



Bundesstelle für Seeunfalluntersuchung
Federal Bureau of Maritime Casualty Investigation
Federal Higher Authority subordinated to the Ministry of Transport,
Building and Urban Development

2012 Annual Report



Fire on the container ship MSC FLAMINIA in July 2012

August 2013

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Foreword

2012 was a year of change for the Federal Bureau of Maritime Casualty Investigation. To begin with, the new Maritime Safety Investigation Law (SUG) entered into force on 1 December 2011, which brought about several changes in day-to-day operations. The new legislation has transposed the provisions of Directive 2009/18/EC of the European Parliament and of the Council, which the Federal Republic of Germany is required to uphold. On the one hand, this Directive reflects the resolutions MSC.255(84) and MSC.257(84) of the International Maritime Organisation's Maritime Safety Committee with its new Code for the Investigation of Marine Casualties, which was drawn up on 1 January 2010 and is mandatory for all States party to the Convention for the Safety of Life at Sea to establish a common basis for global cooperation in the investigation of marine casualties. On the other hand, the EC has set its own priorities with the aim of establishing further harmonisation within Europe. It is clear that this has yet to fully succeed. One amendment that is especially significant with respect to substantive work is the regulation in the new SUG that provides that accidents, which only involve fishing vessels of less than 15 m in length or non-commercially used recreational craft, shall be investigated only in exceptional cases and only if they occur in waters within the jurisdiction of Germany or in the German Exclusive Economic Zone. In particular, another important amendment is the abandonment of references to the provisions of the Aviation Accident Investigation Law in the 'old' SUG, while establishing new provisions tailored to the investigation of marine casualties. As a result, the law is much easier to read and apply in general.

The Federal Bureau's previous director, Jörg Kaufmann, left the BSU on 1 May 2012 and transferred to the Federal Maritime and Hydrographic Agency as head of its Shipping department. He was simultaneously replaced by Volker Schellhammer, previously head of the Shipping Law and Administration department of the Federal Maritime and Hydrographic Agency.

As already discussed in the report for 2011, significant amendments to the SUG entered into force on 1 December 2011, which closely reflect Directive 2009/18/EC of the European Parliament and of the Council.

The most dramatic marine casualty for which the BSU was directly responsible in 2012 was quite certainly the accident involving the container ship 'MSC Flaminia' in the Atlantic Ocean. This accident attracted considerable public and political attention, in particular, because of the lengthy procedure surrounding the determination of a port of refuge. Due to the complexity of the investigation, which in addition to the actual accident also deals with the ensuing events, it was not possible to prepare the investigation report within one year of the accident, which, as a general rule, the amended version of the law now requires. The tragic accident in January involving the Italian-flagged cruise ship 'Costa Concordia' off the Italian island of Giglio attracted global attention. This disaster claimed a total of 32 lives, including 12 German nationals. In view of these victims, Germany is considered a substantially interested State as regards the investigation of the accident. Consequently, the BSU has been involved in the investigation and since all the important aspects of the accident have yet to be clarified will continue to be, even though cooperation with the Italian authorities has not always proven easy. Apart from that, 2012 was somewhat below average in respect of the number and severity of accidents. More detailed information can be taken from the statistics section starting on page 19.

Experts from the BSU were sought after as panellists and speakers at various events in 2012, too. For example, presentations were given to the German Nautical Association, the waterway police, recreational craft associations, and maritime safety organisations.

As regards the international arena, two events are especially noteworthy. One is the conference in June for members of the Marine Accident Investigators' International Forum (MAIIF) held in Hong Kong, during which the previous director of the BSU was given a fitting send-off by its committee, on which he held the position of vice chairman. Equally

exciting was the organisation of the annual EMAIIF session (European section of the MAIIF) in September by the BSU. Thanks to the extremely dedicated participation of all staff members at the BSU and the support of the weather, the event was a complete success.

As documented by the various press inquiries, as well as corresponding articles and reports in the respective media, public interest in the work of the BSU seems to be increasing.

A few words on our own behalf: Unfortunately, 2012 was also marked by the fact that

the positions of two of a total of 11 staff members were almost continuously not regularly filled. That included the post of the chief administrative assistant. Amongst other things, the publication of this report very late in the year and fact that our website is not up-to-date in all areas is the outcome of that. However, I am confident that will change next year.

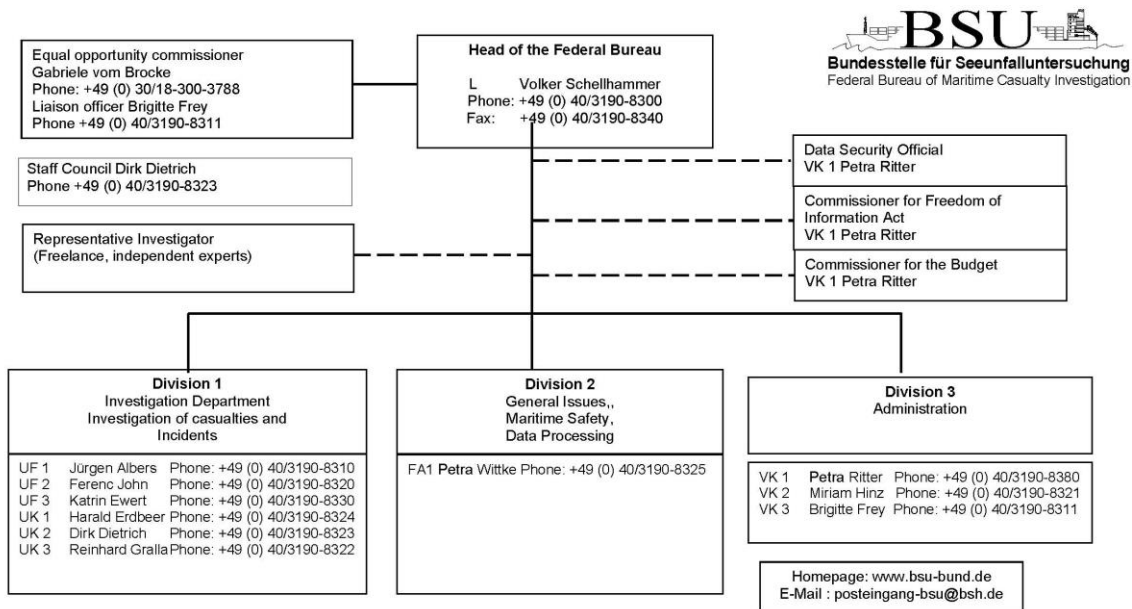
Volker Schellhammer

Structure of the BSU

The Federal Bureau of Maritime Casualty Investigation (BSU) is a federal higher authority based in Hamburg, which is currently staffed by 11 people. It has a single-level administrative structure and is under the direct supervision of Department WS 22 of the Federal Ministry of Transport, Building and Urban Development.

Necessary decisions are made quickly and independently by the BSU's director. In particular, he is not subject to instructions vis-à-vis the decision as to whether an investigation is initiated, or not. He represents the BSU outwardly at national, European, and international level. Moreover, he is responsible for strategic planning and control. He is also responsible for press, media, and general PR work.

BSU organisational chart



UF = Lead Investigator
UK = Investigator

FA = Basic Issues
VK = Administrator

Outside office hours

Mobile II – On-call service: +49 (0) 170-5865675

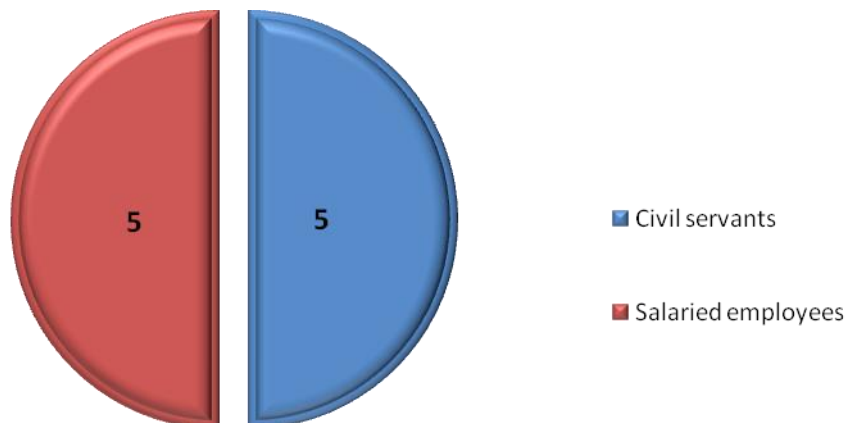
Information as of 05/2013

Information as of May 2013

Inside the BSU

The Maritime Safety Investigation Law (SUG) forms the legal foundation for official marine casualty investigations and thus for the activities of the BSU. The BSU conducts its safety investigations independently; however, it must satisfy the legal requirements derived from EU Directive 2009/18/EC. A core workforce of 11 staff members (five civil servants and six salaried employees) is now available again to complete tasks associated with marine casualty investigation. In spite of this low staff level, the occupational fields in the BSU are varied. For example, job profiles include that of the navigator, naval architect, lawyer, mechanical engineer, as well as commercial and typical administrative disciplines. In addition to being highly qualified, work at the BSU requires great enthusiasm, flexibility and professionalism.

Total staffing Information as of 31 December 2012



Investigation teams

The BSU can be reached 24 hours a day, 7 days a week via its on-call service.

EMERGENCY PHONE NUMBER: +49 (0) 170 – 58 65 67 5

Accessibility is ensured by the staff of the Investigation department in Division 1. These are the people who initiate or coordinate the necessary first measures as quickly as possible and who arrive at the scene of an accident should the need arise.

