INTERNATIONAL MARITIME ORGANIZATION

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LESSONS LEARNED AND SAFETY ISSUES IDENTIFIED FROM THE ANALYSIS OF MARINE SAFETY INVESTIGATION REPORTS

IDENTIFIED ISSUES RELATING TO THE IMPLEMENTATION OF IMO INSTRUMENTS FROM THE ANALYSIS OF DATA

Analysis of accidents within enclosed spaces, falls and those involving survival and rescue craft onboard ships

Submitted by InterManager

SUMMARY

Executive summary:	This document provides observations, information and analysis on accidents within enclosed spaces, also falls and accidents involving survival and rescue craft onboard ships.
Strategic direction, if applicable	7
Output:	7.4 and 7.5
Action to be taken:	Paragraph 22
Related documents:	III 10/4/3, III 10/INF.16; III 11/INF.18, III 11/INF 19 and III 11/INF.20

Introduction

1 This document has been submitted in accordance with the provisions of paragraph 6.12.4 of the *Organization and method of work of the Marine Safety Committee and the Marine Environmental Protection Committee and their subsidiary bodies* (MSC-MEPC.1/Circ.5/Rev.6). It provides additional comments, information and analysis in support of InterManager's information documents on enclosed space accidents ranging from 1996 to 1 May 2025, fall accidents from 2012 to 1 May 2025 and rescue and survival craft accidents from 1980 to 1 May 2025.

2 InterManager submitted documents containing statistics to both III 9 and III 10, in 2023 and 2024, respectively, with supporting information documents, providing detail on the analysis of accidents in enclosed spaces, falls on ships and accidents involving survival and rescue craft. This submission, accompanied by III 11/INF.18, III 11/INF.19 and III 11/INF.20, provides an update on those submissions and captures the accidents that have occurred within these areas in the intervening period and the ensuing analysis.

Enclosed space accidents

3 InterManager has gathered and analysed available and verified information on enclosed space accidents resulting from asphyxiation and poisoning only. Although other accidents continue to occur within enclosed spaces, such as slips, trips and falls, also fires and explosions, these have been excluded because of their different root cause.

4 The trend for the number of enclosed space accidents occurring on an annual basis appears to have stabilized over the past few years, whilst a noticeable dip during the global pandemic of 2021 remains. However, when comparing 2022 and 2023, both of which saw 17 recorded enclosed space incidents, there was a marked increase in the number of actual casualties in 2023, compared to 2022, a figure of 37 as against 20. Thus, although the frequency of accidents remained fairly constant, the casualty rate almost doubled. To date for 2024, there have been 13 enclosed space accidents reported, accounting for a further 15 casualties.

5 InterManager's analysis of the data for the number of people involved in enclosed space accidents shows that a single fatality is the most probable outcome, 52%, of the total number of accidents. However, of that 52%, 30% involved injury to an additional person, or persons, who became involved in the rescue attempts and became potential casualties. Of all recorded enclosed space accidents, 44% resulted in multiple casualties.

6 The phenomena "rescuer syndrome", where people feel a compulsive urge to react instantly and instinctively, is worthy of further consideration and understanding. This phenomenon has been extensively researched and published, particularly in the area of accidents to persons who get into difficulties when swimming adjacent to pleasure beaches. On that aspect, the research undertaken by John Hemsley Pearn and Richard Charles Franklin (2012), titled The Impulse to Rescue: Rescue Altruism and the Challenge of Saving the Rescuer, published through the *International Journal of Aquatic Research and Education*: Vol.6: No.4, article 7 is of particular relevance to what is being observed in the reports made on enclosed space accidents where multiple fatalities have occurred. Indeed, it would be most helpful to consider this in order to mitigate a natural reaction to help instantly. This would be particularly beneficial when considering how to mitigate a reduction in the casualty numbers per accident, rather than the frequency of accidents.

7 Of those who have lost their lives in enclosed space accidents where the rank or role has been stated, 67% currently come from what is considered to be the ship's leadership team, a slight increase on the previous "to date" May 2024 percentage. For statistical purposes, the ship's leadership team comprises the master, chief engineer, chief officer and second engineer. A further 4% of those who lost their lives were serving on board the ship in a training role, which is defined in similar statistical terms as a cadet or a trainee.

8 InterManager has observed a number of enclosed space accidents that have originated onboard ships whilst in ship repair yards, not new build yards, which continue to be unreported within the Marine Casualties and Incidents (MCI) module of the Global Integrated Shipping Information System (GISIS). It is acknowledged that regional and national differences as to who has primary responsibility for the investigation of accidents that happen within shipyards, coupled with difficulties around reporting and managing these types of accidents, prevail. This understandably impacts upon the information gathered and stored within GISIS, where such accidents may not necessarily have been recorded, meaning that the completeness of GISIS as a repository for accidents is degraded and the usefulness of any subsequent analysis, considerably reduced.

Fall accidents

9 InterManager has gathered and analysed available verified information on fall accidents which have occurred onboard ships. It should be noted that occurrences, where the root cause has been identified as something other than a fall, such as asphyxiation, intentional act, or criminal act, have been excluded from the review.

10 Excluding 2024, where to date 46 fall accidents have been recorded, and where the statistics are maturing owing to the natural lag between accident and investigation report release, the trend for fall accidents from or onboard ships for the past five-year period has remained consistently between 45 and 61 accidents per year, the majority of which involved just a single person.

