

# Accidents and Incidents Reported to MACI (2019)

## Introduction

Cayman Islands Shipping Notice 02/2015 requires 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.

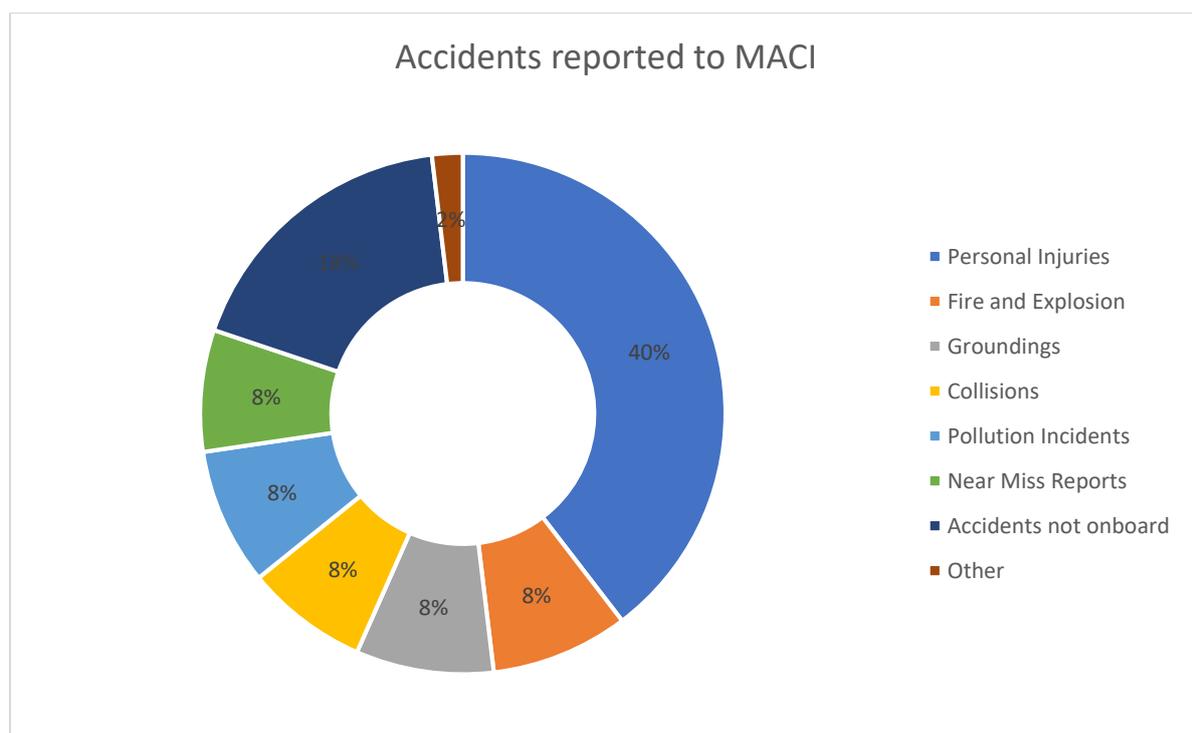
Some incidents require investigation, some simply require recording and others are passed to the Shipping Master who follows up on any seafarer welfare issues that may be related to the accident or incident.

This report examines the accident and incidents reported to MACI during 2019.

## Reported accidents and incidents in 2019

A total of **106** accidents and incidents were reported to MACI during 2019. These can be broken down as follows –

