

REPORT OF AN INVESTIGATION INVOLVING *"FV MARLIONA"* AT GREENCASTLE CO. DONEGAL 3 FEBRUARY 2021

> REPORT NO. MCIB/307 (No.4 OF 2022)

The Marine Casualty Investigation Board (MCIB) examines and investigates all types of marine casualties to, or onboard, Irish registered vessels worldwide and other vessels in Irish territorial waters and inland waterways.

The MCIB objective in investigating a marine casualty is to determine its circumstances and its causes with a view to making recommendations to the Minister of Transport - for the avoidance of similar marine casualties in the future, thereby improving the safety of life at sea and inland waterways.

The MCIB is a non-prosecutorial body. We do not enforce laws or carry out prosecutions. It is not the purpose of an investigation carried out by the MCIB to apportion blame or fault.

The legislative framework for the operation of the MCIB, the reporting and investigating of marine casualties and the powers of MCIB investigators is set out in the Merchant Shipping (Investigation of Marine Casualties) Act, 2000.

In carrying out its functions the MCIB complies with the provisions of the International Maritime Organisation's Casualty Investigation Code and EU Directive 2009/18/EC governing the investigation of accidents in the maritime transport sector.



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Glossary of Abbreviations and Acronyms

BIM	Board Iascaigh Mhara
EEA	European Economic Area
EMCIP	European Marine Casualty Information Platform
EMSAFE	European Maritime Safety Report
EMSA	European Maritime Safety Agency
EU	European Union
FV	Fishing Vessel
ILO	International Labour Organisation
IMO	International Maritime Organisation
ISM	International Safety Management
LOA	Length Overall
MCIB	Marine Casualty Investigation Board
MFA	Medical First Aid
MLC	Maritime Labour Convention
MMSI	Maritime Mobile Service Identity
MSO	Marine Survey Office
S.I.	Statutory Instrument
SOLAS	Convention for the Safety of Life at Sea (SOLAS Convention)
STCW	International Convention on Standards of Training, Certification and Watchkeeping for Seafarers
UN	United Nations
UTC	Co-ordinated Universal Time
WRC	Workplace Relations Commission
Metres	m
Tonne	t

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1. SUMMARY

- 1.1 At approximately 14.05 hours (hrs) on the afternoon of 3 February 2021, a serious marine casualty occurred on the fishing vessel (FV) *"Marliona"* while alongside Greencastle Harbour, Co Donegal. During a repair process the Skipper's left arm became trapped by a trawl door causing severe damage to his arm.
- 1.2 First aid was administered by another crewmember and the bleeding was stopped. The ambulance was called and arrived at 14.30 hrs, and the Casualty was transferred to the nearest hospital where he was treated for his injuries. The hospital treated the Casualty and managed to save his arm. He was released the same day but continued to receive treatment and only returned to work in May 2021.

Note: Times are local time = UTC + 1 (Co-ordinated Universal Time + 1).

2. FACTUAL INFORMATION

The "FV Marliona" is a white fish trawler that mainly fishes to the west and north of Donegal. On 3 February 2021 the vessel had been fishing off the west coast of Donegal and had returned to the port of Greencastle, Co Donegal to unload its catch and repair its fishing gear. Its registered owner is Marliona Fishing Limited, who was registered with the Companies Registration Office on 27 April 2015 and is the employer of one of the crew.

2.1 Vessel Details

Name:	"FV Marliona".
Flag:	Ireland.
Туре:	Fishing vessel - Trawler.
International Maritime Organisation (IMO) Number:	9321342.
Maritime Mobile Service Identity (MMSI) Number:	250510000.
Port of Registry:	Sligo.
Port Letters:	SO975.
Length Overall:	32.5 metres (m).
Breadth:	8.5 m.
Moulded Depth:	5.83 m.
Year Built:	2004.
Gross Tonnage:	362 tonnes (t).
Deadweight:	185 t.
Fishing Licence:	297641054.

See Appendix 7.1 Photograph No. 1 - "FV Marliona".

See Appendix 7.2 Fishing Licence and 7.2.1 Fishing Vessel Safety Certificate of Compliance.

2.2 Trawl Door

This is a large steel wing shaped door that essentially acts as wings, using a hydrodynamic shape to provide horizontal spread of the nets. The TyBoron Type 23 Bluestream semi-pelagic trawl door is an all-round high aspect trawl door, that is used for different kinds of fishing setups such as bottom fishing, semi-pelagic and pelagic fishing (whiting, herring, and sprat), both in deep and shallower water. It is approximately three tonnes in weight. It is secured to a recessed O link which is situated halfway down the trawl door on the centreline by chain-link to the chains and wires. The trawl door is secured to the stern of the vessel by the dog chains which hold the doors to the stern of the vessel when not in use.

See Appendix 7.3 Photograph No. 2 - Starboard Trawl Door.

See Appendix 7.4 Photograph No. 3 - Chain-link and Dog Chains.

See Appendix 7.5 Figure No. 1- Trawl Door Rigging to A Frame from Above.

See Appendix 7.6 Figure No. 2 - Trawl Door Rigging.

See Appendix 7.7 Figure No. 3 - Trawl Door Rigging.

2.3 Crew Details

Skipper (Casualty): Certificate: Skipper Limited Certificate of Competency (Fishing) and Medical First Aid (MFA): 23/03/04.

Crewmember A: Certificate: Skipper Limited Certificate of Competency (Fishing) and MFA: 12/09/01.

Crewmember B: Deck officer Second Hand Full Certificate of Competency (Fishing) and MFA: 01/11/20.

Crewmember C: Three day Safety Course Board Iascaigh Mhara (BIM). Elementary First Aid (EFA): 1/7/83.

Crewmember D: Three day Safety Course BIM EFA lost/renewing.

Crewmember E: Three day Safety Course BIM. EFA: 01/08/16.

One of the crew on the day was an employee of Marliona Fishing Limited, the remaining five including the Skipper were share fishers. The crew were from Ireland, Philippines and Romania.

See Appendix 7.8 Board Iascaigh Mhara First Aid Course Details.

2.4 Details of Marine Casualty Area.

The port of Greencastle (55°12.11'N 006°59.06'W) is a fishing harbour situated on the northeast coast of Donegal. It is on the entrance to Lough Foyle. It is a busy commercial fishing port.

See Appendix 7.9 Photograph No. 4 - Greencastle Harbour.

- 2.4.1 Situated at the north end of Lough Foyle estuary, the inner harbour provides protection from strong winds and swell, and although tidal streams are occasionally strong it provides safe access and safe harbour, in all conditions and at all states of the tides. Swells can however, cause a surge to enter into the harbour and move the vessels on their ropes. The harbour lies adjacent to the port of Derry commercial shipping channel. Outside the harbour of Greencastle is Lough Foyle. This is the approach to the port of Londonderry/Derry. The lough lies in a NE/SW direction.
- 2.4.2 The *"FV Marliona"* was docked just inside the breakwater on the north end of the harbour (see Appendix 7.9 Photograph No. 4 Greencastle Harbour). The vessel was moored, port side to with its stern close to the quay wall. It was pointed in a WNW direction. The vessel was moored using bow line, stern line and two spring lines, one forward and one aft. This mooring arrangement was the regular arrangement for this vessel on this berth. The Skipper stated that the mooring arrangement was adequate for these conditions. Just prior to the incident the vessel moved from a surge or other vessel movements in the harbour, and this caused the door to move trapping the Casualty's arm.

See Appendix 7.10 - Mooring Arrangements.

2.5 Voyage Particulars

- 2.5.1 The *"FV Marliona"* was fishing 100 miles west of the Donegal coast and returned to port at 10.00 hrs on 3 February 2021, the day of the incident. At 14.05 hrs the Skipper's arm became trapped and crushed between the hull and trawl door while repairing the fishing gear.
- 2.5.2 Once the catch was discharged, the crew started working on replacing and repairing the fishing gear for a return to sea the next day.
- 2.5.3 The working time/rest period records indicate some discrepancies in the manner in which work and rest hours were recorded.

2.6 Type of Casualty

This was a serious marine casualty that resulted in a crush injury to the Skipper's left arm.

Date: 3 February 2021.

Time: Circa 14.05 hrs.

Position: Greencastle Harbour.

2.7 Emergency Response

10:00Z February 3, 2021, the "FV Marliona" returned to the fishing port of Greencastle.

14:05Z The Skipper's arm became trapped and crushed between the hull and trawl door while repairing the fishing gear.

14:10Z The ambulance was called.

14:10Z The Skipper was brought to the wheelhouse by crewmembers to administer first aid.

14:30Z The ambulance arrived, and paramedics came to the wheelhouse.

15:00Z The ambulance departed for Altnagelvin Hospital, Derry.

The Greencastle Coast Guard Unit observed the ambulance on the quay wall and enquired about the situation. It was not involved.

2.8 Weather

Weather at the harbour at the time of incident (Met Éireann).

Wind Force: 6 to Force 8 East. Gusts up to 50 knots.

Sea state: Moderate to Rough.

Wave Height: 3.8 m.

Wave Direction: Easterly.

There had been poor weather conditions over the previous few days and a swell had developed. It was reported by witnesses that a swell can cause a surge to develop in the harbour.

See Appendix 7.11 Met Éireann Weather Report.

2.9 Safety Statement and Risk Assessments

There was no risk assessment or method statement for maintaining fishing gear or trawl doors included in, or separate to, the vessel's safety statement.

See Appendix 7.12 Safety Statement.

3. NARRATIVE

- 3.1 The *"FV Marliona"* was tied up in Greencastle Harbour on 3 February 2021 and was due to remain in harbour for 24 hrs having fished 100 miles west of Donegal for the previous five days. It had returned to port at 10.00 hrs that day.
- 3.2 At approximately 14.00 hrs the Skipper (Casualty) and crew were working the fishing gear onboard the vessel for the day and were getting the gear ready for the next voyage to sea. The Casualty (who was an experienced fisher and skipper who held the Skipper Limited Certificate of Competency (Fishing)) was working in the wheelhouse, when he was asked by Crewmember B (Deck officer Second Hand Full Certificate of Competency (Fishing) with 11 years' experience) to slack out the starboard winch as he and Crewmember C (who had six years' experience) were changing a chain-link on the starboard trawl door. Crewmember A (who held a Skipper Limited Certificate of Competency and had 22 years' experience) found that the chain-link was jammed against the door and inaccessible in that position. He requested that the winch be slacked to allow the chain-link to be released. The Skipper slacked the winch and switched off the winch power. This placed more weight on the dog chains. The chain-link was now more accessible, however the trawl door was now more susceptible to movement as it was less secure. He then went to the workshop to get some tools. As he was about to enter the hatch into the workshop that was close to the stern, he noticed that the starboard trawl door was sitting lower than usual, alongside the stern of the vessel. No attempt had been made to raise it as they believed they could complete the task in situ and were eager to finish work for the day.

See Appendix 7.13 Photograph No. 5 - Trawl Door Winch.

3.3 Crewmembers B and C were working on a chain-link that is attached to the trawl door. They were trying to change it as it had become worn. The chain-link was jammed against the trawl door and could not be released unless they slacked off the winch. The Casualty became involved when Crewmembers B and C were unable to complete the task. When he saw the task was not complete, he took over the operation himself. There was no method statement or plan for this operation.

See Appendix 7.14 Photograph No. 6 - Chain-link.

3.4 The Casualty reached down over the gunwale with his left arm on the starboard stern corner, to hold the chain-link straight so that Crewmember C could knock out the pin of the chain-link to release it. He had to reach further down as the trawl door was secured lower than normal. The vessel rolled slightly to starboard and to port, and the ropes also tightened up. Then the trawl door moved trapping the arm of the Casualty. The Casualty called out that his arm was trapped and the crewmembers who were working with nets, nearby on the deck, went to help him. The crew attached a hook to the top of the trawl door via the stern A frame

which was extended. They managed to winch the trawl door away from the hull. This enabled the Casualty's arm to be released.

See Appendix 7.15 Photograph No. 7 - A Frame.

See Appendix 7.16 Photograph No. 8 - Rigging to A Frame.

3.5 The Casualty's arm was bleeding heavily down his sleeve. He was brought to the bridge where first aid was given by Crewmember B. He had recently undergone the three day BIM First Aid course in November 2020 and was able to assist quickly. A quick response by Crewmember B to stop the bleeding, saved the life of the Casualty. Crewmember B said the others were unable to help as it had been a number of years since they had done either their BIM First Aid or Elementary First Aid courses (and one did not hold either at the time of the incident, while another could not evidence the certification during the investigation). The ambulance was called, and the bleeding was stopped by the use of pressure bandages and a tourniquet. The ambulance arrived and the Casualty was stabilised and brought to Altnagelvin Hospital where he was treated for serious soft tissue injuries and heavy bleeding. He was discharged following treatment and returned to work in May 2021.

