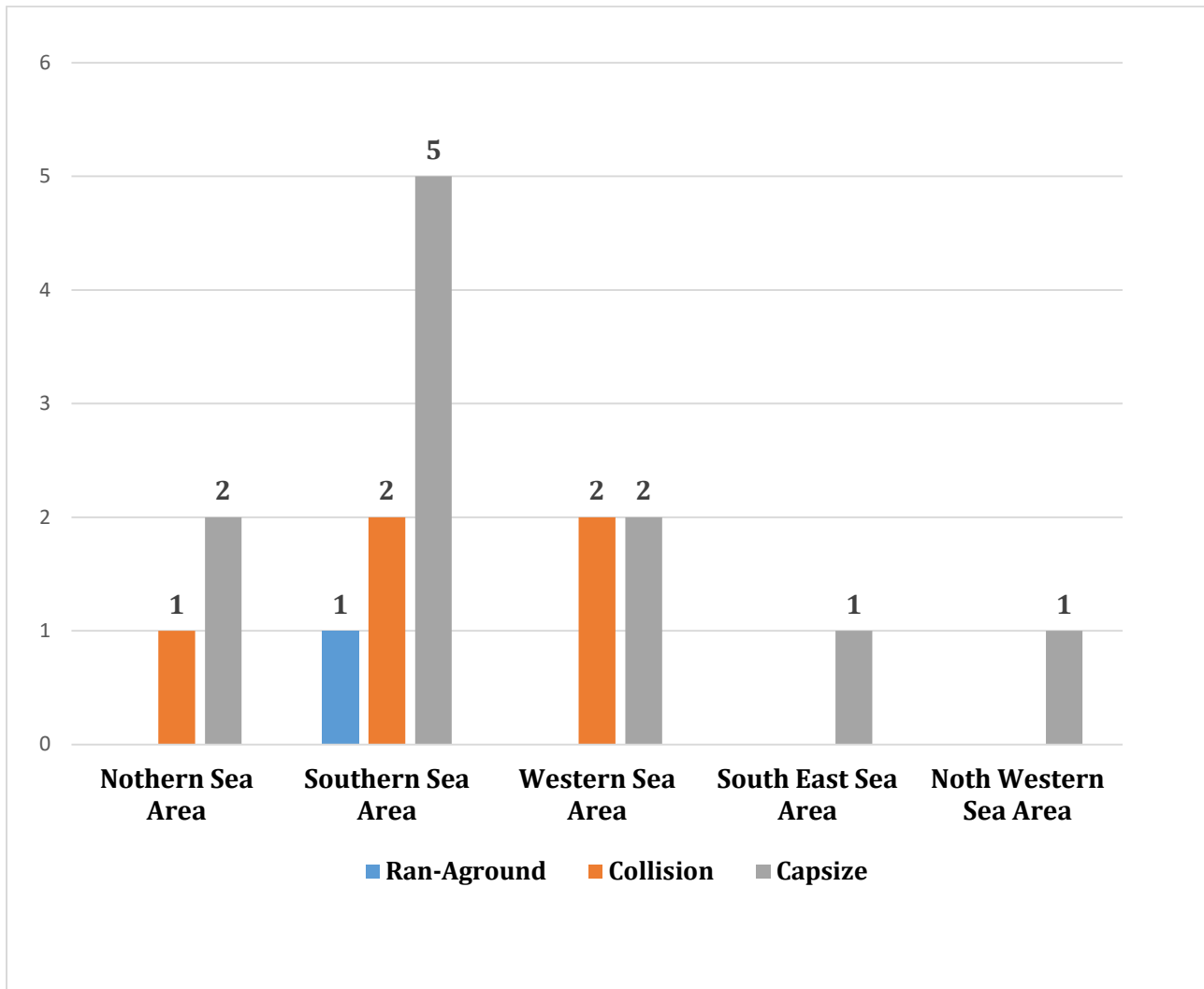
a.	Fishing vessels drifting due to technical breakdown	-	75
b.	Patients onboard and required medical assistance	-	46
c.	Fishing vessels ceased communication or overdue	-	31
d.	Alerts generated by Distress Beacons	-	108
e.	Man Over Board	-	15
f.	Capsizing of vessels	-	11
g.	Vessel run – aground	-	1
h.	Collision	-	5
j.	Death of a crew member	-	7
K	Fire on board	-	5
l.	Other incidents	-	14