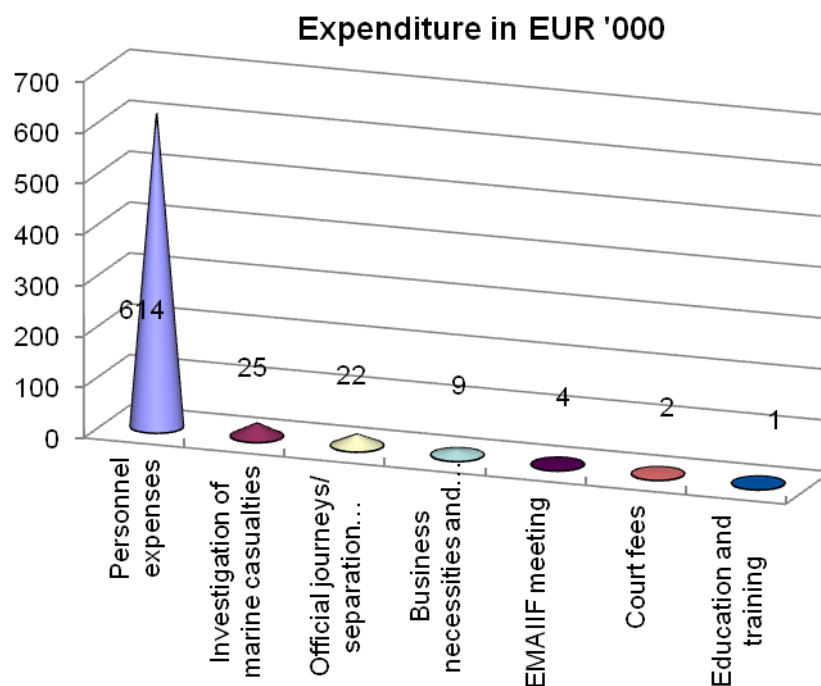
Division 2 provides the necessary support for technical matters, such as securing and analysing technical recordings on board ships and ashore.

Administration

Administrative support is provided by the staff of Administration in Division 3.

Administrative tasks at the BSU were performed by (only) two employees in 2012. This includes all the functions of organisation and personnel management, as well as preparation and management of the budget. An invitation for applications was made in November 2012 with a view to refilling the third, vacant (since January 2012) post and has since been successfully concluded.

The 2012 financial year closed with total expenditure of EUR 677,000. This does not include IT expenditure amounting to EUR 22,000; however, this is not managed directly within the organisation due to the small size of the BSU.



BSU expenditure in 2012 (without IT expenditure)

At EUR 614,000, personnel expenses represented the largest item of expenditure in 2012. Based on total expenditure, this corresponds to a share of some 90%.

Expenditure in 2012 is virtually the same as 2011, in which total expenditure amounted to EUR 683,000 (without IT expenditure).

Amongst other things, the level of expenditure is dependent on the scale of the marine casualty investigations necessary and thus varies from year to year. Considerably less expenditure for marine casualty investigations was necessary due to the recasting of the SUG at the end of 2011.

International

The need for international collaboration in the field of marine casualty investigation is emphasised more and more – not least by the new IMO Code and the new EU Directive. The staff of the BSU work together with other European and international marine casualty investigation authorities if the interests of different countries are affected.

Here, the BSU maintains close contact with foreign marine casualty investigation authorities. In this regard, it works at international level with the Marine Accident Investigators' International Forum (MAIIF), as well as with its regional forum, the European Marine Accident Investigators' International Forum (EMAIIIF), and at European level with the European Maritime Safety Agency (EMSA), which has its headquarters in Lisbon.

Since Directive 2009/18/EC came into force, collaboration in the conduct of safety investigations has been mandatory within the European Union if the interests of several Member States are affected. Furthermore, a framework for permanent collaboration has been created, within which the investigative bodies of the Member States are required to liaise on the modalities for collaboration. Apart from the actual investigative work, one of the tasks in relation to collaboration is to ensure that data are entered and maintained in the European database for marine casualties (European Marine Casualty Information Platform – EMCIP). Information about distressed ships is recorded and stored in this, thus enabling EMSA to provide the European Commission with fundamentals for making decisions concerning the maintenance and improvement of traffic safety in maritime navigation. To facilitate the accomplishment of this objective, the master data on the ships involved and course of the accident are recorded in EMCIP for each marine casualty reported. For marine casualties processed in a preliminary or main investigation, additional data must be entered by the investigator responsible. Since the structure of the EMCIP database is very complex, this now represents significant additional effort. Also apparent is the EMSA's tendency to impose additional input obligations on the investigative bodies. It is feared that this may jeopardise actual investigative work in the longer term.

Globally, marine casualty data are also recorded in a database at the IMO (Global Integrated Shipping Information System – GISIS).

Highlight of the year: EMAIIIF 8

The BSU hosted the eighth Conference of the European Section of the Marine Accident Investigators' International Forum (EMAIIIF) from 9 to 11 September in Hamburg on the occasion of its tenth anniversary and welcomed 29 foreign guests, representing 17 flag States, a representative of the European Maritime Safety Agency (EMSA), as well as various other speakers. In addition to European states (Finland, France, Hungary, Latvia, Luxembourg, Malta, the Netherlands, Norway, Portugal, Sweden, Switzerland, and the United Kingdom), the flag States of Antigua & Barbuda, Canada, the Marshall Islands, and the United States accepted the invitation.

Following a small reception in the Hotel Hafen Hamburg on the prior evening, the actual event opened on Monday morning with a welcoming address for attendees by the head of the Waterways and Shipping department of the Federal Ministry of Transport, Building and Urban Development, Reinhard Klingen.

The main focus of the event was cooperation between pilots and bridge teams. Presentations on the subject were given by Albrecht Kramer, Aldermen of the Elbe pilots, several investigators from the BSU, as well as representatives of a number of other flag States. The programme was rounded off by various other presentations on investigation-based topics.

Feedback from various guests confirmed that overall the event was a huge success. The next conference will be hosted by Switzerland in Interlaken. This is not as odd as it may initially seem because Switzerland's maritime merchant fleet actually comprises some 40 ships at present.



Attendees of EMAIIF 8 (9 to 11 September 2012)
Source: BSU

Basis for the work

The German Maritime Safety Investigation Law (SUG) forms the basis for the work of the BSU. It defines the competence of the BSU for the investigation of marine casualties

- on or involving seagoing ships of all flags
 - within German territory;
 - within the German Exclusive Economic Zone (EEZ);
 - during traffic movements on German navigable maritime waterways, as well as to, from, and in ports connected to them;
- on or involving seagoing ships flying the flag of Germany anywhere in the world, and
- in other countries if the Federal Republic of Germany has substantial interest in the investigation thereof.

Moreover, next to the actual investigative work, the BSU should play a role in improving maritime safety with a focus on preventing marine casualties by

- keeping and analysing statistics;
- publishing information on marine casualties;
- forwarding marine casualty data to the European EMCIP database, as well as to the IMO database, GISIS, and
- participating in seminars.

Transposition of 'Directive 2009/18/EC of the European Parliament and of the Council establishing the fundamental principles governing the investigation of accidents in the maritime transport sector' into German law made an amendment to the SUG necessary.

On the one hand, the readability of the SUG has been improved by this amendment, which came into force on 1 December 2011, in that hitherto cross-references to sections in the Aviation Accident Investigation Law (FIUUG) have been dispensed with.

On the other hand, necessary adjustments resulting from the EU Directive have been made. In particular, the deadline for submitting comments on draft reports of the BSU has been shortened to 30 days from 60 days previously. The addressees of a safety recommendation issued by the BSU are now obliged to report any action planned or already taken to implement the safety recommendation to the BSU. Due to the basic obligation to investigate every very serious marine casualty on or involving seagoing ships, and to conduct at least a preliminary investigation for any serious marine casualty, the BSU may no longer decide on the prioritisation of the investigation of accidents to the extent provided in the old law.

The rule under which the BSU must now publish the final investigation report within 12 months of a marine casualty occurring is gaining increasing importance. In complex cases such as that of the MSC FLAMINIA, this is virtually impossible even if a large percentage of the resources available for this purpose are pooled. Moreover, this has implications insofar as other accidents may need to be postponed.

Due to the amendments of the SUG necessitated by European law, the BSU is not or no longer responsible for marine casualties involving only

1. ships of war, troop ships and other ships owned or operated by the federal or state governments and used only on government non-commercial service;
2. ships not propelled by mechanical means, wooden ships of primitive build, recreational yachts and recreational craft not engaged in trade, unless they have prescribed manning and carry more than 12 passengers;
3. fishing vessels with a length of less than 15 metres, and
4. fixed offshore drilling units.

In practice, this is of particular significance insofar as privately used recreational craft are now no longer subject to the SUG. Therefore, the BSU has no legal mandate to investigate accidents involving recreational craft. It is only possible for the BSU to investigate accidents involving recreational craft in (rare) exceptions and even then only when an accident occurs in waters within the jurisdiction of Germany or in the German Exclusive Economic Zone. See also the comments on the investigation of accidents involving recreational craft in the last ten years at the bottom of this report.

Definitions

The amended version of the SUG defines the term 'marine casualty' as

1. any event that has at least one of the following consequences
 - the death or serious injury of a person caused by or in connection with the operation of a ship;
 - the disappearance of a person on board a ship caused by or in connection with the operation of a ship;
 - the loss, presumed loss or abandonment of a ship;
 - material damage to a ship;
 - the grounding or constructive total loss of a ship or the involvement of a ship in a collision;
 - material damage caused by or in connection with the operation of a ship;
 - environmental pollution resulting from damage to one or more ships caused by or in connection with the operation of one or more ships, and
2. any event caused by or in connection with the operation of a ship that poses a risk to a ship or a person or the consequences of which could cause serious damage to a ship, an offshore structure or the environment.

