

REPORT OF AN INVESTIGATION INTO

THE SINKING OF

"FV AZTEC"

OFF DUNCANNON

CO. WEXFORD

11 JANUARY 2021

REPORT NO. MCIB/305 (No.6 OF 2021) The Marine Casualty Investigation Board (MCIB) examines and investigates all types of marine casualties to, or on board, 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.



Leeson Lane, Dublin 2. Telephone: 01-678 3485/86.

email: info@mcib.ie www.mcib.ie

REPORT OF AN INVESTIGATION INTO

THE SINKING OF

"FV AZTEC"

OFF DUNCANNON

CO. WEXFORD

11 JANUARY 2021

The Marine Casualty Investigation Board was established on the 25th March 2003 under the Merchant Shipping (Investigation of Marine Casualties) Act, 2000.

The copyright in the enclosed report remains with the Marine Casualty Investigation Board by virtue of section 35(5) of the Merchant Shipping (Investigation of Marine Casualties) Act, 2000. No person may produce, reproduce or transmit in any form or by any means this report or any part thereof without the express permission of the Marine Casualty Investigation Board. This report may be freely used for educational purposes.

REPORT NO. MCIB/305 (No.6 OF 2021)



## Glossary of Abbreviations and Acronyms

AGS An Garda Síochána
ALB All Weather Lifeboat
BIM Bord Iascaigh Mhara

C Celsius

CCTV Closed-Circuit Television

CGU Coast Guard Unit
CoP Code of Practice\*Note 1

**DAFM** Department of Agriculture Food and the Marine

**DoC** Declaration of Compliance

FV Fishing Vessel

GPS Global Positioning System
GRP Glass Reinforced Plastic
HSA Health and Safety Authority

IRCG Irish Coast Guard LOA Length Overall

LOM Lifeboat Operations Manager

MRCC Marine Rescue Coordination Centre

MSO Marine Survey Office

NMCI National Maritime College of Ireland
RNLI Royal National Lifeboat Institution

SAR Search and Rescue

UTC Co-ordinated Universal Time

VHF Very High Frequency

Centimetres cm **Kilogrammes** kg **Kilometres** Km kW **Kilowatts** Litres (lts) **Metres** m Millimetres mm Nautical miles NM

Report MCIB/305 published by the Marine Casualty Investigation Board.

Produced 23rd December 2021.



<sup>\*</sup>Note 1: Code of Practice: Design, Construction, Equipment and Operation of Small Fishing Vessels of less than 15 m Length overall (2014) can be downloaded in electronic format at: https://www.gov.ie/publication/b2d313-code-of-practice-fishing-vessels-less-than-15m-length-overall/





|    |   | PAGE |
|----|---|------|
| 1. | Summary                                       | 4    |
| 2. | Factual Information                           | 5    |
| 3. | Narrative                                     | 9    |
| 4. | Analysis                                      | 11   |
| 5. | Conclusions                                   | 13   |
| 6. | Safety Recommendations                        | 14   |
| 7. | Appendices                                    | 15   |
| R  | MSA 2000 Section 36 - Correspondence Received | 34   |





#### 1. SUMMARY

- 1.1 At 07.00 hrs on 11 January 2021 the fishing vessel (FV) "Aztec" departed Duncannon Harbour, Co. Wexford with four persons onboard, to pair trawl with the "FV Western Dawn" for sprat. At 09.30 hrs they hauled the net, took sprat onboard, and stored them below deck in secure pounds.
- 1.2 At approximately 10.00 hrs the "FV Western Dawn" shot its net and the "FV Aztec" took onboard the end for the next tow. As it prepared to take the ends, the fishing weight of approximately 350 kilogrammes (kg) fell from the gunwale onto the deck.
- 1.3 At 10.45 hrs the "FV Western Dawn" hauled its net and the "FV Aztec" passed back the end of the net to the "FV Western Dawn". The "FV Western Dawn" then commenced passing fish over to the "FV Aztec" and during this operation a crewmember noticed a hole in the starboard aft section of the deck allowing water to flood into the steering compartment. As the stern settled deeper in the water the Skipper manoeuvred the "FV Aztec" alongside the "FV Western Dawn" and instructed the crew to transfer to the "FV Western Dawn". The "FV Aztec" then sank within a minute.

Note: All times are local time = Co-ordinated Universal Time (UTC) unless specified. See Appendix 7.1 Photograph No.1 - "FV Aztec".



#### 2. FACTUAL INFORMATION

"FV Aztec" registered number S12, is a small trawler rigged for mid-water sprat fishing with paired vessel "FV Western Dawn".

See Appendix 7.2 Figure No.1 General arrangement - "FV Aztec".

The vessel had in the region of ten tonne of sprat onboard and was due to offload the catch later in the day at Duncannon Harbour.

#### 2.1 Vessel Details

Name: "FV Aztec".

Official Number: 403767.

Flag State: Ireland.

Registration Number: S12.

Type of Vessel: Trawler.

Port of Registry: Skibbereen.

Call Sign: EI2534.

Builder: Seaways, McDuff, Scotland, UK.

Year Built: 2005.

Construction: Glass Reinforced Plastic (GRP) hull, aluminium wheelhouse

with wooden decks. Transom stern trawler. It is arranged with a forward lantern style wheelhouse set over a raised flush foredeck. Below deck, the vessel had watertight bulkheads either end of the engine room. The bulkhead between the fish hold and the steering compartment has a 25 millimetres (mm) drain hole fitted so cannot be considered a watertight bulkhead. The drain hole allows water drain from steering compartment into the fish hold. The fish hold hatch is just aft of midships. The transom fitted goal post type gantry fitted is with net drums.