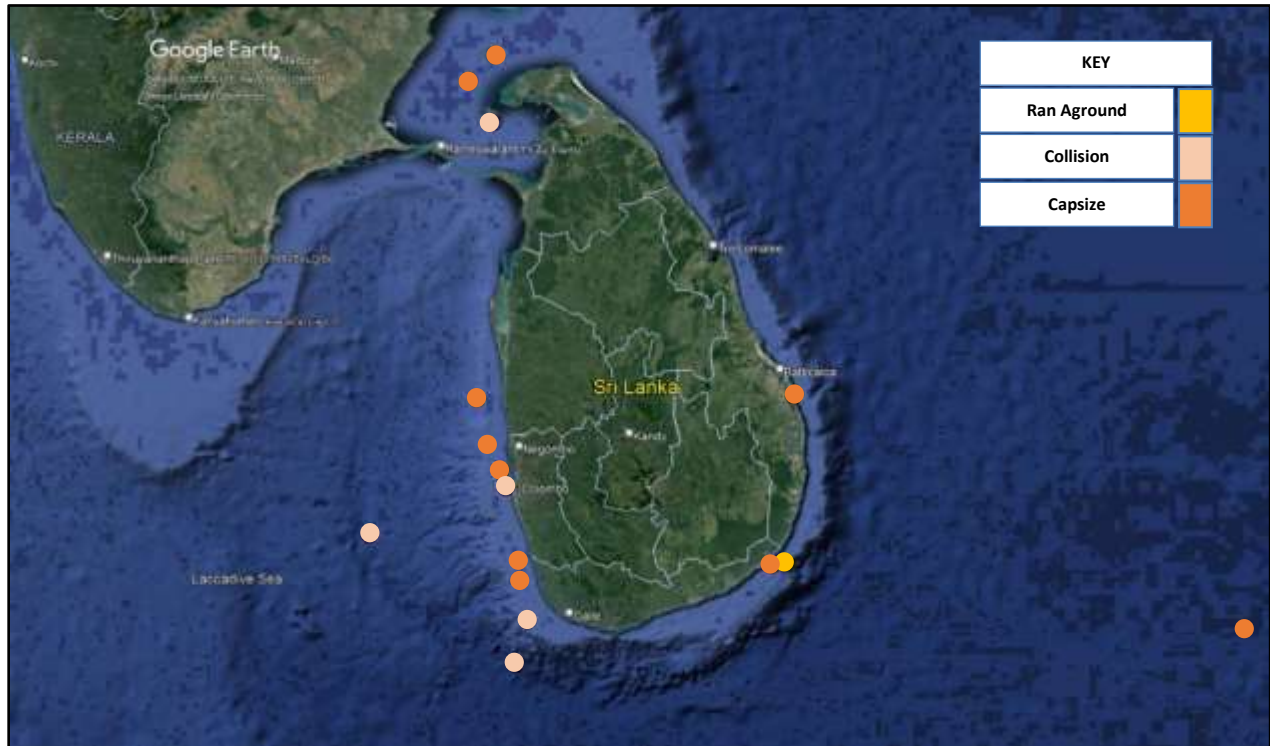
**Graph- III: Types of Incidents Reported in Distress in 2021**

15. 23.29% of total distress incident reported to MRCC Colombo were relevant to the technical breakdowns of Sri Lankan fishing vessels. MRCC Colombo coordinated those in different capacities, which vary from securing, towing and technical assistance with spare support from the Sri Lanka Navy.

16. Total 16 incidents were reported to the MRCC Colombo from all around the country in the year 2021 with the reason of collision, run - aground and capsizing of vessels, 5 out of the above which is 31%, were reported in Southern sea where has become the most disaster-prone area when comparing to the above categories. Graph IV presents the data comparison for the year 2021. 01 run - aground vessels and 11 capsized vessels were abandoned later with the development of the incidents. Relevant warnings were issued to mariners to prevent further accident due to wrecks/ capsized vessel. Figure III illustrates the pictorial distribution of the above incidents in 2021.



**Graph IV: Area wise Distribution of Vessels Run - aground, Collided and Capsized in 2021**



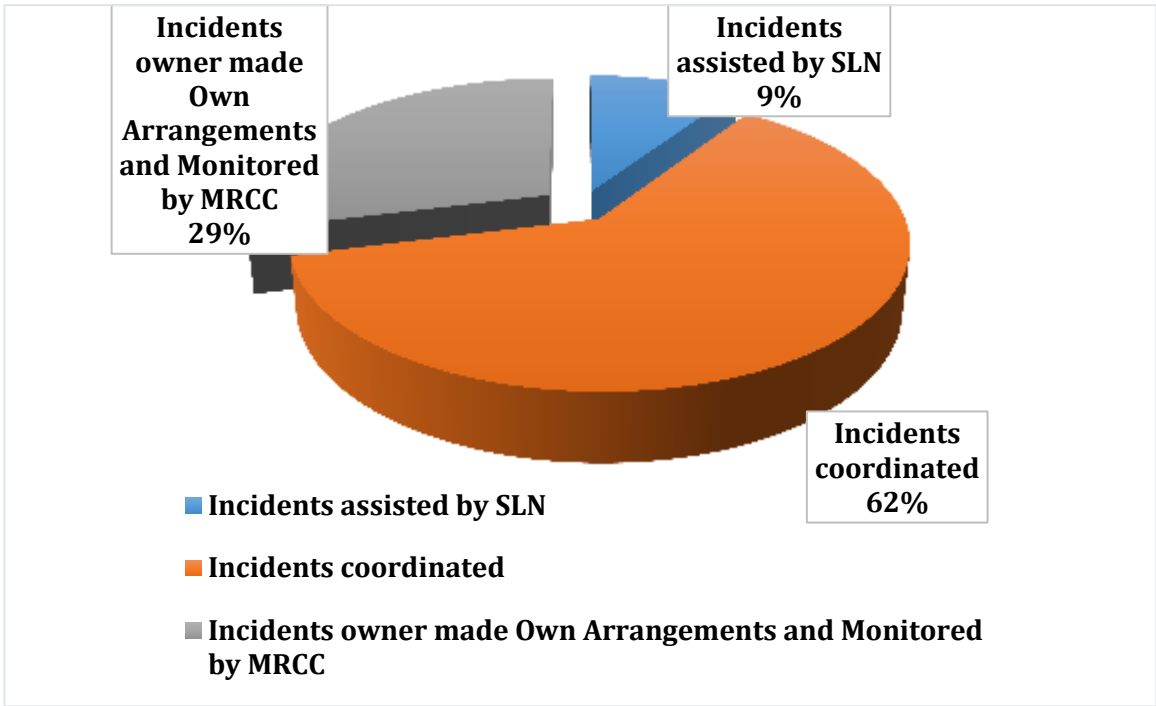
**Figure- III: Vessels Ran Aground, Collided and Capsized in 2021**