ANALYSIS

4. ANALYSIS

- 4.1 The "FV Marliona" had been fishing for five days at sea without incident and had arrived that morning to offload the catch and change the gear. They continued working after arriving at approximately 10.00 hrs when the incident happened some four hours later and were due to return to sea the following day. No attempt had been made to raise the trawl door when planning to carry out the chain-link repair, as they believed they could complete the task in situ and were eager to finish work for the day. There was no method statement or plan for this operation. There should have been as this is a particularly dangerous operation involving very heavy machinery. It would also be an operation that would be done regularly as part of the vessel operations.
- 4.2 The Skipper went down to the trawl deck and noticed that the crew were having difficulty working on the trawl door and he decided he would assist them with the job. The Crewmembers B and C were working on the trawl door trying to remove a chain-link that was attached to it. The chain-link is attached to an O link on the trawl door. The chain-link was attached to chains and then back to the winch by wires. The chain-link needed to be sorted before the vessel sailed for sea again. It needed to be changed as it had started to vibrate, and this would indicate it was worn. If the chain-link had failed whilst at sea and in use, the trawl door could be lost. Therefore, it was important that this task was completed before returning to sea.
- 4.3 Crewmember A found that the chain-link was jammed against the door and inaccessible in that position. He requested that the winch be slacked to allow the chain-link to be released. This placed more weight on the dog chains. The chain-link was now more accessible, however the trawl door was now more susceptible to movement.
- 4.4 As the trawl door was lower than normal, the Skipper had to reach down lower to grab the chain-link. This caused his arm to be injured higher up in the vicinity of the main artery in his upper arm. If the door was in the normal position, he would not have to reach over the gunwale to work on the chain-link. If it was higher, it would have been above the gunwale reducing the chance of his arm getting trapped.
- 4.5 A risk assessment for this operation would have highlighted that the loosening of the chain-link made the area more accessible, however the trawl door was now more susceptible to movement. In addition, the original position of the trawl door was in a dangerous position from which to commence maintenance. The absence of a risk assessment for this operation and the incorrect positioning of the trawl door were causative factors to the incident.
- 4.6 In addition to the aforementioned, during the process the vessel took a roll. This was caused by a water surge commonly experienced after a period of bad weather. The movement of the vessel combined with the unstable trawl door

caused it to move more, thereby trapping the Casualty's arm to an even greater extent.

- 4.7 In summary, the probable immediate causes of the incident were that the trawl door was not secured adequately and was in the wrong position, making it prone to movement from side to side. At the time of the incident the vessel was taking a slight roll, adding to this movement.
- 4.8 The Casualty was in serious risk of bleeding out in a short time, but due to the quick action of Crewmember B he got critical attention that probably saved his life. The fact that he recently had completed a three day first aid course was a major factor in saving the life of the Casualty.
- 4.9 This task could have been carried out more safely on the quay wall i.e., the door should have been landed onto the quay and the chain-link removed there. This would have been a quick operation to complete in a safe manner.
- 4.10 There was no method statement for this particular task, and this contributed to the incident, as the crew working on the chain-link had no clear method on how to carry out this operation.

See Appendix 7.12 Safety Statement.

- 4.11 Other factors, in particular human factors, may have contributed to the decisions made on the day. In particular, fatigue has been identified as an important contributing factor to maritime casualties and to the health problems of seafarers.
- 4.12 One of the sources of fatigue is excessive hours of work and/or insufficient rest. Ireland is subject to European Union (EU) rules on maximum hours of work and minimum hours of rest for fishermen. These rules are contained in EU Directive 2017/159, which in turn implements the social partners' agreement concerning the implementation of International Labour Organisation (ILO) Convention No. 188 (Work in Fishing). Article 11(b) of that Agreement, concerning working time, was transposed by the European Union (International Labour Organisation Work in Fishing Convention) (Working Hours) Regulations 672 of 2019. Statutory Instrument (S.I.) No. 672 of 2019 applies to sea fishing vessels which are registered in the State and where the fisher is employed, or, where at least some of the crew are employed.¹

S.I. No. 585/2020 - European Union (Workers on Board Seagoing Fishing Vessels) (Organisation of Working Time) (Share Fishermen) Regulations 2020 applies to a share fisher who -

^{1. &}quot;fisherman" means a person who works in any capacity under a contract of employment or in an employment relationship on board a fishing vessel, including any other person engaged in activities related to fishing who is present on the same vessel in order to protect the overall health and safety of the persons on board.

- (a) works in any capacity on board a fishing vessel manned by more than one person,
- (b) is not employed under a contract of services, and
- (c) is paid in whole or in part on the basis of a share of the profits or gross earnings of the catch of the fishing vessel.

The third category is covered by S.I. No. 441/2020 The European Union (Workers on Board Seagoing Fishing Vessels) (Organisation of Working Time) Regulations 2020^2 which applies to a seagoing fishing vessel flying the flag of another Member State while in a port in the State.

S.I. No. 672 of 2019 applies to the *"FV Marliona"* given it flies an Irish flag and has at least some of the crew were employees, while the balance were employed as share fishers.

See Appendix 7.17 - S.I. No. 672 of 2019 European Union (International Labour Organisation Work in Fishing Convention) (Working Hours) Regulations 2019.

The requirements S.I. No. 672 of 2019 are set out and circulated by Marine Notice No. 3 of 2020 (extracts from which are in quotations).

"The European Union (International Labour Organisation Work in Fishing Convention) (Working Hours) Regulations 2019, (S.I. No 672 of 2019) was signed into law on 19 December 2019 and gives effect to the provisions of Article 11 of the Annex to Council Directive 2017/159/EU.

The objective of the Regulations is to give effect to provisions of Article 11 of the Annex to Council Directive 2017/159/EU which relate to Hours of Work and Rest. They prescribe maximum hours of work and minimum hours of rest for workers on board sea-going fishing vessels, require records to be kept of their hours of work or rest and provide for enforcement measures.

The Regulations apply to sea fishing vessels which are registered in the State and the European Communities (Workers on Board Sea-Going Fishing Vessels) (Organisation of Working Time) Regulations 2003 (S.I. No. 709 of 2003) no longer applies to those workers to which The European Union (International Labour Organisation Work in Fishing Convention) (Working Hours) Regulations 2019, (S.I. No 672 of 2019) apply.

^{2.} Which revoked the previous S.I. No. 709 of 2003, European Communities (Workers on Board Sea-going Fishing Vessels) (Organisation of Working Time) Regulations.

Article 11 of the Annex to Council Directive (EU) 2017/159 set specific limits on fishers' hours of work and rest, which are as follows:

Subject to the limit of an average of 48 hours of work a week over a reference period not exceeding 12 months, the limits on hours of work and rest in respect of a worker on board a sea-going fishing vessel are as follows:

- maximum hours of work shall not exceed 14 hours in any 24 hour period, and 72 hours in any seven-day period; or
- minimum hours of rest shall not be less than 10 hours in any 24-hour period, and 77 hours in any seven-day period."

Hours of rest may be divided into no more than two periods, one of which shall be at least six hours in length, and the interval between two consecutive periods of rest shall not exceed 14 hours.

4.13 The crew on the "FV Marliona" had five days at sea, a day in port, some or all of which consisted of work, and were scheduled to return to sea the day after the incident. They were presumably going to then remain at sea over a number of days. By day six, the day of the incident, and allowing for departure the next day, according to the Regulations on the basis of the maximum 14 hour working day, over the seven day period, each should have worked no more than five days given the seven day additional maximum of 72 working hours.

In respect of rest, crewmembers should have had at least ten hours rest in each 24-hour period with an overall minimum of 77 hours. Therefore, the Regulations require over a seven day period, which comprises 168 hours, that work is carried out for no more than the maximum of 77 hours, and that there is rest of at least 72 hours (combining to a total of 149 hours), thereby allowing 19 hours neither at rest or work for recreation.

4.14 The Regulations also prescribe what is required for record keeping as set out in Marine Notice No. 3 of 2020:

"The master, or a person authorised by the master, shall maintain on board the fishing vessel a record of the daily hours of work or rest for every fisherman on board the vessel.

Each record shall be completed monthly in arrears and shall be endorsed by the master (or a person authorised by the master), and by the relevant fisherman no later than 7 days after the last day of the calendar month to which the record relates. The relevant fisherman should be given a copy of the endorsed record. Each record should be retained for at least one year from the date of its making."

ANALYSIS Cont.

4.15 The Regulations prescribe who and how the Regulations are to be enforced. The Marine Survey Office (MSO) of the Department of Transport is designated as the competent authority in the State for the purposes of the Regulations. That is to say the MSO stands in the same position in relation to fishers as the Workplace Relations Commission (WRC) does to other employees for those aspects of competency within the jurisdiction of the MSO (which therefore includes responsibility for enforcement). The MSO may do the following as set out in the Marine Notice:

In order to ensure compliance with these Regulations, a surveyor of ships, may do any of the following:

- (a) at all reasonable times board any fishing vessel while the vessel is in the State;
- (b) search and inspect the fishing vessel and any documents or records found on board;
- (c) require any person on board the fishing vessel to produce any report, document or record the surveyor of ships may reasonably require for the purposes of his or her functions under these Regulations;
- (d) inspect, examine and take copies or extracts from or take away, any report, document or record that the surveyor of ships finds in the course of his or her inspection and require the relevant person to certify the copy as a true copy;
- (e) detain a vessel that fails to comply with the provisions of hours of work or hours of rest in these Regulations and where detention is deemed necessary for the protection of the health and safety of the fishermen on board.

The MSO provided observations on its role for fishing vessel hours of work and rest and enforcement. The MSO stated that it works with the industry and owners to help them comply with the requirements. The MSO sets the levels of safe manning of the vessel to ensure that it is operated and navigated safety. The enforcement part of the MSO role is a small subset of its overall role and enforcement activities are only used when necessary.

4.16 An inspection of time sheets for the Skipper & Crewmembers A, B & C of the "FV *Marliona*" showed an inconsistency in the way the hours worked, and hours of rest were recorded. The X marks which are supposed to indicate the hours of rest taken by the fisher did not tally with the totals in the columns showing the total hours rest/work. This indicated that the hours of rest provided to the crew did not comply with the Regulations. The Skipper asserted that this was a clerical



error and the X represented hours of work and not rest. An error was made, whereby the boxes marked X which should have indicated the rest periods in fact indicated the working time. The Skipper provided the records for the previous weeks work. The recorded work and rest periods of each of the crew over the period of a week prior to the incident provided to the Marine Casualty Investigation Board (MCIB) record hours of rest and work that show compliance with the Regulation. However, it is for the MSO to assess and determine whether in fact the Regulations were complied with. It is also for the MSO to consider any issue arising from the incorrect record keeping. As noted in the studies commencing at paragraph 4.18, incorrect record keeping in relation to the Directive(s) has been a cause of concern. It should also be noted that it was not possible to interview all crewmembers during this investigation.

See Appendix 7.18 Time Sheets (Work and Rest Periods).

See Appendix 7.19 Correspondence in Relation to the Time Sheets.

See Appendix 7.20 Crew Details and Status of Fishers.

- 4.17 Even where there is compliance with the Regulations in relation to work and rest, fatigue may still be present and be a possible contributing factor to any marine incident. Fatigue can contribute to a lack of attention due to time pressures. After the vessel docked, the crew immediately commenced working which involved changing the gear to prepare the vessel for a return trip the next day. They were due to go home for the night once the gear was made ready for the next day's fishing. They were eager to finish for the day and needed to get the job done. Any rushing to get the work completed would also have contributed to the incident and the lack of advance assessment and preparation.
- 4.18 The factors presented in this marine incident, including the absence of proper risk evaluation and human factors reflect what has been reported in other studies/reports including from the European Maritime Safety Agency (EMSA) in its 2018 "Analysis on Marine Casualties and Incidents involving Fishing Vessels" and in its 2021 "Annual Overview of Marine Casualties and Incidents", and a report from Maynooth University entitled "Experiences of Non-European Economic Area (EEA) Migrant Workers in the Irish Fishing Industry". Extracts from these reports are set out in the following paragraphs.
- 4.19 In 2018 EMSA published the "Analysis on Marine Casualties and Incidents involving Fishing Vessels". The scope of the analysis was the detection of potential safety issues concerning marine casualties and incidents that involved fishing vessels falling within the scope of the Accident Investigation Directive and that occurred between 17/06/2011 and 01/08/2017. The project was conducted at two levels:

- A high level analysis of all the reported occurrences, either investigated or not, with a view to prepare general statistics and identify possible trends;
- A more detailed analysis on "Accidental Events", "Contributing Factors" and "Safety Recommendations" based on the investigations that have been completed (occurrences with "Investigation Status" equal to "Finished").

The following summarises the key findings of relevance to occupational injuries on fishing vessels (incidents involving damage or loss of vessels are separately analysed).

"5.2 Occupational accident

This section details the analysis carried out on the 2 high priority SI [=Safety Issue. This is an issue that encompasses one or more contributing factors and/or other unsafe conditions for "occupational accident", as defined by the IMO].

5.2.1 Safety assessment - review "Fishing at sea is probably the most dangerous occupation in the world". Life on board a fishing vessel, especially due to the peculiar layout of the vessel as well as to the nature of the fishing profession conceals a number of risks, on a daily basis. Risk or safety assessment may be run on two levels: the management level and personal level, depending on the nature of the task or action assessed. If however, a proper assessment is not carried out previous to any actions on board, the risks may evolve to dangers and eventually to casualties. "Safety assessment - review" is a SI which has been identified in 13 investigations, with a total of 19 CF [= Contributing Factor]. This is a condition that may have contributed to an accident event or worsened its consequence (e.g. man/machine interaction, inadequate illumination), as defined by the IMO] that have been reported in respect. The consequences in investigated occurrences where safety assessment - review is a SI are 9 deaths and 4 injuries to persons in total. Most of these occupational accidents were codified relating to body movement (7 times) and slipping, stumbling and falling of a person (7 times).

The main areas identified within this SI are:

• Keeping unsafe position on board: the position of crew members tasked in fishing operations is often risky, especially when it has to do with proximity to mechanical equipment or fishing tools that are mechanically driven (trawls, nets, etc.). Also cases of unsafe positioning in which the crewmember was affected by weather / sea conditions were reported. Therefore, the assessment of the dangers of positioning on board appears to be prominent within the safety investigations reported in the EMCIP.

• Use of lifejackets: the use of lifejackets during operations on board the vessel, especially under adverse weather / sea conditions, is a practice that usually derives from a proper safety assessment. It has been reported that crewmembers that were swept overboard due to rough seas were not wearing lifejackets either during unmooring operations or during normal passage and fishing operations.

