INTERNATIONAL MARITIME ORGANIZATION

E

SUB-COMMITTEE ON IMPLEMENTATION OF IMO INSTRUMENTS
12th session
Agenda items 4 and 8

III 12/INF.17
15 May 2026
ENGLISH ONLY
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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

The analysis of enclosed-space accidents on board ships

Submitted by InterManager

SUMMARY

Executive summary:	This document provides information and analysis on enclosed-space accidents attributable to asphyxiation or poisoning only, on board ships between the years 1996 and 1 May 2026.
Strategic Direction, if applicable:	7
Output:	7.4 and 7.5
Action to be taken:	Paragraph 5
Related documents:	III 12/4/4; III 11/4/4, III 11/INF.19; III 10/4/3, III 10/INF.18 and III 9/INF.11

Introduction

1 This document supports document III 12/4/4 and provides information on enclosed-space accidents from 1996 to 1 May 2026, as well as updates on InterManager's previous submission to the III Sub-Committee through document III 11/INF.19.

2 InterManager continues to gather and analyse available verified information on enclosed-space accidents which have occurred as a result of asphyxiation or poisoning only. Although other accidents occur within enclosed spaces, such as slips, trips and falls, and fires and explosions, these have been excluded since their root cause is seen to be distinctly different.

3 In the period from 2025 to 2026, InterManager was fortunate to obtain access to another NGO's incident database that enabled cross verification of a number of enclosed-space incidents. This increased the overall number of accidents available, particularly regarding serious near-miss events, where fortunately no one died, but the potential was most apparent.

4 The trend for the number of enclosed-space accidents in the near term appears to be stable, acknowledging that there remains a significant lag between the accident occurrence, it being investigated, and the report being released and uploaded into the Marine Casualties and Incidents module (MCI) of the Global Integrated Shipping Information System (GISIS).

Action requested of the Sub-Committee

5 The Sub-Committee is invited to take note of the analysis, trends and information presented in the annex to this submission in the context of its consideration of document III 12/4/4 and, in particular, how such information might be taken into account when deliberating safe entry into enclosed spaces, whilst taking cognizance of lessons learned from past incidents.

