ANNUAL REPORT

2017

MAIB
MARINE ACCIDENT INVESTIGATION BRANCH

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

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June 2018

MAIB ANNUAL REPORT 2017


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CHIEF INSPECTOR'S REPORT

2017 was a typically busy year for the Branch, not only in terms of its investigation workload but also in respect of its effort to promulgate the safety message, build relationships with stakeholders and train its staff. Included in this report is a selection of the diary entries for MAIB staff, which I hope will provide a flavour of the diverse nature of the work they have been involved with during the year.

There were 1 232 accidents reported (1 190 in 2016) and 21 investigations were started (29 in 2016). The decrease in the number of deployments to marine accidents was due to an unusually quiet start to 2017, which saw MAIB inspectors being deployed on only two occasions between January and April.

During May and June there were two further deployments to attend accidents involving UK registered vessels trading in the Arabian Gulf.

Our workload began to increase significantly from 1 July, when the bulk carrier *Huayang Endeavour* collided with the tanker *Seafrontier* in the Dover Strait separation scheme. MAIB teams were then deployed on seven occasions up to the end of September and a further nine investigations were launched during the final quarter of 2017. The majority of these accidents occurred in UK waters but my inspectors were also required to deploy overseas to the west coast of the United States (twice), France, South Africa and Australia.

Twenty-six investigation reports, two Safety Digests and one Safety Bulletin were published in 2017. The average time taken to publish our reports was 11.7 months compared with 10.8 months in 2016. However, the period saw the publication of reports on a number of complex investigations. The underlying average for non-complex investigations (i.e. when the Branch does not have to conduct extensive testing, salvage operations or be reliant for its output on the contribution of third parties) was 10.6 months. It remains the collective goal of the Branch to drive down the average time taken to produce its reports to below 10 months.

For the eighth successive year there were no UK merchant vessels of >100gt lost. The overall accident rate for UK merchant vessels >100gt has fallen to 75 per 1 000 vessels from 78 per 1 000 vessels in 2016. There was no loss of life within the crews of UK merchant vessels >100gt during 2017. Two UK registered small vessels (<100gt), both commercially operated sailing yachts, were lost in 2017. Two small vessels were also lost in 2016.

One foreign flag vessel, a French registered sailing yacht, was lost when trading in UK waters and there were two reported deaths of crew working on foreign flag vessels trading in UK waters.

RECOMMENDATIONS

Fifty-six recommendations were issued during 2017 to 62 addressees. 98.4% of the recommendations were accepted. This compares with 90.6% in 2016.

No recommendations were rejected and one recommendation was partially accepted (Rec.2017/151).

Of the 56 recommendations issued between 2007 and 2016 that were accepted but are still open, 36 (64%) of these were addressed to the Maritime and Coastguard Agency (MCA). In my last Annual Report I expressed concern at the number of recommendations

that had not been closed off by the MCA. Since that time, more effort has been made by the Agency to progress commitments made as long ago as 2007. Better dialogue and more focus on the task has delivered a noticeable improvement in the clear-up rate, which I hope will be maintained.

FISHING SAFETY

Six commercial fishing vessels were lost in 2017 compared with 13 in 2016. The loss rate of fishing vessels is the lowest ever recorded by the MAIB, at 0.11% of the fleet.

The number of injuries to fishing vessel crew reported to the MAIB in 2017 is also at an all-time low (32).

Five fishermen lost their lives in 2017 compared with nine lives lost in 2016.

From the above statistics it might be reasonable to assume that the safety record of commercially operated fishing vessels is improving. The data collected by the MAIB for boats lost is robust and the number lost each year has certainly been reducing. However, there have been concerns expressed that many of the injuries that fishing vessel crew suffer go unreported. To test this, the MAIB examined personal injury data supplied by one insurance provider, the Scottish Boatowners Mutual Insurance Association, covering the period 2008-2016. The data set contained 113 injuries and fatalities, 98 of which were reportable to the MAIB. The MAIB's data set for the same period held details of all the fatalities (9) but only 13.5% of the reportable injuries to fishing vessel crew recorded by Scottish Boatowners. This would seem to confirm that many accidents that result in personal injury to fishermen do not get reported to the authorities, and it is tempting to conclude that the safety record of the fishing industry may not be improving at all.

My own discussions with members of the fishermen's associations, the Royal National Lifeboat Institution (RNLI), the Fishing Industry Safety Group (FISG) and the MCA, plus the evidence provided by 176 accidents involving fishing vessels that have been investigated by the MAIB since I joined the Branch in 2004 suggest that the safety record of the UK registered fishing fleet is improving, but very slowly. The glacial nature of the fishing industry's progress towards improved safety has perhaps been the only source of real disappointment for me during my time as the Chief Inspector of Marine Accidents. There are many organisations and individuals who are working hard to educate fishermen on the benefits of, for example, the wearing of Personal Flotation Devices (PFDs) on the open deck, or the basic principles of stability. However, these laudable efforts do not prevent some owners from providing their crews with welfare and working environments that would not be allowed in a UK factory ashore. Excessive working hours, poorly trained crews, inadequate accommodation, dangerous machinery and working practices provide the perfect mix for accidents to occur.

Following a period of consultation, implementation of the International Labour Organization (ILO) Work in Fishing Convention 2007 (ILO 188) into UK Law is expected to be completed by the end of 2018. ILO 188 entitles all fishermen to written terms and conditions of employment (a fisherman's work agreement), decent accommodation and food, medical care, regulated working time, repatriation, social protection and health and safety on board. It also provides minimum standards relating to medical fitness.

ILO 188 standards will apply to all fishermen working on commercial fishing vessels of any size. They apply equally to employed fishermen and non-employed (share) fishermen, removing a legal impediment that has prevented the application of robust Health and Safety legislation to much of the UK registered fleet. In my view, implementation of this legislation cannot come quickly enough.

FINANCE

The annual report deals principally with the calendar year 2017. However, for ease of reference, the figures below are for the financial year 2017/18, which ended on 31 March 2018. The MAIB's funding from the Department for Transport is provided on this basis, and this complies with the Government's business planning programme.

£ 000s	2017/18 Budget	2017/18 Outturn
Costs – Pay	2 803	2 893
Costs – Non Pay	1 167	879
Totals	**3 970**	**3 772**

The budget allocation for Pay costs assumed that a 5% saving due to staff churn would be realised. However, the Branch was fully staffed throughout the period and this was largely responsible for the overspend of £90k. However, proceeds from the sale of the salvaged FV *Louisa* by the Receiver of Wreck, together with reduced operational costs, resulted in an overall underspend against budget of £198k.

AND FINALLY...

This is my last Annual Report. I will leave the MAIB at the end of June after almost 8 years as Chief Inspector and 14 years with the Branch. It has undoubtedly been one of the happiest and most fulfilling periods of a 47-year career in the maritime industry. The MAIB is considered by many to be one of the leading transport safety investigation bodies in the world. This reputation has been hard won and is entirely due to the commitment, effort and enthusiasm of my amazing team, who have never failed to deliver despite the unrelenting grind of working with death and tragedy. I take this opportunity to thank them all for the hard work and support they have given during my watch and I wish them and my successor good fortune for the future.

Steve Clinch
Chief Inspector of Marine Accidents

PART 1: 2017 OVERVIEW

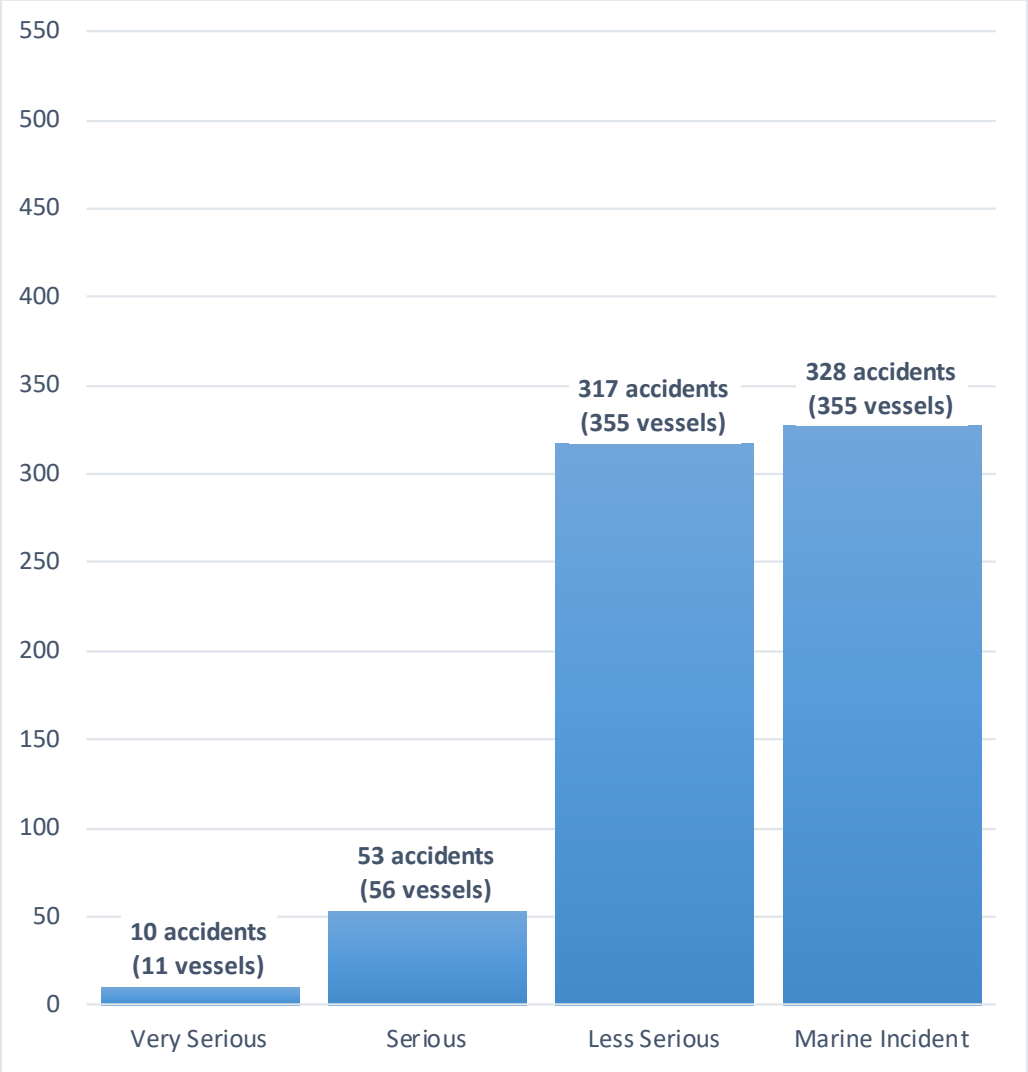
2017: OVERVIEW OF CASUALTY REPORTS TO MAIB

In 2017, 1 232 accidents (casualties and incidents[1]) to UK vessels or in UK coastal waters were reported to the MAIB. These involved 1 352 vessels.

42 of these accidents involved only non-commercial vessels, 499 were occupational accidents that did not involve any actual or potential casualty to a vessel.

There were 708 accidents involving 779 commercial vessels that involved actual or potential casualties to vessels. These are broken down in the following overview:

Chart 1: UK accidents - commercial vessels



[1] As defined in Annex B on page 101.

Chart 2: UK merchant vessels of 100gt or more

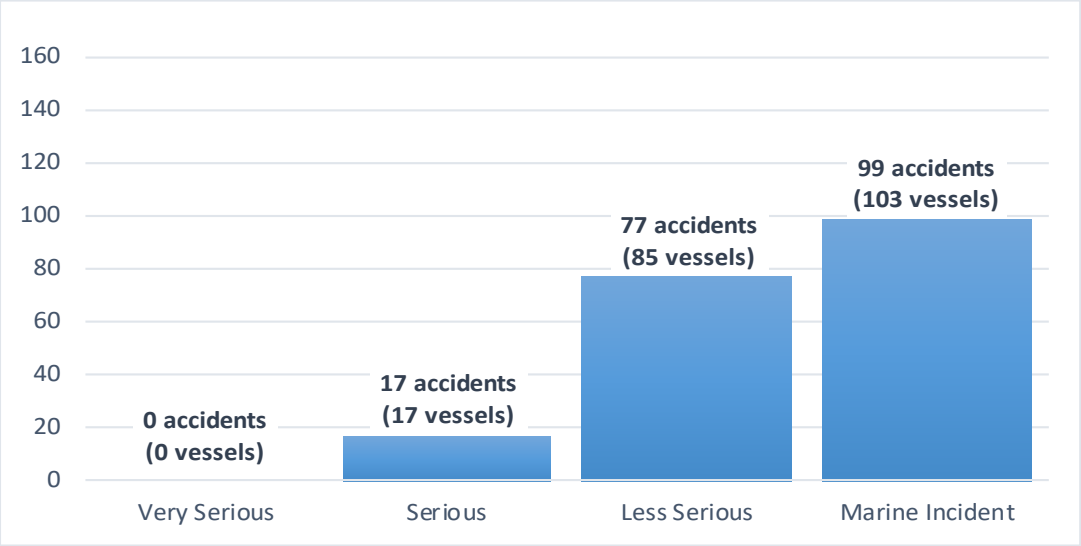


Chart 3: UK merchant vessels of under 100gt

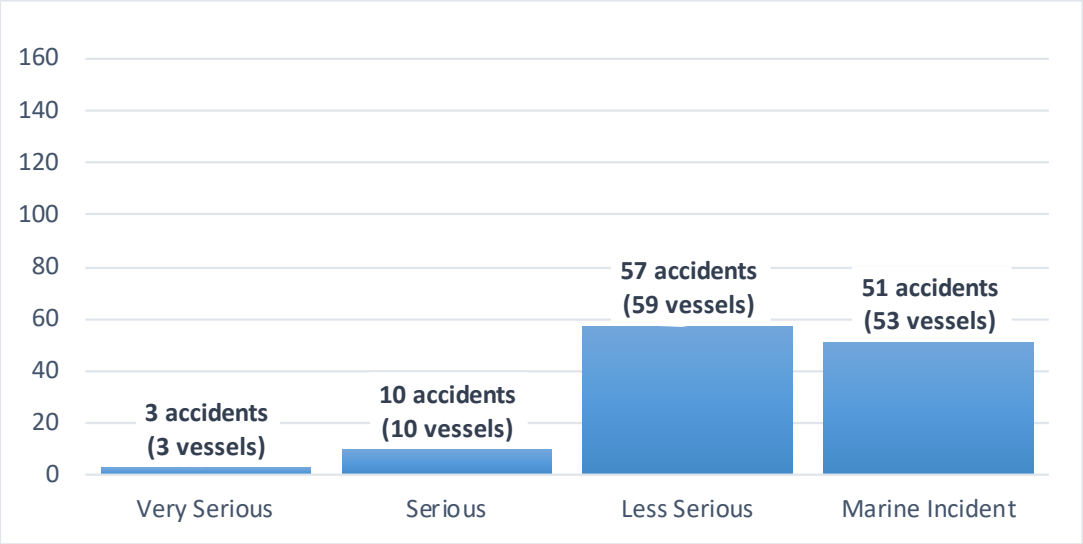


Chart 4: UK fishing vessels

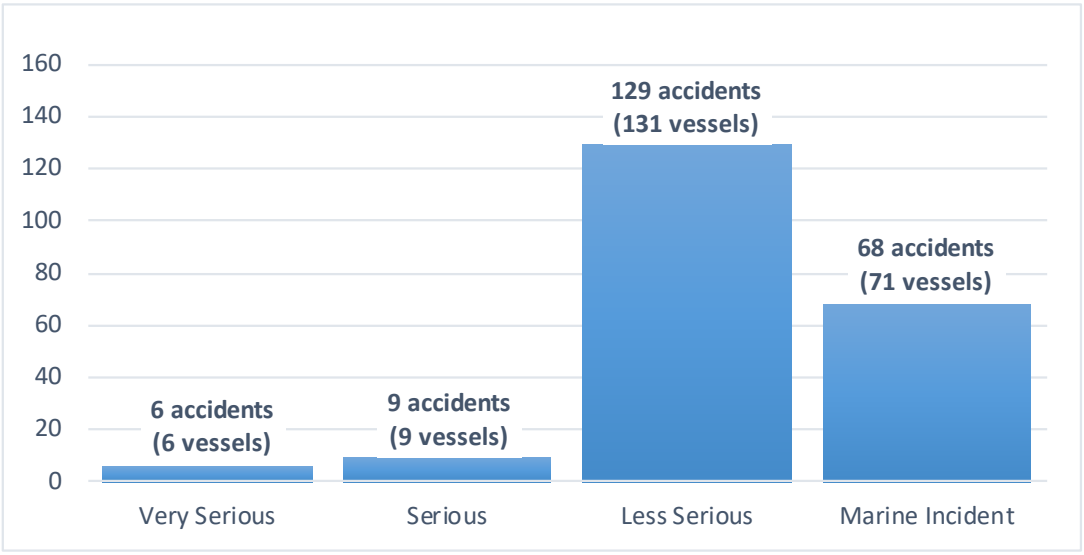
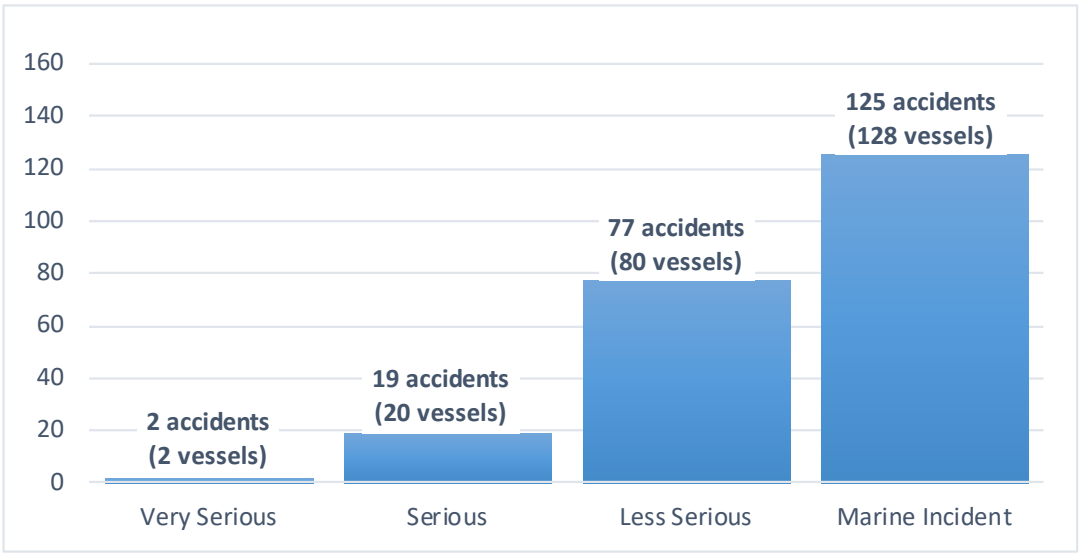


Chart 5: Non-UK commercial vessels - in UK 12 mile waters



2017: SUMMARY OF INVESTIGATIONS STARTED

Date of occurrence	Occurrence details
19 Jan*	Auxiliary boiler explosion on the Japan registered container ship ***Manhattan Bridge*** at Felixstowe container terminal resulting in one fatality and one serious injury. *MAIB deployed inspectors to Felixstowe to conduct an initial accident site investigation. Its findings prompted the MAIB to publish a safety bulletin designed to raise awareness of a safety issue that might be linked to the initial boiler flame failures. The Japan Transport Safety Board (JTSB) conducted the full investigation and its report was subsequently published in accordance with the International Maritime Organization's (IMO) Casualty Investigation Code.
3 Mar	The flooding and sinking of the fishing vessel ***Ocean Way*** (LK207) approximately 22nm north-east of Lerwick, Shetland Islands. All five crew were rescued from the sea.
4 May	The UK registered container ship ***CMA CGM Centaurus*** contacted the quay while berthing at Jebel Ali, United Arab Emirates. Damage was sustained to the ship, the quay and two shore cranes.
10 Jun	Grounding of the UK registered bulk carrier ***Ocean Prefect*** while entering the port Umm Al Qaywayn, United Arab Emirates.
1 Jul	Collision between the bulk carrier ***Huayang Endeavour*** and the tanker ***Seafrontier*** in the Dover Strait traffic separation scheme. Both vessels were Hong Kong registered.
2 Jul	Collision between two F4 powerboats on Stewartby Lake, Bedfordshire resulting in the capsize of one boat and serious injury to the driver.
17 Jul*	Unintentional releases of the fire suppressant system's CO_2 gas into the CO_2 room on the ro-ro passenger vessel ***Red Eagle*** as it was on passage between Cowes, Isle of Wight and Southampton. *A similiar accident on 8 June 2016 on the UK-flagged ro-ro cargo vessel ***Eddystone*** while on passage in the Red Sea has been included in the investigation.
6 Aug	Accident between privately owned recreational craft ***James 2*** and UK registered fishing vessel ***Vertrouwen*** (DS11) resulting in the sinking and loss of three lives from ***James 2***, about 1.5 miles south of Shoreham Harbour.
7 Sep	Fire in the port engine space of the 16m crew transfer vessel ***Windcat 8*** operating in the Lincs Wind Farm in the North Sea off Skegness.
12 Sep	Fire in the forward engine room of the passenger ro-ro ferry ***Wight Sky*** as it was on passage between Lymington and Yarmouth, Isle of Wight, resulting in injury to the chief engineer.

