

Accidents and Incidents Reported to MACI. Summary Report (2022)



May 2023

Accidents and Incidents Reported to MACI (2022)

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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. Initial reports of incidents that may have an impact on the survey and certification of ships are also passed to the Safety and Compliance section of Cayman Islands Shipping Registry.

As in previous years, this report examines the accidents and incidents reported to MACI during 2022. Where appropriate, comparisons are drawn to incidents reported in previous years dating back to 2019.

Reported accidents and incidents (2022)

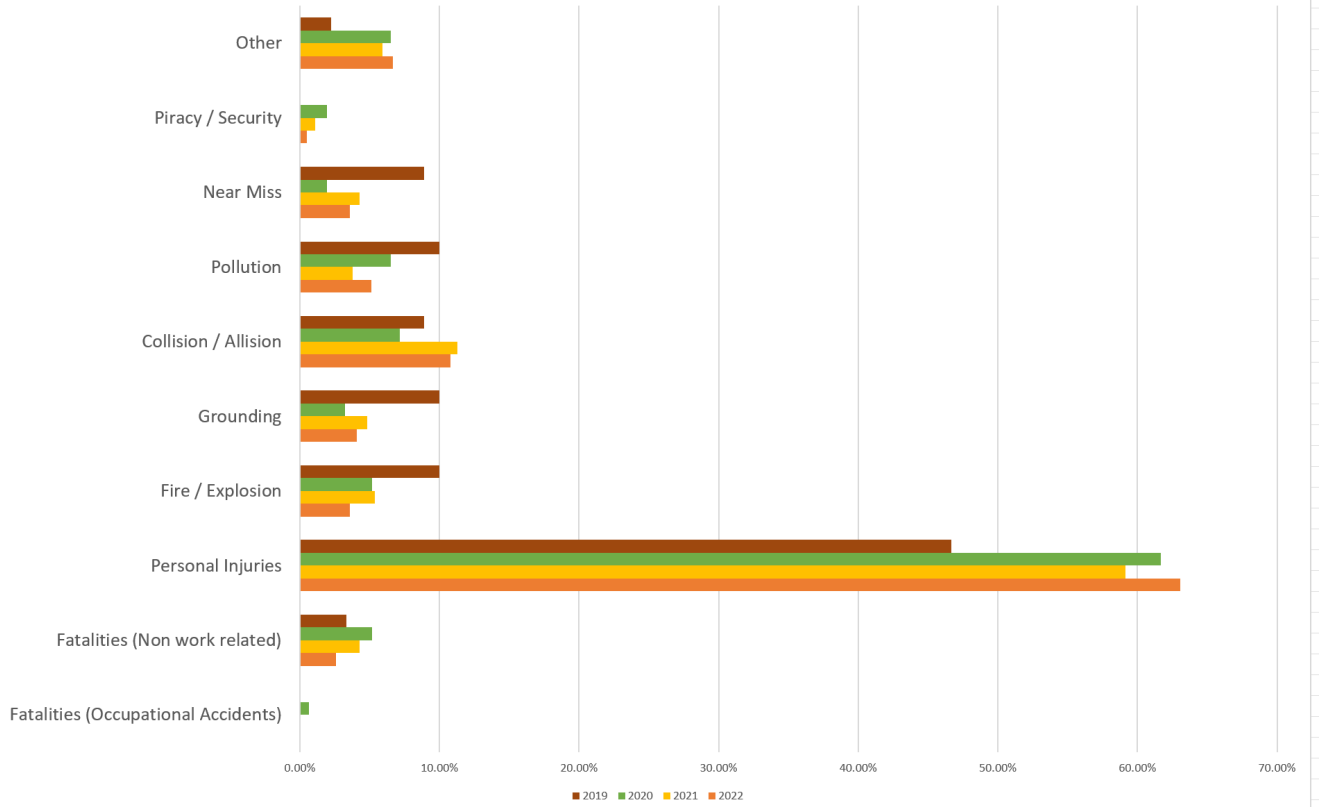
Overview

A total of one hundred and ninety-five (**195**) accidents and other incidents were reported to MACI during 2022. This is an increase of nine (**09**) incidents when compared to 2021. These can be broken down as follows –