Length Overall: 11.89 metres (m).

Beam: 5.2 m.

Maximum Draught: 2.36 m.

Gross Tonnage: 23.95 tonne.

Main Engine: Caterpillar 3406 diesel engine developing 150 kilowatt

(kW) power for propulsion, hydraulic and electrical power. Two 1800 litre (ltr) capacity fuel tanks are located on each side of the engine compartment. There is an engine driven bilge pump with suctions arranged for pumping out the fish hold or engine room bilges. The engine room and fish hold bilges are fitted with high water level alarms but there is none fitted to the steering compartment. There is also a large electric pump fitted for pumping fish ashore from the fish hold.

### 2.2 Fishing Gear and Method

The vessel was pair trawling for sprat with partner "FV Western Dawn" using mid water trawls. The "FV Aztec" had earlier recovered a catch and stowed the fish in the hold in secure pounds. The pounds are secure sections of the fish hold separated by boards to improve the stability of the vessel.

2.3 The "FV Aztec" was the subject of a compliance survey under the provisions of the Code of Practice (CoP): Design, Construction, Equipment and Operation of Small Fishing Vessels of less than 15 m Length overall. The CoP Declaration of Compliance (DoC), was duly completed and signed off by the authorised person.

2013 CoP DoC inspection and survey:

Date of issue: 08/06/2013.

Date of expiry: 06/06/2017.

2017 CoP DoC inspection and survey:

Date of issue: 27/06/2017.

Date of expiry: 26/06/2021.

Fishing Licence issued on 20 June 2020. Valid from 1 July 2020 to 30 June 2021.

See Appendix 7.3 Copy of Fishing Licence.

#### **Crew Qualifications and Experience**

Skipper: 46 years fishing experience. Board lascaigh Mhara (BIM)

Safety Card holder.

Crewmember No.1: Ten years fishing experience. National Maritime College of

Ireland (NMCI) Fire Fighting, Survival Techniques and

Elementary First Aid certificates.

Cont.

Crewmember No.2: 25 years fishing experience. Petans Basic offshore

safety training.

Crewmember No.3: Five years fishing experience. BIM Safety Card holder.

#### 2.4 Marine Incident Information

Type: This was a very serious marine casualty resulting in the loss of the vessel.

Time: The incident occurred at approximately 11.00 hrs on 11 January 2021.

Position: 500 m south of Duncannon Fort, Duncannon, Co. Wexford.

See Appendix 7.4 Position of Casualty.

Weather: Wind: westerly force 4. Sea state: slight. General outlook: overcast.

See Appendix 7.5 Met Éireann Weather Report.

Low water: 10.10 hrs.

Source: Port of Waterford Tide Tables.

#### 2.5 Shore Authority Involvement

Extract from MRCC Dublin SITREP

1156: ALERT CALL FROM LOM FETHARD LIFEBOAT LOM.

1200: DUNMORE EAST LIFEBOAT TASKED.

1201: ROSSLARE COASTGUARD RADIO CQ ALL STATIONS: FV WESTERN DAWN ADVISE 4 CREW RECOVERED FROM FOUNDERED FISHING

VESSEL ROUTING TO DUNCANNON PIER NO MEDICAL ISSUES.

1205: TASK FETHARD CGU.

1211: DUNMORE EAST ALB PROCEEDING.

1216: WATERFORD HARBOUR MASTER ADVISED OF SITUATION AND

PROXIMITY OF FOUNDERED VESSEL TO SHIPPING CHANNEL.

1222: FETHARD CGU ON SCENE.

1224: DUNMORE EAST RNLI ON SCENE.

1226: FV WESTERN DAWN ALONGSIDE AT DUNCANNON.

1231: FETHARD CGU CONFIRM SKIPPER ADVISE NO MEDICAL ASSISTANCE REQUIRED BY CREW.

1152: DUNCANNON AGS UPDATED.\*

1332: IRISH LIGHTS CONTACTED BY MRCC DUBLIN AND SITREP PASSED. IRISH LIGHT ENGAGE IN SITUATION. 1/11/2021.

1415: DUNMORE EAST LIFEBOAT REMAIN ON SCENE TO MONITOR.

\*Time should read 12:52 when, having become aware locally that the situation was unfolding the Gardaí contacted the Irish Coast Guard (IRCG) to offer assistance.



## 3. NARRATIVE

- 3.1 On the morning of 11 January 2021 the "FV Aztec" sailed from Duncannon Pier, Co. Wexford at 07.00 hrs to fish sprat in Waterford Estuary alongside its paired trawler the "FV Western Dawn". There was no risk assessment or method statement for this type of fishing arrangement included in the vessel's safety statement. The "FV Aztec" shot its net first and hauled fish at 09.30 hrs. These fish were stowed in pounds in the fish hold divided by boards. It was estimated that this haul was in the region of at least eight tonnes of fish. The load condition stability calculations carried out in 2017 allowed for ten tonnes of loose fish in pounds in the fish hold. These were placed in the fish hold filling from the after end first.
- 3.2 At 10.00 hrs the "FV Western Dawn" shot its net for the "FV Aztec" to take the end for the next tow. During this operation, the towing weight for the net dropped from the gunwale onto the starboard aft deck of the "FV Aztec". This punctured a hole of approximately 300 centimetres (CM)² in the deck roughly 200 cm forward of the transom (see Appendix 7.6 Photograph No. 2 Hole in Deck). Due to the amount of gear around this area of the deck the damage went undiscovered at this time. The fishing weight was made up of a collection of chain and weighed 350 kg.

