

A study into UK Sea Angling Incidents

Prevention Report 1/04



Executive Summary

Issue

The MCA Prevention Branch, whilst trialing a new prevention process, has conducted a study of the risks arising from the use of charter boats, sea angling boats and non-regulated powered pleasure craft involved in sea angling within the United Kingdom Search and Rescue Region .

The report describes the method of the investigation and analysis of data. It presents findings, conclusions and recommendations to be considered as part of the Maritime and Coastguard Agency's (MCA) integrated prevention planning system trial.

Findings

- Incident data from 1st January 2002 to 31st July 2003 demonstrate that 6 fatalities occurred and 57 persons suffered an injury whilst engaged in sea angling.
- 23 persons were taken from the water after capsized.
- The majority of Search and Rescue (SAR) incidents where assistance was rendered (57%) appear to be caused by machinery failure. These involved 68% of persons.
- 13 incidents involved people with pre-existing medical conditions, one of which resulted in a fatality.

Recommendations

The following recommendations have been derived from this study and it is suggested that implementation may contribute to further promoting safety within the sport of sea angling.

1. Safety communications within this sport appear to require improvement. A National and possibly Regional MCA Sea Angling Liaison Officers should be nominated to establish and develop links with national bodies that have a specific interest in the sport.
2. Further research should be conducted into the frequency and potential severity of all UKSRR incidents involving sea angling craft caused by machinery breakdown.
3. Incident data collection should be improved in order to distinguish between commercially coded charter vessel activities, sea angling craft and those of non-regulated powered pleasure craft.
4. Incident data collection process used by the MCA and RNLI to establish the severity of marine related incidents should be further developed. This particularly applies to those incidents that lead to immersion or capsized .
5. A process should be introduced whereby complaints or near-misses originating from sea angling activities are effectively recorded.
6. Further research should be conducted to identify the type of precautionary advice required for prospective sea anglers who have pre-existing medical conditions.
7. Links should be established with DEFRA to ensure the findings of Prevention based reviews are shared with the MCA.

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Introduction

The sport of sea angling, albeit from either small privately owned, non-regulated powered pleasure craft or from a coded charter vessel, occurs all year round within the UK, but most predominantly within the winter months when catches are larger. A recent Omnibus¹ survey (2002/3) indicated that 5.02% of all UK households participated in sea angling last year.

A fatal sea angling incident involving a small leisure boat in Loch Ryan during July 2003 was followed by a formal MAIB investigation (MAIB 5/2004) and recommendations are being considered to reduce the likelihood of a similar occurrence.

The MCA Prevention Branch, whilst testing a new prevention process, have conducted further study into the risks arising from the use of charter craft, sea angling boats and other non-regulated powered pleasure craft when engaged in sea angling.

This report will describe the method of this study and the analysis of data. It will present findings, conclusions and recommendations to be considered as part of the Maritime and Coastguard Agency's (MCA) integrated prevention planning system trial.

Scope

The scope of this 'sea angling' study is as follows:-

Owners and users of non-regulated powered pleasure craft engaged in sea angling.

Owners and those who charter coded vessels to engage in sea angling.

Those incidents that occurred within the UK SRR between 1st January 2002 – 31st July 2003. After this period the replacement of the Coastguard Management Information system (CMIS) began and currently data extraction processes have yet to be completed.

Shore-based sea angling activities are not included in this study.

Sources Of Information

Four sources of primary data/information were explored:-

SEAREM	RNLI database of incident reports
CMIS	Coastguard Management Information System – SAR Incident Reporting system
Customer Population Survey	An indication of the UK customer base. Conducted by MCA, referenced to 2003
National Federation of Sea Anglers	Sports Governing Body for sea angling

¹ Omnibus Survey as reported within Research into the Economic Contribution of Sea Angling, Drew Associates Limited for DEFRA (2003)

Limitations

There are limitations to this study of sea angling which should be noted.