Depending on the consequences, the generic term 'marine casualty' is divided further into

Very serious marine casualty (VSMC):

Fatality, constructive total loss of a ship or an accident with substantial environmental pollution

Serious marine casualty (SMC):

Marine casualty not classified as a VSMC, but which involves

- failure of the main engine;
- substantial damage to the accommodation spaces;
- serious damage to the ship's structure;
- a leak in the underwater shell plating with which the ship becomes unseaworthy;
- pollution, regardless of the volume of pollutants released, and/or
- an accident that necessitates towing or shore-based assistance.

Less serious marine casualty (LSMC):

Any marine casualty not classified as a VSMC or SMC

Incident (I):

Any event caused by or in connection with the operation of a ship that poses a risk to a ship or a person or the consequences of which could cause serious damage to a ship, an offshore structure or the environment

In particular, the aforementioned definitions are of significance because they apply throughout Europe and form the basis for the entries in the European marine casualty database, EMCIP (European Marine Casualty Information Platform).

Accidents or other incidents involving only recreational craft or small fishing vessels are not recorded in Europe. Since there is still a requirement to report such accidents, a national database is kept for this purpose.

Moreover, the law does not apply to inland waterway vessels, ships of war, troop ships and other ships owned or operated by the federal or state governments and used only on government non-commercial service.



**Water ingress on the starboard side of the bulk carrier SPLITTNES;
BSU investigation ref. 507/11, investigation ongoing at 31 December 2012**



**Collision in the Kiel Canal, BSU investigation ref. 117/11, investigation ongoing at 31 December 2012
Source: Hasenpusch Photo-Productions and Agency**

Publications

All the reports published by the BSU are available sorted by year of publication on the BSU website (www.bsu-bund.de) under 'Publications'.

The BSU's discretion to investigate or not investigate marine casualties is more restricted than hitherto following the entry into force of the EU Directive on marine casualty investigation and its transposition into national law by amending the SUG. For example, any VSMC reported within the BSU's area of responsibility must be investigated and any SMC at least evaluated in the course of a preliminary investigation. Deviations from this principle must be justified to EMSA, the agency appointed by the European Commission for that purpose. When deciding whether to investigate an SMC by means of only a preliminary investigation, consideration must be given, in particular, to the severity of the accident, the type of ships involved and their cargo, and the question of whether new knowledge for preventing future marine casualties may be gained from a full safety investigation. Cases discontinued after a preliminary investigation are usually concluded with an internal report. Main investigations that do not give rise to important conclusions with respect to preventing future accidents, for example, because matters pertaining to safety have been discussed previously in a similar accident, are usually concluded with a summary investigation report. This does not contain safety recommendations, but may refer to previous reports and recommendations of the BSU or foreign marine casualty investigation agencies.

The BSU's investigation reports follow a certain pattern, which is also provided by Directive 2009/18/EC. In addition to the required indication of the purpose of the safety investigation, notably, the prevention of future accidents and malfunctions, but not the determination of blame, liability, or claims, each report contains

- a summary of the accident;
- factual information, in particular, ship and voyage particulars;
- a detailed account of the course of the accident and investigation;
- an analysis of the investigation;
- ensuing conclusions, and
- as a rule, safety recommendations.

The publication of so-called interim investigation reports is also required if it is not possible to prepare a final report within one year of the date of an accident.

Safety recommendations

In line with the IMO Code for the Investigation of Marine Casualties, the task of marine casualty investigation agencies is defined as 'safety investigation' in the new EU Directive and correspondingly in the amended SUG. This emphasises the fact that marine casualty investigations are not intended to clarify issues of fault or liability, but are solely for the purpose of improving maritime safety. That is also the reason why a safety recommendation is issued. A safety recommendation points to an identified gap in safety and aims to help the addressee avoid or at least reduce the impact of future situations similar to those that led to an accident in the case investigated.

Therefore, a safety investigation by the BSU focuses not only on the events on board, but also looks at organisation ashore. Consequently, in addition to the crew, addressees of safety recommendations could include pilots, ship owners, shipyards, manufacturers of equipment, the Maritime Administration, the legislature, or others.

The BSU may issue an early alert in the form of preliminary safety recommendations before the publication of an investigation report. This is to prevent accidents if it has been found that a safety risk exists, for which notification must be provided immediately, i.e. before publication of the final report.

In 2012, the BSU issued safety recommendations in nine final reports. Beyond that, a safety recommendation was issued outside of an investigation report via press release 13/12 of 16 July 2012. This concerned a technical fault in the electrical system of a container ship, which resulted in a collision with a harbour jetty.

All the recommendations published by the BSU are available for reading sorted by year of publication on the BSU website (www.bsu-bund.de) under 'Publications'.

Main investigations

14 investigations were closed with an investigation report in 2012. As can be derived from the investigations ongoing at 31 December 2012 (see table on pages 29 and 30), many older cases are still being processed. This is partly due to the fact that the accident involving the MSC Flaminia in the second half of 2012 tied up disproportionately high staff capacity, but also because accidents that have to be processed under the new SUG now have priority due to the time limit of one year that has to be adhered to. The 'old cases' are not subject to such a time limit.

The accident involving the 'LISCO GLORIA' already discussed last year (see investigation report 445/10) and the dramatic collision involving the TMV ZAPADNY and a floating dock on the River Weser were closed in 2012.

A number of accidents that gave rise to lively public attention were still being processed at the end of 2012: next to the fire on the MSC FLAMINIA, in particular, the COSTA CONCORDIA case, as well as one of the last accidents involving recreational craft to be investigated under the old law; notably, the collision off Pelzerhaken between a motor yacht and surfer in August 2011.

Serious marine casualty due to a collision involving the TMV ZAPADNY and a floating dock moored on the bank of the River Weser belonging to the Fr. Lürssen shipyard after an overtaking manoeuvre between the TMV RHONESTERN and TMV ZAPADNY

At 0804 on 5 April 2011, the Belize-registered TMV ZAPADNY was proceeding with pilot advice and collided with the front end of a floating dock, which was firmly moored on the northern bank of the River Weser and belonged to the Fr. Lürssen shipyard, off Bremen-Vegesack. The collision was preceded by an overtaking manoeuvre by the TMV RHONESTERN, which was sailing under the flag of the Isle of Man and also manned by a pilot, after which the ZAPADNY's ability to steer was almost certainly compromised due to hydrodynamic effects.

Due to the force of the collision on the dock, its various shore anchoring points tore off across a wide area. The river's flow then caused the front end of the empty floating dock, which was affected by the collision, to part from the quay wall. Following that, the still buoyant ZAPADNY – whose bow had become wedged together with the front end of the dock – and the dock itself moved crossways to the direction of flow, thus blocking the traffic on the River Weser for some two hours. The shipyard workers employed on the floating dock were able to move to safety before the accident occurred. Since there was also no crew members situated on the fore section of the ZAPADNY – which was primarily affected by the collision – at the time of the accident, nobody came to physical harm.

The TMV RHONESTERN was not affected by the effects of the overtaking manoeuvre and continued her voyage towards the next port of destination without interruption. There was no environmental pollution.



Fore section of the ZAPADNY Y wedged into the front end of the floating dock

Very serious marine casualty due to fire and explosion on board the MSC FLAMINIA on 14 July 2012 in the Atlantic, as well as subsequent events

On 14 July 2012, smoke followed by an explosion in cargo hold 4 occurred on the German-flagged full container ship MSC FLAMINIA during her voyage from Charleston to Antwerp. The ship was in the middle of the Atlantic Ocean at the time of the accident. The crew abandoned the ship because of the indeterminable hazard to life and limb and was taken on board the tanker DS CROWN a short time later. Three seamen lost their lives during the accident. Two other crew members were seriously injured.

Salvaging the ship and the inextricably linked search for a place/port of refuge presented the ship's owner, the appointed salvage company, and the authorities involved from the European coastal States under consideration for the assignment of a port of refuge with major challenges. Finally, following a prolonged decision-making process and inspection of the distressed vessel by British, French, and German experts, the Federal Republic of Germany expressed its willingness to accept her.

After that, the MSC FLAMINIA made fast in Wilhelmshaven on 9 September 2012.



Destruction on the MSC Flaminia (seen from the bridge)

Very serious marine casualty involving the cruise ship COSTA CONCORDIA

One disaster at sea to attract more public attention than any other happened on 13 January 2012 when the Italian cruise ship COSTA CONCORDIA collided with an outcrop of rocks just off the coast of the Italian island of Giglio during a voyage in the western Mediterranean with 4,229 people on board. As a result, the ship suffered a 70-metre tear on the starboard side, which immediately led to heavy water ingress in the engine rooms, resulting in a blackout, as well as the loss of manoeuvrability of the ship. The ship quickly listed and finally ran aground on rocks off the port of Giglio, where she had drifted due to the wind and current.

The accident claimed 32 lives, including 12 German nationals. For this reason, Germany is a substantially interested State as regards the investigation of this case by the Italian authorities within the meaning of the SUG. Therefore, it has sought to cooperate closely with the Italian investigative body from the outset. Amongst other things, a staff member of the BSU took part in two briefings on this subject in Rome.

Meanwhile, Italy's marine accident investigation authority has published its investigation report. This has subsequently been – understandably so some degree – severely criticised.

The BSU takes the view that the case has yet to reach its final conclusion and will attempt to clarify some unresolved issues surrounding the disaster to the extent possible.



The Costa Concordia shortly after running aground

Statistics

This statistics section requires a number of explanatory notes.

All the statistics from previous years are based on the requirements of the IMO rules and to some degree national procedures. Consequently, the following classifications of the reports received have existed hitherto:

- Very serious marine casualty (VSMC);
- Serious marine casualty (SMC);
- Less serious marine casualty (LSMC);
- Minor accident (P), and
- Non-marine casualty (NC).

In principle, nothing has changed. However, following the transposition of Directive 2009/18/EC by the new SUG, which entered into force on 1 December 2011, it was not possible to preserve national particularities, especially in the area of accidents involving recreational craft. This is because a European database (EMCIP) that operates solely in accordance with the requirements of the Directive has been set-up in the meantime, meaning that accidents involving recreational craft are no longer considered. Moreover, it no longer contains minor accidents, but only the entries 'LSMC' and 'Incidents'. This gives rise to certain shifts, which are explained below.