See Appendix 7.7 Photograph No. 3 - Fishing Weight.

At approximately 10.45 hrs the "FV Western Dawn" hauled its net and the "FV Aztec" passed back the end of the net to it. It was then decided to pass fish from the "FV Western Dawn's" net to the "FV Aztec". The crew of the "FV Western Dawn" passed over the bag rope and this was hauled up on the main winch aft. The bag rope from the "FV Western Dawn" was heaved across to the "FV Aztec" using the main winch through the aft starboard towing block. The Gilsen winch and lifting derrick are situated starboard forward. The Gilsen winch was then secured to the bag rope/lifting strop and the cod end was taken onboard, one lift at a time allowing the fish to enter the fish room via scuppers on the deck. The securing of the bag rope on the aft starboard hanging block and subsequent lifting of the cod end lift caused the vessel to list to starboard and immerse the hole on the aft starboard side of the deck.

See Appendix 7.8 Photograph No. 4 - Hauling Arrangement.

3.4 As the fish were being taken onboard the "FV Aztec" the Skipper noticed the water was not clearing off the aft deck in the usual manner. At the same time a crewmember noticed water flooding into the steering compartment through a hole in the deck. The crewmember attempted to stem the flow with an oilskin and alerted the Skipper.

9

- 3.5 As the steering compartment flooded, the vessel lost its reserve buoyancy aft and began to settle by the stern. The crew tried to let go the net as the Skipper manoeuvred alongside the "FV Western Dawn". Once alongside, with the stern going under water the Skipper of the "FV Aztec" instructed the crew to abandon ship and to transfer across to the other vessel. At this stage the fish hold bilge alarm sounded as the fish hold began to flood through deck scuppers and the open hatch. Time did not allow for activation of the engine driven bilge pump or the large electric fish pump. The rate of flooding and settling by the stern would have made any attempt to evacuate water by these pumps futile.
- 3.6 The crew of the "FV Aztec" successfully transferred to the "FV Western Dawn" dry, and watched their boat sink in less than one minute. The vessel settled by the stern as the water filled into the fish hold and into the engine room through the open watertight door. No pollution was detected in the vicinity of the sinking between the time of the incident and recovery of the vessel on 29 January 2021. The sinking was reported to MRCC (Marine Rescue Coordination Centre) Dublin by the Fethard Lifeboat Operations Manager (LOM). The Skipper of the "FV Western Dawn" confirmed the foundering to MRCC Dublin and confirmed he had the crew of the "FV Aztec" safely onboard his vessel. The crew of the "FV Aztec" were then transferred ashore at Duncannon Harbour.
- 3.7 Dunmore East Lifeboat arrived on the scene at 12.24 hrs and remained until dark to monitor for pollution and to ensure other vessels stayed clear.
- 3.8 A salvage operation was commenced leading to the successful recovery of the vessel from the seabed at 20.00 hrs on 29 January 2021.
  - See Appendix 7.9 Photograph No. 5 Salvage.

#### 4. ANALYSIS

4.1 The weather was relatively calm at the time of the incident. The wind was westerly force four with a moderate sea and a low swell. Visibility was good on a generally overcast day with an air temperature of 9.1 Celsius (C) and a sea temperature of 8.2 C. There is nothing to suggest that weather conditions contributed in any way to the sinking.

See Appendix 7.5 Met Éireann Weather Report.

- The first trawl of the day was recovered at 09.30 hrs and stowed in the fish hold. It is estimated that at least eight tonnes of sprat were caught at this time causing significant loading on the vessel. The load condition stability calculations carried out in 2017 allowed for ten tonnes of loose fish in pounds in the fish hold. This will have been calculated as evenly spread whereas on the day of the incident the previous catch was loaded into the after end of the fish hold first which will have trimmed the vessel by the stern causing the after end to sink deeper into the water.
- 4.3 As the "FV Western Dawn" shot its net for the "FV Aztec" to take the end for the next tow the towing weight for the net dropped from the gunwale of the "FV Aztec" onto the starboard aft deck. This action punched a hole through the deck of approximately 300 cm². This went unnoticed by the crew at this time due to the amount of gear located around this area of the deck.
- 4.4 After the "FV Western Dawn" recovered its net and took onboard part of the catch, it handed over the net to the "FV Aztec" to recover the remainder of the fish. During the operation to recover these fish, the net was hauled close to the starboard after end of the "FV Aztec". The cod-end was then attached and lifted using the derrick. The height of side derrick for cod-end lift above deck level is 5.06 m and the distance from side derrick block head to centreline of vessel is 2.54 m. The height of aft towing block above deck level is 1.6 m.

See Appendix 7.10 Photograph No. 6 - Lifting Dimensions.

These actions combined caused the after deck on the starboard side to dip into the water. This action resulted in the steering compartment starting to flood through the hole in the deck. The lack of a bilge alarm in the steering compartment meant this was not picked up until it was noticed by one of the crew. Despite attempts by the crewmember to stem the flow, the steering compartment continued to flood resulting in loss of buoyancy in the after end of the vessel. The steering compartment consisted of a free area of approximately five cubic meters and provided the majority of the buoyancy to the after end of the vessel. This caused the vessel to settle further by the stern ultimately leading to flooding of the fish hold through deck scuppers and open hatch.