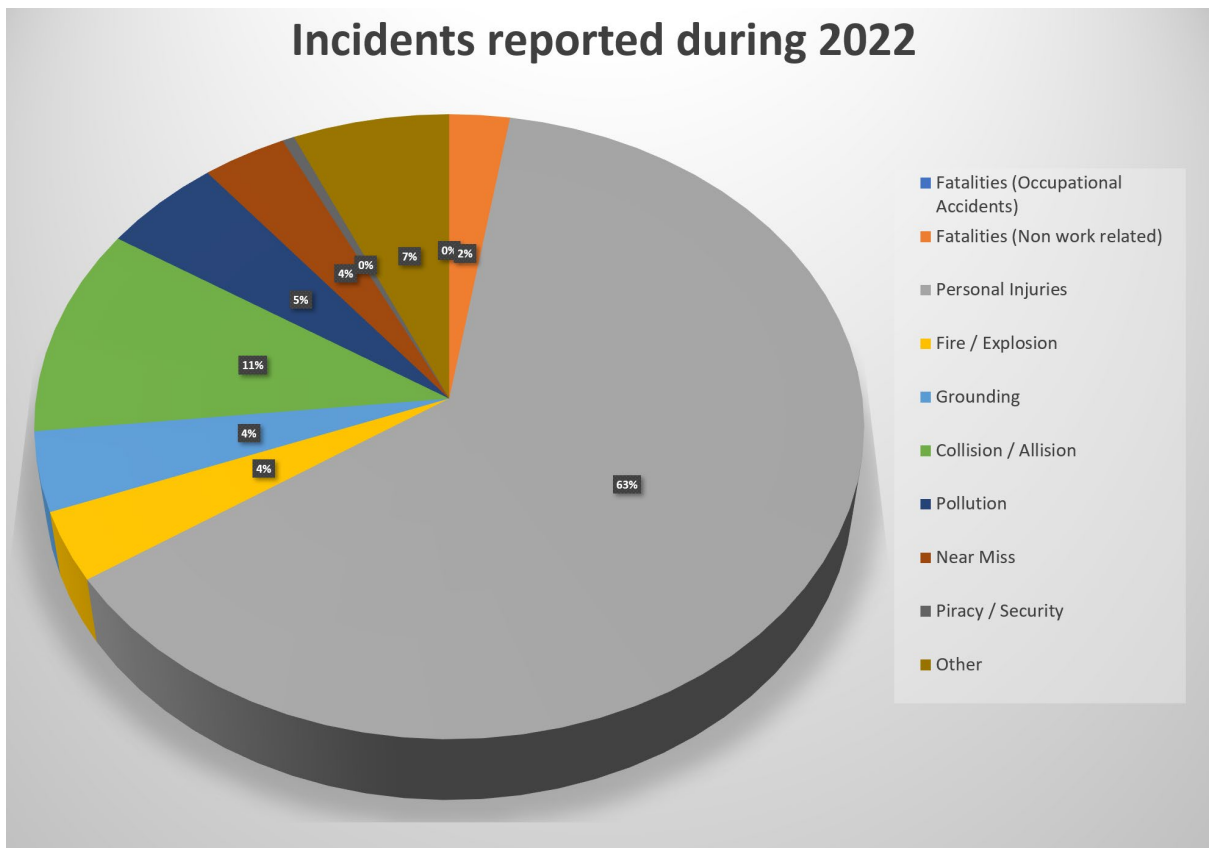
	2022		2021		2020		2019	
	Num	%	Num	%	Num	%	Num	%
Fatal (Occupational Accident)	0	0.00%	0	0.00%	1	0.65%	0	0.00%
Fatalities not work related	5	2.56%	8	4.30%	8	5.19%	3	3.33%
Personal Injuries	123	63.08%	110	59.14%	95	61.69%	42	46.67%
Fire & Explosion	7	3.59%	10	5.38%	8	5.19%	9	10.00%
Groundings	8	4.10%	9	4.84%	5	3.25%	9	10.00%
Collisions / Allisions	21	10.77%	21	11.29%	11	7.14%	8	8.89%
Pollution Incidents	10	5.13%	7	3.76%	10	6.49%	9	10.00%
Near Miss	7	3.59%	8	4.30%	3	1.95%	8	8.89%
Piracy / Other Security	1	0.51%	2	1.08%	3	1.95%	-	-
Other	13	6.67%	11	5.91%	10	6.49%	2	2.22%

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Percentage of incidents reported (1019 to 2022)



