

Accidents and Incidents Reported to MACI.

Summary Report (2023)



Table of Contents

Introduction	4
Part I – All Vessel Types	5
2023 Overview	5
By Vessel Type	6
Severity of Events	7
Personal Injuries Sustained	7
Type of Injury Sustained	7
Location On Board	8
Mortality for seafarers and others on board	9
Part II – Merchant Ships	11
Overview	11
Type of event (Merchant Ships)	11
Severity of Events (Merchant Ships)	12
Personal Injuries Sustained	12
Type of Injury Sustained (Merchant Ships)	12
Locations on board (Merchant Ships)	13
Mortality of Seafarers	13
Part III – Commercial Yachts	14
Overview	14
Type of event	14
Severity of Events	15
Personal Injuries Sustained	15
Type of Injury Sustained	15
Locations on board (Commercial Yachts)	16
Mortality of Seafarers	16
Part IV – Other Vessels	17
Overview	17
Type of event	17
Severity of Events	18
Personal Injuries Sustained	18
Type of Injury Sustained	18

Accidents and Incidents Reported to MACI 2023

Locations on board (Other Vessels)	19
Mortality of Seafarers	19
Part VI – Safety Issues and Observations	20
Safety Flyers issued in 2023	20
Incidents on Gangways, Passarelles and Accommodation Ladders	20
The Importance of Proper Planning, Execution and Monitoring of All Voyages	20
Use of synthetic cordage and falls including "man riding" applications	20
Failure of "Side Boarding Ladders" attached to yacht hulls	21
The Dangers of "Tombstoning" from Yachts	21
Safety Observations	21
Reporting	21
Accidents which could have been prevented or reduced in severity	22
Accidents occurring when not on board	22
"Fault of Navigation"	22
Other incidents	22
Limitations	23
Reporting Accidents and Incidents	23

Introduction

Cayman Islands Shipping Notice 02/2015 and regulation 5 of the Merchant Shipping (Marine Casualty Reporting and Investigation) Regulations, 2018, require certain accidents and incidents to be reported to the Maritime Authority of the Cayman Islands (MACI). These reports are recorded, logged and followed up as appropriate.

Some incidents require investigation, some simply require recording and others are passed to the Shipping Master who follows up on any seafarer welfare issues that may be related to the accident or incident.

This report examines the accident and incidents reported to MACI during 2023.

Changes to the summary report format for 2023 include –

Revised categorisation of vessel types "Ship", "Commercial Yacht" and "Other" to reflect the level of safety related trading certification held and the applicability of the IMO Casualty Investigation Code rather than simply the vessel's registration "category";

Historical minor statistical errors in earlier Summary Reports have been corrected and historical trends have been updated;

The estimates for the number of seafarers serving on Cayman Islands ships has been revised and updated; and

An analysis of incidents and accidents for each vessel type has been introduced in addition to the "all vessel type analysis".

Vessel type **"Ship"** include merchant cargo ships, passenger ships and passenger yachts registered as "passenger ships".

Vessel Type "Commercial Yacht" include yachts fully certified under Part A of the Large Yacht Code, yachts certified under Part B of the Large Yacht Code, yachts entered in the "Yachts Engaged in Trade" (YET) Scheme and other yachts certified to engage in commercial activities.

Vessel type "Other" are vessels over 24m in length, not included in other categories.

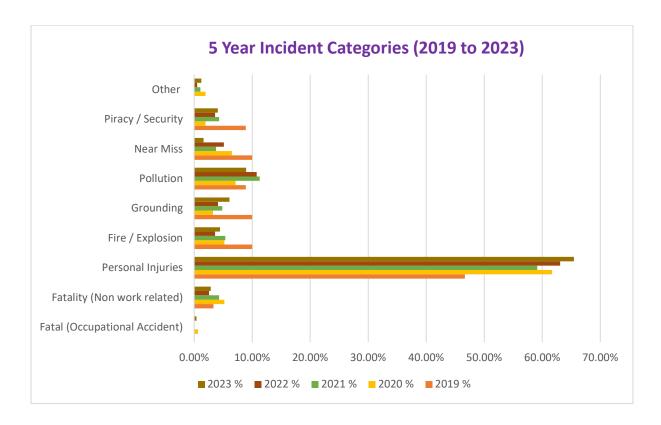
<u>PLEASE NOTE:</u> When comparing the data presented in one part of this report with data presented in another part, it is important to consider that a single "incident" may result in multiple "events" (for example "collision" and "personal injury"), and a single "event" may also result in multiple outcomes (for example multiple "personal injuries" to one or more seafarers).

