



Annual report 2013



Bureau d'enquêtes sur les événements de mer

Annual report 2013



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For your information, the official version of this report is written in French language. The translation in English language is proposed to facilitate the reading of this report to those who are not French speakers.

Appendixes:
(These appendixes are only available in the French language edition of this report)

- A.** Classification of the marine casualties according to the IMO code for the conduct of investigations;
Obligation to investigate established by directive 2009/18/CE on marine casualty investigations.
- B.** The investigation work 2013.
- C.** Recommendations issued in the safety investigation reports (*rapports d'enquête technique RET*) published in 2013 and follow-up.
- D.** Lessons learnt from the simplified reports (*rapports simplifiés RES*) published in 2013.
- E.** International cooperation. Main marine casualties 2013.
- F.** Recommendations fundamental reminders;
Taking stock of five years of fishery casualties.

Year 2013

In 2013, the maturing process, set up by *BEA*mer for filtering and sorting maritime casualties, allowed to take into account more specifically 56 maritime casualties which were subjected to a « *enquête technique* » safety investigation, figure up with a number of fatalities comparable with last year figure.

Along with its investigations and enquiries, *BEA*mer has carried on the started actions:

➤ **On the international ground with:**

- The careful enforcement of all the provisions of directive 2009/18/EU on marine casualty investigations (transposition by decree nr 2012-668 dated 4 May 2012);
- The participation within the framework of permanent cooperation, as the same directive stipulates (PCF3 meeting in July 2013 at EMSA headquarters in Lisbon);
- The participation in the different EMSA working groups on the interpretation of the directive and the development of the shared database (EMCIP);
- The participation in the 22nd Marine Accident Investigators International Forum (MAIIF) in October 2013 comprising the safety investigation boards worldwide as well as in the 9th European Forum E-MAIIF in September and in various seminars.

➤ **On the national ground with:**

- Contributions/lectures in several institutions (CEDRE, ENSEM, ENSAM, experts...) with the aim of promoting safety;
- The publication of a synthesis of the studies done by SIREHNA and DGA *Techniques hydrodynamiques* (hydrodynamic techniques) following the sinking of the trawler *L'ÉPAULARD* in 2011;
- The continued participation in the « *SOS stabilité* » program until the publication of the study during autumn 2013;
- At last, it is worse to draw professional fishermen's attention on the synthesis of recurring recommendations, track record of investigations achieved by *BEA*mer during the five last years.

L'Administrateur Général des Affaires Maritimes
Daniel LE DIREACH
Directeur du *BEA*mer



BEAmer

BEAmer 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 (6 executives among whom 5 investigators and 3 administrative staff). On top, since the 1st September 2013, one investigator supplements temporarily the staff. This team is reinforced by a local network of some twenty non-permanent investigators and experts, commissioned to investigate in cooperation with the headquarters permanent investigators. Depending on the events, BEAmer can call on outside experts, chosen on the grounds of their particular qualifications.

The initial allocation for the annual operating budget, not including the wages and the non-permanent investigators' or experts' pay, was 72.500 euros (actual allocation 55.000 euros), to which must be added a budget of 19.000 euros for travel expenses (allowance and fare).

Year 2013 allowed to direct and to make durable our everyday actions firmly committed to effectively implement Directive 2009/18/CE dated 23 April 2009. The transposition work of this directive in the French regulation by a 2012 amendment to decree 2004-85 dated 26 January 2004 and the integration of law 2002-3 dated 3 January 2002 on marine casualty investigations in the "*Code des transports*" (transport code) allowed a wide clarification of the objectives, of the conduct and of the course of marine casualty investigations.

The framework of *BEA*mer missions

*BEA*mer has three basic 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).

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. The local administration representatives (*délégations à la mer et au littoral au sein des directions départementales des territoires et de la mer*) contribute significantly to inform *BEA*mer on work-related accidents.

However, to ensure the most extensive transmission of marine casualty information, *BEA*mer has proposed, since the end of 2013, to the masters (and ship-owners) uppermost of merchant vessels as well as fishing vessels of 15m or more in length who wish, an accident report form which can be e-mailed, once filled, directly to *BEA*mer. It is available on its website, which should change in 2014.

