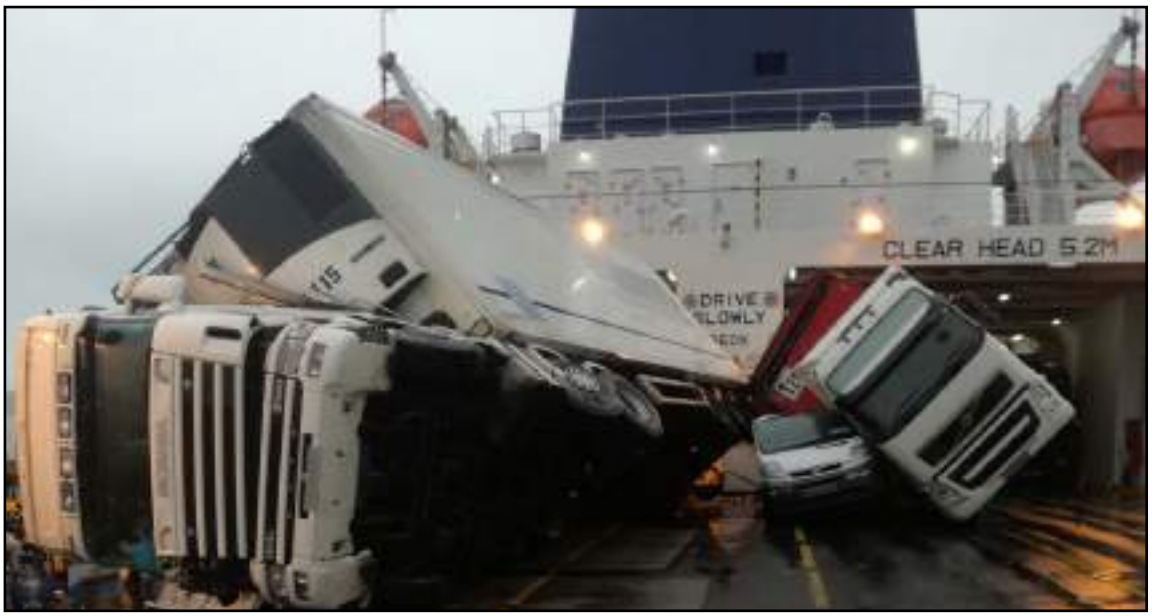
ANNUAL REPORT

MAIB
MARINE ACCIDENT INVESTIGATION BRANCH

2020

Marine Accident Recommendations and Statistics



This document is posted on our website: www.gov.uk/maib

Marine Accident Investigation Branch
First Floor, Spring Place, 105 Commercial Road
Southampton, SO15 1GH
United Kingdom

Email: maib@dft.gov.uk
Telephone: 023 8039 5500

9 June 2021

MARINE ACCIDENT INVESTIGATION BRANCH

The Marine Accident Investigation Branch (MAIB) examines and investigates all types of marine accidents to or on board UK vessels worldwide, and other vessels in UK territorial waters.

Located in offices in Southampton, the MAIB is a separate, independent branch within the Department for Transport (DfT). The head of the MAIB, the Chief Inspector of Marine Accidents, reports directly to the Secretary of State for Transport.

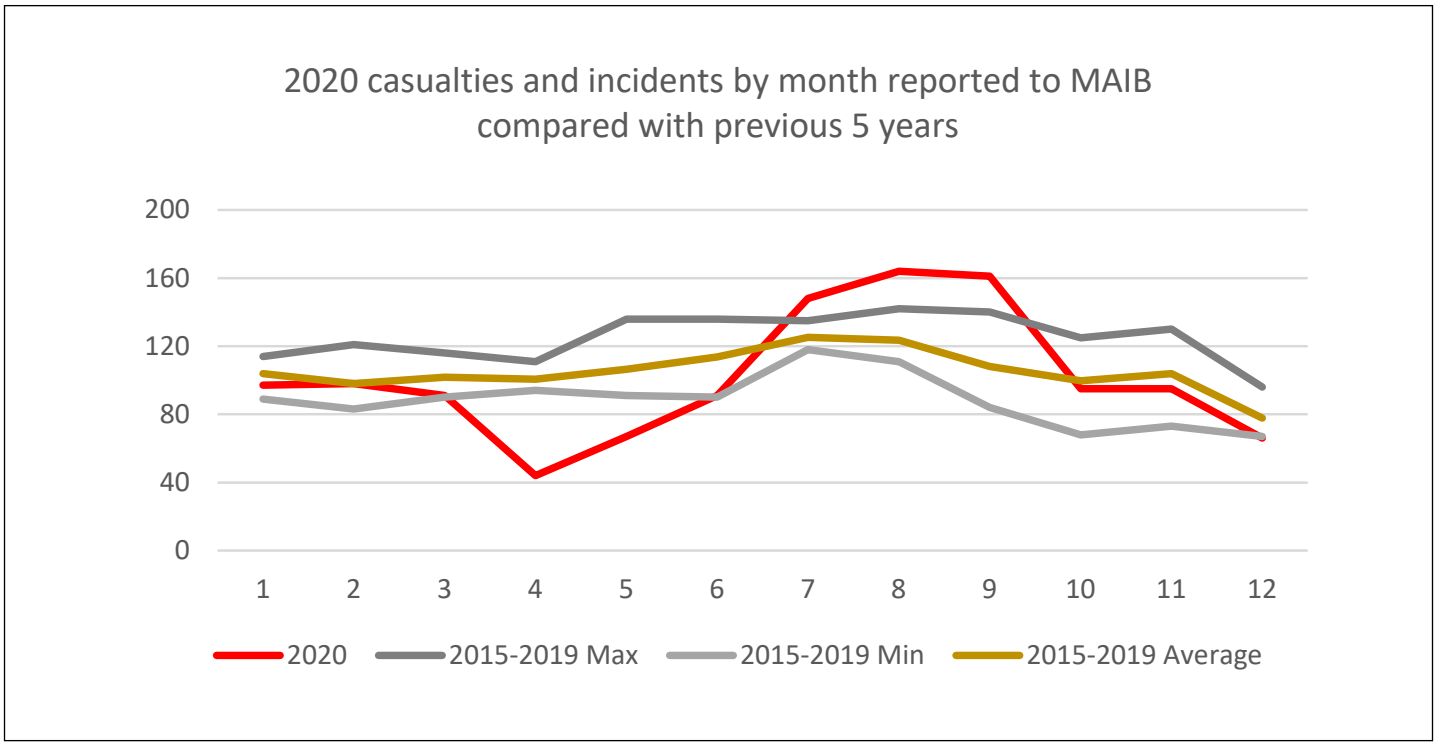
CONTENTS

CHIEF INSPECTOR'S STATEMENT

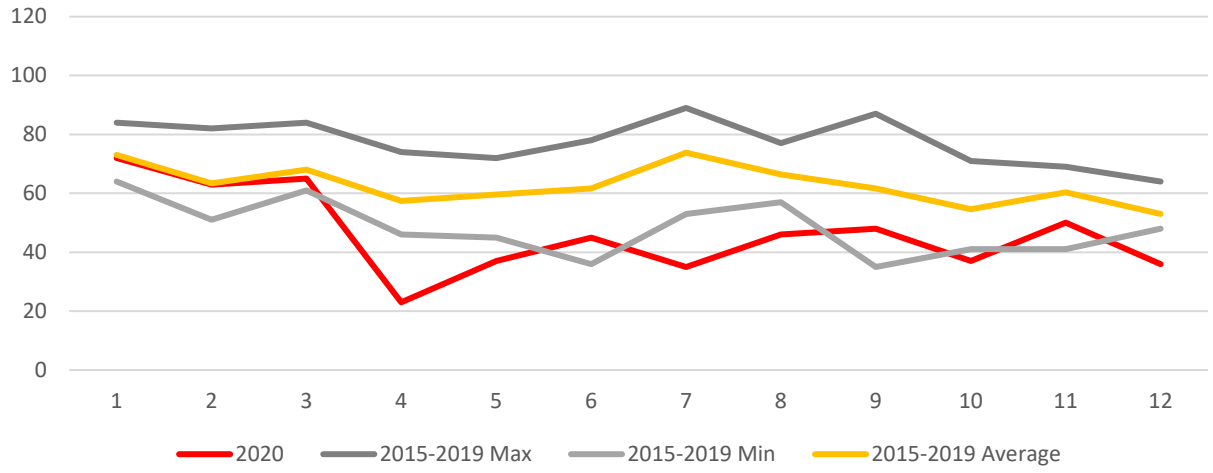
I am pleased to introduce MAIB's annual report 2020. It was another busy and successful year for the Branch improving safety at sea by our sustained output of safety investigation reports, safety digests, and safety bulletins despite lock-down conditions affecting work for much of the year. The Branch raised 1 217 reports of marine accidents and incidents and commenced 19 investigations in 2020.

	Marine Casualties and Marine Incidents reported	Investigations started	Investigations started involving loss of life
2020	1 217	19	10
2019	1 090	22	13
2018	1 227	23	7

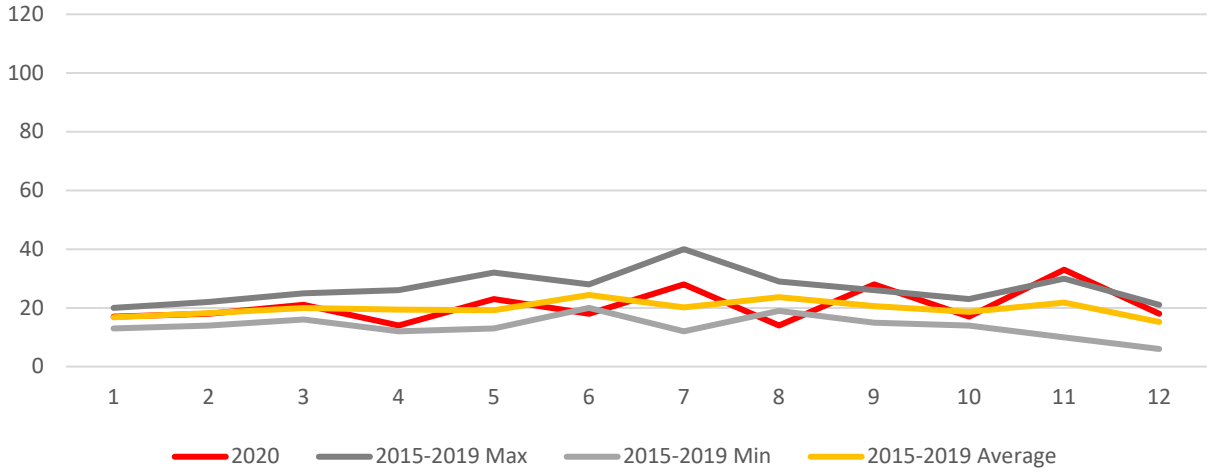
The graph below and those on the next page provide an insight into the impact the COVID pandemic had on the reporting of marine casualties and incidents in 2020. The first lockdown saw a significant reduction in maritime activity, which was reflected in the dip in reportable accidents from March through to May. The rate of accident reporting increased later in the year but remained depressed compared against the 5-year average. However, a spike in reports of leisure craft accidents over the summer (June to September) brought the total number of reportable accidents for the year up to normal levels.



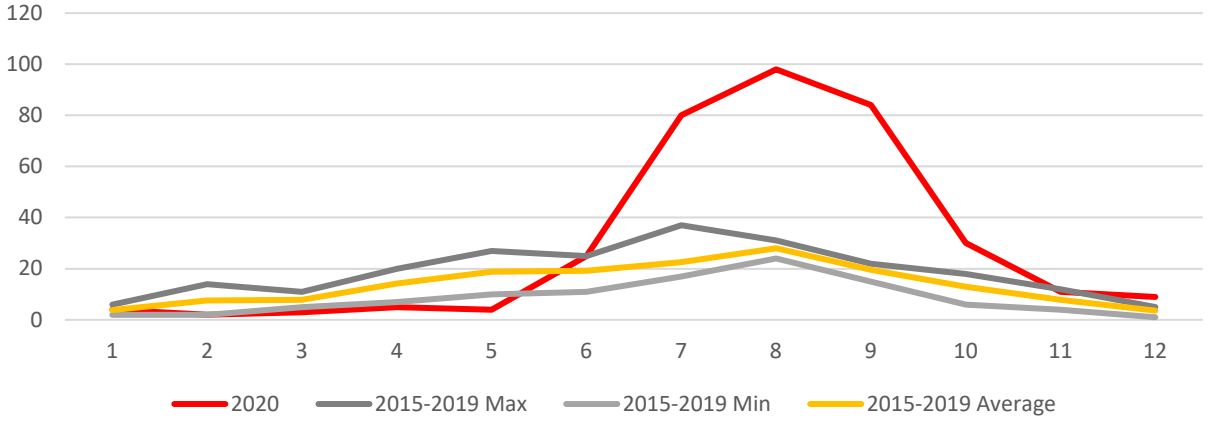
MERCHANT VESSELS >= 100gt UK flag or in UK waters
2020 vessels in casualties & incidents by month reported to MAIB
compared with previous 5 years



FISHING VESSELS UK registered
2020 vessels in casualties & incidents by month reported to MAIB
compared with previous 5 years



RECREATIONAL (commercial & non-commercial) UK flag or in UK waters
2020 vessels in casualties & incidents by month reported to MAIB
compared with previous 5 years



SAFETY ISSUES

In 2020, the MAIB published two investigation reports into the collapse of container stacks on large container ships[1], both of which were transiting the North Pacific Ocean in heavy weather at the time. Such accidents are challenging to investigate due to the multiple inter-related factors involved and that critical evidence could be lost overboard during the accident. There have been more accidents involving large losses of containers since, the most notable being *ONE Apus*, and more general concerns about large container vessels were already being raised before *Ever Given* grounded in the Suez Canal earlier this year. There is no doubt that accidents involving Ultra Large Container vessels will continue to receive intense focus, but it is too early to say what common themes might emerge from accident investigations and whether these could have wider implications for the sector.

On paper, 2020 was a safer year for the UK fishing industry, with only one accident (*Joanna C*, BM 265) resulting in fatalities. Regrettably, six commercial fishermen's lives have been lost already in 2021, meaning that eight commercial fishermen have lost their lives in the 6 month period November to May. While the investigations are ongoing, the indications are that five lives were lost as a result of small fishing vessels capsizing or foundering quickly. The MAIB is currently in the process of recovering the wreck of *Nicola Faith* (BS 58), the most recent small fishing vessel to founder, to establish why the vessel sank and its three crew lost their lives.

The accidents involving leisure and recreational craft that the Branch is investigating are quite varied, but two themes are worth mentioning. As the tragic accident onboard the motor cruiser *Diversion* demonstrated, lives are still being lost due to carbon monoxide poisoning (see **Safety Bulletin 2/2020**). There can be many sources of carbon monoxide on a cruising vessel, including the main engines, generators, heaters and cooking appliances. Whatever the source, the presence of carbon monoxide can be detected by a reasonably inexpensive alarm, which will provide ample warning that this odourless, highly toxic gas is present. Owners of craft with enclosed accommodation spaces are strongly advised to fit a carbon monoxide alarm suitable for use in the marine environment, and to test it regularly.

Two accidents involving Personal Watercraft (PWC) and Rigid Inflatable Boats (RIBs) show how vulnerable passengers are to injury when these craft collide or hit stationary objects while travelling at high speed. The collision between a PWC and RIB *Rib Tickler*, and the RIB *Seadogz*'s collision with a navigation buoy are still under investigation, but both accidents resulted in fatalities that could have been avoided had a better lookout been kept and larger passing distances maintained.

RECOMMENDATIONS

The high level of acceptance of MAIB recommendations in 2020 (>90%) is good news, which validates our process of involving stakeholders in the formulation of recommendations during the final stages of the investigation.

A number of outstanding recommendations made to the Maritime and Coastguard Agency seek the introduction of more stringent stability standards for small commercial fishing vessels. It is hoped that the long-awaited revision of the Code of Practice for these craft, now due in August 2021, will satisfactorily address these recommendations and start the process of improving stability standards across this sector of the UK's fishing fleet.

[1] **MAIB Report 2/2020** – *CMA CGM G. Washington*, and **MAIB Report 14/2020** – *Ever Smart*.

BRANCH ACTIVITY AND DEVELOPMENT

Accident investigation continued throughout the pandemic, but it was far from business as usual. During parts of the year travel and quarantine restrictions severely curtailed the Branch's ability to attend accident sites. This resulted in heavy reliance on remote interviewing and third parties to collect physical evidence. Like many others, MAIB staff have become adept at remote working, but the constraints of the remote environment have hindered accident investigation.

Last year saw some staff retire, others take on new responsibilities, and there have been a number of new joiners. Experience levels in some areas dropped while training was carried out and those new to role learned the ropes, though this has been hampered by remote working. The combined effect has been an impact on efficiency and timescales with the result that the average time taken to publish investigation reports has increased to 16 months. At the time of writing this foreword the training backlog is being addressed, and a key objective as the pandemic loosens its grip on business will be to reduce the time taken to deliver investigation reports to normal levels.

On a more positive note: expansion of the Branch's Technical Team has been completed, broadening the in-house technical skill set and enhancing capacity for horizon scanning; the Business Support team has been re-structured; and for the first time in many years the Branch has a full complement of inspectors. Further, the newly introduced case management system is working well, opening the prospect for data mining and trend analysis to recommence in earnest.

Finance

The annual report deals principally with the calendar year 2020. However, for ease of reference, the figures below are for the financial year 2020/21, which ended on 31 March 2021. The MAIB's funding from the DfT is provided on this basis, and this complies with the Government's business planning programme.

£ 000s	2020/21 Budget	2020/21 Outturn
Costs – Pay	3 314	3 195
Costs – Non Pay	1 354	1 269
Totals	**4 668**	**4 464**

Captain Andrew Moll
Chief Inspector of Marine Accidents

PART 1 - 2020: CASUALTY REPORTS TO MAIB

In 2020, 1 217 accidents (casualties and incidents[1]) to UK vessels or in UK coastal waters were reported to the MAIB. These involved 1 307 vessels.

520 are not included in this overview e.g. they were accidents to people that did not involve any actual or potential casualty to the vessel.

There were 695 accidents involving 750 commercial vessels that involved actual or potential casualties to vessels. These are broken down in the following overview:

[1] As defined in Annex B on page 69.

