STANDING
COMMISSION FOR
MARITIME
ACCIDENT
AND INCIDENT
INVESTIGATIONS



MINISTERIO DE FOMENTO



ANNUAL REPORT 2010

# EXTRACT FROM ROYAL DECREE 862/2008, DATED 23 MAY

The Standing Commission for Maritime Accident and Incident Investigations will investigate serious and very serious maritime accidents and incidents when lessons learned can be obtained for maritime safety and for the prevention of marine pollution originating from vessels.

In no case will the purpose of the investigation be to determine any fault or responsibility.

Edited by: Centro de Publicaciones Secretaría General Técnica Ministerio de Fomento © NIPO: 161-11-089-9

COMISIÓN PERMANENTE DE INVESTIGACIÓN DE ACCIDENTES E INCIDENTES MARÍTIMOS

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Francisco Mata Álvarez-Santullano

## SECRETARY

## A YEAR OF TRANSITION

It is harder to get started than to keep moving. When I started working as the Commission's Secretary in March 2010, which was the second year of operation of the commission after its creation at the end of 2008, much of the work was done. In this sense, I have to thank my predecessor because my job this year has been relatively easy, since I was able to focus on adjusting the working procedures to the changes experienced throughout the year.

For the Secretariat, 2010 was a transitional year. At the beginning of the year there were four investigators and we shared offices with other organizations. At the end of 2010, we doubled the number of investigators, signed management agreements and contracts to guarantee technical assistance is available during investigations, and we moved to our current offices, which are more spacious and provide a adequate room for us to carry out our work.

The result is that we investigate more and better. Even though the number of reported accidents is about the same as the previous years, we have been able to increase the number of approved reports and recommendations provided during the previous year almost three fold, and the expectations for 2011 are even better.

All personnel from the Commission's Secretariat as well as from the Plenary have contributed to this achievement by being committed to their jobs throughout the year. Moreover, the organizations that collaborate with the Commission have also contributed to achieving these objectives, especially the Maritime Authorities and Districts, whose cooperation at the beginning of an investigation and immediately following an accident is essential.

In the short term, the main tasks we must undertake in 2011 are the following:

- Adapt to the new European Directive regarding the investigation of maritime Accidents.
- Incorporate new and improved management tools.
- Reinforce ties with national and international organizations.

Apart from the numbers and short term challenges, we must work to consolidate the role of the Commission so that the maritime and fishing sectors may realize that the function carried out by the Commission is necessary. A modern and efficient management of public safety requires mechanisms that help to understand the failures that occur in the system, and with this vision in mind, the Commission was created. The Commission is not a repressing or sanctioning organization; instead, it is an entity that contributes to society. We must be able to make the maritime and fishing sectors understand that we are working for their benefit and that they should use the instruments and resources that we have available for them.

The way to achieve this goal is to work independently, with rigour, objectively, with transparency, cooperating with other public and private organizations and from a position that is receptive to the demands and the realities of the maritime and fishing sector. Also, we must have a constructive vision when searching for solutions regarding maritime safety.

I believe that the work accomplished up to now shows that we are on the right path and that the role to be carried out by the Commission in the next few years will contribute to reinforce the legitimacy of the institutions it belongs to, while achieving the recognition of the society it works for.

Madrid, April 2011.



# NATURE AND LEGAL STATUS

The Standing Commission for Maritime Accidents and Incident Investigations (CIAIM) is a collegial body assigned to the General Secretariat for Transports (Ministry of Public works and Transport), charged with carrying out the investigation of the technical causes of:

- → Maritime accidents and incidents involving Spanish civilian vessels...
- → Maritime accidents and incidents involving foreign civilian vessels when these occur within Spanish waters or Spanish territorial seas, and those occurring outside these when Spain has considerable interests at stake.

The CIAIM and its activity are regulated by the twenty sixth Additional Provision to Law 27/1992 on National Ports and the Merchant Navy and by Royal Decree 862/2008 of 23 May. In accordance with these regulations, the investigations carried out by CIAIM are aimed at establishing the technical causes of the accident as well as making recommendations that will prevent accidents from occurring in the future. In no case shall the purpose of the investigation be to determine any fault or responsibility.

The organizations that comprise the CIAIM are the Plenary and the Secretariat.

The Plenary Commission is charged with validating the classification of accidents or incidents and approving reports and recommendations provided after a technical investigation has been conducted.

It is comprised of the following personnel:

- → The President, appointed by the Minister of Public Works and Transport.
- → The Vice President, a civil servant from the General Secretariat of the Ministry of Public Works and Transport.
- → A board member proposed by the Spanish Merchant Marine Officers Association, COMME.
- → A board member proposed by the Naval Architects and Oceanic Engineers Association, COIN.
- → A board member proposed by the Spanish Association of Nautical/Fishing Degree Holders, AETINAPE.
- → A board member proposed by the El Pardo Model Basin, CEHIPAR

- → A board member proposed by the Centre for Public Works Studies and Experimentation, (CEDEX).
- → A board member proposed by the Secretariat General of the Sea: Environment and Rural and Marine Affairs Ministry
- → A board member proposed by the State Meteorological Service AEMET.
- → A board member proposed by the Autonomous Community where the accident has occurred.
- → The Secretary, appointed by the Minister of Public Works and Transport will participate in Plenary deliberations with a voice but without voting rights.

The Secretariat falls under the Plenary Commission Secretary and carries out the investigation work as well as the reports that will be studied and approved afterward by the Plenary. The investigation team comprised of career Public Administration civil servants belong to the Secretariat.

# **ACCIDENT STATISTICS**

In 2010 the CIAIM received 91 reports of maritime accidents, each of them resulting in preliminary investigations, which were submitted to the CIAIM's plenary for consideration. Of these preliminary investigations, the plenary agreed to investigate 30 of them in depth and decided to not carry out an investigation of the other 61 remaining accidents. Of the 30 accidents that were investigated in depth, four of them corresponded to accidents involving vessels operating under a foreign flag where Spain collaborated with the respective flag nations, who in all cases lead the investigations.

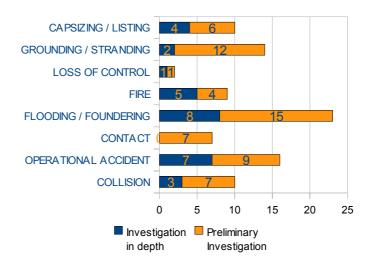
The percentage of accidents investigated in depth with respect to the accidents reported was 35%, which is similar to the percentage of accidents investigated by other maritime accident investigating organizations of neighboring countries.

Regarding the type of accidents reported, most of them involved vessels that either sank or flooded, which totaled 23 accidents reported and in second place, 16 accidents were reported of vessels involved in operational type mishaps. It is important to note that there are a total of 31 accidents that are traditionally associated with human error such as allisions, collisions and running aground, which is a third of the total.

| Type of accidents reported and investigated in depth in 2010 | Accidents re | eported | Investigat<br>depth | ed in |
|--|--------------|---------|---------------------|-------|
| Collision  | 10           | 11%     | 3                   | 10%   |
| Operational accident   | 16           | 18%     | 7                   | 23%   |
| Contact  | 7            | 8%      | 0                   | 0%    |
| Flooding / foundering  | 23           | 25%     | 8                   | 27%   |
| Fire / explosion   | 9            | 10%     | 5                   | 17%   |
| Loss of control  | 2            | 2%      | 1                   | 3%    |
| Grounding / stranding  | 14           | 15%     | 2                   | 7%    |
| Capsizing / listing  | 10           | 11%     | 4                   | 13%   |
| TOTAL  | 91           | 100%    | 30                  | 100%  |

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Throughout the year, the CIAIM published 16 maritime accident reports and provided 113 safety recommendations. In total since its creation to the end of 2010, the CIAIM has published 24 accident reports and has provided 157 safety recommendations.



