Annual report 2015

Bureau d'enquêtes sur les évènements de mer

Annual Report 2015

Summary

Editorial

In 2015, *BEA*mer activity was carried on in a significant European background.
Directive 2009/18 EC structures the work organisation.

The enforcement of this directive was audited by the European Maritime Safety Agency in 2014. Supplementary information had been transmitted to the European Commission in 2015, to the satisfaction of the latter.

Practically, working within a European framework consists, apart from feeding the European data base, in participation in meetings, particularly at EMSA (European maritime safety agency) headquarters in Lisbon and in many common exchanges. At the bilateral level, *BEA*mer cooperated in particular with the Spanish investigation bureau. At the non-European level, *BEA*mer worked together with NTSB (U.S. National Transportation Safety Board).

Regarding quality assurance, the certification to the 2008 version of ISO 9001 was renewed for a three-year period from 19 November 2015.

*BEA*mer strives towards the exhaustiveness of its sources and improving its communication with the actors of the maritime community and the general public.

Among its sources, *BEA*mer invites the shipowners to use to a large extent the accident assessment report form available on its site.

A complete overhaul of the Internet site, the showcase of the service, had been carried out in 2015. *BEA*mer makes available to the general public and to the maritime community a user-friendly tool, regularly updated.

Website address: http://www.bea-mer.developpement-durable.gouv.fr/

About the events that happened in 2015, *BEA*mer recorded a total of 172 leading to:

- The opening of 16 investigations, i.e. 10 safety investigation reports (*RET*) and 6 simplified reports (*RES*).
- 156 events statistically recorded.

*BEA*mer published a total of 33 reports in 2015, 12 of these being *RET* and 21 *RES*, most of these investigations has being initiated on the previous year.

Note that some accidents or incidents are subjected to preliminary investigations with the aim of deciding whether to initiate an investigation.

As for work accidents, they are subjected to a special treatment, with a comprehensive inventory then the selection of the very serious or serious injury accidents, according to IMO criteria and resulting to the core activity: 2066 accidents had been reported to *BEA*mer and processed.

Besides all the accidents (vessels or work) within the scope of the directive are entered on the European maritime safety agency database (EMCIP). Notably, 412 work accidents will be entered in the database for 2015.

Fundamentally, a number of more technical concerns remain, in particular:

- too many accidents occur on board netters or potters, as man overboard, fatalities or serious injuries, like the accident at work arisen aboard *FLIPPER III*.

  *BEA*mer conducted a study regarding this kind of accidents in 2012 and developed in partnership with *institut maritime de prévention (IMP* - Maritime prevention institute) and the *comité national des pêches et des élevages marins (CNPMEM* - National fishery and fish farming committee), an information and advice leaflet for the use of fishermen. The first release of the leaflet has not had the anticipated impact. Consequently *BEA*mer published an updated version for the use of fisherman training schools. Additionally, this leaflet is available on our website. It is a very important issue for the profession.

- little passenger vessels represent a major safety concern owing to the number of persons carried. *BEA*mer recorded several incidents like those arisen aboard *AQUA VISTA* and *GUILLEMOT*. During those incidents, deficiencies regarding crisis management had been notably identified.

L'Administrateur Général des Affaires Maritimes
Jean-Luc LE LIBOUX
Directeur du *BEA*mer

*BEA*mer

*BEA*mer is a specialized standing body within the domestic jurisdiction. It is certified ISO 9001 since 2009.

It is composed of a core team of 9 persons in Paris (a director, a deputy director, 3 investigators and 4 administrative staff). This team, which experienced a substantial change completed in 2016, is reinforced by a local network of some twenty non-permanent investigators on the seaboard and experts, commissioned to investigate in cooperation with the headquarters permanent investigators. Depending on the events, *BEA*mer can call on outside experts, chosen on the grounds of their particular qualifications.

As *BEA*mer is housed in the *MEDDE* central administration premises, the latter takes on its budget occupancy costs for the offices as well as permanents' wages and local investigators' and experts' pays. To carry out its mission, it has an annual operating budget of nearly 70,000 euros, to which must be added a budget, based on the investigation needs, for travel expenses (allowance and fare).

The framework of *BEA*mer missions

As stipulated in the *Code des transports*, *BEA*mer has three essential missions:

- the conduct of marine casualty investigations on all marine casualties, in order to learn from them and to improve the maritime safety;
- the collection, processing and dissemination of information related to practices and the feedback from lessons learnt from marine casualties;
- and at last, the production of studies and research regarding feedback and accidentology.

Its primary jurisdiction is to intervene worldwide on vessels flying the French flag (fishery, merchant and leisure).

It also intervenes in compliance with the obligations arising from directive 2009/18/EC issued on 23 April 2009 with regard to criteria such as:

- « length of 15 m or more » for fishing vessels,
- « territorial or internal waters » for a foreign flag vessel,
- « injuries to persons on board vessels that result in incapacitation for more than 72 hours ».

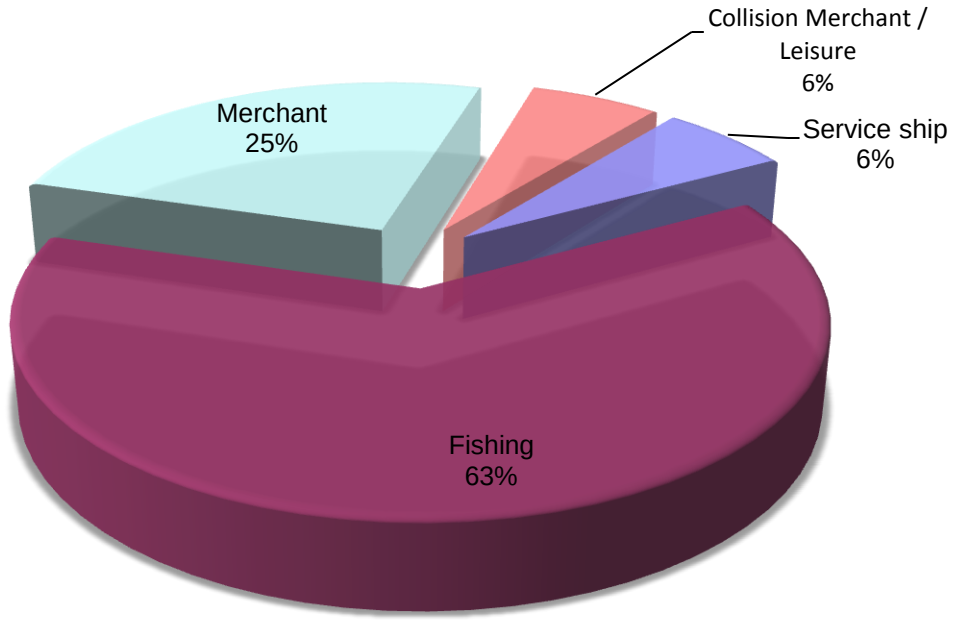
Generally speaking, the transmission of information to *BEA*mer comes mainly from services subordinate to the ministry of Ecology, Energy and Sustainable Development: MRCCs which are the main source of information, vessel safety centres and harbour masters.

Overview of the activity

Investigations initiated in 2015:

*BEA*mer activity remains heavily dependent on maritime events occurring in the fishing industry, which involved 2/3 of the investigation initiation decisions, a constant percentage for several years.