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ANNEX

ANALYSIS OF ENCLOSED-SPACE ACCIDENTS DUE TO ASPHYXIATION OR POISONING

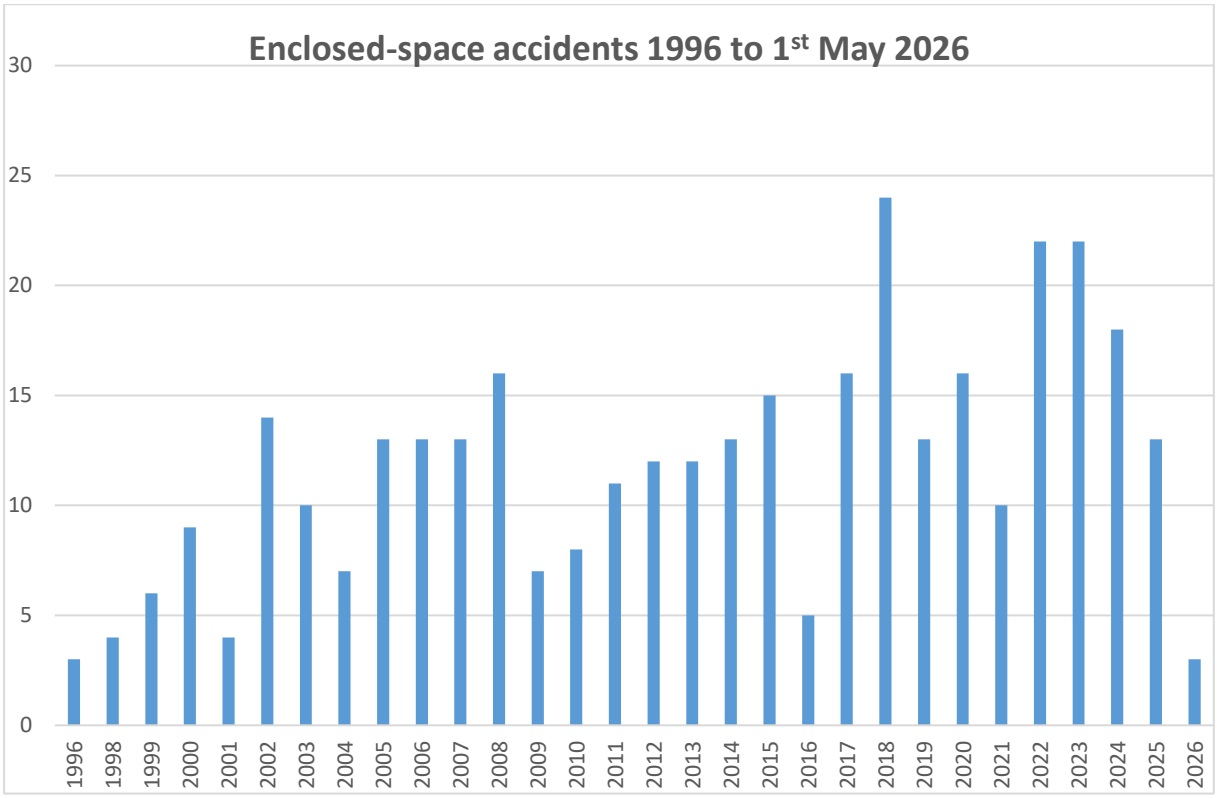

Figure 1

1 Figure 1 shows the number of verified enclosed-space accidents due to asphyxiation or poisoning only per year from 1996 to 1 May 2026.

2 The vertical axis is the count of accidents, and the horizontal axis represents the individual years.

3 Given the increased transparency within the industry, together with more efficient reporting and investigating, the number of accidents captured is increasing. However, there remains a natural lag between the accident occurring, its investigation and the release of the report. This means that the data set for recent years will, by its nature be incomplete, and depict an evolving landscape.

4 Although such a lag is understandable, it inhibits the ability for others to learn, and there remains a risk that similar accidents may occur in the period from the initial event occurrence to the final report being released. The use of safety bulletins, safety flashes and interim reports assists in mitigating this risk. Those who utilize these and other means of communicating initial findings should be commended for their contribution to ongoing safety on board ships and the learning opportunity within the industry.

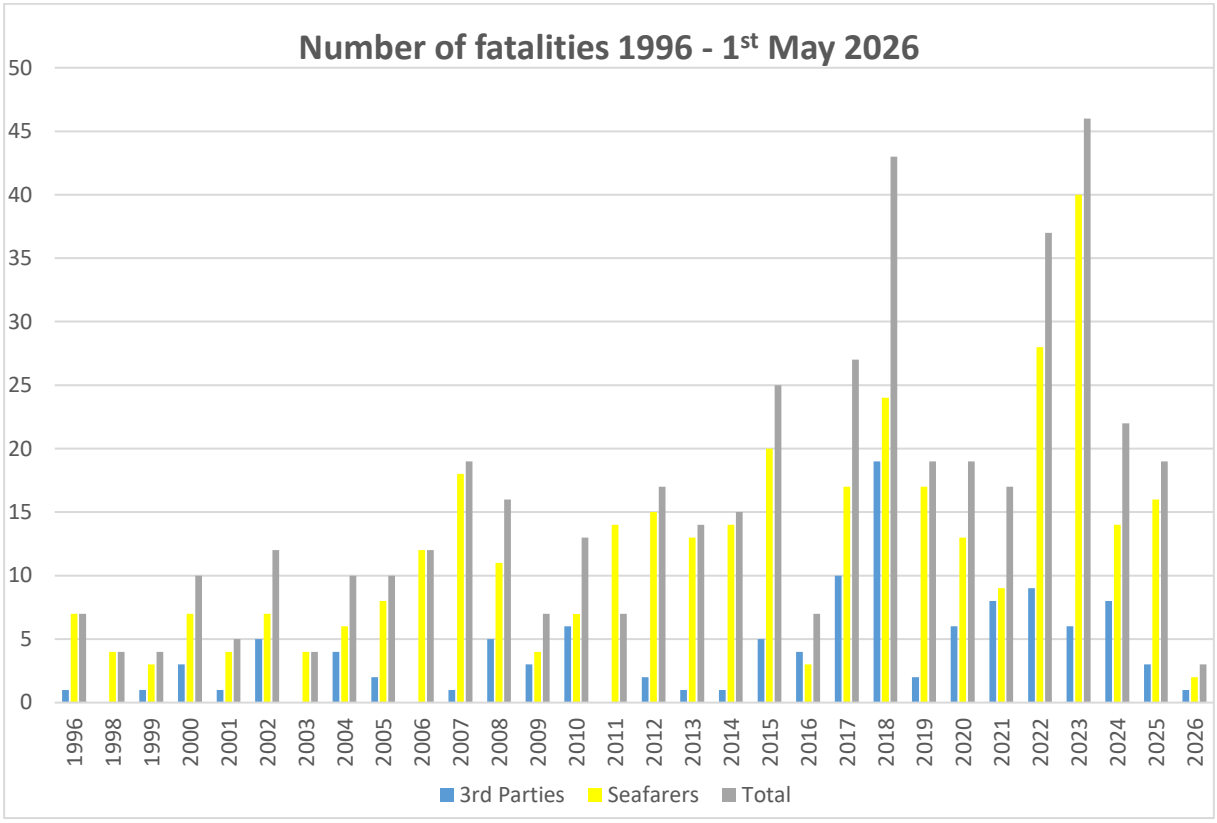

Figure 2

5 Figure 2 shows the number of verified enclosed-space fatalities per year from 1996 to 1 May 2026, where the vertical axis measures the fatality count, and the horizontal axis, represents the individual years.