5.2.2 Work / operation methods Procedures on board fishing vessels are usually limited and most operative actions are carried out based on skills, techniques and experience on the job. Therefore, the methods followed are quite prone to performance variability, leaving grounds for unsafe practices and latent risks. 19 CF., reported in 13 investigations have been classified under the SI of Work / operation methods. Most of them had to do with occupational accidents that were reported in relation with body movement (11 times). The consequences of these accidents rated to 10 deaths and 3 injuries to persons. The main areas of concern under this SI are:

- Poor supervision or communication: tasks carried out on board a fishing vessel may include dangers if loose supervision is applied. Stepping outside the safety rails or on a net that is being hauled in, moving or positioning oneself in a dangerous spot, not applying the normal safety precautions during the cleaning of a conveyor belt without being instructed or warned are examples of poor supervision; miscommunication or no communication at all before performing some tasks like hauling in a net, trying to release a snagged net or repairing a manhole are some reported examples of poor communication on board fishing vessels.
- Operating around the limit of "unsafe": fishing vessels are mainly operating under a catch maximization focus. This may result in operating under pressure and without considering certain specifications or limitations of the vessel or the tools used, creating dangerous situations for the persons on board. Relevant occurrences that have been reported in this scope have to do with sailing or working on deck under adverse weather / sea conditions, overloading of equipment (rope stopper) and an unsafe attempt to remark a trawl warp in order to save time."
- 4.20 What the 2018 EMSA Report says about safety assessments at chapter 5.1.2. is as follows:

"Safety and risk assessment and reviews of tasks, methods, procedures or processes based on such assessment are important tools that are part of the safety culture on board all types of vessels. Unlike other highly "procedurized" industries, such as nuclear energy production, in the maritime industry decision making of key persons within the different types of operations appears as an important factor and it has a great impact on the results of the relevant actions taken. Thus, if not preceded by at least a basic safety assessment it may lead to unexpected and unwanted events, especially in sub-sectors like the fishing vessel operations, which in principle lack in most cases of strict pre-defined procedures and processes in terms of safety or quality management systems. As it appears from the data analysis from the EMCIP, the group of issues under Safety assessment - review are quite prominent in significance. In fact, this specific SI has the highest consequence risk grade, in all the considered areas (lives lost, people injured, vessels sunk) apart from pollution. It can be characterised as the most "fatal" in terms of casualties with ship(s)1, topping the list of fatalities per SI, with a toll of 25 lives lost, as well as the list of injured persons with a total of 7. It has also led to the highest figure of fishing vessels sunk, with a total of 19 vessels." The report set out more detail on categories of safety assessment: Safety assessment on the wheelhouse; Safety assessment on water ingress; Assessment of tools' and aids' status."

- 4.21 The 2018 EMSA report therefore identifies the absence of safety assessments as a major factor in marine incidents and flags how that absence can have serious consequences. It also identifies the contributory effect of human factors relating to work pressures in its findings on *Operating around the limit of "unsafe"*. EMSA has published its European Maritime Safety Report (EMSAFE). The key analysis in the report shows that from the figures in 2019, while 17% of all the occurrences registered in the European Marine Casualty Information Platform (EMCIP) correspond to fishing vessels, they were the source of 32% of all very serious and serious occurrences.
- 4.22 The 2021 report starts out by providing a useful summary of the international context which is for fishing vessels over 15 m (i.e. larger than, and not applicable to the *"FV Marliona"*):

"As shipping is inherently international, its safety is regulated in the first instance by an international layer. The International Maritime Organization (IMO) is the dedicated agency of the United Nations (UN) which sets the main safety, security and environmental standards at a global level. The IMO basically provides a framework where states can meet and cooperate to agree on technical matters affecting international maritime trade."

4.23 The Report analyses accident data provided to EMCIP from an accident perspective in respect of fishing vessels over 15 m:

"the figures in 2019 show that while 16% of all the occurrences registered in EMCIP correspond to fishing vessels, they were the source of 32% of all very serious and serious occurrences. The Report concluded that fishing vessels are more vulnerable to accidents, not so much in terms of frequency, but in terms of the seriousness of the consequences when they do occur. The rate of very serious casualties and serious casualties for fishing vessels is much higher compared to the overall fleet. In addition, despite the accidents of fishing

vessels representing 16% of the total number of accidents, the number of fishing vessels lost represent more than 50% of the number of total vessels lost. This trend has been observed in recent years."

"The occurrence indicator about fishing vessels was 84 over the period. However, it was noted that it continuously increased from 2014 (58) to 2020 (137) and therefore, safety level related to fishing vessels has negatively evolved during the past years. With a total of 106, fishing vessels remain the category of ships with the highest number of ships lost over 2014-2020. Namely, in 2020, the number of occurrences involving fishing vessels continued increasing; however, the number of ships lost reduced to six (in comparison with 15 in 2019) and the number of injuries remained stable, around 220."

See Appendix 7.21 Graphs 48, 49 and 50 from the 2021 EMSA Safety Report.

The Report also found that "around 25% of the deficiencies found from inspections related to the human element, most of them within MLC Title 4 which deals with healthcare, safety protection and accident prevention of seafarers. One out of every six inspections show deficiencies in this field.

Between 2016 and 2020, 4,875 STCW³ deficiencies were identified during Port State Control (PSC) inspections. These deficiencies related to the STCW Code Part A which contains mandatory provisions that detail the minimum standards required to give full and complete effect to the provisions of the STCW Convention:... From the analysis carried out for the PSC section, most of the deficiencies since 2016 are linked to the STCW Code, Part A, Chapter VIII which sets out standards regarding watchkeeping, such as hours of rest." The STCW only applies to Merchant Ships, therefore the report data only applies to those vessels. Equivalent data is not available for fishing vessels but the content is nevertheless of interest.

4.24 The 2021 EMSA Report provides further evidence of concern at an international level in relation to safety issues which have fatigue as their contributing factor.

The Maritime Labour Convention, 2006 (MLC, 2006) is another relevant instrument adopted at ILO level in 2006. It establishes minimum working and living standards for all seafarers employed on ships, irrespective of the flag. It is the most important instrument that recognises the need for maritime labour regulation to protect seafarers when they sign employment agreements. Similar to the STCW Convention, such standards do not apply to the crew of fishing vessels, nor does the International Safety Management (ISM) Code, adopted through an amendment to the International 1060 Convention for the Safety of Life at Sea (SOLAS Convention), introduced a new chapter. Its purpose is to provide an international standard for the safe management of ships and for pollution prevention. Its main objectives are to provide safe practices in ship operation and working environments; establish safeguards against all identified risks and continuously improve safety management skills of personnel ashore and onboard ships. Regulation I/14 of the STCW Convention provides a clear link between the STCW Convention 1065 and the ISM Code. 1

^{3.} The International Convention on Standards of Training, Certification and Watchkeeping for Seafarers (STCW), which applies to merchant shipping and not to fishing vessels. Such standards do not therefore apply to the crew of fishing vessels.

4.25 Finally, given the national makeup of crews on some fishing vessels operating in Irish waters (including the *"FV Marliona"*), it is pertinent to refer to the report entitled "Experiences of Non-EEA Migrant Workers in the Irish Fishing Industry"⁴. It is important to make clear that there is no finding by the MCIB of the conditions referred to in the Maynooth Report. The objective of the socio-legal research study was to assess the current working conditions, immigration status, and experiences of enforcement of non-EEA workers in the Irish fishing fleet. The analysis drew on "semi-structured interviews conducted with 24 male migrant workers in the Irish fishing industry. Over half the participants had lived in Ireland for ten years or more. The interviewees were highly skilled fishers and collectively had over 200 years of fishing experience." The report recorded that:

"Over two thirds of the participants observed that they could work between 15 and 20 hours a day."

"Less than half of the interviewees recalled boats being inspected by the Workplace Relations Commission or anyone else asking about work-related issues. Fear of losing one's job and work permit, along with language barriers, were key challenges for workers to engaging with employers or inspectors to seek better working conditions."

The study was, however, based on interviews with a small cohort of fishers and only on Irish flagged vessels. The presence of non-EEA fishers on Irish flagged vessels arises from the introduction by the Departments of Transport, Justice, Enterprise & Employment, and Agriculture, Fisheries & the Marine of an Atypical Scheme to allow a certain number, capped at 500, of non-EEA fishers to work in a small subsector of the Irish fishing industry, as there was a labour shortage identified. The Department of Transport advise that at most, 440 permits have been issued with some 330 currently active. The Irish fleet consists of approximately 2,200 vessels of which only 171 are eligible to take part in the Atypical Scheme for non-EEA fishers. The actual number which have taken part is understood to be 106 vessels. There are approximately 6,500 fishers engaged in the Irish fishing sector, so the number of non-EEA fishers is very small as an overall percentage (5%).

The Maynooth Report also records useful data on enforcements by the MSO and the WRC as follows:

"Information provided by the Workplace Relations Commission indicated that 454 fisheries inspections have now been undertaken by WRC Inspectors since the introduction of the AWS, with 323 contraventions were detected (PQ, 16th June

^{4.} This research was conducted at Maynooth University Department of Law by Dr Clíodhna Murphy, Dr David Doyle and Stephanie Thompson. The research was funded by the International Transport Workers' Federation (ITF). Published October 2021. The Marine Survey Office advise that of the 6,500 fishers authorised to work in Ireland only 330 of those are non-EEA.

2021). In the 12-month period to 31st May 2021, 43 contraventions of employment rights or employment permits legislation were detected in the fisheries sector including 8 Contraventions of Working Time Regulations (referred to Department of Transport) and 1 Contravention of safety training regulations (referred to Department of Transport)".

The report noted the position of the MSO and the potential development of changes as follows:

"The Marine Survey Office of the Department of Transport (MSO), which is currently solely responsible for the enforcement of relevant working time rules on fishing vessels, confirmed that it had to date received 28 referrals from the WRC in relation to working time issues, resulting in the identification of deficiencies in 16 cases (PQ, 16th June 2021). The MSO noted in responses to a questionnaire circulated by the researchers (on file with the authors) that the MSO has achieved very significant positive outcomes for many fishers over the years especially in cases where their living and working conditions on foreign flagged fishing vessels may not have complied with the requirements."

"The fragmented nature of enforcement of labour protections for fishers has been frequently criticised in the past (e.g., MRCI, 2017)."

The MCIB has been advised by the Department of Transport that the mediation agreement between the Department of Justice and SIPTU/ITF (lodged with the Labour Court) states that, the Department of Justice "with the support of the Department of Business, Enterprise and Innovation, shall recommend that the WRC adjudicators have jurisdiction over violations of Regulation 6 of S.I. No. 709 of 2003, and to implement this recommendation by the appropriate legislative measures to be determined by the Department of Business, Enterprise and Innovation." As set out above the role of the MSO in fishing vessel manning covers all aspects and is focused on ensuring that the owners understand their obligations to operate safely. The MSO advises that it only uses enforcement when necessary and even then, does so in a measured and graduated manner to achieve the best overall outcomes.

4.26 In March 2022 the MSO published a form 'Application for issue of a Safe Manning Document for a Fishing Vessel of less than 500 Gross tons by the Marine Survey Office', issued in accordance with S.I. No. 289/1988 - Fishing Vessels (Certification of Deck Officers and Engineer Officers) Regulations, 1988 as amended.⁵ As the name suggests, this certificate mentions how many minimum crews need to be onboard to run the vessel. This certificate sets the minimum crew requirements and the ship managers can have any number of crew above

^{5.} MSO 1004.1 (APPL) SMD (Fishing Vessel less 500GT) (Rev 1.0)

the numbers mentioned in this certificate subject to the capacity of life saving appliances. The application requires the proposed manning (with reference to Fishing Vessels (Certification of Deck Officers and Engineer Officers) Regulations, 1988, as amended by S.I. No. 673/2019 - Fishing Vessels (Certification of Deck Officers and Engineer Officers) (Amendment) Regulations 2019) and also to the proposed planned working hours arrangement. The relevant extracts from the explanatory notes to the application form provide:

"7 THIS SECTION COVERS THE PROPOSED MINIMUM MANNING THE OWNER CONSIDERS SHOULD BE CARRIED ON BOARD THE FISHING VESSEL TO ENSURE THE VESSEL IS SUFFICIENTLY AND SAFELY MANNED FOR ITS SAFE NAVIGATION AND OPERATION, AND APPROPRIATE WORK AND LIVING CONDITIONS FOR PERSONNEL ON BOARD. WHEN COMPLETING THIS SECTION, THE OWNER SHOULD TAKE INTO CONSIDERATION THE WORK IN FISHING CONVENTION) (WORKING HOURS) REGULATIONS 2019 and S.I. No. 585/2020 - European Union (Workers on Board Seagoing Fishing Vessels) (Organisation of Working Time) (Share Fishermen) Regulations 2020

8 THIS SECTION REQUIRES THE OWNER TO STATE WHAT THE WORKING PATTERN OF THE VESSEL WILL BE. THIS SHOULD BE COMPLETED AS ACCURATELY AS POSSIBLE AS IT WILL ALLOW THE MSO TO HAVE A GREATER UNDERSTANDING OF THE AMOUNT OF CREW THE VESSEL SHOULD CARRY."

4.27 At the time of the incident, S.I. No. 587/2001 - Fishing Vessel (Basic Safety Training) Regulations 2001⁶ was in force. It was superseded by S.I. No. 591/2021 European Union (Minimum Safety and Health Requirements for Improved Medical Treatment on Board Vessels) Regulations 20217 which came into force on 20 November 2021. These Regulations provide for the transposition of Directive 92/29/EEC, as amended by Directive 2019/1834 on the minimum safety and health requirements for improved medical treatment onboard vessels. In particular, the Regulations provide for the owner of a vessel to ensure it has sufficient medical supplies and equipment onboard the vessel relevant to the category of vessel as set out in the schedule. They also require the carriage of an up-to-date medical guide relevant to the supplies onboard and minimum requirements for lifeboats and liferafts. Furthermore, there is a requirement to provide a sick bay, antidotes when carrying dangerous substances and details on training requirements. The Regulations apply to all vessels, including fishing vessels, except warships, non-commercial pleasure craft, inland waterway craft and tugs operating in harbour areas.