**Actions initiated by the MRCC Colombo**

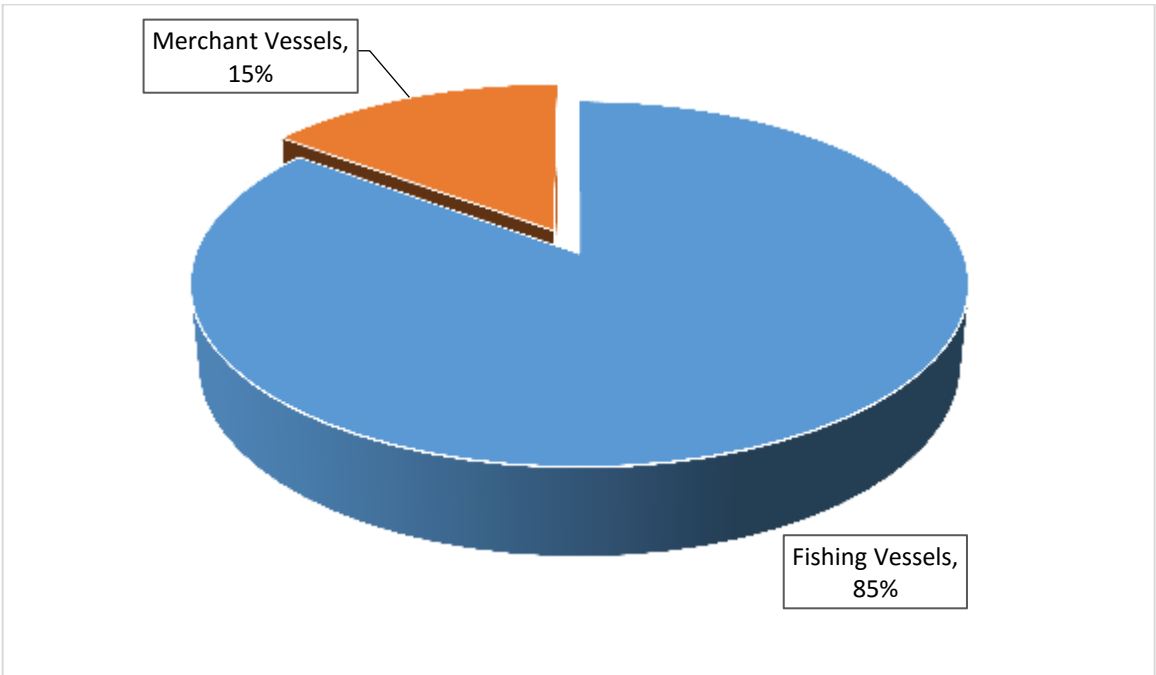
17. **Actions initiated against Distress Alerts Reported.** Actions initiated by the MRCC Colombo on receipt of distress alerts are depicted in Table I and graphically presented in Graph V.

Sr.	Month	Incidents Reported	Incidents assisted by SLN	Incidents Coordinated	Incidents owner made Own Arrangements and Monitored by MRCC	No. of Lives Saved
01	January	24	06	14	04	9
02	February	30	04	15	11	16
03	March	20	03	08	09	-
04	April	26	0	21	05	-
05	May	23	03	11	09	-
06	June	21	05	10	06	07
07	July	30	01	24	05	01
08	August	18	02	11	05	02
09	September	21	02	14	05	03
10	October	28	02	17	09	03
11	November	32	0	24	08	01
12	December	45	02	27	16	-
<b>Total</b>		<b>318</b>	<b>30</b>	<b>196</b>	<b>92</b>	<b>42</b>

**Table- I: Actions Initiated by MRCC Colombo in 2021**



**Graph - V: Action initiated by MRCC Colombo in 2021**



**Graph - VI: Incidents Assisted by SLN**

18. Through the verifications were proved that 42 incidents reported to the MRCC Colombo, were not required to be assisted directly as lives of the seafarers were not in danger, the crew onboard being in a position to rectify the technical breakdowns/ defects or the owner of the vessel in distress being able to arrange to tow by another nearby fishing vessel or sending another fishing vessel to tow. In such incidents, the owners of distressed fishing vessels were provided real-time details of fishing vessels operating in the

same area with the help of MDA tools available at MRCC Colombo and Area Operations rooms. At the same time, MRCC Colombo with the assistance of the Sri Lanka Navy monitored all such incidents until the defect rectified or the vessel towed safely to the harbour. The success rate of MRCC for the year 2021 was 99.14%, only one death occurred after reporting distress to the MRCC Colombo.

19. 151 incidents reported to MRCC Colombo which shares 49% of the total were coordinated in liaison with the NAVAREA VIII Coordinator. Observed a significant increase of coordinated incidents (compare to 2020) with relevant MRCCs, through which the assistance of foreign State-owned maritime assets and MVs operating in respective areas were secured as SAR assistance.