Part I – All Vessel Types

2023 Overview

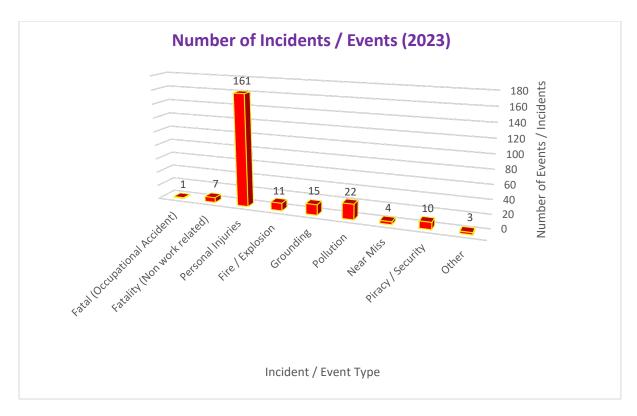
A total of **237** separate incidents were reported to MACI during 2023 resulting in **246** reportable events¹. This is an increase of **51** reportable events when compared to 2022. These can be broken down as follows –

Туре	2	019	2	020	2	021	2022		2023	
	Num	%	Num	%	Num	%	Num	%	Num	%
Fatal (Occupational Accident)	0	0.00%	1	0.65%	0	0.00%	0	0.00%	1	0.41%
Fatality (Non work related)	3	3.33%	8	5.19%	8	4.30%	5	2.56%	7	2.85%
Personal Injuries	42	46.67%	95	61.69%	110	59.14%	123	63.08%	161	65.45%
Fire / Explosion	9	10.00%	8	5.19%	10	5.38%	7	3.59%	11	4.47%
Grounding	9	10.00%	5	3.25%	9	4.84%	8	4.10%	15	6.10%
Pollution	8	8.89%	11	7.14%	21	11.29%	21	10.77%	22	8.94%
Near Miss	9	10.00%	10	6.49%	7	3.76%	10	5.13%	4	1.63%
Piracy / Security	8	8.89%	3	1.95%	8	4.30%	7	3.59%	10	4.07%
Other	0	0.00%	3	1.95%	2	1.08%	1	0.51%	3	1.22%
	2	2.22%	10	6.49%	11	5.91%	13	6.67%	12	4.88%
Total	90	100%	154	100%	186	100%	195	100%	246	100%



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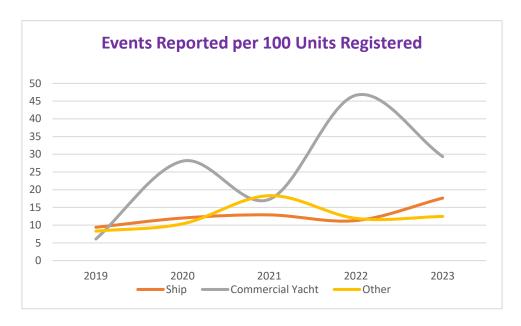
¹ An individual "incident" reported may involve more than 1 vessel (e.g. collisions) and can result in more than one "event" (e.g. "Fire & Personal injury" or "multiple personal injuries" etc.)



By Vessel Type

As well as recording events by "category", they were also recorded by vessel type as follows –

Vessel Type	2019	2020	2021	2022	2	023
	Per 100 units	Per 100 units	Per 100 units	Per 100 units	Events	Per 100 units
Ship	9.39	12.01	12.90	11.30	21	17.65
Commercial Yacht	6.09	28.07	17.28	46.67 ²	86	29.35
Other	8.32	10.38	18.32	11.92	131	12.46



² During 2022, a number of "commercial yachts" left the Flag as a consequence of sanctions imposed on Russia following the invasion of Ukraine. The "per 100" figures were calculated on "year end" fleet statistics making the figure for 2022 artificially high.