Chart 1: UK accidents - commercial vessels

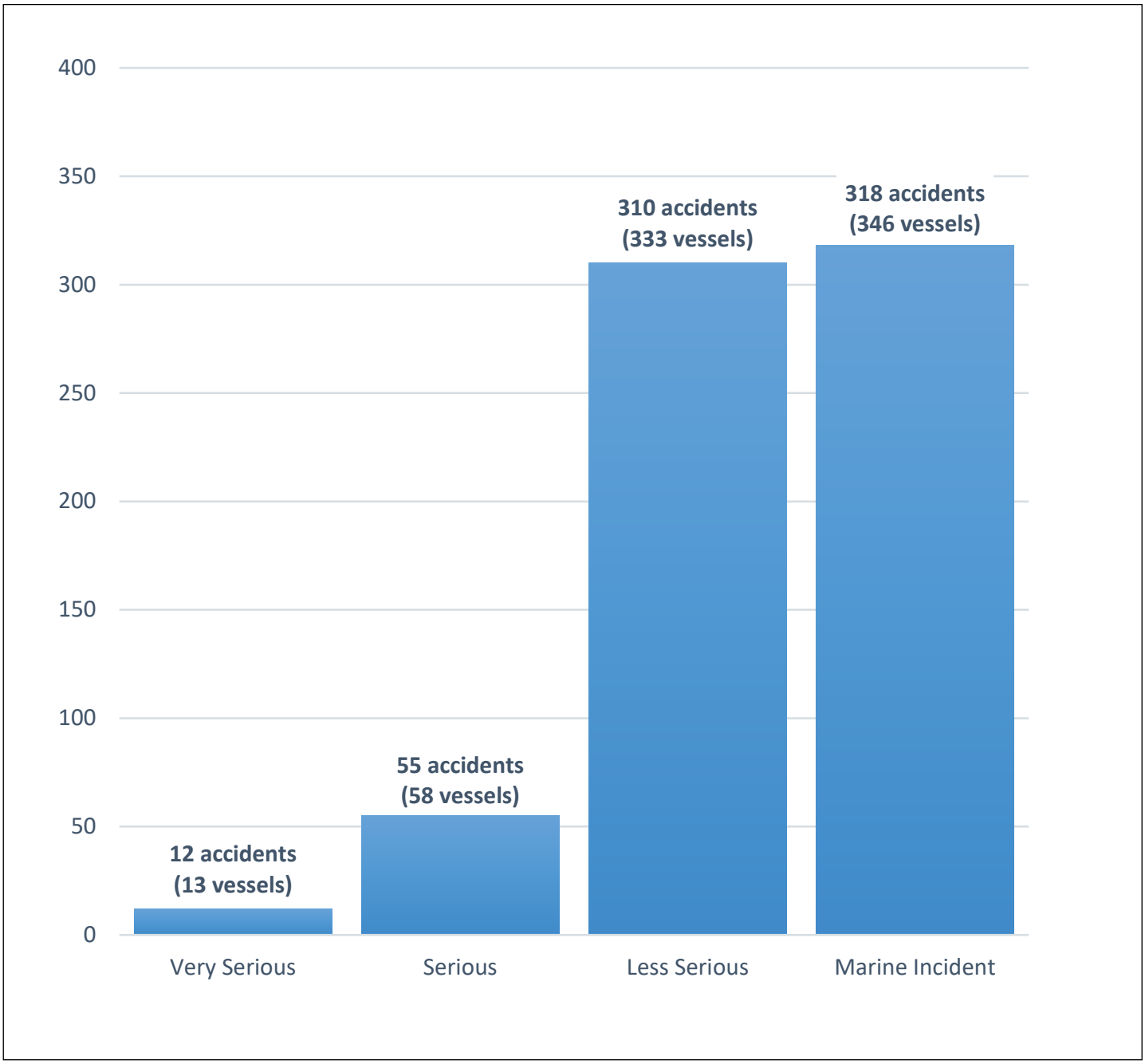


Chart 2: UK merchant vessels of 100gt or more

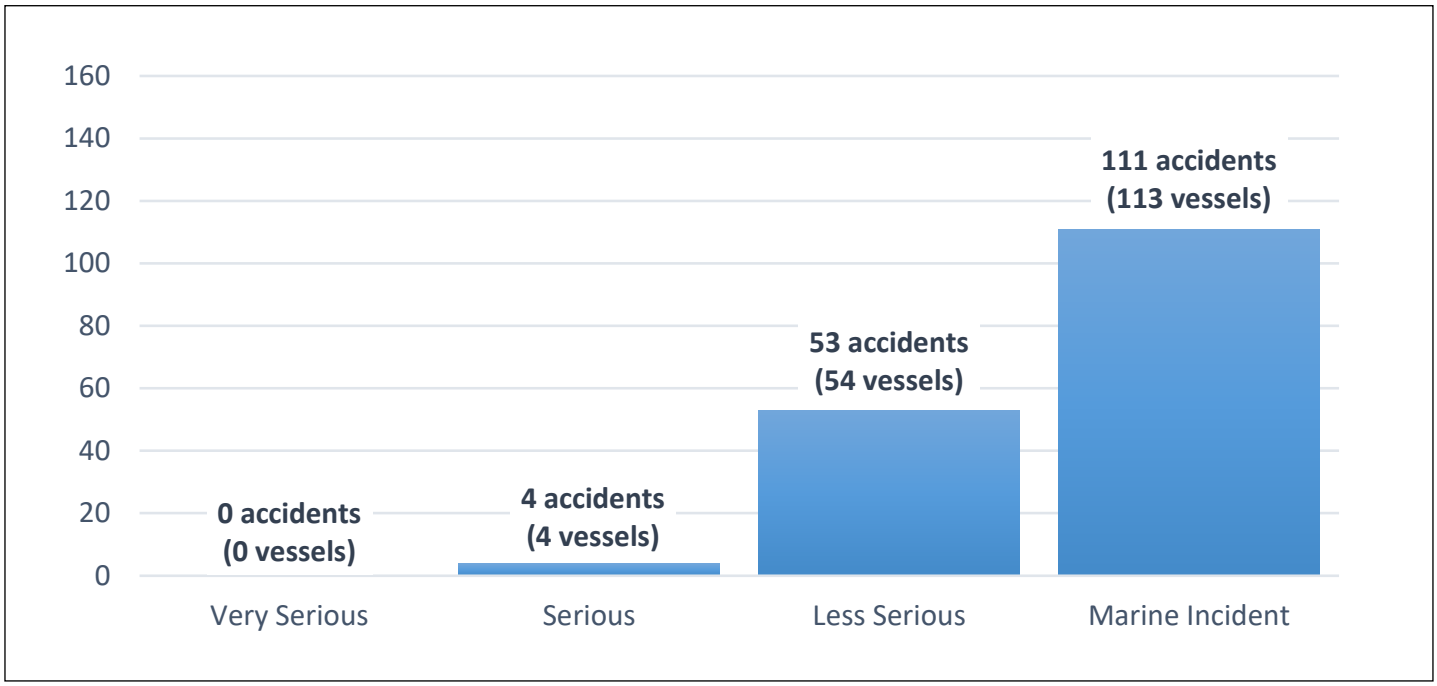


Chart 3: UK merchant vessels of under 100gt

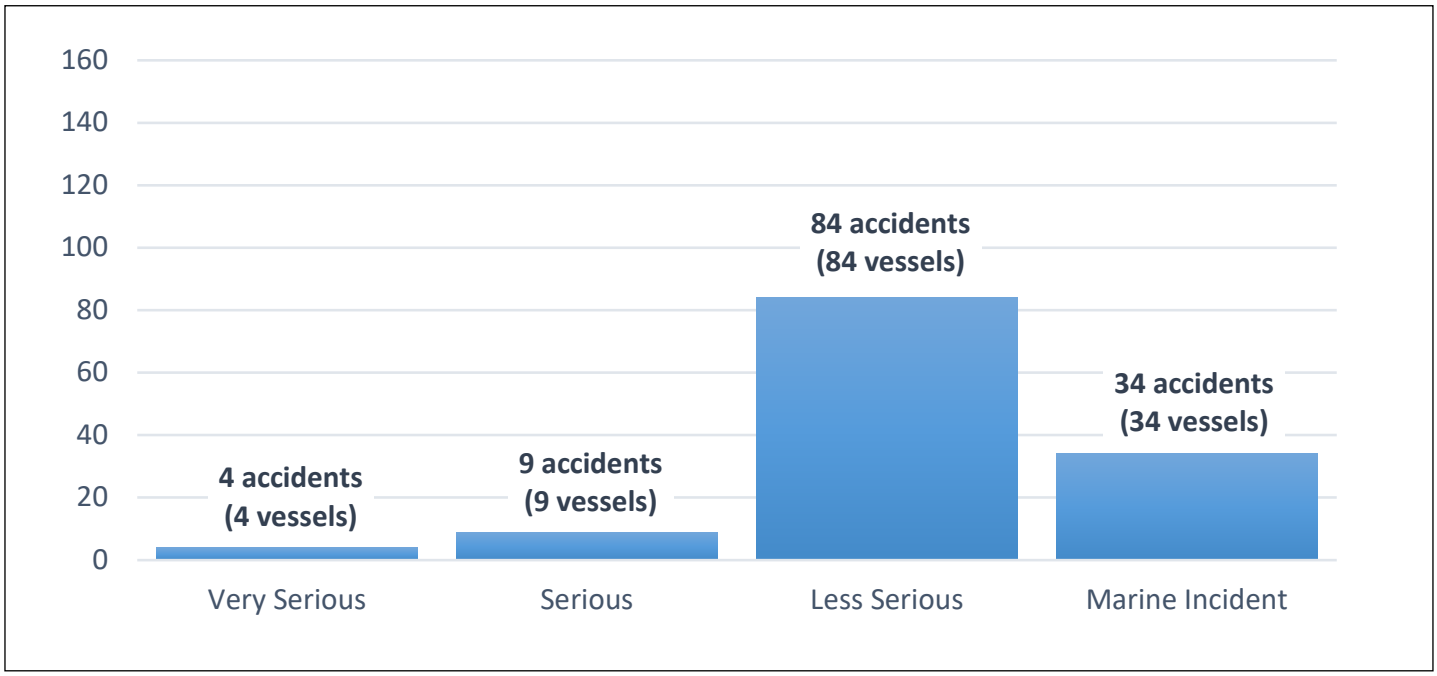


Chart 4: UK fishing vessels

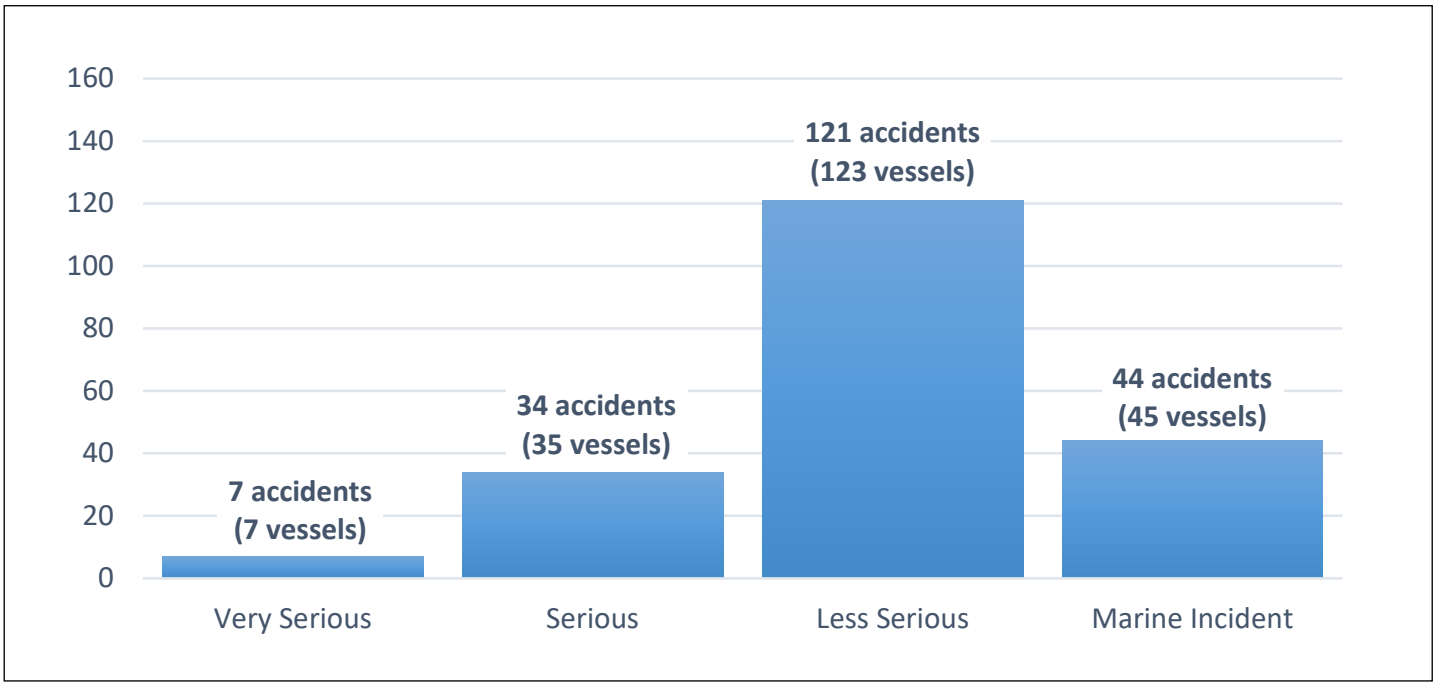
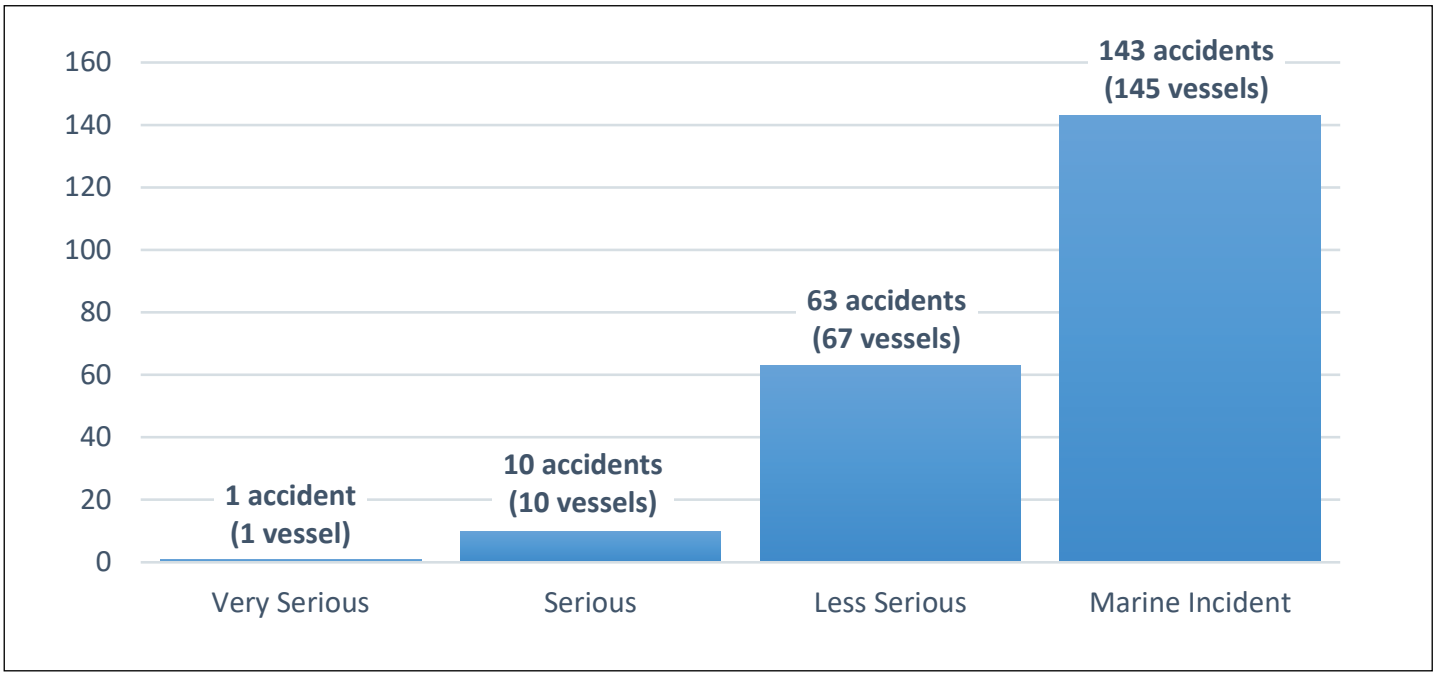


Chart 5: Non-UK commercial vessels - in UK 12 mile waters



SUMMARY OF INVESTIGATIONS STARTED

Date of occurrence	Occurrence details
18 Feb	Fatal accident to crewman while disembarking the 21m workboat ***Beinn Na Caillich*** at Ardintoul Fish Farm, Loch Alsh on the west coast of Scotland.
23 Mar	Grounding of the Bahamas registered general cargo vessel ***Kaami*** (9063885) while transiting the Little Minch, Scotland.
28 Mar	Grounding and flooding of the Gibraltar registered chemical/products tanker ***Key Bora*** (9316024) in Kyleakin, Scotland.
09 Apr	Loss of propulsion, hull damage and flooding of the dredger ***Shearwater*** (6822216)[2] while towing the barge ***Agem One*** near Cape Wrath, Scotland.
25 May	Capsize of the leisure cabin cruiser ***Norma G*** in the Camel Estuary, Cornwall, England resulting in one fatality.
31 May	Foundering and subsequent loss of a leisure fishing vessel ***Globetrotter*** near Fleetwood, England resulting in one fatality.
4 Dec 2019[3]	Carbon monoxide poisoning on board motor cruiser ***Diversion***, resulting in two fatalities at the Museum Gardens quay, River Ouse, York, England.
25Jun	Grounding of the Isle of Man registered ro-ro freight vessel ***Arrow*** (9119414) in restricted visibility while entering Aberdeen Harbour, Scotland.
15 Jul	Fatal injury to a stevedore during cargo operations on the Gibraltar registered general cargo vessel ***Cimbris*** (9281786) in Antwerp, Belgium[4].
04 Aug	Fatal injury to crewman following an engine room fire on board the Isle of Man registered LPG tanker ***Moritz Schulte*** (9220794) while alongside in Antwerp, Belgium[5].
08 Aug	Fatal injury to a passenger on the RIB ***Rib Tickler*** following a collision with a Personal Watercraft near Menai Bridge, Wales.

[2] Vessel has since changed flag from UK to St Kitts & Nevis

[3] Investigation started after the MAIB received notification of the accident on 2 June 2020.