Maritime accidents in Spain for the most part involve fishing vessels and boats, which demonstrates the important role that these types of vessels play in the national fleet.

| Vessel type      | Number of vo<br>boats involve<br>accidents the<br>investigated | ed in<br>at were | Number of verboats lost in a investigated in | ccidents |
|------------------|--|------------------|--|----------|
| Fishing          | 19   | 56%              | 10   | 67%      |
| Recreational     | 5  | 15%              | 3  | 20%      |
| Special services | 4  | 12%              | 1  | 7%       |
| Passenger        | 3  | 9%               | 1  | 7%       |
| Merchant         | 3  | 9%               | 0  | 0%       |
| TOTAL            | 34   | 100%             | 15   | 100%     |

In the 91 accidents reported to CIAIM, 28 people died, four were declared missing, fourteen were seriously injured and 40 vessels and boats were lost. In the 30 accidents that were investigated in depth, 15 vessels and boats were lost, 16 people were killed and four people were seriously injured.

| Number of vessels and boats lost in the investigations that were conducted in depth by type of accident |    |      |  |  |
|---|----|------|--|--|
| Flooding / foundering   | 7  | 47%  |  |  |
| Fire  | 2  | 13%  |  |  |
| Grounding / stranding   | 2  | 13%  |  |  |
| Capsizing / listing   | 4  | 27%  |  |  |
| TOTAL   | 15 | 100% |  |  |

Regarding the location of the accidents, it is worth mentioning that 27% of accidents investigated in depth occurred in Galicia and an even greater percentage; 30% occurred outside Spanish territorial waters.

| Number of accidents investigated in depth by location where they occurred |    |      |  |  |
|---|----|------|--|--|
| Andalusia   | 3  | 10%  |  |  |
| Asturias  | 0  | 0%   |  |  |
| Canary Islands  | 2  | 7%   |  |  |
| Cantabria   | 1  | 3%   |  |  |
| Catalonia   | 1  | 3%   |  |  |
| Galicia   | 8  | 27%  |  |  |
| Melilla   | 2  | 7%   |  |  |
| Basque Country  | 3  | 10%  |  |  |
| Valencia  | 1  | 3%   |  |  |
| Outside Spanish territorial waters  | 9  | 30%  |  |  |
| TOTAL   | 30 | 100% |  |  |

#### ACCIDENTS THAT ARE NOT INVESTIGATED IN DEPTH

The fact that a large number of accidents reported where there is loss of human life or loss of vessels are not investigated in depth by the CIAIM is due to a number of reasons.

On one hand, some of these accidents involve vessels that are operating under a foreign flag, occur outside Spanish territorial waters and no considerable Spanish interests are affected. For example, this is the case of the accident involving cruise ship LOUIS MAJESTY when it was hit by a wave near the Catalonian coast but outside of Spanish waters, resulting in the death of two passengers, with six seriously injured. Even though this accident was reported to the CIAIM by the Maritime Authority that provided assistance to the vessel, the investigation corresponded to the vessel's flag country and not Spain, since none of the circumstances listed in current regulations applied.

It also occurs at times that the preliminary investigations of some accidents discover that negligence occurred, that the mishap was an accident, that unpredictable failures occurred, etc., and the Commission's plenary considered that an in-depth investigation would not provide further information about the mishap nor would it contribute to improving maritime safety in any way.

# **PUBLISHED REPORTS**

# **A-01/2010. VALLE DE ELDA**

A sailor from fishing vessel VALLE DE ELDA was thrown overboard by the sweepline from a skid, which hooked onto one of his legs as it was being released to recover the fishing rig. The sailor drowned.

During the accident investigation, deficiencies were discovered in the procedure used for dropping the skid and in the training and certification of the vessel's crew.

The CIAIM provided twenty three safety recommendations directly related to the operational safety of the vessel, the training of its crewmembers, and the control exerted by the administration over the conditions for crew enrolment and vessel dispatch procedures.

# **A-02/2010. URDANETA**

Recreational schooner URDANETA with Panamanian flag ran aground at the beach of La Concha because the lines that kept her moored to an anchor buoy at the bay of San Sebastian were washed away during foul weather. During the subsequent maneuvers to free the schooner, she suffered structural damage and flooding. There were no personal injuries.

During the investigation it was discovered that even though the anchorage area where the schooner was moored was used by many vessels, it was not properly authorized and therefore, its safety was not guaranteed.

The CIAIM made recommendations for the anchorage area to be certified and its safety improved, and to verify that rescue and re-float operations are directed by qualified technicians.



# A-03/2010. LLUNA-PRINCES

Fishing vessels LLUNA and PRINCES collided at a location 3.5 miles from Peñiscola when they were returning to port at the end of their fishing day. Both vessels suffered minor damages and no personal injuries occurred.

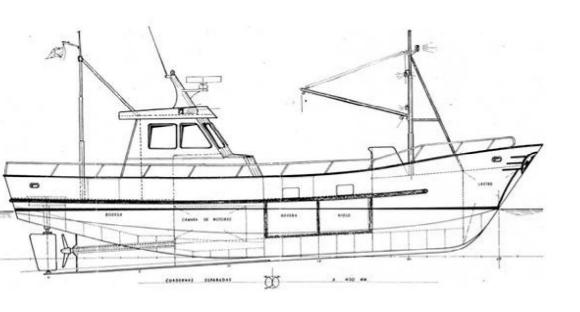
During the investigation it was discovered that it was normal practice for the fishing vessels in that area to remain operating at the fishing grounds as long as possible and return quickly to port prior to the time stipulated by the Fishing Guilds of Castellon for vessels to be back at their base ports. Consequently, there was a large concentration of fishing vessels navigating at high speeds near the ports and it was common practice for Skippers to assist with fish preparation tasks while they were supposed to be navigating the vessel.

The CIAIM provided ten recommendations aimed at emphasizing the importance of strictly complying with regulations for preventing collisions and the proper use of radio-electric radar and communications equipment installed on board the vessels.

# A-04/2010. PLAYA DEL MAR

Fishing vessel PLAYA DEL MAR sank five miles from the coast of Asturias without being able to determine a technical cause that satisfactorily explains the accident. There were no personal injuries. Contradictory statements were provided by the two crewmembers of the vessel, which was not re-floated.

Even though an accidental cause of the sinking did not seem to exist, the CIAIM provided three recommendations aimed at improving the maintenance of the vessel's bottom valves and at increasing the Civil Guard Maritime Service's control over crewmembers.



# A-05/2010. JOSE ALMUIÑA

Long-line fishing vessel JOSE ALMUÑA capsized in the Atlantic Ocean after the fishing hold flooded during fishing rig hoisting operations under foul weather conditions. The vessel sank and four of her crewmembers were declared missing.

The investigation found that the vessel's design included certain vulnerabilities during operational errors, which placed the vessel at risk. The fact that the vessel underwent modifications that were not authorized by the Administration and that it left port in an overload condition contributed to the accident.



Deficiencies were also detected in the certification and training of the crew and in the distress call procedures that were used; and also, the hydrostatic release mechanism of one of the life rafts failed, preventing it from deploying.

The CIAIM provided eleven recommendations to the European maritime administrations, to fishing vessel designers and to the companies that manufacture GMDSS equipment and life rafts, which were aimed at correcting the discrepancies that had been discovered.

# A-06/2010. BLANCA B – GERMANS PERIS

Fishing vessel BLANCA B collided with the fishing vessel GERMANS PERIS while she was hoisting her fishing gear at a location 7 miles from Peñiscola. The Skipper of the BLANCA B stated that he had lost consciousness at the wheelhouse. Moments prior, he had been at the stern assisting with the fishing tasks since they were headed to port to unload the catch.

The investigation determined that neither of the Skippers maintained a proper lookout over the other vessel and therefore, the collision prevention regulations were not complied with. It became evident that it was common practice among fishing vessel Skippers in the area to

leave the wheelhouse to assist with the fishing tasks during the vessel's return to base port, at a time when there is the largest concentration of fishing vessels near the ports.

The CIAIM provided eight recommendations stating that the best way to prevent this conduct and therefore, prevent these accidents is through training and increasing the awareness of fishing vessel owners and crews.