Severity of Events³.

The severity of each event was ranked into one of three criteria, as follows –

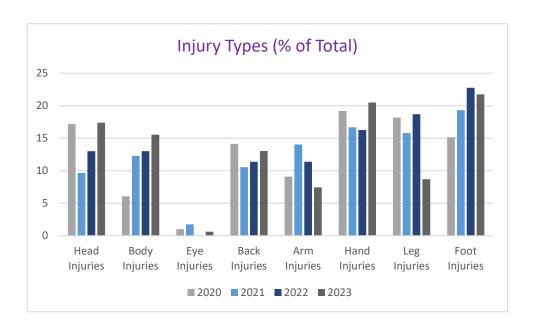
Severity	2019	2020	2021	2022		2023 Change
Where the event resulted in the loss of life on board, the total loss of the vessel or caused severe damage to the environment:	0	1	0	0	1	+1
Events resulting in an injury resulting in incapacitation where the person is unable to function normally for more than 72 hours, or resulting is major damage to the vessel, or damage to the environment:	46	97	115	123	160	+37
Less serious accidents, incidents and other events:	60	75	64	67	85	+18

Personal Injuries Sustained Type of Injury Sustained

Type of Injury	201	.9	2020		2021		2022		2023	
	Num	%	Num	%	Num	%	Num	%	Num	%
Head Injuries	Not rec	orded	17	17.17	11	9.65	16	13.01	28	17.39
Body Injuries	Not rec	orded	6	6.06	14	12.28	8	13.01	25	15.53
Eye Injuries	Not rec	orded	1	1.01	2	1.75	0	0.00	1	0.62
Back Injuries	Not rec	orded	14	14.14	12	10.53	14	11.38	21	13.04
Arm Injuries	Not rec	orded	9	9.09	16	14.04	14	11.38	12	7.45
Hand Injuries	Not rec	orded	19	19.19	19	16.67	20	16.26	33	20.50
Leg Injuries	Not rec	orded	18	18.18	18	15.79	23	18.70	14	8.70
Foot Injuries	Not rec	orded	15	15.15	22	19.30	28	22.76	35	21.74
Total	-	-	99	100%	114	100%	126	100%	161	100%

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³ In relation to merchant ships, commercial yachts and other vessels subject to the IMO Casualty Investigation Code.



Location On Board

Location On Board	20	19	2020		2021		20	22	20	23
	Num	%	Num	%	Num	%	Num	%	Num	%
Machinery & Technical Spaces	4	7.14%	17	17.89%	9	8.18%	16	13.01%	20	11.90%
Deck and Cargo Operations	13	23.21%	20	21.05%	31	28.18%	31	25.20%	42	25.00%
Mooring operations	4	7.14%	5	5.26%	16	14.55%	11	8.94%	3	1.79%
Overside & Working at Height	2	3.57%	1	1.05%	0	0.00%	1	0.81%	1	0.60%
Accommodation Spaces	14	25.00%	34	35.79%	8	7.27%	14	11.38%	30	17.86%
Hotel Operations	Not Recorded	0.00%	Not Recorded	0.00%	11	10.00%	8	6.50%	11	6.55%
Accident Not On Board	19	33.93%	18	18.95%	35	31.82%	42	34.15%	61	36.31%



Mortality for seafarers and others on board

During 2023, the death of any seafarer serving on a Cayman Islands ship was recorded as either –

Acute Natural Causes: whereby the death was caused by contracting a disease, infection, or sudden medical event that led to death shortly after contraction;

Chronic Natural Causes: whereby a long term condition led to the death of a seafarer, whether previously diagnosed or undiagnosed before death;

Lost at Sea, Presumed Deceased: whereby a seafarer was lost overboard from a ship and not subsequently recovered;

Occupational Accident: whereby the death of a seafarer was directly attributable to an accident on board;

Suspected Suicide: where there is evidence to suspect that the seafarer may have taken their own life (Please note that "suicide" can only be determined by a coroner or a court)

Death Ashore: whereby the death did not occur on the ship or in a ship's boat and was not directly attributable to an incident classified elsewhere;

Other: where the death does not correspond to any of the above categories; and

Unknown: where the cause of death remains subject to a Death Inquiry under the Merchant Shipping Act (2021 Revision).

