

FV *MOYUNA*

Grounding at the entrance to Ardglass Harbour, Northern Ireland 21 November 2011

SUMMARY

At 2330 (UTC) on 21 November 2011, the UK registered fishing vessel *Moyuna* (**Figure 1**) grounded, at slow speed, while entering Ardglass Harbour. The vessel started to list and the skipper and three crew abandoned to a liferaft. They were successfully rescued, having suffered no injuries, and the vessel refloated on the rising tide. She had sustained only minor damage, resulting in no water ingress or pollution.

The grounding occurred because the skipper lost positional awareness. Following a previous track on his track plotter, the skipper's primary means of

navigation was by eye as he tried to visually detect the green light on the Ardtole beacon. Unbeknown to the skipper, this light was inoperative at the time. The harbour sector light, which was operating correctly, was not used during the approach.

A recommendation has been made to *Moyuna's* owner designed to improve navigational practices on board the vessel. The harbour authority has also been recommended to complete its intended review of navigational aids to ensure they are effective, reliable and well publicised to users of the harbour.



Figure 1: *Moyuna*

Extract from The United Kingdom Merchant Shipping (Accident Reporting and Investigation) Regulations 2005 – Regulation 5:

“The sole objective of the investigation of an accident under the Merchant Shipping (Accident Reporting and Investigation) Regulations 2005 shall be the prevention of future accidents through the ascertainment of its causes and circumstances. It shall not be the purpose of an investigation to determine liability nor, except so far as is necessary to achieve its objective, to apportion blame.”

NOTE

This report is not written with litigation in mind and, pursuant to Regulation 13(9) of the Merchant Shipping (Accident Reporting and Investigation) Regulations 2005, shall be inadmissible in any judicial proceedings whose purpose, or one of whose purposes is to attribute or apportion liability or blame.

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Tel: 023 8039 5500

Fax: 023 8023 2459

FACTUAL INFORMATION

Vessel, crew and environment

Moyuna was 15.34m length overall, of wooden construction, and built in 1973. She was converted for scalloping during 2011. Her home port was Kilkeel in Northern Ireland.

The wheelhouse (**Figure 2**) was well-equipped with duplication of some systems. Two GPS units each independently fed one of two track plotters. There were two VHF radios in addition to a digital selective calling (DSC) VHF radio, and a radar was located on the starboard side. *Moyuna* was not fitted, nor required to be fitted, with Navtex.

The skipper had been employed in the fishing industry for 32 years and had gained a Class 2, Limited (Fishing Vessel) Certificate of Competency in 1983. He had been a fishing vessel skipper since 1986 and had been skipper of *Moyuna* since 2009. Although not a frequent visitor to Ardglass, he had entered the harbour on a number of previous occasions. The three crew were experienced fishermen, all of whom had fished with the skipper before and had attended the mandatory safety training courses for fishermen.

At the time of the accident, there was a north-westerly force 2-3 breeze off the land, with slight sea conditions and good visibility. Low water was at 0155 on 22 November 2011.



Figure 2: Wheelhouse

Narrative

At 0200 on 20 November 2011, *Moyuna* sailed from her home port of Kilkeel and headed for fishing grounds near Chicken Rock, south of the Isle of Man.

Having arrived at the grounds, nine trawls were completed that day in moderate sea conditions before the vessel headed for Port St Mary, Isle of Man for the night.

At 2030 on 20 November, the Ardglass harbourmaster noted that the Ardtole beacon light was inoperative. He reported this to Belfast Coastguard, emphasising that the harbour's sectored light was working correctly.

Moyuna returned to the fishing grounds off Chicken Rock on 21 November and the first trawl commenced at 0620. During the day, the skipper listened to weather forecasts, assessed the conditions and decided to head towards Northern Irish waters that evening so that the vessel fished nearer to her home port the following day.

Belfast Coastguard transmitted navigation warning broadcasts, which included information about the defective Ardtole beacon light, at 0710 and 1910; neither was received on board *Moyuna*.

At 2000, having recovered the fishing gear, *Moyuna's* skipper set a course for Ardglass some 30 miles to the north-west. At 2100 he went to bed, leaving a crewman on watch with instructions to call him when the vessel had reached a position he had marked on the track plotter, approximately 1 mile east of Ardglass.