# A-07/2010. CURRANA UN

A sailor from fishing vessel CURRANA UN was thrown overboard by the last longline signal buoy that the sailor himself was launching into the waters of Great Sole Bank. The bad weather conditions in the area along with the difficulty for carrying out the buoy launching manoeuvre caused one of the float balls to hook itself to the sailor's leg when he was launching the buoy, pushing him overboard. When recovered he was already deceased.

The CIAIM determined that the size of the longline buoys, which are established by a European Directive, are not the most appropriate to be handled by one person from the deck of a vessel in bad weather. Also, the sailor had spent little time performing this type of task and therefore, he was not fully aware of the hazards involved with the manoeuvre. Finally, the aforementioned manoeuvre was not included in the vessel's occupational hazards prevention plan.

Eight recommendations were provided to improve the training of crews, redesign the dimensions of the longline signal buoys and include the launching of the signal buoy in the vessel's occupational hazards prevention plan and in the technical guide for the evaluation and prevention of workplace hazards, which is provided by the National Institute for Occupational Safety and Health.



# A-08/2010. KELBO

A crewmember from recreation sailboat KELBO, which had been rented in Majorca a few days prior to the accident, died after falling overboard during the voyage from Majorca to Menorca with four German national crewmembers on board.

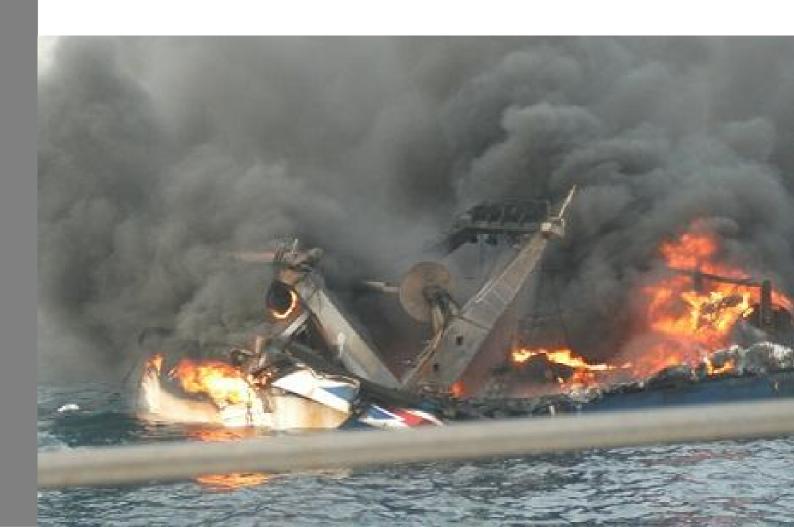
During the voyage, the seas were categorized as being rough and very rough; however, none of the crewmembers was wearing their life vest, nor were any lifelines used to prevent them from falling overboard.

Aircraft assets were not properly coordinated during the rescue, resulting in the search operations being delayed; however, the death would probably not have been prevented even if the search operations would have been dispatched on time.

The CIAIM provided five recommendations aimed at preventing the coordination problems as well as at several irregularities detected regarding the renting of the vessel and the inspection procedures for recreational vessels.

# **A-09/2010. NOU ESQUITX**

The engine room of fibreglass fishing vessel NOU ESQUITX caught on fire and it could not be controlled by the crew. The fire spread to the rest of the vessel, which ended up sinking in spite of the efforts by SASEMAR and the Catalonian Fire Department to save her. However, the crew was safely rescued.



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The fire was caused by a gas-oil leak, which spilled onto a hot surface of the engine; the fire could not be controlled due to the low fire resistance of the materials used in its construction and because it was not possible to completely close the engine room compartment. The subsequent action carried out by the emergency services was unsuccessful in extinguishing the fire.

The CIAIM provided five recommendations to ship-owners, fishing vessel skippers and designers, and public administrations.

# A-10/2010. MONTE GALIÑEIRO



Trawler vessel MONTE GALIÑEIRO sank while it was operating 235 miles from Saint John's after an uncontrolled flood broke out inside her engine room. The origin of the flood could not be determined, but because the vessel sank quickly, it was determined that the flood must have occurred through the sea water collector; however, other hypotheses were not ruled out.

During the investigation of this accident irregularities were detected in the vessel's operation, which resulted in eleven recommendations aimed at the ship's designer, the ship-owner, the administration and to fishing vessel owners in general.

# A-11/2010. MAR DE AGUIÑO - CIMA - VAI BEN

Recreational vessel MAR DE AGUIÑO collided at high speed and repeatedly against fishing boats CIMA and VAI BEN, which were anchored and engaged in shell fishing at the Arousa Ria in Pontevedra. One sailor from vessel CIMA was hospitalized.

The MAR DE AGUIÑO was a recreational vessel that conducted tourist guides through the Ria and on the day of the collision it had 11 passengers on board. Her Skipper simultaneously steered the vessel while acting as a tourist guide.

Four recommendations were provided to improve the training of Skippers and to set operational limitations for passenger tourist vessels as well as prohibit the possibility of simultaneously carrying out the skipper and tourist guide functions.

# A-12/2010. PEIX MAR TREINTAYUNO

A fire broke out on board fishing vessel PEIX MAR TREINTAYUNO while it was operating off the coast of Mauritania. The fire was controlled and the vessel was towed to the port of Dakar by another fishing vessel owned by the same company. Improper procedures carried out by the Dakar fire Department caused the vessel to finally sink because the water that had been sprayed on board could not be pumped out.



During the investigation, it was determined that an efficient control is not carried out of the fishing vessels that operate at Mauritanian fishing grounds as part of the fishing agreement between the EU and that country. This lack of control extends to the enrolled crewmembers, their certifications and the quality of their training as well as the safety conditions on board.

The CIAIM provided five recommendations; three for the ship-owner and two for the administration to improve the procedures for controlling fishing vessels operating off the coast of Mauritania.

# A-13/2010. SICHEM COLIBRI



Chemical tanker SICHEM COLIBRÍ, which was transporting dangerous cargo, lost steering due to a steering gear failure when she was beginning her journey up the Guadalquivir River in Seville. Given the proximity to the coast, her running aground at the mouth of the river could not be avoided; however, she did not suffer serious structural damage or loss of cargo.

The failure consisted in the accidental breaking of a steering gear hydraulic circuit valve. The CIAIM provided recommendations to the manufacturer of the steering gear to ensure that the manufacturing process meets the specifications of the system. A recommendation was also provided for the Port of Seville to study the implementation of special conditions for the transiting of vessels carrying dangerous cargo up and down the Guadalquivir River.

# A-14/2010. PESCABON

A sailor from fishing vessel PESCABON died after hitting his head against a cleat during a strong storm at Great Sole Bank.

The CIAIM concluded that the accident could not have been prevented although it considered that crew fatigue may have been a contributing factor. Therefore, a recommendation was provided for the company and the administration to determine the minimum crews on board fishing vessels by taking into account their operating methods so that their work shifts will be in compliance with mandatory crew rest periods.

# A-15/2011. ROSAMAR

Fishing vessel ROSAMAR under Portuguese flag sank after her fishing gear got snagged and her trawling machines continued hoisting the gear while her crew was unable to release it. It was concluded that the manual control of the trawling machine had probably been improperly locked in the hoist position. Also, some design aspects of the vessel contributed to the flooding, which could not be controlled.

The necessary recommendations were issued to correct these deficiencies and the maritime administration was asked to carry out studies regarding the snagging



of fishing gears in order to develop operating procedures for Skippers to follow during these situations..

# S-16/2010. SIEMPRE AL ALBA

A sailor from the fishing vessel SIEMPRE AL ALBA fell overboard after tripping over a net that was stowed on the side of the vessel when they were returning to port after the day's work. The sailor was not wearing his life vest and sank; his body was not recovered.

The CIAIM determined that it was an accident and made a recommendation for the General Directorate for the Merchant Navy to make it mandatory to wear life vests while on deck at all times.