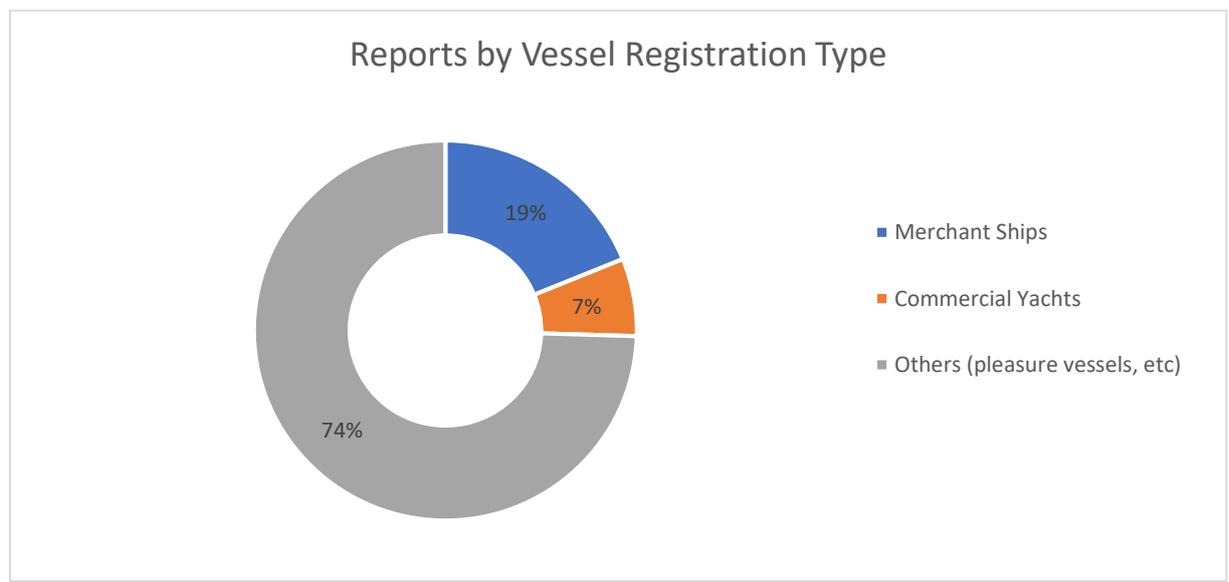
Personal Injuries –	<b>42;</b>	<b>(39.62%</b> of all reported incidents)
Fire and Explosion –	<b>9;</b>	<b>(8.49%</b> of all reported incidents)
Groundings –	<b>9;</b>	<b>(8.49%</b> of all reported incidents)
Collisions –	<b>8;</b>	<b>(7.55%</b> of all reported incidents)
Pollution Incidents –	<b>9;</b>	<b>(8.49%</b> of all reported incidents)
Near Miss Reports–	<b>8;</b>	<b>(7.55%</b> of all reported incidents)
Accidents not onboard–	<b>19.</b>	<b>(17.92%</b> of all reported incidents)
Other-	<b>2;</b>	<b>(1.89%</b> of all reported incidents)



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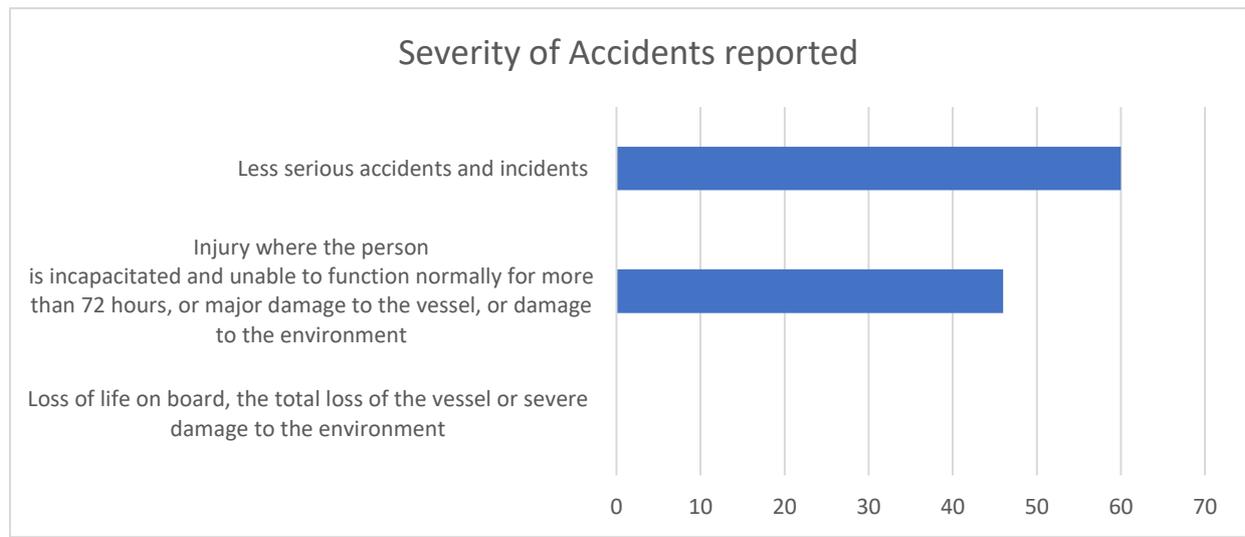
As well as breaking down the reports by “incident type”, the incidents were also analysed as to ship type as follows –