	2011 (old)	2012 (old)	2012 (new)
VSMC	11	4	3
- of which recreational craft	3	1	
SMC	24	13	8
- of which recreational craft	4	5	
LSMC	95	87	332
- of which recreational craft	22	6	
Minor accidents (P)	361	293	
- of which recreational craft	97	42	
Incidents (I)			-
Other accidents (OA)			54
- of which recreational craft			42
Non-marine casualty (NC)	66	65	65
Total number of reports	557	462	462

This table shows a comparison of the development of accidents in 2011 with 2012 in the first two columns according to the old system; the general development of accidents from 2011 to 2012 can be easily seen.

The third column compares the accident reports in 2012 according to the old and new system. Absolute figures remain the same, but shifts arise within individual categories. Specifically:

VSMCs involving recreational craft are no longer considered. These can now be found in the OA category. The same applies to the categories SMC and LSMC.

The minor accidents category has been dispensed with. As a rule, this would include accidents involving minor material damage with no further consequences, near misses, or other dangerous incidents. To the extent that they concern merchant shipping, such accidents are now listed in the LSMC category if an accident has actually occurred or in the I category if a dangerous event has occurred without an accident. The latter is defined as "any event caused by or in connection with the operation of a ship that poses a risk to a ship or a person or the consequences of which could

cause serious damage to a ship, an offshore structure or the environment" (Article 1a(1b) SUG). The problem here lies in the fact that ultimately nothing has happened. In turn, this means that the tendency to report such incidents will be rather low. A typical incident would be a blackout; for example, an engine failure and emergency anchoring manoeuvre that does not lead to damage to a ship, environmental pollution or bodily harm. Therefore, it is quite likely that the 'I' column will be sparsely filled in the future, too.

Accidents involving recreational craft will be classified under OA. They also include accidents that only involve small fishing vessels, so-called government ships, and inland waterway vessels.

Non-marine casualties (NC) refer to all cases that have no direct relationship with the operation of a ship, such as accidents while calling at a shipyard or on offshore installations, pure occupational accidents during loading and unloading operations or suicide, for example.

To be able to draw comparisons with past years, the following statistics comply with the 'old' system unless an explicit reference is made to the new system.

Marine casualties in total

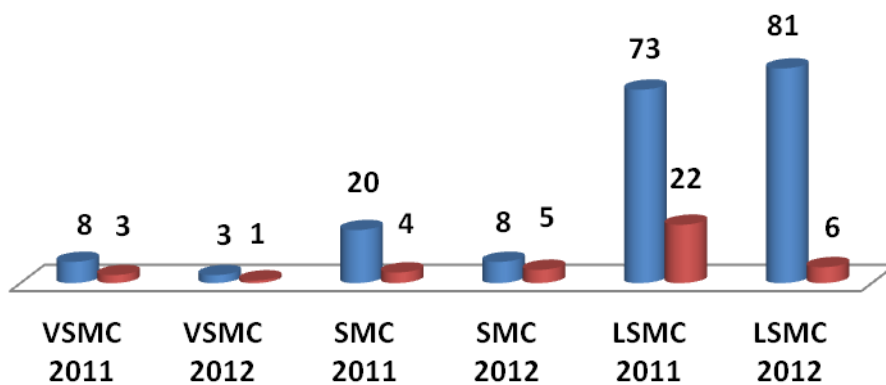
In 2012, a total of 462 incidents were recorded by the BSU. 104 of these were classified as 'marine casualties' as per the 'old' definition. The development of the number of accidents as compared to the previous year is shown in the following graph.

Particularly relevant to the BSU is the development of serious and very serious marine casualties (SMCs and VSMCs). These have seen a sharp drop in the area of merchant shipping from 28 to only 11 as compared to the previous year.

This drop is difficult to explain. It could be an outlier; however, the reduction in German-flagged vessels may also have contributed. With that said, the most favourable explanation would certainly be that the efforts of all interested bodies have contributed to maritime safety in general.

Marine casualties from 2011 to 2012

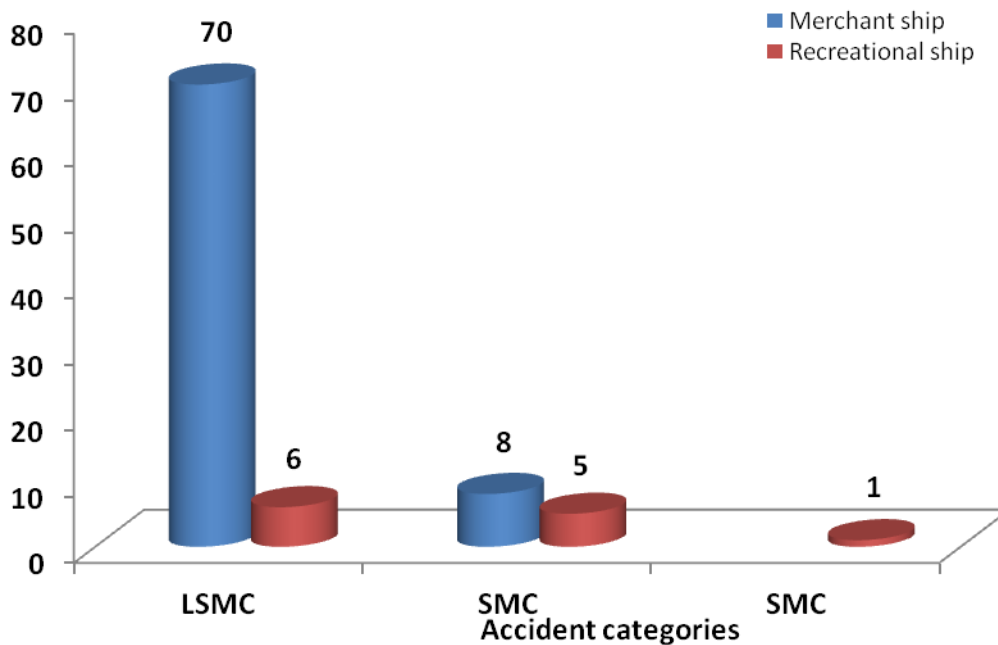
■ Merchant vessels



Marine casualties in German waters

90 (115)¹ marine casualties occurred in German waters in 2012. These consisted of 76 (89) LSMCs, 13 (18) SMCs and one (eight) VSMC. 78 (89) of the 90 marine casualties reported concerned merchant ships (including fishing vessels).

Marine casualties in German waters



Marine casualties involving German ships

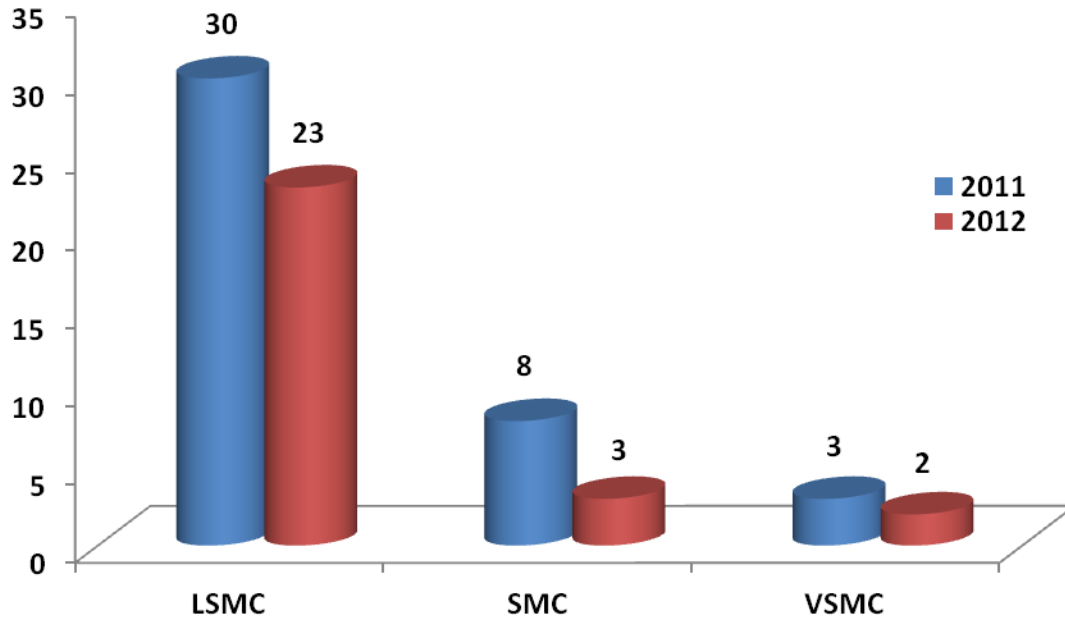
28 (41)² marine casualties occurred on board merchant ships flying the German flag. These consisted of 23 (30) LSMCs, three (eight) SMCs, and two (three) VSMCs, as well as four (seven) marine casualties on board fishing vessels, comprising three (seven) LSMCs, one (zero) SMC, and zero VSMC (zero VSMC). On 31 December 2012, there were 448 merchant ships and 71 seagoing fishing vessels registered under German flag³. In the previous year, 82 more merchant ships sailed under German flag, meaning we are faced with a significant drop of more than 15%.