# SAFETY RECOMMENDATIONS

In the sixteen reports approved during 2009 by the Plenary of the CIAM, a total of 113 safety recommendations were provided for the purpose of preventing similar accidents from occurring in the future. They have been grouped according to two different criteria:

## 1. Addressee:

- → Public Administrations
- → Persons: Natural or legal persons, unequivocally determined. (Examples: the ship-owner, the skipper, the construction shipyard, etc.)
- → Collectives: group of persons, not individually determined. Typically, in this group would be the fishing guilds, ship owners, ship designers, etc.

| Recommendation addressee, per year | 2009 |     | 2010 |             | Total |      |
|------------------------------------|------|-----|------|-------------|-------|------|
| Public Administrations             | 9    | 20% | 63   | 56%         | 72    | 46%  |
| Collectives                        | 21   | 48% | 37   | 33%         | 58    | 37%  |
| Persons / companies                | 14   | 32% | 13   | 12%         | 27    | 17%  |
| TOTAL                              | 44   | 28% | 113  | <b>72</b> % | 157   | 100% |

# 2. Subject:

- → Compliance with existing regulations and protocols. It is recommended that persons and collectives (e.g. shipyards) be stricter in complying with regulations (e.g. by not carrying out unauthorized modifications to vessels).
- → Training. It is recommended that training be provided to crews or employees regarding the specific aspects related with their job, or to carry out training campaigns among the members of certain collectives (e.g. skippers), normally to refresh knowledge or raise awareness regarding the need to strictly comply with protocols (e.g. use of the GMDSS during emergencies).
- → Safety management / Operation. It is recommended that new or improved operating procedures be introduced if they do not already exist or are deficient, or changes be made in the way vessels are operated.
- → Inspection. It is recommended that the Administration

- reinforce the inspections of a specific technical or operating element.
- → Design improvement. It is recommended, generally to designers and manufacturers, to implement improvements in the designs, taking into account the deficiencies noted during the safety investigations, even when their implementation is not mandatory (e.g. avoid asymmetries in fuel tanks).
- → Regulations. It is recommended that the Administration implement changes in its regulations.
- → Sanctioning procedures. It is recommended that sanctions for certain behaviours be increased.

| Type of recommendation, per year     | 2009 |     | 2010 |     | Total |      |
|--------------------------------------|------|-----|------|-----|-------|------|
| Compliance with rules and procedures | 10   | 23% | 15   | 13% | 25    | 16%  |
| Training                             | 4    | 9%  | 29   | 26% | 33    | 21%  |
| Safety management /<br>Operation     | 12   | 27% | 22   | 19% | 34    | 22%  |
| Inspection                           | 3    | 7%  | 16   | 14% | 19    | 12%  |
| Design improvement                   | 14   | 32% | 14   | 12% | 28    | 18%  |
| Regulations                          | 0    | 0%  | 17   | 15% | 17    | 11%  |
| Sanctions                            | 1    | 2%  | 0    | 0%  | 1     | 1%   |
| TOTAL                                | 44   | 28% | 113  | 72% | 157   | 100% |

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Most of the recommendations have to do with deficiencies in crew training, improper operation of vessels and with deficiencies in vessel designs.

Also, the data shows that the different entities, to which the recommendations are aimed for, are asked to act in different manners:

- → To Public Administrations, primarily the General Directorate for the Merchant Navy: To improve the training of crews, basically by conducting awareness campaigns and to improve the control and inspection procedures for vessels.
- → To the different collectives, primarily ship-owners and crews: To improve the manner in which they operate their vessels. These recommendations are provided because during the different investigations, unsafe and generalized practices are found to exist regarding the manner in which vessels are operated, which must be addressed.
- → <u>To individual persons</u>: To implement improvements in vessel designs and equipment.

| Recommendations provided in 2010, by addressee and subject | Pub<br>Adminis |     | Collec | ctives | Perso<br>comp | -   | Tot | al          |
|--|----------------|-----|--------|--------|---------------|-----|-----|-------------|
| Compliance with rules and procedures                       | 4              | 6%  | 7      | 19%    | 4             | 31% | 15  | 13%         |
| Training   | 19             | 30% | 8      | 22%    | 2             | 15% | 29  | 26%         |
| Safety management /<br>Operation                           | 6              | 9%  | 16     | 43%    | 0             | 0%  | 22  | 19%         |
| Inspection   | 16             | 25% | 0      | 0%     | 0             | 0%  | 16  | 14%         |
| Design improvement   | 1              | 2%  | 6      | 16%    | 7             | 54% | 14  | 12%         |
| Regulations  | 17             | 27% | 0      | 0%     | 0             | 0%  | 17  | 15%         |
| Sanctions  | 0              | 0%  | 0      | 0%     | 0             | 0%  | 0   | 0%          |
| TOTAL  | 63             | 55% | 37     | 33%    | 13            | 12% | 113 | 100,0<br>0% |

# **ANNEX I. LIST OF RECOMMENDATIONS**

| Code         | Addressee                                 | Text   |
|--------------|---|--|
| R-2010-A1-1  | Shipowners                                | To understand that lack of training is the primary cause of maritime accidents, particularly in the fishing sector.  |
| R-2010-A1-2  | Shipowners                                | To include procedures in the Occupational Hazard Prevention Plans for all those operations involving the releasing and hoisting of fishing gears and other heavy objects, particularly skids, to guarantee these are carried out under controlled and safe conditions. |
| R-2010-A1-3  | Shipowners                                | to order their crews to strictly comply with the Occupational Hazards Prevention Plans and to monitor their compliance.  |
| R-2010-A1-4  | Shipowners                                | To establish working procedures that prohibit stepping over sweeplines, lines, etc., when carrying out tasks where these lines may be pulled tight.  |
| R-2010-A1-5  | Shipowners                                | to refrain from enrolling personnel that does not possess the proper qualifications.   |
| R-2010-A1-6  | Shipowners                                | To provide practical training to crewmembers regarding the procedures for safely carrying out skid hoisting preparations, the release method and the hoisting and collection of the gear.  |
| R-2010-A1-7  | Skippers and crewmembers                  | To understand that lack of training is the primary cause of maritime accidents, particularly in the fishing sector.  |
| R-2010-A1-8  | Skippers and crewmembers                  | To comply with the instructions included in the current occupational hazards prevention plans for their vessel.  |
| R-2010-A1-9  | Skippers and crewmembers                  | to ensure that personal protective equipment is used at all times while operating on the deck, especially a life jacket with a radio-beacon and the working gloves.  |
| R-2010-A1-10 | Skippers and crewmembers                  | That once the skids are ready to be launched, these are kept suspended from the boom hook up until the last moment, while an additional means for holding the skid is arranged to prevent it from falling uncontrollably.  |
| R-2010-A1-11 | Skippers and crewmembers                  | That the manoeuvre for launching the skid be carried out by personnel designated for this purpose, who have received the practical training required for carrying it out safely.   |
| R-2010-A1-12 | General Directorate for the Merchant Navy | To understand that lack of training is the primary cause of maritime accidents, particularly in the fishing sector.  |
| R-2010-A1-13 | General Directorate for the Merchant Navy | That maritime Authorities and Districts do not enrol any crewmember that is not in possession of the required titles and certificates.   |
| R-2010-A1-14 | General Directorate for the Merchant Navy | That Maritime Authorities and Districts strictly comply with R.D. 1519/2007 of 16 November when issuing Dispatch approval Paperwork.   |
| R-2010-A1-15 | General Directorate                       | That Maritime Authorities and Districts not allow  |