1. Time – The Prevention process trial has a life span of 12 weeks and commenced from the 1st January to the 31st March 2004. This study is therefore limited by the resources and time given to that trial.
2. Database – Coding errors have been found within all databases examined.
3. Within CMIS, it was not possible to distinguish between incidents originating from commercial charter operations, purpose built sea angling boats or those involving non-regulated powered pleasure craft.
4. CPS – The data available from the Customer Population Survey is based solely on estimated figures.
5. Sport Governing body – The National Federation of Sea Anglers (NFSA) have not been able to supply membership and boat usage figures to the MCA.

Methodology

Contact was established with potential data providers and each source of information was evaluated to assess its validity and quality. The sources of information which did not prove to be credible were dismissed from the study.

Data concerning sea angling craft between January 2002 and 31 July 2003, were extracted from CMIS to identify the cause and frequency of incidents that affect this type of craft.

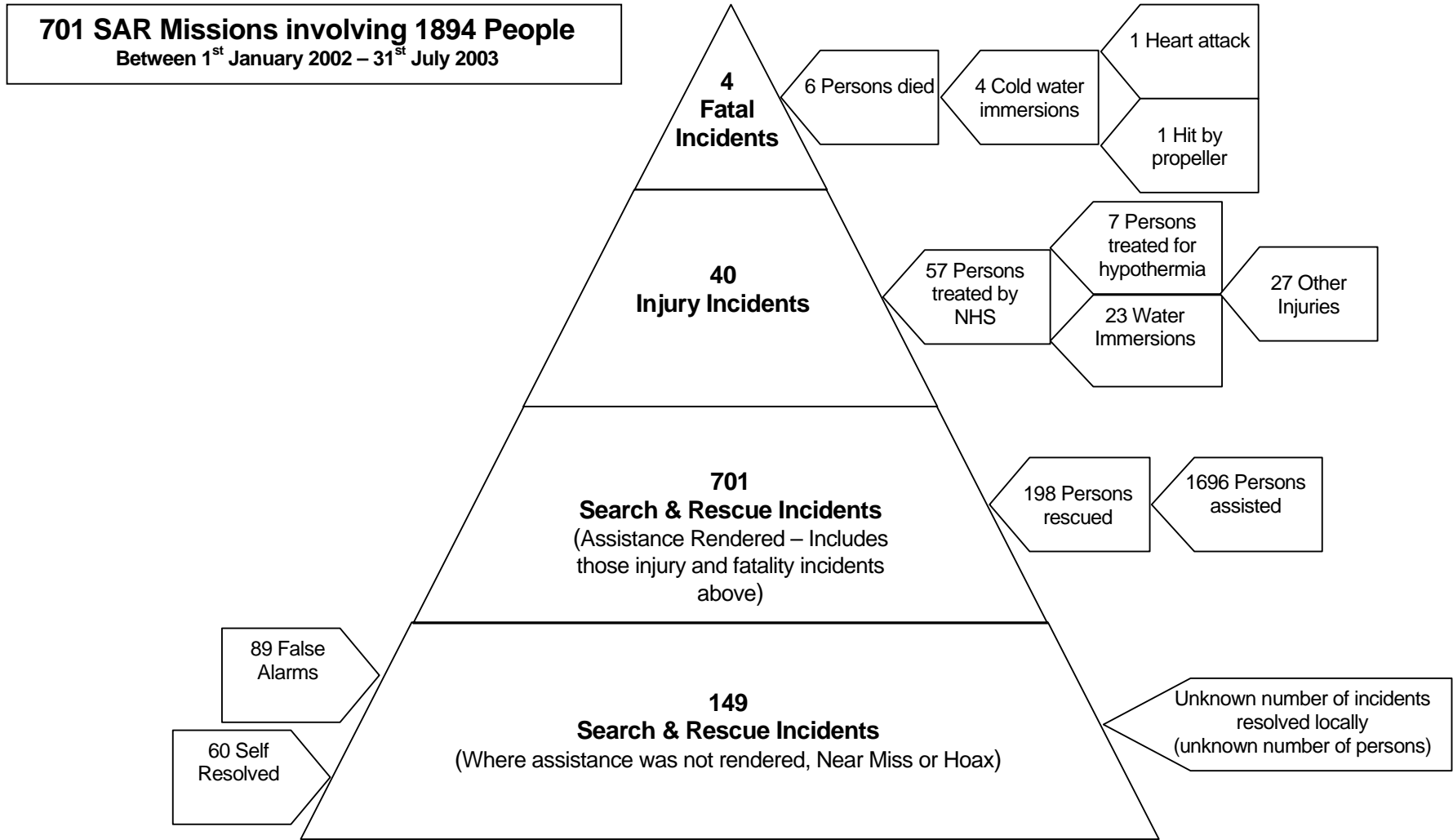
Data abstracted from CMIS relating to sea angling craft was interpreted to assess the severity of incidents and identify the number of fatalities and injuries. This information was illustrated using a Severity Pyramid structure shown at Figure 1, page 6.