¹ Previous year's figures in brackets

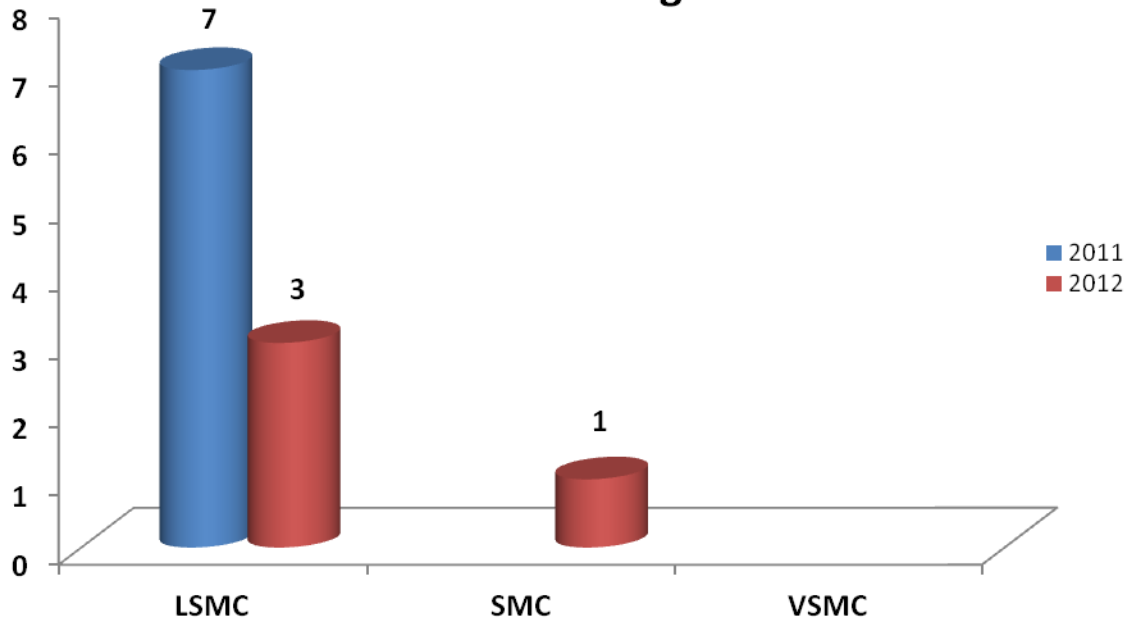
² Previous year's figures in brackets

³ Source: Federal Maritime and Hydrographic Agency

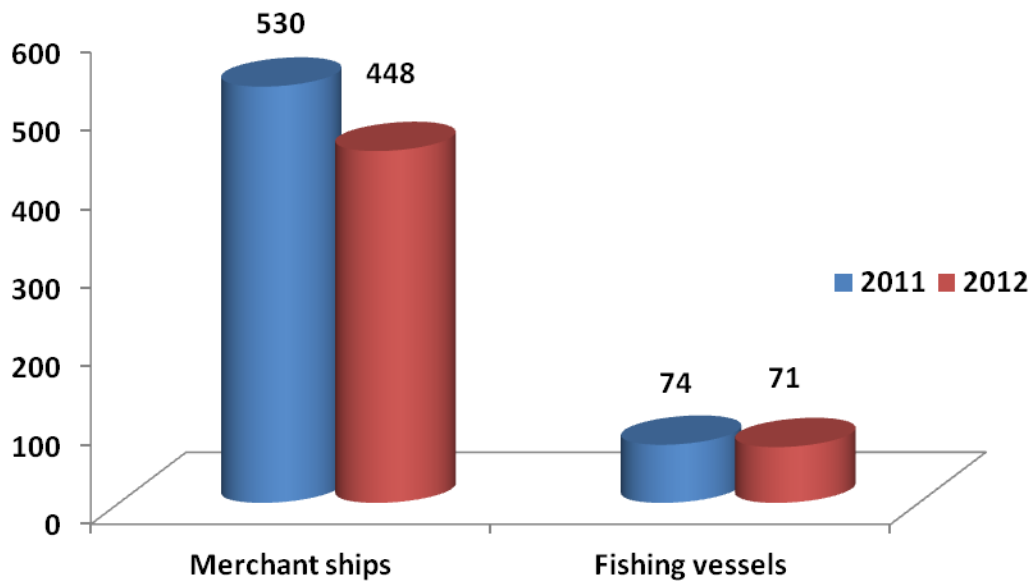
Marine casualties involving German ships



Marine casualties involving German seagoing fishing vessels

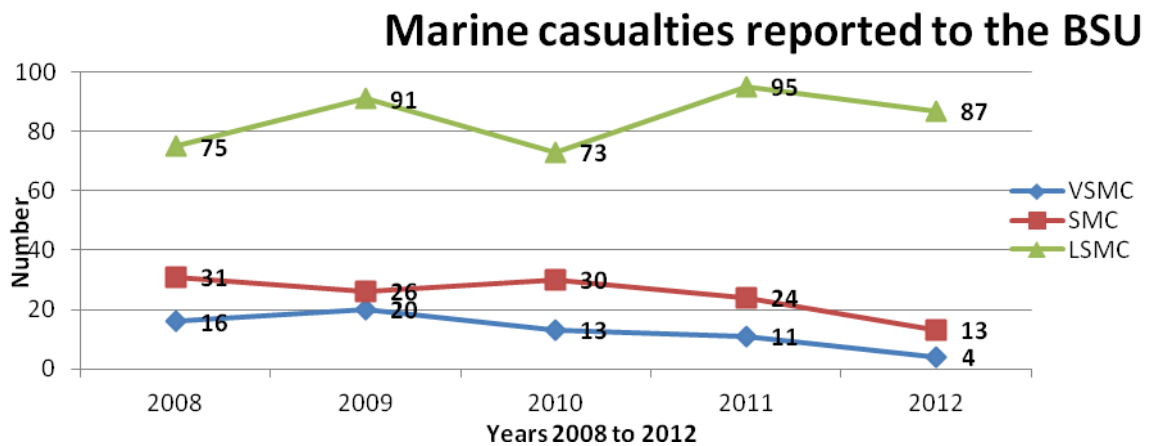


Ships flying the German flag in 2011 and 2012



Source: Federal Maritime and Hydrographic Agency

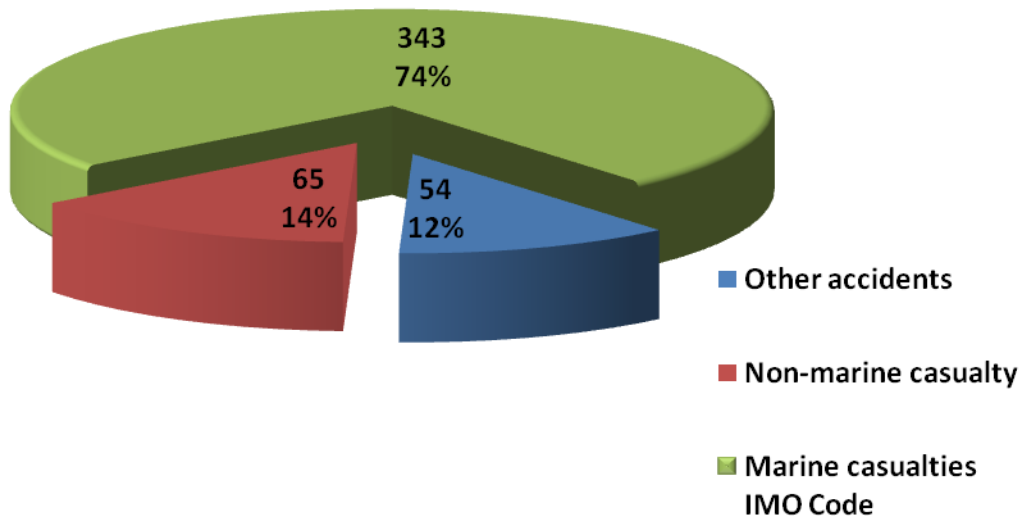
Marine casualties from 2008 to 2012



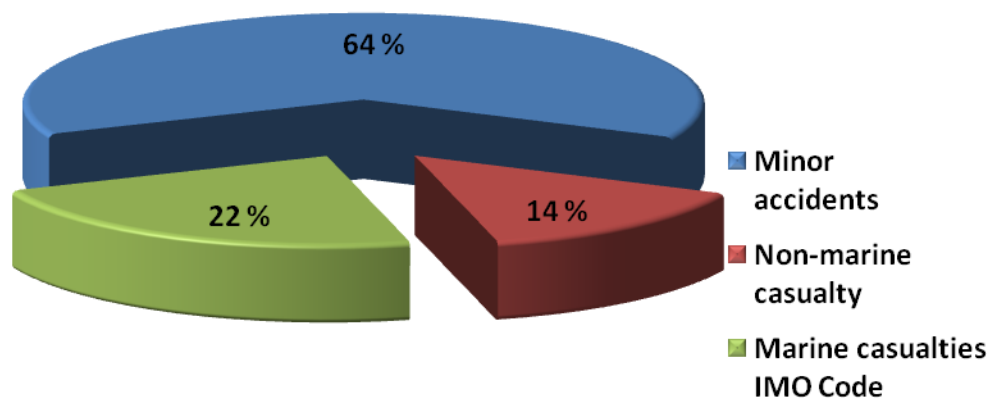
The five-year review reveals only slight fluctuations in previous years in the 'very serious marine casualties' (VSMCs) and 'serious marine casualties' (SMCs). However, the 'less serious marine casualties' (LSMCs) were subject to greater annual fluctuations. On the other hand, there was a significant drop in VSMCs and SMCs in 2012. These figures are highly satisfactory even if the fact that there are significantly less German-flagged ships than the previous year is taken into account.