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|              | for the Merchant Navy  | crewmembers to remain enrolled for periods longer than those stipulated.   |
| R-2010-A1-16 | General Directorate for the Merchant Navy  | To collaborate with the Marine Social Institute to identify those crewmembers that do not have a valid medical aptitude certificate in order to deny their requests for enrollment on board fishing vessels.   |
| R-2010-A1-17 | General secreteriat of<br>the Sea, Fishing guilds,<br>Marine Social institute,<br>Workplace inspection<br>Authorities, Accident<br>Insurance Agencies<br>and Occupational<br>safety and Health<br>Prevention Consulting<br>Agencies: | To understand that lack of training is the primary cause of maritime accidents, particularly in the fishing sector.  |
| R-2010-A1-18 | General secreteriat of<br>the Sea, Fishing guilds,<br>Marine Social institute,<br>Workplace inspection<br>Authorities, Accident<br>Insurance Agencies<br>and Occupational<br>safety and Health<br>Prevention Consulting<br>Agencies: | To carry out training and awareness campaigns regarding the hazards of on-deck operations, especially those involving lines or sweeplines that are going to be pulled taut and rigs that are launched into the ocean as well as the procedures to be carried out in case of an emergency.  |
| R-2010-A1-19 | National Institute of<br>Occupational Safety<br>and Health   | to take into account the recommendations provided in this report when they update the Technical Guide for the Evaluation and Prevention of Work hazards Onboard fishing Vessels, applying what is stipulated in the final provision of r.d. 1216/1997 of 18 July, which sets the minimum occupational safety and health requirements on board fishing vessels. |
| R-2010-A1-20 | Maritime Training Centres, Maritime Unions and Professional Associations:  | To understand that lack of training is the primary cause of maritime accidents, particularly in the fishing sector.  |
| R-2010-A1-21 | Maritime Training<br>Centres, Maritime<br>Unions and<br>Professional<br>Associations:  | to carry out training and awareness campaigns for their students and their affiliated and associated personnel regarding the hazards encountered when carrying out operations on-deck.   |
| R-2010-A1-22 | Autonomous communities   | To understand that lack of training is the primary cause of maritime accidents, particularly in the fishing sector.  |
| R-2010-A1-23 | Autonomous communities   | To encourage the imparting of specif knowledge within their Nautical Fishing Training Plans regarding all those on-deck tasks and operations involving operational hazards.  |
| R-2010-A2-1  | Competent authority  | For safety reasons, to encourage the Competent Authority to certify the anchorage area located south of the Island of Santa Clara, inside the Bay of La Concha in San Sebastian.   |

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| R-2010-A2-2 | Competent authority                                 | Request that Competent Authorities guarantee that those awarded the concession of the anchorage area located near the real Club Nautico de San Sebastian, watch over the safety of the achorage system that is used at that location.   |
| R-2010-A2-3 | Maritime Authorities                                | Encourage Maritime Authorities to verify that the rescue and refloat oparations of vessels are carried out in accordance with the drafted plans and are directed by qualified personnel, avoiding actions that may cause serious damage to the vessels.   |
| R-2010-A3-1 | fishing vessel Captains,<br>Skippers and Officers.  | Encourage captains, skippers and officers with navigation watch responsibility to strictly comply with the COLREG, especially regarding the evaluation and reaction with enough anticipation in those cases where a risk of collision exists.   |
| R-2010-A3-2 | fishing vessel Captains,<br>Skippers and Officers.  | Likewise, encourage these groups to record the important events related with a maritime accident. The record, once it has been disseminated, will allow authorities and rescue services to react quicker and more efficiently. Likewise, the recording of the events will provide an explanation of the actions as well as ensure the rights of crewmembers and owners in subsequent surveys carried out by authorities, insurance companies, professional organizations, etc are properly safeguarded.   |
| R-2010-A3-3 | fishing vessel Captains,<br>Skippers and Officers.  | Likewise, encourage these GROUPS to always use the GMDSS.   |
| R-2010-A3-4 | General Directorate for the Merchant Navy           | It is recommended they enforce maximum compliance with COLREG regulations. It has been checked that there are ports where vessels maintain the "vessel engaged in fishing" signs displayed at all times, even when they are in port.  |
| R-2010-A3-5 | General Directorate for the Merchant Navy           | It is recommended that the General Directorate of the Merchant Navy (DGMM) carry out awareness campaigns directed at skippers and guilds, emphasizing strict compliance with the COLREG   |
| R-2010-A3-6 | General Directorate for the Merchant Navy           | Likewise, it is recommended that they require fishing vessels obligatorily record safety events in their logs or appropriate documents.   |
| R-2010-A3-7 | General Secretariat for<br>the Sea / fishing Guilds | Carry out awareness campaigns directed at Guild members to increase awareness regarding / the need to strictly complyu with the RIPA / the high risk involved with leaving a vessel's wheelhouse unattended / The need to carry out a systematic monitoring of the bearings and/or positions of nearby vessels and not exclusively rely on the position and direction they appear to have at a given moment / the limitations of anticollision systems. By themselves they are not very useful unless a subsequent follow up is carried out of the target movements / the inadequate or insufficient usage made at times of the navigation aids. For example, the radars can be used to detect if a risk of collision exists far beyond 0.5 miles / the low reliability of the data obtained from the radar regarding targets |

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|              |   | located at short distances, especially when the scale selected is not the proper one   |  |
| R-2010-A3-8  | General Secretariat for<br>the Sea / fishing Guilds | Carry out awareness campaigns among Guild members where training is provided regarding the use of radio-electric devices to document and report an accident. Specifically: The GPS capability known as MOB, which allows to immediately store the location of an accident / the Digital Selective Call devices that allow sending a distress message almost instantly and automatically and where the operator only has to select if desired, the nature of the accident and the type of help requested / the radio telephony safety, urgency and distress procedures. In this case, the PAN-PAN procedure would have been very useful to notify all nearby stations tunned to the working channel as well as the coastal station of the collision. this would have allowed rescue services to remain on standby |  |
| R-2010-A3-9  | Autonomous communities                              | Insist and preserve the theoretical as well as the practical training in the use of the GMDSS as the quickest and most effective way of broadcasting alerts and reporting the location of accidents.   |  |
| R-2010-A3-10 | Autonomous communities                              | Carry out information campaigns directed at professionals in the sector regarding the COLREG.  |  |
| R-2010-A4-1  | General Directorate for the Merchant Navy           | It is recommended that Maritime Authorities intensify their inspections to assure that vessels are not modified without the corresponding governmental authorizations, with respect to the conditions listed in the original specifications.   |  |
| R-2010-A4-2  | General Directorate<br>for the Merchant Navy        | It is recommended that Maritime Authorities, during all vessel inspections, in dry dock as well as afloat, check the proper operation of all the hull opening valves that could cause progressive flooding.  |  |
| R-2010-A4-3  | General Directorate for the Merchant Navy           | It is recommended that the Servicio Maritimo de la Guardia Civil del Mar, via their maritime surveillance patrols, intensify their fishing vessel inspections for the purpose of ensuring they comply with dispatching and minimum crew requirements.  |  |
| R-2010-A5-1  | European Maritime<br>Authorities                    | To intensify the control of fishing vessel load conditions when they depart from their ports in order to as much as possible, prevent vessels from navigating in an overload configuration, and in any condition that affects its safety.  |  |
| R-2010-A5-2  | European Maritime<br>Authorities                    | To intensify the control of embarked crews, checking their qualifications and compliance with minimum crew requirements.   |  |
| R-2010-A5-3  | European Maritime<br>Authorities                    | To intensify the training and/or awareness regarding stability and safety of the vessel and their crews, and require fishing vessels, in accordance with their tonnage and fishing areas, to carry out abandon ship and general safety drills.   |  |
| R-2010-A5-4  | Fishing vessel ship-<br>owners and<br>crewmembers   | To strictly comply with load, stability and safety instructions.   |  |