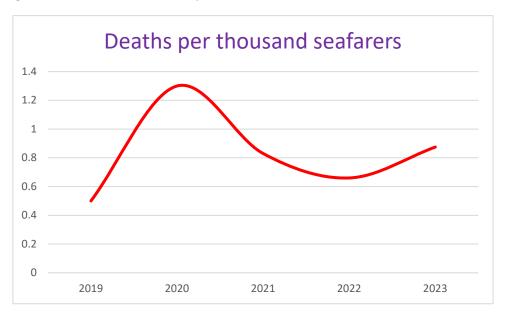
In 2023, the eight seafarer deaths reported to MACI can be categorized as follows –

Acute Natural Causes	2	(2022 – 3)
Chronic Natural Causes	s 0	(2022 – 1)
Lost at Sea	0	(2022 – 0)
Occupational Accident	1	(2022 – 0)
Suspected Suicide	2	(2022 – 1)
Death Ashore	3	(2022 – 0)
Other	0	(2022 – 0)
Unknown	0	(2022 – 0)

The Occupational Accident relates to a seafarer who fell to his death on board a merchant ship undergoing maintenance in a shipyard. This accident is being investigated by the UK Marine Accident Investigation Branch (MAIB). The MAIB report of the investigation will be published on www.cishipping.com on completion of the investigation.

In addition to the **eight** seafarers listed above, **one** 78-year-old passenger died on board a Cayman Islands yacht due to a serious chronic health condition during 2023.

It is estimated that approximately **8,000** seafarers are serving on Cayman Islands ships at any time. With **eight** seafarer deaths recorded in 2023, this equates to **0.875** deaths per thousand seafarers. This is a slight increase from **0.66** deaths per thousand seafarers in 2023.



The mortality rate of seafarers serving on Cayman Islands ships remains an order of magnitude below that found in the general population of the majority of seafarers' home countries.

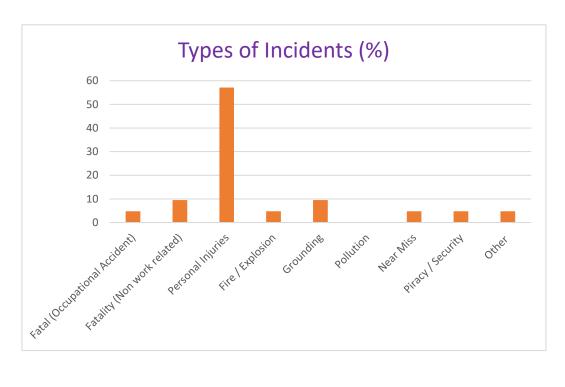
Part II – Merchant Ships

Overview

A total of **21** incidents on board merchant ships were reported to MACI during 2023.

Type of event (Merchant Ships)

Туре	20:	19	20	20	20	2021 2022		20	2023	
	Num	%	Num	%	Num	%	Num	%	Num	%
Fatal (Occupational Accident)									1	4.76
Fatality (Non work related)									2	9.52
Personal Injuries									12	57.14
Fire / Explosion									1	4.76
Grounding									2	9.52
Pollution									0	0.00
Near Miss									1	4.76
Piracy / Security									1	4.76
Other									1	4.76
Total									21	100



Severity of Events (Merchant Ships)