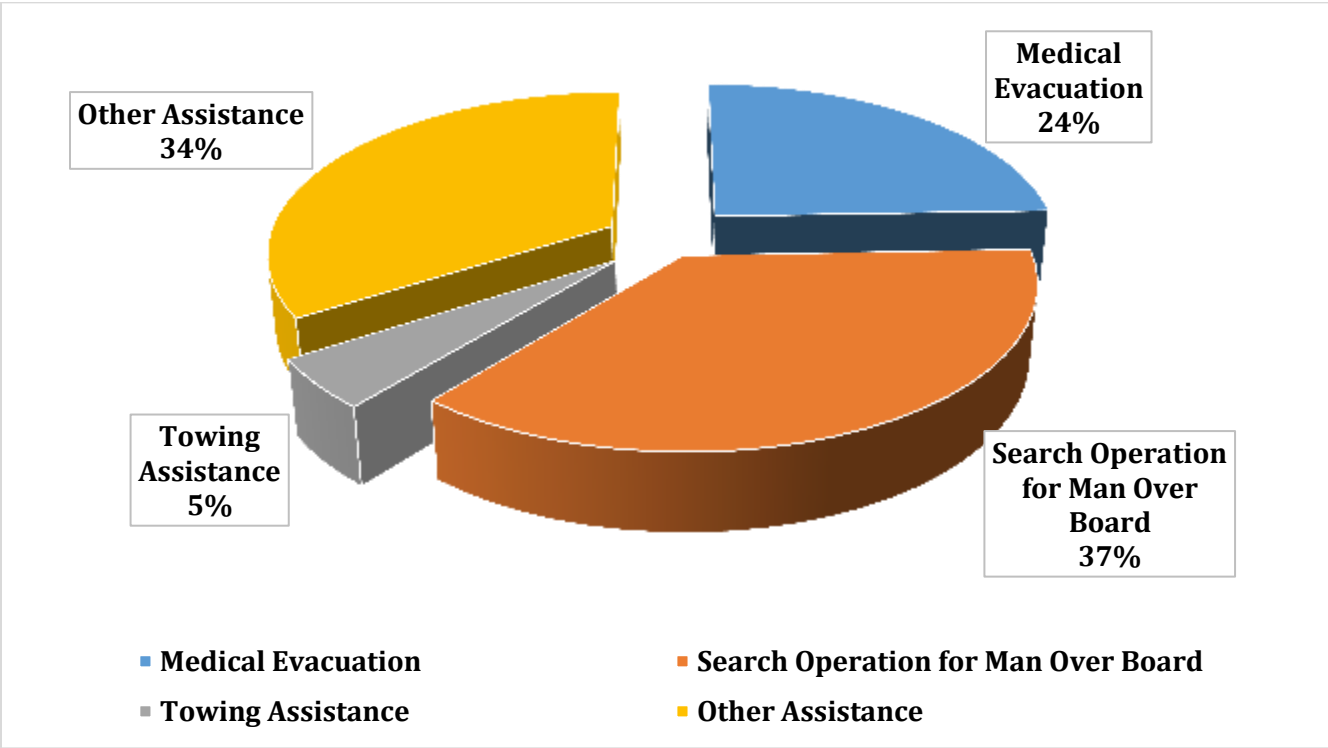
20. MRCC Colombo was able to gain the direct assistance of SLN to ensure the safekeeping for the seafarers at Sri Lanka's SAR region by deploying naval assets at various capacities. SLN rendered assistance to 41 incidents which accounted 13% of incidents reported during 2021. The nature of assistance provided by the SLN is at tabled II.

<b>Nature of Assistance Provided by Sri Lanka Navy</b>	<b>Number of Incidents</b>
Medical Evacuation	10
Search Operation for Man Over Board	15
Towing Assistance	02
Other Assistance	14
<b>Total</b>	<b>41</b>

**Table- II: Nature of Assistance Provided by Sri Lanka Navy**

21. Sharing of 24% in which 10 out of 41 incidents wherein MRCC Colombo acquired the assistance of SLN were for Medical Evacuations (MEDEVAC). Expeditious respond of SLN on such incidents continued until the transfer of patients to the hospital or being transferred to the harbour for medical treatments.

22. Units engaged in surveillance patrol and the units at naval harbours were directed to conduct these SAR operations. Limited platforms available with SLN were utilized for these operations effectively and efficiently, where the maximum number of distressed out at sea were promptly served. Graph VII illustrate the summary of the nature of assistances provided by SLN utilizing naval assets at the requests of MRCC Colombo.