^{6.} See: https://www.irishstatutebook.ie/eli/2001/si/587

^{7.} See: https://www.irishstatutebook.ie/eli/2021/si/591/made/en/print

S.I. No. 587/2001 - Fishing Vessel (Basic Safety Training) Regulations 2001 provided as follows:

Section 4.

(1) Every crew member of a fishing vessel shall undertake basic safety training as set out in this Regulation.

(2) Basic safety training shall consist of the following 3 training units-

- (a) personal survival techniques, including man overboard techniques,
- (b) elementary first aid, and
- (c) fire prevention, health and safety training, and shall be held in such establishments, to such standards, under such conditions and for such duration as BIM may approve and determine.
- (3) The dates by which basic safety training must have been completed by each crew member are specified in the Table to this Regulation.
- (4) A crew member who has not successfully completed basic safety training by the date specified in the Table shall not work on board a fishing vessel.

Category of crew members	Date by which the safety training must be completed
New entrants	Before going to sea
Serving crew members born on or after 1 March 1982	Before 1 March 2003
Serving crew members born between 1 March 1976 and 28 February 1982 inclusive	Before 1 March 2004
Serving crew members born between 1 March 1971 and 29 February 1976 inclusive	Before 1 March 2005
Serving crew members born between 1 March 1966 and 28 February 1971 inclusive	Before 1 March 2006
Serving crew members born between 1 March 1961 and 28 February 1966 inclusive	Before 1 March 2007
Serving crew members born before 1 March 1961	Before 1 March 2008

TABLE

S.I. No. 591/2021 makes the following provision for medical training within a major suite of provisions that should improve health and safety on fishing vessels if complied with.

- 10.(1) All persons receiving professional maritime training and intending to work on board a vessel shall be given basic training, as determined by the MSO, in the medical and emergency measures to be taken immediately in the event of an accident or serious medical emergency.
- (2) The master of a vessel and any worker he or she delegates the use of medical supplies to under Regulation 9(1) shall receive special training updated periodically, at least once in every 5-year period, as specified by the MSO, taking into account the specific risks and needs connected with the different categories of vessel and in accordance with the general guidelines set out in Annex V.
- (3) The special training of fishermen shall, in addition to the requirements of paragraph (2), take into account the number of fishermen aboard, the area of operation and the length of the voyage.

S.I. No. 591 of 2021 was communicated to the fishing industry via Marine Notice No. 60 of 2021, which superseded Marine Notice No. 28 of 2001 (and Marine Notice No. 36 of 1997).

See Appendix 7.22 - Marine Notice No. 60 of 2021.

On the day of the incident (3 February 2021), Crewmembers A and B and the Skipper had completed a more advanced first aid course as part of the certificate of competency as officers. Two other crewmembers had completed a Basic Safety Training course within the previous five years. One crewmember had completed a Basic Safety Training course 18 years earlier, and one crewmember could not clarify whether they had lost their certification or were renewing same. S.I. No. 591 of 2021 provides that the regulation of its contents lies with the MSO, who may, inter alia under Regulation 14:

(1)Where the MSO considers that the owner or master of a vessel is failing to comply with these Regulations, the MSO may serve a direction (in these Regulations referred to as a "direction") on that person.

5. CONCLUSIONS

- 5.1 There was a failure to identify the consequences of the trawl door not being in the correct position.
- 5.2 There was a failure to take into account the possibility of additional vessel movement from the harbour.
- 5.3 This operation should have been done on the quay wall, i.e., the door should have been landed onto the quay and the chain-link removed there. This would have been a quick operation to complete in a safe manner.
- 5.4 The absence of a safety assessment and a method statement in the safety statement for this type of operation was a contributory factor to the incident.
- 5.5 The time sheets were inspected, and inconsistencies were noted. The MCIB can make no finding about compliance or non-compliance with the Regulations as that is within the jurisdiction of the MSO.
- 5.6 Irrespective of whether there was or was not compliance with the Regulations, it cannot be discounted that fatigue may have been a contributory human factor.
- 5.7 It is likely that another human factor was that of time pressure to effect the repairs during a limited time in port before the next fishing trip.
- 5.8 As Crewmember B had recently completed his first aid course in November, he was able to act appropriately to prevent the Casualty from bleeding out and dying. It is not the function of this investigation to determine if there was compliance with S.I. No. 587/2001 Fishing Vessel (Basic Safety Training) Regulations 2001.

6. SAFETY RECOMMENDATIONS

- 6.1 The Minister for Transport should issue a Marine Notice reminding fishing vessel owners and operators of the great importance of safety & risk assessments, that a hazards identification process should be carried out in respect of operations, that a risk assessment should be carried out in respect of hazardous operations, and that method statements should be compiled for all hazardous activities on fishing vessels and kept under active review. The Marine Notice should emphasise the importance of ensuring that the risk assessments and methodology are communicated fully and effectively to all relevant crew, and that should involve interpreters if required.
- 6.2 The Minister for Transport should issue a Marine Notice reminding
 - fishing vessel owners and operators of fishing vessels, of the dangers of working with trawl doors.
 - that the physical hazards associated with trawling, including beam trawling and scallop dredging, should include working with fishing gear in port and all lifting operations since this is work with suspended loads.
 - fishing vessel owners and operators of fishing vessels, that crewmembers are to be especially careful not to put their limbs in crush zones. Each trawler should be risk assessed for crush zones and should be visibly marked with stencils or signage.
- 6.3 The Minister for Transport should review Marine Notice No. 60 of 2021 in light of this Report and consider whether an updated Marine Notice should issue with regard to first aid training or other aspects of the regulations.
- 6.4 The Minister for Transport should review existing health and safety training of fishers in the light of this Report.
- 6.5 The Minister for Transport should ensure that the Marine Survey Office has the capacity for the audit of working time to ensure compliance with those Regulations and to ensure adherence to the requirements in S.I. No. 591/2021 European Union (Minimum Safety and Health Requirements for Improved Medical Treatment on Board Vessels) Regulations 2021.
- 6.6 The owners of the "FV Marliona" should carry out a hazards identification process in respect of operations, that a safety & risk assessment should be carried out in respect of hazardous operations, and that method statements should be compiled for all hazards that the risk assessments and methodology are communicated fully and effectively to all relevant crewmembers (and all new relevant crew), and that should involve interpreters if required.

All lifting operations are to be identified as hazardous operations, to be properly planned, appropriately supervised and carried out to protect the safety of crew.

- 6.7 The owners of the *"FV Marliona"* should conduct a review into the working processes on the vessel to including work and rest arrangements, manning, and training, to ensure that fatigue is not a possible contributory factor to unsafe practises or incidents.
- 6.8 The owners of the *"FV Marliona"* should conduct a review to ensure that all of their crewmembers comply with all of the requirements of S.I. No. 591/2021 European Union (Minimum Safety and Health Requirements for Improved Medical Treatment on Board Vessels) Regulations 2021.

APPENDICES

7. APPENDICES

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Appendix 7.1 Photograph No. 1 - "FV Marliona"



APPENDIX 7.2

Appendix 7.2 Fishing Licence

	FISHERIES ACTS 1959 TO 2006 SEA – FISHING BOAT LICENCE
	LICENCE NO. 297641054 The boat being a sea-fishing boat particulars of which are set out in the Schedule hereto is hereby licensed for the purposes of section 4 of the Fisheries (Amendment) Act 2003 (as inserted by section 97 of the Sea- Fisheries and Maritime Jurisdiction Act 2006) for the period commencing on 1 July 2020 and ending on 30 June 2021 in the name of:
	SCHEDULE
	Name of Boat to which the Licence relates: MARLIONA
	Country of Registration: IRELAND
]	Registration Number: SO975
]	Port of Registration: Sligo
]	Length Overall: 32.5 metres
(Gross Tonnage: 362 Tonnes
I	Engine Capacity: 721 kilowatts
I	international Radio code or Call Sign: EIND
(CFR Number: IRL000I01224 UVI Number: 9321342
1	Type of Vessel: Trawler
I	ype of Gear: OTB - Bottom Otter Trawls
E	leet Segment: Polyvalent [>=18m LOA]
1 - J	Other Information:
	Pate: 1 July 2020

Appendix 7.2.1 Fishing Vessel Safety Certificate of Compliance

V			NG VESSEL S ATE OF COM		E	
S	This certi	ficate of complianc	e shall be suppleme	nted by a reco	rd of equipment	
		fo	or a new fishing ves	sel		
com	ed under the provision pliancy of the vessel nonised safety regime	named hereafter	with the provisions	of Council I		
		under the auth	ority of the Govern	ment of Ireland	d	
		by Th	e Department of Tra	ansport.		
	Name of Ship	Fishing Letters & Numbers	Official & IMO Numbers	Port of Registry	Sca arcas in which ship is certified to operate	Length ⁽²⁾
	MARLIONA	SO975	403795 IMO 9321342	SLIGO	A1&A2	27.7
			at a similar stage of	construction		h 2003
Dat	e of delivery or comp			construction	April 2004	11 2003
	e of delivery or comp S IS TO CERTIFY: that the ship has be	letion of major con	tract ⁽³⁾		April 2004	
THIS	e of delivery or comp S IS TO CERTIFY: that the ship has be Torremolinos Proto that the survey sho 1. the ship full 2. the maximu	letion of major con een surveyed in acco ocol of 1993; wed that: ly complies with th un permissible oper	tract ⁽³⁾ Initial Survey	ation I/6(1)(a) council Directiv	April 2004 of the Annex to th ve 97/70/EC; and n operating condit	ne tion for the
THI5 1.	e of delivery or comp S IS TO CERTIFY: that the ship has be Torremolinos Proto that the survey sho 1. the ship full 2. the maximu	letion of major con een surveyed in acco ocol of 1993; wed that: ly complies with th un permissible open ntained in the stabi	tract ⁽³⁾ Initial Survey ordance with Regula e requirements of C rating draught associ lity booklet dated	ation I/6(1)(a) council Directiv	April 2004 of the Annex to th ve 97/70/EC; and n operating condit	ne tion for the
THIS 1. 2. 3.	e of delivery or comp S IS TO CERTIFY: that the ship has be Torremolinos Proto that the survey sho 1. the ship full 2. the maximu vessel is co	letion of major con een surveyed in acco bool of 1993; wed that: ly complies with th im permissible open ntained in the stabi Certificate has not til l June 2024	tract ⁽³⁾ Initial Survey ordance with Regula e requirements of C rating draught assoc lity booklet dated been issued.	ation I/6(1)(a) council Directiv tiated with each 18 June 2004	April 2004 of the Annex to th ye 97/70/EC; and n operating condit	ne tion for the ∴
THIS 1. 2. 3. This	e of delivery or comp S IS TO CERTIFY: that the ship has be Torremolinos Proto that the survey sho 1. the ship full 2. the maximu vessel is co that an Exemption Certificate is valid un)(b)(ii) and (iii) and (o	letion of major con een surveyed in acco bool of 1993; wed that: ly complies with th im permissible open ntained in the stabi Certificate has not til l June 2024	tract ⁽³⁾ Initial Survey ordance with Regula e requirements of C rating draught assoc lity booklet dated been issued. subject to sur	ation I/6(1)(a) council Directiv tiated with each 18 June 2004	April 2004 of the Annex to th e 97/70/EC; and n operating condit ance with Regula 11 Septer	ne tion for the ∴
THIS 1. 2. 3. This I/6(1	e of delivery or comp S IS TO CERTIFY: that the ship has be Torremolinos Proto that the survey sho 1. the ship full 2. the maximu vessel is co that an Exemption Certificate is valid un)(b)(ii) and (iii) and (o	een surveyed in acce bool of 1993; wed that: ly complies with th um permissible open ntained in the stabil Certificate has not til I June 2024 Dublin e of issue of Certificate) (signed	tract ⁽³⁾ Initial Survey ordance with Regula e requirements of C rating draught assoc lity booklet dated been issued. 	ation I/6(1)(a) Council Directiv Diated with each 18 June 200 Eveys in accord	April 2004 of the Annex to th e 97/70/EC; and n operating condit ance with Regula 11 Septer	ne tion for the ∴ ttion nber 2020 of issue)

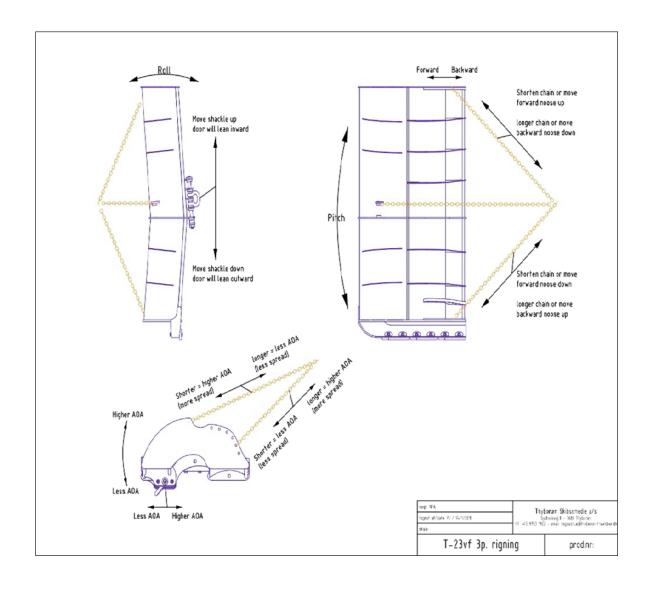
APPENDIX 7.3

Appendix 7.3 Photograph No. 2 - Starboard Trawl Door

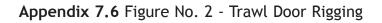


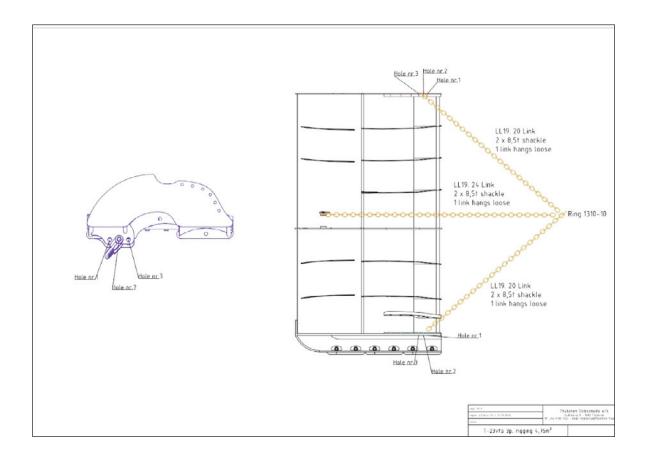


Appendix 7.4 Photograph No. 3 - Chain-link and Dog Chains

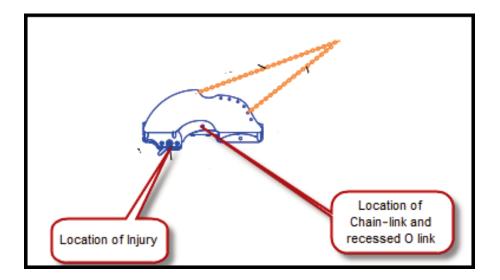


Appendix 7.5 Figure No. 1 - Trawl Door Rigging to A Frame from Above





Appendix 7.7 Figure No. 3 - Trawl Door Rigging



Appendix 7.8 Board Iascaigh Mhara First Aid Course Details

First Aid Course Details and requirements.