Overview of the activity

Marine casualties 2013

In 2013, the 153 more significant marine casualties have been registered in the main *BEA*mer database (CUMULUS).

128 events involved only one vessel: 33 merchant vessels, 1 leisure craft with professional crew, 76 fishing vessels (44 of those under 15 m in length and 32 of 15m or more in length) and 18 recreational crafts.

25 collisions (50 vessels) complete this list. There were 6 fishing/leisure, 4 merchant/leisure, 7 fishing/merchant, 2 fishing/fishing, 3 merchant/merchant and at last 3 leisure/leisure.

The 128 above-mentioned events can be sorted according to the IMO classification (cf. [appendix A, only available in the French language edition](#)): **very serious** 43, **serious** 41, **less serious** 22 and **incident** 22. Only a small part (15) of the occupational accidents on board professional vessels (fishing vessels, merchant vessels, leisure crafts with professional crew) have been counted up, those which had been subjected to a marine safety investigation by *BEA*mer.

The 25 collisions can be classed as:

- very serious** : 5 involved 1 merchant vessel, 5 fishing vessels (among which 4 under 15 m in length and 1 of 15m or more in length) and 4 leisure crafts ;
- serious** : 6 involved 5 merchant vessels, 3 fishing vessels (among which 2 under 15 m in length and 1 of 15m or more in length) and 4 leisure crafts ;
- less serious** : 8 involved 8 merchant vessels, 6 fishing vessels (among which 4 under 15 m in length and 2 of 15m or more in length) and 2 leisure crafts ;
- incident** : 6 involved 3 merchant vessels, 3 fishing vessels (among which 2 under 15 m in length and 1 of 15m or more in length) and 6 leisure crafts.

56 out of 153 marine casualties had been subjected to a marine casualty investigation with comprehensive reports (15) or simplified reports (41). This number is significantly higher than 2012 (39) and slightly over 2011 (46) and 2010 (49). The number of

fatalities (10) related to these 56 maritime events remains in the same order of magnitude compared with the past years.

The increase of the number of investigations opened in 2013 is partly explained by the fact that as soon as 1st January 2013, BEAmer has voluntarily focused on a more detailed study of the personal/occupational accidents in order to increase the number of investigations which has to date been limited to accidents with fatalities.

After a preliminary evaluation, related to fatal, serious or recurrent accidents, 15 investigations had been conducted 5 of which for commercial shipping and 10 for fishery including 2 investigations with fatalities among which one man overboard. In addition 511 other occupational accidents had been recorded in another dedicated database.

Among these 526 recorded accidents, 1/5th had be the object of a MRCC maritime casualty report (SITuation REPort). For the rest the transmission of the information was done mainly through the local administration (*délégations à la mer et au littoral - DDTM*).

Three categories of personal accidents seem to be recurrent and deserve particular attention from all relevant stakeholders:

- Slip, vessel motion, fall, threshold crossing, climbing down the ladder (30%);
- Fishing gear operation, fishing equipment handling (25%);
- Wrong move, moving or lifting equipment or various loads (20%).