Distribution of events over the 16 investigations opened in 2015

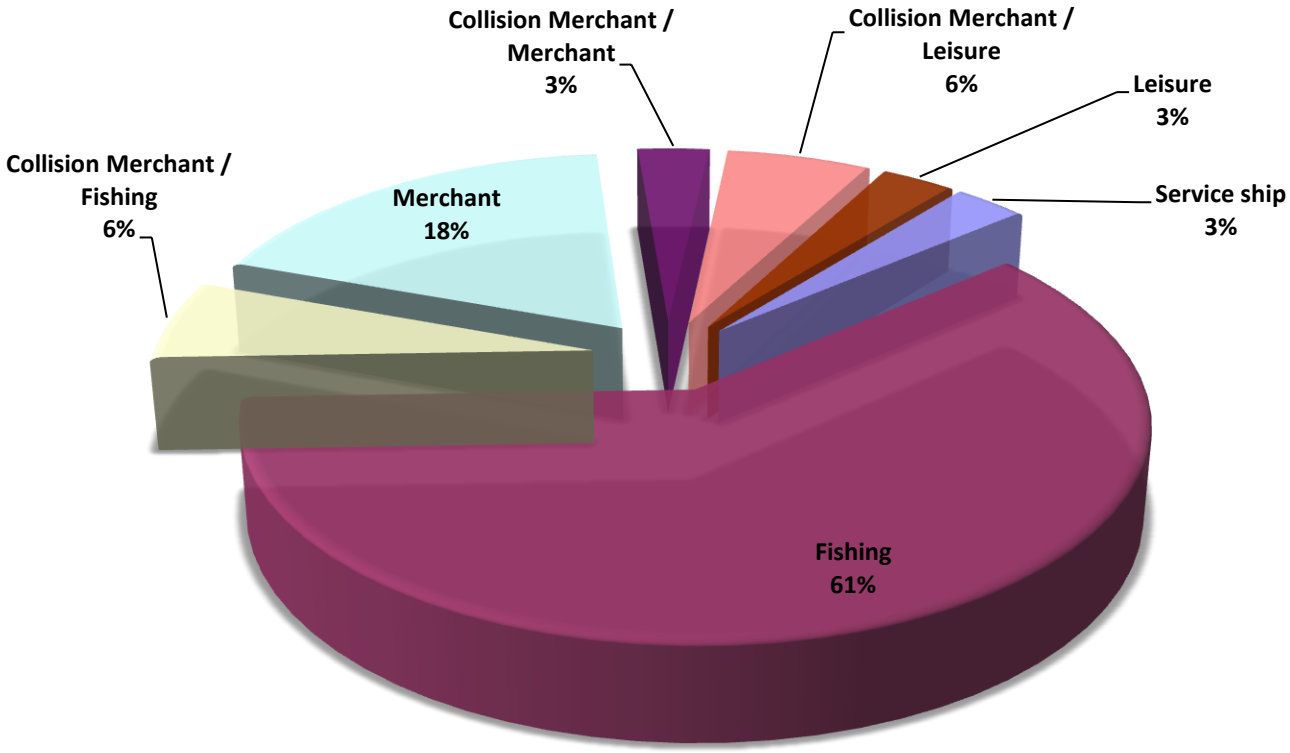


The table above shows the distribution of opened marine safety investigations by main categories of events resulting either in a full report (*RET*) or in a simplified report (*RES*):

RET : *Enquête de sécurité maritime*, (Marine safety investigation) or *Enquête Technique après Accident* (ETA) - (Technical investigation after accident), resulting in a *Rapport d'Enquête Technique* (Technical investigation report) including **recommendations**.

RES : *Enquête de sécurité maritime* (Marine safety investigation), formerly *investigation préliminaire* (preliminary investigation), resulting in a *Rapport d'Enquête Simplifié* (Simplified investigation report) including **lessons**.

Distribution of events over the 33 investigations published in 2015



The table above shows the distribution of opened marine safety investigations by main categories of events resulting either in a full report (*RET*) or in a simplified report (*RES*):

Summary of marine safety investigation reports (RET)

published in 2015

(events arisen in 2014 and 2015)

PS : Marine safety investigation reports are published on the *BEA*mer's website.

Loss of control and stranding of the trawler *LE SILLON*, on 2 February 2014 on Totty Cove rocks (Cornwall, UK).

Summary :

Time on board (UTC + 1)

On 1st February 2014 around 4.30 pm, off the north-west coast of Cornwall (UK), the trawler *LE SILLON* was heaving to in very poor weather conditions. She faced a succession of exceptional waves, one of which broke several windows and devastated the bridge. The water flooded inside the vessel through a left open hatch. Short-circuits occurred on the bridge. As heavy vibrations were experienced, the skipper shut the engine down. It had been impossible to restart it.

The rescue services were alerted. The local lifeboat intervened and took the trawler in tow around 6.00 pm to move her off the coast. The towline broke two hours later.

Five crewmembers were winched up by a helicopter and the sixth picked up by the lifeboat. The only slight injury was sustained by the skipper.

LE SILLON kept on drifting towards the coast, she was driven onto the rocks on 2nd February 2014 around 4.00 am. The vessel broke-up there due to the seas. A local pollution due to diesel fuel and lubricants had been diluted thanks to natural mixing.

The investigation shows the harmful effect of shutting down the engine in very severe sea state conditions.

Safety lessons:

To skippers of fishing vessels:

1 - 2015-E-004: When a severe gale is forecast, a number of measures have to be taken in anticipation particularly closing doors and hatches, and for this event, the bridge companionway hatch leading to the accommodations.

2 - 2015-E-005: In degraded electric supply conditions, keeping the main engine running would have preserved the vessel's manoeuvrability.

3 - 2015-E-006: When a severe gale and its development are forecast, it is better to shelter than to fish in a priori less exposed areas.

Safety recommendation:

To the French maritime administration (affaires maritimes):

1 - 2015-R-001: To make the regulation evolve concerning the location or the protection of the portable VHF's battery charger on the bridge of fishing vessels so that it remains reachable in case of major damage on the bridge.

Blackout followed by a loss of propulsion on board the cargo vessel *JUST MARIIAM* on 10 February 2014 off *Belle-Île* (France).

Summary:
Time (UTC + 1)

On Monday 10 February 2014 at 5.40 pm, a blackout occurred on board the cargo vessel *JUST MARIIAM* at a dozen of miles in the south of *Belle-Île*. The vessel, flying the Moldavian flag, was sailing from Iceland to Lebanon. On 9 February 2014 she called on *Le Palais* roads (*Belle-Île*) for meteorological reasons, in order to secure the lashing of her deck cargo, then she resumed her voyage on 10 February in the early afternoon. The wind was blowing from the south-west force 8, the sea state was rough with 3 to 5 meter waves.

As a first step, the emergency source of electric power allowed propulsion and auxiliary machinery to remain running and the steering was controlled in the emergency mode. Soon after the blackout, the master of *JUST MARIIAM* informed the ship-owner and the company, but no coastal station had been informed. As the chief engineer was not able to restore the power to the main switchboard, the propulsion engine would stop at 0.45 am on 11 February, because its auxiliaries did not get enough power from the emergency power supply. The vessel was then at 17 miles in the south-west of *Belle-Île* and began to drift north-eastwards.

The master of *JUST MARIIAM* did not inform *Etel* MRCC of the blackout before 11.38 pm. The *Préfet maritime de l'Atlantique* decided to operate the intervention, assistance and salvage tug *ABEILLE BOURBON*, at anchor at Ushant. The tug arrived on scene around 9.00 am on 12 February; after a first aborted attempt, she successfully towed *JUST MARIIAM* off the southwestern coast of *Belle-Île*, which was then at a distance of 1 mile.

At the end of the afternoon, a *Marine nationale* (French navy) response team and a towing pennant had been winched aboard *JUST MARIIAM* by two *Marine nationale* helicopters, in order to secure the towing line. The assisted vessel, who was listing 5° to port, had been towed into *Lorient* shipping port, where she arrived at 11.57 am.

The investigation concludes that the cause was a failure of the automatic electric power management system and points out the delay to inform the MRCC.

Safety lessons:

1 - 2015-E-007 : The relevant MAS should be immediately notified of any accident or incident aboard a vessel (ref: SOLAS rule 1/11 ; Decree nr 2011-2108 on 20 December 2011 art. 13; *arrêté PREMAR n°2004/02 Brest* on 27 January 2004).

Safety recommendation:

To the company operating *JUST MARIIAM*:

1 - 2015-R-002: According to the provisions of the International Safety Management code (ISM code), to develop a safety management manual for the vessel.

The manual should include:

• the electric power management system which should be made more reliable or supplemented (possibility to be started and coupled independently from PMS for one of the generators, or shaft generator driven by the main engine for example) in order to comply with the requirements of the ISM code article 10.3;

• the necessary measures to enhance the crew familiarization of vessel equipment knowledge (“understudy”, keeping an engineer officer on the crew list despite the UMS certification) in order to comply with the requirements of the ISM code article 6.3.

Stranding of the trawler *CÉLACANTE*, on 22 May 2014 in the vicinity of *Les Pierres Noires* lighthouse in the framework of an assistance operation to the sailing boat *NÉNETTE*.

Summary:
Time (UTC + 2)

On 22 May 2014 between 5.00 am and 6.00 am local time, the 13 metre long leisure sailing boat *NÉNETTE*, who sailed from Scotland on 19 May bound to Portugal with two men on board, suffered from two hard gybes, due to the rough sea state, gale warning in force, at 88 miles in the west-north-west of Ushant Island. The main sheet injured the vessel's owner/skipper's thigh who had just taken up the watch. He was consequently greatly hampered in moving on board. Shortly after, the second gybe snatched the starboard steering wheel pedestal. The helm got jammed. One hour later, he informed *Étel* MRCC of the failure and requested assistance. Around 8.00 am, the helm get free following the skipper's intervention and the sailing boat changed her course motoring towards *La Trinité-sur-Mer* under autopilot.

Around 2.45 pm, the helm got jammed again and *Corsen* MRCC, informed, transmitted a PAN PAN message letting know that *NÉNETTE* requested assistance. One hour later, the 25 meter long trawler *CÉLACANTE* arrived in the area and managed to pass a towing line around 4.30 pm. The convoy proceeded to *Brest*.

When she arrived in the vicinity of *Les Pierres Noires*, the heaving line of the tow-line, made fast aboard *NÉNETTE*, broke at a dozen of meters from the sailing boat. The skipper of the sailing boat started then the engine in order to prevent from drifting. The engine stalled, as the propeller was fouled by the tow-line. *NÉNETTE* was drifting rapidly towards the reefs because of her sail still partly hoisted. The crew of the sailing boat did not try to cast anchor. The crew of the trawler recovered the broken tow-line and succeeded in passing another one. After several attempts, the sailboat's hand managed to make it fast on a cleat. As she got too close from *Les Pierres Noires* rocks, the trawler stranded around 11.30 pm.