Date of occurrence	Occurrence details
23 Sep	Fatal accident to crew member of the fishing vessel ***Constant Friend*** (N83) while alongside at Kilkeel, Northern Ireland.
26 Sep	Capsize of the 9.9m fishing vessel ***Solstice*** (PH199) about 9 miles south of Plymouth harbour with the loss of one life.
8 Oct	Grounding of the Barbados registered general cargo ship ***Islay Trader*** off Margate, Kent.
10 Oct	Grounding of the cargo vessel ***Ruyter*** on Rathlin Island, Northern Ireland.
30 Oct	Loss overboard of 42 containers from the container ship ***Ever Smart*** in the Pacific Ocean, 700nm east of Japan.
31 Oct	Sailing yacht ***CV24*** grounded during the Clipper Round the World Yacht Race, Western Cape Peninsula, South Africa. The crew were evacuated safely but the yacht could not be salvaged.
6 Nov	Fatality of a crewman who fell overboard from the 8m fishing vessel ***Enterprise*** (SH323) in the North Sea off Scarborough, North Yorkshire.
12 Nov	Fatal accident to crew member of the fishing vessel ***Illustris*** (B119) while alongside at Royal Quays, North Shields, Tyne and Wear.
18 Nov	Fatal man overboard from the sailing yacht ***CV30*** during the Clipper Round the World Race while racing in the Indian Ocean between Cape Town, South Africa and Fremantle, Australia.
20 Nov	Fatal man overboard from the single-handed creel fishing vessel ***Varuna*** (BRD684) south of Applecross, on the west coast of Scotland.
10 Dec	Grounding of the UK-flagged ro-ro passenger ship ***Pride of Kent*** in Calais, France.

2017: SELECTION OF MAIB DIARY ENTRIES

Key - ongoing investigation activity

Deployable accident occurs | Start of draft investigation report's 30-day consultation period | Investigation report published

JANUARY

2: Chapter drafted for the Nautical Institute publication 'A Master's Guide to Evidence Collection'

11: Presentation for Yacht Designers and Surveyors Association, London

12: Presentation to nautical students at Southampton City College

14: Presentation at a skippers' training day, Bern, Switzerland

16-20: Attendance at the Critical Thinking in Safety course at Lund University, Sweden

26-27: Presentations and guidance on the effects of cold water shock during the RNLI's 'man overboard' event, Bournemouth

FEBRUARY

7-9: MAIB technicians support the Greek Hellenic Bureau for Marine Casualties Investigation in the recovery of data from MV *Cabrera*'s voyage data recorder

22: Presentation for the Ministry of Defence's maritime safety forum, Bristol

22: Attendance at the UK National Disaster Victim Identification Unit's national conference, London

27-3 Mar: Attendance at the Investigating Human Performance course, Cranfield University

28: Presentation at the Sunsail Skippers Seminar, Port Solent

MARCH

1: Presentation at the Channel Sailing Club, Ashtead

4: Presentation and *Hoegh Osaka* case study at meeting of Solent Sea Rescue Organisations, Gosport

6: 30th anniversary of the capsize of ro-ro ferry *Herald of Free Enterprise* with the loss of 193 lives

20: Consultation on the Marine Guidance Note for marine casualty and marine incident reporting starts

20, 21, 24: Attendance at the IMO Sub-Committee on Ship Systems and Equipment, London

20-24: Attendance at Legal Skills Course for Accident Investigators, Cranfield University

30: Presentation to maritime business, law students and yacht design students and *Hoegh Osaka* case study, Southampton Solent University

APRIL

3: Safety Digest 1/17 issued

3: Member of the US Coastguard joins MAIB on a 6-week secondment

6: Presentation at the Manchester Cruising Association

10: Lecture on marine casualty investigation at the International Maritime Safety Security and Environment Academy, Genoa, Italy

19: Business Plan published

25: Attendance at Inquest, Bristol

25: Presentation at Man Overboard Prevention and Recovery Workshop, Southampton

25: Visit to MAIB by Group Captain of the Defence Accident Investigation Branch

25-27: Attendance at the Chartered Institute of Ergonomics and Human Factors Annual Conference, Daventry

MAY

8-26: Attendance at Fundamentals of Accident Investigation course, Cranfield University

11: Attendance at FIT test operation training course, Bristol

16: Meeting to discuss car carrier stability at Southampton Institute

18: Role of MAIB and case studies for the Nigerian Maritime Safety Administration at Southampton Solent University

25: Meeting on the Rule of the Road at North West Nautical Institute, Fleetwood

26-27: Exhibiting at Skipper Expo Int. Aberdeen

30: Discussion about MAIB safety concerns at a Trinity House Strategy Day, London

JUNE

6-8: Participation at the Permanent Cooperation Framework (PCF) for the Investigation of Accidents in the Maritime Transport Sector, Lisbon, Portugal - MAIB Chief Inspector is current Chair

13-15: Exhibiting at Seawork International, Southampton

15: Seawork forum, National Workboat Association's towage conference, Southampton

019-21: Commercial fishing acquaint, North-East Scotland

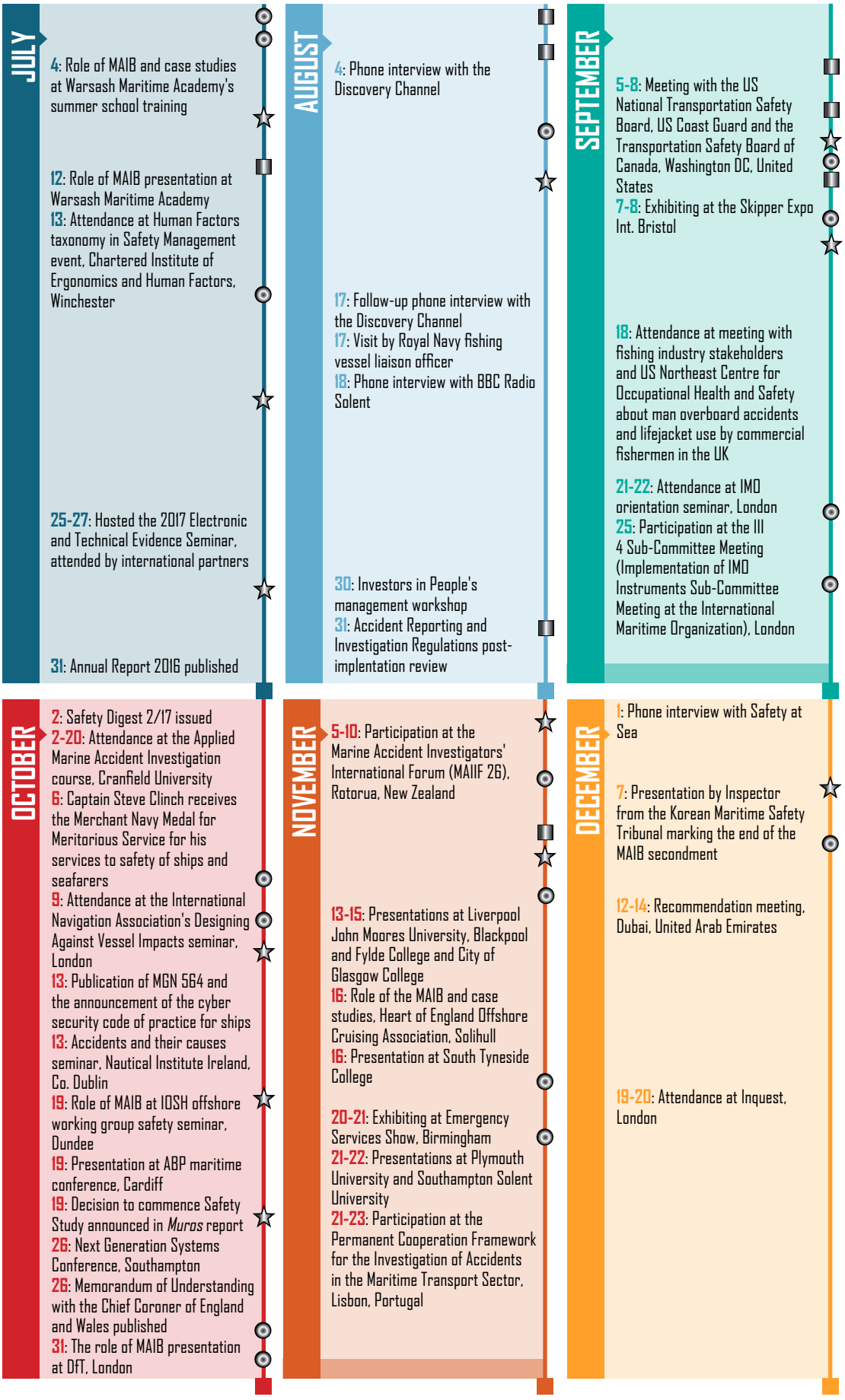
23: Presentation on guidelines for the protection of the seafarer, IMO, London

29: Inspector from the Korean Maritime Safety Tribunal joins MAIB on a 6-month secondment

30: Safety Bulletin 1/2017 issued

Key - ongoing investigation activity

Deployable accident occurs | Start of draft investigation report's 30-day consultation period | Investigation report published



PART 2: RECOMMENDATIONS AND PUBLICATIONS

INVESTIGATIONS PUBLISHED IN 2017 INCLUDING RECOMMENDATIONS ISSUED

The following pages list the accident investigation reports and safety bulletins published by the MAIB during 2017. 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 106.

***Status as of 31 March 2018**

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 that can be published 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 which have a wider role in the maritime community such as the Department for Transport (DfT), the 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 2017

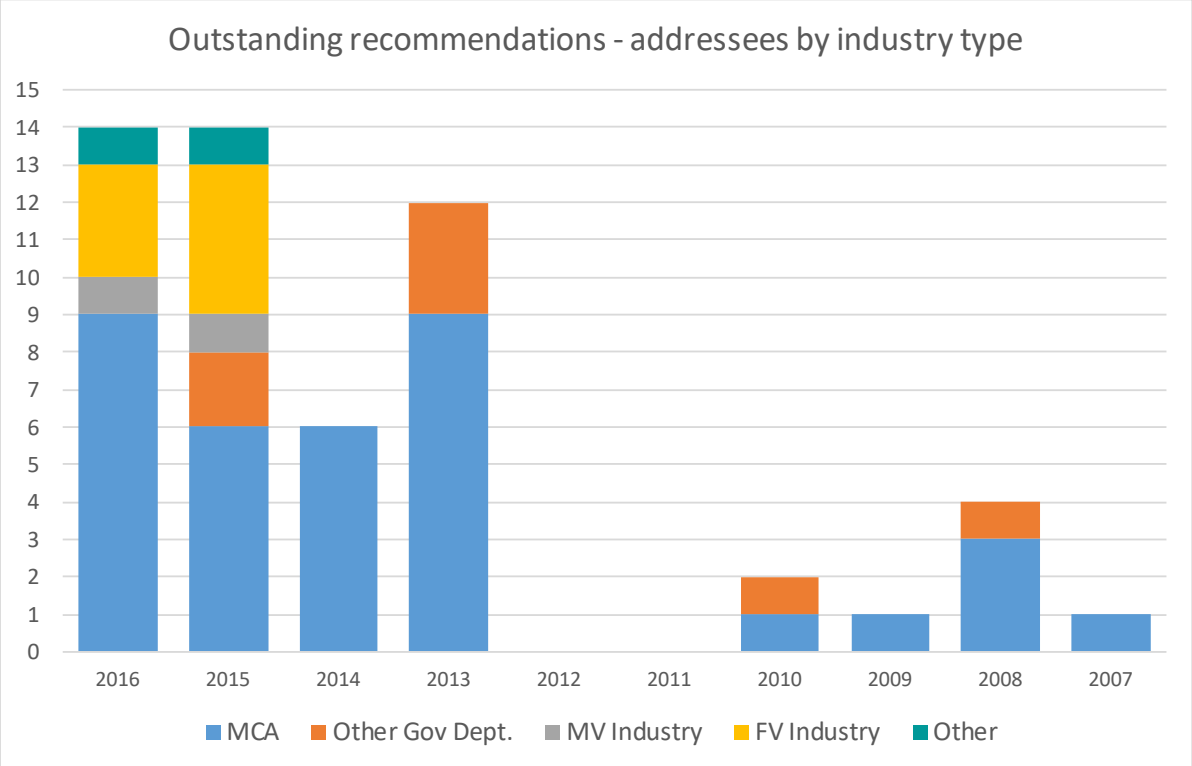
56 recommendations were issued to **62** addressees in 2017. The percentage of all recommendations that are either ***accepted and implemented*** or ***accepted yet to be implemented*** is **98.4%**.

Year	Total*	Accepted Action		Partially Accepted	Rejected	No Response Received
		Implemented	Yet to be Implemented			
2017	62	33	28	1	-	-

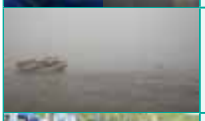
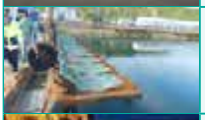
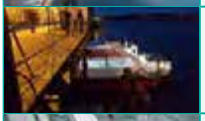
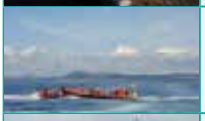
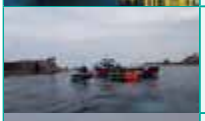
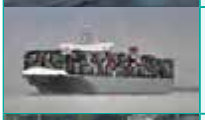
*Total number of addressess

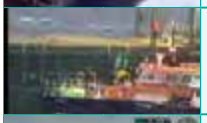
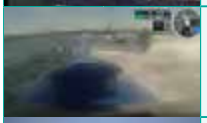
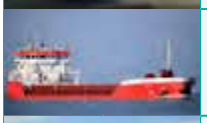
RECOMMENDATION RESPONSE STATISTICS 2007 TO 2016

The chart below shows the number of recommendations issued under the closed-loop system that remain outstanding as of May 2018. There are no outstanding recommendations from 2004-2006 and 2011-2012.



SUMMARY OF 2017 PUBLICATIONS AND RECOMMENDATIONS ISSUED

Vessel name(s)		Category	Publication date (2017) and report number	Page
	***Johanna C***	Very Serious Marine Casualty	12 January (No 1/2017)	17
	***Toby Wallace***	Very Serious Marine Casualty	1 February (No 2/2017)	17
	***City of Rotterdam/ Primula Seaways***	Serious Marine Casualty	8 February (No 3/2017)	19
	***Petunia Seaways/ Peggotty***	Very Serious Marine Casualty	15 February (No 4/2017)	20
	***King Challenger***	Very Serious Marine Casualty	2 March (No 5/2017)	20
	***Uriah Heep***	Serious Marine Casualty	6 April (No 6/2017)	21
	***CV21***	Very Serious Marine Casualties	12 April (No 7/2017)	21
	***Pauline Mary***	Very Serious Marine Casualty	4 May (No 8/2017)	23
	***Love for Lydia***	Very Serious Marine Casualty	11 May (No 9/2017)	24
	***Osprey/Osprey II***	Serious Marine Casualty	18 May (No 10/2017)	25
	***Royal Iris of the Mersey***	Serious Marine Casualty	25 May (No 11/2017)	26
	***Ardent II***	Very Serious Marine Casualty	14 June (No 12/2017)	27
	***Zarga***	Serious Marine Casualty	15 June (No 13/2017)	27
	***Surprise***	Serious Marine Casualty	29 June (No 14/2017)	27
	***Manhattan Bridge***	Very Serious Marine Casualty	30 June - Safety bulletin (No SB1/2017)	31
	***Sea Harvester***	Serious Marine Casualty	6 July (No 15/2017)	31

	Vessel name(s)	Category	Publication date (2017) and report number	Page
	***CMA CGM Simba/ Domingue***	Very Serious Marine Casualty	19 July (No 16/2017)	32
	***Louisa***	Very Serious Marine Casualty	27 July (No 17/2017)	32
	***Vasquez***	Very Serious Marine Casualty	10 August (No 18/2017)	34
	***Transocean Winner/ ALP Forward***	Serious Marine Casualty	7 September (No 19/2017)	35
	***Hebrides***	Serious Marine Casualty	14 September (No 20/2017)	36
	***Sunmi/Patrol***	Very Serious Marine Casualty	12 October (No 21/2017)	38
	**Formula 4 powerboats**	Serious Marime Casualty	n/a, recommendation issued pre-publication by letter①	37
	***Muros***	Serious Marine Casualty	19 October (No 22/2017)	38
	***CMA CGM Vasco de Gama***	Serious Marine Casualty	25 October (No 23/2017)	39
	***Typhoon Clipper/ Alison***	Very Serious Marine Casualty	2 November (No 24/2017)	40
	***Graig Rotterdam***	Very Serious Marine Casualty	9 November (No 25/2017)	41
	***CV24***	Very Serious Marine Casualty	n/a, recommendation issued pre-publication by letter②	42
	***Karissa***	Marine Incidents	n/a, recommendation issued pre-publication by letter③	42
	***Nortrader***	Serious Marine Casualty	7 December (No 26/2017)	43

① Formula 4 powerboats investigation report (No 6/2018) published on 12 April 2018.

