

Analysis Of Maritime Reports Received 2022-2023

Introduction

CHIRP improves safety at sea through the provision of a confidential and independent incident and near miss reporting programme. The annual reporting cycle begins 01 April and completes 31 March the following year. This report covers the period 2022-2023.

Incident vs Near-Miss Reports

CHIRP uses different frameworks to analyse the significance of data we receive. One such widely used framework is the Heinrich¹ ratio that describes the number of near misses to actual serious incidents: for every incident resulting in major harm, there may be expected to be 30 resulting in minor harm and 100 'near-misses'. CHIRP actively promotes near-miss reporting. 65% of reports received by CHIRP Maritime concerned near-misses and only 35% were regarding actual incidents. Although some way off the 1-30-300 ratio defined by Heinrich, this is nevertheless a significant improvement on the previous year, where near misses made up only 14% of reports. This reflects the efforts of the CHIRP team to encourage near-miss reporting.

Factor Analysis

Our analysis of all received reports revealed 88 different factors that contributed to safety incidents or near misses, with an average of 5 identified factors per incident. Figure 2 shows the top-10 factors by frequency of occurrence (%) thus:

- "Inadequate leadership or supervision" occurred in 35% of all reported incidents. This suggests either lack of availability of operational leaders or lack of competency.
- "No/wrong/late visual detection" also occurred in 35% of reported incidents and are often the result of high workloads, distraction or inattention.
- "Inadequate risk assessment" was present in 32% of all incidents. Common causes for this are inadequate hazard identification (an issue of experience), or lack of time to adequately assess and address the identified risks.
- "Proactive safety risk management" is like the above, but at the organizational level. It highlights the need for improved implementation of hazard identification and risk management practices. This was a factor in 31% of reports.
- "Reactive safety management assurance" occurs when risk assurance measures lack effectiveness in identifying and rectifying safety shortcomings. This was present in 23% of all reports.

A recurring pattern to all the most frequent causal factors is the presence or otherwise of sufficient – and sufficiently experienced – personnel so that adequate time and attention can be allocated to the preparation and supervision of maritime activities. CHIRP has previously questioned whether existing minimum Safe Manning² levels have become misaligned with the current tempo of maritime operations, and especially short sea shipping routes?

¹ Heinrich, H.W. (1931) Industrial Accident Prevention: A Scientific Approach. McGraw-Hill, New York.

² [https://wwwcdn.imo.org/localresources/en/OurWork/HumanElement/Documents/1047\(27\).pdf](https://wwwcdn.imo.org/localresources/en/OurWork/HumanElement/Documents/1047(27).pdf)

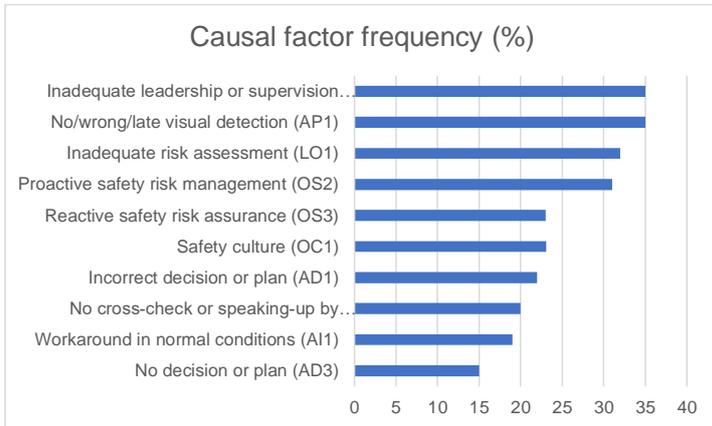


Figure 1: Top 10 causal factors (%)

Incident Outcomes

Almost every incident (i.e., not the near misses) reported to CHIRP resulted in personal injury or damaged equipment. These findings are like last year's outcomes, although fatalities reported to CHIRP (<2%) have fallen compared to last year (10%).