Global reports and marine casualties reported

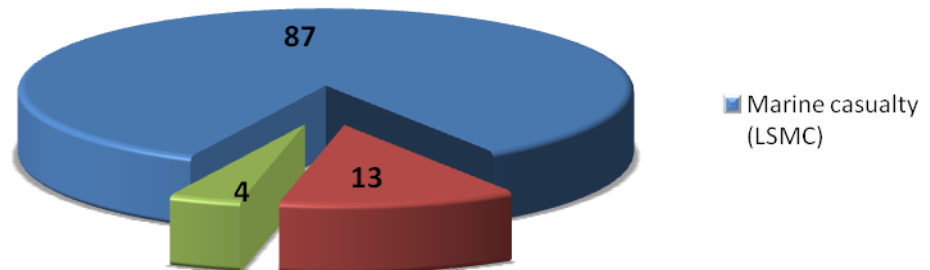
Global reports according to new classification system



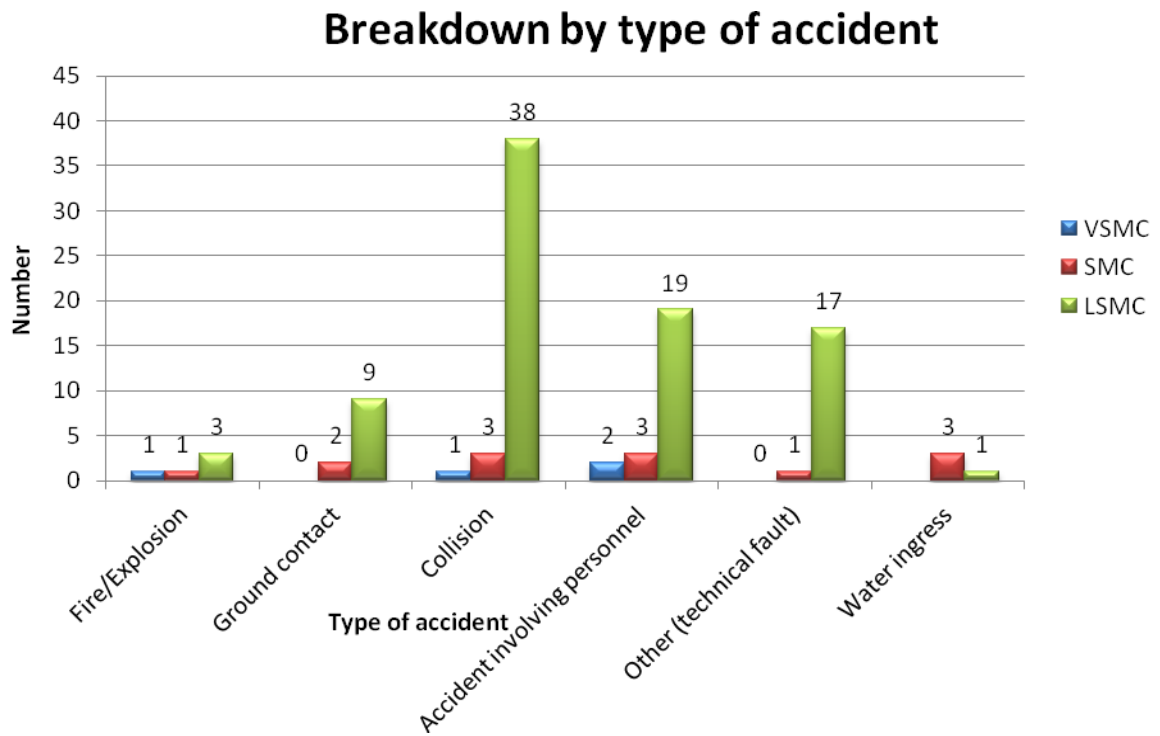
Global reports according to old classification system



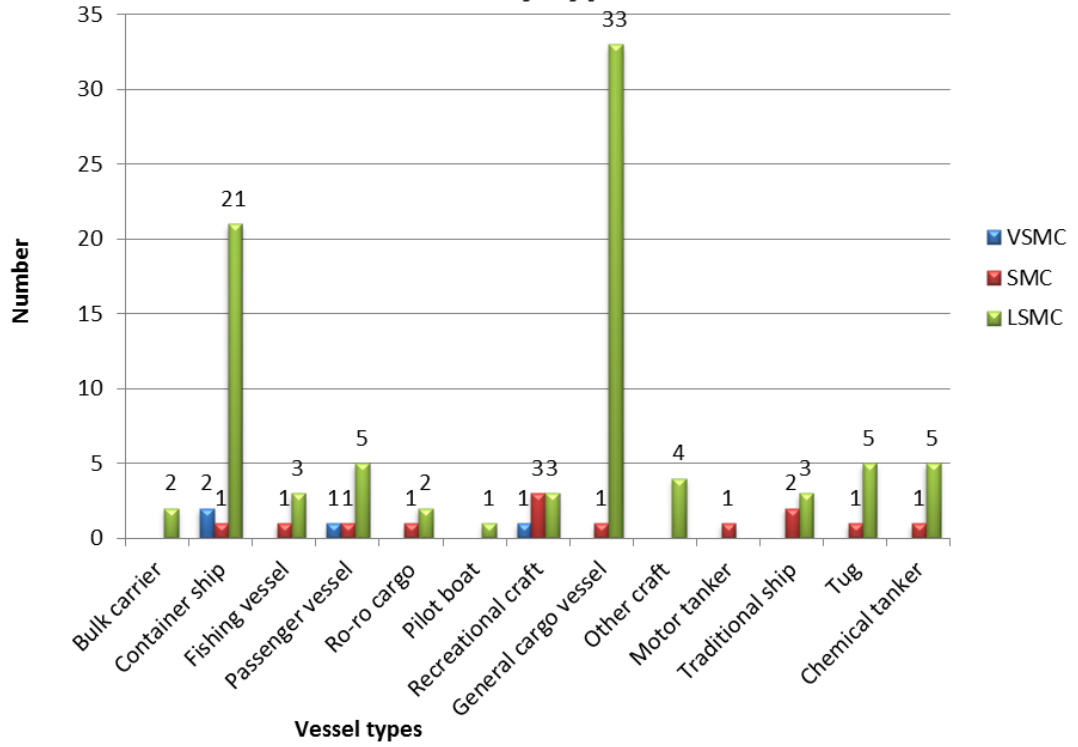
Marine casualties according to IMO Code



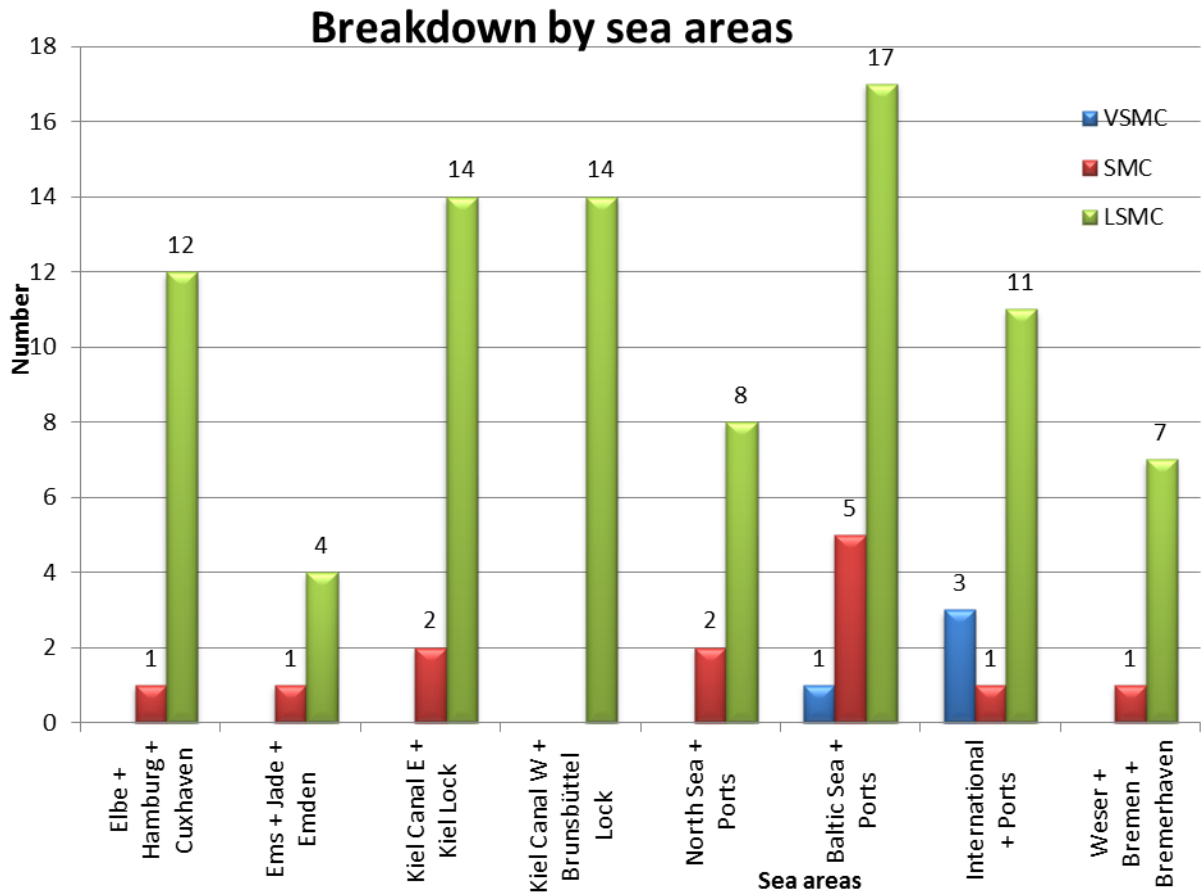
Breakdown of marine casualties by type of accident and vessel