Incidents reported during 2022



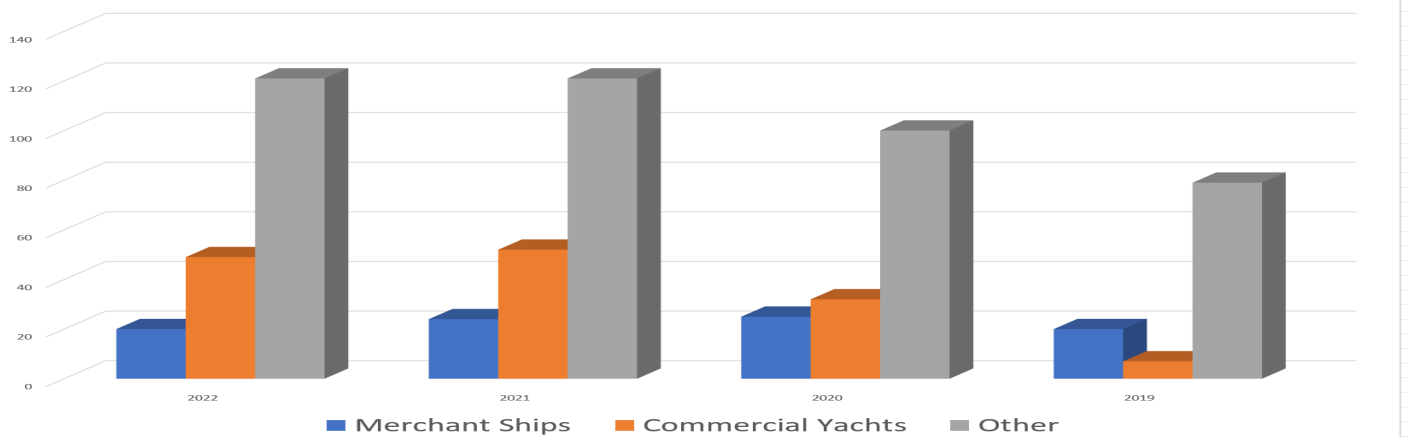
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By Vessel Type

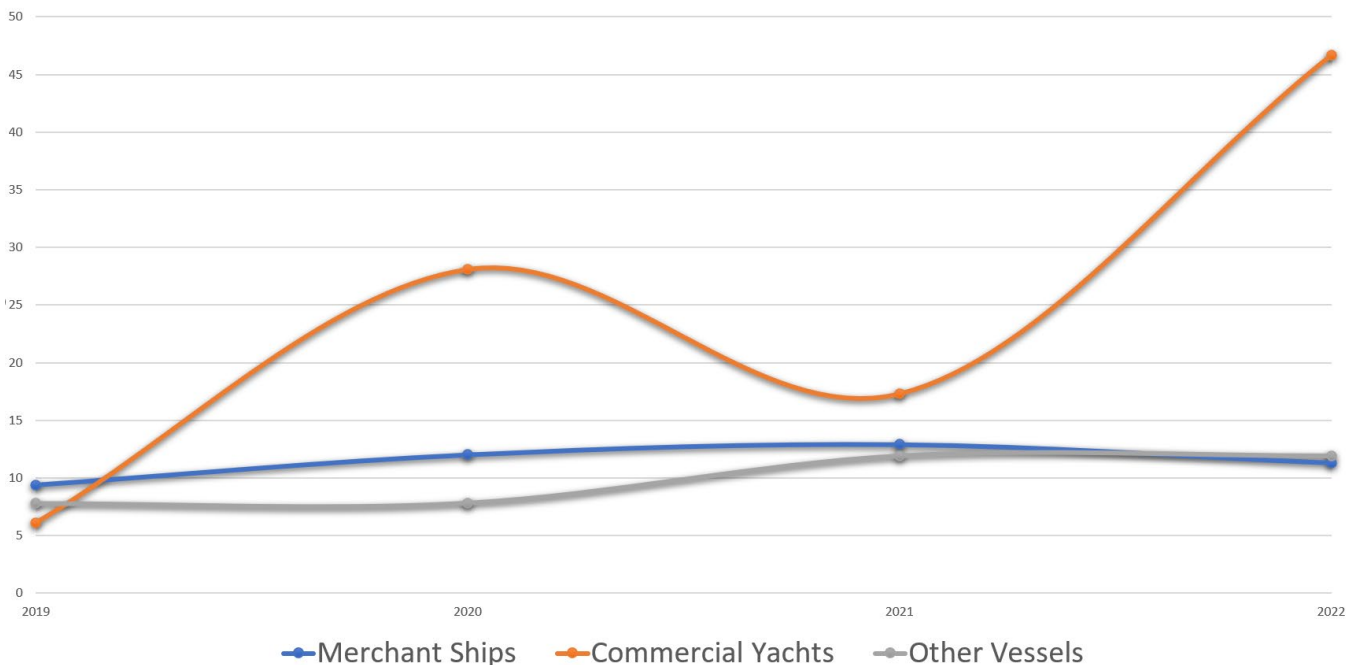
As well as recording incidents by “category”, the incidents were also recorded for each “ship type” as follows –