M

- The Skipper quickly noticed the vessel was in peril and attempted to let go the net. As the stern began to settle below the surface, he brought the vessel alongside the "FV Western Dawn" and ordered the crew to abandon their vessel. The transfer of crew went smoothly and the "FV Aztec" sank in what was estimated to be less than a minute later. Time did not allow for operation of the bilge pumps and they would have been ineffective against the rate of flooding. As the fish hold flooded, the vessel sank quickly by the stern leaving only a small section of the bow above water.
  - See Appendix 7.11 Photograph No. 7.
- 4.6 Catches of sprat had been reported as being good with Closed Circuit Television (CCTV) images of the "FV Aztec" showing the vessel heavily laden down by the stern on returning to Duncannon on 10 January 2021. Discharge of fish is done by partially flooding the fish hold and pumping the fish and water mix ashore.
- 4.7 The load condition stability calculations carried out in 2017 allowed for ten tonnes of loose fish in pounds in the fish hold. The stability calculations done at this time however concentrated on lateral stability and did not address longitudinal aspects of stability. Vessels of this size have no load restrictions attached to them, however this vessel was heavily loaded and attempting to take on further catch.



## 5. CONCLUSIONS

- 5.1 Both the "FV Aztec" and the "FV Western Dawn" have been pair trawling for sprat at this time of year for the past eight years. The Skippers and crews of both vessels were familiar with the processes involved in this type of pair trawling. There were no risk assessments or method statements for pair trawling listed in the "FV Aztec's" safety statement. Effective risk assessments and procedures would have highlighted dangers associated with pair trawling.
- 5.2 The "FV Aztec" had an in-date CoP survey and there were no reports of serious defects prior to sailing from Duncannon on the morning of 11 January 2021.
- 5.3 The vessel was heavily laden at the time and dependant on the buoyancy provided by the steering compartment to maintain its longitudinal stability. Although not required, the "FV Aztec" had stability calculations done in 2017 for a condition with ten tonnes of fish in the hold. These stability calculations concentrated on lateral stability and did not address longitudinal aspects of stability. It was stated during recovery operations that the "FV Aztec" had between ten and 12 tonnes of fish onboard. Although no limits are set for vessels of this size, the loading of the vessel was a contributory factor in the sinking. This must take into account the weight of the catch onboard as well as the positioning of fish in the hold. The effect of the additional catch being taken onboard at the time of the incident will have also caused considerable settling by the stern and listing to starboard. The combination of these forces will have left the longitudinal stability of the vessel dependant on the buoyancy provided by the steering compartment.
- 5.4 The hole in the deck went unnoticed when it occurred but the incident should have merited further investigation.
- No alert was sent out by the "FV Aztec" or by the "FV Western Dawn". First notification of foundering of the vessel to MRCC Dublin was from the shore. Although there was no imminent danger to life, as a serious incident occurred, a Pan-Pan alert should have been raised with the Coast Guard.
- 5.7 The steering compartment of the "FV Aztec" had no bilge alarm fitted and no means of directly pumping out this compartment. A small drain hole allowed water to drain from the steering compartment onto the fish hold.

# SAFETY RECOMMENDATIONS

### 6. SAFETY RECOMMENDATIONS

- 6.1 The Minister for Transport should issue a Marine Notice to owners/skippers of fishing vessels reminding them to be aware of the safe loading capacity of their vessels. Also, to be aware where the stability in a loaded state is dependent on a compartment's watertight integrity it is advisable that compartment is alarmed and has a means of being pumped out.
- 6.2 The Minister for Transport should issue a Marine Notice to owners/skippers of fishing vessels reminding them that where an area of deck is subjected to regular working and shock loading, consideration should be given to re-enforcing and strengthening that area.
- 6.3 The Minister for Transport should review the Code of Practice for Fishing Vessels under 15 meters to take into account heave loadings on decks during fishing operations.
- The Minister for Transport should review the Code of Practice for Fishing Vessels under 15 meters to take into account the maximum load of bulk fish a vessel is authorised to carry.



**PAGE** 

32

33



**7.** 

7.10

7.11

| 7.1 | Photograph No. 1 - "FV Aztec" |  |
|-----|-------------------------------|--|

Photograph No. 6 - Lifting Dimensions

Photograph No. 7

**APPENDICES** 

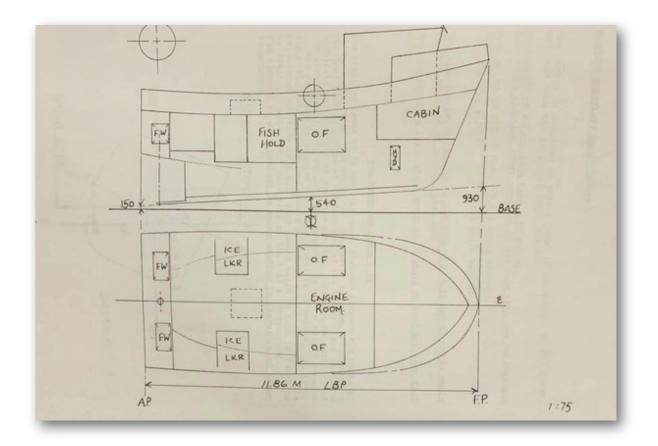
| 7.1 | Photograph No. 1 - "FV Aztec"                 | 16 |
|-----|---|----|
| 7.2 | Figure No. 1 General Arrangement - "FV Aztec" | 17 |
| 7.3 | Copy of Fishing Licence                       | 18 |
| 7.4 | Position of Casualty                          | 20 |
| 7.5 | Met Éireann Weather Report                    | 21 |
| 7.6 | Photograph No. 2 - Hole in Deck               | 28 |
| 7.7 | Photograph No. 3 - Fishing Weight             | 29 |
| 7.8 | Photograph No. 4 - Hauling Arrangement        | 30 |
| 7.9 | Photograph No. 5 - Salvage                    | 31 |