The information gathered was analysed to formulate conclusions and recommendations to be considered as part of the MCA's integrated prevention planning system trial.

The distinction between incidents originating from commercial charter operations, purpose built sea angling boats or those involving non-regulated powered pleasure craft, will undergo further resolution and clarification before this report is released externally.

Severity Structure: Sea Angling

Figure.1 Severity Pyramid Structure



Findings

There were 850 incidents involving sea angling boats between 1 January 2002 and 31 July 2003.

Table 1 provides a summary of the data that was extracted from CMIS regarding incidents for 2002 and for 2003 until 31 July. Annexes A – J show the complete overview, this data revealed that there were:

- 4 incidents which resulted in fatalities.
- 6 fatalities recorded, one of which had a pre-existing medical condition.
- 40 incidents that included injuries.
- 57 persons suffered injury, of which 12 had a pre-existing medical condition (e.g. Diabetes, Epilepsy)
- 23 persons were recovered from the sea after immersion following capsize or when the craft sank.
- 57% of SAR incidents where assistance was rendered were caused by machinery failure.

Table 1

	Incidents		Total Incidents	Total Persons
	2002	2003		
Fatalities (including 1 heart attack)	3	1	4	6
Injuries	30	10	40	57
Incidents where assistance was rendered	456	245	701	1894
Total number of Incidents reported to HMCG including Assistance Not Rendered and Near Miss	555	295	850	1894 + unknown number*
Primary Cause – Machinery Failure	317	171	488	1294

Note that the research covers a period of 19 months from 1/1/2002 to 31/7/2003

After investigating and discerning credible data it was discovered that:

- The sea angling incident data extracted from SEAREM did not correlate with CMIS. Data from CMIS was considered to be the more reliable because of the researchers' familiarity with the system.
- The investigation revealed that there was some misreporting on CMIS as well as empty data fields.
- There was no clear method for extracting the severity of an incident using CMIS. The resultant process was lengthy and it is possible that some of the more severe incidents might have been missed.

* When an incident is concluded as 'Assistance not rendered' the number of persons involved is not recorded.

- CMIS does not allow data analysts to easily distinguish between commercial coded charter boat activities and those of non-regulated powered pleasure craft.
- The estimates provided by Customer Population Survey (CPS) were imprecise.
- There was little information readily available detailing complaints or near misses involving sea angling craft.
- It was not possible to identify if participation in sea angling is growing or declining because the NFSA were unable to supply this information. However, recent research initiated by DEFRA² indicates that whilst catches might be in decline both in numbers and size of fish, the UK sea angling population has stabilised and possibly increased since 1990.

Conclusions

The data suggests that serious and fatal incidents do occur within the sport of sea angling and that this justifies prevention activities already being conducted by the MCA and its partners.

As one of the fatalities and twelve of the injuries were caused by pre-existing medical conditions, people with medical conditions could be made aware that higher awareness of the restrictions of their condition is required by those participating in or managing sea angling activities.

Machinery Failure accounted for 57% of the number of incidents to sea angling craft and involved 68% of all persons affected by SAR. This high percentage suggests that a further study is required to identify if the machinery failures are a result of poor maintenance of the engine or craft, or, as perhaps in the worst case scenario, that the machinery in the craft itself is unsuitable for sea angling.