② *CV24* is under investigation.

③ Administrative inquiry.

Johanna C

Report number: 1/2017

General cargo vessel

Accident date: 11/5/2016

Fatality during cargo operations at Songkhla, Thailand

Safety Issues

- It was inherently unsafe and unnecessary to stand on top of the cargo while it was being lifted
- The sudden and unexpected movement of the cargo and/or its slings was possibly due to the slings slipping from their intended positions

Due to actions taken by the ship's managers, Carisbrooke Shipping Ltd and MCA, no recommendations were made.

Toby Wallace

Report number: 2/2017

Ocean rowing boat

Accident date: 14/2/2016

Fatal man overboard in the North Atlantic Ocean

Safety Issues

- Rower washed overboard with no tether, lifejacket or PLB worn
- Insufficient safety standards and inadequate pre-race preparation carried out by crew
- Commercially operated ocean rowing boats are not regulated

No	Recommendation(s) to:	British Rowing/ Maritime and Coastguard Agency
101	Work together in order to assess the feasibility of developing means by which commercially operated ocean rowing boats can demonstrate equivalent safety standards to those required of other small vessels in commercial use for sport or pleasure.	

British Rowing: Appropriate action planned: 2018 MARCH 31

MAIB comment:
An update from British Rowing has been requested.

MCA: Appropriate action planned: 2018 NOVEMBER 30

No	Recommendation(s) to:	British Rowing
102	Liaise with stakeholders to develop and promulgate a best practice guide or a code of practice for ocean rowing, taking into account, inter alia: • Boat design, construction and stability • Minimum training requirements • Minimum equipment requirements • Onboard procedures • Shore-based and seaborne support.	

Appropriate action planned: 2018 MARCH 31

MAIB comment:
An update from British Rowing has been requested.

No	Recommendation(s) to:	Oceanus Rowing Limited
103	Review its risk assessments for the conduct of future ocean crossings and take measures as necessary to ensure its crews are appropriately fit, trained and competent, and the necessary equipment, training and procedures are in place to reduce the risk of rowers coming to harm to as low as reasonably practicable.	

Appropriate action planned: Progress Ongoing NO DATE GIVEN

City of Rotterdam/ Primula Seaways

Report number: 3/2017

Pure car carrier/ro-ro ferry

Accident date: 3/12/2015

Collision on the River Humber

Safety Issues

- **Unforeseen consequence of novel bridge design was relative motion illusion**
- **Problem known to ship's team but not addressed**
- **Had bridge team management been effective, accident could have been prevented**

No	Recommendation(s) to:	Bureau Veritas

104 Propose to the International Association of Classification Societies that Recommendation 95 "Recommendation for the Application of SOLAS Regulation V/15 Bridge Design, Equipment Arrangement and Procedures (BDEAP)" is revised to:

- Improve the definition of conning position(s), taking into account the equipment that is required to be at, viewable from, and convenient to the position.
- Raise the awareness of the dangers of navigating from off-axis windows and the effect of relative motion illusion.

Appropriate action implemented

105 Propose to the International Association of Classification Societies that the status of Recommendation 95 is raised to a Unified Interpretation.

Appropriate action implemented

Petunia Seaways/Peggotty

Report number: 4/2017

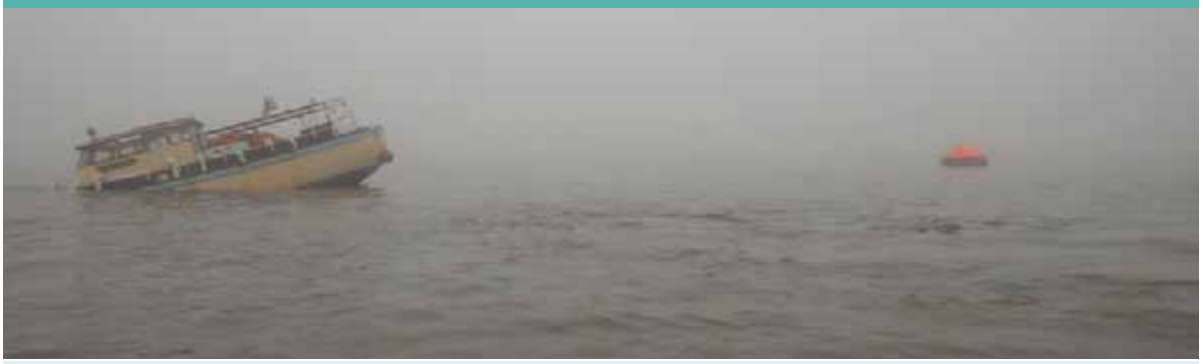
Ro-ro freight ferry/historic motor launch

Accident date: 19/05/2016

Collision on the River Humber in dense fog

Safety Issues

- The passage plan was not adequate in the reduced visibility
- The motor launch was not displaying navigational lights, and neither vessel was sounding a fog signal as required by the COLREGS
- Although the motor launch was showing on radar, it was not noticed by the VTS officer



In view of actions taken by Associated British Ports following this accident, no recommendations were made.

King Challenger

Report number: 5/2017

Scallop dredger (BA 87)

Accident date: 23/6/2016

Fatal man overboard south-west of Scalloway, Shetland Islands

Safety Issues

- Crewman did not wear harness or lifejacket when on working deck
- Poor working practices
- Crew insufficiently practised in emergency response

No	Recommendation(s) to:	West Coast Sea Products
106	Review the risk assessment for all the vessels in its fleet, paying particular attention to the risks associated with maintenance tasks.	

Appropriate action implemented

Uriah Heep

Report number: 6/2017

Small passenger ferry

Accident date: 13/5/2016

Contact with Hythe Pier, near Southampton

Safety Issues

- **Propulsion control failure led to collision with pier**
- **No injuries sustained as the skipper had alerted the crew and passengers to the impending collision**

Following the accident, the Maritime and Coastguard Agency withdrew *Uriah Heep*'s passenger safety certificate and the ferry was sold by its operator. In view of these actions, no recommendations were made.

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

Safety Issues

- **Watch leader moved into unmarked danger zone**
- **Ineffective supervision of inexperienced crew**

No	Recommendation(s) to:	Clipper Ventures plc
107	Review and modify its onboard manning policy and shore-based management procedures so that Clipper yacht skippers are effectively supported and, where appropriate, challenged to ensure that safe working practices are maintained continuously on board. In doing so, it should consider the merits of: • Manning each yacht with a second employee or contracted 'seafarer' with appropriate competence and a duty to take reasonable care for the health and safety of other persons on board. • Enhancing shore-based monitoring and scrutiny of onboard health and safety performance.	

Appropriate action implemented

108 Complete its review of the risks associated with a Clipper yacht MOB and recovery, and its development of appropriate control measures to reduce those risks to as low as reasonably practicable, with particular regard to:

- Ensuring strict adherence to clipping-on procedures
- Reviewing the guardrail arrangements on its yachts to reduce to as low as reasonably practicable the risk of a person falling overboard
- AIS beacon carriage, training and procedures
- Providing training in addition to that delivered on basic sea survival training courses to better prepare its crews for the challenges they could encounter
- Reinforcing the requirement for yacht crews to carry out regular and effective practical MOB recovery drills
- Providing its crews with methods and procedures for reducing sail quickly and safely in extreme weather conditions.

Appropriate action implemented

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

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 planned:

World Sailing: Appropriate action implemented

British Marine: Appropriate action planned:

No	Recommendation(s) to:	Marlow Rope Ltd

110 Review the information provided on its data sheets to ensure that the user is informed on the loss of strength caused by splices, hitches or knots when using ropes made with HMPE. In addition, work together with other rope producers to ensure that these limitations are promulgated within the maritime sector.

Appropriate action implemented

Pauline Mary

Report number: 8/2017

Potting fishing vessel (WY845)

Accident date: 2/9/2016

Fatal man overboard east of Hartlepool

Safety Issues

- No safe system of work for the deployment of lobster pots
- Crew member was not wearing a lifejacket or carrying a knife
- Inappropriate carriage of passengers during fishing operations
- Delay in using the emergency DSC alert
- Skipper had not carried out risk assessment of fishing method

No	Recommendation(s) to:	Maritime and Coastguard Agency
111	Provide updated guidance on the carriage of passengers or guests on board commercial fishing vessels during operations.	

Appropriate action planned: 2018 DECEMBER 31

Love for Lydia

Report number: 9/2017

Motor cruiser

Accident date: Between 7 and 9/6/2016

Carbon monoxide poisoning on Wroxham Broad resulting in two fatalities

Safety Issues

- Petrol engine used to charge batteries while alongside and exhaust fumes entered boat
- Vessel's cockpit and accommodation spaces were inadequately ventilated
- No CO alarm fitted

No	Recommendation(s) to:	Maritime and Coastguard Agency

112 Continue to build on current initiatives by co-ordinating relevant organisations to focus efforts on raising the awareness of the leisure boating community of the dangers of CO and the importance of fitting carbon monoxide alarms. Efforts should be focused on, inter alia:

- Raising awareness of the likely sources of carbon monoxide, including from other boats.
- The dangers of using inappropriate or poorly installed fossil-fuel burning equipment.
- Recognising the early symptoms of carbon monoxide poisoning.
- The importance of ventilation in habitable areas.

Appropriate action implemented

No	Recommendation(s) to:	British Marine

113 Seek clarification from the Recreational Craft Sectoral Group concerning whether a requirement to install carbon monoxide detection systems falls within the scope of the RCD's essential requirements, particularly requirement 5.1.1.

Appropriate action planned: 2018 APRIL 30

No	Recommendation(s) to:	Boat Safety Scheme

114 Make the installation of carbon monoxide alarms a requirement for recreational craft participating in the Boat Safety Scheme, taking into account, among other things, the:

- Potential risk posed to other boat users by carbon monoxide-rich engine emissions.
- Various sources of carbon monoxide on board recreational craft.

- Number of recent deaths of recreational boaters caused by carbon monoxide poisoning.
- Relatively low cost of carbon monoxide alarms.

Appropriate action planned: 2018 JUNE 30

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

Safety Issues

- No method agreed or risk assessment for the 'close pass' manoeuvre
- More passengers than available seats
- Victim seated on tube in a vulnerable position
- Delay in obtaining medical assistance

No	Recommendation(s) to:	Maritime and Coastguard Agency

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: 2018 JULY 31

No	Recommendation(s) to:	Royal Yachting Association/ Passenger Boat Association (PBA)
116	Review the content of the two documents '*Passenger Safety on Small Commercial High Speed Craft*' and '*Small Passenger Craft High Speed Experience Rides*'. In particular, any ambiguity with respect to seating arrangements for high speed craft should be removed and measures taken to ensure that these documents are updated and remain in line with current thinking and good practice.	

RYA: Appropriate action planned: 2018 JUNE 30

PBA: Appropriate action planned: 2018 MAY 31

Royal Iris of the Mersey

Report number: 11/2017

Domestic passenger ferry — Accident date: 10/7/2016

Grounding at the approaches to Eastham lock, River Mersey

Safety Issues

- Navigation by eye was insufficiently accurate in the circumstances
- The vessel was not equipped with an electronic chart display and the paper charts used were not referred to

Due to actions taken by Mersey Ferries Limited, Peel Ports Group Limited and the UK Hydrographic Office, no recommendations were made.

Ardent II

Report number: 12/2017

Trawler

Accident date: 16/8/2016

Fire while alongside in Port Henry Basin, Peterhead

Safety Issues

- Lack of electrical equipment inspection and testing
- Fire detection and alarm system needed for sleeping crew

In view of current regulation and guidance, and that the voluntary code of practice for fishing vessels of 24m registered length and over is intended to become mandatory in 2017, no recommendations were made in this report.

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 resulting in serious injury to an officer

Safety Issues

- Elastic pennant on HMPE mooring introduced snap-back hazard
- Jacketed rope construction prevented inspection of load bearing yarns
- Conflict between rope manufacturers' guidance on factors of safety and the ship industry operating guidance

No	Recommendation(s) to:	Bridon International Ltd
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 planned: 2018 DECEMBER 31

118 Conduct whole rope break tests, where practicable, to establish accurate realisation factors for its HMSF ropes.

Appropriate action planned: 2019 DECEMBER 31

No	Recommendation(s) to:	Shell International Trading and Shipping Company Ltd

119 Review the mooring arrangements on board its vessels and ensure that the mooring lines and the deck fittings are compatible.

Appropriate action implemented ✓

120 Develop robust mooring line procurement criteria to ensure rope manufacturers' recommendations on safety factors and D:d ratios are carefully considered.

Appropriate action planned: 2018 MAY 31

121 Provide its ships' crews with comprehensive guidance on the inspection of HMSF mooring ropes.

Appropriate action planned: Update requested NO DATE GIVEN

122 Investigate methods for monitoring the through-life condition of HMSF rope mooring lines with the aim of ensuring ropes are retired and replaced before their residual strength drops below their expected working load limit.

Appropriate action planned: 2019 MAY 31

Mooring rope break during testing

No	Recommendation(s) to:	Oil Companies International Marine Forum (OCIMF)

123 Consider the safety issues identified in this report during the revision of its Mooring Equipment Guidelines, in particular:

- The complex nature of mooring rope snap-back, and actions that can be taken to mitigate injury to the crew.
- Factors such as axial compression, cyclic loading, creep, flexing and twisting that will contribute to the loss of strength in HMSF ropes over time.
- Adoption of a safe minimum D:d ratio for all deck fittings using HMSF mooring ropes.
- Through-life monitoring of HMSF mooring rope operating conditions and maintenance to achieve managed discard timescales.

Appropriate action planned: 2018 MAY 31

124 Promulgate the safety issues identified in this investigation to its members.

Appropriate action implemented

125 When updating its OCIMF/SIGTTO guide on purchasing high modulus synthetic fibre mooring lines, ensure the limitations of the tests contained within its "Guidelines for the Purchasing and Testing of SPM Hawsers" are recognised, and that rope performance tests verify an HMSF rope meets a prescribed safe working life.

Appropriate action planned: 2018 MAY 31

No	Recommendation(s) to:	EUROCORD

126 Consider the inclusion of the following criteria during the next revision of ISO2307:2010:

- Full load break tests to be applied to all new rope designs/constructions and when the molecular properties of fibre material have been significantly altered.
- Clarification that yarn break testing and the resultant realisation factors, as a means of determining rope strength, be treated only as supporting evidence to full rope break testing.
- Indicative realisation factors for HMSF.
- The effects of yarn twist levels on rope strength and fatigue life under varying operating conditions.

Appropriate action planned: 2019 JUNE 30

Surprise

Report number: 14/2017

Domestic passenger vessel

Accident date: 15/5/2016

Grounding and evacuation of vessel at Western Rocks, Isles of Scilly

Safety Issues

- Vessel underway in vicinity of rocks without a passage plan, completely reliant on skipper's local knowledge
- Skipper was complacent due to repeated and persistent close proximity to navigational hazards
- No procedures for grounding or flooding

No	Recommendation(s) to:	Council of the Isles of Scilly
127	Review its procedures for the examination and issue of Local Authority Boatman's licences. The review should consider the applicability of the licensing scheme and assurance of examination standards.	

Appropriate action planned: 2018 DECEMBER 31

No	Recommendation(s) to:	St Mary's Boatmen's Association
128	Update its safety management system to incorporate guidance on passage planning and the conduct of navigation. (Such guidance should not affect the responsibility of individual skippers for the safe operation of their own vessels.)	

Appropriate action implemented

Manhattan Bridge

Safety Bulletin number: SB1/2017

Container vessel | Accident date: 19/01/2017

Auxiliary boiler explosion at Felixstowe container terminal resulting in one fatality and one serious injury

Safety Issues

- Maintenance management; faulty igniter and leaking solenoid valve found during evidence collection
- Inappropriate fuel resulted in waxing under cold conditions
- Limited knowledge of boiler fuel/ control system resulted in repetitive use of reset function
- Failure of burner locking arrangement

The bulletin was designed to raise awareness of a safety issue that might be linked to the initial boiler flame failures. No recommendations were made.

An investigation report was later published by the Japan Transport Safety Board on 27 December 2017: http://www.mlit.go.jp/jtsb/eng-mar_report/2017/2017tk0004e.pdf

Sea Harvester

Report number: 15/2017

Twin rig prawn trawler (N822) | Accident date: 3/8/2016

Serious injury to a deckhand in the Firth of Clyde

Safety Issues

- Guiding-on pole for trawl net failed under transverse load
- Crewman was standing in hazardous area

No	Recommendation(s) to:	Owners of *Sea Harvester*

129 Take steps to promote the safe operation of their vessels, taking into account, among other things, the importance of:

- Crew training
- The provision and use of personal protective equipment
- Regulatory compliance.

Appropriate action implemented

CMA CGM Simba/Domingue

Report number: 16/2017

Container vessel/tug

Accident date: 20/9/2016

Capsize of a tug while assisting a container vessel resulting in two fatalities at Tulear, Madagascar

Safety Issues

- Tug's crew were insufficiently experienced
- Tug and tow lines were inappropriate for the task
- Tug was not monitoring effectively from the ship

The scope of the MAIB investigation focused on aspects concerning the involvement of *CMA CGM Simba* with only observations relating to the tug *Domingue* owing to limited access to evidence. The Madagascar maritime authority, Agence Portuaire, Maritime et Fluviale (APMF), has confirmed it is conducting a safety investigation into the causes and circumstances of the accident in accordance with the International Maritime Organization's Casualty Investigation Code, but has not advised when its report will be published.

No recommendations were issued as a consequence of the investigation in light of current published guidance and the actions since taken by *CMA CGM Simba*'s manager, Midocean Ltd.

Louisa

Report number: 17/2017

Vivier creel boat (SY30)

Accident date: 9/4/2016

Foundering while at anchor off the Isle of Mingulay in the Outer Hebrides resulting in three fatalities

Safety Issues

- Crew fatigued from working excessive hours
- Out-of-date lifesaving appliances
- Deficient liferaft maintenance
- Abandon ship lifejackets failed to keep the unconscious crews' faces clear of the water

No	Recommendation(s) to:	Maritime and Coastguard Agency
130	Urgently conduct research to confirm or otherwise the effectiveness of SOLAS lifejacket water performance test requirements to ensure approved lifejackets will satisfactorily turn a face-down, unconscious person onto their back with sufficient orientation and buoyancy to maintain their airway clear of the water. Any shortcomings in the water performance test requirements that may be identified should be brought to the attention of the International Maritime Organization for action.	