Breakdown by type of vessel

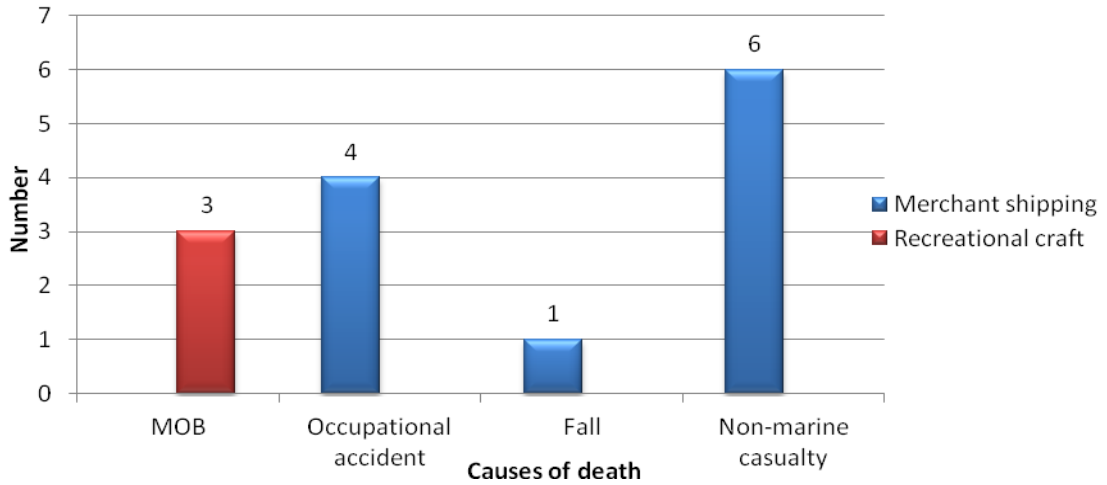


Breakdown of marine casualties by sea area

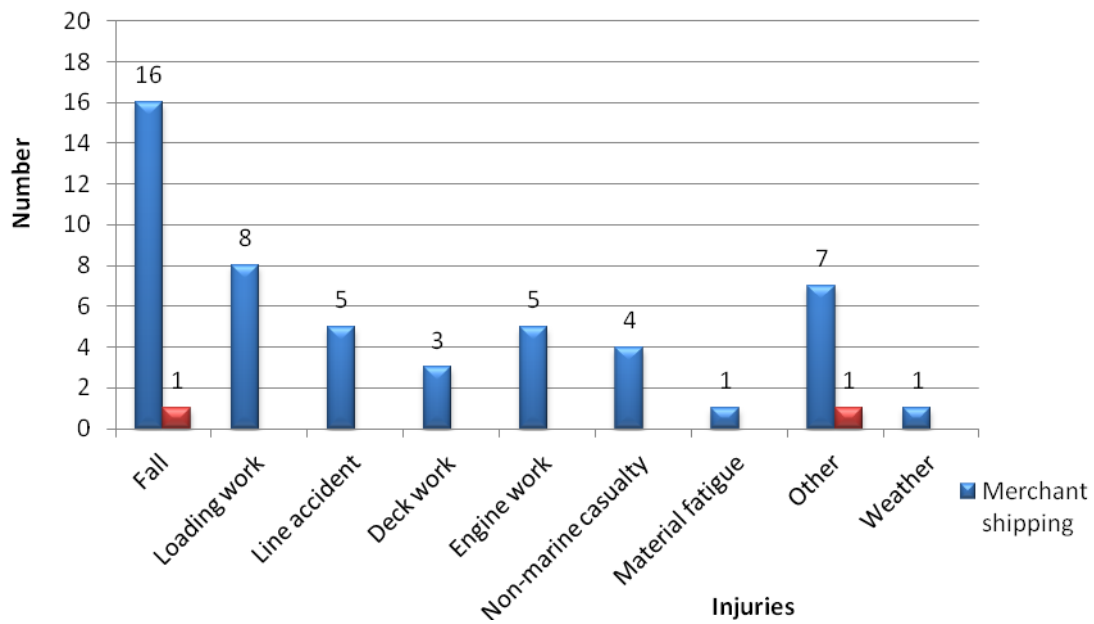


Breakdown of marine casualties by cause of death and injuries

Breakdown by causes of death



Breakdown by injuries




Overview of closed and ongoing investigations

A total of 32 investigations were ongoing at the end of 2011. In 2012, 14 of these investigations were closed with the publication of an investigation report and another three with an internal report. Finally, two cases were handed over to the competent flag State. The remaining 13 cases are still being processed.

Investigations were opened for a total of ten more cases in 2012. It was possible to close four of these before the end of 2012. Accordingly, 19 accidents were being processed at the end of 2012. Details are given in the following tables.

Investigated marine casualties closed with an investigation report

	Published	Report no	Date of accident	Name of vessel	Type of vessel	Nationality	Scene of accident	Type of accident
1	16/01/2012	140/10	18/04/2010	Sonoro/ Süllberg	Chemical tanker/ Container ship	Gibraltar/ Gibraltar	Kiel Canal	Contact with embankment and collision
2	01/02/2012	445/10	08/10/2010	Lisco Gloria	Ro-ro passenger vessel	Lithuania	NW Fehmarn	Fire
3	15/02/2012	550/10	11/12/2010	Christopher/ Clipper Miki	Container ship/ Chemical tanker	Antigua & Barbuda/ Bahamas	Audorf siding, Kiel Canal	Collision
4	01/03/2012	301/09	01/08/2009	Ece Nur K	Chemical tanker	Turkey	Lower Elbe	Accident in- volving per- sonnel
5	15/03/2012	413/10	21/09/2010	Waterway	Hopper dredger	Cyprus	Emden port	Accident in- volving per- sonnel
6	02/04/2012	415/10	22/09/2010	Thule	General cargo vessel	Germany	Naantali, Finland	Accident in- volving per- sonnel and subsequent loss of life
7	16/04/2012	325/11	29/06/2011	Amphitrite	Traditional sailing vessel	Germany	Little Belt	Grounding
8	30/04/2012	143/11	30/04/2011	Special One	Sailing yacht	Germany	Fehmarn	Accident in- volving per- sonnel and subsequent loss of life
9	15/05/2012	570/10	21/12/2010	MSC La Spezia	Container ship	Germany	Gioia Tauro port, Italy	Accident in- volving per- sonnel
10	01/06/2012	450/11	16/09/2011	Fiducia	Container ship	Germany	Cebu, Philip- pines	Ground contact
11	15/08/2012	102/11	05/04/2011	Rhonestern/ Zapadnyy	Tanker/ Chemical tanker	Belize/ Isle of Man	River Weser	Collision
12	15/10/2012	301/11	28/07/2011	Seute Deern	Traditional ship	Germany	East of Chris- tiansø, Bornholm	Accident in- volving per- sonnel
13	01/11/2012	515/10	19/11/2010	Mecklenburg- Vorpommern	Ro-ro passenger vessel	Germany	Warnow port	Fire
14	19/12/2012	230/09	27/06/2009	Marti Princess/ Renate Schulte	Container ship/ Bulk carrier	Germany/ Malta	Bozcaada island, Turkey	Collision

 Investigation by the flag State in collaboration with the BSU

Investigated marine casualties closed with an internal investigation report

	Date	Report no	Date of accident	Name of vessel	Type of vessel	Nationality	Scene of accident	Type of accident
1	Discontinued 24/08/2012	485/11	09/11/2011	Kovera/ Ida	General cargo vessel/ General cargo vessel	Panama, Cyprus	Kiel-Holtenau roadstead	Collision
2	Discontinued 15/02/2012	497/11	14/11/2011	Elbtank Italy	Chemical tanker	Liberia	Kiel Canal	Collision
3	Discontinued 20/12/2012	503/11	19/11/2011	Cosco Harmony/ Altenwerder	Container ship/ Inland waterway passenger vessel	Hong Kong/ Germany	Hamburg port	Collision
4	Discontinued 05/07/2012	117/12	02/04/2012	Anmiro	General cargo vessel	Antigua & Barbuda	Hamburg port	Fire
5	Discontinued 26/07/2012	132/12	11/04/2012	MSC Alessia	Container ship	Germany	Freeport, Bahamas	Ground contact
6	Discontinued 29/06/2012	152/12	02/05/2012	Abel Tasman	Recreational craft	The Netherlands	Süderpiep, North Sea	Water ingress
7	Discontinued 01/08/2012	153/12	03/05/2012	Grande Colonia/ Peter Wessels	Ro-ro cargo/ Tug	Italy/ Germany	River Ems, buoys 66-68	Tug overrun

Marine casualties handed over to flag State

	Report no	Date of accident	Name of vessel	Type of vessel	Nationality	Scene of accident	Type of accident
3	453/11	19/10/2011	Hafina Seaways	Ro-ro cargo	Great Britain	North of Spiekeroog	Fire
5	537/11	18/12/2011	Johanna/ West Sund	Container ship/ Tug	Great Britain/ Denmark	Baltic Sea (EEZ) Kadet Trench	Collision

Investigations ongoing at 31 December 2012

	Report no	Date of accident	Name of vessel	Type of vessel	Nationality	Scene of accident	Type of accident
1	457/09	19/10/2009	Noormann/ Pontoon HH2016	Tug/ Work pontoon	Germany/ Germany	Bodden waters off Rügen	Capsize
2	146/10	29/01/2010	Sophie Scholl	Fishing vessel	Germany	Glowe, Baltic Sea	Foundering
3	555/10	16/12/2010	Grande Nigeria/ Victoria	Car carrier/ Passenger vessel	Italy/ Germany	Hamburg port	Collision
4	010/11	07/01/2011	Frisia II	Ferry	Germany	Norddeich	Accident involving personnel
5	117/11	14/04/2011	Tyumen-2/ OOCL Finland	General cargo vessel/ Container ship	Russia/ Germany	Kiel Canal, km 32	Collision
6	250/11	21/06/2011	CSAV Petorce/ CCNI Rimac	Container ship/ Container ship	Liberia/ Germany	Yellow Sea – Yanhan	Collision
7	326/11	07/08/2011	Seewind/ Surfer	Recreational craft/ Surfboard	Germany/ Germany	Lübeck Bay	Accident involving personnel
8	365/11	11/08/2011	Carola/ Galan	Traditional ship/ General cargo vessel	Germany/ St. Kitts & Nevis	Dahmeshöved	Collision

