Annual report 2014

20.01.2014 L’ESTRAN

11.09.2014 REGARDE AILLEURS : credit Marine nationale

12.09.2014 ISLE D’HER

27.03.2013 MOUSÉTRAP

02.02.2014 JUST MARIAM credit Marine nationale

Bureau d'enquêtes sur les événements de mer
On 16 February 2015, BEAmer launched its new website. From now on the new website address is:

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

Visibility and ergonomics have been reviewed. The migration of the most recent reports is already done, the recovery of the archives should be done before summer.

Summary:

Year 2014
BEAmer
The framework of BEAmer missions

Overview of the activity
  The events occurred in 2014
  The international cooperation
  The studies
  The recommendations

Conclusion

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

Appendixes:

A. Classification of the marine casualties according to the IMO code for the conduct of investigations;

  Obligation to investigate set out by directive 2009/18/CE on marine casualty investigations.

(The following appendixes are only available in the French language edition of this report)

B. The investigation work 2014.
C. Recommendations issued in the safety investigation reports (rapports d’enquête technique RET) published in 2014 and follow-up.

D. Recommendations issued in the safety investigation reports (rapports d’enquête technique RET) published in 2013 and update of the follow-up.

E. Lessons learnt from the simplified reports (rapports simplifiés RES) published in 2014.

Year 2014

In 2014, BEAmer after filtering and sorting the maritime casualties which had been reported to it, took into account more specifically 33 events which had been subjected to a "enquête technique" / maritime safety investigation, representing 5 casualties (deceased persons).

Along with its investigations and enquiries, BEAmer has carried on the started actions:

- **On the international ground with:**
  - The rigorous enforcement of directive 2009/18/EC on marine casualty investigations, (finally transposed in 2012 with its codification finalised in 2014 in the Code des transports, mainly articles L.1621-1 to L.1622-2 and R.1621-1 to R.1621-38), BEAmer having hosted a visit of the European Maritime Safety Agency (EMSA) in March 2014;
  - The participation within the framework of permanent cooperation, as the same directive stipulates (PCF4 meeting in June 2014 at EMSA headquarters in Lisbon);
  - The participation in the different EMSA working groups on the interpretation of the directive and to those on the evolution of the European Marine Casualty Information Platform (EMCIP);
  - The participation in the 23rd Marine Accident Investigators’ International Forum (MAIIF) in July 2014 comprising the safety investigation boards worldwide as well as in the 10th European Forum E-MAIIF in March.

- **On the national ground with:**
  - Contributions/lectures in several institutions (Documentation, research and trial Centre on accidental water pollutions CEDRE, French maritime high school ENSEM, French maritime administration high school ENSAM, …) with the aim of promoting safety;
  - The design of a new BEAmer website edited and managed by the ministry of Ecology, Sustainable development and Energy for synergy and efficiency reasons, launched in February 2015.

Once again, the number of accidents in the fishery industry remains high. Safety of life at sea requires the constant vigilance of the sailors.
BEAmr

BEAmr is a specialized standing body within the domestic jurisdiction. It is certified ISO 9001 since 2009. The renewal of its certification is scheduled for 2015.

The situation remains unchanged compared to 2013. 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, BEAmr can call on outside experts, chosen on the grounds of their particular qualifications.

As BEAmr 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 of 26,000 euros for travel expenses (allowance and fare).

After the transitional year 2013, year 2014 has contributed to the evolution and the continuation of our daily actions fully engaged in the implementation of directive 2009/18/EC issued on 23 April 2009. The visit of the European Maritime Safety Agency in March 2014 focused on the enforcement of this directive took place in this background.

The codification of all the reference texts on the operation of BEAmr and the conduct of investigations has been completed in 2014 in the Code des transports.
The framework of BEAmer missions

As stipulated in the Code des transports, BEAmer 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 (cf. appendix A) 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 BEAmer comes mainly from services subordinate to the ministry of Ecology, Sustainable Development and Energy: 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 BEAmer on work-related accidents.