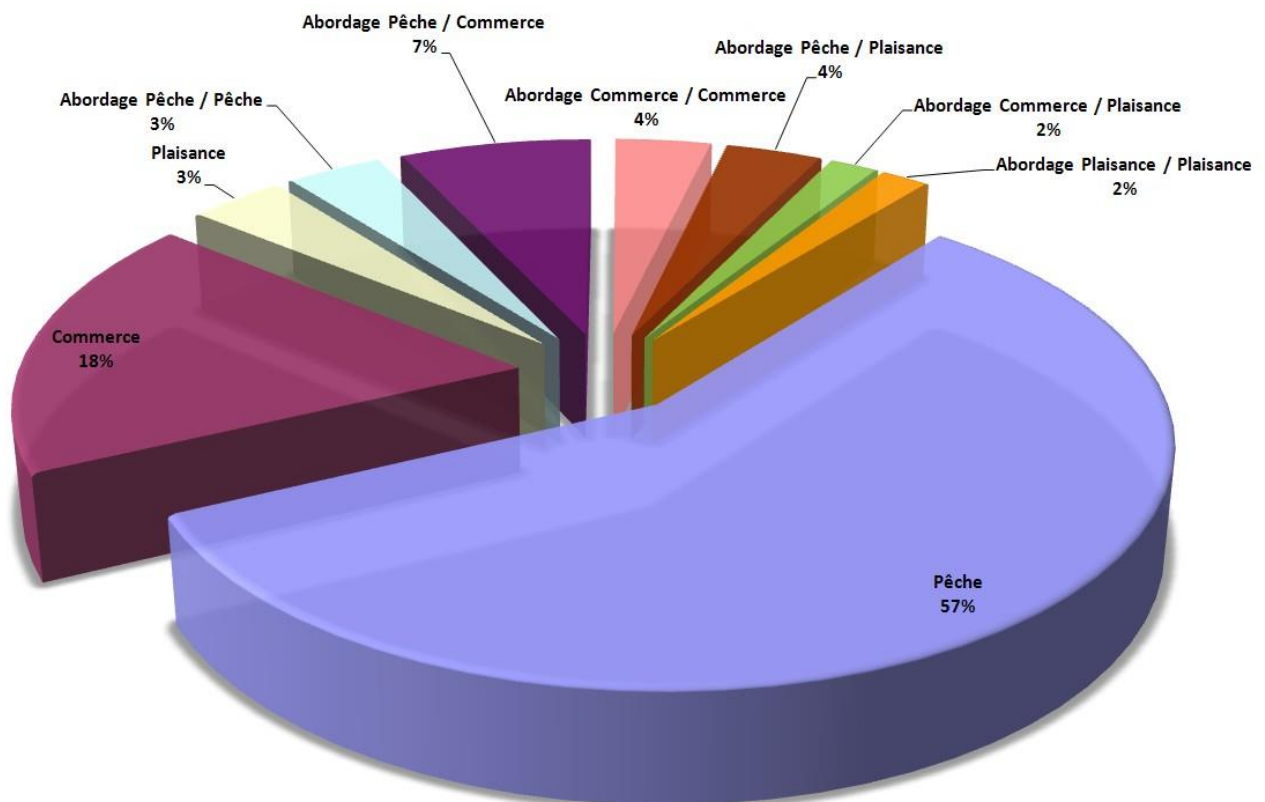
Stakeholders are invited to consult the information available on the « *Institut Maritime de Prévention (IMP)* » (Institute for marine accident prevention) website. This institute plays a key role as a contributor to the development, within the companies, of risk prevention culture: www.imp-lorient.com. BEAmer reminds the leaflet published at the end of 2012 to the attention of the netter crews « *Prévenir les accidents au filage* » (Preventing shooting accident) which is available online on its website.

Several fatal events had involved leisure crafts. Le BEAmer regrets to be unable to open more systematically an investigation, particularly when there are fatalities, as it prioritizes its investigations to the marine casualties in the scope of directive 2009/18/CE, the latter excluding recreational crafts and the fishing vessels under 15m in length.

The number of fishing vessel foundering remains important, mainly after various origin water-leaks. Fishing vessels are involved in 2/3 of the cases, either alone, or with merchant vessels or leisure crafts, which percentage has been constant for several years.

The apparent increase of the number of water-leaks and the decrease of the foundering can be explained by a more discriminating analysis of the causes and of the consequences of events.

Distribution of events Over the 56 investigations opened in 2013



The table below 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**.

Types of casualties	Collision	Occupational accident and personal accident	Capsizing	Dismasting or Mooring lines giving way, Contact	Stranding	Man overboard	Fire, Explosion	Foundering	Touching the bottom	Waterleak	Total
Leisure	-	-	-	1 RET	-	1 RES	-	-	-	-	1 RET 1 RES
Merchant	-	4 RES	1 RET	1 RET 1 RES	2 RET	-	1 RET	-	-	-	5 RET 5 RES
Fishing	-	1 RET 9 RES	1 RES	1 RES	1 RET 2 RES	1 RET	1 RET 5 RES	1 RET 2 RES	-	1 RET 6 RES (1)	6 RET 26 RES
Fishing - Fishing	2 RES	-	-	-	-	-	-	-	-	-	2 RES
Fishing - Merchant	1 RET 3 RES	-	-	-	-	-	-	-	-	-	1 RET 3 RES
Merchant - Merchant	2 RES	-	-	-	-	-	-	-	-	-	2 RES
Fishing - Leisure	2 RET	-	-	-	-	-	-	-	-	-	2 RET
Merchant - Leisure	1 RES	-	-	-	-	-	-	-	-	-	1 RES
Leisure - Leisure	1 RES	-	-	-	-	-	-	-	-	-	1 RES
Total 2013	12	14	2	4	5	2	7	3	0	7	56
2012	6	4	2	1	1	2	6	11	3	1	39
2011	5	3	3	1	10	4	9	8	1	2	46

(1) All the marine casualties related to the RET and the 6 RES « water leak » resulted in a foundering.