Appropriate action planned: 2018 DECEMBER 31

MAIB lifejacket trials

131 Update and enhance its response to satellite distress beacon alerts, particularly with regard to GNSS enabled EPIRBs, in respect of:

- HMCG's standard operating procedure.
- Staff training, in terms of both Cospas-Sarsat system knowledge and HMCG's operational requirements, including the definition of standard terminology in relation to beacon alerts.
- Network functionality, reliability, supporting interactivity and resource, in terms of both manpower and equipment.

Appropriate action planned: 2018 MARCH 31

MAIB comment:
We are expecting a completion letter from MCA shortly.

No	Recommendation(s) to:	Premium Liferaft Services

132 Update its liferaft servicing procedures to ensure:

- Any anomalies in the recorded CO_2 cylinder weight can be readily identified.
- Definitive work specifications are issued to sub-contractors.
- Selected sub-contractors are suitably qualified to undertake the specified work.
- Introduce a formal process to advise hirers when their liferafts are due for service.
- Compliance with the content of MGN 533 (M+F).

Appropriate action implemented

No	Recommendation(s) to:	Thameside Fire Protection Company Limited
133	Introduce liferaft CO_2 cylinder servicing procedures to ensure: • Any anomalies in the recorded CO_2 cylinder weight can be readily identified. • Sufficient documentation is held to facilitate servicing a CO_2 cylinder in accordance with the liferaft servicing company's work specification and the particular liferaft manufacturer's instructions. Appropriate action implemented	

No	Recommendation(s) to:	Owners of *Louisa*
134	With respect to any fishing vessel they may own in the future, ensure that the vessel remains compliant with the relevant mandatory Code of Practice by: • Developing a planned maintenance system to ensure the vessel is maintained and its safety equipment serviced in accordance with statutory requirements and manufacturers' instructions. • Conducting formal risk assessments appropriate to the vessel's anticipated range of activities. Appropriate action implemented	

Vasquez

Report number: 18/2017

Motor cruiser

Accident date: 12/11/2016

Fatal CO poisoning while moored at Cardiff Yacht Club

Safety Issues

- Owner and rescuers lacked awareness of carbon monoxide danger
- Deficient engine maintenance

Given the recommendations issued following the *Love for Lydia* investigation (page 24), no further recommendations were made.

Transocean Winner/ALP Forward

Report number: 19/2017

Semi-submersible rig/tug

Accident date: 8/8/2016

Grounding of *Transocean Winner* following the loss of tow from *ALP Forward* on the Isle of Lewis

Safety Issues

- Inadequate allowance for weather during planning stages
- Effects of wind on rig not assessed during planning stages
- Length, load and catenary of tow line inadequately managed

No	Recommendation(s) to:	ALP Maritime Services BV

135 Review its procedures with regard to the production of towing manuals to ensure that the guidance provided in them:

- Complies with the guidelines issued by the International Maritime Organization in MSC/Circ.884 of 1998.
- Provides those responsible for the safety of the tow with all the necessary information, including tow-specific guidance on:
  - the need to consider sea room and lee shores during passage planning
  - the provision of an adequate catenary
  - the need to report when control of the tow is lost
  - the limitations/functionality of the emergency towing arrangement when in adverse weather.
- Provides its vessels' crews and maintenance staff with comprehensive guidance on the maintenance, inspection and discard of tow lines.

Appropriate action implemented

Hebrides

Report number: 20/2017

Ro-ro passenger ferry

Accident date: 25/9/2016

Loss of control and grounding of ro-ro passenger ferry at Lochmaddy, North Uist

Safety Issues

- **Machine service instructions not available to staff and not followed during routine maintenance**

No	Recommendation(s) to:	Rolls-Royce Marine
136	Verify its processes to ensure that service and inspection instructions provided by the original equipment manufacturers of the components used in its control systems are available to its service engineers and in the documentation provided to vessels.	

Appropriate action implemented

No	Recommendation(s) to:	CalMac Ferries Ltd
137	Implement procedures that: • Document and process recommendations for safety critical system upgrades received from manufacturers. • Introduce drills and contingency plans to better prepare its crews to deal with propulsion failures.	

Appropriate action implemented

F4 powerboats

Recommendation issued pre-publication by letter

Formula 4 (F4) powerboats | Accident date: 02/07/2017

Collision resulting in serious injury to one driver at Stewartby Lake, Bedfordshire

Safety Issues

- Driver's escape equipment did not function as intended
- Race continued under yellow flag conditions following the accident
- Some roles and responsibilities of race officials (i.e. safety officer) were unclear

No	Recommendation(s) to:	Royal Yachting Association
138	Submit proposals to the Union Internationale Motonautique and the national governing bodies for powerboat racing aimed at addressing the immediate safety issues identified during the MAIB's initial investigation. In particular, the need to stipulate a minimum duration for emergency air supplies and ensure the effective operation of safety devices is demonstrated during the race scrutineering process.	

Appropriate action implemented

Sunmi/Patrol

Report number: 21/2017

General cargo vessel/pilot launch | Accident date: 5/10/2016

Fatal accident during pilot transfer on the River Thames, London

Safety Issues

- Pilot used inappropriate width deck gate to board vessel
- Insufficient risk assessment carried out for 'step across' boarding
- Pilot had consumed alcohol
- Pilot fitness levels

No	Recommendation(s) to:	International Maritime Pilots' Association
139	Promulgate the requirements for gateways in vessels' rails or bulwarks intended for pilot boarding operations by updating its *Required Boarding Arrangements For Pilot* poster to include the amendments contained in IMO Resolution A.1108(29).	

Appropriate action planned: Update requested — NO DATE GIVEN

No	Recommendation(s) to:	Misje Rederi A.S.
140	Ensure that the designated pilot boarding areas on *Sunmi* are marked and that pilot boarding operations are overseen by a responsible officer.	

Appropriate action implemented

Muros

Report number: 22/2017

Bulk carrier | Accident date: 3/12/2016

Grounding on Haisborough Sand in the North Sea

Safety Issues

- The revised passage plan was unsafe and had not been adequately checked
- The master did not see or approve the revisions
- ECDIS safeguards were ignored, overlooked or disabled
- The OOW's performance was probably adversely affected by a low state of alertness

In view of the actions taken by the ship's manager, Naviera Murueta, no recommendations were made. Furthermore, MAIB is conducting a safety study, in collaboration with the Danish Maritime Accident Investigation Board, designed to more fully understand why operators are not using ECDIS as envisaged by regulators and the system manufacturers.

CMA CGM Vasco de Gama

Report number: 23/2017

Ultra-large container vessel

Accident date: 22/8/2016

Grounding on the western side of the Thorn Channel while approaching the Port of Southampton

Safety Issues

- Poor master/pilot exchange
- Inadequate planning of passage from pilot boarding station to berth
- Lack of communication between ship's staff and pilots on bridge
- Passage plan was not reviewed during voyage

No	Recommendation(s) to: CMA Ships	
141	Conduct a thorough review, through its internal audit process, of the implementation of company procedures for pilotage planning, use of ECDIS and bridge resource management, and take steps to improve onboard standards and levels of compliance.	Appropriate action implemented
142	Include standards of pilotage and bridge team/pilot integration as specific items for assessment and comment in its internal navigation audit reports.	Appropriate action implemented
143	Work closely with ABP Southampton to address the safety issues identified in this report.	Appropriate action implemented

No	Recommendation(s) to: Associated British Ports	
144	Conduct a thorough review, through its internal audit process, of the implementation of company procedures for pilotage planning and bridge resource management at all its UK ports, and take steps to improve standards of communication and levels of compliance.	Appropriate action implemented
145	Provide refresher training to all pilots in bridge resource management and implement a periodic bridge resource management training programme.	Appropriate action implemented
146	Consider providing provisional pilotage plans to vessels and VTS prior to pilot embarkation.	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

Safety Issues

- No effective lookout by either vessel
- Poor judgment by skipper of *Alison* (to try and pass close ahead of a larger/faster vessel)
- VHF radio not used by either vessel to notify intentions to other vessels
- Lifejackets not being worn by either of the 2 crew on board *Alison*

No	Recommendation(s) to:	Port of London Authority

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 planned: 2019 DECEMBER 31

No	Recommendation(s) to:	Crown River Cruises Limited

148 Update its safety management system to include risk assessments and procedures for the safe operation of workboats.

Appropriate action implemented

Graig Rotterdam

Report number: 25/2017

Bulk carrier

Accident date: 18/12/2016

Fatal accident during a cargo discharge at Alexandria Port, Egypt

Safety Issues

- No fall prevention measures in place for crew working on cargo
- Poor stevedoring practices
- Insufficient racking strength with deck cargo lashings removed

No	Recommendation(s) to:	Graig Ship Management Limited

149 Reinforce and, as appropriate, modify its safety management system with respect to the carriage of timber cargoes to ensure:

- A lifeline or other means for attaching a safety harness is available to counter the risk of ship's crew or shore stevedores falling from the top of a deck cargo stack or as a result of a deck cargo stack collapse.
- Where possible, appoint a master or chief officer with experience of the cargo type being carried.
- Ship's crew proactively engage with shore stevedores for the purpose of maintaining a safe system of work during cargo operations.

Appropriate action implemented

No	Recommendation(s) to:	Norlat Shipping Limited A.S.

150 Ensure that all cargo information, as required by the IMO Code of Safe Practice for Ships Carrying Timber Deck Cargoes, is provided to the master or his representative prior to loading cargo for all ships that it charters to carry timber deck cargo.

Appropriate action implemented

CV24

Recommendation issued pre-publication by letter

Commercial racing yacht — Accident date: 31/10/2017

Grounding and loss of yacht at Cape Peninsula, South Africa

Safety Issues

- Maintaining situational awareness
- Conduct of safe navigation
- Passage planning and monitoring

No	Recommendation(s) to:	Clipper Ventures plc

151 Take urgent action designed to improve the ability of its skippers and watch leaders to maintain positional awareness while on deck in pilotage and coastal waters. Consideration should be given to:

- The provision of a navigation/chart display on deck by the helm position;
- More effective use of onboard navigational equipment to avoid danger, including a means for rapid communication between the navigation station and the helm;
- More clearly defining the duties of the watch navigator.

Partially accepted - open

Karissa

Recommendation issued by Chief Inspector's letter

General cargo vessel — Accident date: Various dates in 2017

Three groundings and two collisions in Langstone Harbour

Safety Issues

- Insufficient passage planning
- Risk assessment did not address hazard of grounding
- Insufficient supervision of pilotage by the harbour authority

No	Recommendation(s) to:	Kendalls Group

152 In co-operation with the Langstone Harbour Authority, undertake a risk assessment for navigation of *Karissa* in Langstone Harbour, paying particular attention to the development of procedures for the safe conduct of pilotage.

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

Safety Issues

- Carriage of 'untreated incinerator bottom ash' not listed in the International Maritime Solid Bulk Cargoes (IMSBC) Code
- Inadequacy of UN Test N.5 for determining the potential of a non-homogeneous substance for flammable gas release

No	Recommendation(s) to:	Maritime and Coastguard Agency/ Environment Agency
153	Work collaboratively to identify reliable methods and protocols for testing non-homogeneous solid bulk cargoes for the property of evolving flammable gases when wet.	

MCA: Appropriate action implemented

Environment Agency: Appropriate action planned: Progress Ongoing NO DATE GIVEN

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

Appropriate action planned: Update requested NO DATE GIVEN

No	Recommendation(s) to:	Hudig & Veder BV
155	Review its operating procedures to ensure that the requirement to apply the provisions of the IMSBC Code to all bulk cargoes is clear.	

Appropriate action implemented

No	Recommendation(s) to:	NTO Shipping GmbH & Co.KG
156	Review its safety management system to ensure that the requirement to apply the provisions of the IMSBC Code to all bulk cargoes is clear	

Appropriate action implemented

PROGRESS OF RECOMMENDATIONS FROM PREVIOUS YEARS

① *Carol Anne* investigation report (no 11/2016) published on 9 June 2016.

2016 RECOMMENDATIONS - PROGRESS REPORT*

*Status as of 31 March 2018

Good Intent/Silver Dee

Report number: 4/2016

Fishing vessels

Accident date: 29/07/2015

Collision between fishing vessels resulting in the foundering of *Silver Dee* in the Irish Sea

No	Recommendation(s) to:	The skippers of both vessels
2016/106	Take steps to improve the standard of watchkeeping on board vessels they are in charge of in the future, taking particular account of the guidance contained in MGN 313 (F) - *Keeping a Safe Navigational Watch on Fishing Vessels*.	

Skipper of *Good Intent* - appropriate action implemented

Skipper of *Silver Dee* - no response received: closed

Hoegh Osaka

Report number: 6/2016

Car carrier

Accident date: 03/01/2015

Listing, flooding and grounding of a car carrier on Bramble Bank, The Solent

No	Recommendation(s) to:	Maritime and Coastguard Agency
2016/110	Promulgate the amended version of IMO Resolution A.581(14) in respect of the minimum MSL of lashings to be used when securing road vehicles: • Through its forthcoming Marine Guidance Note, providing guidance on the safe stowage and securing of specialised vehicles; and • Within the next edition of its publication *Roll-on/Roll-off Ships - Stowage and Securing of Vehicles – Code of Practice*.	

Appropriate action planned: 2018 MAY 31

Cemfjord

Report number: 8/2016

Cement carrier

Accident date: 02/01/2015

Capsize and sinking of a cement carrier in the Pentland Firth with the loss of all eight crew

No	Recommendation(s) to:	Maritime and Coastguard Agency
2016/115	Review the arrangements for the safety of shipping in the Pentland Firth, giving particular consideration to: • Defining the purpose of the Pentland Firth voluntary reporting scheme. This should include the information to be provided by vessels in the area and the subsequent use of that information by the coastguard. • The potential benefits of making the Pentland Firth voluntary reporting scheme compulsory. • Identifying the level of surveillance and monitoring required of vessels operating in the Pentland Firth. In particular, establishing operational routines for the use of AIS information and operator procedures to monitor AIS tracks and respond to loss of AIS contact. • Whether, given the frequent and extreme local sea conditions, advisory information should be broadcast to ships in addition to routine maritime safety information.	

Appropriate action planned: 2019 MARCH 31

No	Recommendation(s) to:	The Cyprus Department of Merchant Shipping
2016/116	Undertake a thorough review of its revised processes for the management of regulatory exemptions and the conduct of Flag State inspections. In particular, assure itself that: • Vessel owners and managers are providing the levels of information required to allow exemptions to be issued based on reliable assessments of risk; and • The training provided to, and the supervision of, its non-exclusive surveyors is effective. **Appropriate action implemented**	

Asterix

Report number: 10/2016

Mooring launch

Accident date: 30/03/2015

Girting and capsize of a mooring launch at Fawley Marine Terminal, Southampton

No	Recommendation(s) to:	Maritime and Coastguard Agency
2016/120	Inform tug operators and port authorities of the importance of ensuring that masters engaged in towing operations have the necessary knowledge and skills. **Appropriate action planned:** Update requested NO DATE GIVEN	

Carol Anne

Report number: 11/2016

Workboat

Accident date: 30/04/2015

Collapse of a crane on board a workboat resulting in one fatality on Loch Spelve, Isle of Mull

No	Recommendation(s) to:	Association of Lorry Loader Manufacturers and Importers
2016/123	Work with the Maritime and Coastguard Agency to ensure that the maritime requirements and regulation covering the inspection and testing of shipborne lorry loader cranes is included in its training syllabi and examiners' manuals. **Appropriate action planned:** Progress Ongoing NO DATE GIVEN	

No	Recommendation(s) to:	Maritime and Coastguard Agency
2016/124	Instruct certifying authorities to ensure that their procedures for the agreement of the fitting or modification of lifting appliances on board workboats take into account, inter alia, the importance of assessing the suitability of installation arrangements and the impact on vessel stability.	

Appropriate action planned: 2018 OCTOBER 31

Enterprise

Report number: 13/2016

Fishing vessel

Accident date: 09/07/2015

Fatal man overboard from a fishing trawler in North of Dogger Bank, North Sea

No	Recommendation(s) to:	Maritime and Coastguard Agency
2016/126	Take steps to ensure that fv *Enterprise* complies with the minimum bulwark height requirements of the *Torremolinos International Convention for the Safety of Fishing Vessels* as referred to in Council Directive 97/70/EC and in accordance with the revised requirements contained in MSIS 27.	

Appropriate action implemented

JMT

Report number: 15/2016

Fishing vessel

Accident date: 09/07/2015

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

No	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: 2020 DECEMBER 31

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

Appropriate action planned: 2020 DECEMBER 31

No	Recommendation(s) to:	Sea Fish Industry Authority (Seafish)
2016/132	Amend its construction standards to include a requirement for new fishing vessels and vessels joining the UK fishing vessel register to be fitted with a Wolfson freeboard mark.	

Appropriate action planned: Update requested NO DATE GIVEN

No	Recommendation(s) to:	Maritime and Coastguard Agency/ Sea Fish Industry Authority
2016/133	Work together to ensure that the inspection regime for assessing existing vessels against the Seafish Construction Standards is consistently robust through critical evaluation of the condition of each vessel at the time of survey.	

MCA - Appropriate action implemented

Seafish - Appropriate action planned: Update requested NO DATE GIVEN

No	Recommendation(s) to:	Maritime and Coastguard Agency/ Sea Fish Industry Authority/ Scottish Fishermen's Federation (SFF)/ National Federation of Fishermen's Organisations (NFFO)
2016/134	Through membership of the Fishing Industry Safety Group, collectively explore ways to encourage owners of fishing vessels of under 15m LOA that are engaged in trawling, scalloping and bulk fishing to affix a Wolfson Mark to their vessels and operate them in accordance with the stability guidance provided.	

MCA - Appropriate action planned: 2020 DECEMBER 31

Seafish - Appropriate action planned: Update requested NO DATE GIVEN

SFF - Appropriate action implemented

NFFO - Appropriate action implemented

Arco Avon

Report number: 17/2016

Dredger

Accident date: 18/08/2015

Engine room fire on a suction dredger, 12 miles off the coast of Great Yarmouth with loss of one life

No	Recommendation(s) to: Maritime and Coastguard Agency
2016/136	Review International Maritime Organization circular MSC.1/Circ.1321 – *Guidelines for measures to prevent fires in engine-rooms and cargo pump-rooms*, and, as appropriate, promulgate its contents to the shipping industry.

Appropriate action planned: 2018 MARCH 31

MAIB comment:
An update from MCA has been requested.

Aquarius

Report number: 18/2016

Fishing vessel

Accident date: 17/08/2015

Fatal man overboard from the fishing vessel 2 miles east of Aberdeen harbour

No	Recommendation(s) to: Maritime and Coastguard Agency
2016/140	Review its monitoring and enforcement of "*The Working Time: Sea Fishermen Regulations 2004*" to ensure that fishermen, and in particular foreign fishermen living on board their vessels, are achieving the statutory levels of rest and annual leave.