The watch was uneventful, requiring only one alteration of course to pass astern of a coaster.

At approximately 2315, the crewman on watch called the skipper, who came to the wheelhouse. The shore lights of Ardglass were visible ahead and the skipper asked the crewman to rouse the other crew and to then go on deck to prepare for arrival.

To ensure the crew could operate safely on deck, the skipper switched on one of the aft floodlights. The skipper stood to

the starboard side of the wheel with the wheelhouse window open so he could communicate with the crew on deck and also have a good view ahead.

The skipper steered *Moyuna* towards the quay (**Figure 3**), which was brightly lit, while also attempting to follow a previous track which was displayed on one of the plotters. The radar was operational but was not used. At one stage, the skipper believed the vessel was heading too close to the quay, so he made a small alteration to starboard and at the same time reduced speed.

The skipper was trying to visually identify the green light on the Ardtole beacon when a crewman on deck shouted that he could see rocks in the water ahead. A series of judders was then felt as the vessel came to a halt and the main engine stalled.

The skipper made no attempt to move the vessel. At 2332, he broadcast a “Mayday” on VHF radio channel 16. Belfast Coastguard responded and the Portaferry RNLi lifeboat was launched to assist.

The skipper ordered the crew to don lifejackets and to launch the liferaft as the vessel started to heel to starboard. As well as keeping in contact with the Coastguard, the skipper called the fishing vessel *True Token*, which he knew was heading for Ardglass astern of *Moyuna*. He also called

Moyuna’s owner. The crew then abandoned to the liferaft, the skipper taking a knife to cut the painter when needed. About 10 minutes later, as *True Token* approached the entrance to Ardglass, the liferaft was cut free and was then paddled out into the main channel. Just as the crew were climbing on board *True Token*, the lifeboat arrived and towed the liferaft into harbour.

Moyuna’s crew were landed ashore and the skipper made his way to the harbourmaster’s office, where he saw a message on the electronic display on the office wall stating ‘Ardtole light extinguished’. The lifeboat departed the scene an hour or so later. *Moyuna* was visible from the harbour office window as the skipper had left the navigation lights and the deck floodlight switched on to ensure she was not a hazard to other vessels. Concerned that the batteries would become discharged, the skipper arranged with a local fisherman to be taken out to the vessel. At this stage, *Moyuna* was resting on her starboard side on the rocks. At 0200, the owner and skipper climbed on board and managed to start the diesel generator, before returning ashore. There had been no sign of any water ingress or pollution.

At around 0442, the harbourmaster was in his office with the skipper when he noticed *Moyuna* drifting towards Phennick Point. The same local fisherman again ferried the skipper and a crewman out to

Moyuna. Once aboard, they started the engine and the skipper followed the local fisherman’s vessel into the harbour. The catch was landed ashore and the vessel was then moored at a drying berth to allow the damage to be surveyed later in the day. Damage was limited to a short section of the keel, and that evening the skipper sailed *Moyuna* back to Kilkeel for repairs.

Reproduced from Admiralty Chart BA 0633 by permission of the Controller of HMSO and the UK Hydrographic Office