S.I. 591 of 2021 is communicated via M Notice 60 of 2021.

https://www.irishstatutebook.ie/eli/2021/si/591/made/en/pdf

https://www.gov.ie/pdf/?file=https://assets.gov.ie/203751/e7e16698-ee30-4cfb-a83c-9518505f3482.pdf#page=null

This superseded M notice 36 of 1997 and S.I. 587/2001 – Fishing Vessel (Basic Safety Training) regulations 2001.

Skipper and Crewmember A and B

Medical First Aid

This three-day programme covers subjects including: classroom theory in introduction and detail on various first-aid situations which might be encountered on-board. There are also practical exercises on wounds, bandaging, spinal injuries, patient assessment and administering medication.

On successful completion of this programme, the learner will receive a STCW Medical First-Aid onboard Certificate issued by BIM on behalf of the Department of Transport.

Crewmember C, D and E

Three Day Basic Safety Training Course.

STCW-PST Personal Survival Techniques

SKL-FPSA Fire Prevention and Safety Awareness

STCW-EFA Elementary First Aid

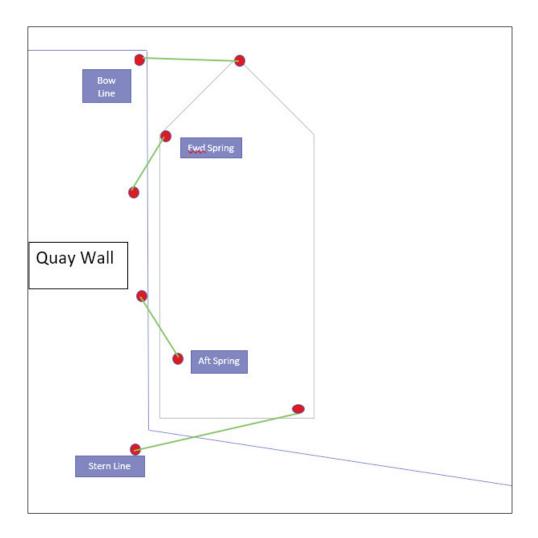
The programme covers a one-day course in the basics of first aid onboard a vessel. On completion of this course the student will be able to provide immediate basic medical care at the scene of an accident or other medical emergency until the arrival of a person with first-aid skills or the person in charge of medical care aboard.

On completion of the course a BIM Basic Safety Training card is issued by BIM.

Appendix 7.9 Photograph No. 4 - Greencastle Harbour







Appendix 7.11 Met Éireann Weather Report



Met ÉireannThe Irish Meteorological ServiceClimate ServicesSeirbhísí AeráideGlasnevin HillCnoc Ghlas NaíonDublin 9Baile Átha Cliath 9

Tel: +353-1-8064260 Email: legal@met.ie

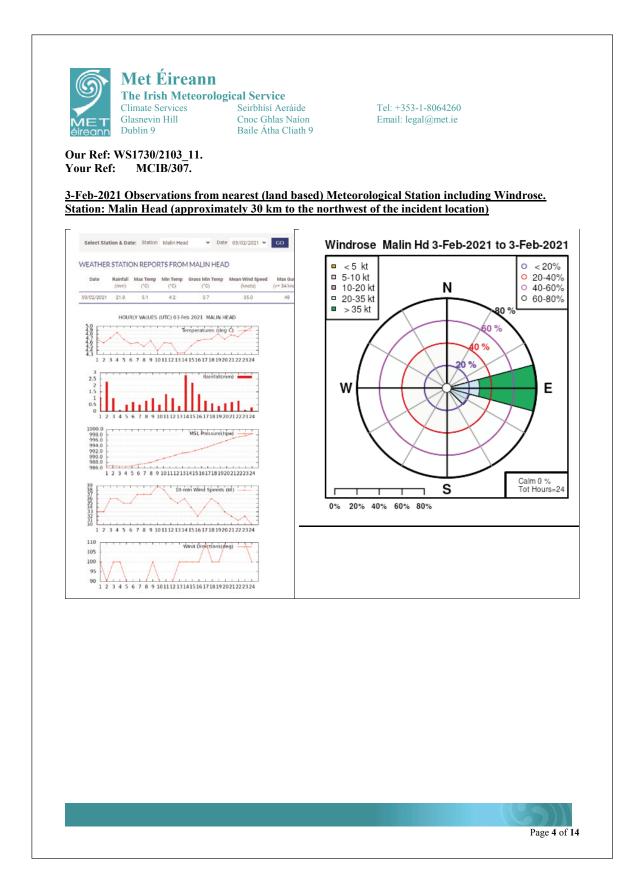
Our Ref: WS1730/2103_11. Your Ref: MCIB/307.

PRELIMINARY REPORT: Estimated weather conditions for Greencastle Pier, County Donegal area (latitude/longitude of incident: 55°12.11'N 006°59.06'W (55.202 -6.984 decimal degrees)) for the period from Tuesday 2nd February to Thursday 4th February 2021 (date/time of accident: Wednesday 3-Feb-2021 at 14:00 hours).

	Tuesday 2-February-2021 00:00 – 24:00 hours UTC:
<u>Meteorological</u> <u>Situation:</u>	A complex area of low pressure (976 hPa) approximately 200nm west of Ireland was slow-moving on the 2nd and steered an easterly airflow with an associated occluded front over the northern half of the country.
<u>Wind:</u>	Winds were strong force 6 to near-gale force 7, occasionally gale force 8 with gusts up to 45 knots. Wind direction was south-easterly at first backed easterly by afternoon.
<u>Weather &</u> <u>Precipitation:</u>	Persistent and heavy rain in the morning followed by occasional showers in the afternoon and evening. Estimated daily total rainfall accumulation: 15 to 18 mm (most of which fell prior to 2pm).
<u>Visibility:</u>	Moderate to poor $(1 - 5 \text{ nm})$.

<u>Meteorological</u> <u>Situation:</u>	Wednesday 3-February-2021 00:00 – 24:00 hours UTC: The near-stationary low-pressure system (985 hPa) remained situated just west of Ireland on the 3 rd and continued to steer an easterly airflow over the northern half of the country. The associated active frontal trough (occlusion) was near-stationary over the area.
<u>Wind:</u>	Winds were strong force 6 to gale force 8 from easterly direction with gusts up to 50 knots.
<u>Weather &</u> <u>Precipitation:</u>	Outbreaks of rain or drizzle affected the area throughout the day with occasional heavy downpours. Around the time of the accident it was raining with moderate intensity (estimated rainfall rate of 2 to 4 mm/h). The estimated daily total rainfall accumulation: 20 to 25 mm.
<u>Visibility:</u>	Moderate to poor $(1 - 5 \text{ nm})$.

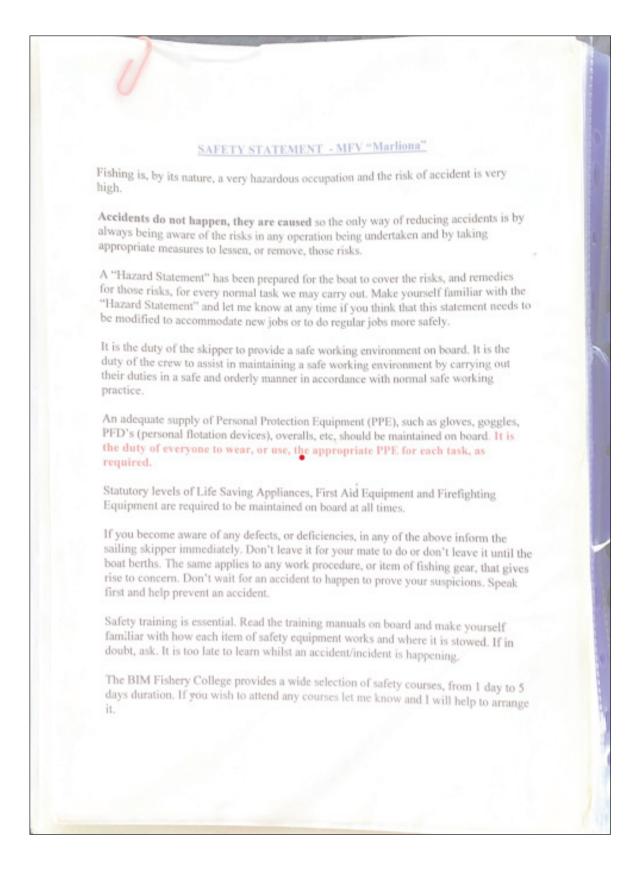
Appendix 7.11 Met Éireann Weather Report



Appendix 7.11 Met Éireann Weather Report

S Met Eirean		
24-hour Sea Area Forecast	Southeast to east winds wil waters	Text of Gale Warning I reach gale force 8 for a time this afternoon (Tuesday) on Irish coasts from Bloody Foreland to Malin Head to Fair Head.
Sea Area Forecast until 1200 Wednesday, 3 February 2021 Issued at 1200 Tuesday, 2 February 2021	from	Text of Small Craft Warning II occasionally reach force 6 or higher today (Tuesday) on Irish coasts Fair Head to Roches Point to Bloody Foreland. ease see gale warning for remaining sea areas.
	Coastal Reports	12 Noon Tuesday, 02 February 2021
1. Gale warning: In operation Small craft warning: In operation	Malin Head Automatic	East-Southeast, 34 Knots, Gust 46 Knots, Light rain, 3 Miles, 988, Falling slowly
2. Meteorological situation at 0900; A near stationary depression of 974 hPa, roughly 200 NM west of Ireland.	Dublin Airport	Southeast, 4 Knots, Cloudy, 6 Miles, 985, Falling slowly
2. Meterorological intradion at table. A field stationary depression of 974 field, todginy 200 km west of relatio, generates a fresh to near gale force cyclonic variable airflow across Ireland. Its associated occlusion continues to move up in the flow.	Buoy M5 51° 41'N 6° 42'W	South-Southwest, 21 Knots, Wave ht: 3.4 m, The visibility at Tuskar is 1 Miles, 986, Falling
	Roches Point Automatic	South-Southwest, 20 Knots, Mod rain shower, 1.7 Miles, 983, Falling slowly
3. Forecast for Irish coastal waters from Erris Head to Malin Head to Carlingford Lough	Sherkin Island Automatic	Southwest, 21 Knots, Gust 38 Knots, Rain shower, 1.5 Miles, 982, Falling slowly
Wind: East to southeast force 6 to gale force 8. Soon decreasing force 5 to near gale force 7. Later decreasing cyclonic variable force 5 to 7.	Valentia Automatic Mace Head Automatic	South-Southwest, 13 Knots, Cloudy, 6 Miles, 981, Steady Southeast, 14 Knots, Rain shower, 5 Miles, 980, Falling slowly
	Belmullet Automatic	East-Southeast, 9 Knots, Rain shower, 6 Miles, 981, Steady
Weather: Showers - some heavy. Risk of isolated thunderstorms.	Buoy M1 53° 8'N, 11° 12'W	Report not available
Visibility: Moderate or poor in showers. Otherwise good.	Buoy M2 53° 29'N, 5° 26'W	South-Southeast, 13 Knots, Wave ht: 1.7 m, 986, Falling slowly
	Buoy M3 51° 13'N, 10° 33'W	West-Southwest, 25 Knots, Wave ht: 5.1 m, 982, Rising slowly
	Buoy M4 55° 0'N 10° 0'W Buoy M6 53° 4'N 15° 56'W	East, 25 Knots, Wave ht: 4.3 m, 982, Rising slowly West, 20 Knots, Gust 30 Knots, Wave ht: 4.3 m, 979, Rising
Forecast for Irish coastal waters from Carlingford Lough to Carnsore Point to Mizen Head and the Irish Sea		approximate and are not for navigational purposes
Wind: South to southwest force 6 or 7 and gusty. Later decreasing force 5 or 6. Increasing force 6 to near gale	Sea Crossings	State of sea until 1200 Thursday 04 February 2021
force 7 in the southwest towards the end of the period.	Dublin - Holyhead	Moderate to rough, occasionally very rough on Wednesday.
Weather: Showers - some heavy. Risk of isolated thunderstorms. Mainly fair later tonight.	Rosslare - South Wales	Rough to very rough.
	Cork - South Wales	Rough to very rough.
Visibility: Moderate or poor in showers. Otherwise good.	Rosslare - France	Very rough, occasionally high Tuesday evening, easing rough Wednesday night.
Forecast for Irish coastal waters from Mizen Head to Slyne Head to Erris Head	Cork - France	Very rough, occasionally high Tuesday evening, easing rough Wednesday night.
Wind: Cyclonic variable force 4 to 6. Soon increasing mainly westerly force 5 to 7. Later increasing cyclonic variable mainly southwest force 6 to gale force 8.	Next update before 1900 Tu	
Weather: Showers - some heavy. Risk of isolated thunderstorms. Mainly fair later tonight.	the stand aparte before 1000 fe	
Visibility: Moderate or poor in showers. Otherwise good.		
Warning of Heavy Swell: South and west sea areas for a time.		
4. Outlook for a further 24 hours until 1200 Thursday 04 February 2021: Cyclonic variable winds - strong to gale force at times. Showers, merging into longer spells of rain. Ongoing risk haii/lightning.		