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| R-2010-A5-5  | Fishing vessel ship-<br>owners and<br>crewmembers  | To ensure crews comply with required professional qualifications and ensure they are trained in the performance of emergency safety procedures.   |  |
| R-2010-A5-6  | Professional<br>association of Naval<br>Architects | To inform all their members regarding the designing of long-line vessels, about the importance of locating the spaces that connect the fish processing areas and the stern compartment on the side opposite the fishing hold, in order to increase the safety of the design.  |  |
| R-2010-A5-7  | General Directorate for the Merchant Navy          | To modify the criteria for certifying the Gmdss equipment so that the messages that appear on the screen are sufficiently clear, so that users do not doubt if the distress signal has been transmitted or not.   |  |
| R-2010-A5-8  | General Directorate for the Merchant Navy          | To establish inspection criteria in order to prevent efficiency problems that have been detected in the sodium batteries that are installed on life rafts.  |  |
| R-2010-A5-9  | General Directorate for the Merchant Navy          | To intensify the inspections of life raft stations and all their elements.  |  |
| R-2010-A5-10 | Manufacturer of GMDSS equipment                    | To review the design of their gmdss equipment, looking for possible operating deficiencies that may have gone undetected.   |  |
| R-2010-A5-11 | Life raft manufacturers                            | To investigate the reasons why the starboard life raft's hydrostatic release mechanism failed and make public the results of their investigations.  |  |
| R-2010-A6-1  | fishing vessel Captains,<br>Skippers and Officers. | Encourage captains, skippers and officers with navigation watch responsibility to strictly comply with the COLREG, especially regarding the evaluation and reaction with enough anticipation in those cases where a risk of collision exists.   |  |
| R-2010-A6-2  | fishing vessel Captains,<br>Skippers and Officers. | Likewise, encourage these groups to record the important events related with a maritime accident. The record, once it has been disseminated, will allow authorities and rescue services to react quicker and more efficiently. Likewise, the recording of the events will provide an explanation of the actions as well as ensure the rights of crewmembers and owners in subsequent surveys carried out by authorities, insurance companies, professional organizations, etc are properly safeguarded. |  |
| R-2010-A6-3  | General Directorate<br>for the Merchant Navy       | It is recommended they enforce maximum compliance with COLREG regulations. It has been checked that there are ports where vessels maintain the "vessel engaged in fishing" signs displayed at all times, even when they are in port.  |  |
| R-2010-A6-4  | General Directorate for the Merchant Navy          | It is recommended that the General Directorate of the Merchant Navy (DGMM) carry out awareness campaigns directed at skippers and Guilds, emphasizing strict compliance with the COLREG   |  |
| R-2010-A6-5  | General Directorate for the Merchant Navy          | It is recommended that Maritime Authorities meet with<br>the head Skippers of the respective geographical area<br>Guilds to inform them of the safety conclusions and<br>recommendations pertaining to the reports published<br>by the CIAIM.   |  |

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| R-2010-A6-6 | General Directorate for the Merchant Navy  | Likewise, it is recommended that the DGMM require fishing vessels obligatorily record safety events in their logs or appropriate documents.   |  |
| R-2010-A6-7 | General Secretariat for<br>the Sea / fishing Guilds  | Carry out awareness campaigns directed at Guild members to increase awareness regarding: the need to strictly complyu with the RIPA / the high risk involved with leaving a vessel's wheelhouse unattended / The need to carry out a systematic monitoring of the bearings and/or positions of nearby vessels and not exclusively rely on the position and direction they appear to have at a given moment / The GPS capability known as MOB, which allows to immediately record the location of an accident. |  |
| R-2010-A6-8 | Autonomous communities   | Carry out information campaigns directed at professionals in the sector regarding the COLREG.   |  |
| R-2010-A7-1 | Fishing vessel ship-<br>owners   | Be more proactive in order to ensure that crewmembers are properly trained since this is the primary cause of accidents on board fishing vessels.   |  |
| R-2010-A7-2 | Fishing vessel ship-<br>owners   | Modify existing hazard plans and establish proper and safe procedures, especially for all dangerous operations and in particular those involving dropping and raising rigs or other heavy objects.  |  |
| R-2010-A7-3 | Fishing vessel ship-<br>owners   | When handling rigs or other heavy objects, design procedures that enable in as much as possible, to automate the manoeuvre and avoid using sailors directly for these tasks.  |  |
| R-2010-A7-4 | General secreteriat for<br>the Sea, Fishing guilds,<br>Marine Social institute,<br>Workplace inspection<br>Authorities, Accident<br>Insurance Agencies<br>and Occupational<br>safety and Health<br>Prevention Consulting<br>Agencies |   |  |
| R-2010-A7-5 | National Institute of<br>Occupational Safety<br>and Health   | To take these recommendations into account when the Technical Guide for the Evaluation and Prevention of Occupational Hazards on Board Fishing Vessels is updated.  |  |
| R-2010-A7-6 | European Commission<br>Fishing Authorities   | When addressing requests from the sector regarding the hazard involved with handling bottom-set longline signal buoys; press to modify the rules regarding signalling and markings concerning the size of the signalling items, especially the buoy, adapting their size so that sea launching operations can be carried out safely, especially during severe sea and wind conditions.  |  |
| R-2010-A7-7 | General Directorate for the Merchant Navy  | To press upon Marine Authorities to ensure their inspectors pay close attention during safety management controls.  |  |
| R-2010-A7-8 | General Directorate for the Merchant Navy  | To press upon Marine Authorities to not relax their controls regarding the qualifications of crewmembers aboard fishing vessels.  |  |

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| R-2010-A8-1 | recreational vessel renting companies          | To check that the navigation plans filed by their customers are safe before renting the vessel. To accomplish this, crew certifications and forecast weather conditions must be taken into account.  |  |
| R-2010-A8-2 | Inspection collaborating organizations         | That during periodic inspections of recreational vessels, check that the location where the 406 MHz radio beacon and life rafts are stowed are adequate so that the equipment will function properly during an emergency.  |  |
| R-2010-A8-3 | Inspection collaborating organizations         | That during periodic inspections of recreational vessels, check that the VHF radio with Digital Selective Calling is programmed with the MMSI number assigned to the vessel by the Cognizant country and it is connected to the GPS.   |  |
| R-2010-A8-4 | Spanish Maritime<br>Safety and Rescue<br>Agent | To inform their Rescue Coordination Centres regarding the deficiencies detected during the rescue and implement the necessary measures to prevent them from occurring in the future, making optimum use of material and human resources.   |  |
| R-2010-A8-5 | General Directorate for the Merchant Navy      | To pay close attention during controls of inspection collaborating organizations in order to guarantee thorough periodic inspections of recreational vessels are carried out.  |  |
| R-2010-A9-1 | Fishing vessel owners<br>and skippers          | to take into account the conclusions reached in this report concerning the enforcement of provisions of Royal Decree 543/2007, which requires skippers to ensure that:  i. The crewmembers know the location of fire fighting equipment and materials that the ship is equipped with, they know how the equipment works and are properly trained in theiruse;  ii. The crewmembers are properly trained in the use of survival equipment and are aware of the importance of wearing a life jacket when required to abandon ship. |  |
| R-2010-A9-2 | fishing vessel designers                       | To include improvements in the designing of closing systems for the hinged windows of the openings and for the covers to the engine room access hatches for fishing vessels that have a fixed CO2 extinguishing system installed, to ensure the water tightness of the room as well as the proper performance of said system.  |  |
| R-2010-A9-3 | General Directorate<br>for the Merchant Navy   | To press upon Marine Authorities that their inspectors do not neglect the technical control regarding sealing systems for hot surfaces and the possible fire sources, especially in ships built before Royal Decree 543/2007 came into effect.   |  |
| R-2010-A9-4 | General Directorate<br>for the Merchant Navy   | To press upon marine Authorities that their inspectors do not neglect the operational control regarding the familiarization of crewmembers with fire fighting and abandon ship procedures, verifying the execution of periodic emergency drills carried out by fishing vessel crews.   |  |
| R-2010-A9-5 | SASEMAR and<br>Catalonia                       | To value the need to of carrying out a joint study regarding FRP fires, in case new techniques can be  |  |