	2022 Reports	(Per 100 vessels)	2021 Reports	2020 Reports	2019 Reports	Change
Merchant Ships:	20	11.30	24	25	20	-4
Commercial Yachts:	49	46.67 ¹	52	32	7	-3
Other (Pleasure vessels, etc) ²	121	11.92	121	100	79	0

Incidents reported by vessel type (2019 - 2022)



Annual incident rate per 100 vessels



¹ 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 this figure artificially high. Taking account of this fleet turbulence, this figure is estimated to be broadly similar to 2021.

² This category is restricted to vessels over 24m in length.

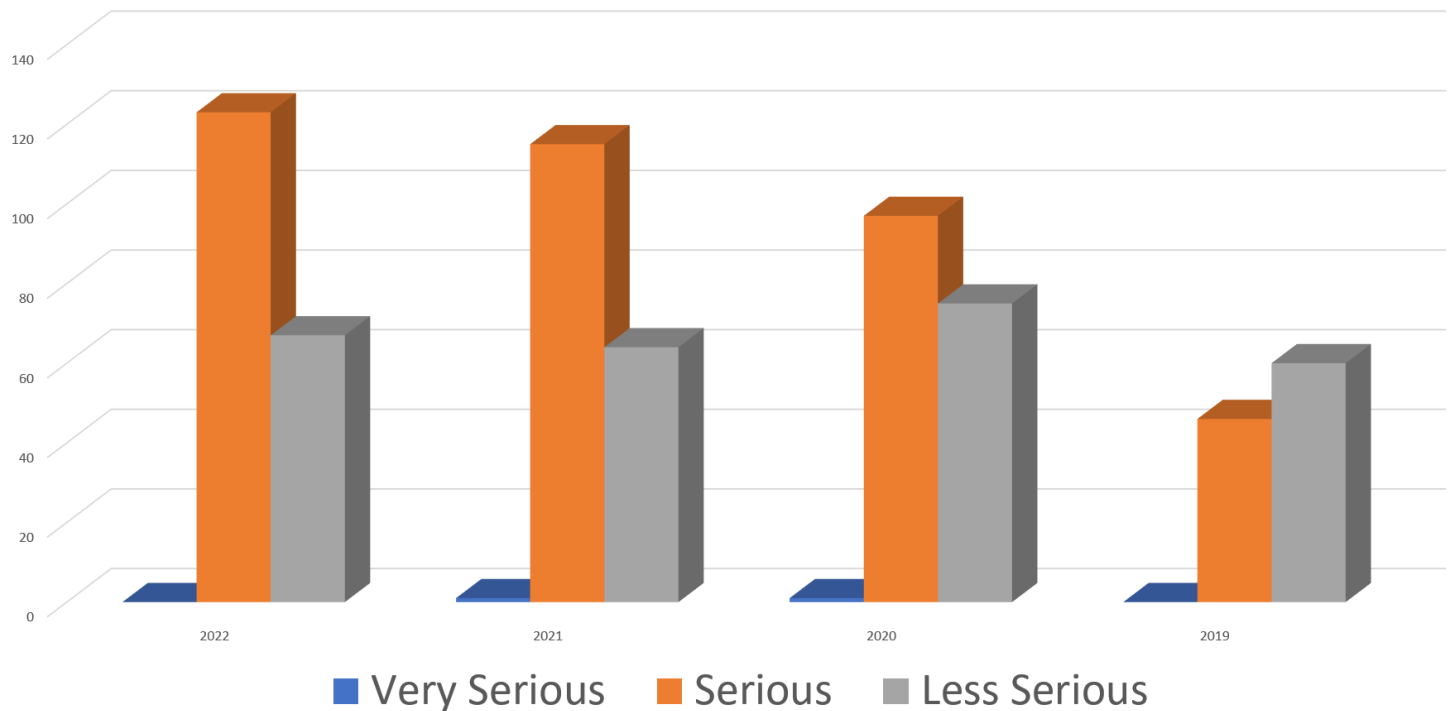
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By severity of incident