However, to ensure the most extensive transmission of marine casualty information, BEAmer 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 BEAmer. It is available on its website, which migrated in the early 2015. In 2014 BEAmer received about 30 reports directly from the ship-owners.
Overview of the activity

Marine casualties 2014

The more significant marine casualties recorded:

In 2014, the 208 more significant marine casualties have been recorded in the main BEAmer database (CUMULUS) which can be sorted according to the IMO classification (cf. appendix A): very serious: 61, serious: 85, less serious: 49 and incident: 13.

- 189 events involved only one vessel:
  - 52 merchant vessels;
  - 108 fishing vessels (48 of those under 15 m in length and 60 of 15m or more in length);
  - 27 recreational crafts;
  - 1 government ship;
  - 1 rescue boat.

- 18 collisions and 1 close-quarters situation between two vessels - near miss - (36 vessels) in addition to the list. There were:
  - 3 fishing/leisure;
  - 3 merchant/leisure;
  - 3 merchant/merchant;
  - 4 fishing/merchant;
  - 4 fishing/fishing among which the close-quarters situation;
  - 1 fishing/government ship;
  - And at last 1 leisure/leisure.
Only the work-related accidents subjected to a maritime investigation by BEAmer are taken into account. They represent a very low part (15) of work-related accidents occurred aboard professional vessel (fishing industry, merchant vessels, recreational with crew).

Maritime work related accidents are taken into account separately. The results are displayed further on.

Regarding the 18 collisions and the close-quarters situation, they can be classified as:

- **very serious**: 2: involving 1 merchant vessel and 3 recreational crafts;
- **serious**: 2: involving 3 merchant vessels and 1 fishing vessel of less than 15 m in length;
- **less serious**: 13: involving 9 merchant vessels, 13 fishing vessels (among which 8 of less than 15 m in length and 5 of 15 m in length or more) and 3 recreational crafts;
- **incident**: 2: involving 3 fishing vessels (among which 1 of less than 15 m in length and 3 of 15 m in length or more) and 6 recreational crafts.

Among these 208 maritime events, **33** has been subjected to a *enquête technique / maritime safety investigation procedure* involving 5 casualties, with full reports (10) or simplified reports (23).
Over the past five years, BEAmer has thus initiated 223 investigations and more than 250 reports had been published and more precisely as detailed thereafter:

<table>
<thead>
<tr>
<th>activity of year</th>
<th>total number of investigations initiated</th>
<th>total number of reports published</th>
<th>full reports published</th>
<th>simplified reports (since 2013) or preliminary investigation reports published</th>
<th>recommendations issued in the full reports published</th>
<th>Lessons issued</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014</td>
<td>33</td>
<td>46</td>
<td>16</td>
<td>30</td>
<td>35</td>
<td>93</td>
</tr>
<tr>
<td>2013</td>
<td>56</td>
<td>47</td>
<td>14</td>
<td>33</td>
<td>58</td>
<td>96</td>
</tr>
<tr>
<td>2012</td>
<td>39</td>
<td>32</td>
<td>6</td>
<td>26</td>
<td>32</td>
<td>Not recorded</td>
</tr>
<tr>
<td>2011</td>
<td>46</td>
<td>63</td>
<td>19</td>
<td>44</td>
<td>64</td>
<td>Idem</td>
</tr>
<tr>
<td>2010</td>
<td>49</td>
<td>90</td>
<td>20</td>
<td>70 (events 2008 to 2010)</td>
<td>87</td>
<td>Idem</td>
</tr>
<tr>
<td>total</td>
<td>223</td>
<td>278</td>
<td>75</td>
<td></td>
<td>276</td>
<td></td>
</tr>
</tbody>
</table>

**Investigations initiated in 2014:**

BEAmer 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.

The number of fishing vessels foundering remains very important, mainly as a result of a water leak, a fire or a loss of stability.

Several maritime events (fishing and merchant) resulting in the initiation of a marine safety investigation (RET or RES) were directly linked with the numerous storms of 2013 and 2014 winters, particularly at the beginning of year 2014.

Accidents with casualties involved also recreational crafts. Taking its workload into consideration, BEAmer regrets to be unable to initiate more investigations in this domain.
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.
In 2014, the marine events related to 3 RES «waterleak» 2 RES «capsizing» and 1 RES «touching the bottom» resulted in a « foundering ».