Estimated sea state conditions for the offshore area approximately 5 nautical miles east-northeast of Inishowen Head					
	2-February-2021	3-February-2021	4-February-2021		
Sea State Description	Moderate	Moderate to rough	Moderate to rough at first moderate later.		
Estimated significant wave height	1.5 to 2.5 meters	2 to 4 meters	2 to 4 meters; later 1.5 to 2.5 meters.		
Wave direction	Southwesterly at first. Easterly later in the day.	Easterly	Easterly		



his non-exhaustive safety check ssess the safety status of your ote that this list might not cove	vessel and asks you to tackle t r some activities undertaken by	hose hazards the you. In those ca	it are present with ses a separate as	h appropriate action. isessment should be
ut. Inspectors from the Health a our Safety Statement must be				ir vessel's Safety Sta
NAME OF VESSEL	MARLIONA		CALL SIGN	EIND
LENGTH OVERALL (L.O.A.)	32.5 m.		REGISTRATION	50975
HOME PORT	greencast	tle	HUMDLA	
NAME OF SKIPPER	1100111.115			
ADDRESS	greencastle		/	
NAME OF OWNER (if not the skipper)	0			
ADDRESS	2			
		9		~
This Safety Statement sets o with the Safety, Health and W other safety and health regul minimise the risk of accident this vessel. We will update it be reviewed at least once a y equipment, information, train procedures necessary for the will be provided as required to	Velfare at Work Act 2005 and ations and in the process is and ill health on board as necessary and it will year. Personal protective ing and the operating is safety of the vessel and crew	DEPUTY DATE	PER SIGNATURES	
GENERAL GUIDELINES				
 Never wear rings or watch Never stand in the line of 	ropes under tension your hand (s/cranes carrying loads	 Practice r Avoid run Practice r 	ning turns on wir	ill gear changeovers ich drums
 Never wrap ropes around Never stand below derrict Use light reflectors on ext 	ernal ciotning	tradit part		

Trained first elders and a first eld kit as approved must be carried on board the vessel.

The Trained First Alder is Jan All Crew is First Aiders

Communications

The communications equipment on board consists of the following:

Full G.M.D.S.S V.H.F. Dr. M.F. DSC SAT.C and SAT Phone.

When not in use it will be left on this emergency channel:

Ch 16 (rhe

Lighting

Proper lighting is important not only for work but also for welfare.

- Are all working areas above, on and below deck properly lit?
- Are emergency lighting facilities available?
- Are enough spare bulbs on board?
- Is the boarding area properly lit?
- Are reflective bands worn on deck?
- Is the searchlight working?

Fatigue

Occupational risks increase dramatically with fatigue.

- Prolonged periods without sleep impairs judgement, concentration and the ability to communicate.
- If you find it difficult to remain alert on watch, notify the skipper immediately.
- Minimum rest periods should be discussed and agreed before going to sea.

Pre-Steaming Check List

- Are adequate supplies (for example diesel, food, water, lube oil etc.) on board for expected trip duration?
- Does someone ashore know who is on board and your expected return date and time?
- Are adequate spare parts (for example hydraulic, electrical, mechanical etc.) on board for the trip?
- Have emergency muster procedures been practiced?
- Are all relevant marine notices and charts on board?
- Is all ancillary equipment (e.g. generators and auxillaries etc.) in good working order?
- Do you understand all emergency signals on board and know how to respond to them?

Anchoring

- Are you aware of the anchoring arrangements on board?

Drink and Drugs

To risk your own or others' lives as a result of abusing drink and/or drugs is grossly irresponsible.

- What arrangements have been made for boarding?
- Is the man on watch fit?
- Is anyone on board taking non-prescribed drugs while at sea?
- Is anyone on board on prescribed medication?
- If the answer to any of these questions is yes, has the skipper been advised?

Ventilation

Death and serious health damage can result from inadequate ventilation on board.

- Carbon dioxide asphyxiation can result from inadequate ventilation of galleys and cabins.
- Carbon monoxide poisoning can result from incomplete combustion of gas/paraffin/diesel heaters.
- Engine exhaust fumes are extremely toxic.
- Liquid Petroleum Gas (LPG) leaks can kill. The gas is heavier than air and sinks to cabin
- floor/bilge levels and can explode or ignite.

 Methane and other gases produced by rotting fish can kill.
 If you feel dizzy or awaken with headaches, check heaters, cookers and ventilation fans and ducts, report symptoms to the skipper. If necessary, evacuate cabins etc.

Emergency Stops

Emergencies can occur at any time – are you prepared for them?

- Does everyone on deck know the emergency stop signals?
- Who controls machinery emergency stops, such as winches, haulers etc?
- Are emergency reverse signals and procedures clearly understood?

Berthing

- Are all signalling procedures clearly understood?
- Remember to stand clear of ropes under strain.
- Avoid riding turns on drum ends.
- Beware of ropes chafing at the pler edge.
- Make sure that deck hose is not underwater when the pump is shutdown.
- Take care not to get crushed between the side of the boat watch fingers, hands etc.
- Are rope/wire splices/bridles sound and are all ropes/wires/bridles in good condition?

Painting and Dry Docking

- Take great care when using ladders to climb masts or onto boats.
- Ensure that electrical wires from ashore are rigged for outdoor use.
 Wear suitable protective clothing when using blow torches/cutting
- and welding gear and keep a fire watch.
- Proper staging platforms must be used when painting.

Health and Safety Authority, The Metropolitan Building, James Joyce Street, Dublin 1.

HAZARDS TYPES OF HAZARDS	RISKS	ACTION ACTION REQUIRED
Access		
Failing between pler and boat/ between boats	Drowning/serious injury	Only board when gangway is out.
Obstacles on deck	Man overboard/serious injury	hareness of Sarroundings, and
Failing down hatches	Broken bones/death	colo Ciller
Lighting	Tripping/falling	Report or spills
Slippery decks	Tripping/falling	
Gangway	Falling/drowning	Take care while entering Lexiting.
Wheelhouse		IC Fired call
Falling asleep on watch	Callisian/sinking/grounding	pon't leque
Leaving wheelhouse on watch	Collision/sinking/grounding	una Hended. Adequate rest.
Fitness for watchkeeping	Collision/sinking/grounding	
Shooting Gear		
External clothing getting caught on gear	Serious injury/man overboard	No loose clothing
Wearing of rings/watches on deck	Loss of fingers/hands	No jewellerg.
Improper communications on deck	Serious injury/death	clear hand signals.
Releasing doors/larsen weights	Amputation/broken bones/crushing	Liceep limbs clear.
Shooting lazy deckles/lifelines	Broken ilmbs/man overboard	stand clear.
Shooting gillnets/pots/buoys/lines/ anchors	Brokan limbs/man overboard	Stand Clear clear communication
Net drums	Crushing	L aland clear.
Gear parting	Amputation/death	Exera care while working at travis:
Emergency stop procedures	Man overboard/broken bones	Check emergency stop scene sapety.
Hauling		
Doors/fishing anchors coming up too fast	Injury/boat immobilised	stop immediately.
nproper communications on deck	Serious Injury	clear signals.
od-end lifts coming aboard	Crushing	stop immediately. clear signals. keep well back.
	Page 3	

HAZARDS	RISKS Exemples of Risks	ACTION ACTION REQUIRED
Hauling continued		
Hauling lazy deckles/lifelines	Amputations/lacerations	of parting rope
Overloading boat	Capsizing/sinking	Don'E overload.
Operating power blocks	Crushing/amputations	NIA
Operating net drums	Crushing	clear hand sland correct not to be (stand , clear of
Gear parting	Amputation/death	stand clear of
Operating winches	Amputation/death	Good communicati
Emergency stop procedures	Man overboard/broken bones	Good communication to bridge.
Galloy		NOE be left
Deep fat fryer	Bums/suffocation	unattendant.
Cookers	Fires/explosion/suffocation	Ever flamables
Handling Fish		
Hand gutting	Cuts/infections	wear gloves.
Machine gutting	Amputation/serious injury	NIA. AIN
Fish conveyors	Crushing	from belts.
Passing boxes/baskets to fish room	Bones broken/back injury	Bend knees.
Stacking fish boxes	Bones broken/back injury	Bend knees.
Dipping prawns in antioxidant	Heart damage/asthma attacks	PPE .
Bulk storage of fish in pounds/lockers/ tanks	Suffocation/capaizing	secure 2 ventiliati
Unloading		
Clipping on boxes in fish room	Head Injury	PPE MUSE be wo
Lifting foads with demicks/cranes	Serious injury/death	under load.
Landing boxes on pler/truck	Serious Injury	under load.
Engine Room		
Belt and Power Take Off (PTO) drives and flywheels	Amputation of limbs	Replace of
	Broken legs/serious injury	Daniage of

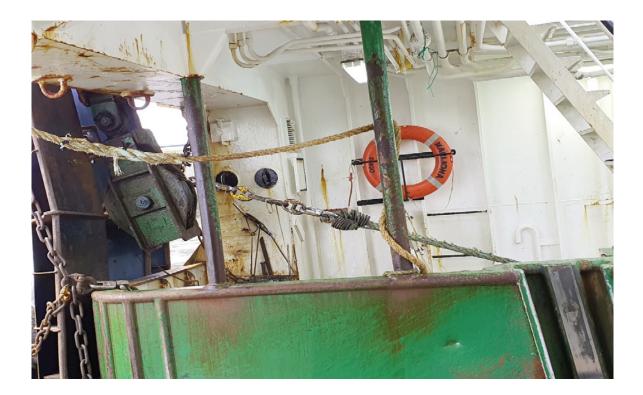
HAZARDS TYPES OF HAZARDS	RISKS	ACTION
Engine Room continued		
Grinding and welding	Cuts/eye damage/electrocution	
Noise levels	Hearing damage	Earmuff must
Fire	Death/burns	Fireman suit
Water leakages	Equipment damage/sinking	Report and
Batteries	Explosion/acid burns/suffocation	take action.
Deck head protrusions	Head Injuries	Training essential.
Fallure of bilge pump	Equipment damage/sinking	PPE gear to be wor
Access to engine room	Falling	use backup.
Contact with hot surfaces/pipes	Burns	Use handrails.
Pressure vessels/air bottles	Explosion/bursting	PPE .
Fire smothering system	Suffocation	Tested.
2 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -	GUIGGEUN	Training 1 awareness
Electrical Installation		
Electrical wiring and fitting	Fires/suffocation/electrocution	keep in good working
Batteries	Explosion/acid burns/suffocation	Training essential.
Portable tools	Electrocution	Training essential
		non ng essension
Accommodation		
Ventilation	Poisoning/dampness	Mainlained & serviced
Emergency exit	Drowning/suffocation	rept clear.
Inadequate lighting	Panic/falls/serious injury	Replace lights.
Open cabin floor hatches	Falling/serious injury	To be kept closed.
Smoking in bunk	Fire	Forbidden.
Heaters	Fire/gas polsoning	NOE to be covered.
Welfare		
Fatigue	Shipwreck/death/serious injury	Proper rest.
Loose/tom/damaged clothing	Exposure/entanglement	Forbidden