Appropriate action planned: 2018 AUGUST 31

Annie T

Report number: 21/2016

Fishing vessel

Accident date: 04/10/2015

Man overboard from a creel fishing vessel with the loss of one life in the Sound of Mingulay

No	Recommendation(s) to: Maritime and Coastguard Agency
2016/146	Prioritise the introduction of legislation that will require the compulsory wearing of personal flotation devices on the working decks of all fishing vessels while at sea.

Appropriate action planned: 2018 AUGUST 31

Saint Christophe 1/Sagittaire

Report number: 24/2016

Fishing vessels

Accident date: 10/03/2016

Grounding of French fishing vessels while alongside in Dartmouth resulting in the flooding and sinking of *Saint Christophe 1*

No	Recommendation(s) to:	Maritime and Coastguard Agency
2016/150	Perform a Port Marine Safety Code health check upon the Dartmouth Harbour and Navigation Authority in 2017.	

Appropriate action implemented

No	Recommendation(s) to:	Dart Harbour Navigation Authority
2016/151	• Provide guidance to its duty harbourmasters and river officers about the information they are required to exchange with visiting vessels before approving their entry into the harbour. • Review the control measures identified in its risk assessments and ensure procedures are in place to make them effective.	

Appropriate action implemented

No	Recommendation(s) to:	Owners of *Saint Christophe 1* and *Sagittaire*
2016/152	Review their carriage arrangements to ensure appropriate charts and publications are available for likely ports of refuge in their area of fishing operations, in compliance with Chapter 6, Division 226 of Volume 5 du réglement applicable aux navires: Navires de Pêche.	

Owner of *Saint Christophe 1* - No response received: closed

Owner of *Sagittaire* - No response received: closed

Daroja/Erin Wood

Report number: 27/2016

Cargo ship/oil bunker barge

Accident date: 29/08/2015

Collision between a general cargo ship and an oil bunker barge, 4 nautical miles south-east of Peterhead

No	Recommendation(s) to:	The St Kitts and Nevis International Shipping Registry
2016/155	Ensure that, for vessels applying to join the Registry: • A Flag State inspection of the vessel takes place to review compliance with relevant regulations. • Manning negotiations with owners/managers take into account all relevant factors set out in the IMO Principles of Safe Manning.	

Appropriate action planned: 2018 DECEMBER 31

2015 RECOMMENDATIONS - PROGRESS REPORT*

*Status as of 31 March 2018

Arniston

Report number: 2/2015

Motor cruiser

Accident date: 01/04/2013

Carbon monoxide poisoning with two fatalities on Windermere

No	Recommendation(s) to:	The Boat Safety Scheme
2015/104	Encourage its boat examiners, during the course of periodic boat examinations, to explain to boat users, where present, the risk of carbon monoxide poisoning; highlight the potential sources of carbon monoxide; and promote the use of carbon monoxide alarms.	Appropriate action implemented

Wanderer II

Report number: 6/2015

Fishing vessel

Accident date: 19/11/2013

Serious injury to a crew member while 1 mile south-east of Wiay Island, Outer Hebrides

No	Recommendation(s) to:	Maritime and Coastguard Agency
2015/109	Review and amend MGN 415 to include guidance on the safe operation of winch whipping drums.	Partially accepted - closed

MAIB comment:
Although the new Codes of Practice for the Safety of Fishing Vessels (MSN 1871, 1872 and 1873) provide greater clarification about the installation and use of winch whipping drums. The lack of guidance to operators on their safe use remains unaddressed.

2015/110	In developing the revised Code of Safe Working Practices for the Construction and Use of 15 metre length overall to less than 24 metres registered length Fishing Vessels, ensure that the safe operation of winches is properly considered, including that: • Hauling and hoisting gear shall be controlled by a dedicated winch operator; • The winch operator shall give exclusive attention to that task and not carry out any other tasks while operating the equipment; • Appropriate safety devices, including emergency stop facilities, are within easy reach of personnel using the equipment. Such provision should be applied to all vessels constructed, and all existing vessels that are substantially structurally or technically modified, from the date the revised Code is introduced.	Appropriate action implemented

Cheeki Rafiki

Report number: 8/2015

Sailing yacht

Accident date: 16/05/2014

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

No	Recommendation(s) to:	British Marine Federation[2]
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: 2018 DECEMBER 31

No	Recommendation(s) to:	Maritime and Coastguard Agency
2015/119	Issue operational guidance to owners, operators and managers of small commercial sailing vessels, including: • The circumstances in which a small vessel is required to comply with the provisions of the SCV Code and those in which it is exempt from compliance. • Management responsibilities and best practice with regard to: - Vessel structural inspection and planned maintenance by competent personnel, particularly prior to long ocean passages, - Passage planning and execution, including weather routing, - The provision of appropriate lifesaving equipment, including liferafts, EPIRBs and PLBs, and the extent to which they should be float-free and/or readily available, and - The provision of onboard procedures, including the action to be taken on discovering water ingress. • The need for an inspection following any grounding, taking into account the danger of potential unseen damage, particularly where a GRP matrix and hull have been bonded together.	

Appropriate action planned: 2018 OCTOBER 31

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

Appropriate action planned: 2018 OCTOBER 31

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

Millennium Time/Redoubt

Report number: 13/2015

Passenger vessel/motor tug

Accident date: 17/07/2014

Collision on the Kings Reach, River Thames, London

No	Recommendation(s) to: Maritime and Coastguard Agency/ Port of London Authority/Transport for London/Passenger Boat Association
2015/133	Work together to explore the use of technology to improve the accuracy of the passenger count on board passenger vessels on the River Thames.

MCA/PLA/TfL/PBA: Appropriate action implemented

Millennium Time


Carol Anne

Carol Anne

Recommendation issued pre-publication by letter

Workboat

Accident date: 30/04/2015

Collapse of crane on workboat at Loch Spelve, Isle of Mull with one fatality

No	Recommendation(s) to: Atlas Cranes UK Ltd
2015/142	Take action to ensure that:

- All Atlas 170.2 cranes supplied in the UK have been installed using fastenings of the diameter, grade and number of fastenings as promulgated by Atlas GmbH.
- The M24 nylon insert lock nuts supplied are of the same grade or higher than their associated studs.
- The operators of all other Atlas crane installations in the UK, for which Atlas UK has supplied fastenings, are made aware of the potential that the nuts that have been supplied may be of an insufficient grade.

Appropriate action implemented

Commodore Clipper

Report number: 18/2015

Ro-ro passenger ferry

Accident date: 14/07/2014

Grounding and flooding in the approaches to St Peter Port, Guernsey

No	Recommendation(s) to:	Government of Guernsey
2015/145	Improve the standard of vessel traffic services within the Guernsey Ordnance statutory pilotage area by implementation of an information level service to shipping as guided by the applicable elements of the Maritime and Coastguard Agency's Marine Guidance Note 401.	
	Appropriate action planned:	30 SEPTEMBER 2018
2015/146	Implement measures designed to provide assurance that, post-qualification, its Special Pilotage Licence holders continue to demonstrate the required level of proficiency when conducting acts of pilotage.	
	Appropriate action planned:	31 MARCH 2019

Damage to *Commordore Clipper*

Ocean Way

Ocean Way

Report number: 23/2015

Fishing vessel

Accident date: 02/11/2014

Capsize and foundering 100 miles north-east of Tynemouth resulting in three fatalities

No	Recommendation(s) to:	Maritime and Coastguard Agency
2015/154	Take action to ensure that the EPIRBs required to be carried on UK registered fishing vessels are equipped with integral GNSS receivers.	
	Appropriate action implemented	

Beryl

Report number: 26/2015

Fishing vessel

Accident date: 10/02/2015

Fatal person overboard west of the Shetlands Islands

No	Recommendation(s) to:	Maritime and Coastguard Agency/ Scottish Fishermen's Federation/ National Federation of Fishermen's Organisations/ Sea Fish Industry Authority
2015/156	Through membership of the Fishing Industry Safety Group, collectively explore ways of: • Ensuring fishermen conduct regular emergency drills as required by statute • Procuring rescue dummies which could be made available to the owners/skippers of fishing vessels to facilitate realistic manoverboard drills • Using the results of onboard risk assessments to promote behavioural change and develop robust safety cultures.	

MCA: Appropriate action planned: 2018 DECEMBER 31

NFFO: Appropriate action planned: 2018 DECEMBER 31

Seafish: Appropriate action planned: 2018 DECEMBER 31

SFF: Partially accepted - closed[3]

No	Recommendation(s) to:	Maritime and Coastguard Agency
2015/157	Strengthen and enforce its policy regarding manoverboard drills on board fishing vessels by ensuring that during surveys: • The witnessed drills are realistic, and practise recovery procedures as well as initial actions • Owners are instructed to have sufficient crew available • The frequency of manoverboard drills conducted is similar to other emergency drills.	

Appropriate action implemented

[3] Refer to page 46 of 2015 MAIB Annual Report for MAIB comment:
www.gov.uk/government/uploads/system/uploads/attachment_data/file/541432/MAIB_AnnualReport2015.pdf

No	Recommendation(s) to:	Sea Fish Industry Authority
2015/158	Conduct research into the manoverboard recovery systems suitable for use on board fishing vessels and promulgate advice on the systems to the fishing industry regarding their suitability, capabilities and limitations.	

Appropriate action planned: 31 DECEMBER 2018

Stella Maris

Report number: 29/2015

Fishing vessel

Accident date: 28/07/2014

Capsize and foundering 14 miles east of Sunderland

No	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 DECEMBER 2020

2015/166	Revise as necessary and re-issue its guidance to fishing vessel owners and skippers on the application to fishing vessels of: • The Merchant Shipping (Provision and Use of Work Equipment) Regulations 2006, and • The Merchant Shipping (Lifting Operations and Lifting Equipment) Regulations 2006. **Appropriate action planned:** 2018 AUGUST 31	

No	Recommendation(s) to:	Sea Fish Industry Authority
2015/167	Amend its construction standards for new registered vessels to increase the angle at which downflooding occurs by reviewing the placement of ventilation ducts in or adjacent to the bulwarks. **Appropriate action planned:** 2018 MAY 31	

No	Recommendation(s) to:	Marine Management Organisation (MMO)
2015/168	Mandate stability verification for current and future European Commission funded projects involving decked vessels undergoing significant modifications that might impact on their stability. **Appropriate action implemented**	
2015/169	Include vessel stability verification as an eligible safety related undertaking for attracting grant aid from European Commission fund schemes. **Appropriate action implemented**	
2015/170	Require scale drawings, machinery installation details, winch power information and all other relevant details of proposed structural modifications to vessels to be included in all applications for assistance from future European Commission funded schemes. **Appropriate action implemented**	

No	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 planned:** 2018 MAY 31 **MMO: Appropriate action implemented**	

2014 RECOMMENDATIONS - PROGRESS REPORT*

*Status as of 31 March 2018

Danio

Report number: 8/2014

General cargo vessel — Accident date: 16/03/2013

Grounding off Longstone, Farne Islands

No	Recommendation(s) to:	Maritime and Coastguard Agency
2014/110	Working closely with the European Commission and EU member states, make a proposal to the International Maritime Organization that all vessels engaged in short sea trades be required to carry a minimum of two watchkeepers in addition to the master.	

Appropriate action planned: Update requested — NO DATE GIVEN

CMA CGM Florida/Chou Shan

Report number: 11/2014

Container vessel/bulk carrier — Accident date: 19/03/2013

Collision between container vessel *CMA CGM Florida* and the bulk carrier *Chou Shan* in open water 140 miles east of Shanghai

No	Recommendation(s) to:	Maritime and Coastguard Agency
2014/117	Update Appendix IV of MGN 324 (M+F) to: • Acknowledge the growing trend of integrating AIS data with radar systems. • Acknowledge the increased availability and use of radar functions that focus on and prioritise targets for collision avoidance on the basis of AIS target CPA and TCPA rather than radar target tracking information. • Warn of the danger of limiting situational awareness through over reliance on radar functions that focus on and prioritise AIS target CPA and TCPA.	

Appropriate action implemented

Eshcol

Report number: 14/2014

Fishing vessel

Accident date: 15/01/2014

Carbon monoxide poisoning on board fishing vessel in Whitby, resulting in two fatalities

No	Recommendation(s) to: Maritime and Coastguard Agency
2014/120	At the earliest opportunity, include in the Code of Practice for the Safety of Small Fishing Vessels a requirement for a carbon monoxide detector to be fitted in the accommodation on all vessels. **Appropriate action implemented**
2014/121	In developing a Code of Practice for the Safety of Small Fishing Vessels based on the Small Commercial Vessel and Pilot Boat Code, and in implementing the requirements of International Labour Organization Convention C188 in national regulations (when in force), take into account the circumstances of this accident, including, inter alia: • The disparity in the requirements for Liquid Petroleum Gas installations on board small fishing vessels and other small commercial craft and larger fishing vessels. • The need for suitable accommodation to be provided when crew are expected or required to stay on board overnight. • The operating patterns of small fishing vessels and the need to protect fishermen from fatigue. **Appropriate action planned:** 2018 AUGUST 31

Ovit

Report number: 24/2014

Chemical tanker

Accident date: 18/09/2013

Grounding of oil/chemical tanker in the Dover Strait

No	Recommendation(s) to: Transport Malta in co-operation with the Maritime and Coastguard Agency
2014/141	Propose to the Paris Memorandum of Understanding Committee that a Concentrated Inspection Campaign be conducted of ECDIS-fitted ships to establish the standards of system knowledge among navigators using a list of pre-defined questions. **Appropriate action implemented**

Wacker Quacker 1/Cleopatra

Report number: 32/2014

Amphibious passenger vehicles — Accident dates: 15/06/2013 and 29/09/2013

Combined report on the investigations of the sinking and abandonment of the DUKW amphibious passenger vehicle *Wacker Quacker 1* in Salthouse Dock, Liverpool and the fire and abandonment of the DUKW amphibious passenger vehicle *Cleopatra* on the River Thames, London

No	Recommendation(s) to:	Maritime and Coastguard Agency/ Driver and Vehicle Standards Agency
2014/153	Identify single points of contact for amphibious vehicle issues and put processes in place to allow them to work together, in consultation with the industry, to explore potential cross agency synergies, identify regulatory conflicts and agree a coherent approach to the survey and certification of new and existing amphibious passenger vehicles.	

MCA: Appropriate action planned: 

MAIB comment:
We are expecting a completion letter from MCA shortly.

DVSA: Appropriate action implemented 

No	Recommendation(s) to:	Maritime and Coastguard Agency
2014/154	Provide amphibious vehicle survey guidance and instructions to its surveyors.	

Appropriate action planned: 

2014/155	Work with industry to develop an amphibious vehicle operators' code of practice.	

Appropriate action planned: 

2014/156	Ensure that measures to reduce the risk of passenger entrapment and improve the levels of passenger survivability are included in its proposed technical standard for amphibious passenger vehicles.	

Appropriate action planned: 

MAIB comment:
We are expecting a completion letter from MCA shortly.

2014/157	Require existing DUKW operators, which may choose to rely on the insertion of buoyancy foam to meet the required damaged survivability standards, to demonstrate through risk based analysis that the foam does not adversely affect the safe operation of the vehicles.

Appropriate action implemented

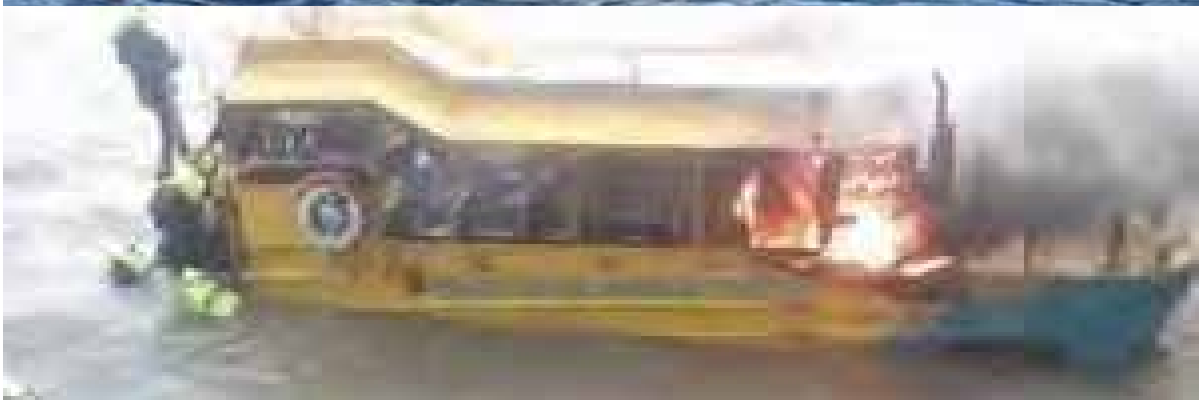
No	Recommendation(s) to:	London Duck Tours Ltd

2014/158 Use the safety lessons identified in this report to take further action to ensure, as far as is reasonably practicable, its vehicles, crew and passengers are best prepared to deal with emergency situations. In particular, attention should be given to:

- The readiness and use of PFDs: the practicalities of the current arrangements should be reviewed and consideration given to requiring all passengers to wear PFDs whenever DUKWs are waterborne.
- Establishing appropriate and achievable emergency procedures: these should include the marshalling of passengers, alerting potential responders and abandonment.
- Development of effective training drills.
- Engine compartment shut down and fire-fighting.
- Lowering the risk of passenger and crew entrapment: assess in particular whether the current canopy arrangements are appropriate.

Withdrawn

MAIB comment:
Withdrawn as company no longer operates vehicles on the water.