The 2013 investigation work is displayed in [appendix B \(only available in the French language edition\)](#).

The international cooperation

International collaboration in the field of marine casualty investigations has proven more and more necessary.

It is encouraged and requested all the more so as its framework is defined by the IMO code for the conduct of marine safety investigations, the European directive 2009/18/CE and the European regulation 651/2011 of the commission adopting the rules of procedure of the permanent cooperation framework.

In 2013, *BEA*mer has cooperated with several foreign boards in the framework of investigations mainly conducted by itself. It has also transmitted preliminary information or given its support in the framework of preliminary assessment or of investigations opened by its foreign counterparts, for marine casualties occurring in the French territorial or internal waters or in international waters if French interest were involved, within the meaning of the IMO code for the conduct of investigations.

A non-exhaustive list of the major marine casualties that occurred in 2013 resulting in an international cooperation is displayed in [appendix E \(only available in the French language edition\)](#).

The studies

Following the foundering of the 19.50 m trawler *L'ÉPAULARD*, on 21st January 2010, *BEA*mer conducted a technical investigation. Information collected during the investigation, as well as the regulatory stability information, had not allowed to clearly identify the causes of the capsizing resulting in the foundering. A number of hypotheses emerged and, according to the ship-owner, the cause of the capsizing could only be due to causes external to the vessel. It is in this unique context that *BEA*mer ordered a dynamical stability study to the naval engineering company SIRENHA and by the *Délégation Générale de l'Armement, Techniques hydrodynamiques (ex Bassin des carènes)* – Administration in charge of naval procurement, hydrodynamic technic division (formerly towing/wave tank department) . The document published in December 2013 on the *BEA*mer website is a compilation of the outcomes of these two studies, carried out independently, and using different simulation tools. Besides the synthesis that the reader can do himself, measures for vessel design and operation are proposed in conclusion.

In parallel, SIRENHA final report for project « *SOS stabilité* », of which *BEA*mer was an associate partner, had been published in October 2013. For the record, small fishing vessel dynamical stability was the core target of the study. *BEA*mer, fully involved in casualty analysis, which launched a number of actions in this area, was interested in the outcomes of the project. As such, and with the agreement of the partners in the project, it was kept informed of the progress throughout, and invited to participate in the review meetings.

The recommendations

In the 14 investigation reports (RET) published during year 2013, *BEA*mer issued 58 recommendations (a same recommendation can be addressed to several recipients) for:

- administrations and maritime authorities (18) ;
- concerned ship-owners (11);
- ship-owners, skippers and crews (19);
- vessel designers or equipment providers (7);
- various services as SHOM, INRS, Météo France and divers (5);
- classification societies (2).

They can be distributed in the following categories:

1 - FISHERY

Good professional practices

- 2013-R-37 : before involving divers to clear propellers fouled by nets or ropes, make a proper analysis of the situation and give priority to a request for a tow;
- 2013-R-39 : a constant visual monitoring between divers during the intervention to clear a propeller.

Communications, language

- 2013-R-28 : For purse seine fishing: fit a camera to monitor the starboard aft alleyway when this one is not in the direct view of the bridge;
- 2013-R-38 : provide a voice communication system between the divers and the surface controller.

Fishing vessel shiphandling

- 2013-R-10 : be vigilant in bad weather conditions;
- 2013-R-13 : use all available aids to navigation and equipment;
- 2013-R-14 : lookout should remain uninterrupted;
- 2013-R-15 : enforcement of COLREG rule 17 ;
- 2013-R-16 : fishing shapes exhibited appropriately;
- 2013-R-50 : do not anchor close to a windward coast, at night waiting for haul-in, when the weather conditions are bad but prefer to lie to.