The 2014 investigation work is displayed in appendix B (only available in the French language edition).
Personal / occupational accidents (injuries):

**Foreword:** The annual review for maritime occupational accidents and illness is not a BEAmer responsibility. This document is issued under the authority of the French Ministry of Ecology, Sustainable Development and Energy (MEDDE) / Directorate for Maritime affairs / Seafarers’ health service.


In addition, the *Institut Maritime de Prévention* (IMP – Maritime Prevention Institute) has also an essential role in contributing to the development of a risk prevention culture within shipping companies: [http://www.imp-lorient.com](http://www.imp-lorient.com)

Finally, maritime labour inspectorates within the *Directions Régionales des Entreprises, de la Concurrence, de la Consommation, du Travail et de l'Emploi* (Ministère du Travail – Labour ministry, Regional directions for Companies, Competition, Consumption, Labour and Employment) disseminate also a certain amount of leaflets and prevention material about maritime occupational accidents.

*BEA*mer, for its part, has intensified its efforts about occupational accidents (injuries) to meet the obligations of directive 2009/18/EC which requests that member states fill the EMCIP with the occurrence of maritime accidents and incidents aboard merchant vessels or recreational crafts with a professional crew and also on board fishing vessels of 15 m in length or more as well as the information of a potential initiation of a marine safety investigation.

To facilitate this work, *BEA*mer keeps current a separate database for the monitoring of the accidents to persons that are brought to its attention.

In 2014, 907 events had been recorded in this database versus 511 accidents in 2013 its first year of implementation, which indicates a better transmission of information, yet far from exhaustive, compared to the official figures published by the *direction des gens de mer* (Seafarers direction) within MEDDE.

So in 2014, *BEA*mer had been able to report more than 200 fatalities and injuries in the EMCIP.
In 2014, after a preliminary evaluation carried out on the basis of the collected information and with an analytic grid which takes into account fatal, serious or recurrent accidents, BEAmer initiated 9 marine safety investigations (5 fatalities). For the record, 15 investigations (2 fatalities) had been initiated in 2013.

This number of investigation figure, although it is below that of 2013, is in the order of magnitude of what BEAmer can reasonably lead annually.

The investigations initiated in 2014 relate all to the fishing industry.

During year 2014, BEAmer had thus used the data collected on 907 events, 529 of which related to the aquaculture and fishing industry among which 313 for fishing vessels of 15m in length or more (scope of directive 2009/18/EC) and 372 to merchant and 6 to leisure.

Out of the 766 accidents recorded, almost 1/5th had been subjected to a SITuation REPort from a MRCC. For the main part, the transmission of information reporting an accident had been done essentially by the délégations à la mer et au littoral (sea and coastline boards) within directions départementales des territoires et de la mer (DDTM – land and sea departmental directorate) through the transmission of illness and injury detailed reports (CGP102) and/or by the ship-owners using the form available on the BEAmer website or other similar documents used by other investigation boards.

Among the 766 accidents, BEAmer recorded:

- In the fishing industry 471 accidents (130 alongside and 241 at sea) among which 293 aboard vessels of 15 m in length or more and in this group 193 with an incapacitation for more than 3 days or an hospitalisation of more than 24 hours. 154 out of these 193 concern trawlers;
- Aboard merchant vessels 205 accidents (129 alongside and 76 at sea) among which 132 with an incapacitation for more than 3 days or a hospitalisation of more than 24 hours. 100 out of these 132 concern passenger ferries or passenger vessels;
- 23 accidents in marine farming;
- 55 accidents aboard tugs (port services);
- 2 in professional leisure;
- 10 aboard rescue crafts.
Three categories of personal accidents seem to be recurrent and deserve particular attention from all relevant stakeholders:

- Core tasks: Fishing gear operation, fishing equipment handling, use of various equipment, works on board, manoeuvres (40%);
- Slip, vessel motion, fall, threshold crossing, climbing down the ladder (30%);
- Wrong move, moving or lifting equipment and various loads (17%);
- Others among which absence of information about circumstances (13%).