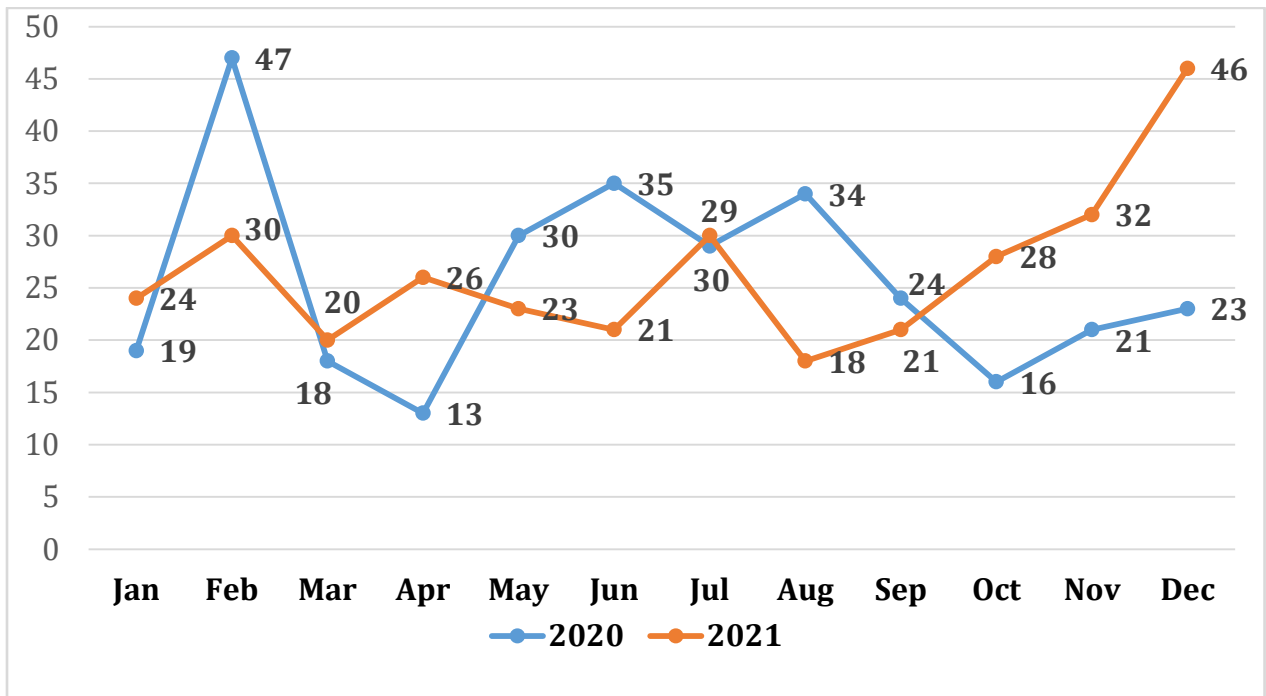


**Graph – VII: Nature of Assistance Provided by the Sri Lanka Navy**

23. **Alerts Generated by Distress Beacons.** Distress alerts generated by Distress Beacons (Emergency Position Indicating Radio Beacon, Emergency Location Transponder and Personal Locator Beacon) were relayed to the MRCC Colombo by the Mission Control Centers (MCC) of COSPAS-SARSAT and associated RCCs for providing the required assistance. Staff at MRCC Colombo verifies the distress alert directly from the subjected platform or by contacting relevant authorities via emails and through voice as per operational instructions. 108 alerts generated by such beacons were received by the MRCC Colombo in 2021 and all of them found to be false or generated during exercise.

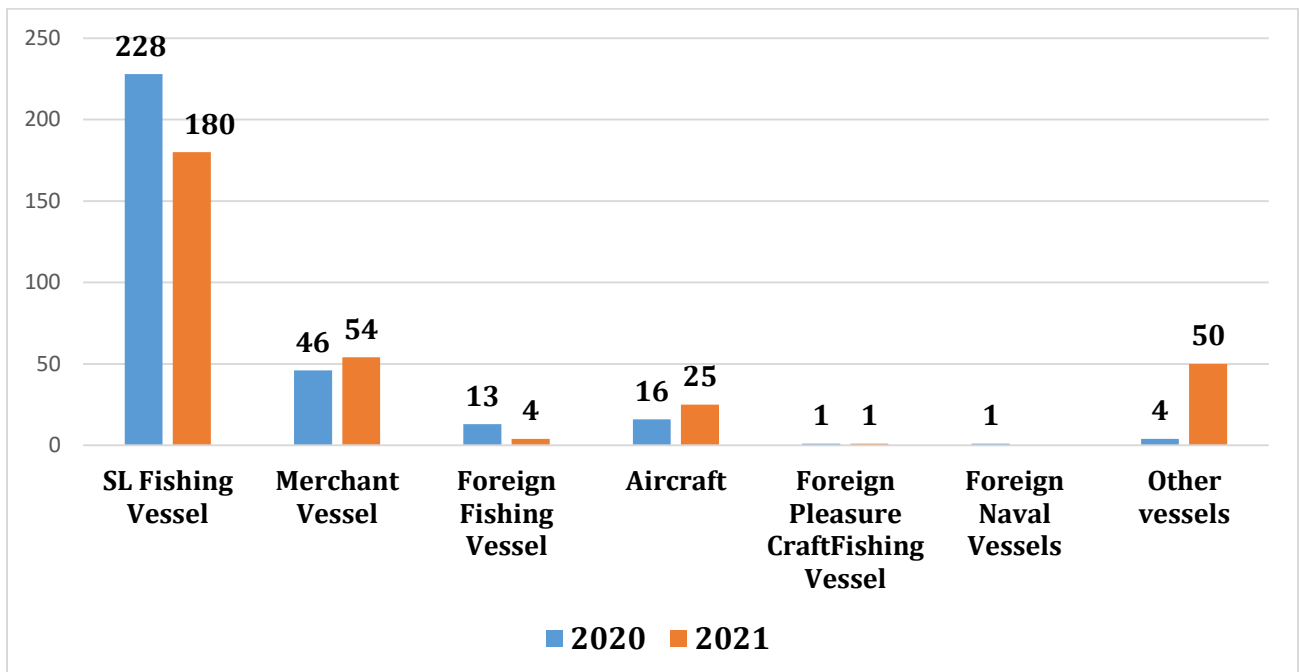
**Comprehensive Comparison of Year 2020-2021**

24. It is comparatively higher the marked 27 incidents (28%) that of per month in 2021 than the 26 incidents reported per month in 2020. Comparison of the incidents reported at MRCC Colombo in 2020 and 2021 on monthly basis is demonstrated in Graph VIII.



**Graph - VIII: Comparison of Incidents Reported to MRCC**

25. Total 318 incidents reported in distress during the year 2021 marked a marginal decrease (09 incidents) compared to 2020. Further, a similar trend in the types of platforms in distress with minimal deviations was also identified. Comparing to 2020, Sri Lankan fishing vessels and Merchant vessels reported in distress have decreased by 04 and 01 numbers respectively in 2021. Foreign military vessels, foreign fishing vessels and pleasure craft in distress have increased by 01, 02 and 01 numbers respectively in 2021 whilst the number of Aircraft reported in distress remained the same. Comparison of the platforms reported in distress is demonstrated in Graph IX.