[4] The MAIB is investigating on behalf of the Maritime Authority of the Gibraltar

[5] The MAIB is investigating on behalf of the Isle of Man Ship Registry

Date of occurrence	Occurrence details
16 Aug	Capsize and sinking of the UK registered fishing vessel ***Diamond D*** (SN100) 20nm north-east of North Shields, England.
19 Aug	Fatal person overboard from the Broads cruiser ***Diamond Emblem 1*** on the River Bure, Great Yarmouth, England.
22 Aug	Fatal injury to a passenger on the RIB ***Seadogz*** following a collision with a navigation buoy in the Solent, England.
03 Sep	Contact by the passenger vessel ***Waverley*** (5386954) with the pier on arrival at Brodick, Isle of Arran, Scotland resulting in passenger injuries and damage to the vessel.
31 Oct	Loss overboard of 33 ISO containers from the container vessel ***Francisca*** (9113214) near Duncansby Head, Scotland.
08 Nov	Collision between the Panamanian cargo vessel ***Talis*** (9015424) and the UK registered fishing vessel ***Achieve*** (HL 257) off Tynemouth, England, resulting in the subsequent sinking of the fishing vessel.
21 Nov	Capsize and sinking of the UK registered scallop dredger ***Joanna C*** (BM 265)[6], south of Newhaven, England resulting in the loss of one life and one crewman missing.
15 Dec	Extensive shock damage, including hull penetration and flooding, to the potting fishing vessel ***Galwad-Y-Mor*** (BRD116) after an external explosion, 19nm north-east of Cromer, Norfolk, England[7].

[6] A Notification of Direction to Prohibit Access was issued

[7] A preliminary assessment report was published

PART 2: REPORTS AND RECOMMENDATIONS

Investigations published in 2020 including recommendations issued

The following pages list the accident investigation reports and safety bulletins published by the MAIB during 2020. Where the MAIB has issued safety recommendations following an investigation, the current status of the recommendation and any applicable comments made by the MAIB accompany the entry*.

Recommendations from previous years that remain open are also included on the following pages.

For details of abbreviations, acronyms and terms used in this section please refer to the glossary on page 74.

*Status as of 21 May 2021

Background

Recommendations are a key element of MAIB investigations. They are issued to promulgate the lessons from accidents investigated by the MAIB, with the aim of improving the safety of life at sea and the avoidance of future accidents. The issue of a recommendation shall in no case create a presumption of blame or liability.

Following an investigation the MAIB will, normally, make a number of recommendations. These will be contained within the published report but will also be addressed in writing to the individuals or senior executives of organisations concerned. Urgent safety recommendations may also be made in Safety Bulletins or by letter from the Chief Inspector to the organisations involved, which can be published or issued at any stage of an investigation.

Recommendations are made to a variety of addressees who might have been involved in, or have an interest in, the accident. These may range from those organisations that have a wider role in the maritime community such as the Department for Transport (DfT), the Maritime and Coastguard Agency (MCA) or an international organisation, through to commercial operators and vessel owners/operators.

It is required by the *Merchant Shipping (Accident Reporting and Investigation) Regulations 2012* that the person or organisation to whom a recommendation is addressed, consider the recommendation, and reply to the Chief Inspector within 30 days on the plans to implement the recommendation or, if it is not going to be implemented, provide an explanation as to why not. The Regulations also require the Chief Inspector "*to inform the Secretary of State of those matters*" annually, and to make the matters publicly available. This Annual Report to the Secretary of State for Transport fulfils this requirement.

Recommendation response statistics 2020

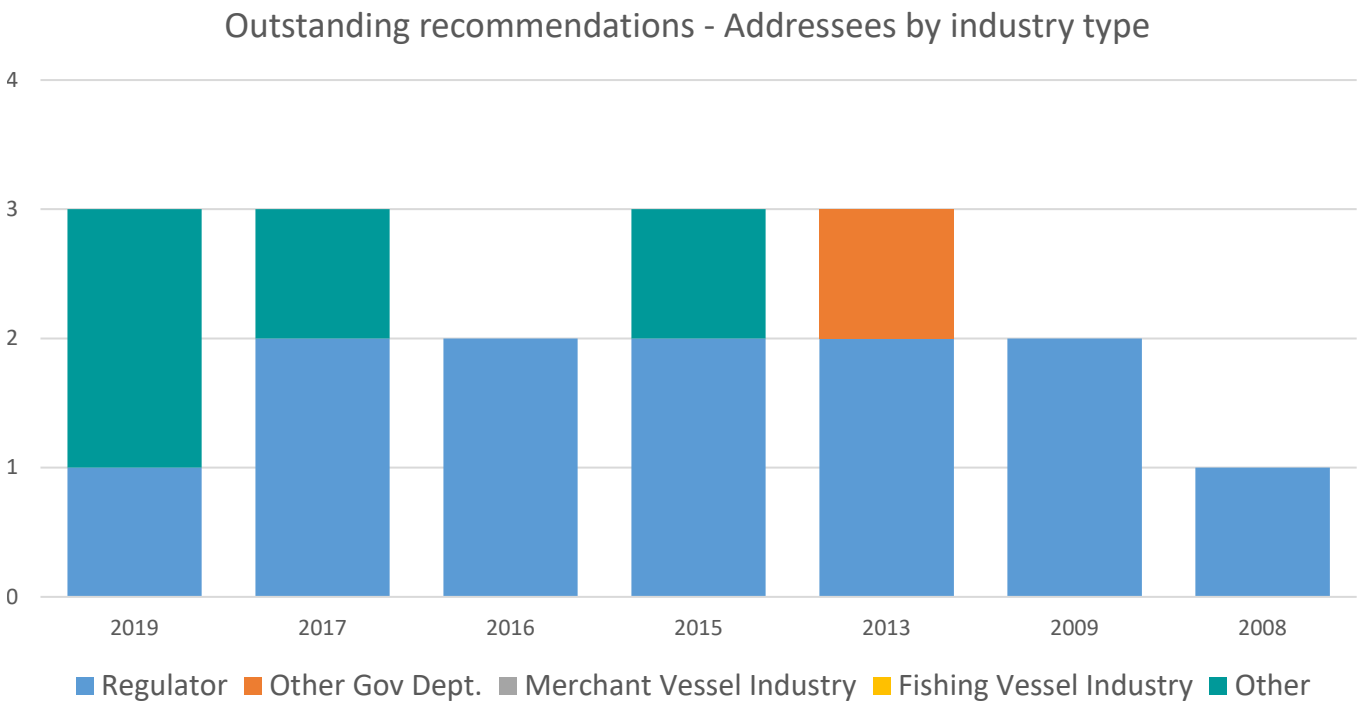
42 recommendations were issued to **29** addressees in 2020. The percentage of all recommendations that are either ***accepted and implemented*** or ***accepted yet to be implemented*** is **92.9%**.

Year	Total*	Accepted Action		Partially Accepted	Withdrawn	Rejected	No Response Received
		Implemented	Yet to be Implemented				
2020	**42**	30	9	2	0	1	0

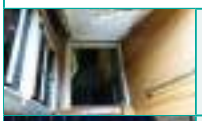
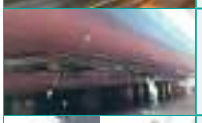
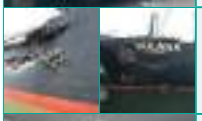
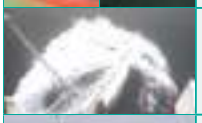
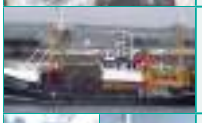
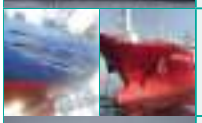
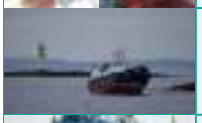
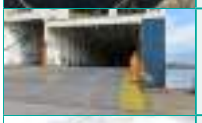
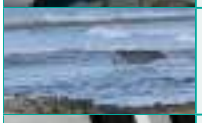
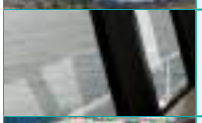
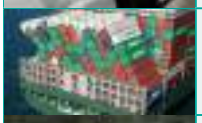
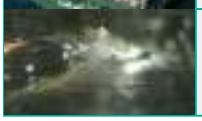
*Total number of addressees

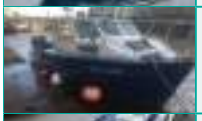
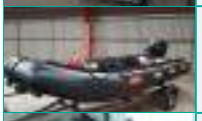
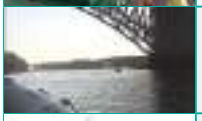
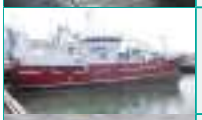
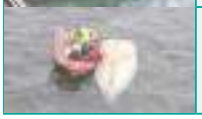
Recommendation response statistics 2008 to 2019

The chart below shows the number of recommendations issued under the closed-loop system that remain open at the time of this publication. There are no outstanding recommendations from 2004-2007, 2010-2012, 2014 and all recommendations made in 2018 are now closed.



SUMMARY OF 2020 PUBLICATIONS AND RECOMMENDATIONS ISSUED

Vessel name(s)	Category	Publication date (2020) and report number	Page
 ***Artemis* (FR 809)**	Very Serious Marine Casualty	9 January No 1/2020	14
 ***CMA CGM G. Washington***	Serious Marine Casualty	16 January No 2/2020	15
 ***European Causeway***	Serious Marine Casualty	17 January No 3/2020	16
 ***Seatruck Performance***	Serious Marine Casualty	6 February No 4/2020	17
 ***Gülnak/Cape Mathilde***	Serious Marine Casualty	13 February No 5/2020	17
 ***Red Falcon/Greylag***	Serious Marine Casualty	20 February No 6/2020	18
 ***Resurgam* (PZ 1001)**	Very Serious Marine Casualty	10 March No SB1/2020	19
 ***ANL Wyong/King Arthur***	Serious Marine Casualty	19 March No 7/2020	19
 ***Coelleira* (OB 93)**	Very Serious Marine Casualty	20 March No 8/2020	20
 ***Cherry Sand***	Very Serious Marine Casualty	21 May No 9/2020	21
 ***Seatruck Progress***	Very Serious Marine Casualty	11 June No 10/2020	22
 ***ZEA Servant***	Serious Marine Casualty	24 June No 11/2020	23
 ***Anna-Marie II* (WK 875)**	Very Serious Marine Casualty	8 July No 12/2020	23
 ***Stena Superfast VII*/Royal Navy submarine**	Marine Incident	16 July No 13/2020	24
 ***Ever Smart***	Less Serious Marine Casualty	22 July No 14/2020	24
 ***Thea II/Svitzer Josephine***	Serious Marine Casualty	13 August No 15/2020	25

Vessel name(s)		Category	Publication date (2020) and report number	Page
	***May C* (SY213)**	Very Serious Marine Casualty	3 September No 16/2020	26
	***Diversion***	Very Serious Marine Casualty	15 October No SB2/2020	26
	***Diamond Emblem 1***	Very Serious Marine Casualty	n/a, recommendation issued prepublication by letter	27
	**Fire and rescue service boats**	Very Serious Marine Casualty	4 November No 17/2020	28
	***Karina C***	Very Serious Marine Casualty	26 November No 18/2020	29
	***Rib Tickler*/Unnamed Personal Watercraft**	Very Serious Marine Casualty	n/a, recommendation issued prepublication by letter	30
	***Sunbeam* (FR487)**	Very Serious Marine Casualty	10 December No 19/2020	31
	**RS Venture Connect**	Very Serious Marine Casualty	17 December No 20/2020	32

Artemis

Report number: 1/2020

Fishing vessel (FR 809)

Accident date: 29/4/2019

Fatal fall through internal wheelhouse hatch while berthed alongside at Kilkeel, Northern Ireland

Safety Issues

- Difficult and hazardous accomodation access route
- Effects of alcohol

№	Recommendation(s) to:	BAG FR LLP

2020/101 Is recommended to:

- Review the design and layout of the wheelhouse to mess deck hatch and ladder, to reduce the risk of crew falling through to the deck below.
- Update its drug and alcohol policy to ensure its crew are: aware of the legal limits stipulated in the Railways and Transport Safety Act 2003; provided with clear defnitions of when they are on or of duty; and ensure that they are aware of the circumstances under which they may be required to undergo drug and alcohol testing.
- Ensure that it complies with the requirements of the International Labour Organisation 188 and owner's responsibilities under the Fishing Vessel (Health and safety at work) Regulations and that all crew have fishermen's work agreements.

Appropriate action implemented

№	Recommendation(s) to:	**Seafish** and **Rockall Ltd**[8]

2020/102 Are recommended to:

- Review and update the generic drug and alcohol policy in their safety folders to reflect the issues identifed by this investigation. These policies should include: the Railways and Transport Safety Act 2003 alcohol limits; a clear defnition of when crew are on or of duty; and, parameters under which the skipper or other authorised person may direct a crew member to undergo drug and alcohol testing.

Appropriate action planned: 31 August 2021

[8] Rockall Ltd is no longer trading; however, the SafetyFolder is now being managed by Watchful Ltd, and it has undertaken to implement the intent of the recommendation.

CMA CGM G. Washington

Report number: 2/2020

Container vessel

Accident date: 20/1/2018

Loss of cargo containers overboard while on passage in heavy seas in the North Pacifc Ocean

Safety Issues

- Weather routing and parametric rolling
- Container securing standards - loose lashings
- Reduced structural strength of non-standard containers
- Inaccurate container weight declarations and mis-stowed containers

№	Recommendation(s) to:	CMA Ships
2020/103	Issue direction to its terminal planners to ensure that, where container terminals routinely weigh containers prior to loading, the cargo plan for those containers is updated to reflect these weights.	

Appropriate action implemented

№	Recommendation(s) to:	Maritime and Coastguard Agency
2020/104	In conjunction with the Health and Safety Executive, promote the involvement of UK container owners and operators in the Bureau International des Containers, Global Container Database and the Approved Continuous Examination Programme database.	

Appropriate action implemented

№	Recommendation(s) to:	Bureau Veritas
2020/105	Amend its rules to require the approved lashing software installed on the onboard loading and lashing computer to calculate and display maximum roll and pitch angles associated with ship loading condition and intended passage.	

Appropriate action implemented

2020/106 Review its rules and approval procedure to ensure Container Safety Certifcation data is accurately reflected within the ship's loading computer, whatever the type of container. Compliant with ISO standard or not.

Appropriate action implemented

European Causeway

Report number: 3/2020

Ro-ro passenger ferry

Accident date: 18/12/2018

Cargo shift and damage to vehicles on a ro-ro vessel during a voyage from Larne, Northern Ireland to Cairnryan, Scotland

Safety Issues

- Vehicles not adequately secured for anticipated wind and sea conditions
- Freight vehicle drivers allowed to remain in their cabs on the vehicle decks during passage
- Decision to sail and ship handling in heavy seas

№ **Recommendation(s) to: P&O Ferries Ltd**

2020/107 Amend its SMS to provide specific guidance on the lashing of cargo in heavy weather to all vessels in its fleet, to ensure that it meets industry best practice and the guidance provided in the MCA's Code of Practice – *Roll-on/Roll-of Ships – Stowage and Securing of Vehicles*.

Appropriate action planned: 31 December 2021

MAIB Comment: The full implementation of the intent of this recommendation has been delayed due to the impact of COVID-19 restrictions. As an interim measure enhanced heavy weather lashing arrangements have been put in place onboard each vessel.

Seatruck Performance

Report number: 4/2020

Ro-ro freight ferry

Accident date: 8/5/2019

Grounding of a ro-ro freight ferry in Carlingford Lough, Northern Ireland

Safety Issues

- The effects of under keel clearance and squat were not considered before departure
- The lack of support from the bridge team meant that the ferry's master was a single point of failure
- The bridge team did not fully utilise the electronic navigation aids available, which led to a loss of situational awareness

№	Recommendation(s) to: Seatruck Ferries Ltd
2020/108	Take further measures to enhance the safe navigation of its vessels by optimising its use of electronic navigation systems to provide real time positional information, and enhancing its Bridge Resource Management training.

Appropriate action planned: No date given

Gülnak/Cape Mathilde

Report number: 5/2020

Bulk carrier/Bulk carrier

Accident date: 18/4/2019

Collision between a bulk carrier and a moored vessel at Teesport, River Tees, England

Safety Issues

- Loss of steerage - no direct cause identified
- Crucial manoeuvring information was not recorded on the vessel's VDR

№	Recommendation(s) to: Gülnak Shipping Transport & Trading Inc.
2020/109	Take action to ensure: • *Gülnak*'s masters and embarked pilots are aware of the circumstances of this accident and the potential for similar accidents to occur in the future. • *Gülnak*'s shiphandling characteristics are closely monitored and that the accuracy of the available manoeuvring data is validated. • Bridge equipment on its vessels, including engine speed indication, is checked frequently to ensure it is operating correctly.

Appropriate action implemented

Red Falcon/Greylag

Report number: 6/2020

Ro-ro passenger ferry/Yacht

Accident date: 21/10/2018

Collision between a ro-ro passenger ferry and moored yacht at Cowes Harbour, Isle of Wight, England

Safety Issues

- Ineffective bridge resource management
- Insufficient helmsman practice steering into Cowes
- Lack of assessed practice navigating by instruments alone
- Master became cognitively overloaded due to high situational stress

№	Recommendation(s) to: Red Funnel	
2020/110	Conduct regular assessment of ship-handling capabilities of masters and C/Os, not limited solely to normal operational routines of berthing and unberthing, including pilotage by instruments alone.	**Appropriate action implemented**
2020/111	Review the method of determining the orientation of the vessel displayed on the ship's electronic chart system, to ensure that the system is not solely reliant on the operation of a toggle switch, and that there is a method of positive confirmation of the orientation displayed at each manoeuvring console.	**Appropriate action implemented**

№	Recommendation(s) to: Cowes Harbour Commission	
2020/112	Review its risk assessment for collision between a commercial vessel and raft of yachts moored at Shepards Wharf Marina, to provide more clarity on mitigating measures that can be controlled by Cowes Harbour Commission.	**Appropriate action implemented**

№	Recommendation(s) to: Cowes Yacht Haven	
2020/113	Produce a comprehensive risk assessment of the risk of a collision between a commercial vessel and raft of yachts moored at Cowes Yacht Haven Marina, detailing the mitigating measures that can be controlled by Cowes Yacht Haven.	**Appropriate action implemented**

Resurgam

Safety bulletin number: SB1/2020

Fishing vessel (PZ 1001)

Accident date: 15/11/2019

Inadvertent discharge of a FirePro condensed aerosol fire extinguishing system during its installation on a fishing vessel resulting in one fatality

Safety Issues

- Lack of awareness of hazards associated with condensed aerosol firefighting systems
- Control of contractors
- Installation standards - system isolation and safe systems of work
- Emergency preparedness - no rescue plan

№	Recommendation(s) to: FirePro
2020/S114	Issue a safety alert to the owner/operators of vessels fitted with its systems and its network of marine installation/maintenance engineers highlighting the circumstances of this accident and advising them of appropriate measures to take to reduce the risk of exposure to fire suppressant particles.

Appropriate action implemented

ANL Wyong/King Arthur

Report number: 7/2020

Container vessel/Gas carrier

Accident date: 4/8/2018

Collision between a container vessel and a gas carrier in the approaches to Algeciras, Spain

Safety Issues

- Risk of collision was underestimated
- VHF and AIS information was distracting and unhelpful
- Lack of intervention by VTS
- *King Arthur* was not proceeding at a safe speed in thick fog

№	Recommendation(s) to: Spanish Ministry of Development
2020/115	Conduct a review of vessel traffic services in the vicinity of Algeciras designed to enhance the coordination between the authorities involved in order to improve the deconfliction of traffic. Such a review should consider establishing: • a dedicated holding area or anchorage for waiting vessels, and; • a traffic organisation service for vessels in the approaches to Algeciras.