6 The following colour key has been used:

.1 Yellow - Seafarers who have died in enclosed spaces on board ships for the year indicated.

.2 Blue - Third parties who have died in enclosed spaces on board ships for the year indicated.

.3 Grey - The total number of seafarers and third parties who have died in enclosed spaces on board ship for the year indicated.

7 Seafarers face the greatest exposure to enclosed-space activities on board their ships and unfortunately remain those most at risk from losing their lives within those spaces. These seafarers will have exposure to enclosed-space training during their careers. Whereas those who, in many instances, task the seafarer to undertake the work remotely, such as ship operators and charterers, may not have had any such training opportunities, and therefore the appreciation of risk is diminished.

8 With improvements in communications from ship to shore, both commercially and for private use, there is much greater transparency within the industry particularly when things do not go as planned. Likewise, the process of reporting and that of investigation are now more mature and have become more encompassing. InterManager still believe that these factors have led to a greater number of incidents being reported, recorded and investigated.

9 The number of all fatalities remains substantial and any improvement in hazard awareness, design and process will assist in mitigating such deaths in the future.

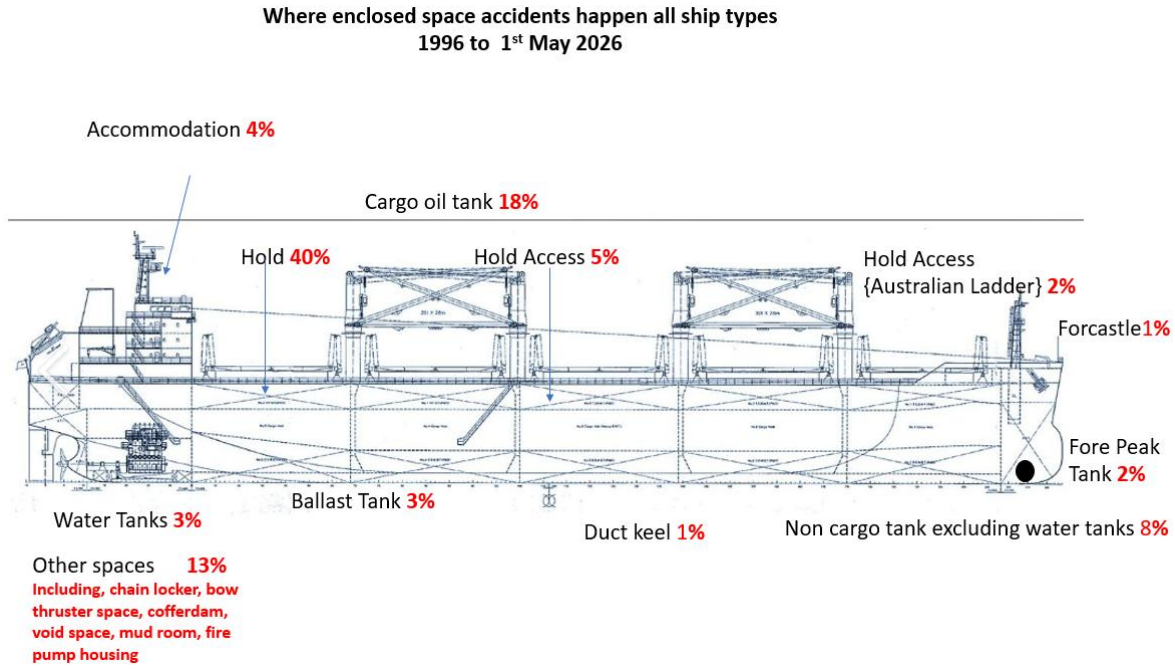

Figure 3

10 Figure 3 shows pictorially where enclosed-space accidents have occurred on board ships within the period from 1996 to 1 May 2026 utilizing a generic ship profile.

11 It can be seen that the majority of accidents continue to have occurred, expectedly, within the working areas of ships such as cargo oil tanks, hold and hold access, and water tanks as well as void spaces.