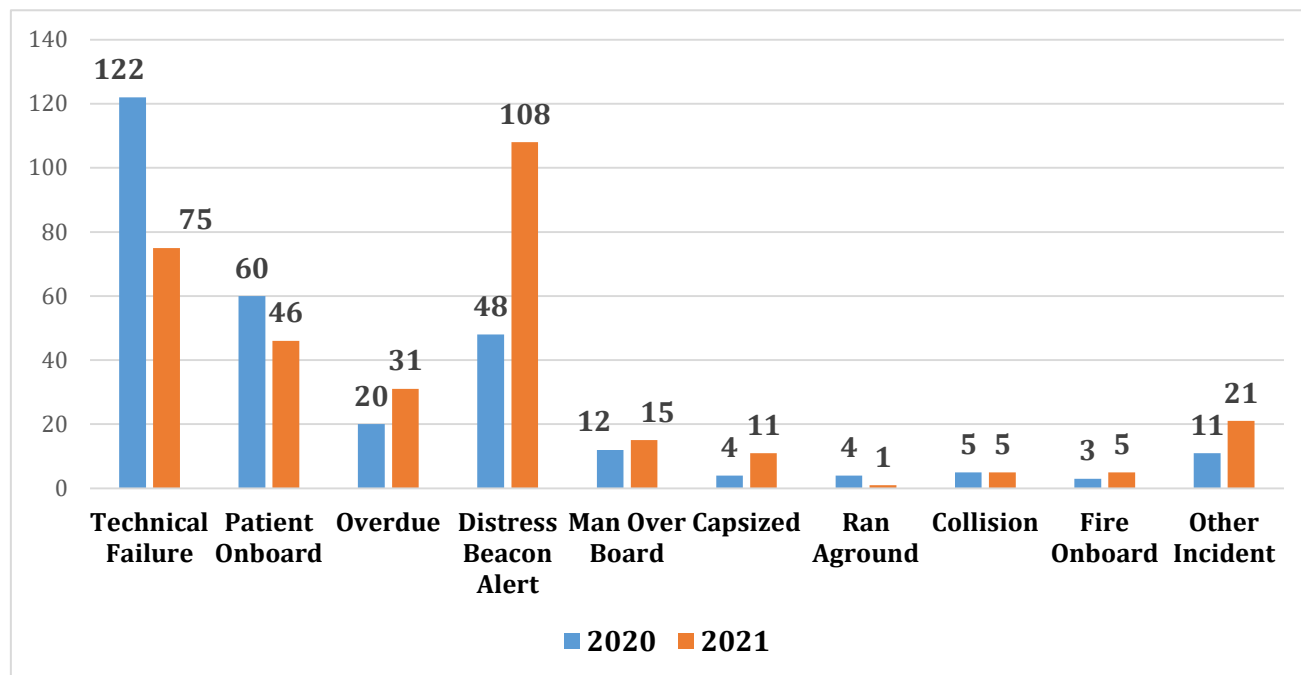


**Graph - IX: Comparison of Platforms Reported in Distress**



## **Type of Incidents**

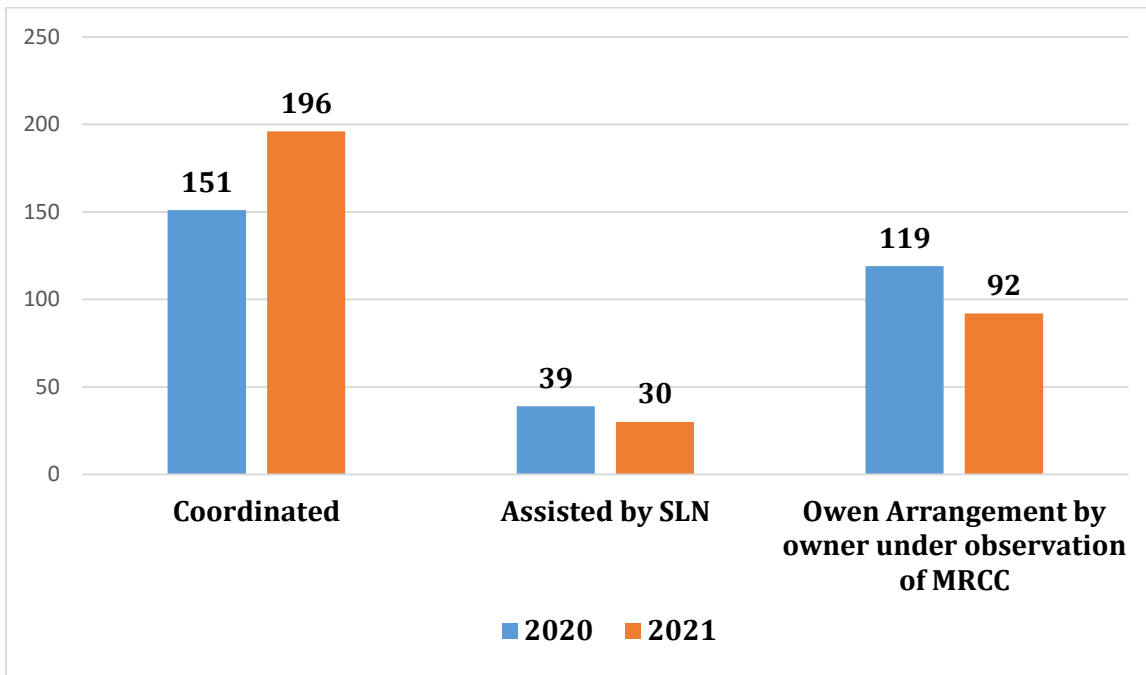
26. Analysis of incidents reported to the MRCC Colombo in the year 2020 and 2021 revealed a similar tendency at numerous categories with marginal deviations. Reports on overdue vessels, distress beacon alerts, man overboard, capsizes, fires onboard and other incidents have increased by 45%, 125%, 25%, 57%, 66% and 91% respectively in 2021. Incidents of technical failures, patient onboard and ran aground vessels have decreased by 38%, 23% and 75% respectively in 2021 whilst number of collision incidents remained the same. Comparison of type of incidents reported in 2021 illustrated in Graph X.