Finally, the seriousness of every incident is recorded. Three criteria are evaluated³ –

	2022 Incidents	2021 Incidents	2020 Incidents	2019 Incidents	Change
Where the accident resulted in the loss of life on board, the total loss of the vessel or caused severe damage to the environment ⁴ :	0	0	1	0	0
Incidents resulting in an injury resulting in incapacitation where the person is unable to function normally for more than 72 hours, or resulting in major damage to the vessel, or damage to the environment:	123	115	97	46	+18
Less serious accidents, incidents and other events:	67	64	75	60	-11

Severity of incidents (2019 - 2022)



³ Based on the IMO Casualty Investigation Code definitions of “Very Serious Marine Accident”, “Serious Marine Accident” and “Less Serious Marine Accident”.

⁴ Excludes deaths by natural causes and other deaths of non-seafarers not on board

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Accidents and incidents by type

Personal Injuries

As in previous years, personal injuries are the largest category of accidents and incidents reported with **123** personal injuries reported to MACI in 2022. The place of occurrence on board as well as the nature of each personal injury was recorded.

Locations where personal injuries were sustained

	<u>2022</u>		<u>2021</u>		<u>2020</u>		<u>2019</u>	
Machinery and Technical Spaces	16	(13.01%)	9	(8.18%)	17	(17.89%)	4	(7.14%)
Deck and Cargo Operations	31	(25.20%)	31	(28.18%)	20	(21.05%)	13	(23.21%)
Mooring Operations	11	(8.94%)	16	(14.55%)	5	(5.26%)	4	(7.14%)
Overside and working at height	1	(0.81%)	0	(0.00%)	1	(1.05%)	2	(3.57%)
Accommodation Spaces	14	(11.38%)	8	(7.27%)	34	(37.79%)	14	(25.00%)
Hotel Operations	8	(6.50%)	11	(10.00%)	(not recorded)	(not recorded)	(not recorded)	(not recorded)
Not on board	42	(34.15%)	35	(31.82%)	18	(18.95%)	19	(33.93%)
Total	123	(100%)	110	(100%)	95	(100%)	56	(100%)

Locations where personal injuries were sustained (% of total)



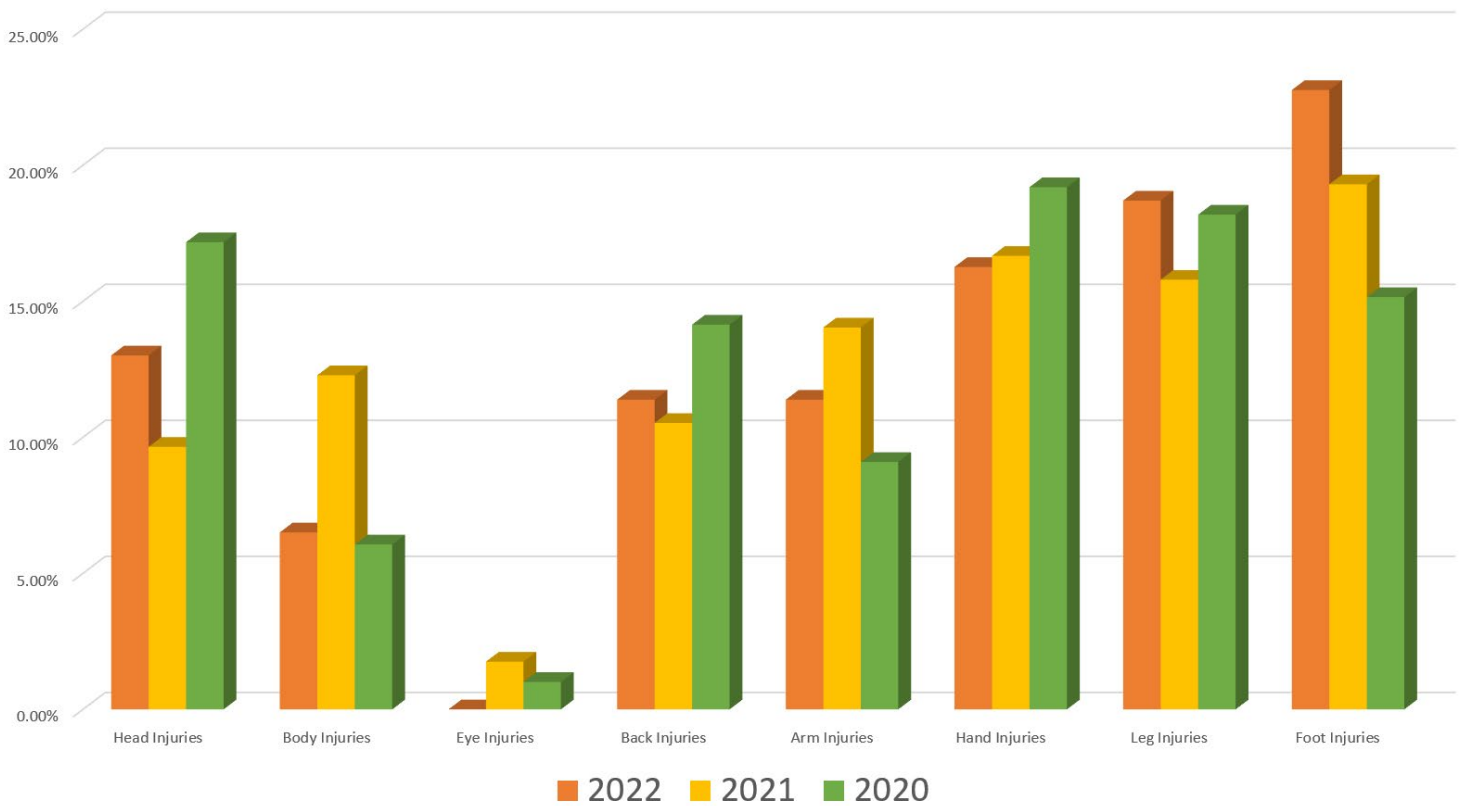
(In 2021, personal injuries sustained while delivering “hotel operations” were separated from those that were sustained elsewhere in accommodation spaces.)