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|               | Government Fire<br>Department                | found to fight these types of fires aboard ships and draft an operating procedure for fighting these types of fires.  |  |
| R-2010-A10-1  | Ship-owning company VALIELA, S.A.            | To provide clear and categorical instructions in order to remind all personnel aboard their ships to comply with regulations regarding emergency training and familiarization, especially regarding the execution of onboard drills.  |  |
| R-2010-A10-2  | Ship-owning company<br>VALIELA, S.A.         | To provide clear and categorical instructions in order to remind skippers and captains of their obligation to comply with regulations regarding ship loads, their floatability and stability, especially taking into account the restrictions that apply to ships sailing in the North Atlantic in the winter time.   |  |
| R-2010-A10-3  | Company Faustino<br>Carceller, S.L.          | To review their work procedures in order to ensure that errors and incoherencies do not occur in the project documents for a ship.  |  |
| R-2010-A10-4  | Company Faustino Carceller, S.L.             | To use load density values that are more realistic of ship operations when drafting stability books.  |  |
| R-2010-A10-5  | Company Faustino<br>Carceller, S.L.          | To review their work procedures to include in stability books, the most pertinent load conditions for the areas and seasons in which the ship may operate. The stability book is undoubtedly, a valuable tool to assist the skipper in the proper loading of the ship; but in orde to do so, it must include realistic operating conditions.  |  |
| R-2010-A10-6  | General Directorate for the Merchant Navy    | To improve their ship building project approval processes, in order to be able to detect errors in the projects and verify that the ship has been built in accordance with the project.   |  |
| R-2010-A10-7  | General Directorate for the Merchant Navy    | To carry out random inspections of fishing vessels upon their departure and arrival at ports for the purpose of detecting overload conditions at the moment of departure and arrival at port as well as those that exist at the fishing grounds, which can be deduced from the load conditions at the time of departure and arrival.  |  |
| R-2010-A10-8  | General Directorate for the Merchant Navy    | To intensify the inspections of training centres that teach maritime safety courses in order to guarantee that the contents of the courses corresponds with the established programs.   |  |
| R-2010-A10-9  | General Directorate<br>for the Merchant Navy | To issue a specific instruction to the fishing industry in general in order to ensure that for each crewmember that boards a vessel for which there is an obligation to carry an immersion survival suit for each crewmember, that a proper size immersion survival suit is assigned to each crewmember and that crewmembers have had a chance to fit test the suits. in those cases in which the suits are stowed in a single location, it is recommended that each of them is positively labelled using a marking or clear label with the crewmember's name. A simple adhesive tape located on the suit's bag with the name of the crewmember written with indelible ink may suffice. |  |
| R-2010-A10-10 | General Directorate for the Merchant Navy    | To relay the circumstances surrounding the accident and abandon ship procedures that took place to  |  |

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|               |  | maritime safety training centres for them to use when drafting and developing their maritime safety training programs. Especially, those regarding procedures to be carried out when a ship sinks while it is carrying out fishing gear trawling operations and the loss of propulsion causing the ship to move towards her stern due to the pull exerted by the launched longline.  |  |
| R-2010-A10-11 | Trawling vessel ship-<br>owning companies  | To draft abandon ship instructions for trawling vessels when the emergency occurs while the vessel is operating. The traction caused by the entire gear extended towards the stern may cause the rafts to drift away from the ship and/or the designated boarding areas, drifting towards the bow. The personnel on-board must be aware of the risks inherent to this circumstance as well as of the procedures to confront it, such as to first of all moor the raft tightly and then bring it near the side ladder and be able to quickly cut the mooring line afterwards. |  |
| R-2010-A11-1  | General Directorate<br>for the Merchant Navy   | Study the implementation of operational limitations for vessels of up to 12 passengers, regarding the navigation area, speed, power and crew rest in cases where crewmembers are working two jobs, attempting to make compatible a fishing activity with a commercial passenger activity.  |  |
| R-2010-A11-2  | General Directorate for the Merchant Navy  | Prohibit personnel operating tourist vessels to simultaneously carry out tourist guide functions.  |  |
| R-2010-A11-3  | Public Administrations<br>that have Nautical<br>Training Centres under<br>their cognizance | Insist on the need to guarantee that personnel that obtain titles qualifying them to operate vessels are fully trained regarding watch and lookout duties.   |  |
| R-2010-A11-4  | Public Administrations<br>that have Nautical<br>Training Centres under<br>their cognizance | Carry out information campaigns regarding the RIPA.  |  |
| R-2010-A12-1  | Company that owns the fishing vessel that was involved in the mishap                       | To ensure that all their vessels have occupational hazard prevention plans as required by current regulation.  |  |
| R-2010-A12-2  | Company that owns the fishing vessel that was involved in the mishap                       | To ensure that all the information provided to the crewmembers on board their vessels regarding safety, and especially the organizational emergency charts, are printed in a language that all crewmembers can understand.   |  |
| R-2010-A12-3  | Company that owns the fishing vessel that was involved in the mishap                       | To implement the necessary measures to ensure that crewmembers on board their vessels are in possession of the proper professional qualifications for guaranteeing navigation and ship safety at all times, while taking into account the vessel's technical and operating characteristics and that they receive the required specific occupational hazards prevention training.   |  |
| R-2010-A12-4  | General directorate for<br>the Merchant Navy<br>and the General                            | To improve the control mechanisms for crews enrolled on board fishing vessels under Spanish flag that are operating in a self-dispatching mode, and more   |  |

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|              | Secretariat for the Sea   | specifically regarding the following: - regularize the enrolling and disenrolling of embarked crewmembers the practicing of professional fishing activities while being in possession of the certificates that prove they are qualified and trained in the nautical/fishing profession; and; - the embarking of crewmembers that are in possession of the medical aptitude certificate for boarding.   |  |
| R-2010-A12-5 | General Directorate<br>for the Merchant Navy<br>and the General<br>Directorate for the Civil<br>Guard | To establish cooperation agreements regarding the control of crews, maritime and navigation safety, so that the patrol vessels that operate between the African and Spanish coasts, include among their duties, the control of the fishing fleet with Spanish flag that are navigating in international waters.  |  |
| R-2010-A13-1 | To Aker Solutions, company that manufactured the steering system:                                     | To carry out an inspection of its production systems to ensure that manufactured components meet the quality specifications of the materials, resistance and fatigue behaviour.  |  |
| R-2010-A13-2 | To Aker Solutions, company that manufactured the steering system:                                     | that when they update the software of any of their systems, they notify and offer said software update to the customers that have those systems installed.   |  |
| R-2010-A13-3 | Port authority of Seville<br>and the General<br>Directorate for the<br>Merchant Navy                  | To study the need to establish special conditions for transiting up and down the Guadalquivir river for vessels transporting dangerous cargo in accordance with the self-protection and emergency plans required by rd 145/1989 of 20 January, which approves the national rules for admission, storage and handling of dangerous cargo. These conditions may be for example, to limit the speed at specific sections that are particularly difficult, preparing the anchoring manoeuvre, etc. |  |
| R-2010-A13-4 | Company EMS SHIP<br>MANAGEMENT INDIA  | That during on-board exercises, they ensure that all wheelhouse personnel are aware of the immediate responses and the procedure to follow in case of an emergency, tripping of alarms or others.  |  |
| R-2010-A14-1 | fishing vessel owners   | To operate their vessels while observing crew rest in accordance with current regulation.  |  |
| R-2010-A14-2 | fishing vessel Skippers   | To implement all the necessary preventive measures to preserve the safety and health of the crew when bad weather is forecast of worsens, cancelling the fishing activities until the weather improves if required.  |  |
| R-2010-A14-3 | Fishing vessel builders and designers   | To improve the constructive design of equipment as well as of the structural elements of the vessel, not including protruding or sharp edges in their designs that may cause serious accidents on board.   |  |
| R-2010-A14-4 | General Directorate<br>for the Merchant Navy  | To establish criteria to set the minimum number of crewmembers when dispatching fishing vessels taking into consideration the vessel's operability in order to prevent working shifts on board that do not observe mandatory periods of crew rest.   |  |
| R-2010-A15-1 | Fishing vessel designers  | To design vessels so that the doors open outward, when opening towards interior spaces creates a flooding  |  |

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|              |   | hazard in case of accident.   |  |
| R-2010-A15-2 | Fishing vessel designers                        | To design remote shutdown systems for the fishing machines that are effective under any circumstance.   |  |
| R-2010-A15-3 | Fishing vessel crews                            | To not add items to the systems installed on board vessels, or modify them, and always use them without compromising safety.  |  |
| R-2010-A15-4 | Fishing vessel crews                            | To consider the vulnerability of vessels against possible floods and maintain all watertight doors closed because when these doors are left open, they may contribute to the flooding.  |  |
| R-2010-A15-5 | Maritime<br>administrations                     | To carry out the studies required so that operating procedures in case of gear snagging on board fishing vessels can be drafted.  |  |
| R-2010-A15-6 | Maritime<br>administrations and<br>SASEMAR      | To create operating protocols that guarantee that a rescue helicopter crew is immediately availability at all times.  |  |
| R-2010-A15-7 | Fishing vessel ship-<br>owners                  | To provide instructions to skippers and verify compliance with regulations and professional uses regarding handling and maintenance of doors, regardless of whether or not they are watertight, as well as distress communications, launching of life rafts, the correct use of personal protective equipments and rest of on-board emergency procedures or abandon ship procedures, a well as the operation of the fishing machines. |  |
| R-2010-S16-1 | Fishing vessel Owners,<br>Captains and Skippers | To encourage the use of life vests while on deck at all times, independent of Royal Decree 543/2007, which states that crewmembers on board fishing vessels must wear the life vest or automatically inflated life vest when carrying out any task on the deck or when recommended due to hazardous sea states or wind conditions.  |  |
| R-2010-S16-2 | General Directorate<br>for the Merchant Navy    | To initiate the process for modifying Royal Decree 543/2007 making the use of the automatically inflated life vest mandatory while on deck, regardless of the sea state or wind conditions.   |  |

## ANNEX II. CLASSIFICATIONS USED

## **SHIP TYPE**

#### Cargo ship:

Designed for the carriage of various types of cargo, goods or products and up to a maximum of 12 passengers, for commercial gain.