The sailboat drifted east-north-easterly some hundreds of meters, she stroke twice then cast anchor in a safer area.

The crew of the trawler boarded the liferafts then was rescued by a helicopter and by the *SNSM* lifeboat from *Le Conquet*. No one had been injured aboard the trawler.

The sailboat had been towed by the SNSM lifeboat from *Molène*, she has been repaired later on. The injured skipper ended up in the hospital for a short time.

Following the formal notice issued by the *Préfet maritime de l'Atlantique*, several unsuccessful attempts to refloat her were undertaken and the trawler had been a total lost.

Safety lessons:

1 - 2015-E-054: deep-sea navigation on board sailboat with a crew made of two persons, only one of them being experienced, may lead to critical situations in particular in harsh sea conditions.

2 - 2015-E-055: information delivered to MRCC by vessels must be exhaustive to enable it to assess the situation as accurately as possible.

3 - 2015-E-056: a good communication between both vessels at the time of taking in tow and a careful monitoring of the behaviour of the tow would probably have avoided its breaking.

4 - 2015-E-057: the presence on board the sailboat of an equipment appropriate to towage (a bridle for example) would probably have avoided the breaking of the towing line.

Safety recommendations:

to the administration in charge of safety and security regulation and control on board vessels:

1 - 2015-R-009: to study a regulatory amendment designed to fit the 12 to 24 meter long fishing vessels with a mooring line ready to be used (cf. Division 226).

Grounding of the passenger ferry *MEGA EXPRESS FIVE* on 31 May 2014 on departure from the port of *L'Île-Rousse* (Corsica)

Summary:

On Saturday 31 May 2014* in the early afternoon, at the port of *L'Île-Rousse*, after a less than one hour call for embarking and disembarking passengers and vehicles, the passenger ferry *MEGA EXPRESS FIVE* embarked her pilot, closed her stern door and sailed at 2.40 pm. She pulled away from the quay then backed out of the port. Then, once outside the western jetty, the vessel swung to starboard and began to run up to speed.

Around 2.47 pm, the pilot left the bridge, then was dropped on the port side, sheltered from the north-easterly wind by the vessel.

A few minutes later, an abnormal vibration was felt by the crew. It corresponds, after investigation, to the grounding on the shoal called "*Danger de L'Île-Rousse*".

At 8.45 pm, the vessel arrived at *Toulon* from where she sailed at 10.25 pm bound to *Bastia*.

On the day after, 1st June at 6.50 am, shortly before the boarding of the pilot of the port of *Bastia*, a loss of electric power and propulsion occurred. The technical issue was sorted out in about thirty minutes and the vessel came alongside at 8.25 am.

She sailed one hour later from *Bastia* bound to *L'Île-Rousse* where she arrived at 11.35 am. She sailed at 00.30 pm bound to *Toulon* where she moored at 7.30 pm. During the crossing, further to abnormal water ingresses, supposed to be related to the grounding, the company decided a survey with the help of divers.

Upon arrival, the divers intervened, observed the damages and made a temporary repair. The classification society required repairs before resuming the commercial activity. During the night the vessel sailed bound to the Italian port of *La Spezia*.

The passengers had been transported to *Bastia* by another company and *MEGA EXPRESS FIVE* had been temporarily replaced by *SARDINIA VERA*.

One week later, on 9 June at 11.00 pm, the vessel resumed her service on the line *Toulon* / Corsica.

The investigation found a lack of vigilance in the handling of the vessel in the vicinity of a danger, outside the port.

* On 17 June 2014, *BEA*mer took the decision to initiate a technical investigation following the incident involving *MEGA EXPRESS FIVE* occurred in the French territorial waters, according to the information available at the time. The investigation demonstrated that the bottom contact occurred outside the port of *L'Île-Rousse*, on 31 May and not on 1st June as stated in the decision.

Safety lessons:

The *BEA*mer notes reminders done by the owner and particularly:

1 - 2015-E-044: according to the Emergency Response Plan, in reference to the ISM Code made for the masters to comply with the relative regulations in force to the "reporting of the sea incidents and sea accident" in the ecological protection zone under French jurisdiction in the Mediterranean to the maritime authority.

Furthermore, the *BEA*mer reminds:

2 - 2015-E-045: that it is imperative to enforce the "*arrêté préfectoral*" fixing the access conditions to ports;

3 - 2015-E-046: to follow the voyage plan and the courses laid on the chart, in compliance with the STCW Convention Chapter VIII Section A-VIII / 2 Part 2 in appendix C11.

Safety recommendations:

***BEA*mer recommends to the *Haute-Corse* pilot station:**

1 - 2015-R-008 : to set up, in its Quality Management System, a procedure aiming at the fact that the ship leaves the compulsory pilotage area of the port *L'Île-Rousse* by having cleared any danger.

Explosion and foundering of the semi-rigid diving support boat *CASTILLE 2* in the bay of *Calvi (Haute-Corse)*, close to *Pointe de la Revellata*, on 30 June 2014 (six injured).

Summary:

On 30 June 2014 in the early afternoon, the diving support boat *CASTILLE 2*, sailed from Calvi and after a short run, arrived in the vicinity of one of the diving sites frequented by the diving centre *CASTILLE*. 15 divers already wearing their wetsuits were on board, 4 of them instructors (including the skipper of the boat). As he was approaching the buoy on which he was mooring usually, the skipper reduced speed then turned on the bow thruster. When he actuated it (as it seemed to him), the deck of the boat lifted off as a result of a violent explosion; several divers lost their balance or were thrown into the water.

The boat caught fire and the skipper ordered to those still aboard to jump in the water. A witness ashore alerted the *CODIS* which relayed the call to Corsica MRCC. Soon after, a second explosion occurred.

The divers, six of them wounded, would be rescued by a diving support boat already on-site and nautical assets quickly mobilised.

The boat foundered about twenty minutes after the first explosion and would be refloated 3 days after the accident.

The judicial enquiry dismissed the hypothesis of a criminal act. The technical investigation concluded that the explosion could only be caused by the ignition of gasoline vapours having migrated to the head of the boat, as the subdivision under the deck was not tight and without a natural ventilation (non-compliance with standard NF EN ISO 11105). As the bow thruster engine was not flame-proof, it had certainly generated the spark that caused the explosion.

Safety lessons:

To professionals involved in the recreational boating sector:

1 - 2015-E-024: Fitting out works have to be performed in compliance with directive 94/25/EC appendix XIV.

Safety recommendations:

to MASTER GOMMONI shipyard:

1 - 2015-R-003: To include in its craft manufacturing process the standard NF EN ISO 11105 - Ventilation of petrol engine and/or petrol tank compartments.

2 - 2015-R-004: To write to the Italian authority to inform it of the date from which the mechanical ventilation has been installed on board MASTER GOMMONI's boats.

3 - 2015-R-005: To reconsider its manufacturing process, installing and connecting in factory the equipment which could compromise the reference to the standard declared in the DoC (declaration of conformity).

4 - 2015-R-006: To double, with a sufficient overlapping, the clamping rings on fuel flexible hose connections.

Maritime accident at work occurred on 10 September 2014 on board the fishing vessel *DRENNEC*, during a seine heaving manoeuvre off Seychelles (one fatality).

Summary:

The tuna purse seiner *DRENNEC* owned by the *Compagnie Française du Thon Océanique (CFTO)* sailed from the port of Victoria (*île de Mahé* at *Seychelles*) on 23 August 2014 in the early afternoon for a 50 day fishing season.

On 10 September around 6.10 am local time, the seine was deployed. One hour later, while half of the net has been heaved, part of the crew was manoeuvring on the deck to prepare the purse of the seine.

During these operations, a fault caused the rupture of a previously opened block and the sheave had been thrown as a result of the forces involved. One of the components of the block hit the bosun's head violently, who collapsed on the deck.

Despite the first care given by the crew, the seaman was declared deceased, after consultation of the medical emergency service ashore.

The opening of a block and a brief action on a winch control, incompatible with the ongoing manoeuvres are the causal events of this very serious accident.

Safety lessons:

1 - 2015-E-025: *BEA*mer retains more particularly among the measures taken by the owner:

C - Use exclusively the capstan to heave the « cork line ».
D - Use a non-opening block, suitable for working with a capstan.
F - At the console the first officer has to concentrate on the heaving of the seine, should be supported by another officer in charge of the other manoeuvres.

2 - 2015-E-026: Although this vessel has been more recently built, this event leads to remind the study conducted in 1996 by the *Institut maritime de prévention (IMP)* on the safety and working conditions aboard deep-sea tuna boats which identified the boatswain's position as the most exposed to working accidents.