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Types of personal injuries sustained

	<u>2022</u>		<u>2021</u>		<u>2020</u>	
Head Injuries	16	13.01%	11	(9.65%)	17	(17.17%)
Body Injuries	8	6.50%	14	(12.28%)	6	(6.06%)
Eye Injuries	0	0.00%	2	(1.75%)	1	(1.01%)
Back Injuries	14	11.38%	12	(10.53%)	14	(14.14%)
Arm Injuries	14	11.38%	16	(14.04%)	9	(9.09%)
Hand Injuries	20	16.26%	19	(16.67%)	19	(19.19%)
Leg Injuries	23	18.70%	18	(15.79%)	18	(18.18%)
Foot Injuries	28	22.76%	22	(19.30%)	15	(15.15%)
Total⁵	123	100.00%	114	100.00%	99	100.00%

Types of personal injuries sustained (% of total)



⁵ A single accident or incident may result in multiple injuries.

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Accidents not on board

For the second year running, when considering the locations where personal injuries were sustained during 2022, the highest number of injuries (**43**) were sustained while the seafarer was not on board the ship or yacht. This represents **34.14%** of all personal injuries sustained. Of these incidents resulting in injuries–

Only **1 incident** was directly related to work activities;

Sport and leisure activity accidents accounted for **19 incidents**;

Water sport activities accounted for **7 incidents**, with e-Foil and jet ski accidents accounting for more than half of these;

Seafarers were injured in **2 incidents** involving road traffic accidents. One (**1**) seafarer sustained serious injuries when struck by a vehicle;

Alcohol intoxication is suspected as being a direct cause of **10 incidents** representing **23.25%** of all injuries sustained ashore; and

Five seafarers were injured in **4 incidents** involving violence against the person; and

Three (**3**) seafarers were injured riding skateboards.

Fire and explosion

Fires were reported as occurring on **07 Cayman Islands vessels** during 2022. Of these **07 incidents** –

Six (**06**) of the fires were of electrical origin;

One (**01**) fire was associated with a Li-Ion battery;

Two (**02**) fires were associated with lead acid battery uninterruptable power supplies (UPS); and

The one (**01**) “non electrical fire” was caused by sparks falling from hot work conducted as part of a hull repair.

Groundings

Groundings were reported by eight (**08**) Cayman Islands vessels during 2022. One (**01**) grounding involved a merchant ship with the other seven (**07**) involving yachts (either in private or commercial use).

As in previous years, poor passage planning and voyage monitoring was a factor in most groundings.

Collisions and allisions

Collisions and allisions were reported by twenty-one (**21**) Cayman Islands vessels during 2022. Two (**02**) collisions and allisions involved merchant ships with the other nineteen (**19**) involving yachts (either in private or commercial use).