**Graph - X: Comparison of Type of Incidents Reported in 2021**

## **Number of Incidents**

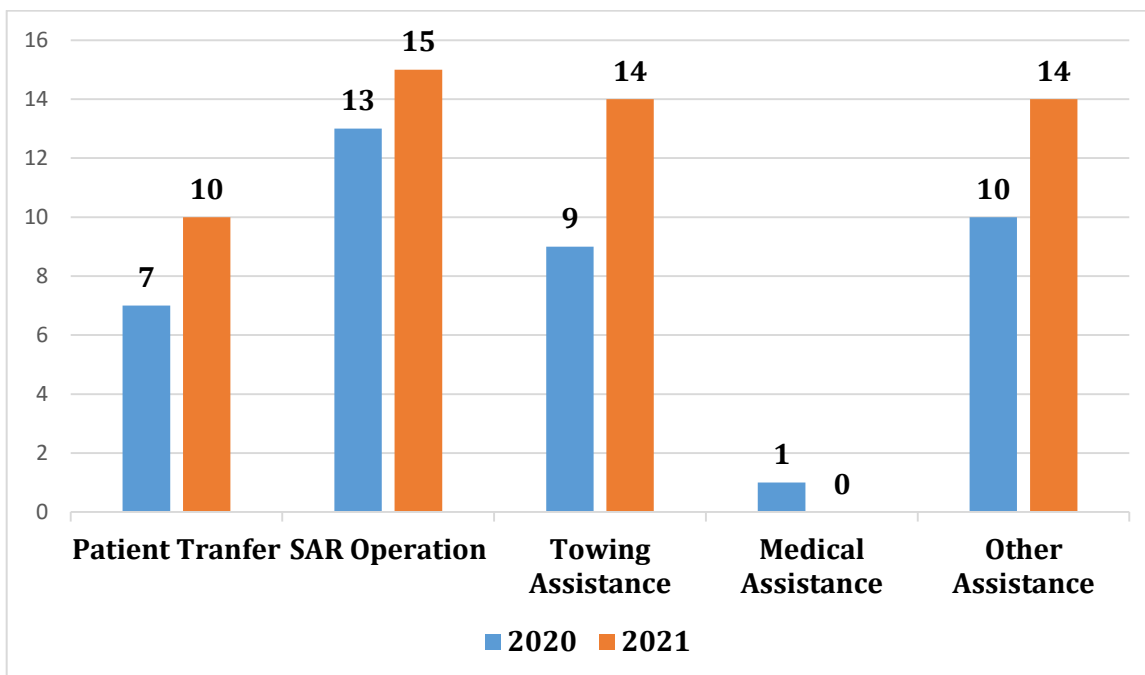
28. Compared to 2020, the number of incidents coordinated by the MRCC have increased by 30% and number of incidents which were assisted by the SLN and the owner has initiated own arrangements; have decreased by 30% and 14% respectively. Comparison of actions initiated by MRCC is in Graph XI.



**Graph - XI: Comparison of Actions Initiated by MRCC**

**Actions Initiated by MRCC Colombo**

29. Transfer of patients and technical assistance marked a declination of 65% and 100% respectively in 2021. Compared to 2020, patient transfer, SAR operations, towing assistance and other assistance marked an increase of 42%, 15%, 55% and 40% respectively in 2021. Medical assistance provided decline to zero in year 2021. Incidents in which SLN provided direct assistance are graphically demonstrated in Graph XII.



**Graph - XII: Types of Assistance Provided by Sri Lanka Navy**

30. **Comparison of Lives Saved and Cost Incurred by SLN for Assisting Distress Incidents** MRCC activities resulted in the saving of 42 lives in 2021, which is decreased by 65% compared to 2020. The cost sustained by the SLN for assisting the distressed at sea in 2021 has increased by Rs. 238,216,598.63 compared to 2020. Comparison of the lives saved and the cost incurred by SLN for assisting distress incidents on monthly basis is demonstrated in Table III.

Sr.	Month	Incidents Assisted by SLN		Lives Saved		Cost Incurred (Rs.)	
		2020	2021	2020	2021	2020	2021
01	January	6	6	15	9	1,237,215.15	1,121,010.34
02	February	2	4	1	16	1,052,201.73	82,549.43
03	March	2	3	5	-	60,655.63	1,645,319.79
04	April	-	-	-	-	-	-
05	May	6	3	22	-	519,237.89	6,980,778.52
06	June	3	5	4	07	21,944.89	20,007,514.30
07	July	4	1	1	01	6,353,376.18	13,318,753.08
08	August	7	2	30	02	5,172,106.92	1,882,001.06
09	September	2	2	23	03	271,026,177.98	1,980,652.63
10	October	2	2	6	03	1,346,843.85	997,977.28
11	November	4	-	10	01	361,353.75	-
12	December	1	2	-	-	65,979.90	983,937.55
<b>Total</b>		<b>39</b>	<b>30</b>	<b>117</b>	<b>42</b>	<b>287,217,093.87</b>	<b>49,000,495.24</b>