Rejected - closed

MAIB comment: It is disappointing that this recommendation has not been accepted, particularly given the levels of engagement during the investigation process. Spain's Standing Commission for Maritime Accident and Incident Investigations did not agree with some aspects of the investigation and did not approve the whole investigation report. As a result, the Spanish Ministry of Development could not consider this recommendation.

№	Recommendation(s) to:	Maritime and Coastguard Agency
2020/116	Propose to the International Maritime Organization that the navigation status information in the automatic identification system be reviewed to ensure that a vessel's status can be accurately described, including vessels underway but not making way.	

Appropriate action planned: 30 August 2021

Coelleira

Report number: 8/2020

Fishing vessel (OB 93)

Accident date: 4/8/2019

The stranding and loss of a fishing vessel on Ve Skerries, Shetland, Scotland

Safety Issues

- Inadequate passage planning
- An effective lookout was not maintained and an unmanned bridge meant that navigational hazards were not recognised
- The route monitoring function of the vessel's electronic navigational equipment was not fully utilised

№	Recommendation(s) to:	Blue Pesca Ltd
2020/117	Take steps to ensure that any vessel it may own in the future is navigated safely, paying attention to: • Requirements for rest detailed in MSN 1884 (F). • Guidance on keeping a safe navigational watch detailed in MGN 313 (F). • The coverage and updating of electronic charts.	

Partially accepted - closed

MAIB comment: Blue Pesca Ltd does not currently own or operate any fishing vessels, but has undertaken to fully implement Recommendation 2020/117 when it recommences fishing activities.

Cherry Sand

Report number: 9/2020

Dredger

Accident date: 28/2/2019

Man overboard from a dredger in the non-tidal basin at Port Babcock Rosyth, Scotland resulting in one fatality

Safety Issues

- Hazardous and uncontrolled self-mooring operation
- Operational procedures not followed
- Age and agility of person conducting the task not properly considered
- Work as done versus work as imaged not identified during internal audit

№	Recommendation(s) to:	Maritime and Coastguard Agency
2020/118	Amend the Code of Safe Working Practices for Seafarers to include guidance for the safe completion of mooring operations including, specifcally, the circumstances when it is permissible for crew to carry out self-mooring operations.	

Appropriate action implemented

№	Recommendation(s) to:	Associated British Ports
2020/119	Review its audit programme to ensure a common approach to safety and adherence to operational procedures across the UK Dredging fleet.	

Appropriate action implemented

Seatruck Progress

Report number: 10/2020

Ro-ro freight ferry

Accident date: 15/5/2019

Accident on the stern ramp of the ro-ro freight ferry at Brocklebank Dock, Liverpool, England resulting in one fatality

Safety Issues

- The movement of pedestrians and vehicles over the stern ramp was not monitored or controlled
- The use of mobile phones in a working environment was a distraction
- The risk of distraction when using mobile phones in working areas on board ships not adequately addressed by industry bodies
- The way work was conducted on board Seatruck Progress did not always match onboard procedures

№	Recommendation(s) to:	**Maritime and Coastguard Agency** and **Isle of Man Ship Registry**

2020/120 Issue guidance on the potential distractions caused by the use of mobile telephones on working decks and other workspaces on board ships.

MCA - Appropriate action implemented

IOM Ship Registry - Appropriate action implemented

№	Recommendation(s) to:	**Maritime and Coastguard Agency**

2020/121 Incorporate guidance on the potential distractions caused by the use of mobile telephones on working decks and other workspaces on board ships into the Code of Safe Working Practices for Merchant Seafarers.

Appropriate action implemented

№	Recommendation(s) to:	**United Kingdom Chamber of Shipping**

2020/122 Highlight to the ferry industry the lessons to be learned from this accident, through its Health and Safety Sub-Committee and Ferry and Cruise Panel, taking into account, inter alia:

- The importance of segregating vehicular and pedestrian movements across a vessel's ramps, particularly when there is only one means of access.
- The importance of co-ordinating vessel-based and shore-based safety management systems to pedestrian safety.
- The difficulties created by ports and terminals adopting differing work practices.
- The potential hazard of distraction caused by mobile phone use.

Appropriate action implemented

№	Recommendation(s) to: Seatruck Ferries Ltd
2020/123	Continue to strive to improve the safety of its crews, considering, inter alia: • The requirements of the Code of Safe Working Practices for Merchant Seafarers, particularly regarding the segregation of pedestrians and vehicles on a ferry's stern ramp where a protected pedestrian walkway cannot be provided. • The findings of the recent safety climate survey report and its suggestions to improve procedural compliance and crew attitudes towards safety. • The importance and benefits of continuing to monitor the safety climate among its workforce.

Appropriate action implemented

ZEA Servant

Report number: 11/2020

General cargo vessel

Accident date: 2/3/2019

Fall of a suspended load during a lifting operation on board a cargo vessel while alongside in Campbeltown, Scotland, resulting in injuries to two crew

Safety issues

- Working under a suspended load or in the load's fall zone
- No task specific risk assessment or lifting plan
- Inappropriate storage area for loose lifting gear
- Ineffective inspection regime for lifting gear

Given the subsequent actions taken by *ZEA Servant*'s managers to improve safety and prevent recurrence, no safety recommendations were made as a result of this investigation.

Anna-Marie II

Report number: 12/2020

Fishing vessel (WK 875)

Accident date: 23/9/2019

Capsize of a fishing vessel in the mouth of the Brora river, Brora, East Scotland resulting in one fatality

Safety issues

- Hazards associated with crossing the river sand bar
- Local environmental conditions - unexpected wave heights
- The crew did nor wear PFDs

No recommendations were made as a result of this investigation.

Stena Superfast VII/Royal Navy submarine

Report number: 13/2020

Ro-ro ferry/Submarine

Accident date: 6/11/2018

Near miss between a ferry and a submerged Royal Navy submarine in the North Channel, crossing from Belfast, Northern Ireland to Cairnryan, Scotland

Safety Issues

- Insufficient situational awareness to support safety-critical decision making on board a Royal Navy submarine
- Passage planning had identified the hazard for the submarine of operating near busy shipping lanes; however, the action taken to keep clear was ineffective

№	Recommendation(s) to: Royal Navy	
2020/124	Deliver an independent review of the actions taken following this and previous similar events, to provide assurance that such actions have been effective in reducing the risk of collision between dived RN submarines and surface vessels to as low as reasonably practicable.	**Appropriate action implemented**

Ever Smart

Report number: 14/2020

Container ship

Accident date: 30/10/2017

Loss of 42 cargo containers overboard, 700 miles east of Japan in the North Pacific Ocean

Safety Issues

- Weather routing in heavy seas - bow slamming and hull vibration
- The containers were not stowed or secured in accordance with the guidance contained in the ship's cargo securing manual
- The lashing rod locking arrangements were not used, which increased the risk of loosening
- Verified Gross Mass irregularities in 36% of the stow

№	Recommendation(s) to: Evergreen Marine Corp. (Taiwan) Ltd	
2020/125	Highlight to its ships' masters the increased risk of cargo damage when ships experience hull slamming and stern shuddering during heavy weather.	**Appropriate action implemented**
2020/126	Introduce a programme for lashing equipment inspections when the ship is not in service.	**Appropriate action implemented**

2020/127 Take action to ensure its shore planners are fully trained in the use of its ship loading computers and that they understand the importance of checking the permissible load limits for containers and lashing systems.

Appropriate action implemented

Thea II/Svitzer Josephine

Report number: 15/2020

Container feeder vessel/Tug

Accident date: 15/12/2018

Grounding and recovery of a container feeder vessel and a tug in the approaches to the Humber Estuary, England

Safety Issues

- Insufficient anchor cable and second anchor not used
- Tug did not have adequate navigational plan when it left the channel
- Vessel manager's emergency response organisation was ineffective
- Valuable intervention by SOSRep initiated successful salvage of stranded vessel

№ **Recommendation(s) to:** **TS-Shipping GmbH & Co. KG.**

2020/128 Review the company's emergency response organisation and procedures with the aim of improving decision making and the clarity of advice provided to its vessels.

Appropriate action implemented

May C

Report number: 16/2020

Creel fishing vessel (SY213)

Accident date: 24/7/2019

Fatal person overboard from a single-handed vessel at Loch Carnan, Outer Hebrides, Scotland

Safety issues

- Cold water shock and cold water incapacitation
- The casualty was not wearing a Personal Flotation Device or carrying a Personal Locator Beacon

In view of fishing industry initiatives and the recommendations made in the MAIB's report into the fatal man overboard from the single-handed fishing boat *Sea Mist*[9], no recommendations have been made as a result of this investigation.

Diversion

Safety bulletin number: SB2/2020

Motor cruiser

Accident date: 4/12/2019

Carbon monoxide poisoning on board a motor cruiser on the River Ouse, in York, England, resulting in two fatalities

Safety Issues

- The boat's diesel-fulled cabin heater was not correctly installed, inspected or regularly serviced by a suitably competent person
- The exhaust silencer was not designed for marine use and the exhaust system leaked
- A carbon monoxide detector was not fitted

This bulletin was issued to raise awareness of the importance of installing carbon monoxide (CO) alarms on boats with enclosed accommodation spaces and no recommendations were made.

[9] Recommendation details are on page 37 and the full report can be download from our website: https://www.gov.uk/maib-reports/man-overboard-from-single-handed-creel-boat-sea-mist-with-loss-of-1-life

Diamond Emblem 1

Recommendation letter issued by the Chief Inspector

Motor Cruiser

Accident date: 19/08/2020

Fatal person overboard at Great Yarmouth Yacht Station, England

Safety Issues

- Fall prevention requirements for open deck access routes
- Transfer of helm and propulsion control and control position indication
- Boat hirer competence checks and boat handover familiarisation instruction

№	Recommendation(s) to:	Association of Inland Navigation Authorities

2020/129 Revise the Code of Practice for Hire Boats to include:

- A requirement for hire boat companies to assess the risk of people falling overboard and implement suitable control measures, particularly for areas that are in frequent use or where the risk of a fall is identified as high (Hire Boat Code Section 2.6 and Annex II).
- A requirement for hire boat companies operating vessels with multiple helm positions to comply, where possible, with international standards for a positive visual indication of the active helm position and interlocks to prevent inadvertent engine operation from an inactive helm position (3.2.2).
- Guidance on conduct of handover to include a thorough demonstration of a vessel's engine and steering controls where more than one helm position exists (3.3.3).
- A requirement for in-water trial, before handover, to assess the competence of those expected to drive the boat, irrespective of their previous experience or length of hire of the vessel (3.3.4).

Partially accepted - action planned: 31 January 2022

MAIB comment: Bullet points 1, 3 and 4 have been accepted and passed onto the Higher Boat Code Working Group for action. Bullet 2 has been rejected but has been passed onto the Boat Safety Scheme for their consideration by the Association of Inland Navigation Authorities.

Fire and rescue service boats

Report number: 17/2020

Inflatable boat/Rigid inflatable boat

Accident date: 17/09/2019

Collision resulting in one fatality on the River Cleddau, Milford Haven, Wales

Safety Issues

- Unplanned boating activity - both boats were operating at speed and carrying out uncoordinated manoeuvres in the same stretch of the river
- An effective lookout was not maintained on either vessel
- No national standards for fire service boat operations when not involved in flood rescue work

№	Recommendation(s) to: Mid and West Wales Fire and Rescue Service	
2020/130	Undertake a review of the crewing and staff qualification requirements for boats within MWWFRS to determine appropriate levels for familiarisation, training and emergency operations status and include the requirement within revised procedures and guidance.	**Appropriate action implemented**
2020/131	Introduce a method of recording time spent as helmsman of its boats and implement a minimum number of hours required as helmsman to maintain competency.	**Appropriate action implemented**
2020/132	Include reference to its boats within the internal audit and inspection report process.	**Appropriate action implemented**

№	Recommendation(s) to: National Fire Chief's Council	
2020/133	Consult with the Maritime and Coastguard Agency and the UK Harbour Master's Association to introduce a standard code for the operation of all fire and rescue service craft when in categorised or non-categorised waters.	**Appropriate action planned: 30 November 2021**

Karina C

Report number: 18/2020

General cargo vessel

Accident date: 24/05/2019

Fatal crush accident during cargo operations at Seville, Spain

Safety Issues

- Unsafe crane operations
- Established safe practices were not being followed on deck
- Enforcement of drug and alcohol policies ineffective
- Slow reporting of accident to MAIB

№	Recommendation(s) to: Carisbrooke Shipping Limited	
2020/134	Take action to improve the safety culture on its vessels. In particular, to take steps to ensure all crew on its vessels understand and adhere to agreed and established safe systems of work, aligned to the company's safety management system, and that all accidents are reported appropriately.	**Appropriate action implemented**
2020/135	Investigate improvements to gantry crane warning systems, including pre-movement warning or automatic stop systems.	**Appropriate action implemented**

Rib Tickler/Unnamed Personal Watercraft

Recommendation letter issued by the Chief Inspector

RIB/PWC

Accident date: 08/08/2020

Fatal collision in the Menai Straits, Wales

Safety Issues

- Over shoulder, pre-manoeuvre checks were not being carried out
- Supervision of inexperienced helmsman
- Operation of watercraft in close proximity to each other and wave jumping

№	Recommendation(s) to:	Royal Yachting Association

2020/136 Review and amend its Personal Watercraft and Start Powerboating handbooks to provide guidance on:

- The importance and conduct of the over-the-shoulder pre-manoeuvre check;
- How to safely operate in company with other craft, with particular focus on communication and safe distances;
- The oversight of inexperienced/untrained helms in an informal setting;
- Crossing waves and wakes, with particular focus on control of personal watercraft and safe distances from vessels creating wake, and:
- Disseminate to their members a summary of the safety messages from this accident prior to the start of the 2021 boating season.

Consideration should also be given to including the above topics in the relevant training course syllabi.

Appropriate action planned: 31 August 2021

Sunbeam

Report number: 19/2020

Fishing vessel (FR487)

Accident date: 14/08/2018

Fatal enclosed space accident in Fraserburgh, Scotland

Safety Issues

- Enclosed space working without safety precautions
- Unsafe lone working in an enclosed space
- Insufficient risk assessment or method statements for maintenance work on board
- Inadequate refrigeration plant maintenance resulting in loss of containment of ozone depleting gas

№	Recommendation(s) to:	Maritime and Coastguard Agency

2020/137 Implement measures for the safe conduct of enclosed space operations on board fishing vessels, specifically:

- Amend the Merchant Shipping (Entry into Dangerous Spaces) Regulations, 1988, or any subsequent regulations for potentially hazardous spaces, to include fishing vessels. Consideration should also be given to aligning UK regulations and guidance with the IMO terminology for enclosed spaces.
- Update fishing vessel codes of practice and surveyor's checklists to reflect enclosed space safety and operations, specifically including atmosphere monitoring and crew preparation for emergencies.

Appropriate action planned: 31 March 2022

2020/138 Review Letters of Delegation to its Recognised Organisations in order to ensure clarity of understanding with regard to responsibility for survey of machinery items.

Appropriate action planned: 31 December 2021

№	Recommendation(s) to:	Owners of *Sunbeam*

2020/139 Implement an onboard safety management system in accordance with the MCA's Fishing Safety Management Code, specifically ensuring that safe systems of work are in place for all operations.

Appropriate action planned: 29 May 2021

№	Recommendation(s) to:	Scottish Pelagic Fishermen's Association

2020/140 Encourage its members to maintain onboard safety management systems in accordance with the MCA's Fishing Safety Management Code.

Appropriate action implemented

RS Venture Connect sail number 307

Report number: 19/2020

Self-righting keelboat

Accident date: 12/06/2019

Capsize and full inversion of the self-righting keelboat resulting in the death of a disabled sailor on Windermere, Cumbria, England

Safety Issues

- Entrapment of crew under upturned hull
- Self-righting retractable keel was not secured in place.
- Inadequate guidance for the securing of the retractable keel.
- Inadequate risk assessments and ineffective safety audit processes

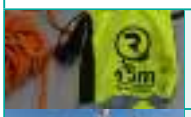
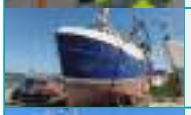
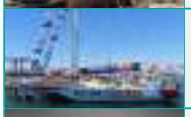
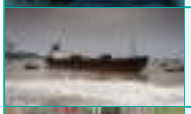
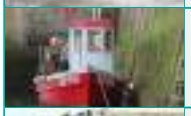
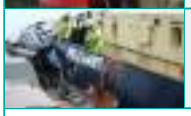
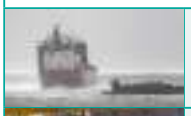
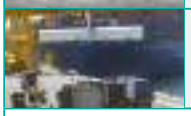
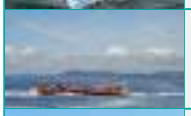
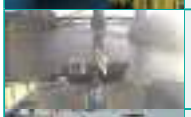
№	Recommendation(s) to:	Blackwell Sailing
2020/141	Seek an authoritative external review of its safety management system, once its internal review and updating process is complete.	

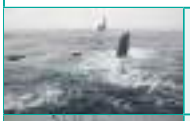
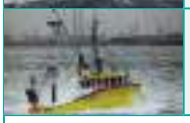
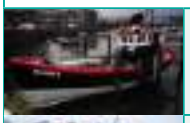
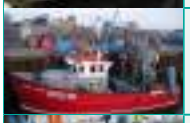
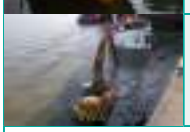
Appropriate action implemented

№	Recommendation(s) to:	Royal Yachting Association
2020/142	Consider offering RYA Sailability centres the benefit of voluntary participation in external audits of their safety management systems, undertaken by its cadre of trained RTC inspectors.	