The NFSA was approached several times and asked if they would supply membership figures together with an indication of boat usage. Unfortunately, this information was not supplied during the study period and could indicate communication problems between the MCA and NFSA.

The information from the Customer Population survey was found to be imprecise and did not provide adequate data to enable the Prevention Branch to suggest an equivalent fatality rate (EFR). A more detailed study would provide a better figure of the MCA's potential sea angling customers. Also, the information extracted from SEAREM could not be used for this study because the data did not correlate with CMIS.

The accuracy of data input onto CMIS affects the quality of the information that can be extracted. Some evidence was found of misreporting and missing data. It was also discovered that ascertaining the severity of an incident was not an easy process. It was concluded that the recording of all SAR incidents should be re-examined and the severity of any incident more clearly discernable.

CMIS does not allow data analysts to distinguish between commercial coded charter boat activities and those of non-regulated powered pleasure craft. It was concluded that this issue should be rectified within the new IMS/Vision system currently being installed within all UK RCCs.

This study revealed that there were no methods available for the MCA to record or obtain details of complaints and near-misses that affect this sport. This is considered rich data that could highlight potential hazards which might be prevented before they become a higher and more common category of incident.

Links should be established with DEFRA to ensure review findings are supplied to the MCA.

² Research into the Economic Contribution of Sea Angling, Drew Associates Limited for DEFRA (2003)

Recommendations

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1. Safety communications within this sport appear to require improvement. A National and possibly Regional MCA Sea Angling Liaison Officers should be nominated to establish and develop links with national bodies that have a specific interest in the sport.
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MCA Internal Action Planning Matrix

	Action	Potential impact	Comment
1.	Legislation	N/A	Insufficient data/research available
2.	Education	Low	Only within on-going initiatives
3.	Governing body	High	Clarify identity, role and responsibilities
4.	New MCA Product	Medium	Review with stakeholders – new MCA sticker approving capacity, power and sea category?
5.	Remedial Guidance	Medium	Introduce a voluntary Small Boat Code for Sea Anglers
6.	Remedial literature	Medium	Review risk-awareness literature. Review machinery breakdown literature Review boat purchase guidelines
7.	Advertising	High	Review with PR
8.	Press Release	High	Review with PR
9.	Media Articles	High	Review with PR
10.	Report Publishing	High	Review with PR
11.	Reporting on line	High	Review with PR
12.	Enforcement Activity	Low	Boat patrols to collect evidence on craft suitability
13.	Stakeholder activity	High	Share report with Safety on the Sea Group. Promote RNLI Sea Check and slipway advice
14.	MCA Staff deployment	Medium	ACG's/SM's on slipway. Identify local clubs Review craft suitability. Advocate Sea Check
15.	Signage	High	Review locations and suitability of Warnings for 'wash/wake/speed'
16.	Committees	Medium	Disseminate information. Include UK Harbour masters
17.	Data collection	Medium	Improve to validate research
18.	Show attendance	Low	No dedicated sea angling events currently identified as a potential point of contact
19.	MCA Liaison Role	High	Identify an MCA liaison officer Define role and responsibilities
20.	Activity management	High	MCA Liaison office to investigate Angling management regimes
21.	Conference attendance	Medium	MCA attendance to raise issues MCA Liaison office to investigate
22.	Electronic forums	Low	Considered that the target audience unlikely to have ready IT access? Review

Annexes

All data shown in these tables has been taken from CMIS (Coastguard Management Information System)

Annex A

Nature of incidents to all craft engaged in Sea Angling 2002

	Angling Boats	Powered Pleasure Craft
Abandoned	3	0
Adverse Conditions	9	5
Capsized	3	2
Casevac	22	1
Collision	2	0
Dragging Anchor	1	0
Fire/Explosion	6	0
Foul Propeller	29	1
Machinery Failure	241	76
Man Overboard	2	1
Other*	49	23
Out of Fuel	14	4
Vessel Overdue	6	4
Sail/Mast/Gear Failure	1	0
Sunk	2	2
Stranded/Aground	29	1
Taking Water	5	3
Uncertain Position	6	2
Total	430	125