HAZARDS TYPES OF HAZARDS	RISKS		ACTION	
Welfare continued				
Poor quality food	Polsoning/n	nainutrition	Food k	iggiene.
Toilet/washing/drying facilities	Sickness/fo	od poisoning/infections	Regular	cleaning
Gases/Chemicals				arms to
LPG/compressed air/refrigerant gases	Suffocation	explosion	be se	arms to ruiced.
Antioxidants e.g. sodium metabisulpha	te Heart dama	ge/asthma	PPE	
Enclosed unventilated spaces	Poisoning/s	uffocation	Muse n	o be ente
Oxyacetylene cutting gear	Explosion/b	ums	PPE & F	ire safe
Man Overboard				00000
Man overboard	Drowning/h	ypothermla	PPE J	safety
Condition of oldest warp				
Condition of oldest warp				
on winch drums	Monthly.			
	Monthly. Weekly.			
on winch drums	Weekly.			
on winch drums Bridles/splices/eyes Gilson derrick/blocks/	Weekly. Monthly.			
on winch drums Bridles/splices/eyes Glison derrick/blocks/ chains/shackles/wires Landing derrick/blocks/chains/	Weekly. Monthly. Weekly.			
on winch drums Bridles/splices/eyes Glison derrick/blocks/ chains/shackles/wires Landing derrick/blocks/chains/ shackles/wires	Weekly. Monthly. Weekly.			
on winch drums Bridles/splices/eyes Glison derrick/blocks/ chains/shackles/wires Landing derrick/blocks/chains/ shackles/wires Warp blocks/pins/roller leads	Weekly. Monthly. Weekly. Daily.			
on winch drums Bridles/splices/eyes Glison derrick/blocks/ chains/shackles/wires Landing derrick/blocks/chains/ shackles/wires Warp blocks/pins/roller leads Hydraulic hoses/pipes/flittings	Weekly. Monthly. Weekly.			
on winch drums Bridles/splices/eyes Gilson derrick/blocks/ chains/shackles/wires Landing derrick/blocks/chains/ shackles/wires Warp blocks/pins/roller leads Hydraulic hoses/pipes/fittings Beckets	Weekly. Monthly. Weekly. Daily. Daily. NIA.			
on winch drums Bridles/splices/eyes Glison derrick/blocks/ chains/shackles/wires Landing derrick/blocks/chains/ shackles/wires Warp blocks/pins/roller leads Hydraulic hoses/pipes/flittings Beckets Power blocks	Weekly Monthly Weekly Daily Daily NIA Occasionly			
on winch drums Bridles/splices/eyes Gilson derrick/blocks/ chains/shackles/wires Landing derrick/blocks/chains/ shackles/wires Warp blocks/pins/roller leads Warp blocks/pins/roller leads Hydraulic hoses/pipes/fittings Beckets Power blocks Stopper chains and cleats	Weekly. Monthly. Weekly. Daily. Daily. Daily. NIA. Occasionly. Monthly.			
on winch drums Bridles/splices/eyes Gilson derrick/blocks/ chains/shackles/wires Landing derrick/blocks/chains/ shackles/wires Warp blocks/pins/roller leads Hydraulic hoses/pipes/fittings Beckets Power blocks Stopper chains and cleats Winch brakes	Weekly Monthly Weekly Daily Daily NIA Occasionly			

	NUMBER	TESTED	TESTED	TESTED
Heat/gas detectors in galley/cabin(s)	3.	weekly.		
Oll pressure	3	Monthly		
Engline temperature	3			
Fuel level	2.	weekly.		
Bilge water level	6.			
Fire	9	weekly.		
Carbon dioxide (CO ₂)	NIF			
Engline room (ER) smothering	1.	Monthly		
Fog horn	1.	weekly.		
rgency drills and musters will be carri th on other vessels which do not com MERGENCY PROCED netuding man overboard a	ed out as required a within the scope URES	by the Department of Trans of current legislation.	aport, Tourism and S	port and at least one
th on other vessels which do not com EMERGENCY PROCED Including man overboard a	ed out as required a within the scope URES nd helicopter	by the Department of Trans of current legislation.	sport, Tourism and S	port and at least one
th on other vessels which do not com	ed out as required a within the scope URES nd helicopter	by the Department of Trans of current legislation.	sport, Tourism and S	port and at least one
th on other vessels which do not com EMERGENCY PROCED Including man overboard a	ed out as required a within the scope URES nd helicopter	by the Department of Trans of current legislation.	sport, Tourism and S	port and at least one
th on other vessels which do not com EMERGENCY PROCED Including man overboard a	ed out as required a within the scope URES nd helicopter	by the Department of Trans of current legislation.	eport, Tourism and S	port and at least one
th on other vessels which do not com EMERGENCY PROCED Including man overboard a	ed out as required a within the scope URES nd helicopter	by the Department of Trans of current legislation.	eport, Tourism and S	port and at least one
th on other vessels which do not com EMERGENCY PROCED Including man overboard a	ed out as required a within the scope URES nd helicopter	by the Department of Trans of current legislation.	eport, Tourism and S	port and at least one
th on other vessels which do not com EMERGENCY PROCED Including man overboard a	ed out as required a within the scope URES nd helicopter	by the Department of Trans of current legislation.	aport, Tourism and S	port and at least one
th on other vessels which do not com EMERGENCY PROCED Including man overboard a	ed out as required a within the scope URES nd helicopter	by the Department of Trans of current legislation.	aport, Tourism and S	port and at least one
th on other vessels which do not com EMERGENCY PROCED Including man overboard a	ed out as required a within the scope URES nd helicopter	by the Department of Trans of current legislation.	aport, Tourism and S	port and at least one
th on other vessels which do not com EMERGENCY PROCED Including man overboard a	ed out as required a within the scope URES nd helicopter	by the Department of Trans of current legislation.	sport, Tourism and S	port and at least ond

	NO. ON BOARD	DATE SERVICED	DATE SERVICED	DATE SERVICI
Standard release liferaft(s)	2	Ep 11/2021		
Automatic release liferaft(s)	2			
Lifeboat(s)	1	Serviced. 9/2020		
Rockets and flares	12	Serviced 8/2020 Exp 11/2022		
Une throwing apparatus	6	EPAnal 2027		
Life jackets (SOLAS)	10	Samed 20%		
Life rings	4.	EPAng/2022 Served 2026 Ang/2026 Ang/2020		
Fire extinguishers - Powder - Carbon dloxide (CO ₂) - Foam - Water - Other		5,		
Fire smothering system				
Emergency lighting				
Emergency fuel shut-offs	2.			
Emergency exit hatches from cabins	2			
Man overboard recovery equipment	١.			
Portable waterproof VHF radio(s)	3	Exp. Feb 2025		
Emergency Position Indicating Radio Beacon(s) (EPIRB(s))	1.	Exp. Feb 2025 Exp. Aug 2024		
First ald boxes	١.			
Anchor and anchor lines	2.	Sovied Aug 2020		
	IPMENT No. on Board	CONDITION	CONDITION	CONDITION
Constant-wear lifejackets	8	V Good		
Full oliskin sets	8	V Good		
Suitable footwear	10	V Good		
Ear muffs	3	V Good.		
Gloves etc.	malliple	V Good		
Personal Locator Beacon(s) (PLB(s))	0			

Appendix 7.13 Photograph No. 5 - Trawl Door Winch



Appendix 7.14 Photograph No. 6 - Chain-link



Appendix 7.15 Photograph No. 7 - A Frame



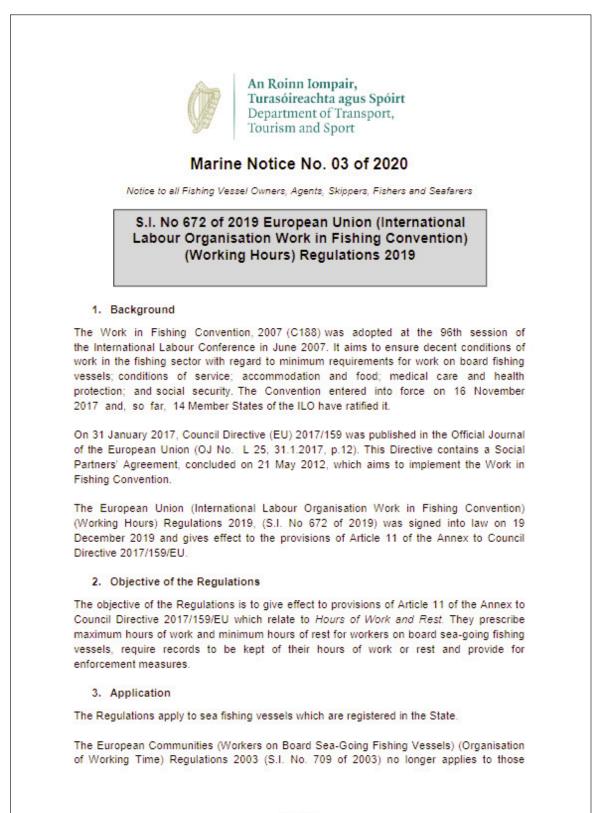
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Appendix 7.16 Photograph No. 8 - Rigging to A Frame



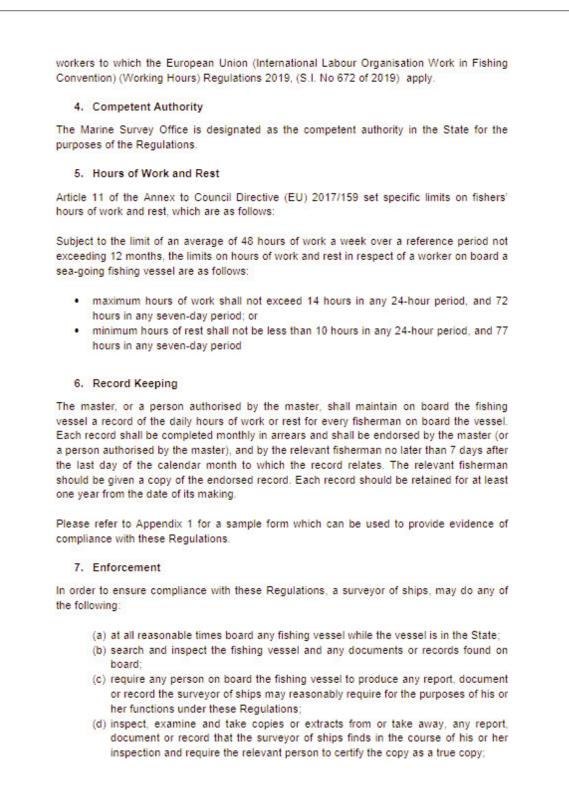


Appendix 7.17 S.I. No. 672/2019 European Union (International Labour Organisation Work in Fishing Convention) (Working Hours) Regulations 2019



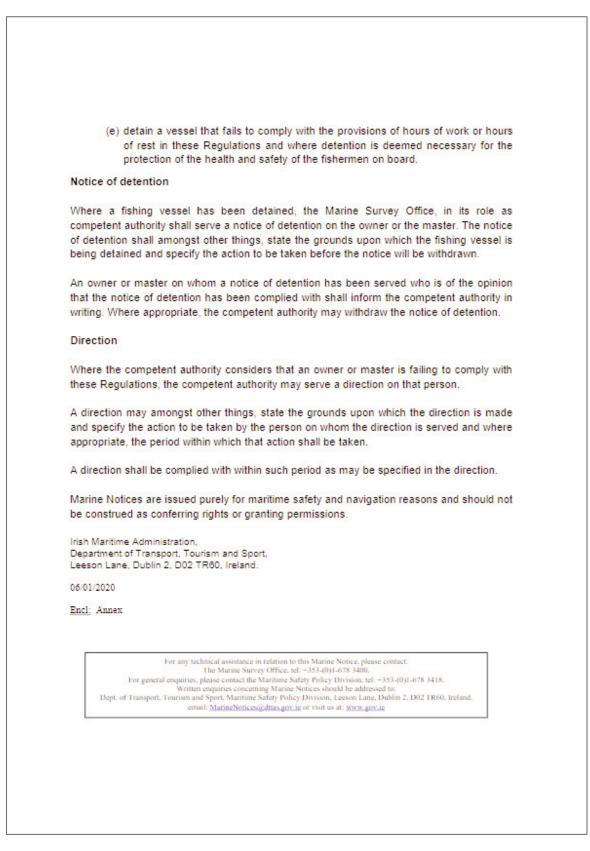
Page 1 of 5

Appendix 7.17 S.I. No. 672/2019 European Union (International Labour Organisation Work in Fishing Convention) (Working Hours) Regulations 2019

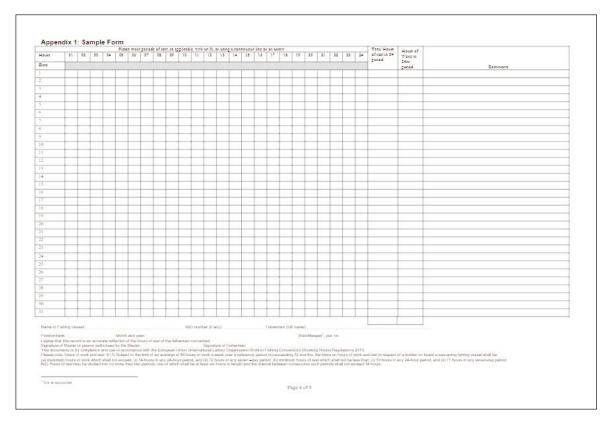


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Appendix 7.17 S.I. No. 672/2019 European Union (International Labour Organisation Work in Fishing Convention) (Working Hours) Regulations 2019



Appendix 7.17 S.I. No. 672/2019 European Union (International Labour Organisation Work in Fishing Convention) (Working Hours) Regulations 2019



APPENDIX 7.17 Cont.