Life-saving appliances, survival, rescue

- 2013-R-24 : fit the vessels with beacons with built-in GPS;
- 2013-R-25 : reconsider, in link with the manufacturers, the reliability of the hydrostatic release units;

Management, ISM, crisis management, fail soft mode

- 2013-R-26 : update on a regular basis the *Document unique de Prévention (DUP)* – Safety Folder – with the help of the feedback of the accidents and at first on the risk assessment from a prevention perspective;
- 2013-R-27 : enforce in case of emergency the radio-medical consultation procedure with CCMM (Maritime Medical Consultation Centre) of Purpan hospital in Toulouse;
- 2013-R-51 : ensure that the sailors on board are able to inactivate, if required, the safety devices and restart the engine. Such a training should be done as soon as sailors join the vessel.

Vessel design

- 2013-R-12 : make the regulatory requirements about the stability at larger angles evolve;
- 2013-R-29 : sort out for purse seine fishing, the incompatibility of the towing by the skiff operations, particularly during sets, with the presence of the engine room after escape and of the steering room in the area swept by the towing line;
- 2013-R-49 : limit the positioning in height of heavy equipment in the bridge or split it so that there is not only one unit, and generally speaking, improve their fixing;
- 2013-R-52 : require an adequate protection of the engine emergency stop switch.

2 – COMMERCIAL SHIPPING

Good professional practices

- 2013-R-30 : use all the aide to navigation equipment fitted with systematic correlation;
- 2013-R-42 : avoid « short line » mooring and study a mooring post solution for important windage vessels wintering alongside at *digue du large* – Outer breakwater (port of Marseille);
- 2013-R-47 : to skippers of small flat-bottomed cargo vessels: duly take into account the sea state and breakers areas;
- 2013-R-53 : navigation equipment not approved by the IMO should be used with caution, and the positions should be systematically cross-checked by other approved systems (radar), particularly in narrow waters or inshore;

- 2013-R-54 : warn, even more, officers during apprenticeship on the inherent risks involved in using electronic aids to navigation (GPS in particular) without cross-checking with visual observation and radar.

Communications, language

- 2013-R-31 : respect GMDSS procedures for emergency and safety communications.

Shiphandling

- 2013-R-57 : draw up written procedures in order to preserve, on the bridge, the quality of the lookout and the necessary concentration for navigation, particularly during manoeuvres and in delicate navigation areas.

Administration in charge of marine safety

- 2013-R-48 : for small flat-bottomed cargo vessels be explicit enough about the operational conditions to be enforced, looking particularly at the weather conditions and at the inherent hazards of the frequented areas, these conditions have to be reminded on the navigation licence.

Navigational documents, buoyage

- 2013-R-55 : keep the charts up-to-date, particularly electronic charts and sailing directions; it is stressed that the user of this documentation have to keep in mind to use the best available source for the frequented geographical area;

- 2013-R-56 : reissue chart SHOM 6497 in the geodesic system WGS84 ;

- 2013-R-58 : coordinate the statement of requirements for nautical information and buoyage in the TAAF in consultation with stakeholders involved in navigation in these areas.

Management, ISM, crisis management, fail soft mode

- 2013-R-32 : initiate a safety management process tailor-made for small passenger vessels, based on the ISM code;

- 2013-R-36 : carry out studies and measures such as computations – vessel – wind – current modelling, allowing the mooring limits to be identified, in order to improve the setting of the mooring lines on warping drums, the checking and the maintenance of the brake drums (surface state) and to familiarize the crews with the operating conditions and limits of the electrohydraulic winches;

- 2013-R-41 : during vessel technical stops draw up, in cooperation, protocols controlling the sea-trial planned operations;

- 2013-R-42 : reinforce the arrangements allowing a vessel wintering to cope with a foreseeable deteriorated situation;

- 2013-R-43 : keep the VDR in operation to save data when the vessel is wintering and, a minima, in case of forecast deteriorated situation

- 2013-R-44 : coordinate the study of an action plan to be implemented in the event of exceptional weather forecast, particularly for vessels in laid-up status or wintering;

- 2013-R-46 : detail, through regulation (*Code des ports maritimes* – Maritime port code), the arrangements allowing a wintering vessel to cope with foreseeable deteriorated situation.