3 - 2015-E-027: *BEA*mer reminds the recommendation to tuna boats' skippers (2013-R-027 - Accident occurred aboard the tuna purse seiner *TORRE GIULIA* on 28 July 2012 at sea off Seychelles): in case of emergency to follow the radio-medical consultation procedure with *CHU Purpan CCMM* at *Toulouse* (Maritime medical consultation centre at *Toulouse* university hospital *Purpan*), in priority over any other medical request.

4 - 2015-E-028: The recording of the block in the cargo handling gear register during the vessel commissioning visit would have enabled to ascertain its accurate monitoring. The monitoring of the mobile accessories of the cargo handling gear have to be in compliance with division 214 (labour protection, cargo handling gear) out of modified decree published on 30 August 1984 on safety of life, habitability on board vessels and marine pollution prevention.

Safety recommendations:

*BEA*mer takes note of the measures taken by the shipowner addressed to his vessels. Consequently no recommendation is issued. (cf. the report on our website - French version only).

Maritime work accident on board the trawler *SAINT JOSSE IV*, on 7 November 2014 at *Boulogne-sur-mer* (one fatality).

Summary:

On 7 November 2014, the skipper of the trawler *SAINT JOSSE IV* was fataly injured while he was conducting a trial of the rope guide of the port warp reel, after a cut-out sensor had been replaced. At the time of the trial, the chief engineer was on the bridge to actuate the control of the guide on gear trolley. The accident occurred alongside at *Boulogne-sur-Mer*, without any eyewitness.

Safety recommendations:

To the shipowner, with, if necessary, the support of *IMP*:

1 - 2015-R-007: to add to the risk assessment plan (*document unique d'évaluation des risques professionnels - DUP*) risks induced by high power gear moving in a limited space and the subsequent precaution to be taken.

Two seamen overboard from the trawler *La NIOULARGUE*, off *Pointe de Chassiron* on 18 December 2014 (one fatality).

Summary:

On 18 December 2014 around 3.00 am at about fifty miles from *Pointe de Chassiron*, with a moderate to rough sea state, *LA NIOULARGUE* was ending her third trawl haul of the fishing trip and her crew was heaving, propulsion engine just engaged ahead. Both hands were on the deck and the skipper was at the winch control console, located on the same deck, sheltered by the accommodation access alleyway.

The manoeuvre had been interrupted by a decrease in hydraulic oil pressure at the reel winch. An oil make-up and the purge of the circuit were done by the skipper but the pressure was not restored; it was then only possible to heave back the reel.

In order to heave back the trawl braces, to be able afterwards to heave the whole « upside down », the skipper ordered the hands to bend a rope on the leg triangles which was made fast on a cleat welded on the port stanchion.

The cleat weld broke while a dozen of meters of each trawl brace had been heaved back and coiled down on the deck. Both braces were no more secured and were brought back overboard by the weight of the trawl which was still in the water.

The port brace, which had just been coiled down on the deck, whipped the legs of the rating who was standing on the port side, dragging him down to sea. His colleague, who was on starboard, tried to hold him back leaning against the bulwark rail but he was also dragged down to sea by the other trawl brace.

A short time after, both hands were still hanging onto the trawl braces, close to the vessel's transom, their PFDs inflated. The younger of the two hands was supporting his colleague, first thrown overboard, but who seemed already to be semi-conscious.

The skipper disengaged the engine then threw two life-buoys towards the hands. Because of the waves, the younger hand was not any more able to support his colleague, who let go and drifted progressively away from the vessel. The skipper began then to secure a ladder on the stern, then attempted to send a rope to the hand still in the vicinity. But this one had been thrown several times against the hull and also let go. The skipper lost sight of him; he got back up to the bridge and broadcast a VHF call. The fishing vessels in the area diverted immediately.

The younger seaman had been rescued safe and sound by *MÉDELUC*. The corpse of his colleague had been recovered by *MARJANIC*.

Safety lessons:

1 - 2015-E-066: fishing vessels should be fitted with a suitable means to recover a man overboard (as, for example, a SILZIG buoy), according to the risk assessment (in the framework of the risk assessment plan - *DUP*) done by the skipper-owner.

1 - 2015-E-067: the labour inspectors who got on board after the accident reminded the good practices consisting in belaying the rope and mooring lines under high tension by taking a single round turn on a stanchion and making fast on the cleat. *BEA*mer subscribes to this reminder.

Safety recommendations:

*BEA*mer did not issue any recommendation.

Fire and subsequent foundering of the dredger *LUCKY*, on 6 January 2015 off *Ouistreham*.

Summary:

On 6 January 2015, in the late morning, the dredger *LUCKY* was on her fishing route off *Courseulles-sur-Mer* at a speed of about 3 knots, for a scallop fishing haul. The skipper was on his own in the wheelhouse when an unusual noise, coming from the engine room, arose without any warnings or alarm. When the skipper opened the engine room hatch cover, for a rapid investigation, he was surprised by an already severe fire which burnt his face.

The two hands who were resting in the crew's accommodation were promptly mobilised and a life raft was brought from the roof of the wheelhouse to the after deck. Then the fixed CO_2 fire-extinguishing system for the engine room was activated. In the rush, the engine was declutched but not shut down and the remote emergency stop controls for fuel supply were not actuated. The fresh air inlet plug was not (or badly) closed. CO_2 proved ineffective and the fire spread rapidly to the wheelhouse and to the forward end of the vessel.

The crew realised that they would not be able to salvage the vessel and decided to abandon ship using the life raft. Soon after, a fishing vessel who was in the vicinity, alerted by the cloud of smoke, proceeded to rescue the shipwrecked and informed *Jobourg* MRCC. The three men were then transferred to the *gendarmerie* patrol boat.

Despite the intervention of the marine fire-fighters winched down in the area on board *PSP CORMORAN*, *LUCKY* broke up and foundered in 21 meters of water in the late afternoon. The wreck has been removed on 10 March 2015. The date on which the skipper resumed his activity on board a new vessel is unknown.

Safety lessons:

1 - 2015-E-074: The fishing vessels' crew's attention is drawn on the importance of firefighting bills (Article 226-7.10), which defines « the crewmembers' assigned tasks in case of critical situation », particularly prior to activate the CO_2 fire-extinguishing system. Drills (Article 226-7.11) allow to become familiar with actions to be undertaken and with on board equipment.

2 - 2015-E-075: A central fire-alarm system would have alerted the skipper as soon as the fire burst out. The firefighting would have been a priori less precipitated, thus more efficient.

Safety recommendations:

*BEA*mer did not issue any recommendation.

Maritime accident at work occurred on 16 January 2015 on board the service ship *POUDJOU*, during a mooring manoeuvre at a buoy of a tanker on roads at Mayotte (one fatality).

Summary:

The service ship (boatman's launch) *POUDJOU* owned by the *Boluda* company sailed from her wharf at Dzaoudzi on 16 January 2015 in the early morning to support the mooring of the Maltese tanker *HIGH FREEDOM* at the two buoys of the *Badamiers* sea-line. This site is located in the lagoon within the administrative boundaries of the port of *Mayotte*.

During this manoeuvre, *POUDJOU* was in charge to recover the aft mooring lines to be bent at the two side buoys. As the manoeuvre to take the port buoy was achieved, the launch was approaching on the starboard stern of the tanker.

While *POUDJOU* was approaching to get the two lines hanging off, with severe weather conditions, the wind and a sudden « water movement » pressed her against the aft hull of the tanker, causing the launch to list heavily and four out of five boatmen, all equipped with a PFD, to fall overboard.

Despite the alert quickly transmitted by the tug present on scene and the search and rescue operation, one out of the four remained missing.

Four hours later, while the mooring operation was cancelled and during the sailing manoeuvre of the tanker, the missing sailor's body, was found dead and adrift.

Safety recommendations:

To the Boluda company at Mayotte:

1 - 2015-R-010 : To establish and implement a training program together with the *service des Affaires maritimes* (French maritime administration) which should allow the sailors to get the required skills (among which the ability to use the safety equipment and to swim) to perform their tasks aboard vessels.

2 - 2015-R-011: In association with the pilotage services, the harbour master and the port facility operator in charge of the oil terminal, to establish a document which lays down the procedure to take a buoy at the *Badamiers* site (for ex. like that of the port of *Bastia*). The actual *document unique d'évaluation des risques professionnels (DUERP* - single assessment document for professional risk*)* could be amended accordingly.

3 - 2015-R-012: To establish a register to monitor the check-out and reconditioning done for each PFD-type life jacket, available for mariners, in accordance with the maintenance rules laid down by the manufacturer.

To Mayotte harbour master:

4 - 2015-R-013: To supplement the document on ships accommodation and on safety at the *Longoni* oil and gas terminal with the rules to be planned for the site of *Les Badamiers* including the weather conditions for mooring at a buoy. It should be included into Mayotte harbour specific police regulations.

To the Mayotte Channel Gateway Company:

5 - 2015-R-014: The towing and mooring company Boluda Mayotte should seek approval from *Conseil général de Mayotte (*local administration*)*, port authority, for its operations. For this purpose Mayotte Channel Gateway Company, as the public service concession holder which has subcontracted this activity to Boluda Mayotte, should call upon the port council to be convened and request the inclusion of this application for approval to the agenda of the meeting.