Appropriate action implemented

PROGRESS OF RECOMMENDATIONS FROM PREVIOUS YEARS

Vessel name	Publication date/report number	Page
2019 Recommendations - Progress Report		**35**
 **Unnamed Rowing Boat (throw bag rescue line)**	31 January 2019 No 2/2019	35
 ***Nancy Glen*** **(TT100)**	30 May 2019 No 6/2019	35
 ***CV30***	20 June 2019 No 7/2019	36
 ***Kuzma Minin***	1 August 2019 No 11/2019	36
 ***Sea Mist*** **(BF918)**	15 November 2019 No 14/2019	37
 ***Millgarth***	5 December 2019 No 15/2019	37
2018 Recommendations - Progress Report		**38**
 ***Saga Sky/Stema Barge II***	15 March 2018 No 3/2018	38
 ***CMA CGM Centaurus***	18 October 2018 No 17/2018	38
2017 Recommendations - Progress Report		**39**
 ***CV21***	12 April 2017 No 7/2017	39
 ***Osprey/Osprey II***	18 May 2017 No 10/2017	39
 ***Zarga***	15 June 2017 No 13/2017	40
 ***Typhoon Clipper/Alison***	2 November 2017 No 24/2017	40
 ***Nortrader***	7 December 2017 No 26/2017	41
2016 Recommendations - Progress Report		**41**
 ***JMT*** **(M99)**	7 July 2016 No 15/2016	41

Vessel name		Publication date/report number	Page
2015 Recommendations - Progress Report			**42**
	***Cheeki Rafiki***	29 April 2015 No 8/2015	42
	***Stella Maris* (HL705)**	10 December 2015 No 29/2015	42
2014 Recommendations - Progress Report			**43**
No recommendations outstanding for 2014			
2013 Recommendations - Progress Report			**43**
	***Purbeck Isle* (PH 104)**	2 May 2013 No 7/2013	43
	***Sarah Jayne* (BM 249)**	13 June 2013 No 13/2013	44
	***Vixen***	20 June 2013 No 16/2013	44
2012 to 2010 Recommendations - Progress Report			**45**
No recommendations outstanding for 2012, 2011 and 2010			
2009 Recommendations - Progress Report			**45**
	***Celtic Pioneer***	21 May 2009 No 11/2009	45
	***Abigail H***	1 July 2009 No 15/2009	45
2008 Recommendations - Progress Report			**46**
	**Fishing Vessel Safety Study 1992 to 2006**	28 November 2008 FV Safety Study	46

2019 Recommendations - Progress Report

*Status as of 21 May 2021

Unnamed Rowing Boat

Report number: 2/2019

Rowing boat

Accident date: 24/3/2018

Failure of a throw bag rescue line during a capsize drill at a rowing club in Widnes, England.

№	Recommendation(s) to:	British Standards Institution
2019/105	Develop an appropriate standard for public rescue equipment ensuring that the topic of throw bags and their rescue lines is addressed as a priority.	

Appropriate action planned: No date given

MAIB comment: Implementation delayed due to the impact of COVID-19 restrictions, British Standards Institution still to provide revised date.

Nancy Glen

Report number: 6/2019

Twin rig prawn trawler (TT100)

Accident date: 18/1/2018

Capsize and sinking in Lower Loch Fyne, Scotland, with the loss of two lives

№	Recommendation(s) to:	Maritime and Coastguard Agency
2019/109	Include in its new legislation addressing the stability of existing fishing vessels of under 15m, a requirement to undertake both a freeboard check and stability check, which should be recorded and repeated at intervals not exceeding 5 years. Provide guidance on the conduct of 5-yearly stability checks to ensure the results can be effectively compared to determine whether the vessel's stability has altered. Align the text of MSN 1871 (F), The Code of Practice for the Safety of Small Fishing Vessels of less than 15m Length Overall, to mirror Statutory Instruments 2017 No. 943 Merchant Shipping, The Fishing Vessel (Codes of Practice) Regulations 2017. This amendment should be in respect of vessel owners' obligation to notify the MCA of any proposal to alter or modify a vessel's structure, remove or reposition engines or machinery or change the mode of fishing. Include in its new legislation introducing stability criteria for all new and substantially modified vessels, a requirement for this to be validated by a 5-yearly lightship check.	

Partially accepted - action planned: 31 August 2021

CV30

Report number: 7/2019

Commercial racing yacht

Accident date: 18/11/2017

Fatal man overboard approximately 1500nm west of Fremantle, Australia

№	Recommendation(s) to:	British Standards Institute Committee

2019/110 Review and amend ISO 12401 and ISO 15085 at the earliest opportunity in light of lessons learned from this accident to:

- Ensure the danger of snagging of tether hooks is highlighted and suitable precautions are taken for terminating jackstays.
- Clarify that the ISO 12401 standard test assumes that the tether is loaded longitudinally and that the hook must be free to rotate to align with the load, and lateral loading of the hook must be avoided.
- Clarify what force should be applied during an accidental hook opening test.
- Consider including a requirement for a tether overload indicator.

Appropriate action planned: 31 December 2023

№	Recommendation(s) to:	World Sailing

2019/111 Raise awareness of the dangers of laterally loading safety tether hooks, including consideration of suitable amendments to World Sailing's Offshore Special Regulations.

Appropriate action implemented

Kuzma Minin

Report number: 11/2019

Bulk carrier

Accident date: 18/12/2018

Grounding in Falmouth Bay, England

№	Recommendation(s) to:	JSC Murmansk Shipping Company

2019/117 Take steps to ensure that its vessels are adequately resourced to operate safely and in accordance with international conventions, taking into account the potential consequences of vessels having insufficient fuel and oils, and the statutory requirement to maintain P&I insurance.

Withdrawn

MAIB comment: JSC Murmansk Shipping Company was declared bankrupt in October 2020 and is no longer trading.

Sea Mist

Report number: 14/2019

Creel boat (BF918)

Accident date: 27/3/2019

Fatal man overboard off Macduff, Scotland

№	Recommendation(s) to:	Fishing Industry Safety Group Co-ordination Group
2019/119	Evaluate and, as appropriate, revise the safety guidance for single-handed fishermen provided by the MCA and Seafish to ensure that it remains fit for purpose and readily available to fishermen.	**Appropriate action implemented**
2019/120	Take action to improve the promulgation of the available safety guidance and safety lessons to single-handed fishermen.	**Appropriate action implemented**

Millgarth

Report number: 15/2019

Tug

Accident date: 27/1/2019

Fatal accident while boarding at the north oil stage at Tranmere Oil Terminal, Birkenhead, England

№	Recommendation(s) to:	Essar Oil UK Limited
2019/124	Ensure that a thorough assessment of site-specifc risks, leading to an agreed procedure, is completed for all locations where tugs provide their services. Where shared risks are identifed, work jointly with the tug owners and operators to achieve this.	**Appropriate action implemented**

2018 Recommendations - Progress Report*

*Status as of 21 May 2021

Saga Sky/Stema Barge II

Report number: 3/2018

General cargo vessel/rock carrying barge

Accident date: 20/11/2016

Collision resulting in damage to subsea power cables off the Kent coast, England

№	Recommendation(s) to:	Maritime and Coastguard Agency
2018/104	Commission a study to review the full range of emergency response assets available in the Dover Strait area, including a reassessment of the need for a dedicated emergency towing capability.	

Appropriate action implemented

CMA CGM Centaurus

Report number: 17/2018

Container vessel

Accident date: 4/5/2017

Heavy contact with the quay and two shore cranes at the Port of Jebel Ali, United Arab Emirates

№	Recommendation(s) to:	DP World UAE Region
2018/127	Review and improve its management of pilotage and berthing operations in respect of large container ship movements within the port of Jebel Ali, with particular regard to the following: • Development of approved pilotage and manoeuvring plans, including optimum use of tugs and ensuring ships do not commit to the buoyed channel until completion of a detailed and effective master/pilot information exchange. • Provision of approved pilotage and manoeuvring plans to a visiting ship as soon as practicable prior to the pilot boarding. • Provision of Bridge Resource Management training specifically tailored to meet the needs of pilots. • Removal of Key Performance Indicators that potentially create inappropriate performance bias towards efficiency against safety.	

Partially accepted - action implemented

MAIB comment: Most of the actions recommended were accepted and have been implemented; however, DP World UAE Region considered it impractical to provide pilotage and manoeuvring plans to visiting ships prior to pilots boarding.

2017 Recommendations - Progress Report*

*Status as of 21 May 2021

CV21

Report number: 7/2017

Commercial racing yacht

Accident dates: 4/9/2015 and 1/4/2016

Combined report on the investigations of the fatal accident while 122nm west of Porto, Portugal on 4 September 2015 and the fatal person overboard in the mid-Pacific Ocean on 1 April 2016

№	Recommendation(s) to:	Royal Yachting Association/World Sailing/British Marine

2017/109 Work together to develop and promulgate detailed advice on the use and limitations of different rope types commonly used, including HMPE, in order to inform recreational and professional yachtsmen and encourage them to consider carefully the type of rope used for specific tasks on board their vessels.

RYA: Appropriate action implemented

World Sailing: Appropriate action implemented

British Marine: Appropriate action planned: No date given

MAIB comment: Implementation project delayed due to impact of COVID-19 restrictions and Brexit workloads.

Osprey/Osprey II

Report number: 10/2017

RIBs

Accident date: 19/7/2016

Collision between two rigid inflatable boats resulting in serious injuries to one passenger on Firth of Forth, Scotland

№	Recommendation(s) to:	Maritime and Coastguard Agency

2017/115 Include in its forthcoming Recreational Craft Code with respect to commercially operated passenger carrying RIBs:

- A requirement for the certificated maximum number of passengers to be limited to the number of suitable seats designated for passengers.
- Guidance on its interpretation of "suitable" with respect to passenger seating.
- A requirement for passengers not to be seated on a RIB's inflatable tubes unless otherwise authorised by the Certifying Authority and endorsed on the RIB's compliance certificate with specified conditions to be met for a particular activity.

Appropriate action planned: 30 March 2022

Zarga

Report number: 13/2017

LNG carrier

Accident date: 2/3/2015

Failure of a mooring line while alongside the South Hook Liquefied Natural Gas terminal, Milford Haven, Wales resulting in serious injury to an officer

№	Recommendation(s) to:	Bridon International Ltd

2017/117 Review and enhance its guidance and instructions for the monitoring, maintenance and discard of HMSF mooring ropes, and bring this to the attention of its customers. The revised guidance should emphasise the importance of:

- Deck fitting and rope D:d ratios.
- Applying appropriate safety factors for given applications.
- Understanding the causes of kinking and the potential impact of axial compression fatigue on the working life of HMSF rope.
- Rope fibre examination and testing as part of the assessment of fibre fatigue degradation and discard.

Appropriate action implemented

Typhoon Clipper/Alison

Report number: 24/2017

High speed passenger catamaran/workboat

Accident date: 5/12/2016

Collision between the high speed passenger catamaran *Typhoon Clipper* and the workboat *Alison* adjacent to Tower Millennium Pier, River Thames, London, England

№	Recommendation(s) to:	Port of London Authority

2017/147 Review and, as necessary, clarify the application of:

- General Direction 28 requiring posting of a lookout or a suitable technical means of maintaining an effective lookout in any vessel with limited visibility.
- Byelaw 43 requiring the use of sound signals for vessels intending to enter the fairway; this should include consideration of vessels departing from a pier.

Appropriate action implemented

Nortrader

Report number: 26/2017

General cargo vessel

Accident date: 13/1/2017

Explosion of gas released from a cargo of unprocessed incinerator bottom ash while at anchorage in Plymouth Sound, England

№	Recommendation(s) to:	Maritime and Coastguard Agency
2017/154	Update The Merchant Shipping (Carriage of Cargoes) Regulations 1999 with appropriate references to the IMSBC Code.	

Appropriate action planned: 31 December 2022

2016 Recommendations - Progress Report*

*Status as of 21 May 2021

JMT

Report number: 15/2016

Fishing vessel (M99)

Accident date: 9/07/2015

Capsize and foundering of a small fishing vessel resulting in two fatalities 3.8nm off Rame Head, English Channel

№	Recommendation(s) to:	Maritime and Coastguard Agency
2016/130	Include in its intended new legislation introducing stability criteria for all new and significantly modified decked fishing vessels of under 15m in length a requirement for the stability of new open decked vessels, and all existing vessels of under 15m to be marked using the Wolfson Method or assessed by use of another acceptable method.	

Appropriate action planned: 31 August 2021

2016/131 Require skippers of under 16.5m fishing vessels to complete stability awareness training.

Appropriate action planned: 30 August 2022

2015 Recommendations - Progress Report*

*Status as of 21 May 2021

Cheeki Rafiki

Report number: 8/2015

Sailing yacht

Accident date: 16/5/2014

Loss of a yacht and its four crew in the Atlantic Ocean, approximately 720 miles east-south-east of Nova Scotia, Canada

№	Recommendation(s) to:	British Marine Federation[10]

2015/117 Co-operate with certifying authorities, manufacturers and repairers with the aim of developing best practice industry-wide guidance on the inspection and repair of yachts where a GRP matrix and hull have been bonded together.

Appropriate action planned: No date given

MAIB comment: **A stakeholder group has been established and it has been set a target date of December 2021 to deliver a draft framework of the guidance.**

№	Recommendation(s) to:	Maritime and Coastguard Agency

2015/120 Include in the SCV Code a requirement that vessels operating commercially under ISAF[11] OSR should undergo a full inspection to the extent otherwise required for vessels complying with the SCV Code.

Appropriate action planned: 30 March 2022

Stella Maris

Report number: 29/2015

Fishing vessel (HL705)

Accident date: 28/7/2014

Capsize and foundering 14 miles east of Sunderland, England

№	Recommendation(s) to:	Maritime and Coastguard Agency

2015/165 Introduce intact stability criteria for all new and significantly modified decked fishing vessels of under 15m in length.

Appropriate action planned: 31 August 2021

[10] British Marine Federation now known as British Marine.

[11] International Sailing Federation (ISAF) is now known as World Sailing

№	Recommendation(s) to:	Maritime and Coastguard Agency/Marine Management Organisation
2015/171	Work together to ensure European Commission funded modifications are fully reviewed for their impact on vessel stability and safety by agreeing the remit of such reviews and setting realistic target times to enable such co-operation.	

MCA:Appropriate action implemented

MMO: Appropriate action implemented

2014 Recommendations - Progress Report

There are no outstanding recommendations for 2014.

2013 Recommendations - Progress Report*

*Status as of 21 May 2021

Purbeck Isle

Report number: 7/2013

Fishing vessel (PH 104)

Accident date: 17/5/2012

Foundering 9 miles south of Portland Bill with the loss of three lives

№	Recommendation(s) to:	Maritime and Coastguard Agency
2013/204	Align its hull survey requirements for fishing vessels of <15m length overall with those applied to workboats under the *Harmonised Small Commercial Vessels Code*.	

Appropriate action planned: 31 August 2021

Sarah Jayne

Report number: 13/2013

Fishing vessel (BM 249)

Accident date: 11/9/2012

Capsize and foundering 6nm east of Berry Head, Brixham, England resulting in the loss of one life

№	Recommendation(s) to: Maritime and Coastguard Agency
2013/213	As part of its intended development of new standards for small fishing vessels, review and include additional design and operational requirements as necessary to ensure that a vessel engaged in bulk fishing remains seaworthy throughout its intended loading procedure. Specific hazards that should be addressed include: • The increased risk of capsize from swamping if freeing ports are closed. • The risk of downflooding if flush deck scuttles and fish hold hatch covers are opened at sea.

Appropriate action planned: 31 August 2021

Vixen

Report number: 16/2013

Passenger ferry

Accident date: 19/9/2012

Foundering in Ardlui Marina, Loch Lomond, Scotland

№	Recommendation(s) to: Stirling Council/West Dunbartonshire Council
2013/216	Take action to: • Establish a boat licensing system for inland waters falling under the Council's area of responsibility and which adopts the Inland Waters Small Passenger Boat Code as the standard applied for small passenger boats carrying fewer than 12 passengers on its categorised waters. • Require such boats to be regularly surveyed by a competent person employed by a Certifying Authority or similar organisation as may be recommended by the Maritime and Coastguard Agency.

Stirling Council: Appropriate action planned: No date given

West Dunbartonshire Council: Appropriate action implemented

MAIB comment: A proposed licensing regime for boat hirers was developed by Stirling, Argyll & Bute and West Dumbartonshire Councils in 2014 that, if approved, was intended to be applied consistently by the three local authorities. It is disappointing that Stirling Council has yet to introduce a boat licensing system for inland waters falling under the Council's area of responsibility, particularly given that Argyll & Bute and West Dunbartonshire Councils have fully implemented the intent of the recommendations made in the *Vixen* report.

2012 to 2010 Recommendations - Progress Report

There are no outstanding recommendations for 2012, 2011 and 2010.

2009 Recommendations - Progress Report*

*Status as of 21 May 2021

Celtic Pioneer

Report number: 11/2009

RIB

Accident date: 26/8/2008

Injury to a passenger during a boat trip in the Bristol Channel, England

№	Recommendation(s) to:	Maritime and Coastguard Agency
2009/126	Review and revise the deck manning and qualification requirements of the harmonised SCV Code taking into account the speed of craft and the type of activity intended in addition to the distance from shore and environmental conditions.	

Appropriate action planned: 30 March 2022

MAIB comment: The implementation of this recommendation was delayed due to a change in strategy for the regulation of small commercial vessels: the first draft SI is currently being processed.

Abigail H

Report number: 15/2009

Grab hopper dredger

Accident date: 2/11/2008

Flooding and foundering in the Port of Heysham, England

№	Recommendation(s) to:	Maritime and Coastguard Agency
2009/141	Introduce a mandatory requirement, for all vessels greater than 24m length and less than 500 gross tons, for the fitting of bilge alarms in engine rooms and other substantial compartments that could threaten the vessel's buoyancy and stability if flooded. These, and any other emergency alarms, should sound in all accommodation spaces when the central control station is unmanned. In addition to functioning in the vessel's normal operational modes, alarms should be capable of operating when main power supplies are shut down, and be able to wake sleeping crew in sufficient time for them to react appropriately.	

Appropriate action planned: 30 June 2021

2008 Recommendations - Progress Report*

*Status as of 21 May 2021

Fishing Vessel Safety Study

Analysis of UK Fishing Vessel Safety 1992 to 2006

№	Recommendation(s) to:	Maritime and Coastguard Agency

2008/173 In developing its plan to address the unacceptably high fatality rate in the fishing industry, identified in its study of statistics for the years 1996 to 2005, in addition to delivering the actions outlined at 6.2, the MCA is recommended to consider the findings of this safety study, and in particular to:

- Clarify the requirement for risk assessments to include risks which imperil the vessel such as: environmental hazards; condition of the vessel; stability etc.
- Work towards progressively aligning the requirements of the *Small Fishing Vessel Code*, with the higher safety standards applicable under the Workboat Code.
- Clarify the requirements of *The Merchant Shipping and Fishing Vessels (Health and Safety at Work) Regulations 1997* to ensure that they apply in respect of all fishermen on board fishing vessels, irrespective of their contractual status.
- Ensure that the current mandatory training requirements for fishermen are strictly applied.
- Introduce a requirement for under 15m vessels to carry EPIRBs.
- Review international safety initiatives and transfer best practice to the UK fishing industry with particular reference to the use of PFDs and Personal Locator Beacons.
- Conduct research on the apparent improvement in safety in other hazardous industry sectors, such as agriculture, construction and offshore, with the objective of identifying and transferring best safety practice from those industries to the fishing industry.

Appropriate action planned: 31 August 2021

PART 3: STATISTICS

For details of reporting requirements and terms used in this section please see the annex - Statistics Coverage on page 68 and the glossary on page 74.