BEAmer reminds the existence of the leaflet issued at the end of 2012 for netters « Prévenir les accidents au filage » (Preventing shooting accidents) that can be downloaded from its website.

Lastly, BEAmer believes that a better synergy is still possible between all the relevant stakeholders, besides itself, the Service des Gens de mer (Seafarers’ Service) within MEDDE, merchant and fishing vessels ship-owners, the Établissement National des Invalides de la Marine (Establishment for Seamen’s Invalidity), the IMP (Maritime Institute for Prevention), the DIRRECTE (maritime labour inspectorates) and all in charge of prevention to promote marine safety. A centralisation and a harmonised approach to accidents at work (injuries) reporting might constitute a first step.
The international cooperation

International collaboration in the field of marine casualty investigations has proven more and more necessary. It appears, in general terms, to be growing.

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 2014, BEAmer has cooperated with several foreign boards in the framework of investigations mainly conducted by itself.

The support of other European investigation boards may prove to be crucial for some investigations. For example, the intervention of our British colleagues from the Marine Accident Investigation Branch (MAIB) provided the opportunity to obtain the detailed operation reports from Padstow rescue boat (English Cornwall). This information was of great use in the final writing of the report on the stranding and subsequent total loss of F/V LE SILLON on 2 February 2014.

BEAmer 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 interests were involved, within the meaning of the IMO code for the conduct of investigations.

The marine safety investigation on the stranding and subsequent total loss, on 5 February 2014 at the entrance of the port of Bayonne of M/V LUNO (IMO 9106986 – Spanish flag), was a joint investigation with the Comisión Permanente de Investigación de Accidentes e Incidentes Marítimos, as lead investigation state. The latter, BEAmer Spanish counterpart, had been appointed as investigator-in-charge. The report has not been issued yet at the end of March 2015.

A non-exhaustive list of the major marine casualties that occurred in 2014 resulting in an international cooperation is displayed in annexe F (only available in the French language edition).

The studies

BEAmer did not carry out any specific study in 2014.
The recommendations

The recommendations issued in 2014:

In the 16 investigation reports (RET) published during year 2014, BEAmer issued 35 recommendations (a same recommendation can be addressed to several recipients) for:

- administrations and maritime authorities (10);
- concerned ship-owners (10);
- ship-owners, skippers and crews (12);
- vessel designers or equipment providers (1);
- various services as SHOM, INRS, Météo France and divers (2);
- classification societies (0).

They can be distributed in the following categories:

1 - FISHERY

Good professional practices

- 2014-R-01: to take into account the limit value of tensile strength of the mooring lines when they are used in at-risk situations and to give priority to the use of new lines.

- 2014-R-02: to add to the DUP (Occupational risk evaluation document) a procedure for throwing unwanted catches.

- 2014-R-33: It would be convenient, in the framework of fishing vessel’s skipper training, to draw even more their attention on the use of mooring gear, particularly in case of emergency.

Fishing vessel shiphandling

- 2014-R-03: to keep the AIS emitting and to ensure its proper operation, particularly in areas of high-density commercial shipping traffic.

- 2014-R-04: to enforce light usage rules for « vessel not under command ». 
Life-saving appliances, survival, rescue
- 2014-R-31: to make the regulatory requirements about fishing vessels evolve in order to increase and detail the equipment required on board for plugging leaks so as to be able to cope with different types of waterleaks.

Management, ISM, crisis management, fail soft mode
- 2014-R-17: to drive and coordinate at the relevant level awareness raising measures about prevention of accidental risks on board netters, particularly building on existing work.
- 2014-R-18: to implement the DUP, to make the hands aware of professional risks on board to provide them with a « personal flotation device to prevent drowning risk » during « fishing operations » (decree nr 2007-1227 issued on 21 August 2007-article 9).

Vessel design
- 2014-R-19: to improve the visibility on the working deck from the wheelhouse.
- 2014-R-21: to ensure that forward visibility is not impaired by a too low bridge considering the deck sheer or by electronic equipment fitted in front.
- 2014-R-32: to make the regulation evolve in order to provide for reinforced check of older steel-hulled fishing vessels.