Fire

- 2013-R-40 : during the design stage, pay particular attention to the monitoring and the maintenance of the components of heat transfer circuits with thermal oil, taking into account the flammability of the fluids used.

VTS, onshore authorities, Meteorological services

- 2013-R-34 : better comprehend the consequences of the passage of strong low-pressures with a view to clarify the regulation for the port entrance and getting underway in due time if necessary;

- 2013-R-35 : draw up an emergency plan for important windage vessels, in case of severe gale and of risk to break the mooring lines.

3 - LEISURE WITH PROFESSIONAL CREW AND SUPPORT

Vessel / equipment: maintenance, alterations

- 2013-R-02 : declare the alterations made to the vessel;

- 2013-R-08 : administration has to be present for the inclining experiment;

- 2013-R-09 : declare the alterations made to the vessel;

Vessel design

- 2013-R-01 : implement work procedures based on ISO 2001 norms as soon as the beginning of the building;

- 2013-R-03 : get free from cosmetic constraints if contrary to the safety of the vessel;

- 2013-R-04 : ban architectural option if contrary to the safety of the vessel;

- 2013-R-05 : make the regulation evolve so as it includes in division 242 the reference to rule 21 of the international convention on load lines;

- 2013-R-06 : make the regulation evolve so as it includes in division 242 a stability study, similar to that of division 211 for passenger vessels, particularly the consequences of a minor breach;

- 2013-R-17 : confine the batteries of crafts with electrical propulsion in a dedicated tight compartment fitted with a natural ventilation in direct communication with the exterior;
- 2013-R-18 : to designers of electric-powered crafts to submit to the administration a design dossier in accordance with the activity intended by the client;
- 2013-R-19 : fit the battery chargers of electric-powered crafts with an alarm setting up in case of fault in the load circuit;
- 2013-R-20 : update norm NF EN 50272-3 by adapting it to the constraints of marine propulsion;
- 2013-R-21 : study the adaptation of division 236 for electric-powered crafts built for leisure activity and serving as port support crafts.

Life-saving appliances, survival, rescue

- 2013-R-07 : make the regulation evolve by including in division 242 the requirement of a VDR (fitted with a capsule with hydrostatic release unit and floater) aboard vessels over 500 GT.

Port authorities

- 2013-R-22 : take into account the inherent risks linked to the proximity of the various refuelling berths, depending on the type of energy.

The safety **recommendations** issued by *BEA*mer in its investigation reports are subjected to the follow-up thereafter:

1. The so called « general purpose » recommendations are brought to the attention of « all » by the publication of the investigation report on the *BEA*mer website.
2. The recommendations addressed to the administration are subjected to a follow-up in the framework of the *Comité d'Analyse Technique et de Suivi (CATS)* – Technical analysis and follow-up comity which meets once or twice a year. This comity is chaired by the *directeur des Affaires Maritimes* – Head of maritime administration.
3. The recommendations to a specific addressee (ex: the ship-owner) are subjected to an assessment and feedback form annexed to the report, which has to be answered within three months.
4. The recommendations addressed to foreign addresses get seldom feedback to *BEA*mer.

The summary table in **appendix C (only available in the French language edition)** reports the situation of the 2013 **recommendations** at the date of the last CATS held in December 2013 for the investigations published until November 2013. The list of the

lessons issued in the simplified reports is also displayed in **appendix D (only available in the French language edition)**.

Conclusion

As in previous years, two third of the reports published during year 2013, for events occurred between January 2012 and June 2013, are related to the fishery sector.

In this sector, the recurring nature of a number of factors of accident (lookout, professional practices, emergency situations, training, etc.) is still topical. A summary of these observations is again displayed in **appendix F (only available in the French language edition)**.

A more detailed analysis of the various recommendations should allow in 2014 to plan studies or to create notices to promote awareness about marine casualties.



Ministère de l'Écologie, du Développement durable et de l'Énergie

Bureau d'enquêtes sur les évènements de mer

Tour Pascal B - 92055 La Défense cedex
Téléphone : +33 (0) 1 40 81 38 24 - Télécopie : +33 (0) 1 40 81 38 42
www.bea-mer.developpement-durable.gouv.fr
bea-mer@developpement-durable.gouv.fr