Fire and foundering of the trawler *AR RAOK 2*, on 28 February 2015 in the south-east of *Belle-Île*.

Summary:

On Saturday 28 February 2015, at 3.00 am, the trawler *AR RAOK 2*, sailed from *La Turballe* bound to her fishing grounds in the south-east of *Belle-Île*.

No incident were reported during the two and a half hours underway.

Fishing began at 5.45 am for a three hour tow. The skipper gave his orders to the rating of the watch and went to bed.

Around 6.00 am, the engineer carried out a patrol in the engine room. All was normal.

At 7.15 am, the rating of the watch, as the fire alarm did not trigger, was alerted by a thick dark smoke filling the bridge and informed the skipper. This one went up immediately and observed that the bridge was totally smoke-filled. He saw, on the engine room video monitoring display, flames at the ladder.

He attempted to join the CO_2 room located on the main deck on the port side but the flames prevented him. He came up back to the bridge to call the shipowner, at sea on board *LE JOKER*, fishing in the vicinity, but he did not succeed because of the smoke. He took then the decision to abandon ship.

The deck was beginning to melt, as the liferaft located on the forecastle was inaccessible the crew launched the aft raft, however this one was not fasten to the vessel was drifting away from the vessel. Two sailors jumped to the water to reach it. They inflated it and embarked. The other crewmembers jumped in the water to embark into the raft. The fire had spread to the whole vessel.

The rating of the watch aboard *LE JOKER* observed the fire and informed the skipper. This one, after having hauled in the fishing gear, headed to *AR RAOK 2* and recovered the shipwrecked.

Étel MRCC was informed by the skipper of the trawler *DIABOLO*.
The French navy frigate *LA MOTTE PIQUET* and the lifeboats *SNS 096* and *095* intervened to fight the fire which was under control one hour later.

Later on, a towing attempt was made by a pilot launch but the trawler foundered before the arrival at *Belle-Île*.

The hypothesis for the origin of the fire, retained by *BEA*mer is a spray of fuel on the exhaust pipe.

Safety lessons:

1 - 2015-E-076: Aboard a well-maintained vessel, connections or portions of the fuel supply circuit could prove faulty and constitute a risk of fire on a hot point particularly if the lagging of the exhaust pipe is fragmented.

2 - 2015-E-077: In the framework of the fire prevention and firefighting, crews should have a good knowledge of the equipment and their operation on board their vessels.

3 - 2015-E-078: In case of accident, all the available means of alert should be used (DSC - emergency beacon).

4 - 2015-E-079: During an evacuation, lifejackets must be worn.

5 - 2015-E-080: The liferaft activation device should be able to operate permanently.

Safety recommendations:

To the shipowner (for the sistership, *LE JOKER*):

1 - 2015-R-015: to install an adequate protection against splashed fuel oil from connections and pipes located in the vicinity.

2 - 2015-R-016: to explore the possibility of installing a CO2 fire-extinguishing system remote control at the bridge.

To the administration:

3 - 2015-R-017: to direct the CSN (vessel safety centre), during periodic surveys, to pay a particular attention to the complete lagging of the exhausts.

Collision between the motor yacht *WHAT ELSE* and the cutter *PASTAGA* at 1 mile in the north-west of *Pointe à Colombier* (*Saint-Barthélemy* Island) on 25 may 2015 (1 casualty, 2 severely injured).

Summary:

On 25 May 2015 in fair weather conditions (east south-easterly wind force 3 to 4, moderate sea state with swell) the motor yacht *WHAT ELSE* sailed from *Baie de Saint-Jean* anchorage (*Saint-Barthélemy* Island) with two crewmembers and nine American passengers, for a short crossing to *Saint-Martin* Island where they were expected on board a private aircraft. After she rounded *Pointe à Colombier*, the speed was set to 18 knots and, as the master assessed that the sailing area was clear on the bow, the autopilot was set on, heading 290°.

WHAT ELSE's track was monitored by the master with an iPhone dedicated to navigation and secured on the control panel (The ship-born GPS was out of order).

On the same day in the early afternoon, the cutter *PASTAGA* sailed from *Tintamarre* Island anchorage together with two other sailboats, bound to the port of *Gustavia* (*Saint Barthélemy* Island).
Apart from the skipper, the crew was made of four persons, among whom an experienced female crew member.

Around 4.00 pm, after sailing past on the east side of *Fourchue* Island, she was heading south at about 5 knots (her mainsail and her genoa were trimmed for close-hauled sailing, on the port tack), in order to clear the islet delimiting *Colombier* inlet.

After a while spent looking, the skipper noticed that he was heading for collision with a large craft (whom he did not identified), located at about 2 miles. Knowing he was « stand-on vessel», he kept her course.

Focused on the settings, *WHAT ELSE*'s master did not see *PASTAGA*, when the two vessels were still at a sufficient distance from each other to manoeuvre safely.

A couple of minutes later, as a last resort, *PASTAGA*'s skipper put the helm hard-a-starboard to pay off. At this instant *WHAT ELSE*'s master looked up and saw *PASTAGA*'s mast, very close ahead: then he only had time to return the power levers to the neutral position.
The collision occurred before *PASTAGA*'s skipper and *WHAT ELSE*'s master could slack the sheets of the mainsail and of the genoa for the first one and shift to manual steering for the latter.

WHAT ELSE's bow penetrated deeply in *PASTAGA*'s hull and deck. During the following minutes, the skipper made a rapid assessment of the situation: his female crewmember sustained a fatal head injury, he and his partner were injured, their daughter and her friend were unharmed. *PASTAGA*'s deck was devastated, the hull had a 3-4 metre breach and the vessel was beginning to sink.

At the same time *CROSS Antilles-Guyane* was informed by *WHAT ELSE* and a rescue operation organized itself with the vessels in the vicinity; the four shipwrecked were rapidly picked up by a motor boat who was heading to *Anse de Colombier*.

The nine passengers of *WHAT ELSE* had been transferred on another vessel just after the berthing at *Gustavia*.

In addition to the commentaries formulated during the consultation period by the directly interested parties, the final report takes into account the analysis conducted by NTSB, the transcripts of the hearings, done by the US Coast Guard, of two *WHAT ELSE*'s adult guests, American citizens, as well as the analysis done by maritime professionals who are also experienced skippers.

Safety lessons:

1 - 2015-E-081: Whatever the navigation mode, the AIS in Transmitter - Receptor mode is a valuable help to get a reliable VHF contact.

2 - 2015-E-082: Visual navigation involves risks of uncertainties and inaccuracies which require, in addition to a permanent visual lookout, more anticipation (over time) and margins (for headings and distances) than with common use electronic aids.

3 - 2015-E-083: *BEA*mer informs MAR, *WHAT ELSE*'s flag authority, that the ship-owners of pleasure crafts of 24 metres or more in length, registered at RIF and commercially operated, have to request a manning certificate prior to any commercial operation. After examination, RIF issues a manning form.

Safety recommendations:

*BEA*mer does not issue any recommendation related to the skills of *WHAT ELSE*'s master and *PASTAGA*'s skipper in accordance with human factor analysis criteria commonly used by IMO.

to Master Ski Pilou Company:

1 - 2015-R-018: to fit with AIS transmitter - receptor the fleet of vessels that it owns or technically manages.

2 - 2015-R-019: to man the vessels operated as charter with three crewmembers (two sailors dedicated to shiphandling and one steward/hand).

Summary of simplified reports (RES) published in 2015

(events occurred in 2014 and 2015)

PS : Marine safety investigation reports are published on the *BEA*mer's website.

Stranding of the trawler *L'ESTRAN*, on 20 January 2014 in the port of *Saint-Guénolé-Penmarc'h*.

Summary:

While the trawler *L'ESTRAN* was sailing from the port of *Saint-Guénolé-Penmarc'h* bound to her fishing grounds, she grounded in the channel due to the wind and the stream. The attempts to refloat her were unsuccessful. A pollution boom had been installed. The vessel did not come upright and flooded when the tide came in. She had been refloated later and send to a ship-repair yard. The damages were important.

Safety lessons:

1 - 2015-E-001: A higher level of vigilance particularly in a narrow channel, would have prevented the grounding.

2 - 2015-E-002: The closing of the watertight doors would have prevented to exacerbate the consequences of the grounding.

3 - 2015-E-003: A pre-existing coordinated preparedness plan (port authority /CODIS (local operational emergency centre)/shipowner) would have helped to manage this maritime event which occurred in the administrative boundaries of the port and particularly, to give better consideration to the shipowner's expectations.

Maritime accident at work on board the dredger *FRAVAL*, on 4 February 2014 in Seine Bay.

Summary:

The dredger *FRAVAL* was fishing in Seine Bay and was hauling her scallop dredges. While a dredge bar was on the after deck, a seaman came between this bar and the winch which was pulling. The seaman got stuck and sustained a fracture. After a radio medical consultation, the vessel headed to *Port en Bessin*. The injured was disembarked and evacuated to a hospital.