2013 RECOMMENDATIONS - PROGRESS REPORT*

*Status as of 31 March 2018

St Amant

Report number: 1/2013

Fishing vessel

Accident date: 13/01/2012

Loss of a crewman from fishing vessel off the coast of north-west Wales

No	Recommendation(s) to: Maritime and Coastguard Agency
2013/102	Ensure that its current policy of reviewing and deleting exemptions granted to fishing vessels that pre-date current regulatory requirements is applied robustly. As part of this process, the ambiguity between its Instructions to Surveyors and the 15-24m Code regarding the ongoing acceptance of standard exemptions should be resolved. **Appropriate action implemented**
2013/103	Provide guidance to the owners and skippers of fishing vessels which operate at sea for more than 24 hours on appropriate accommodation standards. The guidance should also recommend consideration of hygiene and sanitation facilities in a vessel's risk assessments, and the application of appropriate control measures. **Appropriate action planned:** 2018 AUGUST 31
2013/105	Improve the management of fishing vessel surveys and inspections by ensuring that: • Existing survey and inspection procedures and guidance are reviewed to improve the clarity of the guidance and ensure that it is consistent throughout. • There is an effective and readily accessible system to record and provide information to surveyors on the status of all identified deficiencies. • Existing instructions requiring a photographic record of a vessel's principal features are followed. **Appropriate action planned:** 2018 JUNE 30

Heather Anne

Report number: 2/2013

Fishing vessel

Accident date: 20/12/2011

Capsize and foundering resulting in the loss of one crewman in Gerrans Bay, Cornwall

No	Recommendation(s) to:	Maritime and Coastguard Agency
2013/106	Revise MGN 427 (F) in order to provide clearer and more comprehensive guidance to surveyors and fishermen on the methods available to assess small fishing vessel stability, taking into account, inter alia: • The limitations of the alternatives to a full stability assessment. • The suitability of the alternative stability assessments for small fishing vessels. • A vessel's stability is dependent on several factors including its upright GM, freeboard and hull form. • The need for skippers to be aware of the maximum loading of their vessels and the benefits of a freeboard mark. • The impact of vessel modifications. • Owners' and skippers' awareness of stability considerations while fishing. **Appropriate action planned:** 2018 DECEMBER 31	
2013/108	Specify the improvement in safety culture/behavioural change that it is seeking with respect to the voluntary wearing of personal flotation devices by individuals working on the decks of fishing vessels, and the timescale within which it is to be achieved; and Make arrangements to rapidly introduce the compulsory wearing of personal flotation devices on the working decks of fishing vessels if the sought after changes are not delivered. **Partially accepted[4] - Action planned:** 2018 AUGUST 31	

No	Recommendation(s) to:	Maritime and Coastguard Agency/ Marine Management Organisation
2013/109	Work together to link the funding provided for modifications to small fishing vessels with a full assessment of the impact such modifications will have on such vessels' stability, particularly where the proposed modifications will substantially alter the method of fishing to be undertaken.	**MCA: Appropriate action implemented** ✓ **MMO: Appropriate action implemented** ✓

[4] Refer to page 18 of 2013 MAIB Annual Report for MCA and MAIB comments: www.gov.uk/government/uploads/system/uploads/attachment_data/file/359941/MAIB_Annual_Report_2013.pdf

Purbeck Isle

Report number: 7/2013

Fishing vessel

Accident date: 17/05/2012

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

No	Recommendation(s) to: Maritime and Coastguard Agency
2013/203	Take action to implement Recommendation 2008/173, issued in the MAIB's 1992-2006 Fishing Vessel Safety Study, specifically by: • Introducing a requirement for all fishing vessels of <15m length overall to carry EPIRBS. • Ensuring that the *Merchant Shipping and Fishing Vessels (Health and Safety at Work) Regulations 1997* apply in respect of all fishermen on board fishing vessels, irrespective of their contractual status. **Appropriate action planned:** 
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:** 

Sarah Jayne

Report number: 13/2013

Fishing vessel

Accident date: 11/09/2012

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

No	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:** 

Vixen

Report number: 16/2013

Passenger ferry — Accident date: 19/09/2012

Foundering in Ardlui Marina, Loch Lomond

No	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: Progress Ongoing — NO DATE GIVEN

West Dunbartonshire Council: Appropriate action planned: Progress Ongoing — NO DATE GIVEN

Arklow Meadow

Report number: 21/2013

General cargo vessel — Accident date: 5/12/2012

Release of phosphine gas during cargo discharge at Warrenpoint, County Down

No	Recommendation(s) to:	Maritime and Coastguard Agency
2013/225	In consultation with the Health and Safety Executive, the Port Skills and Safety Organisation, and other industry bodies as appropriate, review, consolidate and re-issue the guidance provided to UK stakeholders on the loading, carriage and discharge of fumigated cargoes to highlight the importance of: • The potential for a fumigant to remain active due to factors such as temperature, relative humidity, voyage length and fumigant method. • The retention of suitably trained and qualified fumigators at both the load and discharge ports. • Ships' crews being aware of their responsibilities. • UK port authorities having robust procedures and contingency plans when receiving vessels with fumigated cargoes.	

Appropriate action implemented

Audacious/Chloe T

Report[5] number: 27/2013

Fishing vessels

Accident dates: 10/8/2012 and 1/09 2012

Flooding and foundering of fishing vessel *Audacious* 45 miles east of Aberdeen on 10 August 2012 and the Flooding and foundering of fishing vessel *Chloe T* 17 miles south-west of Bolt Head, Devon on 1 September 2012

No	Recommendation(s) to: Maritime and Coastguard Agency
2013/249	Review the conduct of its surveys and inspections of fishing vessels in order to ensure that: • The scope is credible and that it can be achieved in practice. • The whole scope is routinely applied. • Records are accurate and complete. **Appropriate action planned:** 2018 JUNE 30
2013/250	Implement a robust system to manage the scheduling of surveys and inspections on fishing vessels. Such a system should be capable of readily identifying vessels that are overdue for any surveys or inspections. **Appropriate action planned:** Update requested NO DATE GIVEN

Audacious

Chloe T

[5] Due to similarities between the accidents MAIB took the decision to publish its findings as a combined report.

2012 RECOMMENDATIONS - PROGRESS REPORT*

*Status as of 31 March 2018

Karin Schepers

Report number 10/2012

Container vessel

Accident date: 03/08/2011

Grounding at Pendeen, Cornwall

No	Recommendation(s) to: Maritime and Coastguard Agency
2012/115	Assess the desirability of, and, where appropriate, develop operational guidelines for using AIS data to monitor marine traffic movements. Special consideration should be given to using AIS data to monitor marine traffic movement in areas of high traffic concentrations, including traffic separation schemes, where there is limited or no radar coverage.

Appropriate action implemented

Karin Schepers aground

Tombarra

Report number: 19A and 19B/2012

Car carrier

Accident date: 07/02/2011

Fatality to a rescue boat crewman, Royal Portbury Docks, Bristol

Report Part A - The weight of the rescue boat

No	Recommendation(s) to: Maritime and Coastguard Agency
2012/128	Submit to the IMO proposals for the LSA Code to: • Reflect a requirement for a 'system approach' to davit and winch installations with the aim of eliminating the possibility of any component being overstressed to the point of failure. • Provide clarification on the fitting and use of 'safety devices' on davit and winch systems, using a goal-based approach to their application.

Partially accepted - closed

2012/129	Submit to the IMO a proposal to mandate a maximum height of the davit head used in conjunction with rescue boats and survival craft fitted on board both cargo and passenger ships, based upon: • Recognition of the severe difficulties faced by the crews of high-sided vessels such as *Tombarra* when attempting to launch rescue boats in a seaway. • The increased hazards to which the crews of rescue boats and survival craft are exposed when operating at height. • The action taken by Wilhelmsen Lines Car Carriers Ltd to change the design of its future vessels to lower the height of the rescue boat davit head. • The maximum height of davit heads used in conjunction with survival craft already recommended for passenger vessels in SOLAS III/24; and, • The guidance provided in MSC Circ.1094 regarding the height of davit heads used for fast rescue boats on board passenger ships. **Partially accepted - closed**

Report Part B - The failure of the fall wire		
No	**Recommendation(s) to:**	**Maritime and Coastguard Agency**
2012/134	Submit to the IMO proposals to amend the LSA Code designed to: • Ensure any water entering foam-filled buoyancy chambers within the enclosed hulls of rescue boats and lifeboats can be easily removed. • Require the actual weight of the rescue boat or lifeboat supplied to the vessel, rather than its prototype, to be provided in its certification. **Partially accepted - closed**	
2012/135	Submit to the IMO proposals to amend MSC.1/Circ.1206/Rev.1 designed to require the annual weighing of rescue boats and lifeboats which use buoyancy foam within internal spaces, as soon as practicable. **Partially accepted - closed**	

2011 RECOMMENDATIONS - PROGRESS REPORT

There are no outstanding recommendations for 2011.

2010 RECOMMENDATIONS - PROGRESS REPORT*

*Status as of 31 March 2018

Korenbloem/Optik/Osprey III

(Combined) report number: 6/2010

Fishing vessels

Accident dates: November 2009

Fatal person overboard accidents

No	Recommendation(s) to:	Department for Transport
2010/112	Recognise the consistent and disproportionate rate of fatalities in the UK fishing industry and take urgent action to develop a comprehensive, timely and properly resourced plan to reduce that rate to a level commensurate with other UK occupations.	

Partially accepted - closed

Bro Arthur

Report number: 9/2010

Oil/chemical tanker

Accident date: 19/02/2010

Fatality of a shore worker in No 2 cargo tank while alongside at Cargill Terminal, Hamburg

No	Recommendation(s) to:	International Chamber of Shipping
2010/120	Include guidance on the following in the respective International Chamber of Shipping publications during their next periodic review: • TSGC - management of contractors and sub-contractors with emphasis on the master's and other officers' and crew members' related health and safety responsibilities. • TSGC and ISGOTT - the need for the provision of lightweight, portable casualty recovery equipment suitable for recovery from deep cargo tanks and for the crew to be fully trained in its use.	

Appropriate action planned:

Olivia Jean

Report number: 10/2010

Fishing vessel

Accident date: 10/10/2009

Injury to fisherman, 17nm south south east of Beachy Head

No	Recommendation(s) to: Maritime and Coastguard Agency
2010/123	Consider the findings of this investigation when assisting the Department for Transport to address MAIB Recommendation 2010/112, including the need to improve fishing vessel standards and occupational safety by: • Reviewing the application of LOLER, PUWER, risk assessment and working time regulations on board fishing vessels to ensure that they are suitable for the task of improving safety and reducing accidents. • Providing clear and robust guidance to its surveyors and the fishing industry at large. • Ensuring that accurate records are maintained such that surveyors are provided with the information required to survey fishing vessels effectively. • Improving its recording of accidents on vessels' SIAS records to identify trends and act upon them. **Appropriate action planned:** 31 AUGUST 2018

2009 RECOMMENDATIONS - PROGRESS REPORT*

*Status as of 31 March 2018

Celtic Pioneer

Report number: 11/2009

Rigid-hulled Inflatable Boat — **Accident date:** 26/08/2008

Injury to a passenger on board RIB in the Bristol Channel

No	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: 2018 SEPTEMBER 30

Abigail H

Report number: 15/2009

Grab hopper dredger — **Accident date:** 02/11/2008

Flooding and foundering in the Port of Heysham

No	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: 2018 SEPTEMBER 30

2008 RECOMMENDATIONS - PROGRESS REPORT*

*Status as of 31 March 2018

Fishing Vessel Safety Study

Fishing vessels — Accident dates: 1992 to 2006

Analysis of UK Fishing Vessel Safety 1992 to 2006

No	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: 2020 DECEMBER 31

No	Recommendation(s) to:	Department for Transport/ Maritime and Coastguard Agency
2008/174	Agree the coherent resourced plan for reducing the fatality rate in the fishing industry (see recommendation 2008/173).	

DfT: Appropriate action planned: 2018 DECEMBER 31

MCA: Appropriate action planned: 2018 DECEMBER 31

No	Recommendation(s) to:	Maritime and Coastguard Agency
2008/177	Review the current requirements for safety training with particular reference to training assessment and refresher training.	

Appropriate action planned: Progress Ongoing NO DATE GIVEN

MAIB comment:
We are expecting a completion letter from MCA shortly.

2007 RECOMMENDATIONS - PROGRESS REPORT*

*Status as of 31 March 2018

Danielle

Report number: 5/2007

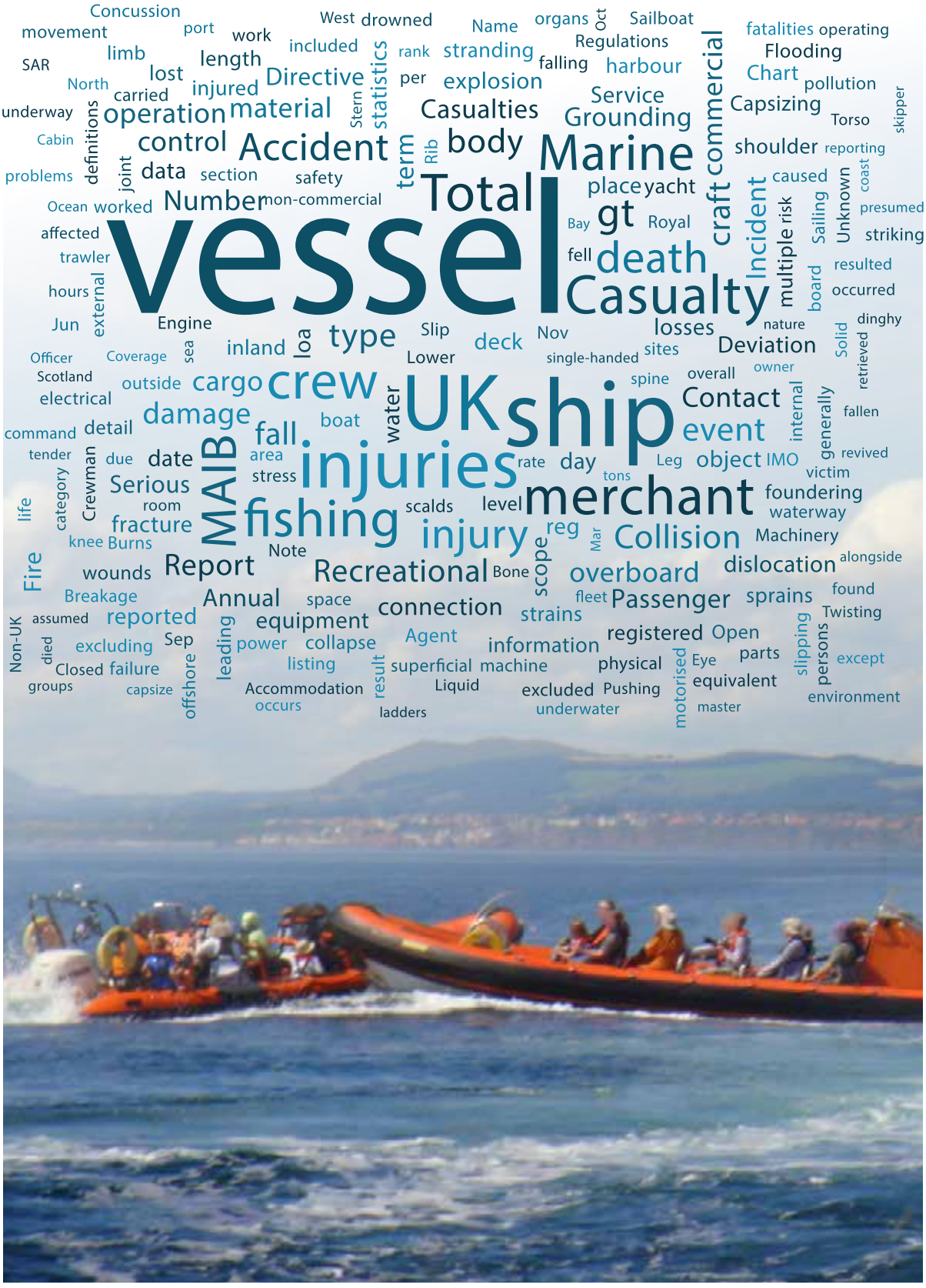
Fishing vessel — Accident date: 06/06/2006

Major injuries sustained by a deckhand, 7 miles south-south-east of Falmouth

No	Recommendation(s) to:	Maritime and Coastguard Agency
2007/119	Amplify and expand on current advice contained in MSN 1768 (M&F) such that fishermen are reminded: • Medical scale requirements provide the minimum levels of medical stores only. Additional stores may be provided at the skipper's/ owner's discretion. Such advice should also specify the need for skippers to consider the level of additional medical stores carried on individual vessels as part of the statutory risk assessment process.	

Partially accepted - action planned : 2018 DECEMBER 31

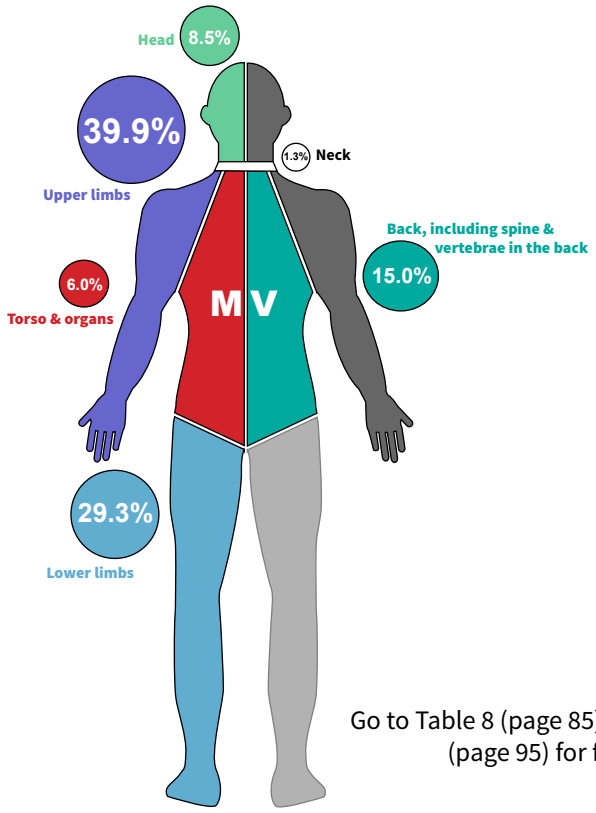
PART 3: STATISTICS

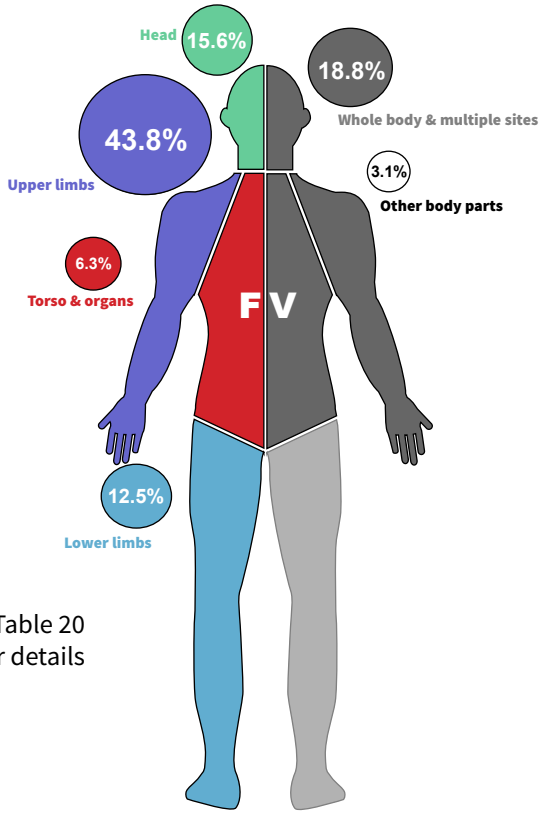


STATISTICS - TABLE OF CONTENTS

For details of reporting requirements and terms used in this section please see Annex - Statistics Coverage on page 100 and Glossary on page 106.