Appendix 7.1 Photograph No. 1 - "FV Aztec"





Appendix 7.2 Figure No. 1 General Arrangement - "FV Aztec"



### **Appendix 7.3** Copy of Fishing Licence



#### FISHERIES ACTS 1959 TO 2006 SEA – FISHING BOAT LICENCE

#### LICENCE NO. 277901480

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: AZTEC

Country of Registration: IRELAND

Registration Number: S12

Port of Registration: Skibbereen

Length Overall: 11.89 metres

Gross Tonnage: 23.95 Tonnes

Engine Capacity: 150 kilowatts

International Radio code or Call Sign: EI2534

CFR Number: IRL000I13029

Type of Vessel: Trawler

Type of Gear: OTM - Mid-water Otter Trawls, OTB - Bottom Otter Trawls, FPO - Pots, LHP - Hooks and lines Hand lines and pole lines (hand operated), GND - Gillnets (Drift), GNS - Gillnets (Set)

Fleet Segment: Polyvalent [<18m LOA]

Other Information:

Date: 18 June 2020

Licensing Authority pursuant to Section3 of Fisheries (Amendment) Act 2003 (No. 21)



### Appendix 7.3 Copy of Fishing Licence

#### **CONDITIONS OF LICENCE**

The following conditions are attached to this licence:

General obligation to comply with EU and National law: The owner and/or master of the boat to which this licence relates shall ensure that the boat and all persons on board shall comply with any requirements, for the time being in force, under EU Law and National Law applicable to the operation of fishing boats and their technical characteristics.

<u>Percentage EEA Crew:</u> The boat to which this licence relates shall not be used for sea-fishing, whether within the exclusive fishery limits of the State or otherwise, unless at least <u>50 per cent</u> of the members of the crew are nationals of any of the Member States of the European Union or a State belonging to the European Economic Area.

<u>Safety & Seaworthiness:</u> The owners and/or masters of the boat to which this licence relates shall ensure that the boat and its crew shall comply with any requirements for the time being in force in relation to the safety of fishing boats (safety requirements should be taken to include any requirements in relation to radio installations, equipment and crew training), and shall maintain the fishing boat in a safe and sea-worthy condition.

Manning: The boat must carry the stipulated number of qualified crew as required under the Fishing Vessels (Certification of Deck Officers and Engineer Officers) Regulations 1988, as amended.

Ownership and Registration: This licence is valid for so long, and only for so long, as the person to whom it is granted is the owner of the boat to which it relates and the boat is entered on the Register of Fishing Boats.

Licence to be carried on Boat: During the period of its validity this licence shall be carried on board the boat to which it relates and the master or other person for the time being in charge of the boat shall produce it for inspection on demand by a Sea Fisheries Protection Officer.

Beam Trawl Preclusion: The boat to which this licence relates shall not be used for sea-fishing by means of beam trawls.

<u>Vessel Modifications:</u> Any proposed structural modifications to the vessel, including changes to the vessel's engine, **must** be approved <u>in advance</u> by the Licensing Authority. Such modifications can have significant implications in terms of the licensing of the vessel, including replacement capacity requirements. The vessel may be required to be re-measured and a new licence application may be required to be submitted.

Scallops Preclusion: The vessel will be precluded from fishing for scallops (Pecten maximus). However by way of derogation and to allow for a by-catch, a quantity of scallop that is no greater than 10% by live weight of the total quantity of all species of fish may be retained on board or landed on any occasion.

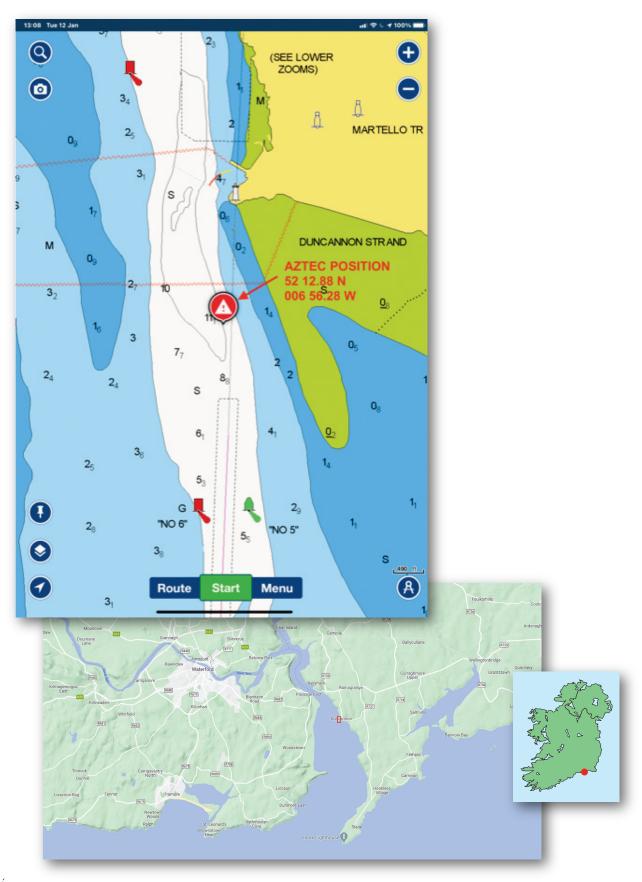
Power to suspend or revoke Licence: The Licensing Authority may suspend or revoke this licence, pursuant to section 4 of the Fisheries (Amendment) Act 2003 (as inserted by section 97 of the Sea-Fisheries and Maritime Jurisdiction Act 2006), for a breach of any condition of the licence. In that event, the licence shall be surrendered to the Licensing Authority for Sea-fishing Boats, Clogheen, Clonakilty, Co. Cork, or risk a Court fine of not more than 6500.