**Nature of incidents to craft engaged in Sea Angling during 2002 -
Breakdown of "Other" for Angling boats**

Incident	Number
Broken Mooring	4
Drifting but not in difficulties	14
Carrier on CH16	1
False Alarm (smoke etc)	4
Locked out of VSL	1
Machinery Failure	21
Abandoned	1
Sickness	1
Tender Adrift	1
Reported on Fire FAWGI (False Alarm With Good Intent)	1
Total	49

**Serious Injury incident categorisation for people engaged in
Sea Angling during 2002**

	Incident Type	Injury
1	illness	head injury
2	other	illness (not specified)
3	illness	fish hook in thumb
4	illness	leg injury
5	fire/explosion	leg injury after fire
6	illness	Seasickness
7	illness	epileptic fit
8	illness	Loss of 2 fingers (winch)
9	engine failure	Diabetic
10	capsize	3 rescued from water
11	capsize	2 rescued from water
12	illness	Seasickness
13	illness	heart attack
14	illness	heart attack (fatal)
15	illness	Collapsed
16	illness	arm injury
17	illness	illness (not specified)
18	illness	unconscious
19	illness	seasickness/collapse
20	illness	cut arm (gutting knife)
21	illness	epileptic fit
22	illness	heart attack
23	illness	heart attack
24	illness	epileptic fit
25	illness	unconscious
26	overdue	Hypothermia
27	adverse conditions	2 hypothermia
28	capsize	4 rescued from water
29	taking water	4 rescued from water
30	illness	lost part of thumb

Annex C

Fatalities arising from craft engaged in Sea Angling 2002			
Date	Incident No	District	Cause
30/05/2002	SO375	Solent	Heart Attack
06/07/2002	FA0397	Falmouth	Man Overboard
29/12/2002	SW919	Swansea	Man Overboard

Annex D

Nature of incidents to craft engaged in Sea Angling 2003

Nature of Incident	Angling Boats	Powered Pleasure Craft
Abandoned	6	0
Adverse Conditions	7	6
Capsized	3	1
Casevac	3	0
Collision	2	1
Dragging Anchor	1	0
Fire/Explosion	1	1
Foul Propeller	20	1
Machinery Failure	120	51
Man Overboard	0	1
Other*	22	9
Out of Fuel	4	1
Vessel Overdue	1	2
Sail/Mast/Gear Failure	1	0
Sunk	2	1
Stranded/Aground	13	2
Taking Water	6	0
Uncertain Position	6	0
Total	218	77

**Nature of incidents to craft engaged in Sea Angling during 2003
Breakdown of "Other" for Angling boats**

Incident	Number
Medical Advice	1
Drifting but not in difficulties	6
Overdue	1
False Alarm (smoke etc)	4
Hazrep (Hazardous incident reporting)	2
Machinery failure	6
Abandoned	1
Total	22

Annex E

Serious Injury incidents for people engaged in Sea Angling 2003

	Incident Type	Injury
1	capsize	3 rescued from water
2	capsize	1 rescued from water
3	illness	heart attack
4	sunk	1 rescued from water
5	illness	possible stroke
6	out of fuel	3 with hypothermia
7	illness	heart attack
8	man overboard	hypothermia
9	sunk	3 rescued from water
10	sunk	2 rescued from water

Annex F

Fatalities from Angling Charter boats and non-regulated powered pleasure craft engaged in Sea Angling 2003