Table 1: Loss of life in 2020 reported to the MAIB

Date	Name of vessel	Type of vessel	Location	Accident description
Merchant vessels 100gt and over				
None reported to the MAIB in 2020				
Merchant vessels under 100gt (including commercial recreational)				
18 Feb	*Beinn Na Caillich*	Fish farm workboat	Loch Alsh, Scottish Highlands	Fatal accident to a fish farm worker while transiting between a vessel and a barge.
22 Aug	*Seadogz*	High speed passenger craft	The Solent, England	A high speed passenger craft hit a buoy, resulting in one fatality.
19 Aug	*Diamond Emblem 1*	Motor cruiser	River Bure, Great Yarmouth, England	Fatal person overboard from inland waterway cruiser.
28 Aug	Unknown	Inflatable dinghy used in cockling	Dee Estuary, Wales	A fatal incident in which a crew member fell overboard after dinghy grounded on a sandbank.
15 Sep	*Acapulco*	Motorboat	Great Yarmouth, England	A passenger onboard a river cruiser fell overboard and was fatally injured by the propeller.
Fishing vessels				
21 Nov	*Joanna C* (BM 265)	Fishing vessel	Off the coast of Beachy Head, England	Capsized and sank with three crew on board. One crew member was found alive, but two certified deceased.
Recreational craft (excluding commercial recreational)				
25 May	*Norma G*	Motor cruiser	The Doom Bar, River Camel, England	A motor cruiser with four persons onboard capsized. One person was trapped on board, the person was rescued but died later that day.
31 May	*Globetrotter*	Ex-fishing vessel	Off the coast of Fleetwood, England	A recreational craft grounded, began taking on water and subsequently sank, resulting in one fatality.
09 Jul	*Miss Adventure*	Sailing yacht	North end of Loch Ness, Scotland	Two persons went overboard from yacht. One was recovered and one is still missing.
08 Aug	*Rib Tickler*	Rigid Inflatable Boat	North side of the Menai Bridge, Menai Strait, Wales	A Personal Watercraft collided with a RIB, fatally injuring one person on board the RIB.

Date	Name of vessel	Type of vessel	Location	Accident description
Recreational craft (excluding commercial recreational) continued				
09 Aug	*September*	Sailing yacht	Off the coast of Papetoai, French Polynesia, Pacific Ocean	A British national was killed by a speedboat in French Polynesia, whilst snorkelling from a UK sailing yacht.
06 Sep	*Lola*	Motorboat	River Chet, East of Loddon, England	Fatal person overboard while boarding a vessel.
18 Sep	*Heather*	Sail boat	River Tamar, between Torpoint and Devonport, England	Presumed person overboard after a boat owner was found deceased in the water and a capsized tender was located upriver.
27 Sep	Unknown	Motorboat	Snipe Loch, Ayr, Scotland	A motor dinghy capsized resulting in one fatality.

Image: Wreckage found after the grounding of *Globetrotter*

Table 2: Merchant vessel total losses

Date	Name of vessel	Type of vessel	loa	Casualty event
There were no losses of UK merchant vessels >= 100gt reported to the MAIB in 2020				

Table 3: Merchant vessel losses — 2011-2020

	Number lost	UK fleet size	Gross tonnage lost
2011	-	1 521	-
2012	-	1 450	-
2013	-	1 392	-
2014	-	1 361	-
2015	-	1 385	-
2016	-	1 365	-
2017	-	1 356	-
2018	-	1 332	-
2019	-	929	-
2020	**-**	**1 242**	**-**

Table 4: Merchant vessels in casualties by nature of casualty and vessel category[12]

	Liquid cargo ship	Solid cargo ship	Passenger ship	Service ship	Commercial recreational	**Total**
Collision	-	3	3	7	-	**13**
Contact	-	-	5	1	-	**6**
Fire/explosion	1	-	1	3	-	**5**
Flooding/foundering	-	1	-	-	-	**1**
Grounding	-	7	1	10	1	**19**
Machinery	1	3	5	5	-	**14**
Total	**2**	**14**	**15**	**26**	**1**	**58[13]**

Table 5: Deaths and injuries to merchant vessel crew — 2011-2020[14]

	Number of crew injured	Of which resulted in death
2011	185	5
2012	186	3
2013	134	1
2014	142	-
2015	141	2
2016	133	2
2017	153	-
2018	114	-
2019	105	3
2020	**78**	**-**

[12] Vessel groups include vessels operating on inland waterways.0

[13] 58 casualties represents a rate of 47 casualties per 1 000 vessels on the UK Fleet.

[14] From 2012 to 2019 this table excludes injuries/fatalities that were not in connection with the operation of a ship.

Table 6: Deaths and injuries of merchant vessel crew by rank

Rank/specialism	Number of crew
Chief engineer officer	2
Chief mate	1
Officer, deck	1
Officer, engineering	3
Rating	1
Hotel service staff	3
Other crew member	67
Total	**78**

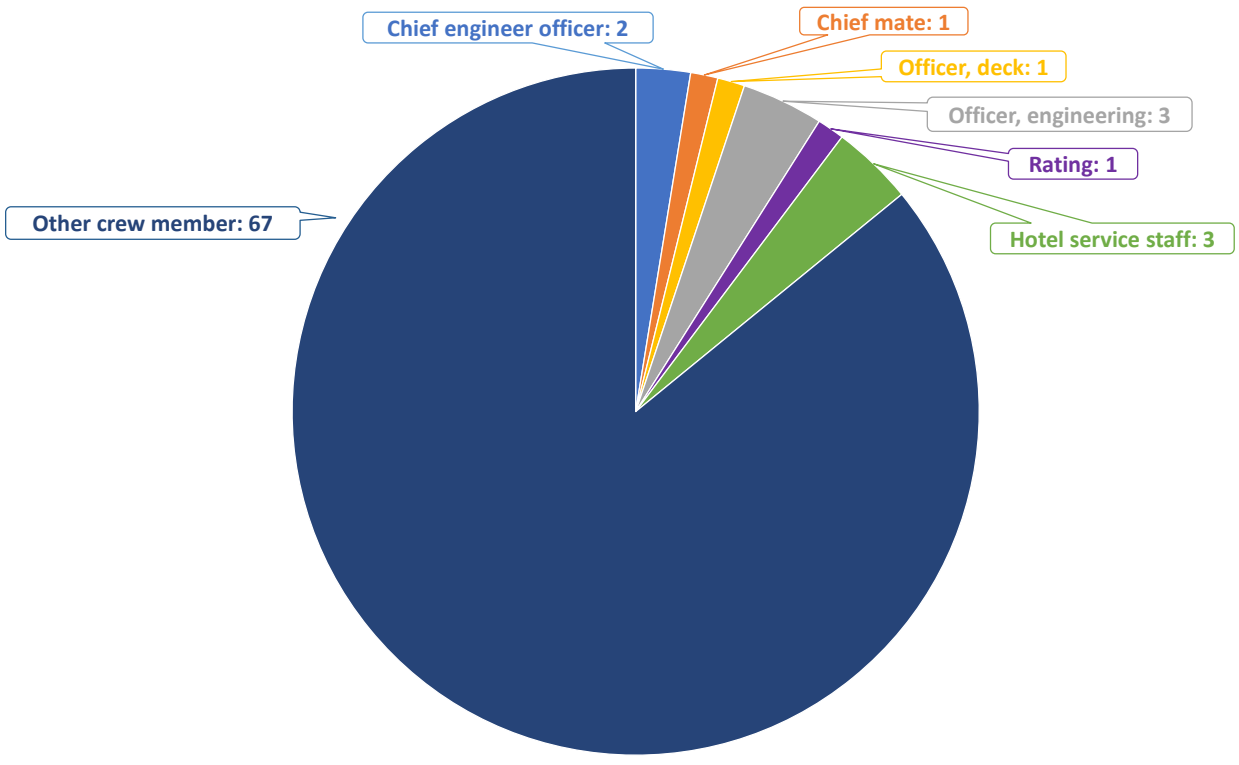


Chart 6

Table 7: Deaths and injuries of merchant vessel crew by place

Place	Number of crew
Accommodation	
Bathroom, shower, toilet	3
Cabin space - crew	2
Cabin space - passengers	1
Galley spaces	7
Gymnasium	1
Laundry	1
Provision room	1
Restaurant/bar	1
Stairway/ladders	8
Theatre	1
Other	5

Place	Number of crew
Cargo and tank areas	
Closed deck cargo space	1
Ro-ro vehicle deck ramp	1
Vehicle cargo space	1
Engine department	
Engine room	7
Workshop/stores	1

Place	Number of crew
Ship	
Deck	20
Stairs/ladders	5
Other	9
Other	
Over side	1
Unknown	1
Total	**78**

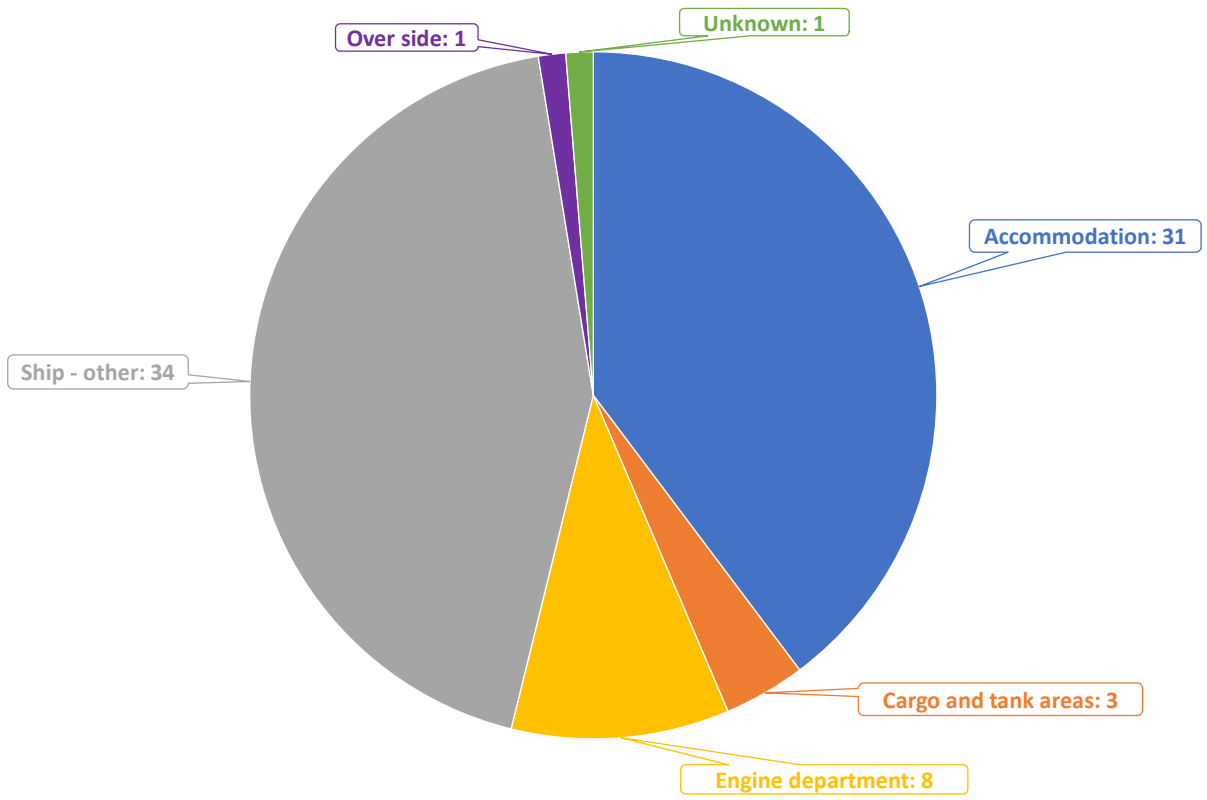
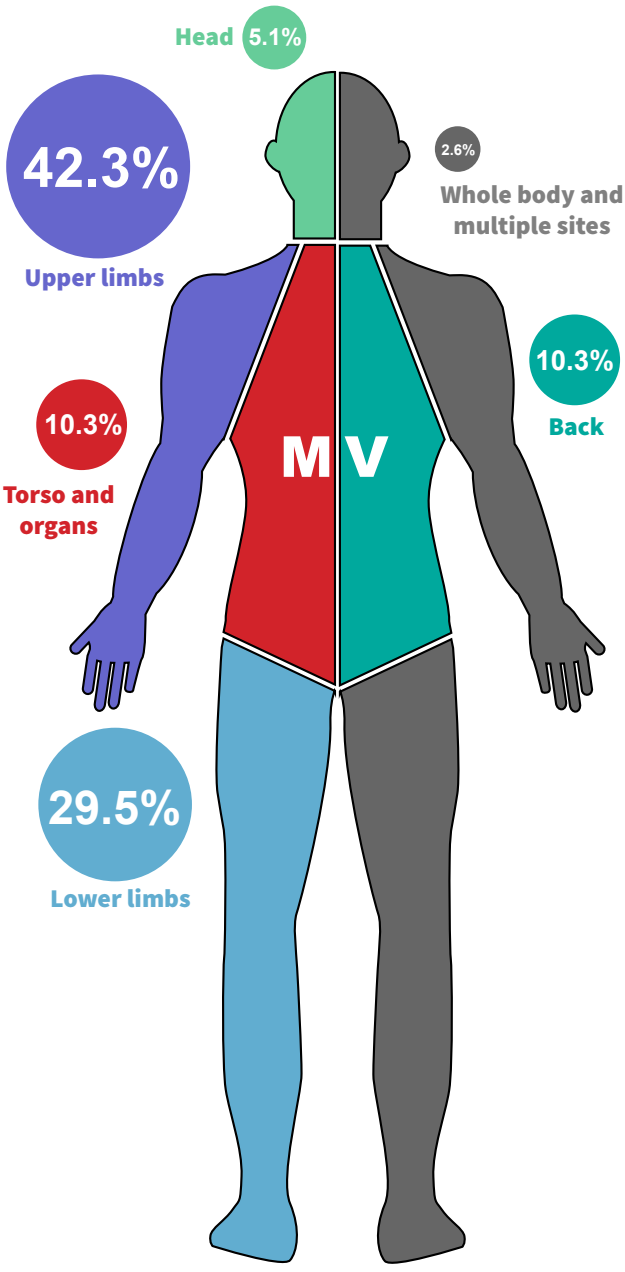


Chart 7

Table 8: Deaths and injuries of merchant vessel crew by part of body injured

Part of body injured	Number of crew
Whole body and multiple sites	
Whole body (systemic effects)	2
Head	
Eye(s)	1
Head, brain and cranial nerves and vessels	2
Head, other	1
Upper limbs	
Finger(s)	9
Hand	3
Wrist	9
Arm, including elbow	6
Shoulder and shoulder joints	6
Back	
Back, including spine and vertebrae in the back	8
Torso and organs	
Rib cage, ribs including joints and shoulder blade	8
Lower limbs	
Toe(s)	1
Foot	4
Ankle	9
Leg, including knee	8
Lower extremities, other parts not mentioned above	1
Total	**78**



Note: Percentages may not add up to 100% due to rounding

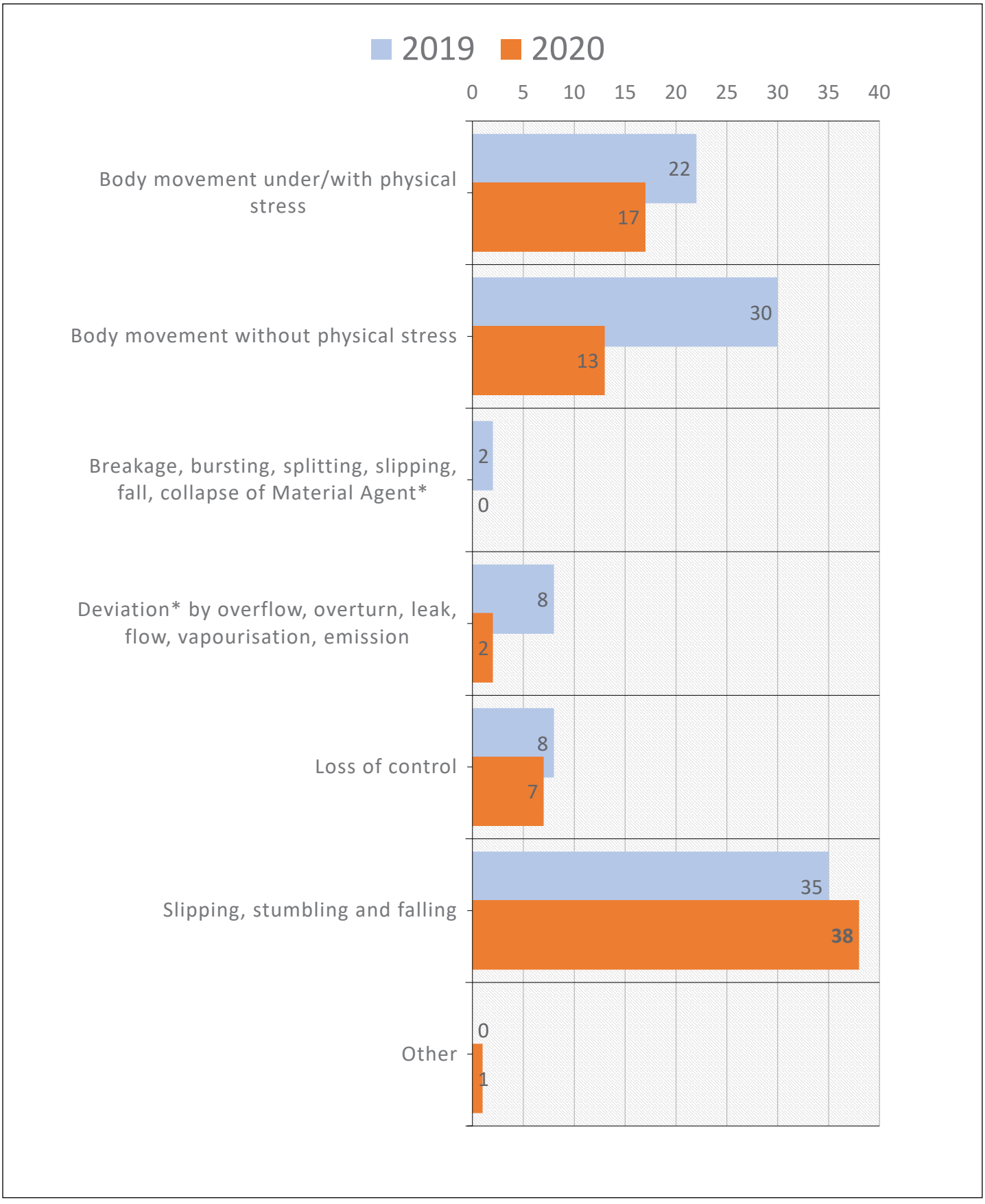
Chart 8

Table 9: Deaths and injuries of merchant vessel crew by deviation*

Deviation*		Number of crew
Body movement under or with physical stress (generally leading to an internal injury)	Lifting, carrying, standing up	8
	Pushing, pulling	2
	Putting down, bending down	1
	Treading badly, twisting leg or ankle, slipping without falling	3
	Other	3
Body movement without any physical stress (generally leading to an external injury)	Being caught or carried away, by something or by momentum	9
	Uncoordinated movements, spurious or untimely actions	3
	Other	1
Deviation* by overflow, overturn, leak, flow, vaporisation, emission	Liquid state - leaking, oozing, flowing, splashing, spraying	2
Loss of control (total or partial) of machine, means of transport or handling equipment, handheld tool, object, animal	Of means of transport or handling equipment, (motorised or not)	1
	Of object (being carried, moved, handled, etc.)	2
	Of hand-held tool (motorised or not) or of the material being worked by the tool	2
	Of machine (including unwanted start-up) or of the material being worked by the machine	1
	Other	1
Slipping - stumbling and falling - fall of persons	Fall of person - to a lower level	14
	Fall overboard of person	1
	Fall of person - on the same level	23
Other		1
	Total	**78**

*See "Terms" on page 75

Chart 9: Deaths and injuries of merchant vessel crew by deviation*



*See "Terms" on page 75

Table 10: Deaths and injuries of merchant vessel crew by type of injury

Main injury		Number of crew
Bone fractures	Closed fractures	34
Burns, scalds and frostbites	Burns and scalds (thermal)	2
	Chemical burns (corrosions)	1
Concussion and internal injuries	Concussion and intracranial injuries	1
Dislocations, sprains and strains	Dislocations and subluxations*	6
	Sprains and strains	21
Wounds and superficial injuries*	Open wounds	6
	Superficial injuries*	2
Traumatic amputations (loss of body parts)		1
Multiple injuries		1
Other specified injuries not included under other headings		1
Unknown or unspecified		2
Total		**78**

*See "Terms" on page 75

Table 11: Deaths and injuries to passengers — 2011-2020[15]

	Number of injured passengers	Of which resulted in death
2011	109	1
2012	50	-
2013	46	-
2014	56	1
2015	55	1
2016	51	1
2017	26	-
2018	81	-
2019	107	-
2020	**25**	**-**

Table 12: Deaths and injuries of passengers by type of injury

Main injury		**Number of passengers**
Bone fractures	Closed fractures	23
	Open fractures	1
Concussion and internal injuries		1
	Total	**25**

[15] From 2012 to 2019 this table excludes injuries/fatalities that were not in connection with the operation of a ship.