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

**Special Remarks**

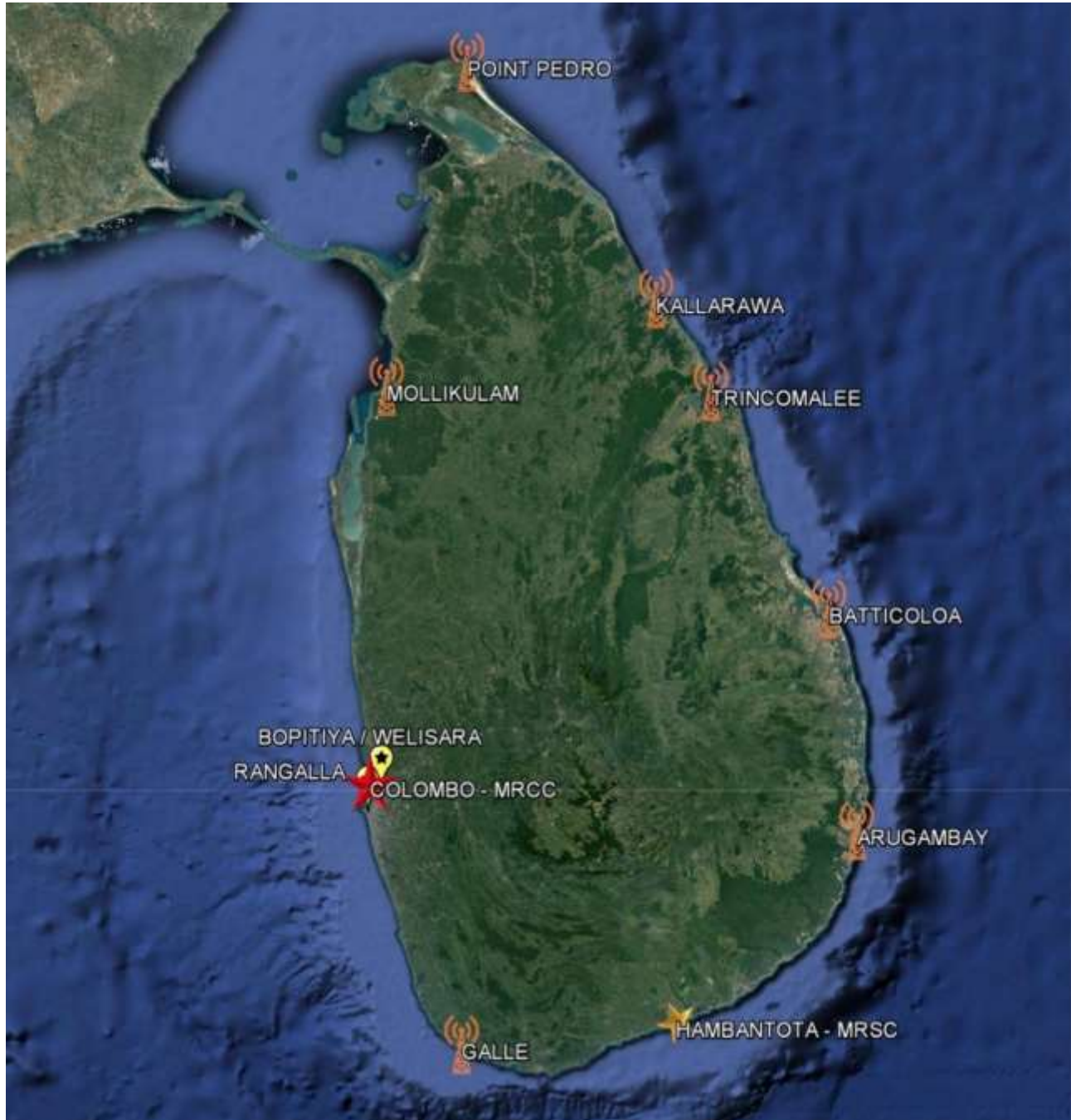
31. Fire onboard MV 'X-Press Pearl' (IMO 9875343) anchored at location 07° 04.2' N, 079° 45.4' E was reported by the Harbour Master to the MRCC Colombo at 1225 hrs on 20<sup>th</sup> May 2021. Assuming the SAR Mission Coordination, MRCC Colombo informed Sri Lanka Navy to assist the distressed ship. Subsequently, two Fast Attack Craft were dispatched to the location. Upon confirming the status by the Captain, Sri Lanka Naval Ship (SLNS) Sagara cruised to provide possible assistance with firefighting. Further, the incident was informed to Marine Environment Protection Authority (MEPA) regarding fire extinguishing efforts and potential oil spill that can emerged in the area. Later, SLNS Sindurala also was directed to the location to provide possible assistance. The assistance of Sri Lanka Air Force also was obtained to airdrop Dry Chemical Powder (DCP) to the heated area of the vessel.

32. As the fire increased onboard MV 'X-Press Pearl', all the crew members abandoned the vessel and rescued in AM, 25<sup>th</sup> May 2021. Upon the request by the Sri Lanka Navy, Indian Coast Guard Ships have arrived at the location to provide assistance with firefighting. An ICG Dornier also conducted aerial reconnaissance and pollution control operations at the location. However, the vessel began sinking in the AM, 02<sup>nd</sup> June 2021 and actions were taken to tow the vessel which failed and the vessel was shipwrecked at location 07° 04.9' N, 079° 46.8' E. Diving/Debris removal operations are in-progress.

## **Conclusion**

33. Sri Lanka Navy has become the national responsible authority for the conducting of Maritime Search and Rescue operations around Sri Lanka's SAR region since 10<sup>th</sup> April 2014 which is 27 times of its landmass. Maritime Rescue Coordination Centre Colombo is monitoring and manned round the clock by qualified and trained staff at the Naval Headquarters under the Director of Naval Operations. The main purpose is to assist distress vessels by all possible means.

34. The ongoing process is to upgrade the SAR coordinating mechanism of Sri Lanka which is to be established a network of 01 Maritime Rescue Coordinating Centre, 01 Maritime Rescue Sub Centre and 07 substations covering the entire coastal area of Sri Lanka. Figure IV illustrates the planned establishment of the MRCC network.



**Figure IV: The planned establishment of MRCC network**

35. 318 numbers of incidents reported during the year 2021 and all incidents have been handled promptly by MRCC Colombo. 226 numbers of incidents were assisted and coordinated by the Sri Lanka Navy. The strenuous effort made by the MRCC Colombo saved the lives of 42 seafarers during the year 2021 keeping the success rate for the year 2021 as 99.14%. 48 numbers of EPIRB alerts were reported to MRCC Colombo during the year 2021 and all of the alerts were either false alerts or alerts generated during the exercises. The number of platforms reported in distress during the year 2021 has increased by 46 incidents compared to the year 2020. The monthly average incidents that were reported to MRCC Colombo were 27 in 2020 and 26 in the year 2021.

36. Every incident reported to MRCC Colombo was either handled with the assistance from the Sri Lanka Navy by dispatching naval platforms to render assistance or handled with the alliance of the NAVAREA VIII coordinated by the staff of MRCC Colombo with proven standard operating procedures.