12 Working within cargo holds and access points to cargo holds accounts for 47% of the total recorded accidents.

13 Four per cent of all enclosed-space accidents have occurred within the accommodation space of a ship, this being the crew's living and recreational areas and they are attributable mainly to the ingress of cargo fumigant.

14 The number of enclosed-space accidents occurring within the cargo tanks of oil, gas and chemical tankers has remained constant at 18% for the period of this study.

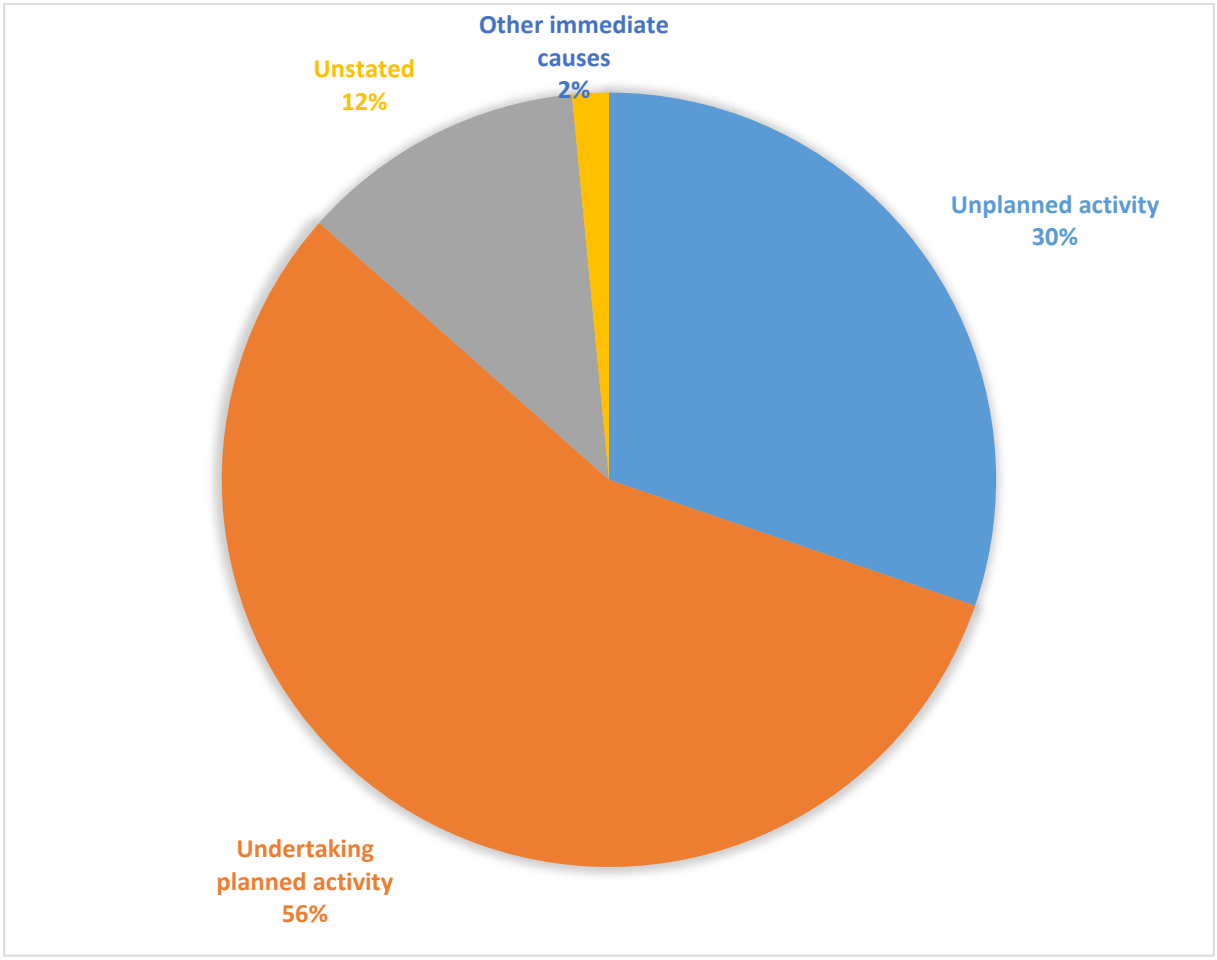

Figure 4

15 Figure 4 shows the nature of the immediate cause of the accident that occurred within an enclosed space on board a ship within the period 1996 to 1 May 2026.

16 Some accidents remain under investigation, so the immediate cause is as yet undetermined. Unfortunately, it is still not possible to determine an initial cause of accident from some accident reports other than that the casualties involved were asphyxiated, whilst in other recorded accidents the investigation report remains unavailable. The combined sum of these figures is shown in the "Unstated" section.