Table 13: Merchant vessels < 100gt — total losses

Date	Name of vessel	Type of vessel	loa	Casualty event
21 Sep	*Dawn Run*	Motorboat	8.53m	Foundering
1 Aug	*Kerry**	Motorboat	9.75m	Flooding

*Constructive total loss

Table 14: Merchant vessels < 100gt by nature of casualty and vessel category

	Solid cargo ship	Passenger ship	Recreational craft | Power	Recreational craft | Sail	Service ship | Tug (towing/pushing)	Service ship | Search and Rescue (SAR) craft	Service ship | Other	**Total**
Capsizing/listing	-	-	-	-	-	2	-	**2**
Collision	1	1	-	-	2	1	5	**10**
Contact	-	2	2	-	-	2	5	**11**
Fire/explosion	-	1	-	-	-	1	4	**6**
Flooding/foundering	1	-	6	-	-	-	1	**8**
Grounding	1	-	12	5	-	9	7	**34**
Machinery	-	4	9	3	2	2	6	**26**
Total per vessel type	**3**	**8**	**29**	**8**	**4**	**17**	**28**	**97**
Deaths	-	-	3	-	-	-	2	**5**
Injuries	4	2	12	6	6	3	8	**41**

There were 5 443 UK registered fishing vessels at the end of 2020. During 2020, 165 casualties to vessels involving these vessels were reported to the MAIB. Figures in the following tables show casualties to vessels and injuries to crew involving UK registered vessels that were reported to the MAIB in 2020.

8 fishing vessels were reported lost (0.15% of the total fleet) and there were 2 fatalities to crew.

Table 15: Fishing vessel total losses by vessel length

Date	Name of vessel	Age	Gross tonnage	Casualty event
Under 15m length overall (loa)				
30 May	*J Sea*	8	38.00	Flooding
6 Sep	*Good Prospect**	37	7.50	Flooding
18 Sep	*Kingfisher*	29	12.70	Grounding
20 Oct	*Ocean Echoes**	10	0.92	Capsizing
8 Nov	*Achieve*	23	13.34	Collision
15 Nov	*Carisma*	17	5.32	Foundering
21 Nov	*Joanna C*	40	28.58	Capsizing
15m length overall - under 24m registered length (reg)				
16 Aug	*Diamond D*	47	48.00	Capsizing
Over 24m registered length (reg)				
There were no losses reported to the MAIB in 2020				

*Constructive total loss

Table 16: Fishing vessel losses — 2011-2020[16]

	Under 15m loa	15m loa to <24m reg	24m reg and over	Total lost	UK registered	% lost
2011	17	7	-	24	5 974	**0.40**
2012	5	4	-	9	5 834	**0.15**
2013	15	3	-	18	5 774	**0.31**
2014	9	3	-	12	5 715	**0.21**
2015	8	5	-	13	5 746	**0.23**
2016	5	2	1	8	5 745	**0.14**
2017	5	1	-	6	5 700	**0.11**
2018	8	-	-	8	5 603	**0.14**
2019	2	2	1	5	5 484	**0.09**
2020	**7**	**1**	**-**	**8**	**5 443**	**0.15**

Table 17: Fishing vessels in casualties — by nature of casualty

	Number of vessels involved	Incident rate per 1 000 vessels at risk (to one decimal place[17])
Capsizing/listing	3	0.6
Collision	10	1.8
Contact	3	0.6
Fire/explosion	8	1.5
Flooding/foundering	9	1.7
Grounding	15	2.8
Machinery	117	21.5
Total	**165**	**30.3**

[16] From 2012 to 2019 this table excludes injuries/fatalities that were not in connection with the operation of a ship.

[17] Rates may not add up due to rounding.

Table 18: Fishing vessels in casualties — by nature of casualty and by length range

	Number of vessels involved	Incident rate per 1 000 vessels at risk (to one decimal place[18])
Under 15m length overall (loa) — ***vessels at risk: 4 877***		
Capsizing/listing	2	0.4
Collision	4	0.8
Contact	2	0.4
Fire/explosion	5	1.0
Flooding/foundering	4	0.8
Grounding	12	2.5
Machinery	83	17.0
Total under 15m	**112**	**23.0**
15m loa - 24m registered length (reg) — ***vessels at risk: 437***		
Capsizing/listing	1	2.3
Collision	5	11.4
Contact	1	2.3
Fire/explosion	2	4.6
Flooding/foundering	4	9.2
Grounding	3	6.9
Machinery	30	68.6
Total 15m to 24m	**46**	**105.3**
24m reg and over — ***vessels at risk: 129***		
Collision	1	7.8
Fire/explosion	1	7.8
Flooding/foundering	1	7.8
Machinery	4	31.0
Total 24m or more	**7**	**54.3**
Fleet total[19]	**165**	**30.3**

[18] Rates may not add up due to rounding

[19] Total number of UK registered fishing vessels: *5 443*

Table 19: Deaths and injuries to fishing vessel crew by type of injury

Main injury		Number of crew
Drowning and asphyxiation	"Drowning and non-fatal submersions"	2
Traumatic amputations (loss of body parts)		6
Bone fractures	Closed fractures	6
	Open fractures	1
Concussions and internal injuries	Concussion and intracranial injuries	9
	Internal injuries	3
Dislocations, sprains and strains	Dislocations and subluxations	1
	Sprains and strains	1
Effects of temperature extremes, light and radiation	Effects of reduced temperature	1
Poisonings and infections	Acute poisonings	2
Wounds and superficial* injuries	Open wounds	6
	Total	**38**

*See "Terms" on page 75

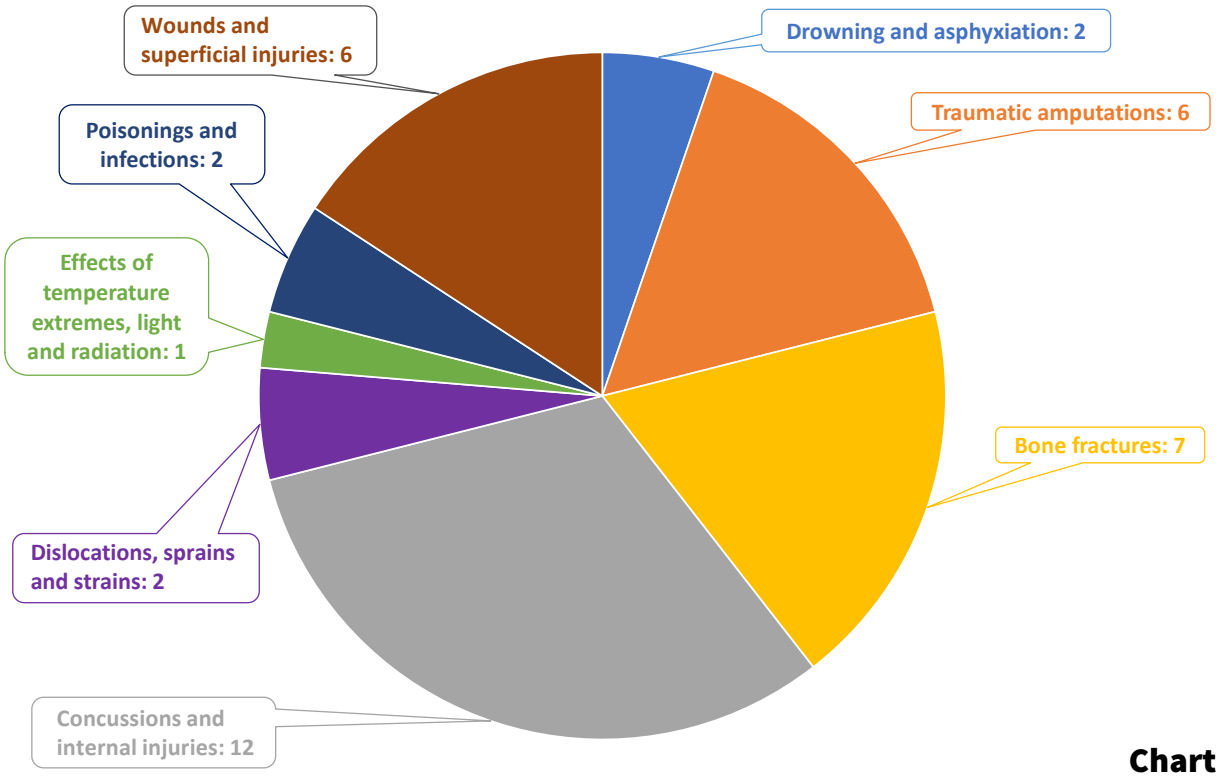
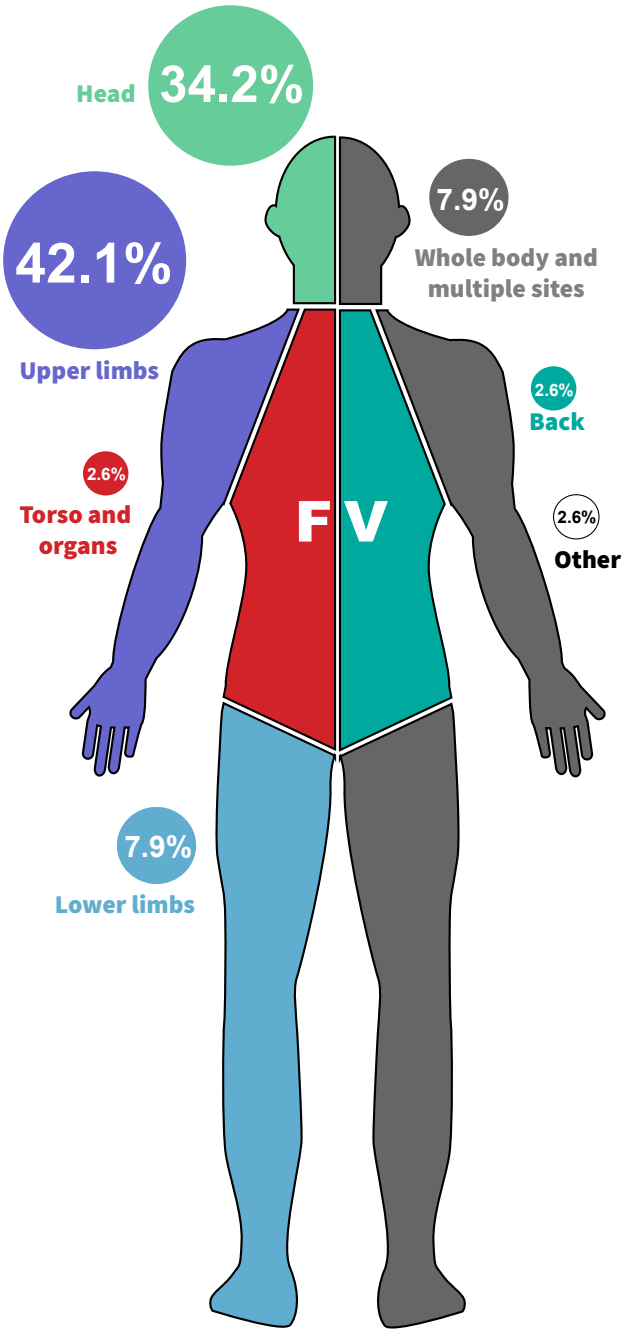


Chart 10

Table 20: Deaths and injuries to fishing vessel crew by part of body injured

Part of body injured	Number of crew
Whole body and multiple sites	
Whole body (systemic effects)	3
Head	
Eye(s)	4
Head, brain and cranial nerves and vessels	7
Head, multiple sites affected	2
Upper limbs	
Finger(s)	10
Hand	1
Wrist	1
Arm, including elbow	3
Shoulder and shoulder joints	1
Back	
Back, including spine and vertebrae in the back	1
Torso and organs	
Pelvic and abdominal area including organs	1
Lower limbs	
Leg, including knee	2
Ankle	1
Other	
Not specified	1
Total	**38**



Note: Percentages may not add up to 100% due to rounding

Chart 11

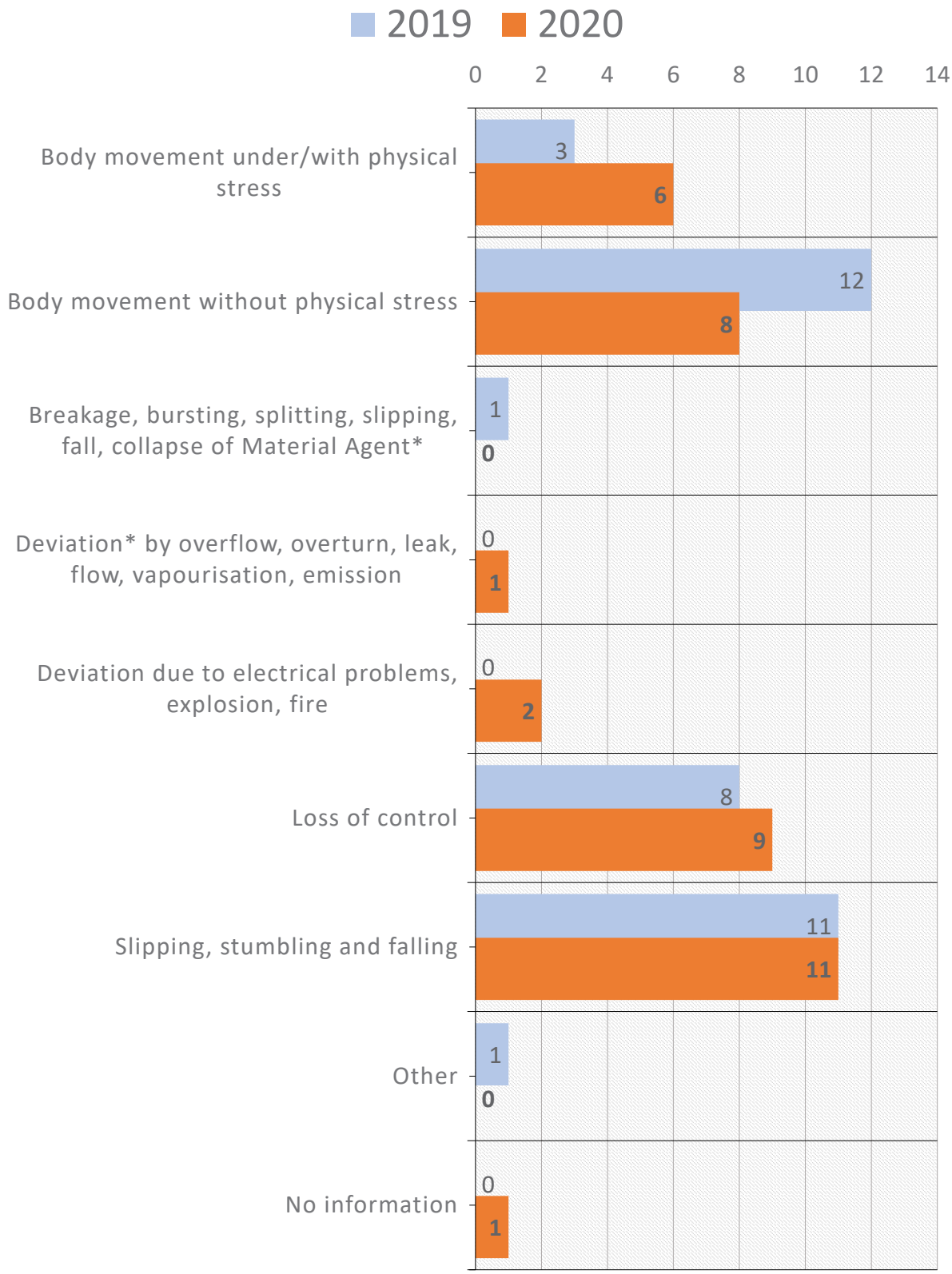
Table 21: Deaths and injuries of fishing vessel crew by deviation*

Deviation*		Number of crew
Body movement under or with physical stress (generally leading to an internal injury)	Pushing, pulling	3
	Twisting, turning	1
	Other	2
Body movement without any physical stress (generally leading to an external injury)	Being caught or carried away, by something or by momentum	7
	Uncoordinated movements, spurious or untimely actions	1
Deviation by overflow, overturn, leak, flow, vaporisation, emission	Liquid state - leaking, oozing, flowing, splashing, spraying	1
Deviation due to electrical problems, explosion, fire	Explosion	2
Loss of control (total or partial)	Of animal[20]	1
	Of means of transport or handling equipment, (motorised or not)	3
	Of object (being carried, moved, handled, etc.)	3
	Of hand-held tool (motorised or not) or of the material being worked by the tool	1
	Of machine (including unwanted start-up) or of the material being worked by the machine	1
Slipping - stumbling and falling - fall of persons	Fall of person - to a lower level	4
	Fall overboard of person	4
	Fall of person - on the same level	3
No information		1
	Total	**38**

*See "Terms" on page 75

[20] Crew member on fishing vessel suffered reaction to fish sting.