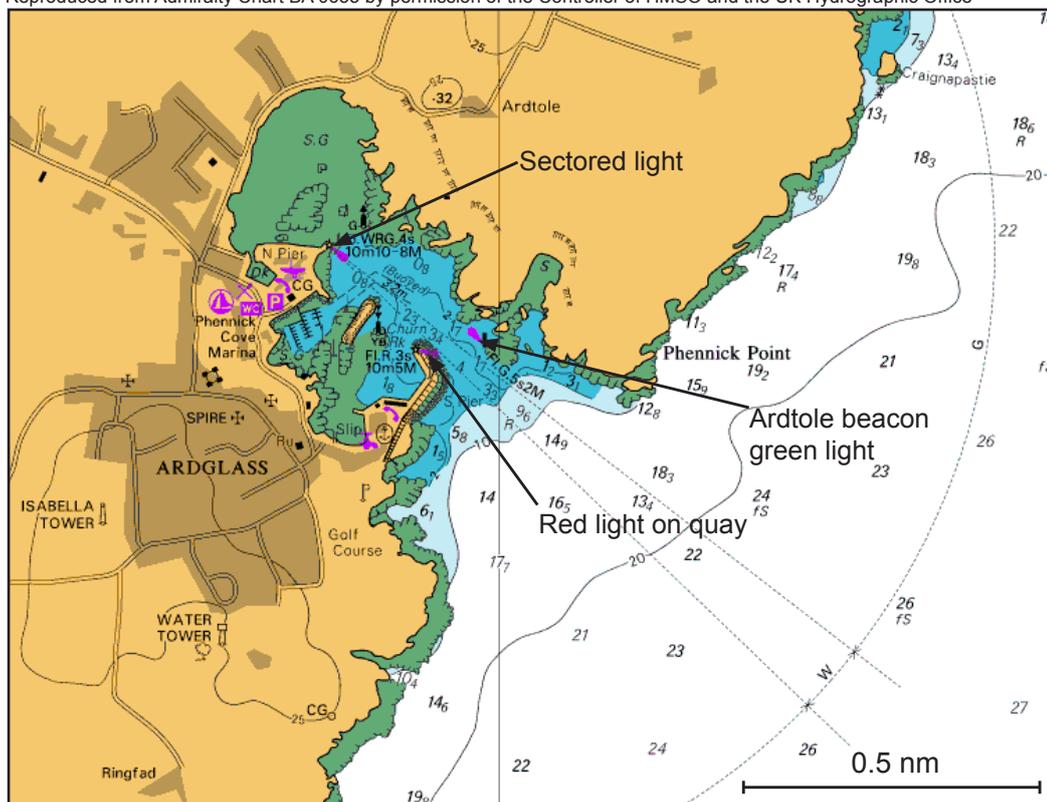


Figure 3: Chart showing Ardglass and approaches



Figure 4: Ardtole beacon

The Ardtole beacon was not formally recorded by the Commissioners of Irish Lights as having a light until 2008. The light was reported as 'washed away' on 5 October 2010 and reinstated on 11 February 2011. Given the intermittent operation of the light, the harbourmaster routinely checked the harbour navigation lights every evening.

Ardglass Harbour and aids to navigation

Ardglass Harbour is owned by the Northern Ireland Fishery Harbour Authority (NIFHA). NIFHA operates three harbours: Ardglass, Kilkeel and Portavogie. Ardglass had three staff, including the harbourmaster, who had been in post for 23 years.

Ardglass Harbour operated a safety management system in line with the requirements of the Port Marine Safety Code and was responsible for its local aids to navigation (AtoN) in the harbour area. Annual checks were conducted and quarterly performance reports provided to the Commissioners of Irish Lights.

At the time of the accident, Ardglass had six AtoN, three of which were equipped with lights (**Figure 3**). These comprised the sectored light, the quay red light and the Ardtole beacon green light.

The Ardtole beacon (**Figure 4**) had been in position for over 100 years, but attempts to equip it with a light had only started after the quay was extended in 1992. There was concern that vessels leaving the port in darkness were heading too far north and grounding on the reef on which the Ardtole beacon was located. The first light quickly became inoperative due to the adverse environmental conditions and, over the years, alternative arrangements were equally unsuccessful.

In respect of entering Ardglass Harbour, the Admiralty pilot book states:

'At night, the white sector (308°-314°) of the light on North Pier (tower 10m in height) (2 cables NW of the head of the South Pier) leads through the entrance clear of the dangers on the NE side.'

Reeds Fishermen's Almanac 2011/12 states:

'By night keep in the white sector of the directional light (10m tower) on North Pier.'

Since the accident, NIFHA has applied for a statutory sanction to remove the Ardtole beacon light and intends to complete a scheduled review of the AtoN in Ardglass before the end of July 2012.

Voyage Planning

The requirement for fishing vessels to conduct voyage planning is laid down in the Safety of Life at Sea Convention (SOLAS) Chapter V Regulation 34 and is invoked by The Merchant Shipping (Safety of Navigation) Regulations 2002. Regulation 34 of SOLAS states:

1. *Prior to proceeding to sea, the master shall ensure that the intended voyage has been planned using appropriate nautical charts and nautical publications for the area concerned...*

2. *The voyage plan shall identify a route which:*
 1. *takes into account any relevant ships' routeing systems;*
 2. *ensures sufficient sea room for the safe passage of the ship throughout the voyage;*
 3. *anticipates all known navigational hazards and adverse weather conditions; and*
 4. *takes into account the marine environmental protection measures that apply, and avoids, as far as possible, actions and activities which could cause damage to the environment*

Further guidance is provided in MGN 313 (F) (Keeping a Safe Navigational Watch on Fishing Vessels). Issued in February 2006, it reiterates the requirement for voyage planning and also includes guidance on the use of navigational equipment, specifically:

'5.3 Over-reliance on video plotters has been a factor in several recent collisions and groundings. Using an electronic system does not remove the need for proper passage planning and navigation, using appropriately scaled paper charts.