- Merchant Ships – **20** reports;
- Commercial Yachts – **7** reports; and
- Others (pleasure vessels, etc)<sup>1</sup> – **79** reports



Finally, the seriousness of the accident was recorded. Three criteria were evaluated –

- Whether the accident resulted in the loss of life on board, the total loss of the vessel or caused severe damage to the environment – **0 incidents;**
- 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 – **46 incidents;**
- Less serious accidents and incidents – **60 incidents.**

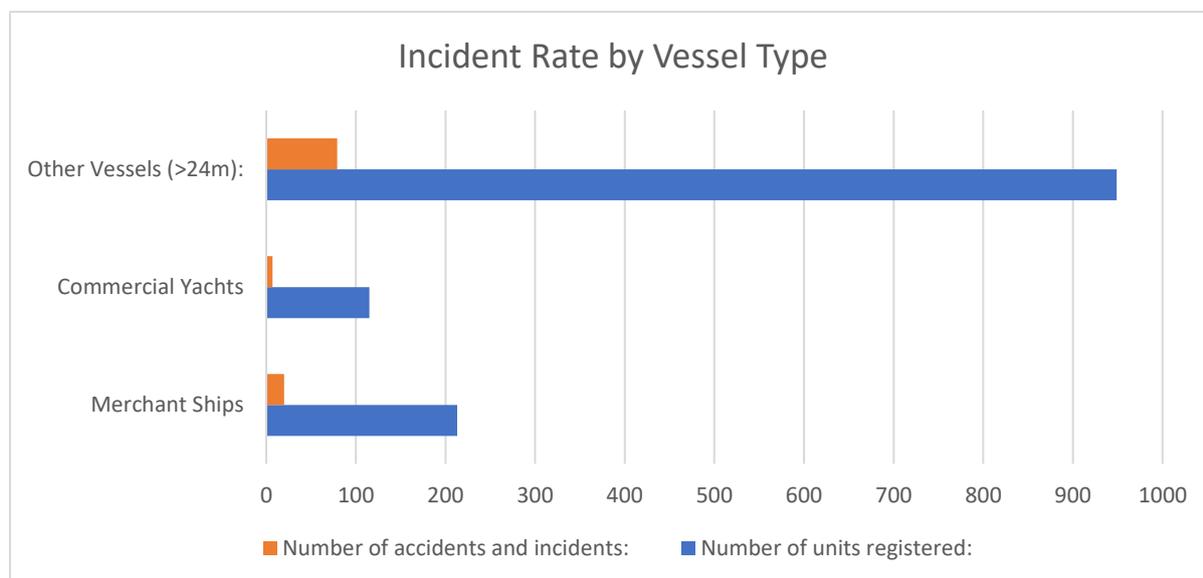


<sup>1</sup> This category is restricted to vessels over 24m in length.

# Accidents and Incidents Reported to MACI (2019)

Incident rate by vessel type:

Ship Type:	Number of units registered:	Number of accidents and incidents:	Incident rate per ship type:
Merchant Ships	213	20	9.39 per 100 units
Commercial Yachts	115	7	6.09 per 100 units
Other Vessels (>24m):	949	79	8.32 per 100 units



## Mortality and Injury rates for seafarers serving on Cayman Islands ships:

Whenever a seafarer dies while serving on a Cayman Islands ship a report is made to the Shipping Master. These reports include deaths while on leave (but still “signed on”), deaths by natural causes, suicides, deaths due to misadventure and those killed as a result of an accident or incident on board.

During 2019, the deaths of **3** seafarers were reported to MACI.

One (**1**) death was attributed to suicide, and two (**2**) deaths resulted from “accidents or misadventure” while ashore.

It is estimated that there are approximately **6,000** seafarers serving on Cayman Islands ships.

This equates to a mortality rate of **0.5** deaths per 1,000 seafarers a year serving on Cayman Islands ships (or **one** death per two thousand seafarer man years).