Chart 12: Deaths and injuries of fishing vessel crew by deviation*



*See "Terms" on page 75

Table 22: Deaths and injuries to fishing vessel crew by vessel length (of which, deaths shown in brackets) 2011-2020[21]

	Under 15m loa		15m loa - under 24m reg		24m reg and over		Total	
2011	20	(7)	27	(1)	11	-	58	(8)
2012	21	(4)	22	(2)	7	-	50	(6)
2013	13	(3)	13	(1)	7	-	33	(4)
2014	22	(5)	14	(3)	10	-	46	(8)
2015	10	(4)	17	(1)	8	(2)	35	(7)
2016	16	(7)	19	(2)	5	-	40	(9)
2017	13	(3)	8	(2)	11	-	32	(5)
2018	14	(4)	18	(1)	6	(1)	38	(6)
2019	12	(3)	18	(1)	6	(1)	36	(5)
2020	**12**	**(2)**	**16**	**-**	**10**	**-**	**38**	**(2)**

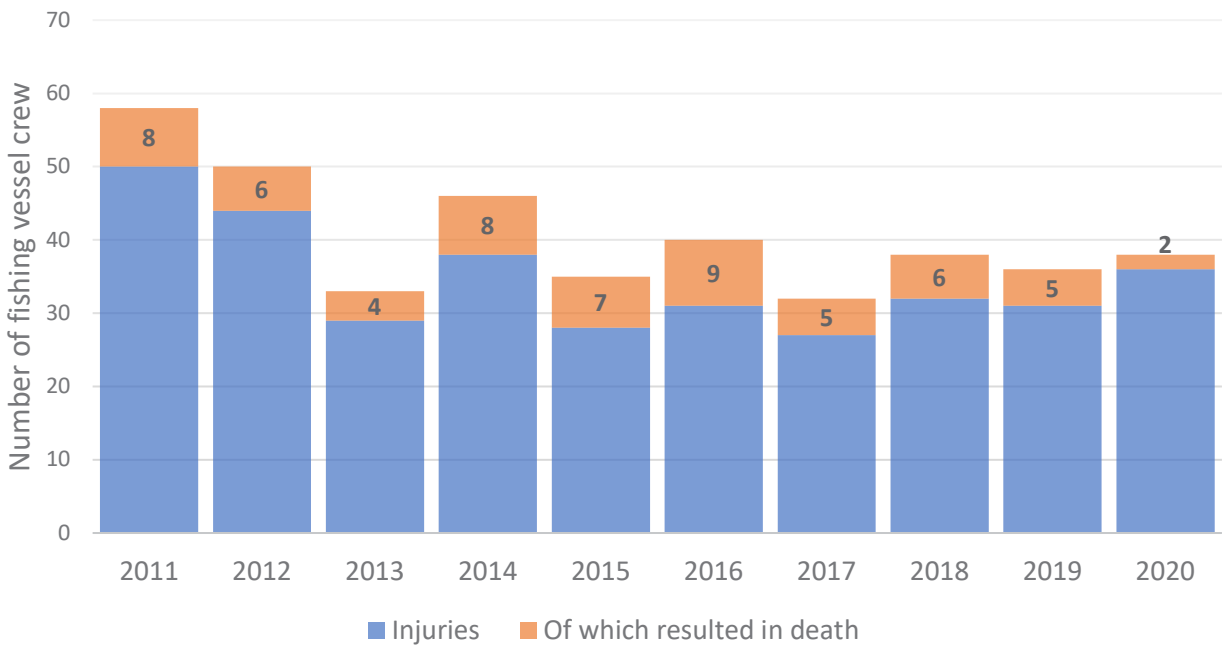


Chart 13

[21] From 2012 this table excludes injuries/fatalities that were not in connection with the operation of a ship.

Table 23: All non-UK commercial vessels total losses in UK waters

Date	Name of vessel	Type of vessel	Flag	loa	Casualty event
There were no losses of non-UK vessels in UK waters reported to the MAIB 2020.					

Table 24: All non-UK commercial vessels in UK waters — by vessel type and by nature of casualty

	Solid cargo ship	Liquid cargo ship	Passenger ship	Service ship	Fishing vessel	Recreational commercial	Total
Collision	11	6	1	5	-	-	**23**
Contact	7	-	2	-	-	-	**9**
Fire/explosion	2	-	2	-	-	-	**4**
Grounding	12	2	1	1	2	-	**18**
Machinery	12	2	3	3	4	-	**24**
Total per vessel type	**44**	**10**	**9**	**9**	**6**	**-**	**78**
Deaths	-	-	-	-	-	-	**-**
Injuries	6	5	7	4	5	1	**28**

ANNEX A - STATISTICS COVERAGE

1. Data is presented by the year in which the incident was reported to the MAIB. Historic data tables contain information from the past 10 years.
2. Not all historical data can be found in this report. Further data is contained in previous MAIB Annual Reports.
3. United Kingdom ships are required by the Merchant Shipping (Accident Reporting and Investigation) Regulations 2012[22] to report accidents to the MAIB.
4. Accidents are defined as being Marine Casualties or Marine Incidents, depending on the type of event(s) and the results of the event(s). See Casualty definitions (see Annex B on page 69) or MAIB's Regulations for more information.
5. Details of vessel types and groups used in this Annual Report can be found in Annex B - supporting information on page 72.
6. Non-UK flagged vessels are not required to report accidents to the MAIB unless they are within a UK port/harbour or within UK 12 mile territorial waters and carrying passengers to or from a UK port. However, the MAIB will record details of, and may investigate, significant accidents notified to us by bodies such as H.M. Coastguard.
7. The Maritime and Coastguard Agency, harbour authorities and inland waterway authorities have a duty to report accidents to the MAIB.
8. In addition to the above, the MAIB monitors news and other information sources for relevant accidents.

[22] https://www.gov.uk/government/organisations/marine-accident-investigation-branch/about#regulations-and-guidance

ANNEX B - SUPPORTING INFORMATION

Casualty definitions used by the UK MAIB - from 2012

Marine Casualty[23]

An event or sequence of events that has resulted in any of the following and has occurred directly by or in connection with the operation of a ship:

- the death of, or serious injury to, a person;
- the loss of a person from a ship;
- the loss, presumed loss or abandonment of a ship;
- material damage to a ship;
- the stranding or disabling of a ship, or the involvement of a ship in a collision;
- material damage to marine infrastructure external of a ship, that could seriously endanger the safety of the ship, another ship or any individual;
- pollution, or the potential for such pollution to the environment caused by damage to a ship or ships.

A Marine Casualty does not include a deliberate act or omission, with the intention to cause harm to the safety of a ship, an individual or the environment.

Each Marine Casualty is categorised as ONE of the following:

Very Serious Marine Casualty (VSMC)

Marine Casualty which involves total loss of the ship, loss of life, or severe pollution.

Serious Marine Casualty (SMC)

Marine Casualty where an event results in one of:

- immobilisation of main engines, extensive accommodation damage, severe structural damage, such as penetration of the hull underwater, etc., rendering the ship unfit to proceed;
- pollution;
- a breakdown necessitating towage or shore assistance.

Less Serious Marine Casualty (LSMC)

This term is used by MAIB to describe any Marine Casualty that does not qualify as a VSMC or a SMC.

Marine Incident (MI)

A Marine Incident is an event or sequence of events other than those listed above which has occurred directly in connection with the operation of a ship that endangered, or if not corrected would endanger the safety of a ship, its occupants or any other person or the environment (e.g. close quarters situations are Marine Incidents).

Accident

Under current Regulations[6] Accident means any Marine Casualty or Marine Incident. In historic data, Accident had a specific meaning, broadly equivalent to (but not identical to) Marine Casualty.

Operation of a ship

To qualify as a Marine Casualty an event/injury etc must be in connection with the operation of the ship on which it occurs. MAIB's interpretation of this includes any "normal" activities which take place on board the vessel (e.g. a chef who cuts himself while preparing food is considered in connection with the operation of the ship).

[23] http://www.legislation.gov.uk/uksi/2012/1743/regulation/3/made

Changes to UK MAIB Casualty Event Definitions - with introduction of EU Directive 2009/18/EC1 (the Directive).

Collisions/Contacts – Until 2012 the UK defined a collision as a vessel making contact with another vessel that was subject to the collision regulations, after 2012 a collision is any contact between two vessels, i.e.

Until 2012

Collision - vessel hits another vessel that is underway, floating freely or is anchored.

Contact - vessel hits an object that is not subject to the collision regulations e.g. buoy, post, dock, floating logs, containers etc. Also another ship if it is tied up alongside. In order to qualify as the equivalent of a Marine Casualty the contact must have resulted in damage.

From 2013

Collision - a casualty caused by ships striking or being struck by another ship, regardless of whether the ships are underway, anchored or moored.

This type of casualty event does not include ships striking underwater wrecks. The collision can be with other ship or with multiple ships or ship not underway.

Contact - a casualty caused by ships striking or being struck by an external object. The objects can be: floating object (cargo, ice, other or unknown); fixed object, but not the sea bottom; or flying object.

Injury - The **EU** requires injuries to be reported if they are "3 day" injuries. This is described in more detail in section 4.2 of the European Statistics on Accidents at Work (ESAW) Summary methodology[24] (Note that in this context the term "Accident" means an injury.)

"Accidents at work with more than three calendar days' absence from work. Only full calendar days of absence from work have to be considered, excluding the day of the accident. Consequently, 'more than three calendar days' means 'at least four calendar days', which implies that only if the victim resumes work on the fifth (or subsequent) working day after the date on which the accident occurred should the incident be included."

UK injury data also includes "serious" injuries. In addition to "3 day" injuries these are:

- any fracture, other than to a finger, thumb or toe;
- any loss of a limb or part of a limb;
- dislocation of the shoulder, hip, knee or spine;
- loss of sight, whether temporary or permanent;
- penetrating injury to the eye;
- any other injury -
  - leading to hypothermia or unconsciousness,
  - requires resuscitation, or
  - requiring admittance to a hospital or other medical facility as an inpatient for more than 24 hours;

In the **IMO** Casualty Investigation Code[25] (section 2.18) **Serious injury** means an injury which is sustained by a person in a casualty resulting in incapacitation for more than 72 hours commencing within seven days from the date of injury.

Due to the special working conditions of seafarers, injuries to seafarers while off-duty are considered to be occupational accidents in MAIB Annual Reports[26].

[24] http://ec.europa.eu/eurostat/en/web/products-manuals-and-guidelines/-/KS-RA-12-102

[25] https://wwwcdn.imo.org/localresources/en/OurWork/MSAS/Documents/Res.MSC.255(84)CasualtyInvestigationCode.pdf (page 9, 2.18)

[26] http://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:91:0::NO::P91_SECTION:MLC_A4 (Article II 1.(f) & Standard A4.3)

Machinery failure/Loss of control/Damage to equipment

Until 2012

The UK used the generic term “machinery failure” to describe most mechanical failures that caused problems to a vessel. In order to be considered the equivalent of a Marine Casualty the vessel needed to be not under command for a period of more than 12 hours, or the vessel needed assistance to reach port.

From 2013

While the IMO does not specify machinery failure in its list of serious casualty events (MSC-MEPC.3-Circ.3[27]), it does define a Marine Casualty by the results and uses the term “etc” in the list of serious casualty events.

The European Union and the UK may interpret machinery failures as either:

- Loss of control - a total or temporary loss of the ability to operate or manoeuvre the ship, failure of electric power, or to contain on board cargo or other substances:
  - Loss of electrical power is the loss of the electrical supply to the ship or facility;
  - Loss of propulsion power is the loss of propulsion because of machinery failure;
  - Loss of directional control is the loss of the ability to steer the ship;
  - Loss of containment is an accidental spill or damage or loss of cargo or other substances carried on board a ship.

or,

- Damage to equipment - damage to equipment, system or the ship not covered by any of the other casualty types.

Stranding/Grounding

Until 2012

Grounds means making involuntary contact with the ground, except for touching briefly so that no damage is caused.

From 2013

Grounding/stranding - a moving navigating ship, either under command, under power, or not under command, drifting, striking the sea bottom, shore or underwater wrecks.

Persons overboard

Until 2012

Any fall overboard from a ship or ship's boat was the equivalent of a Marine Casualty.

From 2013

Any fall overboard from a ship or ship's boat (that does not result in injury or fatality) is a Marine Incident.

[27] https://wwwcdn.imo.org/localresources/en/OurWork/MSAS/Documents/MSC-MEPC.3-Circ.3.pdf [note: link auto downloads PDF]

Vessel Types included in MAIB Annual Report statistics from 2013 to date

1. MAIB use definitions in line with those used by EMSA and IMO. EXCEPT that the data presented in the MAIB Annual Reports includes certain vessel types that are outside the scope of EU Directive 2009/18/EC[28] (the Directive).
2. Vessel types outside the scope of the Directive that are INCLUDED in MAIB Annual Report statistics:
   - Fishing vessels of under 15 metres;
   - Government owned vessels used on government service (except Royal Navy vessels);
   - Inland waterway vessels operating in inland waters;
   - Ships not propelled by mechanical means;
   - Wooden ships of primitive build;
   - Commercial recreational craft with fewer than 13 persons on board.
3. Vessel types outside the scope of the Directive that are EXCLUDED from MAIB Annual Reports:
   - Royal Navy vessels;
   - Fixed offshore drilling units.
4. Vessel Types (potentially) inside the scope of the Directive that are EXCLUDED from MAIB Annual Report statistics:
   - Recreational craft | Personal watercraft;
   - Recreational craft | Sailing surfboards;
   - Ships permanently moored which have no master or crew.
5. One "vessel" type, offshore drilling rigs, are inside the scope of the Directive, but usually outside the scope of MAIB. For UK-flagged installations, broadly, if an accident occurs while the installation is in transit MAIB investigate and record details, otherwise the Health and Safety Executive (HSE) is responsible for investigating and recording details. More information can be found on pages 40 to 41 of the Operational Working Agreement between MAIB, MCA & HSE[29].
6. Until 2012 the MAIB considered SAR craft to be non-commercial. From 2013 onwards they are considered commercial.

[28] http://emsa.europa.eu/emsa-documents/legislative-texts/72-legislative-texts/28-directive-200918ec.html

[29] Refer to pages 11 and 12 of the Operational Working Agreement between HSE, MCA and MAIB: http://www.hse.gov.uk/aboutus/howwework/framework/mou/owa-hse-mac-maib.pdf

Vessel categories used in MAIB Annual Report statistics from 2013 to date

Merchant vessels >=100gt

Trading and non-trading vessels of 100 gross tonnage (gt) or more (excluding fish processing and catching). Note that this category includes vessel types such as inland waterway vessels and vessels on government service that are specifically excluded from the scope of the Directive[12]. It excludes Royal Navy vessels and platforms and rigs that are in place.

Merchant vessels <100gt

Vessels of under 100gt known, or believed to be, operated commercially (excluding fish processing and catching).

Commercial recreational

May be a subset of either of the above two entries. Those over 100gt may be, for instance, a tall ship or luxury yacht. Those under 100gt may be a chartered yacht or a rented dinghy.

UK fishing vessels

Commercial Fishing Vessels Registered with the UK Maritime and Coastguard Agency's Registry of Shipping and Seamen. Note that this category includes under 15 metre fishing vessels that are specifically excluded from the scope of the Directive.

Passenger

In addition to seagoing passenger vessels this category also includes inland waterway vessels operating on inland waters.

Service ship

Includes, but not limited to, dredgers, offshore industry related vessels, tugs and SAR craft.

Recreational craft

Recreational craft may be commercial or non-commercial. In the statistics section of each Annual Report only "Table 1: Loss of life…" includes non-commercial recreational craft.

Non-UK vessels in UK waters

Vessels that are not known, or believed to be, UK vessels, and the events took place in UK territorial waters (12 mile limit).

GLOSSARY OF ABBREVIATIONS, ACRONYMS AND TERMS

Abbreviations and Acronyms

AIS	-	Automatic Identification System
Circ.	-	Circular
EMSA	-	European Maritime Safety Agency
EPIRB	-	Emergency Position Indicating Radio Beacon
ESAW	-	European Statistics on Accidents at Work
EU	-	European Union
GRP	-	Glass Reinforced Plastic
gt	-	gross tonnage
HMPE	-	High Modulus Polyethylene
HMSF	-	High Modulus Synthetic Fibre
HSE	-	Health and Safety Executive
IMO	-	International Maritime Organization
IMSBC Code	-	International Maritime Solid Bulk Cargoes Code
IOM	-	Isle of Man
ISO	-	International Organization for Standardization
loa	-	length overall
LSMC	-	Less Serious Marine Casualty
m	-	metre
MCA	-	Maritime and Coastguard Agency
MGN	-	Marine Guidance Note (M+F) - Merchant and Fishing (F) - Fishing
MI	-	Marine Incident
MMO	-	Marine Management Organisation
MSC	-	Maritime Safety Committee
MSN (M&F)	-	Merchant Shipping Notice (Merchant and Fishing)
MWWFRS	-	Mid and West Wales Fire and Rescue Service
OSR	-	Offshore Special Regulations
PFD	-	Personal Flotation Device
PWC	-	Personal Watercraft
reg	-	registered length
RIB	-	Rigid inflatable boat
RN	-	Royal Navy
RTC	-	Recognised Training Centre
RYA	-	Royal Yachting Association
SAR	-	Search and Rescue
SCV Code	-	Small Commercial Vessel Code
SMC	-	Serious Marine Casualty
SMS	-	Safety Management System
SOSRep	-	Secretary of State's Representative

UAE	-	United Arab Emirates
UK	-	United Kingdom
VDR	-	Voyage Data Recorder
VHF	-	Very High Frequency Radio
VSMC	-	Very Serious Marine Casualty
VTS	-	Vessel Traffic Service

Terms

D:d	-	Bending diameter : diameter of the rope.
Deviation	-	The last event differing from the normal working process and leading to an injury/ fatality.
Material agent	-	A tool, object or instrument.
Subluxation	-	Incomplete, or partial dislocation.
Superficial injuries	-	Bruises, abrasions, blisters etc.
the Directive	-	EU Directive 2009/18/EC.

FURTHER INFORMATION

Marine Accident Investigation Branch
First Floor, Spring Place
105 Commercial Road
Southampton
SO15 1GH

Email
maib@dft.gov.uk

General Enquiries
+44 (0)23 8039 5500

24 hour accident reporting line
+44 (0)23 8023 2527

Press enquiries
+44 (0)1932 440015

Press enquiries (out of office hours)
+44 (0)30 0777 7878

Online resources

www.gov.uk/maib
https://twitter.com/maibgovuk
www.facebook.com/maib.gov
www.youtube.com/user/maibgovuk
www.linkedin.com/company/marine-accident-investigation-branch

MAIB Annual Report