#### Fishing vessel:

Any vessel equipped or used commercially for catching fish or other living resources of the sea.

## Passenger ship:

Designed to transport more than 12 passengers.

## Special services ship:

Designed for special services.

#### Inland waterway vessel:

Intended solely or mainly for navigation on inland waterways.

#### **Recreational craft:**

Boat of any type, intended for sports or leisure purposes.

#### Naval ship:

Any ship operating under a navy or other military organization.

#### Submersible:

Vessel which primarily operates under water. Although it can rely on surface support it may not have to be physically connected to support facilities during the operations.

#### WIG:

Multimodal craft which, in its main operational mode, flies by using ground effect above the water or some other surface, without constant contact with such a surface and supported in the air, mainly, by an aerodynamic lift generated on a wing (wings), hull, or their parts, which are intended to utilize the ground effect action.

#### **Unknown:**

It is not possible to identify the ship type.

#### **CASUALTY EVENTS**

#### Capsizing / listing:

Casualty where the ship no longer floats in the right-sideup mode due to: negative initial stability (negative metacentric height), or transversal shift of the centre of gravity, or the impact of external forces. When the ship is tipped over until disabled is called capsizing; when the ship has a permanent heel or angle of loll is called listing.

#### Collision:

Casualty caused by ships striking or being struck by another ship, regardless of whether the ships are underway, anchored or moored. This type of casualty event does not include ships striking underwater wrecks. The collision can be with other ship or with multiple ships or ship not underway.

#### Contact:

Casualty caused by ships striking or being struck by an external object. The objects can be: floating object (cargo, ice, other or unknown); fixed object, but not the sea bottom; or flying object.

34 ANNEX II. CLASSIFICATIONS USED

#### Damage to equipment:

damage to equipment, system or the ship not covered by any of the other casualty type.

#### Grounding / stranding:

A moving navigating ship, either under command, under power, or not under command, drifting, striking the sea bottom, shore or underwater wrecks.

#### Fire / explosion:

An uncontrolled ignition of flammable chemicals and other materials on board of a ship:

- → Fire is the uncontrolled process of combustion characterized by heat or smoke or flame or any combination of these.
- → Explosion is an uncontrolled release of energy which causes a pressure discontinuity or blast wave.

#### Flooding / foundering:

Casualty event when the ship is taking water on board. Foundering will be considered when the vessel has sunk. Foundering should only be regarded as the first casualty event if we do not know the details of the flooding which caused the vessel to founder. In the chain of events foundering or flooding can be the last casualty event in this case there is the need to add accidental events. Flooding can be:

- → Progressive, if the water flow is gradually
- → Massive, if the water flow is considerable

#### Loss of control:

total or temporary loss of the ability to operate or manoeuvre the ship, failure of electric power, or to contain on board cargo or other substances:

- → Loss of electrical power
- → Loss of propulsion power
- → Loss of directional control
- → Loss of containment (accidental spill or damage or loss of cargo or other substances carried on board a ship)

#### **Hull failure:**

A failure affecting the general structural strength of the ship.

#### Missing

A casualty to a ship whose fate is undetermined with no information having being received on the loss and whereabouts after a reasonable period of time.

#### **Operational accident:**

Accident where a person is injured or killed, not involving in a ship casualty.

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# ANNEX III. MEMBERS OF THE PLENARY

| POSITION                          | INSTITUTION / ORGANIZATION  | PRINCIPAL                             | ALTERNATE                             |
|-----------------------------------|---|---------------------------------------|---------------------------------------|
| President                         |   | Mr. Eduardo Cruz Iturzaeta            |                                       |
| Vice president                    | General Secretariat of the Ministry for Public Works and Transport  | Mr. Isidoro Ruiz Girón                |                                       |
| Secretary                         | General Secretariat for Transport                                   | Mr. Francisco Mata Álvarez-Santullano |                                       |
|                                   | Spanish Merchant Marine Officers Association (COMME)                | Mr. Germán de Melo Rodríquez          | Mr. José María Arroio Fernández       |
|                                   | Naval Architects and Oceanic Engineers Association (COIN)           | Mr. Fernando Yllescas Ortiz           | Mr. Rafael Gutiérrez Fraile           |
| _                                 | Spanish Association of Nautical / Fishing Degree Holders (AETINAPE) | Mr. Francisco Javier Martínez Couto   | Mr. Jesús Saavedra España             |
| Permanent board members           | El Pardo Model Basin (CEHIPAR)                                      | Mr. Luis Palao Lechuga                | Mr. Elov Carrillo Hontoria            |
| board members                     | Centre for Public Works Studies and Experimentation (CEDEX)         | Ms. María Jesús Martín Soldevilla     | Mr. Antonio Lechuga Álvaro            |
|                                   | General Secretariat of the Sea                                      | Mr. Jerónimo Hernández Riesco         | Mr. Florencio Peruio Dávalos          |
|                                   | State Meteorological Service (AEMET)                                | Mr. Manuel Patricio López Carmona     | Ms Mª Milagros García-Pertierra Marín |
|                                   | Autonomous Community of Galicia                                     | Mr. Pedro Riveiro Domínguez           | Mr. Antonio García Díaz               |
| Board<br>members<br>designated by | Prinicpality of Asturias  | Mr. Dimas Alonso Aladro               | Ms. Margarita Rodríguez Alegre        |
|                                   | Autonomous Community of Cantabria                                   | Mr. Marín Sánchez González            | Mr. Carlos de Miquel González         |
|                                   | Autonomous Community of the Basque Country                          | Mr. Joseba Andoni Idoiaga Uribe       | (not designated)                      |
|                                   | Autonomous Community of Catalonia                                   | Mr. Juan Zamora Terrés                | (not designated)                      |
|                                   | Autonomous Community of Balearic Islands                            | Mr. Joaquín Tintoré Subirana          | Ms. Ananda Pascual Ascaso             |
| the                               | Valencian Community   | Mr. Luis Ibáñez Gadea                 | Ms. Irene Rodríauez Rodriao           |
| Autonomous  Communities           | Region of Murcia  | Mr. Alberto Achirica Valencia         | Mr. Luis Manuel Gil de Sola Costell   |
|                                   | Autonomous Community of Andalusia                                   | Mr. Vicente Medrano García            | Ms. Paula Montilla Gómez              |
|                                   | Autonomous City of Ceuta  | Mr. César López Ansorena              | (not designated)                      |
|                                   | Autonomous City of Melilla  | Mr. Antonio Roman Jodar               | (not designated)                      |
|                                   | Autonomous Community of the Canary Islands                          | Ms. Carmen Delia González Martín      | Mr. Fernando Clavijo Redondo          |



GOBIERNO DE ESPAÑA

MINISTERIO DE FOMENTO SECRETARÍA GENERAL DE TRANSPORTES

COMISIÓN PERMANENTE DE INVESTIGACIÓN DE ACCIDENTES E INCIDENTES MARÍTIMOS