World Population Review<sup>2</sup> has published world wide mortality rate for several countries around the world (annual deaths per 1,000 of population).

The following table compares the mortality rate in countries whose nationals typically serve on Cayman Islands ships and the mortality rate of seafarers serving on Cayman Islands ships.

<sup>2</sup> <http://worldpopulationreview.com/countries/death-rate-by-country/>

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Population	Mortality Rate (/1,000 population)
<b>Seafarers on Cayman Islands Ships</b>	<b>0.500</b>
Philippines	5.900
South Korea	6.111
Ireland	6.139
Vietnam	6.345
Brazil	6.503
Australia	6.622
New Zealand	7.033
China	7.261
India	7.273
Norway	7.979
United States	8.782
France	9.317
United Kingdom	9.398
South Africa	9.494
Greece	10.924
Russia	12.785
Croatia	13.170
Ukraine	15.192

Although the overall mortality rate for seafarers serving on Cayman Islands ships is an order of magnitude below those cited above for general populations, it should be borne in mind that seafarers are generally aged between 20 and 59 years of age and so conditions affecting the very young and the elderly are not a factor. In addition, all seafarers undergo a medical examination every two years, and many chronic conditions and illnesses prevent serving at sea.

As no seafarer was killed in an “occupational incident” on board a Cayman Islands vessel, there is insufficient data to make a comparison with other industries.

As a result of the **106** incidents reported in 2019, a total of **63** seafarers suffered injuries and were unable to function normally for more than **72** hours. This equates to **10.5** injuries per 1,000 seafarer man years. (or **1.05%** of Seafarers sustained reportable injuries during 2019)

Although most injuries were sustained on board, **19** seafarers were injured whilst ashore. This represents **30.15%** of all injuries reported in 2019

## Accidents and Incidents by incident type:

### Personal Injuries

An analysis of personal injuries sustained on board shows that the most common activity being undertaken at the time of the injury was simply moving about the vessel. Working on deck had the second highest incident of injuries being sustained. Other injuries were sustained in the engine room, in the galley, during mooring operations and working over the side / at height.

Moving about the ship – **14 incidents**

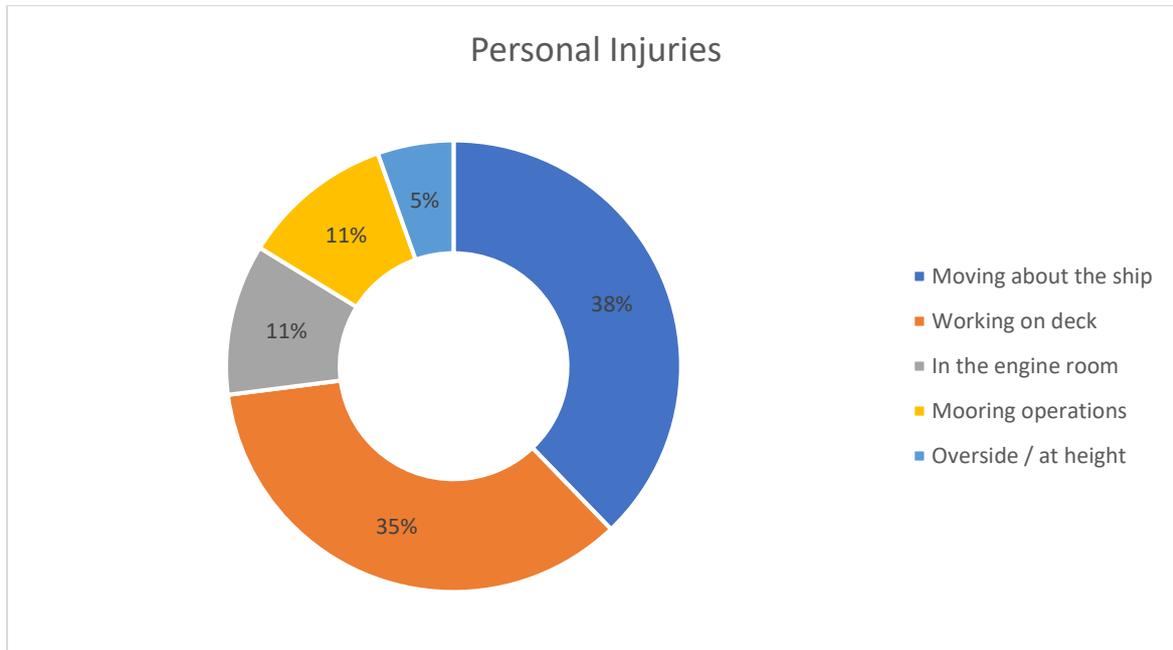
Working on deck – **13 incidents**

In the engine room – **4 incidents**

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Mooring operations – **4 incidents**