Cesser of Licence: Should any information or evidence come to the attention of the Licensing Authority that casts doubt on the veracity of the information or documentation submitted in support of the application for this licence, the licence shall cease to be in force

Social and Economic benefits: The Licensing Authority, in deciding whether or not to renew the licence, will require the owner of the boat to provide such information as will demonstrate the extent of the social and economic benefit accruing to the local coastal communities arising from the operation of the boat.

MFV "AZTEC"

Appendix 7.4 Position of Casualty







# Met Éireann The Irish Meteorological Service

Climate Services Seirbhisí Aeráide Glasnevin Hill Cnoc Ghlas Naíon Dublin 9 Baile Átha Cliath 9

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

Our Ref: WS1730/2101 15

Your Ref: MCIB/12/305

# Marine Weather Report for the sea-area off Duncannon County Wexford latitude/longitude coordinates in decimal-degrees: 52.2145 -6.9377

#### Sunday 10-January-2021

#### **Meteorological synopsis:**

A light to moderate westerly airflow covered Ireland on the 10<sup>th</sup> as a high-pressure system (1031 hPa) was near-stationary to the south of the country and extended a ridge with stable conditions over the Duncannon area.

#### Weather and Sea-State Conditions Daily Summary for the Duncannon area on Sunday 10-January-2021 (from midnight to midnight):

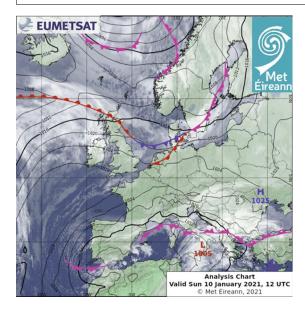
**Weather:** apart from mist patches during the morning the weather was fine and dry throughout the day with variable cloud and occasional sunny spells.

**Temperature:** air temperatures offshore ranged between 6 and 9 degrees Celsius (air frost occurred over land until mid-morning).

Wind: light to moderate westerly breezes Beaufort force 3 or 4 with occasional gusts up to 20 knots.

Visibility: generally good visibility; occasionally moderate in any morning mist patches.

Sea state: slight or less



Page 1 of 8



# Met Éireann The Irish Meteorological Service

Climate Services Glasnevin Hill Dublin 9 Seirbhísí Aeráide Cnoc Ghlas Naíon Baile Átha Cliath 9 Tel: +353-1-8064260 Email: enq@met.ie Email: legal@met.ie

Our Ref: WS1730/2101 15

Your Ref: MCIB/12/305

Marine Weather Report for the sea-area off Duncannon County Wexford latitude/longitude coordinates in decimal-degrees: 52.2145 -6.9377

#### Monday 11-January-2021

#### **Meteorological synopsis:**

A moderate westerly airflow over Ireland increased fresh to strong in the afternoon of the 11<sup>th</sup> between high pressure (1032 hPa) to the south and a complex area of low pressure to the north of the country. Frontal systems embedded in the flow moved slowly eastwards across the northern half of the country while the southern half of the country including the Duncannon area remained mostly dry.

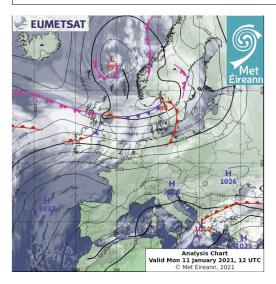
#### Weather and Sea-State Conditions Daily Summary for the Duncannon area on Monday 11-January-2021 (from midnight to midnight):

**Weather:** cloudy or overcast, dry for most of the day, light patchy rain or drizzle in the late afternoon and evening. Total 24-hour rainfall accumulation less than 1 mm.

**Temperature:** air temperature offshore 8 to 10 degrees Celsius.

**Wind:** moderate westerly Beaufort force 4 in the early morning. From around 10am winds increased moderate to fresh southwesterly Beaufort force 4 or 5 and gusts up to 30 knots. After 7pm winds increased further fresh to strong Beaufort force 5 or 6 with gusts up to 36 knots.

**Visibility:** generally good visibility; occasionally moderate visibility in rain or drizzle in the evening. **Sea state:** slight to moderate







# Met Éireann The Irish Meteorological Service

Climate Services Seirbhisí Aeráide Glasnevin Hill Cnoc Ghlas Naíon Dublin 9 Baile Átha Cliath 9

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

Our Ref: WS1730/2101 15

Your Ref: MCIB/12/305

Marine Weather Report for the sea-area off Duncannon County Wexford latitude/longitude coordinates in decimal-degrees: 52.2145 -6.9377

#### Tuesday 12-January-2021

#### **Meteorological synopsis:**

The southwesterly airflow over Ireland decreased on the 12<sup>th</sup> with the high-pressure system (1034 hPa) to the south and depressions to the north of the country. A slow-moving weather front (warm front) brought persistent rain to the Duncannon area in the afternoon and evening.