Charts 6 and 7: Deaths and injuries of merchant vessel and fishing vessel crew by part of body injured





Go to Table 8 (page 85) and Table 20 (page 95) for further details

Note: Rates may not add up due to rounding

UK VESSELS: ACCIDENTS INVOLVING LOSS OF LIFE

Table 1: Loss of life in 2017 reported to the MAIB

Date	Name of vessel	Type of vessel	Location	Accident
Merchant vessels 100gt and over				
-	-	-	-	-
Merchant vessels under 100gt (excluding commercial recreational)				
30 Oct	-	Workboat/ punt	River Aire at Leeds	Crewman fell overboard and drowned.
Fishing vessels				
23 Sep	***Constant Friend*** **(N83)**	Stern trawler	Kilkeel harbour, County Down	Crewman fell into the harbour while boarding the vessel. He was retrieved but could not be revived.
26 Sep	***Solstice*** **(PH199)**	Stern trawler	7nm south-south-east of Plymouth	Capsize leading to the loss of the owner.
6 Nov	***Enterprise*** **(SH323)**	Potter	Off Scarborough, North Yorkshire	A crewman became caught in a string of pots and dragged overboard. He was recovered but could not be resuscitated.
13 Nov	***Illustris*** **(B119)**	Stern trawler	Royal Quays, North Shields, Tyne and Wear	Crewman assumed to have fallen overboard while vessel was alongside.
20 Nov	***Varuna*** **(BRD684)**	Creeler	West of Applecross Bay, west coast of Scotland	Single-handed skipper assumed to have fallen overboard.
Recreational craft (*including commercial recreational)				
5 Feb	-	Kayak	Off Portsoy, Aberdeenshire	Presumed capsize/person overboard.
8 Mar	***Bumpy Daze***	Sailing yacht	Blyth, Northumberland	Person overboard while in harbour.
15 Apr	-	Sailing dinghy	Off Gwbert, Cardigan Bay, Wales	A single-handed sailor drowned after capsizing and being unable to recover.
6 May	-	Speedboat	Irish Sea/North Channel	Two people died when their boat foundered.
25 Jun	***Catherine J***	Sailing yacht	Kirkwall, Orkney	Person fell overboard and drowned in harbour.
6 Aug	***James 2***	Angling boat	Outside the entrance to Shoreham harbour, West Sussex	Three people lost their lives following a collision at night with the fishing vessel *Vertrouwen*.
2 Sep	-	Inflatable tender	Leverburgh, Isle of Harris, Outer Hebrides	A person died after entering the water to retrieve a lost oar.

Date	Name of vessel	Type of vessel	Location	Accident
Recreational craft continued				
18 Sep	***Snailblazer***	Sailing yacht	Cromarty Firth, near Invergordon, east coast of Scotland	A boat owner fell into water and drowned while transferring from tender to yacht.
18 Nov	***CV30***	Commercial racing yacht	South Indian Ocean	A crew member fell overboard while on the foredeck helping to reduce sail. He was retrieved but was unable to be revived.

Recovery of *James 2*

UK MERCHANT VESSELS >= 100GT

Table 2: Merchant vessel total losses

There were no losses of UK merchant vessels reported to the MAIB in 2017.

Table 3: Merchant vessel losses — 2008-2017

	Number lost	UK fleet size	Gross tonnage lost
2008	2	1 578	645
2009	1	1 564	274
2010	-	1 520	-
2011	-	1 521	-
2012	-	1 450	-
2013	-	1 392	-
2014	-	1 361	-
2015	-	1 385	-
2016	-	1 365	-
2017	-	1 356	-

Table 4: Merchant vessels in casualties by nature of casualty and vessel category❶

	Solid cargo	Liquid cargo	Passenger	Service ship	Recreational craft	Total
Collision	2	5	6	21	1	**35**
Contact	1	-	4	1	-	**6**
Damage to ship or equipment	1	-	4	1	-	**6**
Fire/explosion	1	-	4	1	-	**6**
Flooding/foundering	1	-	-	1	-	**2**
Grounding	11	-	3	5	-	**19**
Loss of control	5	4	9	9	1	**28**
Total	**22**	**9**	**30**	**39**	**2**	**102**

❶ Vessel groups include vessels operating on inland waterways.
Note: 102 Casualties represents a rate of 75 casualties per 1 000 vessels on the UK Fleet.

Table 5: Deaths and injuries to merchant vessel crew — 2008-2017❷

	Crew injured	Of which resulted in death
2008	224	5
2009	199	6
2010	222	3
2011	185	5
2012	186	3
2013	134	1
2014	142	-
2015	141	2
2016	133	2
2017	**153**	**-**

❷ From 2012 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
Master/skipper	3
Officer, deck	5
Officer, engineering	10
Rating	33
Other crew	102
Total	**153**

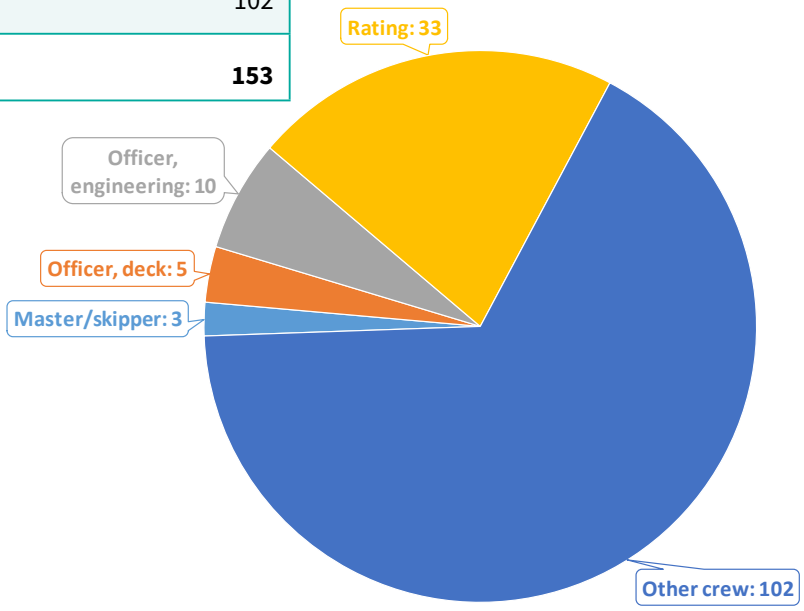


Chart 8: Deaths and injuries of merchant vessel crew by rank

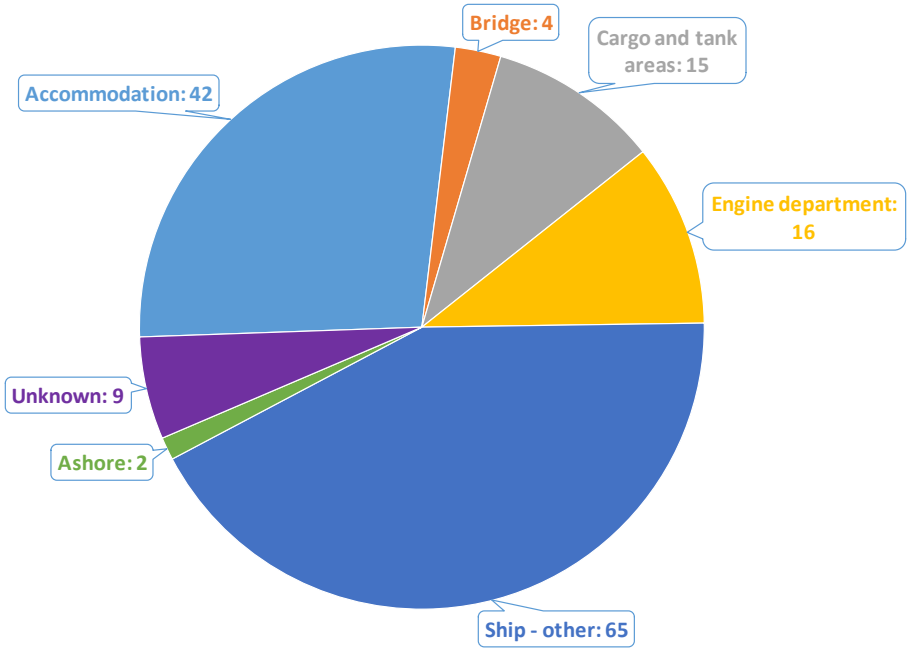


Chart 9: Deaths and injuries of merchant vessel crew by place

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

Place		Number of crew
Accommodation	Bathroom, shower, toilet	2
	Cabin space - crew	4
	Cabin space - passengers	1
	Elevator/lift	1
	Galley spaces	16
	Gymnasium	1
	Laundry	1
	Mess room, dayroom	3
	Restaurant/bar	2
	Stairway/ladders	8
	Theatre	2
	Accommodation, other	1
Bridge	Wheelhouse	4
Cargo & tank areas	Bunker tank	1
	Cargo hold	2
	Open deck cargo space	1
	Ro-Ro vehicle deck ramp	4
	Vehicle cargo space	7
Engine department	Auxiliary engine room	1
	Engine room	13
	Workshop/stores	1
	Other	1
Ship	Boat deck	7
	Bridge deck	1
	Freeboard deck	10
	Forecastle deck	9
	Gangway	2
	Poop deck	5
	Superstructure deck	1
	Stairs/ladders	14
	Over side	2
	Other	14
Ashore (during access)		2
Unknown		9
Total		**153**

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	7
Head	Facial area	2
	Eye(s)	2
	Head, brain and cranial nerves and vessels	1
	Head, other	1
	Neck, inclusive spine and vertebra in the neck	2
Upper limbs	Shoulder and shoulder joints	12
	Arm, including elbow	11
	Hand	15
	Finger(s)	19
	Wrist	4
	Back, including spine and vertebrae in the back	23
Torso and organs	Rib cage, ribs including joints and shoulder blade	7
	Chest area including organs	2
	Pelvic and abdominal area including organs	2
	Torso, multiple sites affected	1
Lower limbs	Hip and hip joint	1
	Leg, including knee	18
	Ankle	9
	Foot	10
	Toe(s)	3
	Lower extremities, multiple sites affected	1
	Total	**153**

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	12
	Pushing, pulling	5
	Putting down, bending down	1
	Twisting, turning	7
	Treading badly, twisting leg or ankle, slipping without falling	1
	Other	3
Body movement without any physical stress (generally leading to an external injury)	Being caught or carried away, by something or by momentum	22
	Uncoordinated movements, spurious or untimely actions	6
Breakage, bursting, splitting, slipping, fall, collapse of Material Agent*	Breakage, bursting - causing splinters (wood, glass, metal, stone, plastic, others)	1
	Slip, fall, collapse of Material Agent* - from above (falling on the victim)	2
	Slip, fall, collapse of Material Agent* - on the same level	1
Deviation* by overflow, overturn, leak, flow, vaporisation, emission	Liquid state - leaking, oozing, flowing, splashing, spraying	3
	Gaseous state - vaporisation, aerosol formation, gas formation	1
Loss of control (total or partial)	Of machine (including unwanted start-up) or of the material being worked by the machine	5
	Of means of transport or handling equipment, (motorised or not)	4
	Of hand-held tool (motorised or not) or of the material being worked by the tool	3
	Of object (being carried, moved, handled, etc)	3
Slipping - stumbling and falling - fall of persons	Fall of person - to a lower level	33
	Fall of person - on the same level	38
	Other	1
Deviation* due to electrical problems, explosion, fire	Fire, flare up	1
	Total	**153**

*See "Terms" on page 108

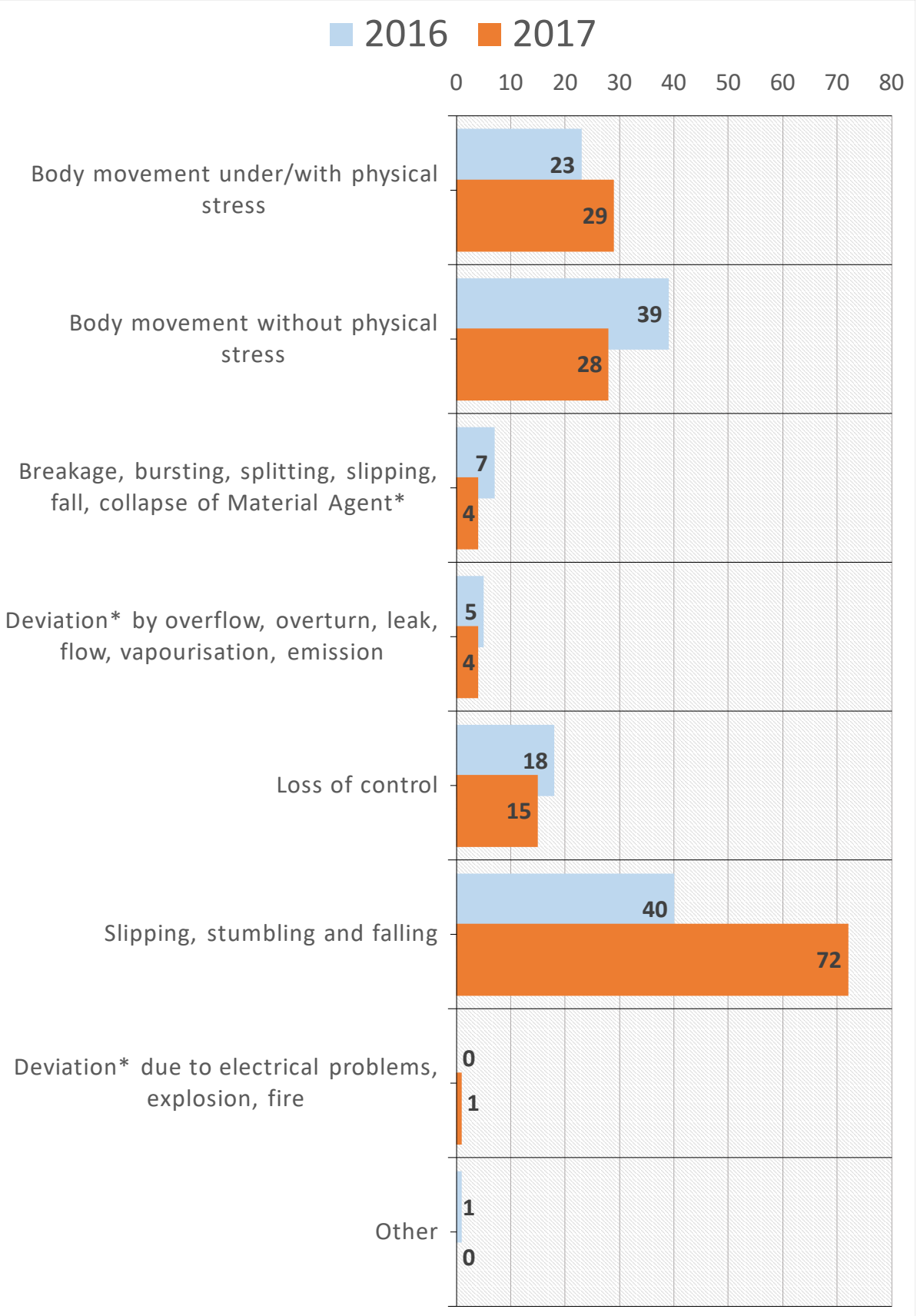


Chart 10: Deaths and injuries of merchant vessel crew by deviation*

*See "Terms" on page 108

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

Main injury		Number of crew
Bone fractures	Closed fractures	55
	Open fractures	1
Wounds and superficial injuries*	Superficial injuries*	6
	Open wounds	10
Dislocations, sprains and strains	Dislocations and subluxations*	10
	Sprains and strains	40
	Other types of dislocations, sprains and strains	5
Concussion and internal injuries	Concussion and intracranial injuries	1
	Internal injuries	1
Burns, scalds and frostbites	Burns and scalds (thermal)	6
Poisonings and infections	Poisonings and infections (other than acute)	1
Traumatic amputations (loss of body parts)		4
Other specified injuries not included under other headings		4
Multiple injuries		5
Unknown or unspecified		4
Total		**153**

*See "Terms" on page 108

Table 11: Deaths and injuries to passengers — 2008-2017❸❹

	Number of passengers	Of which resulted in death
2008	170	2
2009	115	1
2010	92	2
2011	109	1
2012	50	-
2013	46	-
2014	56	1
2015	55	1
2016	51	1
2017	**26**	**-**

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

❹ Between 2009 and 2011 eight cruise ships left the UK flag.

Table 12: Deaths and injuries of passengers by injury

Main injury		Number of passengers
Bone fractures	Closed fractures	20
Concussion and internal injuries	Concussion and intracranial injuries	1
Dislocations, sprains and strains	Sprains and strains	2
	Dislocations and subluxations*	1
Wounds and superficial injuries*	Open wounds	1
Traumatic amputations (loss of body parts)		1
Total		**26**

*See "Terms" on page 108

UK MERCHANT VESSELS < 100GT

Table 13: Merchant vessels < 100gt - losses

Date	Name of vessel	Type of vessel	loa	Casualty event
31 Oct	*CV24*	Sailing yacht	23m	Grounding
7 Dec	*Tyger Of London*	Sailing yacht	13m	Capsizing

Table 14: Merchant vessels < 100gt

	Solid cargo | Barge	Passenger ship	Recreational craft | Power	Recreational craft | Sailboat	Service ship | Offshore	Service ship | Seach and Rescue (SAR) craft	Service ship | Tug (Towing/Pushing)	Service ship | Other	Total
Capsizing/listing	-	-	-	1	-	1	-	1	**3**
Collision	-	2	2	1	1	3	2	2	**13**
Contact	-	5	2	1	-	2	-	4	**14**
Damage to ship or equipment	1	-	-	2	1	1	-	-	**5**
Fire/explosion	-	1	-	-	2	-	-	1	**4**
Grounding	-	2	-	10	-	2	-	1	**15**
Loss of control	-	7	2	3	-	-	1	5	**18**
Total per vessel type	**1**	**17**	**6**	**18**	**4**	**9**	**3**	**14**	**72**
Deaths	-	-	-	1	-	-	-	1	**2**
Injuries	1	4	10	9	1	13	2	11	**51**

UK FISHING VESSELS

There were 5 700 UK registered fishing vessels at the end of 2017. During 2017, 146 casualties to vessels involving these vessels were reported to the MAIB. Figures in the following tables show casualties to vessels and injuries involving UK registered vessels that were reported to the MAIB in 2017.

6 fishing vessels were reported lost (0.11% of the total fleet) and there were 5 fatalities to crew.

Table 15: Fishing vessel total losses

Date	Name of vessel	Age	Gross tons	Casualty event
Under 15m length overall (loa)				
1 Jun	*Jenikay*	Unknown	1.48	Foundering
8 Jun	*Inshallah*	26	4.26	Flooding
26 Sep	*Solstice*	17	9.23	Capsizing
16 Nov	*Pisces*	4	2.37	Flooding
18 Dec	*Adelphi*	11	2.4	Grounding
15m length overall - under 24m registered length (reg)				
3 Mar	*Ocean Way*	21	268.00	Foundering
Over 24m registered length (reg)				
No losses of fishing vessels of 24m and over were reported to the MAIB in 2017.				

Table 16: Fishing vessel losses — 2008-2017⑤

	Under 15m loa	15m loa to <24m reg	24m reg and over	Total lost	UK registered	% lost
2008	14	4	3	**21**	6 763	**0.31**
2009	11	4	-	**15**	6 222	**0.24**
2010	11	3	-	**14**	5 902	**0.24**
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**

⑤ From 2012 this table excludes losses that were not in connection with the operation of a ship.