The severity of each event was ranked into one of three criteria, as follows –

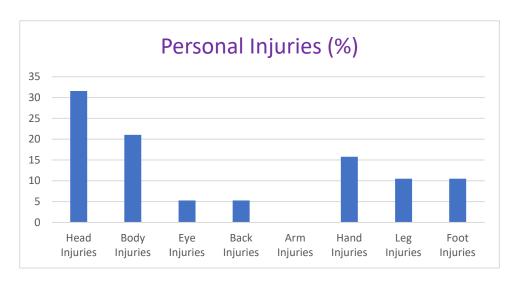
Severity	2019 ⁴	2020	2021	2022		2023 Change
Where the event resulted in the loss of life on board, the total loss of the vessel or caused severe damage to the environment:	N/A	N/A	N/A	N/A	1	+1
Events resulting in an injury resulting in incapacitation where the person is unable to function normally for more than 72 hours, or resulting is major damage to the vessel, or damage to the environment:	N/A	N/A	N/A	N/A	12	N/A
Less serious accidents, incidents and other events:	N/A	N/A	N/A	N/A	8	N/A

This represents an incident rate of one reported incident per **17.65** merchant ships registered in 2023.

Personal Injuries Sustained

Type of Injury Sustained (Merchant Ships)

Type of Injury	20	2019		2020		2021		2022		2023	
	Num	%									
Head Injuries									6	31.57	
Body Injuries									4	21.05	
Eye Injuries									1	5.26	
Back Injuries									1	5.26	
Arm Injuries									0	0.00	
Hand Injuries									3	15.78	
Leg Injuries									2	10.52	
Foot Injuries									2	10.52	
Total									195	100	

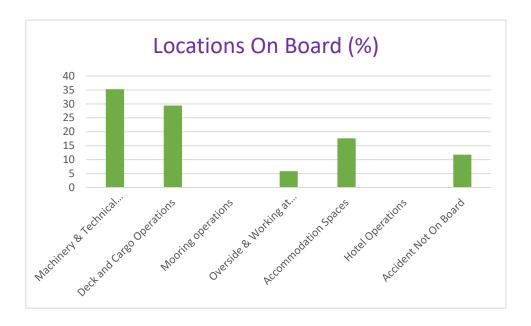


 $^{^{4}}$ No detailed analysis was performed for individual ship types between 2019 and 2022.

⁵ One incident resulted in more than one injury to more than one seafarer.

Locations on board (Merchant Ships)

Location On Board	2	019	20	20	20	21	20	22	2	2023	
	Num	%	Num	%	Num	%	Num	%	Num	%	
Machinery & Technical Spaces									6	35.29	
Deck and Cargo Operations									5	29.41	
Mooring operations									0	0.00	
Overside & Working at Height									1	5.88	
Accommodation Spaces									3	17.65	
Hotel Operations									0	0.00	
Accident Not On Board									2	11.76	
Total									17 ⁶	100	



Mortality of Seafarers

During 2023, **three** seafarers serving on Cayman Islands merchant ships lost their lives. Suicide was suspected in respect of two seafarer deaths. The remaining seafarer died as a result of an occupational accident. This incident is being investigated by the UK Marine Accident Investigation Branch.

⁶ One incident resulted in injuries to more than one seafarer.

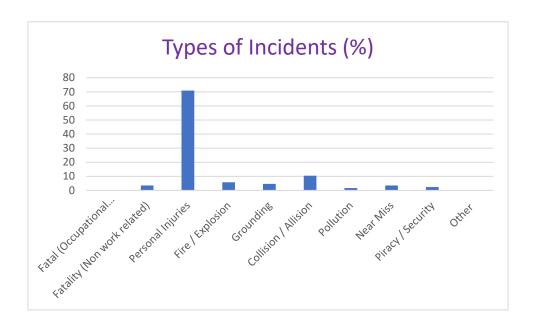
Part III – Commercial Yachts

Overview

A total of 86 incidents on board commercial yachts were reported to MACI during 2023.

Type of event

Туре	2019		2020		2021		2022		2023	
	Num	%								
Fatal (Occupational Accident)									0	0.00
Fatality (Non work related)									3	3.49
Personal Injuries									61	70.93
Fire / Explosion									5	5.81
Grounding									4	4.65
Collision / Allision									9	10.47
Pollution									1	1.62
Near Miss									3	3.49
Piracy / Security									2	2.36
Other									0	0.00
Total									86	100



This represents an incident rate of one reported incident per **3.40** commercial yachts registered in 2023.