#### Weather and Sea-State Conditions Daily Summary for the Duncannon area on Tuesday 12-January-2021 (from midnight to midnight):

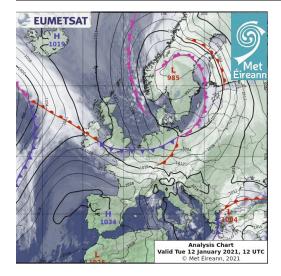
**Weather:** overcast and misty with scattered outbreaks of rain and drizzle in the morning followed by persistent rain in the afternoon; further rain and mist in the evening. Total 24-hour rainfall accumulation estimated between 6 and 10mm.

**Temperature:** air temperature 9 or 10 degrees Celsius

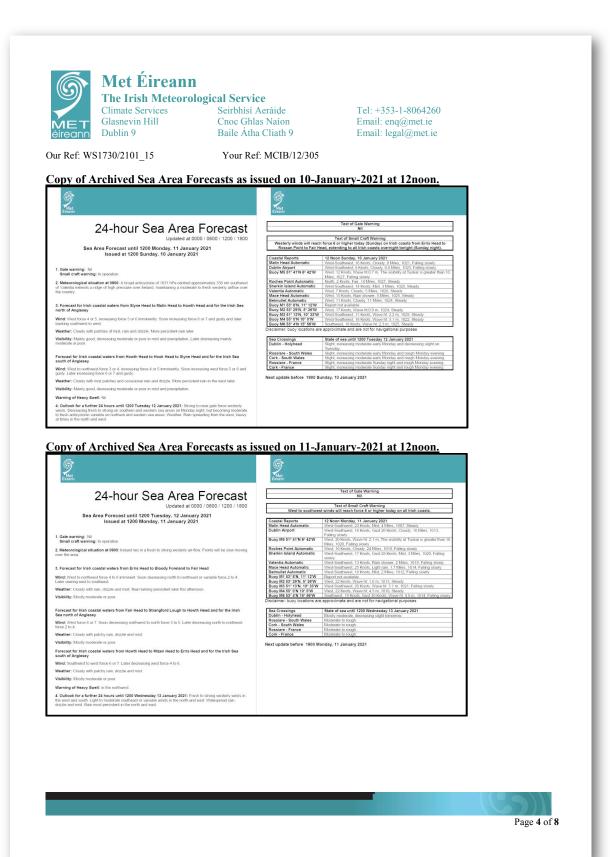
**Wind:** fresh to strong southwesterly Beaufort force 5 or 6 during the morning decreased to moderate force 4 in the afternoon then light and variable force 3 or less by evening. Maximum gusts up to 25 knots occurred during early morning.

**Visibility:** moderate or poor visibility in rain, drizzle and mist

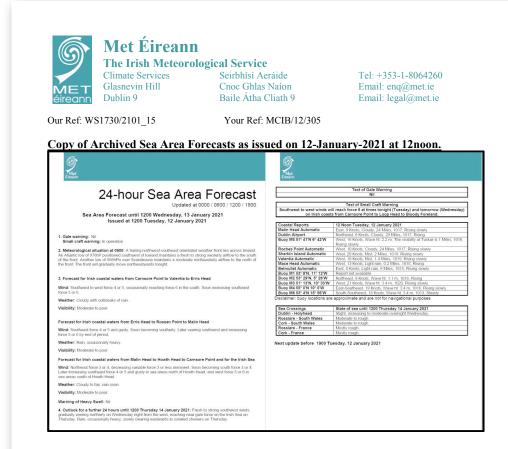
Sea state: moderate



Page 3 of 8







Page 5 of 8



# Met Éireann

The Irish Meteorological Service

Climate Services Glasnevin Hill Dublin 9

Seirbhísí Aeráide Cnoc Ghlas Naíon Baile Átha Cliath 9

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

Our Ref: WS1730/2101\_15

Your Ref: MCIB/12/305

#### Appendix Sea Area Map & Beaufort Scale of Wind



| Force | Description     | Speed* |               | Specification  | Wave height** |
|-------|-----------------|--------|---------------|--|---------------|
|       |                 | knots  | km/hr         | -sea   | (metres)      |
| 0     | Calm            | <1     | <1            | Sea like mirror                                      |               |
| 1     | Light air       | 1-3    | 1-5           | Ripples  | 0.1(0.1)      |
| 2     | Light breeze    | 4-6    | 6-11          | Small wavelets                                       | 0.2 (0.3)     |
| 3     | Gentle breeze   | 7-10   | 12-19         | Large wavelets, crests begin to break                | 0.6(1)        |
| 4     | Moderate breeze | 11-16  | 20-28         | Small waves becoming longer, frequent white horses   | 1 (1.5)       |
| 5     | Fresh breeze    | 17-21  | 29-38         | Moderate waves, many white horses, chance of spray   | 2 (2.5)       |
| 6     | Strong breeze   | 22-27  | 39-49         | Large waves, white foam crests, probably some spray  | 3 (4)         |
| 7     | Near gale       | 28-33  | 50-61         | Sea heaps up, streaks of white foam                  | 4 (5.5)       |
| 8     | Gale            | 34-40  | 62-74         | Moderately high waves of greater length              | 5.5 (7.5)     |
| 9     | Strong gale     | 41-47  | 75-88         | High waves, dense streaks of foam,                   |               |
|       |                 |        |               | spray may reduce visibility                          | 7 (10)        |
| 10    | Storm           | 48-55  | 89-102        | Very high waves, long overhanging crests,            |               |
|       |                 |        |               | visibility affected                                  | 9 (12.5)      |
| 11    | Violent storm   | 56-63  | 103-117       | Exceptionally high waves, long white foam patches    |               |
|       |                 |        |               | cover sea  | 11.5 (16)     |
| 12    | Hurricane       | 64+    | 117<br>& over | Air filled with foam and spray, sea completely white | 14 (-)        |

Page 6 of 8





# Met Éireann

The Irish Meteorological Service

Climate Services Seirbhisí Aeráide Glasnevin Hill Cnoc Ghlas Naíon Dublin 9 Baile Átha Cliath 9

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

Our Ref: WS1730/2101 15

Your Ref: MCIB/12/305

#### Appendix Terminology Sea State & Visibility

#### Wave Heights / State of Sea:

The wave height is the vertical distance between the crest and the preceding or following trough. The table below gives a description of the wave system associated with a range of significant wave heights.