Thirteen (**13**) of these incidents were classed as allisions (where the vessel comes into

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contact with a fixed structure or vessel not under way, or the vessel is not underway and is struck by another).

Damage sustained was generally minor in both the collisions and allisions reported although, although one **(01)** yacht suffered serious structural damage when struck at anchor.

One **(1)** collision was suspected to be a “whale strike” and reported as such to the IWC.

Many collisions and allisions occurred during berthing / unberthing operations.

Pollution incidents

A total of seven **(07)** pollution incidents were reported to MACI during 2021. All of these were fairly minor, with the most severe involving 20 litres of gear oil being lost while underway when an oil cooler failed. All incidents were properly reported to the appropriate authorities and no enforcement actions were instigated.

Security and piracy reports

Only one **(01)** security / piracy incident was reported during 2022. A merchant ship was boarded by three armed pirates while transiting the Singapore Strait. With the crew in the ship’s “citadel”, the pirates left after stealing loose gear and tools.

Near miss reports

Seven **(07)** “near miss” reports were received during 2022. Near misses included three **(03)** loss of steering while on passage, two **(02)** potential LSA / lifting appliance failures identified at routine inspections and one **(01)** incident where undersize securing bolts had been fitted to a “Harken Track” system.

Other reports

Thirteen **(13)** incidents were reported during 2022 which do not fit into one of the above categories. These incidents included –

Three **(03)** instances where a main engine failed on a yacht;

Two **(02)** crew members falling into the dock while either embarking or disembarking a yacht; and

Two **(02)** instances of yachts being damaged by lightning strikes.

Deaths associated with Cayman Islands ships

During 2021, five **(05)** deaths were reported as being associated with a Cayman Islands ship. Of these deaths, none were as a result of an occupational accident, and one **(01)** death was of a non-seafarer.

Of the four **(04)** seafarer deaths recorded –

Two **(02)** deaths were associated with myocardial infarction (heart attack) with no underlying heart condition;

One **(01)** death was associated with myocardial infarction with underlying health conditions relating to unreported ischemic cardiopathy and arteriosclerosis; and

One **(01)** seafarer died due to suspected suicide.

The “non seafarer” death concerned a yacht passenger in their seventies who suffered a pulmonary embolism, as was confirmed by both a local coroner and the United States Department of State.

All five **(05)** deaths associated with Cayman Islands vessels in 2022 were subject to a death inquiry under section 434 of the Merchant Shipping Act and the outcome of these inquiries were transmitted to the General Registry of the Cayman Islands.

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Mortality for seafarers

During 2022, 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

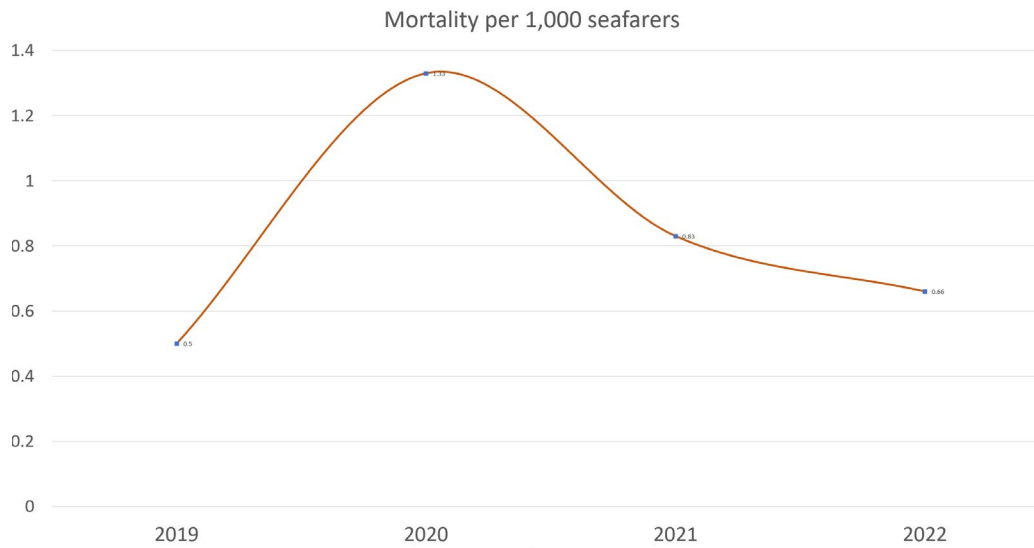
Unknown: where the cause of death remains subject to a Death Inquiry under the Merchant Shipping Act (2021 Revision).