Overside / at height – **2 incidents**



## Fire and Explosion

Two major fire incidents were reported to MACI during 2019. One was a fire on board a private yacht whilst alongside in Thailand, the other incident comprised of a major explosion and subsequent fire on board a chemical tanker in South Korea.

The yacht fire was investigated by the Thai police and the chemical tanker explosion is currently under investigation by the UK Marine Accident Investigation Branch (MAIB) on behalf of MACI.

Other fires reported were relatively minor and were dealt with by crew.

Fire on board a yacht tender – **1 incident**

Engine room fires – **3 incidents**

Galley fires – **1 incident**

Fires in electrical equipment – **2 incidents**

Major fires and explosions – **2 incidents**

## Groundings

Two of the groundings reported to MACI in 2019 resulted in major damage to a vessel. One concerned a yacht driven ashore by weather during a typhoon and the other was contact with a reef in the Bahamas. Other groundings were minor in nature and either resulted in no damage to the ship or environment, or in only minor cosmetic damage to the vessel.

One grounding was in relation to a reported “uncharted object”. Although the chart in use was properly corrected and up to date, the survey data upon which the chart was based at the grounding location was based on a “lead line survey” conducted in 1846.

Four groundings reported were attributable to pilot / crew error.

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The remaining two groundings were minor “bump and go” groundings during river passages.

## Collisions

Both collision (contact with another vessel) and allisions (contact with a fixed object or structure) reported to MACI during 2019 were recorded. All collisions and allisions reported were minor resulting in mainly cosmetic damage.

The following incidents were reported –

A yacht was in collision with a fishing boat while both were restricted in their ability to manoeuvre. Collision attributed to human error.

A yacht struck the quayside during berthing due to a loss of propulsion.

A yacht parted from its moorings and struck a nearby yacht.

A yacht struck an unidentified floating object in a navigation channel.

A yacht struck a bridge at the entrance to a popular marina. Allision attributed to human error.

A merchant ship was in collision with a barge while under pilotage. Collision attributed to human error.

A yacht made “hard contact” with the quayside during berthing. Allision attributed to human error.

## Pollution Incidents

Nine oil spills from Cayman Islands vessels were reported during 2019. All spills were promptly reported to the local authorities and cleaned up in a timely manner without lasting damage to the environment.

Hydraulic oil spills during maintenance of equipment	– <b>2 incidents</b>
Hydraulic oil spills due to equipment failure	– <b>2 incidents</b>
Diesel oil spill during oil transfers	– <b>2 incidents</b>
Oil spill during bunkering due to tank overflow	– <b>2 incidents</b>
Dewatering of engine room after partial flooding	– <b>1 incident</b>

## Near Miss Reports

The reporting of “near misses” is strongly encouraged as lessons learned from a “near miss” may well prevent an accident occurring in the future. The following “near misses” were reported to MACI during 2019 –

A yacht lost all propulsion control while approaching a port entrance. Control was re-established following a full system reset.

A switchboard relay on board a yacht failed leading to smoke being detected in the engine room. No fire resulted and the relay was isolated while waiting replacement.

A yacht lost all propulsion due to the inadvertent operation of the fuel quick closing valves. Engines were restarted after the quick closing valves were reset.

A lifting bracket failed during the launching of a yacht tender. A defect was identified in the lifting bracket construction resulting in design changes by the manufacturer.

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A moored yacht was almost struck by a passing cruise ship during a severe rain storm in Venice. The closest point of approach was reported by the yacht to be 8m.

The autopilot on a yacht failed to disengage on command when approaching a port. This led to a period where the yacht remained on the course set in the autopilot with manual steering unavailable. The breaker for the autopilot was opened and manual steering restored.