Severity of Events

The severity of each event was ranked into one of three criteria, as follows –

Severity	2019 ⁷	2020	2021	2022		2023 Change
Where the event resulted in the loss of life on board, the total loss of the vessel or caused severe damage to the environment:	N/A	N/A	N/A	N/A	o	N/A
Events resulting in an injury resulting in incapacitation where the person is unable to function normally for more than 72 hours, or resulting is major damage to the vessel, or damage to the environment:	N/A	N/A	N/A	N/A	61	N/A
Less serious accidents, incidents and other events:	N/A	N/A	N/A	N/A	25	N/A

Personal Injuries Sustained Type of Injury Sustained

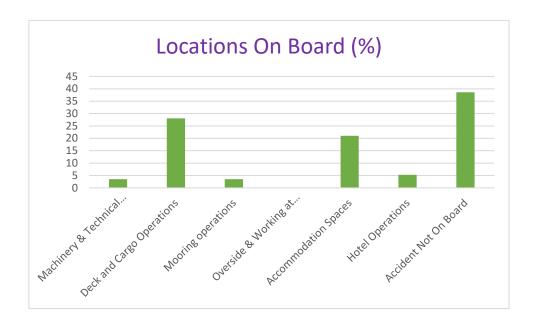
Type of Injury	2019		2020		2021		2022		2023	
	Num	%								
Head Injuries									6	10.91
Body Injuries									1	1.82
Eye Injuries									0	0.00
Back Injuries									8	14.55
Arm Injuries									5	9.10
Hand Injuries									16	29.10
Leg Injuries									4	7.27
Foot Injuries									15	27.27
Total									55	100



⁷ No detailed analysis was performed for individual ship types between 2019 and 2022.

Locations on board (Commercial Yachts)

Location On Board	2019		2020		2021		2022		2023	
	Num	%	Num	%	Num	%	Num	%	Num	%
Machinery & Technical Spaces									2	3.51
Deck and Cargo Operations									16	28.07
Mooring operations									2	3.51
Overside & Working at Height									0	0.00
Accommodation Spaces									12	21.05
Hotel Operations									3	5.26
Accident Not On Board									22	38.60
Total									57 ⁸	100



Mortality of Seafarers

During 2023, **three** seafarers serving on Cayman Islands commercial yachts lost their lives. One seafarer died following a heart attack on board and two seafarers died in fatal accidents not on board the yacht.

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⁸ Includes three non work related fatalities, two of which were not on board the yacht.

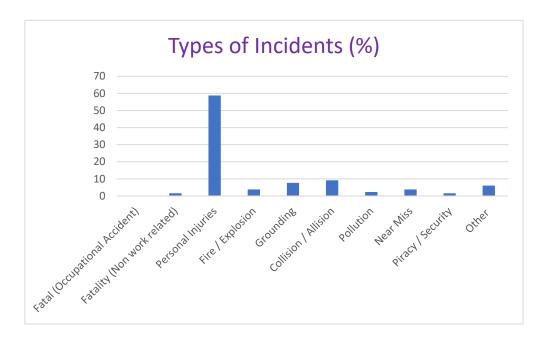
Part IV – Other Vessels

Overview

A total of 132 incidents on board other vessels were reported to MACI during 2023.

Type of event

* *											
Туре	2019		20	2020		2021		2022		2023	
	Num	%	Num	%	Num	%	Num	%	Num	%	
Fatal (Occupational Accident)									0	0.00	
Fatality (Non work related)									3	3.03	
Personal Injuries									77	58.78	
Fire / Explosion									5	3.82	
Grounding									10	7.63	
Collision / Allision									12	9.16	
Pollution									3	2.29	
Near Miss									5	3.81	
Piracy / Security									2	1.53	
Other									8	6.10	
Total									132	100	