Commented [LH1]: From Ruth: How do these numbers reflect the stark difference in near-miss v incident reporting identified earlier?

Commented [LH2R1]: @Adam Parnell

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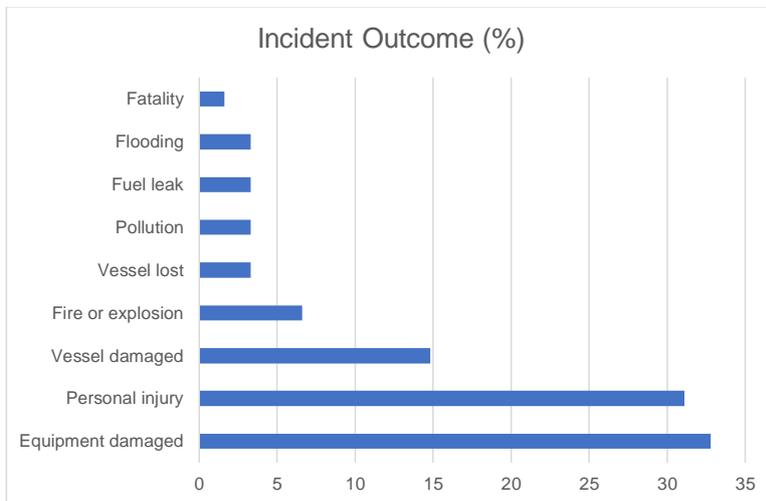


Figure 2: Incident outcomes

Evaluating Report Sources

The most common vessel types mentioned in received reports (figure 4) were bulk carrier (16%), container vessels (14%) and tankers (13%), closely followed by superyachts (11%). The latter can be explained by the recent introduction of a superyacht-focused FEEDBACK newsletter which has significantly raised awareness of the CHIRP reporting programme across that community, which has led to an increased number of reports from them.

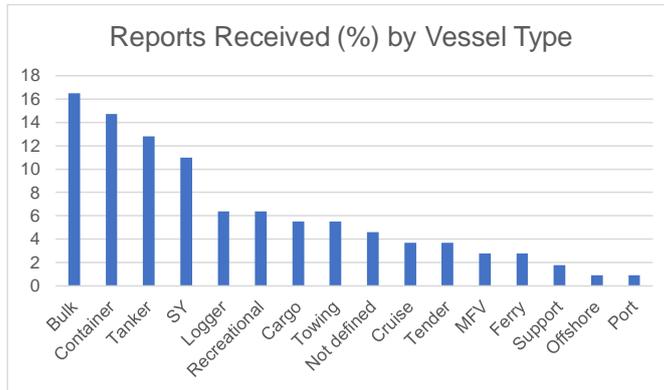


Figure 3: Received reports by vessel type.

Summary

This analysis identifies the key causal factors of safety incidents reported to *CHIRP* Maritime over the past year. These include inadequate leadership or supervision, issues with visual detection, inadequate risk assessment, and the need for proactive safety risk management.

The key findings echo concerns previously expressed by *CHIRP*, i.e. that companies should allocate more time and resources – especially experienced personnel – to permit the safe preparation and execution of maritime activities. In particular, the findings raise questions about the alignment of current minimum Safe Manning levels with the tempo of maritime operations, particularly on short sea shipping routes.

Regarding incident outcomes, personal injuries and damaged equipment remained prevalent, but the decrease in reported fatalities compared to the previous year is a positive trend, potentially indicating some progress in improving safety measures.

Lastly, the evaluation of report sources reveals the most frequently mentioned vessel types, including bulk carriers, container vessels, tankers, and superyachts. Other industry sectors and vessel types are encouraged to increase reporting volumes.

Overall, this analysis of maritime reports underscores the importance of confidential incident and near miss reporting in enhancing safety at sea. The findings provide valuable insights for industry stakeholders, enabling them to identify and address key factors contributing to safety incidents and work towards further improving maritime safety practices.

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 15/06/2023