5.4 Assessments or assumptions based on video plotters alone are dangerous and unreliable. A video plotter used for fishing purposes is not adequate for safe navigation.'

Previous occurrences of grounding at Ardglass

On 19 January 2006, the fishing vessel *Green Hill* grounded between Ardglass and Ringfad Point. The skipper had left the wheelhouse unmanned to help process the catch. The damaged vessel was subsequently driven off the rocks, causing her to flood and sink. Two crewmen lost their lives.

On 3 January 2011, the fishing vessel *Karen* grounded at the entrance to Ardglass Harbour while the crew were engaged in processing the catch. It was likely the skipper was absent from the wheelhouse assisting the crew. The vessel was salvaged and there were no injuries.

The MAIB's database has recorded two further incidents of fishing vessels grounding on the same reef as *Moyuna*. In 2006, a fishing vessel grounded while departing and, in 2007, another grounded

while entering the harbour. Both accidents occurred during the hours of darkness when the Ardtole beacon was unlit.

ANALYSIS

Grounding

Moyuna's skipper was well-rested prior to the trip and had slept during the night prior to the accident. Fatigue is therefore considered to be an unlikely contributory factor. There is also no evidence of any equipment failure leading to a loss of control of the vessel. The weather conditions were calm and the skipper had good visibility ahead from the wheelhouse.

The grounding occurred because the skipper lost positional awareness. Although following a track on one of the plotters, his primary means of navigation was by eye, and he was unduly reliant on his ability to identify a single navigational aid: the green light on the Ardtole beacon. The skipper was unaware that this light was inoperative, and *Moyuna* grounded on the reef marked by the beacon. However, his decision to enter Ardglass at slow speed undoubtedly limited the resulting damage to his vessel.

The skipper did not receive the navigation warning concerning the Ardtole beacon light probably because *Moyuna* was out of VHF radio range when Belfast Coastguard made its routine broadcasts.

Navigation practices and tools

SOLAS and UK merchant shipping legislation require that voyages are properly planned, using relevant nautical charts and publications. The skipper was reportedly unaware of the sectored light on Ardglass North Pier. If he had consulted an Admiralty chart or pilot book, it should have been apparent that the harbour had a sectored light that could be used to enter the harbour at night.

A suitable passage plan, approaching from the east, should have consisted of setting a course that ensured the vessel was in the white sector of the sectored light when at least 1 mile from the harbour entrance. Once assured of this position, the skipper had only to steer a course to keep the vessel within the white sector to ensure her safe passage into the harbour.

Following the accident, MAIB inspectors checked the sectored light from a position just outside the harbour and found it to be clearly visible.

Electronic navigation systems are not a replacement for proper passage planning and monitoring. MGN 313 (F) highlights that over-reliance on track plotters has often led to fishing vessels running aground, and that previously recorded tracks should be used with great caution. Systems can store numerous tracks, but users must be aware of the limitations of their systems and know the origin of a particular track. There were several historical tracks on *Moyuna's* track plotter, some of which appeared to pass through the quay at Ardglass (**Figure 5**).

The Ardglass sectored light was not very clearly marked on the chart plotter (**Figure 5**). If it had been displayed in a way that more closely resembled the way it is shown on the navigational chart, it is possible the skipper would have recognised it and used the light when approaching the harbour.

Fisherman Qualifications

As *Moyuna* was under 16.5m registered length her skipper was not required to hold a Certificate of Competency. However, this does not remove

the need for a skipper to be competent to navigate a vessel safely. Although *Moyuna's* skipper held a Class 2, Limited (Fishing Vessel) Certificate of Competency, he had gained this 29 years before the accident, and the navigational skills he would have been taught at that time were clearly not being applied during *Moyuna's* approach into Ardglass. Skippers of fishing vessels under 16.5m registered length are being encouraged to undertake voluntary training leading to the award of a Certificate of Competency. Details can be found in MGN 411 (M+F). One component of the qualification is a bridge watchkeeping course. Attending the course could be a useful way for experienced fishermen to refresh and update their navigational skills, regardless of their level of qualification.