Severity of Events

The severity of each event was ranked into one of three criteria, as follows –

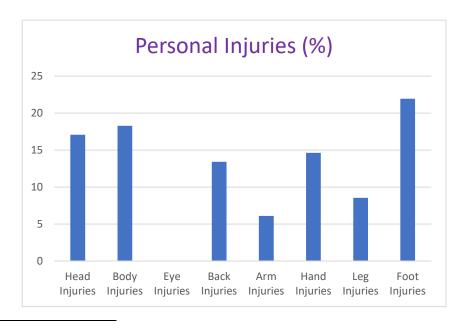
Severity	2019 ⁹	2020	2021	2022		2023 Change
Where the event resulted in the loss of life on board, the total loss of the vessel or caused severe damage to the environment:	N/A	N/A	N/A	N/A	o	N/A
Events resulting in an injury resulting in incapacitation where the person is unable to function normally for more than 72 hours, or resulting is major damage to the vessel, or damage to the environment:	N/A	N/A	N/A	N/A	87	N/A
Less serious accidents, incidents and other events:	N/A	N/A	N/A	N/A	44	N/A

This represents an incident rate of one incident per **8.02** other vessels registered in 2023.

Personal Injuries Sustained

Type of Injury Sustained

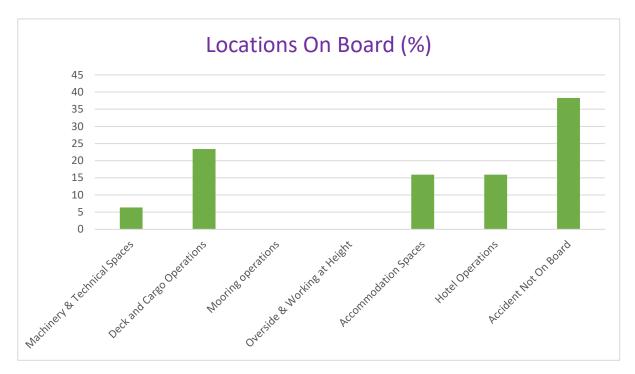
Type of Injury	2019		2020		2021		2022		2023	
	Num	%								
Head Injuries									14	17.07
Body Injuries									15	18.29
Eye Injuries									0	0.00
Back Injuries									11	13.41
Arm Injuries									5	6.10
Hand Injuries									12	14.63
Leg Injuries									7	8.54
Foot Injuries									18	21.95
Total									82	100%



⁹ No detailed analysis was performed for individual ship types between 2019 and 2022.

Locations on board (Other Vessels)

Location On Board	2019		2020		2021		2022		2023	
	Num	%	Num	%	Num	%	Num	%	Num	%
Machinery & Technical Spaces									6	6.38
Deck and Cargo Operations									22	23.40
Mooring operations									0	0.00
Overside & Working at Height									0	0.00
Accommodation Spaces									15	15.96
Hotel Operations									15	15.96
Accident Not On Board									36	38.30
Total									94 ¹⁰	100



Mortality of Seafarers

During 2023, **two** seafarers serving on Cayman Islands commercial yachts lost their lives. One seafarer died following a heart attack ashore and another died in an accident ashore.

¹⁰ Includes two non work related fatalities.

Part VI – Safety Issues and Observations

Safety Flyers issued in 2023

Incidents on Gangways, Passarelles and Accommodation Ladders



Download

The Importance of Proper Planning, Execution and Monitoring of All Voyages



Download

Use of synthetic cordage and falls including "man riding" applications



Download

Failure of "Side Boarding Ladders" attached to yacht hulls



The Dangers of "Tombstoning" from Yachts



Safety Observations

Reporting

Since Summary Reports were first published for the year 2019, MACI has seen an increase in the quantity of reports being submitted each year. The greatest increase in reporting has been from commercial yachts (one report for every 3.04 commercial yacht during 2023). This does not mean there have been more accidents and incidents on commercial yachts, rather it suggests a greater awareness of reporting requirements and greater engagement by this sector of the industry.

Accidents and Incidents Reported to MACI 2023

Merchant ships have a much lower reporting rate than commercial yachts (one report for every 17.65 merchant ships during 2023). Merchant ships are heavily regulated by charterers, class societies, port state control, flag states and ship vetting services. Requirements for personal protective equipment (PPE) and safe systems of work are applied and enforced. All of these measures will tend to reduce the number of accidents and incidents on board. There is a lower level of reporting the "the more minor" personal injuries, even when they meet the IMO threshold of "unable to perform normal duties for 72 hours or more" when compared to commercial yachts and other vessels.