11 Accidents involving a fall are slightly more numerous where the fall occurs from a ship to the sea, as opposed to those where the fall occurs within the ship itself.

12 The percentage of fall accidents, when analysed by ship type, remained broadly constant throughout the review period of 2012 to 1 May 2025, as compared to the figures in InterManager's previous submission through document III 10/INF 16. Likewise, the location of the fall accidents reported remained broadly consistent between the two review periods. It would appear, therefore, that the industry is experiencing a similar frequency of fall accidents in similar locations year on year.

13 It has been observed that where it is stated in the accident investigation report, access to the ship has accounted for a total of 16% of the recorded overall accidents. The use of pilot ladders accounts for 7% of the total. The working deck area of the ship, holds and hold access account for a total of 54%, with falls from cranes a further 4%. Falls within cargo, ballast and water tanks account for 5% of the total.

14 InterManager notes that a number of accidents involving falls onboard ships are not being recorded within the MCI module of GISIS, nor is any accident report being made available. Such accidents continue to be openly reported and recorded on ship type specific websites and regional and national media. The statistics analysed by InterManager exclude falls which were reported as intentional or criminal acts but include those which have been reported as accidental.

Rescue and survival craft accidents

15 InterManager has been continuously gathering and analysing information available on accidents associated with activities involving rescue and survival crafts onboard ships. The data, collated from 1980 to 1 May 2025, is for all types of lifeboats on board ships. It should be noted that it involves all kinds of merchant ships, cruise ships, naval vessels, oil rigs, tugs and supply boats with IMO numbers. There is a considerable time lapse in the verification of data for those accidents not reported to any authorities.

16 Many accidents that occur on board ships, for whatever reason, are not reported into the GISIS MCI module, therefore, the data in the module remains incomplete which impacts any analysis undertaken and distorts the results obtained when compared to real-life figures and causes. Out of 622 incidents (including 80 near misses) gathered since 1980, only 16% are available in the GISIS MCI module. This is particularly relevant when deciding upon a course of action to decrease accidents because the comprehensive nature of the actual maritime accident landscape remains so inaccurate.

17 There remains, however, a potential for serious accidents in the handling of lifeboats during drills and launching. InterManager gratefully acknowledges the continued efforts set in train at IMO to prevent lifeboat accidents by reviewing resolution MSC.81(70) on the *Revised Recommendation on testing of life-saving appliances* and the adoption of resolution MSC.544(107), on 8 June 2023, on the amendments to the *Revised Recommendation on testing of life-saving appliances* (resolution MSC.81(70)) which includes all types of lifeboats on board ships.

Summary

18 InterManager continues to use a variety of verified data feeds to obtain information on accidents onboard ships but there remains a significant lag between accident occurrence, its investigation, and the report being uploaded into the GISIS MCI module. To enable more immediate lessons learned and enhance the safety of those at sea or working onboard ships, it would be markedly beneficial to all if this unnecessary lag could be decreased, indeed eliminated. In that respect, InterManager urges all interested parties involved in the reporting and investigation of accidents to make an initial notification within the relevant module of GISIS as soon after the accident as is humanly possible.

19 Some accidents that occur on board ships, whatever the explanation, are not recorded in the GISIS MCI module. Therefore, the data in the module remains markedly incomplete. This has an impact on any analysis undertaken and distorts the results obtained when compared to real-world figures and causes. It assumes particular significance when deciding upon a course of action to decrease accidents, given the comprehensive nature of the actual maritime accident landscape that remains unavailable. It would undoubtedly be beneficial to the safety of seafarers if all accidents occurring upon ships were recorded in the GISIS MCI module no matter who has primacy of investigation.

20 There is, sadly, an apparent increase in the number of seafarers and third parties dying in enclosed spaces, and further extensive research into the "rescuer syndrome" may be beneficial in reducing casualties rather than reducing accident numbers.

21 Again, it can be seen that the frequency and annual casualty figures for falls on, or from, ships remain consistent year on year. Although seafarers and third-party hazards from fall accidents remain fairly constant, the risk is certainly not decreasing.

Action requested of the Sub-Committee

22 The Sub-Committee is invited to:

.1 take note of the accident analyses, particularly the phenomena "rescuer syndrome" trends and information featured within this submission and decide how such information might best be utilized, whilst taking cognizance of lessons learned from past incidents;

.2 take note of the gaps that are introduced within the data contained in the GISIS MCI module when initial notifications are not made and where flag States do not conduct an investigation owing to the primacy of investigation conflict;

.3 take note of the impact upon analyses of information contained within the GISIS MCI module database where initial notifications remain missing and some accidents have not been recorded;

.4 consider the inclusion within the GISIS MCI module, further sub-categories under "human being consequences". This would benefit data analysis of the stated activities and assist in formulating future actions. Some suggestions for further sub-categories include: enclosed spaces, lifeboats, falls, and personnel transfer and mooring;

.5 take note of the benefits to IMO and seafarers of a centralized database using unified indicators on all accidents and near-miss reports, in order to promote a better understanding of accidents onboard ships, leading to healthier shipping in general; and

.6 take note of the phenomenon "rescuer syndrome" and the research undertaken by John Hemsley Pearn and Richard Charles Franklin (2012), and how this may be applied to mitigate the occurrence of multiple casualties in a single enclosed space accident event.