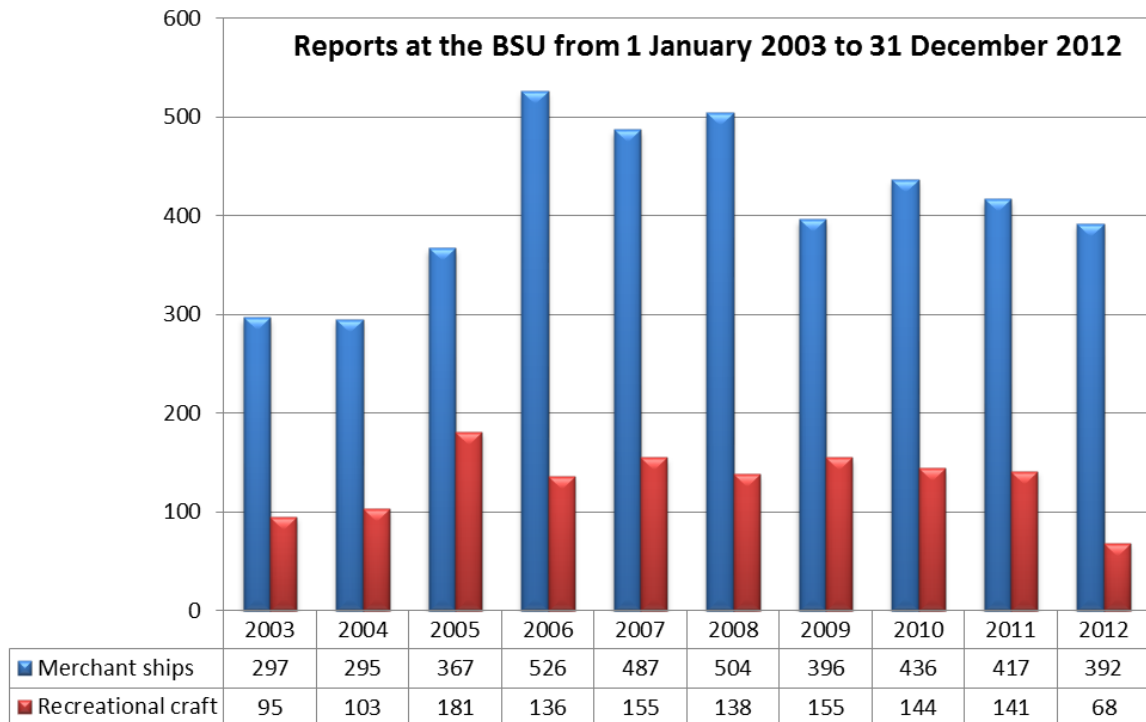
9	442/11	28/09/2011	Taucher O. Wulf 5	Tug	Germany	Cuxhaven	Accident involving personnel
10	460/11	23/10/2011	Hecht VI/ Saparua	Recreational craft/ Recreational craft	Germany/ Germany	Elbe, buoy 115	Ground contact
11	478/11	02/11/2011	Carat/ Max + tow	Container ship/ Tug and tow	Antigua & Barbuda/ Germany	Hamburg port	Collision
12	487/11	06/11/2011	Kösterberg/ CMA CGM Jamaica	Tanker/ Container ship	Gibraltar/ Cyprus	Hamburg port	Collision
13	507/11	22/11/2011	MOL Efficiency/ Splittnes	Container ship/ Bulk carrier	Panama/ Antigua & Barbuda	River Weser, buoy 53	Collision
14	013/12	19/01/2012	E.R. Stralsund	Container ship	Germany	Open sea, Gibraltar	Accident involving personnel
15	019/12	15/01/2012	Deutschland	Passenger/Cruise	Germany	Ushuaia / Argentina	Grounding
15	156/12	22/03/2012	Sigrid ST8	Fishing vessel	Germany	West of Rantum, Sylt	Fire
17	154/12	03/05/2012	Nils Holgersson/ Urd	Ro-ro passenger vessel/ Ro-ro passenger vessel	Germany/ Denmark	Lübeck-Travemünde	Collision
18	255/12	14/07/2012	MSC Flaminia	Container ship	Germany	Atlantic	Fire/ Explosion
19	289/12	14/08/2012	Katja	Tanker	Bahamas	River Jade	Ground contact
20	330/12	13/01/2012	Costa Concordia	Cruise ship	Italy	Giglio Island (Italy)	Capsize

Investigations ongoing at 31 December 2012, published between January and end of May 2013

	Published	Report no	Date of accident	Name of vessel	Type of vessel	Nationality	Scene of accident	Type of accident
1	28/01/2013	507/11	22/11/2011	MOL Efficiency/ Splittnes	Container ship/ Bulk carrier	Panama/ Antigua & Barbuda	River Weser, buoy 53	Collision
2	21/03/2013	156/12	22/03/2012	Sigrid ST8	Fishing vessel	Germany	West of Rantum, Sylt	Fire
3	01/04/2013	326/11	07/08/2011	Seewind/ Surfer	Recreational craft/ Surfboard	Germany/ Germany	Lübeck Bay	Accident involving personnel
4	02/05/2013	154/12	03/05/2012	Nils Holgersson/ Urd	Ro-ro passenger vessel/ Ro-ro passenger vessel	Germany/ Denmark	Lübeck- Travemünde	Collision

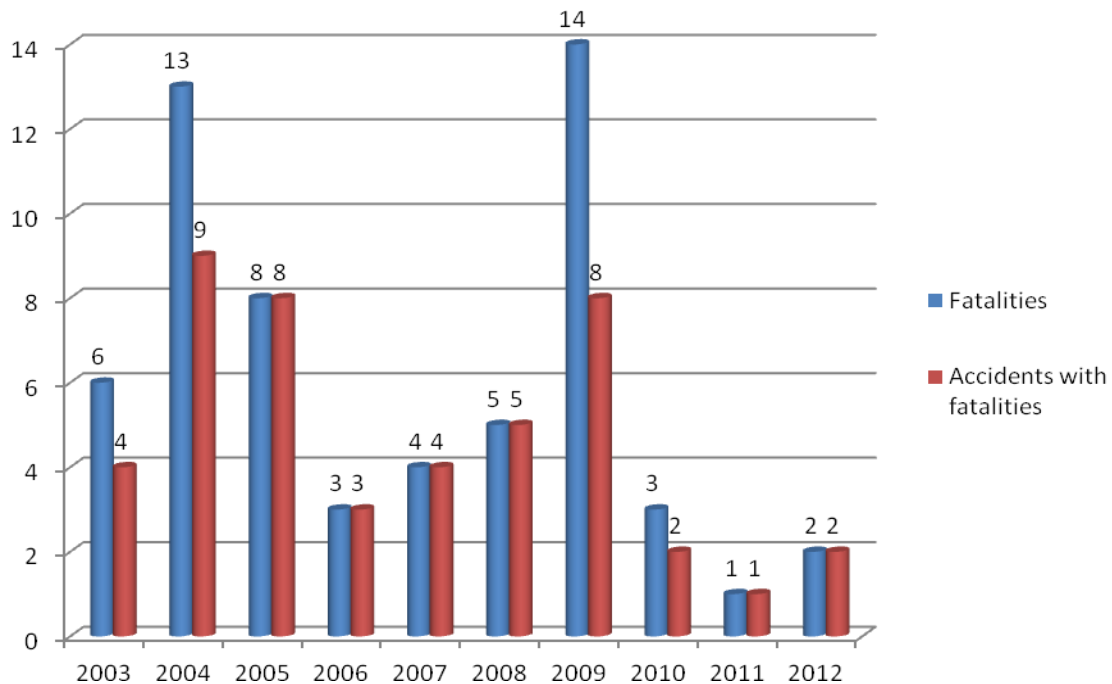
Review: Ten years of investigating marine casualties involving recreational craft by the BSU

Since the German Maritime Safety Investigation Law (SUG) entered into force in June 2002 and the Federal Bureau of Maritime Casualty Investigation was established in Hamburg, accidents involving recreational craft have been investigated on the basis of the IMO Code. The following 10-year statistics show that approximately one third of the reported accidents involved recreational craft.



These reported cases included the following, very serious accidents involving fatalities, which were all investigated and, for the most part, published:

	<u>2003</u>	<u>2004</u>	<u>2005</u>	<u>2006</u>	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>
Fatalities	6	13	8	3	4	5	14	3	1	2
Accidents with fatalities	4	9	8	3	4	5	8	2	1	2



Resulting in the death of six young people, the foundering of the sailing yacht TAUBE off Morocco on 20 January 2009 was the most dramatic of the accidents involving recreational craft to be investigated by the BSU. Accidents with multiple fatalities are more the exception – they generally concern single-handed sailors.

Since the reform of the SUG in 2011, accidents involving recreational craft outside German territorial waters, as well as accidents involving fishing vessels less than 15 m, are no longer investigated by German authorities. In January 2013, an accident similar to that of the foundering of the sailing yacht TAUBE occurred at the entrance to the port of Rabat, Morocco. This accident involved the foundering of a 20 m long converted fishing vessel; her 53-year-old German skipper drowned. Due to the revised legislation, there is no scope for the BSU to investigate this very serious marine casualty.

The legislature established a saving clause (Article 1(4) SUG) for marine casualties that involve only recreational craft in German waters and the German Exclusive Economic Zone. The BSU can continue to investigate such cases if it is expected that the findings will increase maritime safety, in particular, by improving applicable regulations or equipment for maritime navigation.

Regardless of the elimination of the investigation of accidents on the open sea involving recreational craft, there is still an obligation to report such accidents to the BSU under Article 1 of the Ordinance on the Safety of Shipping (SeeFSichV 1993), meaning statistics for such cases are at least kept.