2 – FISH FARMING ACTIVITIES

Shiphandling
- 2014-R-07: to properly understand the notion of blind distance, and to adjust their speed accordingly.
- 2014-R-08: to enforce the load line marks of their barges.

3 - COHABITATION OF ACTIVITIES

Regulatory development
- 2014-R-10: to monitor the development of the uses on the water in order to adapt, if necessary, the relevant regulations.
4 – COMMERCIAL SHIPPING

Good professional practices
- 2014-R-13: To consider the risk of waterleak before undertaking a refloating manoeuvre.
- 2014-R-22: to carry on additional training, already initiated, for its officers sailing in Polar Regions, notably with simulator.
- 2014-R-23: to make the masters aware of the need to safeguard VDR data in the nearest time frame after a maritime event.

Shiphandling
- 2014-R-05: to ban any source of distraction from bridge watch, whatever the navigation conditions.
- 2014-R-11: according to the international regulations for preventing collisions at sea, COLREG 72 (rules 19b et 5), it is convenient to adapt permanently speed to the prevailing circumstances and to reinforce the lookout in case of conditions of restricted visibility.
- 2014-R-12: even in a well-known area, the correlation of the information transmitted by the navigational aids should be systematic.
- 2014-R-16: on completion of the route handbook, make sure to display and record the way-points on the ECDIS and the radars.

Management, ISM, crisis management, fail soft mode
- 2014-R-06: to be compliant with the MSC/Circ.867 conclusion, that “solo watchkeeping in periods of darkness would have a potentially adverse impact on safety of navigation”
- 2014-R-14: to make the arrangements for the call in time to allow the helmsman to be on the bridge during low-visibility approach of the port.
- 2014-R-15: to develop written procedures in order to maintain, on the bridge, the quality of the lookout and the attention required for navigation, particularly during manoeuvres and in tricky navigation areas.
- 2014-R-25: to foster the dissemination of a safety culture within the crews.
5- GOVERNMENT SHIP

Navigational documents, buoyage
- 2014-R-28: to display on the vector chart an unmissable warning when the user zooms in beyond the compilation scale.
- 2014-R-29: to submit to IHO an amendment of the standard in order to display on ENCs an unmissable warning when the user zooms in beyond the compilation scale.

Management, ISM, crisis management, fail soft mode
- 2014-R-26: to create and maintain a navigation common repository in order to facilitate the drafting by the master of instructions for safe operation at sea.
- 2014-R-27: to conduct periodical audits of the isolated maritime surveillance brigades on navigation and shiphandling.
- 2014-R-30: to draft a risk analysis document on crossing over the reef with a reef boat.

6 - LEISURE

Vessel / equipment: maintenance, alterations
- 2014-R-09: to fit their rental crafts with a visible mark, located at about 2 metres above the water.
- 2014-R-20: in the framework of the development of LY3 (The Large Commercial Yacht Code drafted under the authority of the MCA) and of division 242 (drafted under the authority of the French maritime administration), to require the fitting of simplified voyage data recorder on board large commercial yacht.

Recommendations follow-up:

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

1. The so called « general purpose » recommendations brought to the attention of « all » by the publication of the investigation report on the BEAmer website are no longer issued in the reports (actually during the course of year 2014), but the corresponding reminders are included in the lessons (in accordance with the principle that a recommendation must be addressed to a clearly identified recipient).

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.

To illustrate the BEAmer recommendation follow-up, Recommendation 2013-R-12 addressed to the administration in charge of vessel safety to « draw up criteria of stability at large angles of heel for fishing vessels of less than 12m in length ». The arrêté was issued at the end of 2014 and criteria will apply for new vessels from 1st July 2016 with implementation measures for vessels already built (cf. appendix D);

3. Recommendations addressed to a specific recipient (for 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 BEAmer, which is not consistent with what is expected.

5. The measures taken are publicized on our website.

The summary table in appendix C (only available in the French language edition) reports the situation of the 2014 recommendations at the date of the last CATS held in December 2014 for the investigations published until November 2014.