Ardglass Aids to Navigation

NIFHA is responsible for ensuring the AtoN in Ardglass are effective and reliable. The exposed position of the Ardtole beacon (**Figure 4**) has made it difficult to mount a light, and to inspect and maintain it. Indeed, in November 2011 adverse weather conditions prevented the light's annual inspection from being conducted. Consequently, when the light became inoperative, it often took some time before it was repaired.

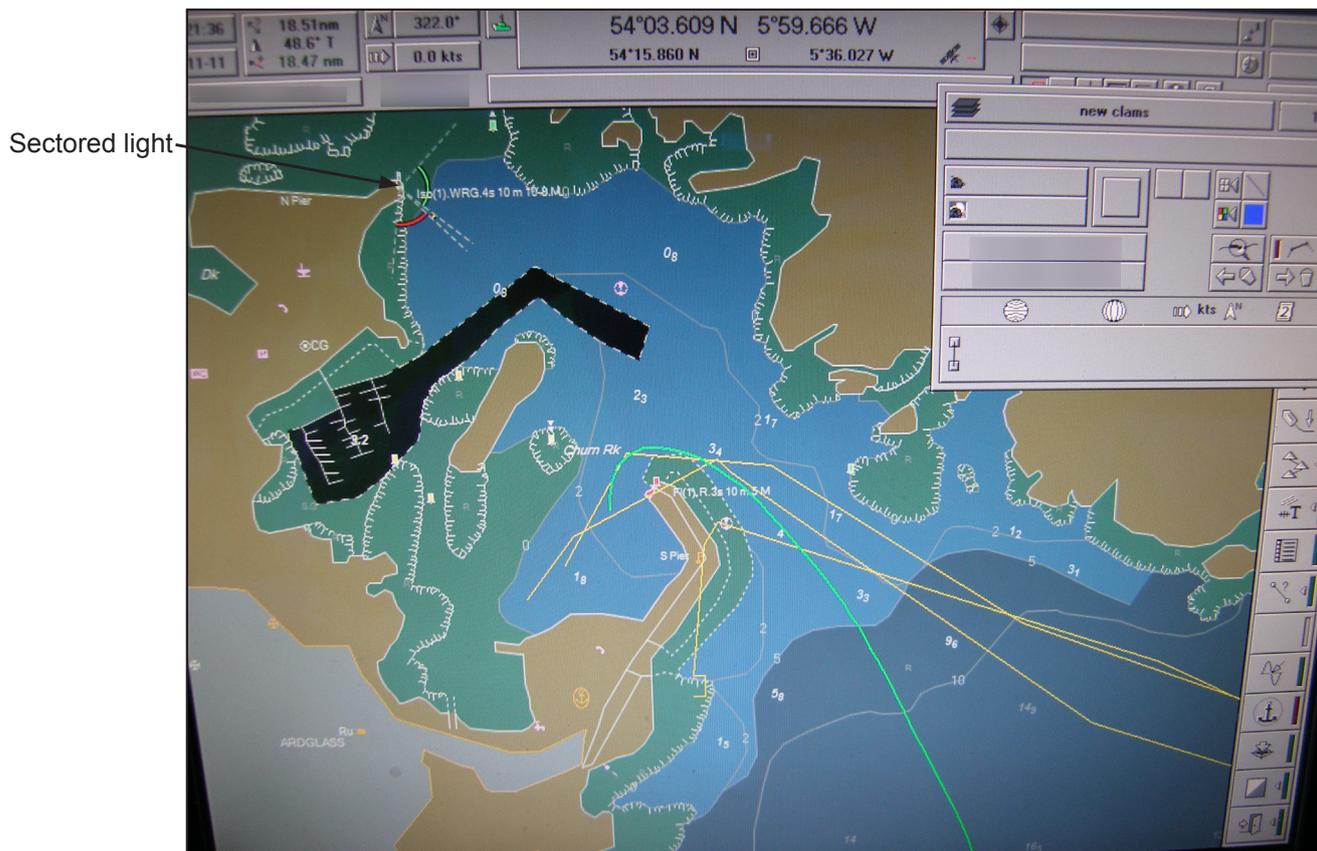


Figure 5: Chart plotter display

In view of the confined nature of the entrance to Ardglass Harbour, it is vital that the AtoN provide a safe means for entry and departure. Given the unreliable nature of the Ardtole beacon light and, as evidenced by previous groundings, the over-reliance by some harbour users on its operation, a review of the suitability and effectiveness of the AtoN provided in Ardglass Harbour, as intended by NIFHA, would be appropriate.