Safety lessons:

1 - 2015-E-008: The positioning of one or more video cameras should ensure that the whole working deck is displayed and more particularly that the danger areas (winches, gantries …) are monitored.

Maritime accident at work on board the research vessel *THALASSA*, on 4 February 2014 at 35'/west/Esbjerg (Denmark)

Summary:

The research vessel *THALASSA* was testing a winch off the western Danish coasts. During the hauling of the cables a rating had a finger crushed. After a radio medical consultation, *THALASSA* got closer to the port of Esbjerg. The injured was transferred to the pilot boat, disembarked and evacuated to the hospital at Esbjerg.

Safety lessons:

1 - 2015-E-012: The speed of a winch should be adjusted when a human intervention is required.
The company assessed this risk and took the adequate measures.

2 - 2015-E-013: An operation, when a team is involved, must be preceded by a briefing on the spot with the various stakeholders in order to remind the working process and the risks involved.

Maritime accident at work (man overboard) on board the trawler *ST ALOUR*, on 20 February 2014 at 120 miles west of *Penmarc'h*.

Summary:

After she sailed from the port of *Loctudy*, the trawler *ST ALOUR* headed to her fishing grounds. During the trawl shooting operation, a chain broke, wrapped around the deck mate's foot and dragged him to the sea. This seaman, who was wearing a PFD, held at first onto an otter board then onto a lifebuoy that had been sent to him. He was then recovered on board. He was suffering minor injuries as well as the skipper who was injured while helping him to re-board.

Safety lessons:

1 - 2015-E-009: Attention must be paid to ensure that the equipment used do not deteriorate over time (wear, distortion, oxidation), which constitutes an alert before the rupture (cf. *BEA*mer simplified reports on the accident of the trawler *ALF*, on 21 March 2013 and the accident of the dredger *LE SOLEIL*, on 26 February 2014).

2 - 2015-E-010: The wearing of a PFD kept afloat the man who felt overboard.

3 - 2015-E-011: The information of the competent rescue centre should be systematic in case of man overboard.

Foundering, following an ingress of water, of the trawler *L'INDOMPTABLE* in the Bay of *Saint-Brieuc*, on 24 March 2014.

Summary:

During a crossing at night, from the port of *Le Légué* to *Saint-Brieuc* to carry out repairs, the crew of *L'INDOMPTABLE* felt a violent jolt and observed an important water leak located below the shafting. The steering room was also flooded and the pumping means proved insufficient to avoid the foundering. The crew who embarked the raft had been quickly rescued by the *SNSM* (French maritime rescue organisation).
The unforeseeable hit, at night, with a midwater floating object is the most likely cause of the event.

Safety lessons:

1 - 2015-E-030: Watertight subdivisions would have probably made it possible to contain the water ingress.

2 - 2015-E-031: The good management of the event by the crew (MRCC information, manual activation of the beacon, preparation of the raft, portable VHF taken aboard …) contributed to a rescue, carried out at night, in March, without any human loss.

Foundering of the liner *MAIATZEKO LOREA*, occurred on 19 April 2014 at the end of the night off *Capbreton*.

Summary:

Soon before arriving on her fishing grounds, on the edge of *Capbreton* canyon, a massive water ingress occurred in the engine room of the vessel and spread to the ice compartment and to the forequarter. The cause of this flooding has not been determined with certainty. The crew embarked on board the liferaft and the vessel sank within minutes.
The crew was quickly rescued by other fishermen present in the vicinity.

Safety lessons:

1 - 2015-E-035: Pre-sailing checks should include a test of the flooding alarm.

2 - 2015-E-036: Global Maritime Distress and Safety System equipment, particularly DSC, and VHF channel 16 should be given priority to inform the competent MRCC.

3 - 2015-E-037: Fishing vessels of less than 12 m in length, built before 1st September 1990, are more vulnerable in the event of seawater flooding due to the absence of watertight subdivisions (cf. investigation reports on recent maritime events as: *ALEXIS*, *L'OKEANOS*…).

Fire on board the passenger vessel *ENEZ EUSSA III*, on her arrival in the port of *Brest*, on 1st May 2014.

Summary:

While, coming from *Le Conquet*, *ENEZ EUSSA III* was arriving in the evening in the port of *Brest* a fire started in the port exhaust manifold. Smoke spread particularly in the passenger accommodation space. The port engine was shut down. The crew took the emergency measures. The vessel came alongside soon after and the firefighters intervened. No passenger or crewmember was injured. The fire had been caused by a failure of the port engine turbocharger.

Safety lessons:

1 - 2015-E-018: The crew reacted efficiently to control the start of the fire, preserve passengers' safety and inform the harbour master.

2 - 2015-E-019: The berthing service was on scene and could have replaced the crew, if necessary, to dock the vessel or stand-by seawards to deal with any emergency.

3 - 2015-E-020: The fitting, by the maritime company, of a nozzle fed by a fire hose (valve and hydrant) to ensure the cooling of the upper part of the machinery casing and facilitate the fight in case of a same-type event, proves relevant.

4 - 2015-E-021: The smoke in the main passenger accommodation space was probably coming on one hand from the engine room access door, frequently opened, on the other hand from the air vents located on the upper deck and on the funnel deck. This situation should lead the shipowner to reflect.

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Fire on board the netter *LE MERCENAIRE*, on 27 May 2014 west from *Plateau des Birvideaux*.

Summary:

While *LE MERCENAIRE*, based at the port of *Lorient*, was shooting her fishing gear in the vicinity of the *plateau des Birvideaux*, the fire alarm triggered in the engine room. The CO_2 was activated. The fire was under control but a water ingress occurred in the engine room. The vessel was kept afloat only thanks to her inherent buoyancy, she was then towed alongside. The crew was sound and safe. The water ingress was due to the seawater filter damaged by the fire.

Safety lessons:

1 - 2015-E-047: A good prevention against fire risks (removing oily rugs and oil drums after oil change, switching off the inspection lamp after use) and the enforcement of the elementary fighting rules (investigation as soon as the alarm is activated, closure of the fuel valves) would have minimized the damages due to the fire.

2 - 2015-E-048: The fitting of a raceway through the bulkheads had compromised the watertight integrity of the subdivisions. For the records, any modification must be subjected to a declaration from the ship operator to the relevant authority responsible for the issue of safety titles (art. 55-II of decree nr 84-810 on 30 August 1984 modified).

3 - 2015-E-049: The PFD must be worn during fishing operations by persons at risk (ref. decree 2007-1227 on 21 August 2007). Wearing a life jacket in such an abandon ship emergency situation was fully justified.

Maritime accident at work on board the potter *INTROUN VARIA AN ESPERANS*, on 21 June 2014 off Cornwall (UK).

Summary:

While the vessel, departed from *Roscoff*, was shooting strings of pots at about thirty miles of the English coast, the engineer's foot was caught and cut by a rope. The seaman was swept overboard. A hand dived in the water to rescue him, another one cut the string. The skipper slowed down and manoeuvred to recover both seamen. After a radio medical consultation, the sailor was airlifted by a helicopter to Falmouth hospital.

Safety lessons:

1 - 2015-E-032: A physical separation between deckhands and moving strings during the pot shooting operations could have reduced the risks of accident. As a reminder, the (French) rule 226-2.25 gives the framework of the design of the working spaces on board fishing vessels (12/24 meters).

2 - 2015-E-033: The item of the risk assessment document (DUP) corresponding to the danger of this work station has to be updated and known to all.

3 - 2015-E-034: The wearing of a PFD by the injured sailor swept to sea and by the rating who assisted him contributed to their fast rescue.

Capsizing of the fishing vessel *THE ROLLING STONES*, on 22 June 2014 in *Port-en-Bessin* approaches.

Summary:

While she was bottom trawling, the trawler *THE ROLLING STONES*, based at *Port-en-Bessin*, caught in her trawl a rock of about 3 metric tons which she could not lift. She headed thus at low speed to the port but when she altered course, she capsized. Both crewmembers were thrown to the water, they managed to climb onto the hull which eventually sank. They were recovered by a rescue party alerted by the emergency beacon.

Safety lessons:

1 - 2015-E-014: Dangers of suspended loads remain under-estimated by skippers of small fishing vessels. The vessel could have been salved letting go quickly the fishing gear after the cable failures.

2 - 2015-E-015: The critical situation (loss of stability, cable failures) justified the wearing of lifejackets.

3 - 2015-E-016: The beacon not equipped with a GPS did not allow the fast detection of the position of the accident.

4 - 2015-E-017: The regulation does not prescribe for this type of vessel any limitation of the winch pulling force which could have avoided the load to “take off” and the outbreak of a suspended load effect.

Collision between the trawler *MOOREA* ant the tanker *FRONT NJORD* on 13 July 2014 at the entrance to the Saint-Nazaire fairway.