Date and Incident No	District	Cause
12/07/2003 CL0361	Clyde	3 persons capsize

Data Analysis: Incidents to all boats/craft engaged in Sea Angling

	2002	2003	2002	2003	Incident Totals	%	Relative	Relative	Comments
	Angling Boats	Angling Boats	Leisure Craft	Leisure Craft			Frequency	Severity	
Machinery Failure	241	120	76	51	488	57%	High	Low	Further action required
Other	49	22	23	9	103	12%	High	TBC	Being resolved within IMS/Vision
Foul Propeller	29	20	1	1	51	6%	High	Low	Further investigation warranted
Stranded/Aground	29	13	1	2	45	5%	Med	Med	Further investigation warranted
Adverse Conditions	9	7	5	6	27	3%	Med	High	Small craft vulnerable in unsuitable conditions
Casevac	22	3	1	0	26	3%	Med	High	High resource
Out of Fuel	14	4	4	1	23	3%	Med	Low	Preventable by planning and preparation
Vessel Overdue	6	1	4	2	13	2%	Low	Med	Further investigation warranted
Taking Water	5	6	3	0	14	2%	Low	High	Small craft vulnerable in unsuitable conditions
Uncertain Position	6	6	2	0	14	2%	Low	Med	Monitor incident trends
Abandoned	3	6	0	0	9	1%	Low	Low	Monitor incident trends
Capsized	3	3	2	1	9	1%	Low	High	Small craft vulnerable in unsuitable conditions
Collision	2	2	0	1	5	1%	Low	High	Monitor incident trends
Fire/Explosion	6	1	0	1	8	1%	Low	High	Monitor incident trends
Sunk	2	2	2	1	7	1%	Low	High	Further investigation warranted
Dragging Anchor	1	1	0	0	2	0%	Low	Low	Monitor incident trends
Man Overboard	2	0	1	1	4	0%	Low	High	Monitor incident trends
Sail/Mast/Gear Failure	1	1	0	0	2	0%	Low	Low	Monitor incident trends
Total	430	218	125	77	850				

Data Analysis: Incidents to People involved in Sea Angling

Injury/nature	2002	2003	People Totals	%	Frequency	Severity	Comments
Heart Attack	4	2	6	11%	High	High	Further investigation warranted
Body injury	8	0	8	12%	High	Med	Further investigation warranted
Seasickness	3	0	3	5%	Med	Low	Monitor incident trends
diabetic	1	0	1	2%	Low	Med	Monitor incident trends
Stroke	0	1	1	2%	Low	High	Monitor incident trends
Water immersion	13	10	23	40%	High	High	Priority action required
Fit	3	0	3	5%	Med	Low	Monitor incident trends
Hypothermia	3	4	7	12%	High	High	Further action required
Not specified	2	0	2	3.5%	TBC	TBC	Resolved in IMS/Vision
Collapsed	1	0	1	2%	Low	Med	Monitor incident trends
Unconscious	2	0	2	3.5%	Low	High	Monitor incident trends
Total	40	17	57				

Note: The assessment of Frequency and Severity are both subject to interpretation.

Data Analysis: Fatal incidents to People involved in Sea Angling

Injury/nature	2002	2003	People Totals	%	Frequency	Severity	Comments
Heart Attack	1	0	1	17%	Low	High	Further investigation warranted
Water immersion	2	3	5	83%	High	High	Priority action required
Total	3	3	6				

Glossary

Accident	An unplanned act or incident which has undesirable consequences.
CASEVAC	Casualty evacuation.
CMIS	Coastguard Management Information System.
Fatal Incident	An incident reported to HM Coastguard where a death occurred during or prior to search and rescue activity.
Incident	An event whereby a diver required assistance. Within MCA terminology, an incident is created Coastguard whenever assistance is required.
MAIB	Marine Accident Investigation Branch.
MCA	Maritime and Coastguard Agency.
NFED	National Federation of Sea Anglers
IMS/Vision	Coastguard Incident Management System
Primary Data	Data gathered directly from source.
Qualitative Data	Data that contains behavioral information.
Quantitative Data	Data that is presented numerically.
RNLI	Royal National Lifeboat Institution.
SAR Mission	Search and Rescue activities.
Sea Angling	Owners and users of non-regulated powered pleasure craft engaged in sea angling. Owners and those who charter coded vessels to engage in sea angling.
Secondary Data	Information gathered from previous research projects.
Serious Incident	An incident reported to HM Coastguard where person or persons were injured prior to search and rescue.
Suspect Conf. Ordnance	The discovery of explosives, e.g. mines, pyrotechnics.

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