The Significant wave height is defined as the average height of the highest one-third of the waves. (It is very close to the value of wave height given when making visual observations of wave height.)

| Sea State<br>(Descriptive) | Significant Wave height in meters |
|----------------------------|-----------------------------------|
| Calm                       | 0 - 0.1                           |
| Smooth(Wavelets)           | 0.1 - 0.5                         |
| Slight                     | 0.5 - 1.25                        |
| Moderate                   | 1.25 - 2.5                        |
| Rough                      | 2.5 - 4                           |
| Very rough                 | 4 - 6                             |
| High                       | 6 – 9                             |
| Very high                  | 9 – 14                            |
| Phenomenal                 | Over 14                           |

Individual waves in the wave train will have heights in excess of the significant height. The highest wave of all will have a height about twice the significant height.

#### **Visibility Descriptions:**

| Visibility<br>(Descriptive) | Visibility in nautical miles (kilometres) |
|-----------------------------|---|
| Good                        | More than 5 nm (> 9 km)                   |
| Moderate                    | 2-5  nm  (4-9  km)                        |
| Poor                        | 0.5 - 2  nm (1 - 4  km)                   |
| Fog                         | Less than 0.5 nm (< 1km)                  |

#### **Please Note:**

If there are no measurements or observations available for an exact location, then the estimated conditions in this report are based on all available meteorological measurements and observations which have been correlated on the routine charts prepared by Met Éireann.

Page 7 of 8

Appendix 7.6 Photograph No. 2 - Hole in Deck





Appendix 7.7 Photograph No. 3 - Fishing Weight



Appendix 7.8 Photograph No. 4 - Hauling Arrangement





Appendix 7.9 Photograph No. 5 - Salvage

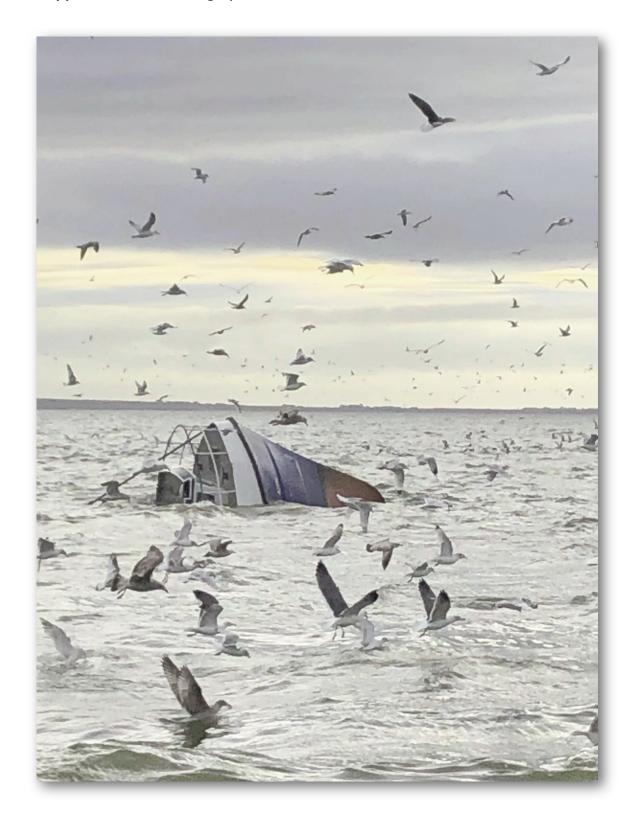


Appendix 7.10 Photograph No. 6 - Lifting Dimensions





Appendix 7.11 Photograph No. 7



#### 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

**PAGE** 

8.1 Observation from Owner and MCIB response

36

Note: The names and contact details of the individual respondents have been obscured for privacy reasons.

#### 8.1 Observation from Owner and MCIB response

#### **MCIB Investigation MFV Aztec**



30<sup>th</sup> of September 2021

RE: FV Aztec Section 36 Response MCIB Investigation Draft Report

To Whom it may concern,

I would like to respond on the following item:

Appendix 7.12: Photograph No.8 Unloading in Duncannon

As per my letter dated 4<sup>th</sup> of July 2021 where we clarified the situation of the vessel unloading in Duncannon, the picture indicated in appendix 7.12 has absolutely nothing to do with the sinking of the vessel on the 11<sup>th</sup> of January 2021. The picture referred to shows the vessel fast alongside in Duncannon and as stated previously this loaded condition was as a result of flooding too much water into the fish room in order to pump out the remaining catch. This was not a normal condition for the vessel and would have resulted from the crew being unfamiliar with the discharge process. If a picture was taken of the vessel within a five minute time frame after this, the vessel would have returned to its normal load condition.

We here by request that this picture be removed from the final report as it has no relevance to the incident in question.

I hope this clarifies this situation and if you require further information, please do not hesitate to contact me.

Sincerely



MCIB RESPONSE: The MCIB notes the contents of this observation.





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