The summary table in appendix D (only available in the French language edition) reports the monitoring of the 2013 recommendations not yet classified on 31 December 2013 with an update on 31 December 2014.

The list of the lessons issued in the simplified reports is also displayed in appendix E (only available in the French language edition). The lessons, which are by definition for more general purpose, are brought to the attention of all those who may have an interest and published on our website.

**Conclusion**

As in previous years, two thirds of the reports published during year 2014, for events occurred between February 2013 and June 2014, are related to the fishery sector. In this sector, the recurring nature of a number of factors of accident (lookout, professional practices, emergency situations, etc.) is still topical.

All the reports had been published. They can be downloaded from the new BEAmer website:

BEAmer also wishes to bring to the attention the European maritime safety agency publication issued at the end of 2014 « ANNUAL OVERVIEW OF MARINE CASUALTIES AND INCIDENTS » covering the period 2011 - 2013. It had been established on the basis of information on maritime accidents and incidents which are stored in the European electronic database named “European Marine Casualty Information Platform” — EMCIP.

It can be accessed on the agency website at:

Appendix A

IMO classification of marine casualties and incidents

Scope and requirements of directive 2009/18/EC

The **IMO Code on the conduct of marine safety investigations** (resolution MSC.255 (84) adopted on 16 May 2008 published by decree nr 2010-1577 issued on 16 December 2010) distinguishes for the accidents to vessels falling in the scope of its conventions:

- **« Very serious casualties »** are casualties to ships which involve total loss of the ship, loss of life, or severe pollution, the definition of which, as agreed by the Marine Environment Protection Committee at its thirty-seventh session (MEPC 37/22, paragraph 5.8), is as follows:

  « “Severe pollution” is a case of pollution which, as evaluated by the coastal State(s) affected or the flag State, as appropriate, produces a major deleterious effect upon the environment, or which would have produced such an effect without preventive action. ».

- **« Serious casualties »** are casualties to ships which do not qualify as « very serious casualties » and which involve a fire, explosion, collision, grounding, contact, heavy weather damage, ice damage, hull cracking, or suspected hull defect, etc., resulting in:

  - immobilization of main engines, extensive accommodation damage, severe structural damage, such as penetration of the hull under water, etc., rendering the ship unfit to proceed (The ship is in a condition, which does not correspond substantially with the applicable conventions, presenting a danger to the ship and the persons on board or an unreasonable threat of harm to the marine environment),
  - or pollution (regardless of quantity),
  - and/or a breakdown necessitating towage or shore assistance.

- **« Less serious casualties »** are casualties to ships which do not qualify as “very serious casualties” or “serious casualties” and for the purpose of recording useful information also include “marine incidents” which themselves include “hazardous incidents” and “near misses”.

The IMO Code classifies also the personal work injuries, depending on degree of injury, in four categories:

- The **« very serious personal work injury »** resulting in the death of the person within a period of less than one month from the date of the accident;
- The « serious personal work injury » resulting in incapacitation for more than 72 hours commencing within seven days from the date of injury or hospitalization for 24 hours or more;

- The « less serious personal work injury » resulting in incapacitation for less than 72 hours commencing within seven days from the date of injury;

- The « personal work incident » in the other situations.

**Directive 2009/18/EC issued on 23 April 2009** lastly transposed by decree nr 2012-668 issued on 4 May 2012, establishing fundamental principles governing the investigation of accidents in the maritime transport sector, applies to marine casualties and incidents which involve vessels flying the flag of a Member State of the European Union, occur within Member States' territorial sea or internal waters or involve other substantial interests of the Member State.

It shall not apply to marine casualties and incidents involving only pleasure crafts with no commercial purpose or fishing vessels of less than 15 m in length.

It sets out the obligation to investigate for very serious marine casualties and in the case of serious accidents to carry out a preliminary assessment in order to decide whether or not a safety investigation is to be undertaken. In the case of any other marine casualty or incident, the investigative body shall decide whether or not a safety investigation is to be undertaken.
Ministère de l’Écologie, du Développement durable et de l’Énergie

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