Summary:

While the Chinese tanker *FRONT NJORD*, coming from Ghana, was approaching the port of Saint-Nazaire entrance fairway, heading a north-easterly course, the trawler *MOOREA* based at *Le Croisic*, was trawling on a southerly course. Both vessels were heading for collision. The rating of the watch on board the trawler felt asleep and did not see the tanker closing. The officer of the watch on board the tanker assessed to be on the stand-on vessel and waited the last moment to manoeuvre. The collision was unavoidable. The damages on the tanker were unimportant but the bow of the trawler was dented and the man of the watch had been seriously injured.

Safety lessons:

1 - 2015-E-050: This collision highlights breaches of rules 5 (lookout), 8 (Action to avoid a collision) and 17 (Action by stand-on vessel) of COLREG (The international regulations for preventing collisions at sea), cf. *BEA*mer investigation on *ELLUMA* and *ARKLOW BEACH*.

2 - 2015-E-051: *BEA*mer notes that the provisions of decree nr 2005-305 issued on 31 March 2005 on seafarers' hours of work, and more particularly chapter III articles 19-I and 19-II, cause problems of enforcement for vessels fitted out for offshore fishery or for coastal fishery.

3 - 2015-E-052: Time spent alongside to land the prawns did not allow the crew and particularly the sailor who had to take over the watch on departure, to get enough rest.

Collision between the research vessel *PRINCESS* and the Maltese cruiser liner *MEIN SCHIFF 1* on 10 August 2014 in the port of Bergen (Norway)

Summary:

During a manoeuvre to moor alongside, *PRINCESS* who had not been able to stop her backing way collided the cruiser liner *MEIN SCHIFF*. The collision, with exclusively material consequences, was caused by the failure of the servomotor body which monitors the propeller pitch of the research vessel.

Safety lessons:

1 - 2015-E-073: In the case of a manoeuvre to be done in a port where it is difficult, even impossible, to cast anchor, it is preferable to provide for a tug assistance.

Stranding of the netter *L'OCÉANIDE*, on 15 August 2014 on the beach at *Gwendrez-Plouhinec* (29).

Summary:

After she had moored her nets, the netter *L'OCÉANIDE* was sailing back to the port of *Audierne* under autopilot control. The speed was of about 6 knots. Some hours later, while the skipper was reading, *L'OCÉANIDE* stranded on the beach of *Gwendrez* at *Plouhinec*. A major leak arose.
The crew was evacuated, the engineer was suffering a wrist injury. The vessel would be refloated and dismantled afterwards.

Safety lessons:

1 - 2015-E-022: Every vessel shall at all times maintain a proper lookout by sight and hearing as well as by all available means appropriate in the prevailing circumstances and conditions so as to make a full appraisal of the situation and or the risk of collision (COLREG - rule 5 lookout).

2 - 2015-E-023: A relevant setting of the navigational aids could have helped to draw the skipper's attention to the proximity of the dangers.

Collision between the pilot boat *MISTRAL* and the pleasure craft *DORIS II*, on 20 August 2014 in the bay of *Ajaccio*.

Summary:

At night, in the port of *Ajaccio*, the pilot boat, after she had re-embarked the pilot having assisted a ferry, was heading back to the *môle croisière* (cruise ship quay). For this purpose the pilot boat made a loop and crossed on the aft of the ferry. In the same time, the pleasure craft was entering the port. She was focused to her destination. The pilot boat skipper's attention was focused to the manoeuvre. Despite last minute manoeuvres, both vessels collided. Three persons were wounded on board *DORIS II*.

Safety lessons:

1 - 2015-E-053: In approaches to harbours, with very bright surroundings, a proper lookout is particularly necessary to prevent collisions.

Collision between the trawler *ELLUMA* and the cargo vessel *ARKLOW BEACH*, on 22 August 2014 off *Pointe de Penmarc'h*

Summary:

The trawler *ELLUMA* was sailing back to the port of *Le Guilvinec* - east-north-easterly course -. The Dutch cargo vessel *ARKLOW BEACH*, coming from *La Rochelle* and bound to Dunkirk was heading a north-westerly course to round the Brittany peninsula. The crew of the trawler was sorting the catches on the after deck and the lookout was not maintained. Shortly before the collision, the mate on watch at the bridge of the cargo vessel blew the horn but did not manoeuvre. The impact was severe and the bow of the trawler was crushed. The skipper and the hand of the trawler were wounded.

Safety lessons:

1 - 2015-E-029: This collision highlights breaches of rules 5 (lookout), 8 (Action to avoid a collision) and 17 (Action by stand-on vessel) of COLREG (The international regulations for preventing collisions at sea).

Fire and subsequent foundering of the fishing vessel *REGARDE AILLEURS*, on 11 September 2014 in the Seine Bay.

Summary:

While the trawler *REGARDE AILLEURS* was trawling in the north of *Port-en-Bessin*, the skipper started the hydraulic pump in order to haul in a few meters of warps for an adjustment. A fire broke out rapidly in the engine room. The engine was shut down, the crew fought the fire with extinguishers but without success. The alarm was raised, the crew evacuated onto the raft. The vessel sank soon after.

Safety lessons:

1 - 2015-E-058: Hydraulic hose manufacturers recommend their replacement every 5 years when under heavy loads conditions, regular checking makes it possible to detect a possible deterioration.

2 - 2015-E-059: Aboard older fishing vessels, fire detection does not exist and firefighting means are limited. A fire detection system can save valuable minutes.

3 - 2015-E-060: Aboard small fishing vessels, consequences of accidents or failures can be worsened because it is difficult to move within the accommodations and to access to the engine compartment (ref.: 2014-E-034 – RES on the fire aboard *JOLENN*).

4 - 2015-E-061: The plugging of the engine room air vents by hinged plugs would be safer than by removable plugs.

5 - 2015-E-062: the presence on board of a gas cylinder, and more generally gas storage, impact significantly on the emergency response time.

Men overboard aboard the potter netter *ISLE D'HER*, on 12 September 2014 in the south-east of *Belle-Île* (one fatality).

Summary:

During the shooting of a pot string in the south-east of *Belle-Île*, a seaman from *ISLE D'HER* was swept to sea by a rope loop. The skipper reversed immediately the engine. The other hand still on board took a knife and jumped in the water to attempt, in vain, to free his colleague caught in the pot string. A rescue operation was initiated. The seaman who jumped in the water would be recovered by a sailboat but the one who had been swept by the string disappeared.

Safety lessons:

1 - 2015-E-040: Any new fishing activity on board a vessel have to be subject to prior risk assessment with the support of the *Institut Maritime de Prévention* (Maritime prevention institute) when appropriate. The results of the assessment have to be added to the unique professional risk assessment document (DUP) and known of all in the crew.

2 - 2015-E-041: PFDs must be subjected to regular check and worn during fishing operations (ref. Art.9 of decree nr 2007-1227 on 21 August 2007).

3 - 2015-E-042: A procedure to recover a man overboard must be established (role of each one, lifebuoy, re-embarkation, etc. …) and known of all. Practical trainings could help to learn appropriate actions.

4 - 2015-E-043: A knife in the belt secured into its sheath or close to the working station is a seaman personal equipment recommended to face risks (*BEA*mer/CNPMEM/IMP leaflet - netter - prevention of shooting accidents - downloadable on the *BEA*mer website).

Stranding of the netter *ARGENTARIO*, on 15 November 2014 on the beach at *Saint-Gilles-Croix-de-Vie*.

Summary:

The netter *ARGENTARIO*, from *Île d'Yeu* had to go to the port of *Saint-Gilles-Croix-de-Vie* to refuel and to embark two hands. On arrival, at the south buoy, the skipper woke up his crew and got back to the wheelhouse. It seems that he felt asleep soon after. The netter stranded on the beach. However the damages were minimum. It is to be noted that the previous fishing trip had been very demanding due to the bad weather conditions and had caused crew fatigue.

Safety lessons:

1 - 2015-E-038: *BEA*mer observes that the provisions of the decree nr 2005-305 on 31 March 2005 on seafarers' hours of work and more particularly chapter III Article 19-II: « For every seven day period, the minimum rest period aboard fishing vessel must not be less than seventy-two hours » cause enforcement problems for the position of skipper of a netter practicing offshore fishery (in this case: 6 day fishing trips).

2 - 2015-E-039: Delaying the getting underway for a dozen of hours after several days of intense work at sea and ashore would have allowed to get a restorative sleep.

Snagging and subsequent foundering of the trawler dredger *ST ANTOINE DE PADOUE*, on 3 January 2015 in the Seine Bay.

Summary:

While *ST ANTOINE DE PADOUE*, based at *Port-en-Bessin*, was dredging, the fishing gear snagged on rips. The rating on watch increased the engine speed to clear the danger, one of the dredges (starboard) was freed but the other (port) snagged. The vessel keeled and then capsized; the crew evacuated onto a raft. The alarm was raised by a flare. The vessel sank. The crew was airlifted by a helicopter.