In 2022, the **five** seafarer deaths reported to MACI can be categorized as follows –

Acute Natural Causes	3
Chronic Natural Causes	1
Lost at Sea	0
Occupational Accident	0
Suspected Suicide	1
Death Ashore	0
Other	0
Unknown	0

With four (**04**) seafarer deaths in 2022, and approximately **6,000** seafarers serving on Cayman Islands ships, this equates to a seafarer mortality rate of **0.66 deaths per 1,000 seafarers** serving on Cayman Islands ships. This represents a reduction from **0.83 deaths per 1,000 seafarers** in 2021.

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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.

Safety Lessons from 2022

The safety lessons that can be drawn from 2022 reports are largely unchanged from previous years.

Personal injuries while ashore

As in previous years, the largest percentage of personal injuries sustained occurred when the seafarer was ashore. A total of forty two (**42**) seafarers were injured while not on board during 2022.

Sport and Water Sport injuries. Opportunities for seafarers to engage in onshore sporting activities are rare. When these opportunities are available seafarers are encouraged to participate in activities that help promote mental and physical health. However, these activities are not free from risk of injury and accident.

Seafarers are advised to recognize the potential risks in any sport or leisure activity. The more "extreme" forms of sport and watersport should only be undertaken after a period of proper training and instruction.

Alcohol and accidents ashore. When seafarers are granted shore leave it is natural for them to engage in leisure and social activities. However, a number of accidents and incidents ashore occurred where alcohol (or other) intoxication was suspected to be a contributing factor. Seafarers should be aware of the effects of alcohol on coordination, reaction time and situational awareness, particularly after a period of abstinence.

E-Scooters. E-Scooters continue to be a popular mode of travel / leisure in the yachting sector. Unfortunately, a number of seafarers have been injured when riding E-Scooters ashore. When using E-Scooters ashore, it is essential that all local regulations and restrictions are understood and complied with. Even when not mandated, the use of head and joint protection when operating E-Scooters is highly recommended. Never operate an E-Scooter with more than one person on board and never operate an E-Scooter after consuming any alcohol. Always remember that inappropriate operation of an E-Scooter not only endangers the operator, but also those around its use.

Foot injuries.

In 2022, twenty eight (**28**) incidents were reported to MACI that involved a seafarer suffering foot or ankle injuries. This represents an increase in the percentage of personal injuries reported to MACI

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from 19.3% (**22 injuries**) in 2021 to 22.8% (**28 injuries**) in 2022.

As in previous years, many of these injuries were sustained in the yachting sector when the seafarer was wearing inappropriate or no protective footwear when the injury was sustained. It is strongly recommended that all seafarers in the yachting sector are provided with suitable “interior / work” footwear appropriate for their duties. The provision and use of such footwear is a statutory requirement on yachts subject to the Maritime Labour Convention, 2006.

Foot injuries in recent years have resulted in life altering and career limiting injuries in many cases where inappropriate, or no, footwear was being worn during “normal” activities on board yachts.

Li-Ion Batteries

Only one Li-Ion battery fire was reported to MACI during 2022.

Passage planning and monitoring

As in 2021, a lack of effective passage planning and voyage monitoring was identified as a factor in many of the groundings reported to MACI during 2022. Whereas the widespread use of ECDIS for passage planning and voyage monitoring is a powerful tool, it does have limitations and does not reduce the need for careful consideration by those planning, executing and monitoring the progress of a voyage. All navigation officers are urged to familiarize themselves with the joint MAIB and DMAIB collaborative study on ECDIS use from the perspective of practitioners. A copy of the study can be download [HERE](#)⁶.

Effective passage planning and voyage monitoring are especially important in areas with low traffic density and when only poor or possibly outdated survey data is available. The Maritime Authority of the Cayman Islands will shortly release a “Safety Flyer” on “lessons learned” from groundings resulting from poor passage planning.

Proper testing of steering and propulsion before berthing and unberthing.

A number of allisions resulted when steering and / or propulsion control was lost on the bridge. It is important that propulsion (both ahead and astern) and steering systems are properly tested and confirmed as satisfactory before every period of maneuvering the ship or yacht where the risk of collision or allision exists.

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 2022. With only four years to compare, inferring any trends should be treated with caution. From 2023 these reports will move to “five-year rolling” reporting. That is, incident comparisons will follow trends over the previous five years. Historic data will remain available through previous summary reports available 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 correlate 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.”

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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/policy-advice/casualty-investigations/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

May 2023