Table 17: Casualties to fishing vessels

	Number of vessels involved	Incident rate per 1 000 vessels at risk (to one decimal place)
Capsizing/listing	2	0.4
Collision	14	2.5
Contact	2	0.4
Fire/explosion	3	0.5
Flooding/foundering	10	1.8
Grounding	10	1.8
Loss of control	105	18.4
Total	**146**	**25.6**

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

	Number of vessels involved	Incident rate per 1 000 vessels at risk
Under 15m length overall (loa) — *vessels at risk: 5 073*		
Capsizing/listing	2	0.4
Collision	11	2.2
Contact	2	0.4
Fire/explosion	2	0.4
Flooding/foundering	5	1.0
Grounding/stranding	6	1.2
Loss of control	70	13.8
Total	**98**	**19.3**
15m loa - 24m registered length (reg) — *vessels at risk: 488*		
Collision	2	4.1
Fire/explosion	1	2.0
Flooding/foundering	5	10.2
Grounding/stranding	4	8.2
Loss of control	30	61.5
Total	**42**	**86.1**
24m reg and over — *vessels at risk: 139*		
Collision	1	7.2
Loss of control	5	36.0
Total	**6**	**43.2**
Total	**146**	**25.6**

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

Main injury		Number of crew
Drowning and asphyxiation	Drowning and non-fatal submersions	6
Traumatic amputations (Loss of body parts)		2
Bone fractures	Closed fractures	8
	Open fractures	2
Burns, scalds and frostbites	Burns and scalds (thermal)	2
Dislocations, sprains and strains	Dislocations and subluxations	1
	Sprains and strains	2
Wounds and superficial injuries	Superficial injuries	1
	Open wounds	7
Other specified injuries not included under other headings		1
Total		**32**

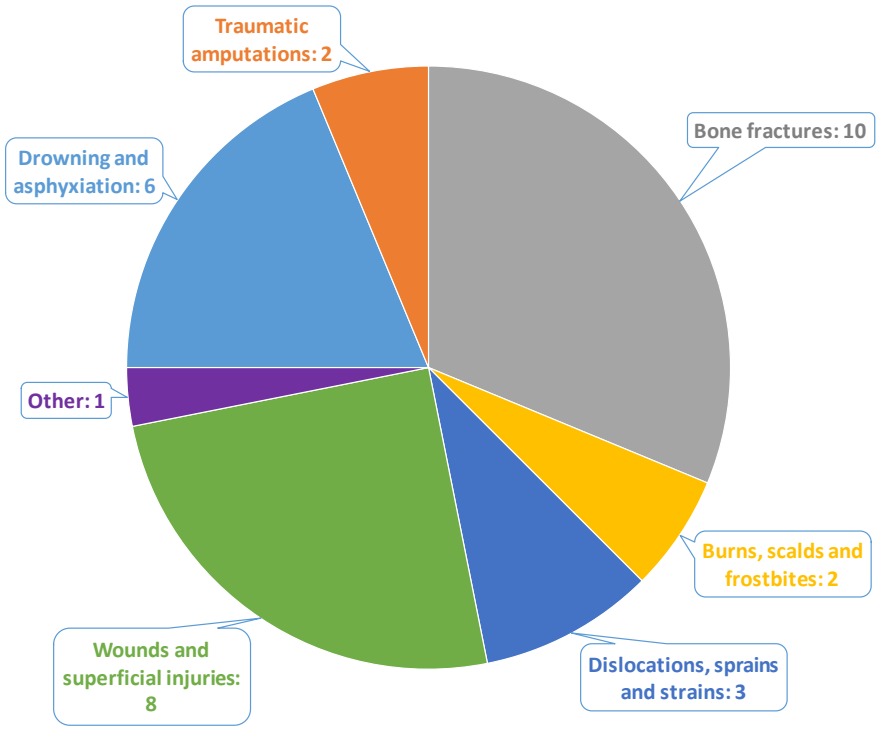


Chart 11: Deaths and injuries to fishing vessel crew by injury

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)	5
	Multiple sites of the body affected	1
Head	Facial area	3
	Eye(s)	2
Upper limbs	Arm, including elbow	2
	Hand	6
	Finger(s)	3
	Shoulder and shoulder joints	2
	Wrist	1
Torso and organs	Rib cage, ribs including joints and shoulder blade	2
Lower limbs	Leg, including knee	4
Other parts of body injured, not mentioned above		1
Total		**32**

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

Deviation*		Number of crew
Body movement without any physical stress (generally leading to an external injury)	Being caught or carried away, by something or by momentum	5
Body movement under or with physical stress (generally leading to an internal injury)	Pushing, pulling	2
	Twisting, turning	1
Breakage, bursting, splitting, slipping, fall, collapse of Material Agent*	Breakage, bursting - causing splinters (wood, glass, metal, stone, plastic, others)	1
	Slip, fall, collapse of Material Agent* - from above (falling on the victim)	3
	Slip, fall, collapse of Material Agent - on the same level	1
Deviation due to electrical problems, explosion, fire	Explosion	1
	Fire, flare up	1
Loss of control (total or partial)	Of machine (including unwanted start-up) or of the material being worked by the machine	1
	Of means of transport or handling equipment, (motorised or not)	3
	Of hand-held tool (motorised or not) or of the material being worked by the tool	2
	Of object (being carried, moved, handled, etc)	2
Slipping - stumbling and falling - fall of persons	Fall of person - to a lower level	1
	Fall overboard of person	5
	Fall of person - on the same level	2
	No information	1
	Total	**32**

*See "Terms" on page 108

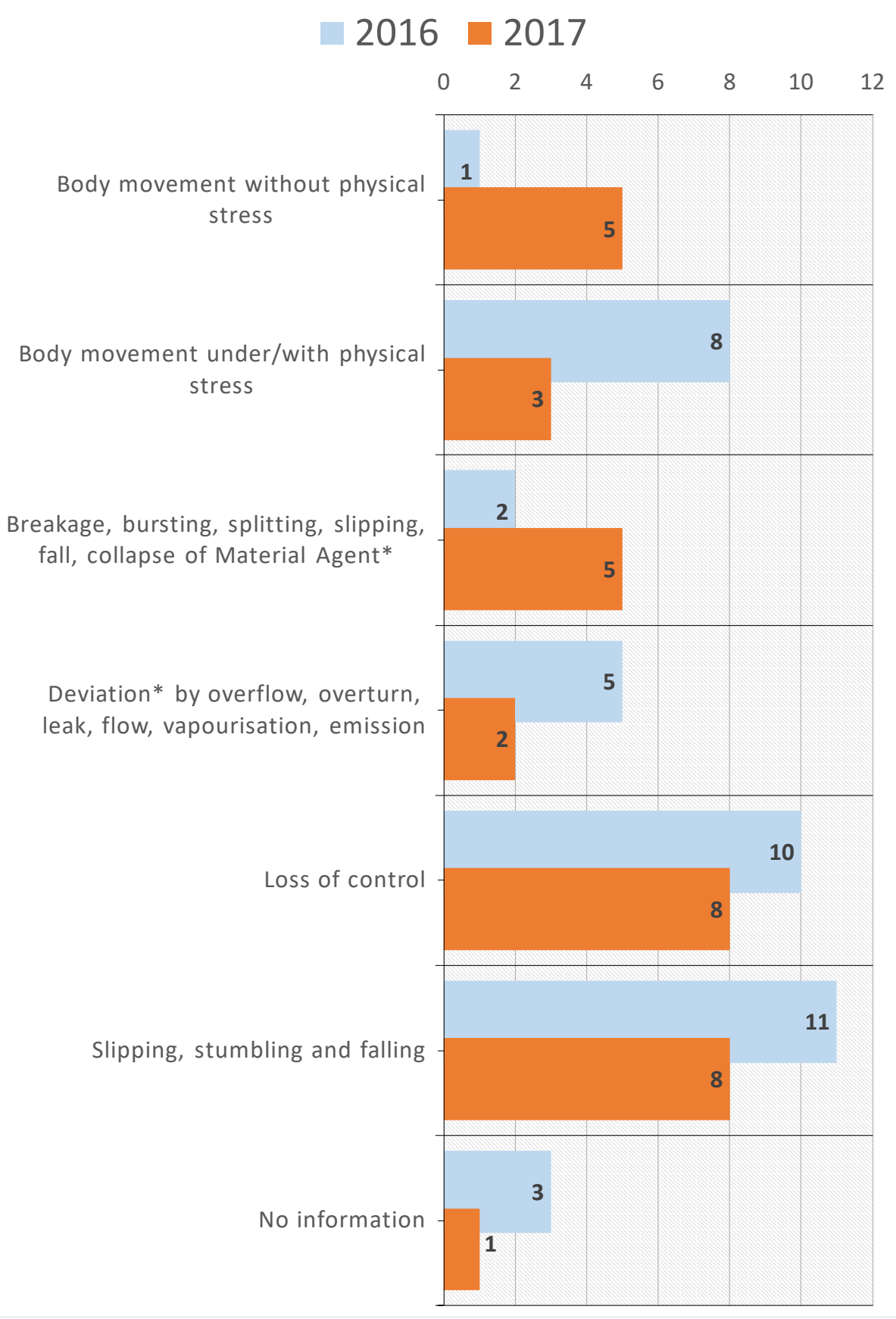


Chart 12: Deaths and injuries of fishing vessel crew by deviation*

*See "Terms" on page 108

Table 22: Deaths and injuries to fishing vessel crew by vessel length (of which, deaths shown in brackets) 2008-2017❷

	Under 15m loa		15m loa - under 24m reg		24m reg and over		Total	
2008	19	(3)	22	(4)	19	(1)	60	(8)
2009	32	(5)	30	(7)	13	(1)	75	(13)
2010	22	(4)	10	-	13	(1)	45	(5)
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)**

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

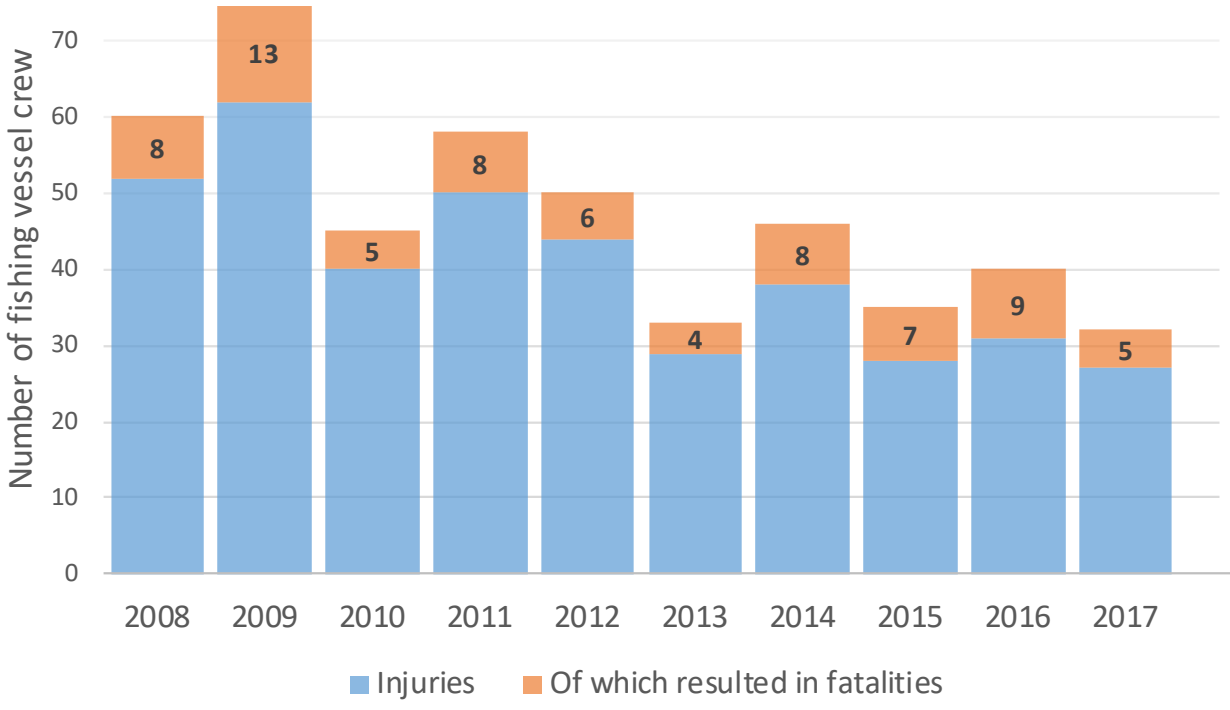


Chart 13: Deaths and injuries to fishing vessel crew

NON-UK COMMERCIAL VESSELS

Table 23: Non-UK commercial vessels total losses in UK waters

Date	Name of vessel	Type of vessel	Flag	loa	Casualty event
5 Jun	*Valparaiso*	Sailing yacht	France	12.5m	Grounding - Isles of Scilly

Table 24: Non-UK commercial vessels in UK waters

	Cargo solid	Liquid cargo	Passenger	Service ship	Fishing vessel	Recreational craft	Total
Capsizing/listing	4	12	1	3	-	-	**20**
Collision	1	18	4	2	1	-	**26**
Contact	1	7	-	1	1	-	**10**
Damage to ship or equipment	-	4	1	1	-	-	**6**
Fire/explosion	-	-	-	-	2	-	**2**
Grounding	2	8	1	1	1	1	**14**
Loss of control	5	18	-	-	1	-	**24**
Total per vessel type	**13**	**67**	**7**	**8**	**6**	**1**	**102**
Deaths	**1**	**1**	**-**	**-**	**-**	**-**	**2**
Injuries	**2**	**19**	**4**	**1**	**1**	**-**	**27**

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[6] 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 101) 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 104.
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.

[6] 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[7]

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).

Note that under some IMO guidelines Less Serious Marine Casualties INCLUDE Marine Incidents. In UK data Less Serious Marine Casualties (and any other Marine Casualties) EXCLUDE 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).

[7] 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[8] (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[9] (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[10].

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

[9] http://www.imo.org/en/OurWork/MSAS/Casualties/Documents/Res.%20MSC.255(84)%20Casualty%20Investigation%20Code.pdf

[10] http://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:91:0::::P91_SECTION:MLC_A4 (Article II 1.(f) & Standard A4.3)

Machinery/Loss of control/Damage to Equipment

Until 2012

The UK used the generic term “Machinery” 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 in its list of serious casualty events (MSC-MEPC.3/Circ.3[11]), 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.

[11] http://www.imo.org/en/OurWork/MSAS/Casualties/Documents/MSC-MEPC.3-Circ.3.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[12] (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[13].
6. Until 2012 the UK considered SAR craft to be non-commercial. From 2013 onwards they are considered commercial.

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

[13] 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 ◂

ABP	-	Associated British Ports
AIS	-	Automatic Identification System
APMF	-	Agence Portuaire, Maritime et Fluviale
BBC	-	British Broadcasting Corporation
BDEAP		Bridge Design, Equipment Arrangement and Procedures
Circ.	-	Circular
CO	-	Carbon monoxide
CO_2	-	Carbon dioxide
COLREGS	-	The International Regulations for Preventing Collisions at Sea 1972, as amended
CPA	-	Closest Point of Approach
DfT	-	Department for Transport
DSC	-	Digital Selective Calling
ECDIS	-	Electronic Chart Display and Information System
EMSA	-	European Maritime Safety Agency
EPIRB	-	Emergency Position Indicating Radio Beacon
ESAW	-	European Statistics on Accidents at Work
EU	-	European Union
FISG	-	Fishing Industry Safety Group
fv	-	fishing vessel
GM	-	Metacentric height
GNSS	-	Global Navigation Satellite System
GRP	-	Glass Reinforced Plastic
gt	-	gross tonnage
HMCG	-	Her Majesty's Coastguard
HMPE	-	High Modulus Polyethylene
HMSF	-	High Modulus Synthetic Fibre
HSE	-	Health and Safety Executive
ILO	-	International Labour Organization
IMO	-	International Maritime Organization
IOSH	-	Institution of Occupational Safety and Health
ISAF	-	International Sailing Federation (now World Sailing)
ISGOTT	-	International Safety Guide for Oil Tankers and Terminals
ISO	-	International Organization for Standardization
JTSB	-	Japan Transport Safety Board
kg	-	kilogram
kN	-	kilonewton
LOA	-	Length overall
LOLER	-	Lifting Operations and Lifting Equipment Reguations
LNG	-	Liquefied Natural Gas
LSA	-	Life Saving Appliance

LSMC	-	Less Serious Marine Casualty
Ltd	-	Limited (company)
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
MOB	-	Manoverboard
MSC	-	Maritime Safety Committee
MSIS	-	Merchant Shipping Instructions to Surveyors
MSN	-	Merchant Shipping Notice
n/a	-	Not Applicable
No.	-	Number
nm	-	nautical mile
OCIMF	-	Oil Companies International Marine Forum
OOW	-	Officer of the watch
OSR	-	Offshore Special Regulations
PFDs	-	Personal Flotation Devices
PLA	-	Port of London Authority
PLB	-	Personal Locator Beacon
PUWER	-	Provision and Use of Work Equipment Regulations (1998)
reg	-	registered
RCD	-	Recreational Craft Directive
RIB	-	Rigid Inflatable Boat
Ro-ro	-	Roll on, roll off vessel
RYA	-	Royal Yachting Association
SAR	-	Search and Rescue
SCV Code	-	Small Commercial Vessel Code
SIAS	-	Ship Inspections and Surveys
SIGTTO	-	Society of International Gas Tanker and Terminal Operators
SMC	-	Serious Marine Casualty
SOLAS	-	Safety of Life at Sea
SPM	-	Single Point Mooring
TCPA	-	Time to Closest Point of Approach
TSGC	-	Tanker Safety Guide (Chemicals)
UK	-	United Kingdom
VHF	-	Very High Frequency
VSMC	-	Very Serious Marine Casualty
VTS	-	Marine Traffic Service

Deviation	-	The last event differing from the normal working process and leading to an injury/fatality.
DUKW	-	A DUKW (commonly pronounced “duck”) is an amphibious landing vehicle that was designed to transport military personnel and supplies for the United States Army during World War 2. The acronym DUKW indicates that it was designed in 1942 (D), it is an amphibious (U) vehicle and has both front-wheel and rear-wheel drive capability (K and W, respectively).
Material Agent	-	A tool, object or instrument.
MSL	-	Maximum Securing Load. MSL can be expressed in kN, kg or t; e.g. a 100kN lashing is also referred to as a 10,000kg or 10t lashing. The variations in quantifier in the report reflects the variation in the source documentation. It is a term used to define the allowable load capacity for a device used to secure cargo to a ship.
Subluxation	-	Incomplete, or partial dislocation.
Superficial injuries	-	Bruises, abrasions, blisters etc.
the Directive	-	EU Directive 2009/18/E

FURTHER INFORMATION

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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
01932 440015

Press enquiries (out of office hours)
020 7944 4292

Online resources

www.gov.uk/maib

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