Safety lessons:

1 - 2015-E-063: Handling a vessel dredging in an area where snagging is frequent and where the stability can be put at risk (dissymmetrical snagging) requires greater vigilance.

2 - 2015-E-064: For fishing vessel shipowners: if the replacement of the beacon of their vessel has to be done before the so called 2G new generation beacons are available (should be put on the market in 2019 and allowing thus to benefit from advanced features of the new MEOSAR system) their vessel can be equipped with a 1st generation beacon fitted with a GPS receiver (references 2013-R-024: vessel *TOIRETTE* and 2014-E-19: vessel *AN DIVELIOUR*). This will make it possible to improve the performance of the location system.
Currently and according to the *Agence Nationale des Fréquences (ANFR* – French radio frequency agency), only 32% of the fishing vessels are equipped with a beacon fitted with a « GPS receiver ».

3 - 2015-E-065: On board fishing vessels, attention must be drawn to:

- variation of weights and locations on board,
- compliance with the operating conditions,
- check of the stalling force of the fishing gear winches.

Hard pitching on board the passenger vessel *OGIA*, on 1st May 2015 in the approaches of *Île d'Yeu* (16 injured).

Summary:

On 1st May 2015, 16 injured on board the passenger vessel *OGIA*, owned by *La Compagnie Vendéenne*. The incident, caused by a hard pitching, occurred in the approaches of *Île d'Yeu* while *OGIA* navigated at 16 knots in a moderate sea state with swell. *BEA*mer conclusion is that a speed reduced to 12 knots would have made the crossing more comfortable and limited the risk for passengers to be propelled out of their seats or of the fore benches.

Safety learnings:

1 - 2015-E-068: The use of the benches located at the fore part of the main deck lounge presents a risk to the passengers when the vessel rolls or pitches.

2 - 2015-E-069: The use of armchairs fitted with a system enabling the passengers to hold better when the vessel rolls or pitches would have limited the risks of ejection.

3 - 2015-E-070: The armchairs located where the motions of the ship are less strong (central and after areas) could be proposed to the most vulnerable passengers.

Fire on board the cable-layer *ILE DE SEIN* on 5 May 2015 at Honolulu (USA)

Summary:

On 5 May 2015, fire in the engine room on board the cable-layer *ILE DE SEIN*. The incident occurred during a technical stop of the vessel at Honolulu. The fire was caused by a leak of pressurised fuel vapours towards the exhaust of a running Diesel-alternator. *BEA*mer conclusion pointed out that the operating errors could be caused by the fatigue of the engine team which joined on the previous day after a long journey.

Safety lessons:

1 - 2015-E-071: Under the authority of the master, the crew dealt with this risky situation by applying the reflexes developed during regular safety drills.

2 - 2015-E-072: The crew's attention should be drawn to the fact that the closure of a fuel tank sounding pipe, only by the ball-valve, do not provide vapour tightness.

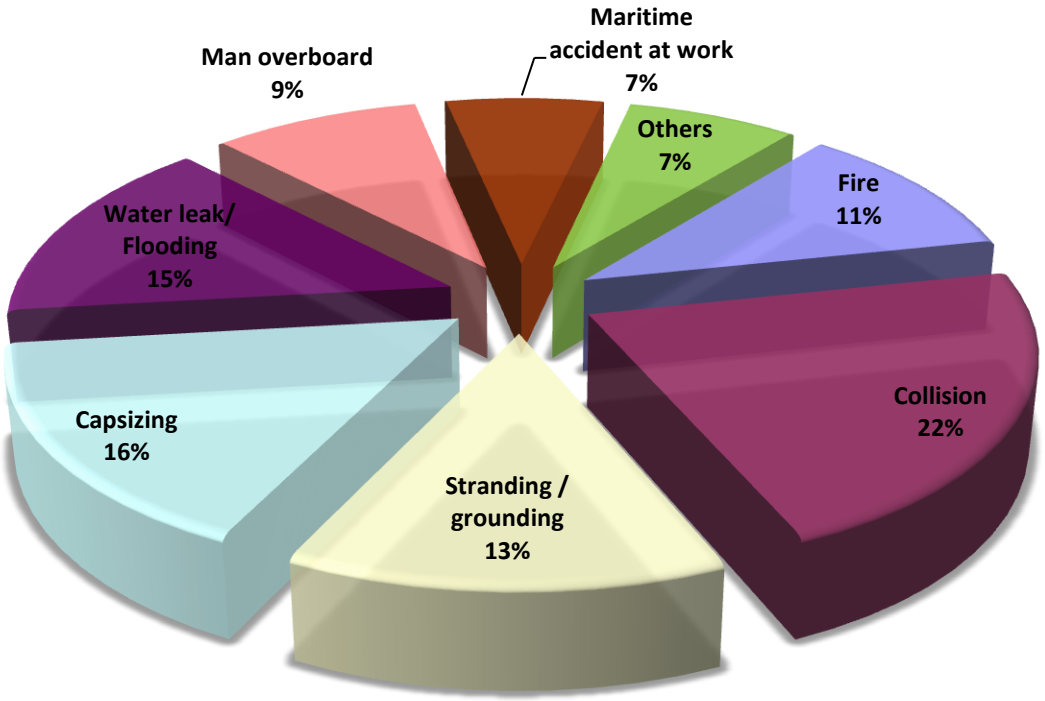
Fishing safety tips

Fishing safety tips

Methodological introduction:

Some years ago, *BEA*mer had released fishing safety reminders based on the study of a hundred of accidents.

This year, in line with this idea, *BEA*mer intended to extend the study to cover a dozen years, which represents 369 investigations that are distributed according to the chart below.



Nota: Accidents at work listed are those which have been subjected to a report.

These figures show the main types of accident, which give the road map of actions. In order to contribute to prevention, *BEA*mer proposes the following safety tips, non-exhaustive, often obvious, easy to follow and likely to lessen the accident rate.

The tips

LOOKOUT: maintain a continuous lookout by sight. Get the most of the equipment useful to avoid collisions (radar, AIS…). Anticipate situations.
Of course, only qualified seamen should be in charge of the watch (this includes the correct use of the radar) and physically fit.
The visibility in the wheelhouse must not be impaired by poorly placed equipment.
Beware of the loss of visibility caused by very bright deck lights.
The International Regulations for Preventing Collisions at Sea must be rigorously enforced (pay particular attention to Rule 19 Conduct of vessels in restricted visibility).

FATIGUE: beware of cumulative fatigue. Rest whenever you have the opportunity to do so. Don't take over the watch if you feel too tired and leave a colleague with it.
Don't shunt the « Deadman » control.
Beware to some seasonal fisheries which cause extra fatigue at the end of the week.

MAN OVERBOARD: wear your PFD.
Reflect on the procedure, for your crew, to recover a man overboard, write it in the *DUERP* (single assessment document for professional risk), display it and overall train everyone.

MARITIME ACCIDENTS AT WORK: enforce the instructions of the leaflet « netters » (available on the *BEA*mer website).
Get familiar with the vessel's *DUERP*.
Have a « critical » attitude on safety when using fishing gear.
Improve, if necessary, the ergonomics at the work station seeking advice when appropriate from a specialized organisation.
Wear your personal safety equipment in its entirety.

ALERT: call immediately the MRCC even if the incident seems initially low. Actually, in case of worsening of the situation, a precious time would be gained to operate the rescue party.
Consider using (all the crew must be familiar with its location and use) the emergency beacon if necessary.

FIRE: maintain the lagging of the exhaust pipe in a perfect condition. Check the perfect condition of fuel and oil hoses and connections close to hot points (exhaust, turbo), add screen when appropriate.
Verify regularly fire detectors. Install a CO_2 extinguishing system even if not required.

OPENINGS: always keep the freeing ports open.
Close, especially under adverse weather conditions, all the openings: doors, hatch covers, portholes ….

FOLLOWING SEAS: be very vigilant in rough following seas.
Alter course and/or speed to avoid dangerous situations.
Close the openings (doors, hatches …).

WATER LEAKS: maintain hull, bulkheads, sea connections, stern tube, valves, pipes etc. … in perfect condition. Beware particularly of corrosions in the after parts of vessels made of steel subjected to vibrations and important strains.
Check very regularly sacrificial anodes.
Check the hull condition at trawl doors chafing areas.
Test regularly the water ingress alarm.
Everyone on board must know how to operate rapidly the pumping means.

SNAGGING: be very vigilant during clearing manoeuvres. Don't use the energy of the swell. Use the propelling power with utmost precaution. Don't insist, cut, mark and when possible grapple afterwards.

STABILITY: Don't modify your vessel and more generally weights in mass and position (gantry, winch, metal hull doublings, warp diameter, etc. …) without agreement of the safety centre.
Comply with the operation conditions of the navigation licence.
Check the watertightness of watertight bulkheads.
Beware of free-surface-effect in the holds or in the engine room.

CONTINUOUS TRAINING: use every opportunity (training courses, demonstrations, vendors' advices…) for safety training.
Train as much as possible particularly on board own vessel in order to get a good knowledge of the equipment, its location and its operating procedure.

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