17 The primary area captured in the immediate cause of an incident is that of the ship crew or contracted shore staff undertaking an activity which was planned to happen, but which unfortunately has gone wrong, leading to an accident.

18 The second substantive segment is where an accident has occurred in an unplanned activity on board the ship. This is primarily where seafarers and shore-based third parties have entered a space considered safe but unfortunately, this has turned out not to be the case. Lack of knowledge of the ship and an appreciation or understanding of signage, if displayed remains a reoccurring causal factor for third-party fatalities. Additionally, for ship crews, it is where a space was known to be unsafe for entry and an individual has entered it to take "a quick look" or, in too many other cases, entered an unsafe space to affect the rescue of another individual who has collapsed within that space.

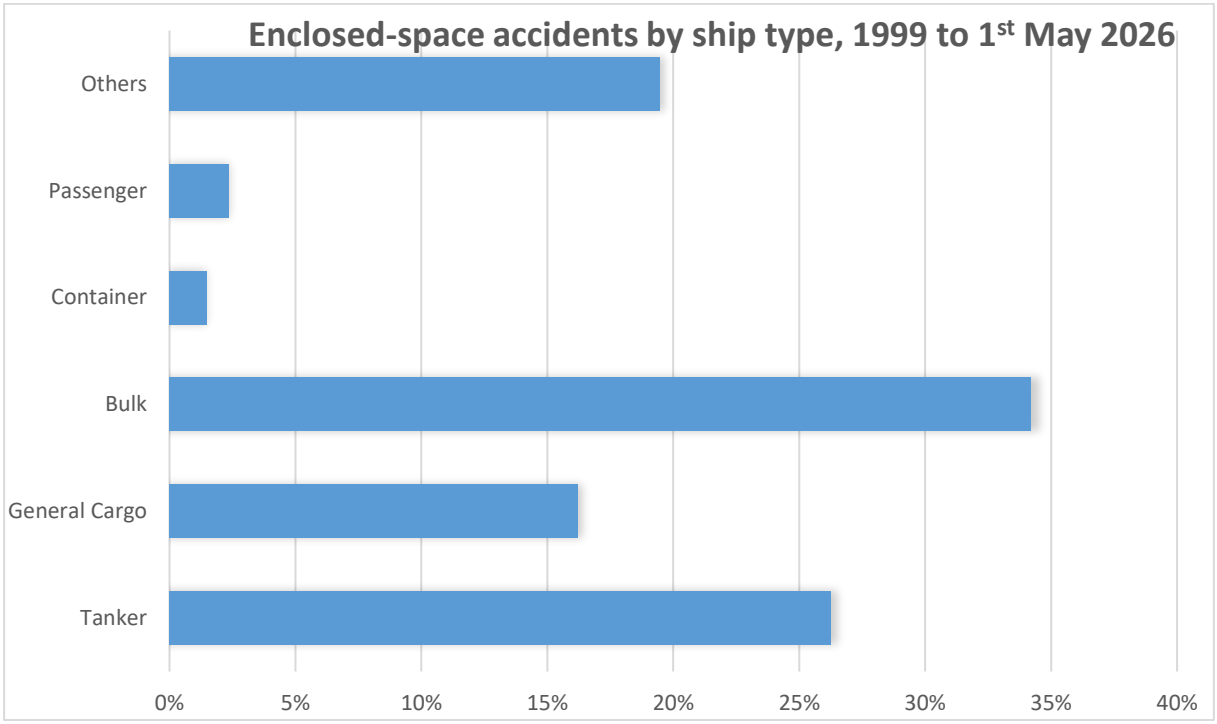

Figure 5

19 Figure 5 shows the breakdown of ship types which have had an enclosed-space accident resulting from asphyxiation due to a deficient atmosphere within the period from 1996 to 1 May 2026. As with all accidents contained within this study, those caused by falls, fires or explosions have been excluded.

The ship types which have been included within the category "others" are:

.1 Livestock ships;

.2 Tugs and offshore service vessels;

.3 Large fish catching and/or processing types; and

.4 Special service or specialist ship types.

20 The tanker category includes all bulk liquid carrying ships and includes those which carry oils, chemicals, and gases. The relative size of this segment remains surprising when considering the additional industry scrutiny that has been applied to it over many years.

21 General cargo ships and bulk carriers account for a high proportion of accidents. However, they also employ the greatest number of third parties in high activity situations to assist in the loading or discharging of their cargoes. Importantly, unlike the ship crew, many of them do not have the necessary knowledge of safety procedures on board the ship they have been temporarily engaged to work on.