A chemical tanker experienced “self-heating” of a cargo of styrene monomer. It was necessary to cool the cargo by the direct injection of sea water to terminate the self-heating reaction.

## Accidents not onboard

Hazards to seafarers exist when ashore as well as when on board the ship or yacht. Nineteen (**19**) incidents involving crew members ashore were reported to MACI during 2019. Sadly, two (**2**) of these incidents resulted in the death of the seafarer involved.

One seafarer was killed after falling through a glass roofing panel of a building, and one seafarer drowned after falling in the dock while attempting to return to the vessel alone after a night ashore.

With 19 incidents reported, “accidents ashore” was the second highest category of incidents reported to MACI during 2019. Only “personal injuries”, with 42 reported incidents, was higher.

Other reported incidents included -

Two (2) incidents concerned a seafarer being injured in a shipyard where the ship or yacht was under maintenance.

Three (3) incidents concerned crew members being injured in car accidents while ashore. Two seafarers were seriously injured in these accidents.

Two (2) incidents involved a lone crewmember being attacked ashore and were investigated by the local police authorities.

Two (2) incidents involved crew members becoming involved in “altercations” ashore resulting in injury. Both these incidents occurred at night in areas where alcohol was freely available.

One (1) incident concerned a “disagreement” between three crew members ashore in a bar, resulting in injuries to all three. No other parties were involved.

One (1) crew member was found unconscious ashore. The crew member was subsequently diagnosed with acute ethanol (alcohol) poisoning.

Two (2) incidents involved crew members being injured whilst engaged in recreational or sporting activities.

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## Reported Incidents by ship type (Incidents per 100 units registered):

Ship Type	PI <sup>3</sup>	F&E <sup>4</sup>	G <sup>5</sup>	C <sup>6</sup>	Pol <sup>7</sup>	NM <sup>8</sup>	NOB <sup>9</sup>
Merchant Ships	4.69	0.47	1.41	0.94	1.41	0.47	0.00
Commercial Yachts	3.48	0.87	0.00	0.00	0.87	0.87	0.00
Other ship types	2.95	0.63	0.63	0.63	0.53	0.63	2.00

## Safety Lessons

Looking at the circumstances surrounding the accidents and incidents reported to MACI in 2019 there are a number of conclusions and safety lessons that are worth noting.

- It is well known that seafaring is more hazardous than many other professions<sup>10</sup> and seafarers should always remain vigilant regarding their personal safety and the safety of others.
- Human error was a contributing factor in most collisions and groundings and in many instances an overreliance on shore pilots was a factor.
- Yachts often travel to remote locations well away from commercial shipping routes where hydrographic data may not be comprehensive. In such circumstances, it is important that yachts exercise caution and properly plan and execute every voyage using up to date and properly corrected official charts. Yachts should not rely on non type-approved chart plotters designed for the small craft leisure sector.
- Seafarers should be aware of potential hazards when ashore, especially when alone at night or where alcohol is freely available. Standards of road safety vary considerably from country to country.
- It is important that appropriate Personal Protective Equipment (PPE) is always used. Many slips, falls and foot/ankle injuries occurred when inappropriate or no footwear was being worn.
- Seafarers should be aware that many accident and injuries occur at sea when the seafarer is not on duty. Ship movements and the “compact architecture” of accommodation spaces has been a factor in some accidents.
- “Near Miss Reporting” is a valuable tool for accident prevention and is encouraged.

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<sup>3</sup> Personal Injuries

<sup>4</sup> Fire and Explosion

<sup>5</sup> Grounding

<sup>6</sup> Collision (includes allisions)

<sup>7</sup> Pollution incidents

<sup>8</sup> Near Miss reports

<sup>9</sup> Accidents and Incidents not onboard the ship

<sup>10</sup> [Journal of Occupational Health 2010; 52; 248 - 256](#)

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## 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.

Where 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”.

## 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](mailto:reporting@cishipping.com)

**Via the website:** Please click [HERE<sup>11</sup>](#)

**By telephone:** +44 1489 799 203 or +1 345 9498831.

Any changes to these details will be published by an update of [Shipping Notice 02/2015](#).

**Maritime Authority of the Cayman Islands.**

January 2020.

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<sup>11</sup> <https://www.cishipping.com/policy-advice/casualty-investigations/report-incident>