Emergency response

The skipper was very aware that the grounding at Ardglass of the fishing vessel *Green Hill* had resulted in the vessel sinking with the loss of two lives. He therefore made no attempt to move *Moyuna* after she grounded. Instead, in accordance with best practice, he immediately broadcast a “Mayday”, and ordered the crew to don lifejackets and to launch the liferaft.

However, in his haste, the skipper forgot to transmit a DSC alert before sending the distress message. Fortunately, there was an immediate response from Belfast Coastguard, but it should be remembered that HM Coastguard no longer keeps a dedicated watch on VHF radio channel 16.

CONCLUSIONS

- *Moyuna* grounded because the skipper lost positional awareness.
- The skipper unduly relied on following an historical track on one of the track plotters and on his ability to identify a single navigational aid: the green light on the Ardtole beacon.
- The skipper was unaware the green light on the Ardtole beacon was inoperative, as *Moyuna* was probably out of VHF radio range when navigational warnings were transmitted.
- If the skipper had consulted an Admiralty chart or pilot book, it should have been apparent that the harbour had a sectored light that could and should have been used for entry to Ardglass at night.
- The exposed position of the Ardtole beacon has made it difficult to mount a light, and to inspect and maintain it.

- Given the unreliable nature of the Ardtole beacon light and the over reliance by some harbour users on its operation, a review of the suitability and effectiveness of the navigational aids provided in Ardglass Harbour would be appropriate.
- The skipper’s actions following the grounding, including his decision to abandon the vessel, were in accordance with best practice. However, in his haste, he forgot to transmit a DSC alert before sending the distress message.

ACTION TAKEN

The Ardglass Harbourmaster has:

- Issued a notice to mariners, notifying harbour users that the Ardtole beacon light has been temporarily extinguished.

RECOMMENDATIONS

The owner of *Moyuna* is recommended to:

- 2012/125 Take the following actions to improve navigational practices on board *Moyuna*:
- Ensure skippers and crew are familiar with and follow the guidance contained in MGN 313 (F) (Keeping a Safe Navigational Watch on Fishing Vessels).
 - Ensure the vessel is adequately equipped with navigation charts and port information.
 - Encourage skippers to undertake voluntary training in line with MGN 411 (M+F) to refresh navigational skills.
 - Reinforce the correct use of the DSC VHF radio alert to ensure distress messages are received by the Coastguard.

Northern Ireland Fishery Harbour Authority is recommended to:

- 2012/126 In conjunction with the Commissioners of Irish Lights, complete its intended review of navigational aids in Ardglass Harbour, to ensure they are:
- Effective and reliable.
 - Well-publicised to local harbour users.

SHIP PARTICULARS

Vessel's name	<i>Moyuna</i>
Flag	UK
Classification society	Not applicable - subject to MCA survey
Fishing numbers	N 938
Type	Fishing Vessel
Registered owner	Privately owned
Manager(s)	Privately managed
Construction	Wooden
Length overall	15.34m
Registered length	14.27m
Gross tonnage	43
Minimum safe manning	Not applicable
Authorised cargo	Not applicable

VOYAGE PARTICULARS

Port of departure	Port St Mary, Isle of Man
Port of arrival	Ardglass
Type of voyage	Other
Cargo information	Scallops
Manning	4

MARINE CASUALTY INFORMATION

Date and time	21 November 2011 at 2330
Type of marine casualty or incident	Serious Marine Casualty
Location of incident	Ardglass Harbour, Northern Ireland
Place on board	Not applicable
Injuries/fatalities	None
Damage/environmental impact	Minor damage to keel at base of stem, no pollution
Ship operation	On passage
Voyage segment	Arrival
External & internal environment	Wind: NW F2-3 Sea state: slight Visibility: good
Persons on board	4