Appendix 7.17 S.I. No. 672/2019 European Union (International Labour Organisation Work in Fishing Convention) (Working Hours) Regulations 2019

rticle	e 11: Hours of Work and Hours of Rest	
1.	 (a) Articles 3 to 6 inclusive, 8, and 21 of Directive 2003/88/EC shal under this Agreement. 	I not apply to fishermen covered
	(b) Each Member State shall, however, adopt laws, regulations or owners of vessels flying its flag ensure that fishermen are entitled t fishermen's hours of work are limited to 48 hours a week on average period not exceeding 12 months.	to adequate rest and that the
2.	 (a) Within the limits set out in paragraph 1, subparagraph (b), and peach Member State shall, after consultation, take the necessary methods with the need to protect the safety and health of the fisher limiting fatigue: (i) the working hours are limited to a maximum number 	easures to ensure that, in men and for the purpose of
	exceeded in a given period of time;	
	or	
	 (ii) a minimum number of hours of rest are provided within a (b) The maximum number of hours of work or the minimum hours or regulations, administrative provisions or by collective agreements of sides of the industry. 	of rest shall be specified by law,
3.	The limits on hours of work or rest shall be either:	
	(a) maximum hours of work which shall not exceed:	
	(i) 14 hours in any 24-hour period, and	
	(ii) 72 hours in any seven-day period;	
	or	
	(b) minimum hours of rest which shall not be less than:	
	 (i) 10 hours in any 24-hour period, and (ii) 77 hours in any seven-day period. 	
4.	 Hours of rest may be divided into no more than two periods, one of in length, and the interval between two consecutive periods of rest 	
	Page 5 of 5	

Skipper/Casualty

Name o Seatare Month 7					100						Po	D No.	_ 2 / Ran	Sa	SIC KIP	PE	R	- 0	loat Ri	eg. No	Sc	993	75	-					
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Crewmember B

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Crewmember C

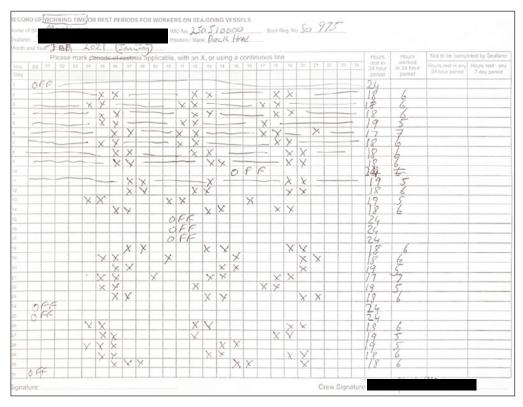
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Appendix 7.19 Correspondence in Relation to the Time Sheets

	Marliona 😕 Index X
	Afternoon
	I wonder if you could clarify for me some things in relation to the timesheets.
	In the attached documents that are the time sheets for the vessel, it
	shows a difference for the hours (x) and the tallies in the columns. The (x) are supposed to indicate the hours of rest.
	But the totals in the column indicate that they are hours of work.
	So for example in your own time sheet first line the (x) show 6 Hours
	of rest but the column shows 18 hours of rest.
	Can you clarify this for me? Regards
	MCIB
(2)	to me 💌
	Hi Land The x is hours worked
	Kind regards
	> On 14 Sep 2021, at 14:08, wrote:
-	> Afternoon
	>

Appendix 7.20 Crew Details and Status of Fishers

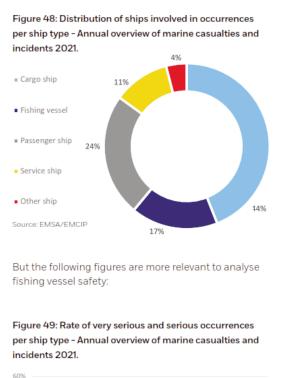
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Appendix 7.20 Crew Details and Status of Fishers

Certificate of Competency Number (if any)	BIM Safery Card Number	Engagement		Discharge		We, the undersigned hereby release this Fishing Vessel and the Skipper and Registered Owner thereof, from all claims for remuneration or otherwise in respect of this voyage or series of voyages Signatures for Discharge		Reforence No.
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APPENDIX 7.21

Appendix 7.21 Graphs 48, 49 and 50 from the 2021 EMSA Safety Report



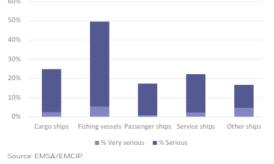
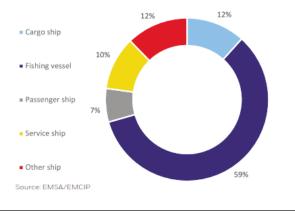
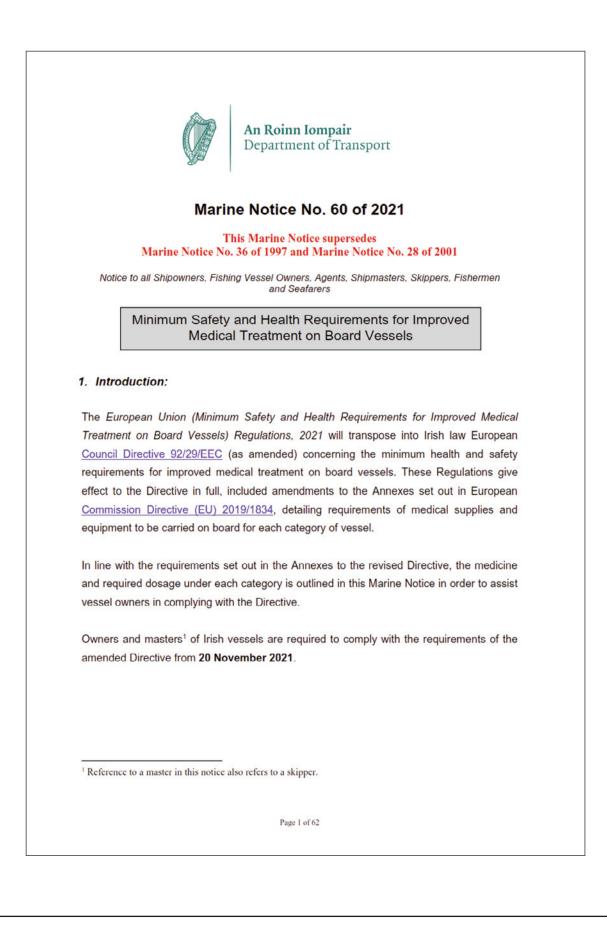


Figure 50: Ships lost per category - Annual overview of marine casualties and incidents 2021.





2. Application:

The legislation applies to all vessels, including fishing vessels, (apart from the exemptions listed below) broken down into the following categories:

Category A: Seagoing or sea-fishing vessels, with no limitation on length of trips.

Category B: Seagoing or sea-fishing vessels making trips of:

- less than 150 nautical miles from the nearest port with adequate medical equipment; and,
- less than 175 nautical miles from the nearest port with adequate medical equipment and which remain continuously within range of the helicopter rescue services.

Category C:

- Harbour vessels, boats and craft staying within 30 nautical miles of the shore or with no cabin accommodation other than a wheelhouse; and,
- lifeboats and life-rafts.

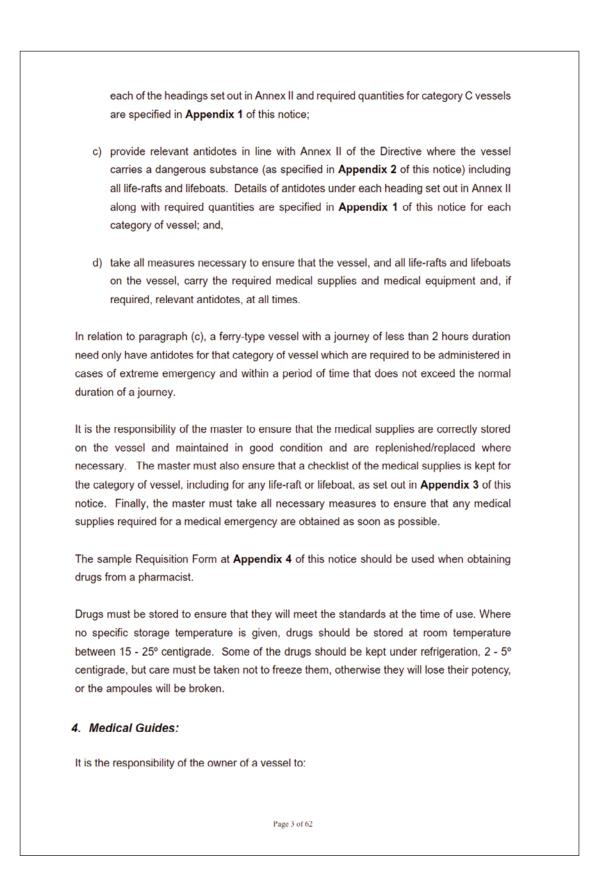
The Regulations <u>do not</u> apply to warships, non-commercial pleasure craft, vessels operating on inland waterways and harbour tugs. If non-commercial pleasure craft require medical advice, they should follow the guidelines in Section 6 of this Marine Notice.

3. Medical Stores:

Taking into account the nature and duration of the voyage, ports of call, nature of the cargo, type of work to be carried out during the voyage, the number of crew on board, and the area of operation of the vessel, the owner must:

- a) provide the vessel with the medical supplies and equipment specified in Annex II of the Directive. Details of medicines and medical equipment under each of the headings set out in Annex II and required quantities for each category of vessel are set out in Appendix 1 of this notice;
- b) provide a water-tight medicine chest containing the required medical supplies and equipment as set out in Annex II of the Directive for Category C vessels for each liferaft and/or lifeboat on the vessel. Details of medicines and medical equipment under

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 a) provide the vessel with the most recent edition of the guide to the use of medicines, medical equipment and antidotes as specified in Appendix 5 of this notice for that category of vessel;

- b) provide each life-raft or lifeboat with the most recent edition of the guide to the use of the medicines, medical equipment and antidotes that is specified for category C vessels in Appendix 5 of this notice;
- c) ensure the guides referred to at (a) and (b) above are in a language and format understood by the master; and,
- d) take all necessary measures to ensure that the guide to the use of medicines, medical equipment and antidotes are carried on board each vessel, at all times.

The master of a vessel must ensure that the guide to the use of medicines, medical equipment and antidotes are:

- a) maintained in good condition; and,
- b) kept within reasonable proximity to the medical supplies on board the vessel.

A general guide on the use of medicines is contained in Appendix 6 of this notice.

The master is permitted to delegate the use and maintenance of medical supplies to an appropriately trained competent crew member. Both the master and any designated crew member must ensure that they renew their medical training at least once every five years.

5. Sickbay and Medical Doctors:

The owner of a vessel of 500gt or more, with a crew of 15 or more, and engaged on a voyage of more than 3 days duration must provide the vessel with a sick bay.

The owner of a new fishing vessel of 500gt or more, with a crew of 15 or more, and engaged on a voyage of more than 3 days duration or a new fishing vessel of 45 metres or more in length regardless of number of crew or duration of voyage, must ensure that a separate sick bay is provided. For the purposes of this requirement a new fishing vessel is defined as a vessel for which:

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(a) the building or a major conversion contract has been placed on or after 16 November 2017; (b) the building or a major conversion contract has been placed before 16 November 2017 and which is delivered three years or more after that date; or, (c) in the absence of a building contract, on or after 16 November 2017 -(i) the keel is laid; (ii) construction identifiable with a specific vessel begins; or, (iii) assembly has commenced comprising at least fifty tonnes or one percent of the estimated mass of all structural material, whichever is less. The owner of a vessel with 100 or more persons on board and engaged on an international voyage of more than 3 days duration must ensure the vessel is provided with a medical doctor. The master of a new fishing vessel must, whenever necessary, make a cabin available for a fisherman who suffers from illness or injury. 6. Medical Advice by Radio: MEDICO Cork is the designated Radio Medical Consultation Centre for Ireland. The unit is available to provide vessels at sea with free medical advice by radio on a 24-hour basis. The unit can be contacted through the Irish Coast Guard Radio Stations at Dublin, Valentia and Malin Head. See Appendix 7 of this notice, which contains guidelines on consulting MEDICO Cork. Note: Marine Notices are issued purely for maritime safety and navigation reasons and should not be construed as conferring rights or granting permissions. Irish Maritime Administration, Department of Transport, Leeson Lane, Dublin 2, D02 TR60, Ireland. 05/11/2021 Page 5 of 62

Encl:	
Appendix 1 Appendix 2	Medicines to be carried on Board Category A, B and C Vessels Dangerous Substances
Appendix 3 Appendix 4 Appendix 5	Checklists for the Inspection of Medical Supplies Sample Requisition Form for use when obtaining Prescription Drugs Medical Guide to be carried on board a vessel
Appendix 6	Use of Medicines
Appendix 7	Telemedical Support
Dept.	For any technical assistance in relation to this Marine Notice, please contact: The Marine Survey Office, email: <u>MSO@transport.gov.ie</u> For general enquiries, please contact the Maritime Safety Policy Division, email: <u>MaritimeSafetyPolicyDivision@transport.gov.ie</u> Written enquiries concerning Marine Notices should be addressed to: of Transport, Maritime Safety Policy Division, Leeson Lane, Dublin 2, D02 TR60, Ireland. email: <u>MarineNotices@transport.gov.ie</u> or visit us at: <u>www.gov.ie/transport</u>

SECTION 36 PROCESS

Section 36 of the Merchant Shipping (Investigation of Marine Casualties) Act, 2000

It is a requirement under Section 36 that:

- (1) Before publishing a report, the Board shall send a draft of the report or sections of the draft report to any person who, in its opinion, is likely to be adversely affected by the publishing of the report or sections or, if that person be deceased, then such person as appears to the Board best to represent that person's interest.
- (2) A person to whom the Board sends a draft in accordance with subsection (1) may, within a period of 28 days commencing on the date on which the draft is sent to the person, or such further period not exceeding 28 days, as the Board in its absolute discretion thinks fit, submit to the Board in writing his or her observations on the draft.
- (3) A person to whom a draft has been sent in accordance with subsection (1) may apply to the Board for an extension, in accordance with subsection (2), of the period in which to submit his or her observations on the draft.
- (4) Observations submitted to the Board in accordance with subsection (2) shall be included in an appendix to the published report, unless the person submitting the observations requests in writing that the observations be not published.
- (5) Where observations are submitted to the Board in accordance with subsection (2), the Board may, at its discretion -
 - (a) alter the draft before publication or decide not to do so, or
 - (b) include in the published report such comments on the observations as it thinks fit.'

The Board reviews and considers all observations received whether published or not published in the final report. When the Board considers an observation requires amendments to the report, those amendments are made. When the Board is satisfied that the report has adequately addressed the issue in the observation, then no amendment is made to the report. The Board may also make comments on observations in the report.

Response(s) received following circulation of the draft report (excluding those where the Board has agreed to a request not to publish) are included in the following section.

The Board has noted the contents of all observations, and amendments have been made to the report where required.

8. MSA 2000 - SECTION 36 OBSERVATIONS RECEIVED

No correspondence was received on the draft of this report.





Leeson Lane, Dublin 2. Telephone: 01-678 3485/86. email: info@mcib.ie www.mcib.ie