Reporting on other vessels is lower than for commercial yachts (one report for every 8.02 other vessel during 2023). As many other vessels are purely in private use and are unclassed and uncertified, the lower reporting rate may be due to a lack of awareness of reporting requirements.

Accidents which could have been prevented or reduced in severity

The largest proportion of personal injuries on commercial yachts and other vessels are injuries to hands and feet. Many of these injuries are career ending or life changing. When following up on initial reports, many of these injuries were sustained when inappropriate or no PPE was being used.

PPE such as safety footwear, eye protection and cut resistant gloves are available in styles that are compatible with the "yacht aesthetic". The supply and use of appropriate PPE is mandatory¹¹ on vessels subject to the Maritime Labour Convention.

Accidents occurring when not on board

As in previous years, the largest percentage of personal injuries sustained occurred when the seafarer was ashore. A total of sixty one (61) seafarers were injured while not on board during 2023. Four of these incidents resulted in seafarers losing their lives.

Excessive alcohol consumption or other intoxication was considered a factor in many of the accidents ashore.

Seafarers should be given every reasonable opportunity to go ashore for recreational and social activities, but it is important to recognise that risks exist ashore that are comparable to those when working and living on board.

"Fault of Navigation"

In 2023 MACI published a Safety Flyer reminding seafarers of the importance of proper voyage planning, monitoring and execution. During 2023, MACI received fifteen (15) reports of grounding, none of which originated from merchant ships. Navigation and voyage planning on commercial yachts and other vessels should be carefully considered to take into account the quality of survey data for the entire voyage. Yachts often operate in areas with low traffic density and when only poor or possibly outdated survey data is available.

Twelve (12) reports of vessels being involved in allisions were received during 2023. Only one report was received from a merchant ship.

Other incidents

During 2023 there was a noticeable increase in reports of towed tenders being lost to swamping or failure of the tow line. When towing a tender in open water it is important to take actual and forecast weather conditions into account when planning the tow.

¹¹ The Merchant Shipping (Maritime Labour Convention) (Health and Safety) Regulations, 2014

Accidents and Incidents Reported to MACI 2023

Two yachts suffered damage to electronic and navigational equipment following lightning strikes.

Twelve **(12)** fires were reported during 2023, all were minor in nature and <u>none</u> involved lithium-ion batteries. However, there was a "near miss" report of a lithium-ion battery being found to be "warm to the touch". The battery box was removed to the open deck, placed on a fire blanket and the temperature was monitored for 24hrs. As the battery continued to self-heat, the decision was taken to jettison the battery in a water depth of 4,000m.

Limitations

This report is a presentation of raw data with limited analysis. The sample sizes are small, variables are large, and no formal statistical analysis has been undertaken. Where limited analysis has been undertaken there is no evaluation of statistical significance. This report contains comparison of reports received for 2019 to 2023. With only five years to compare, inferring any trends should be treated with caution. These reports now follow a "five-year rolling" reporting. That is, incident comparisons follow trends over the previous five years. Historic data will remain available through previous summary reports which may be downloaded from www.cishipping.com.

If external sources have been cited, the veracity of the data cited has not been verified.

"What is reported" does not automatically corelate to "What has occurred".

An increase in the number of incidents reported, does not automatically correlate to an increase in the number of incidents occurring. Reporting of all incidents is both encouraged and extremely valuable in determining potential safety lessons. "If in doubt, report it."

Reporting Accidents and Incidents

Accidents, incidents and "near misses" occurring on Cayman Islands vessels should be reported to the Maritime Authority of the Cayman Islands –

By email: reporting@cishipping.com;

Via our website: Please click https://www.cishipping.com/poli cy-

advice/casualtyinvestigations/report-incident; or

By telephone: +44 1489 799 203 or +1 345 949 8831.

Any changes to these details will be published by an update of Shipping Notice 02/2015.

Maritime Authority of the Cayman Islands
January 2024