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

2008 Annual Report

May 2009

Table of Contents

The Federal Bureau of Maritime Casualty Investigation hereby publishes its statistics about casualties and serious incidents at sea together with a report of its activities in the last operating year.

1 Foreword

The problem of occupational accidents occurring during supposedly routine works, as discussed in the foreword to the year’s 2007 Annual Report, remained unresolved last year too. A further focus of the activities of the Federal Bureau of Maritime Casualty Investigation (BSU) in 2008 were incidents involving the collision or grounding of vessels.

A large number of state-of-the-art aids are available to today's crews of sea going vessels both for safe navigation and for the prevention of collisions. Nevertheless, the categories "Collision" and "Grounding/Stranding" represent core areas of focus in the activities of the Federal Bureau of Maritime Casualty Investigation. In 2008, of the 642 reports received by the BSU, approximately 300 were collisions (42 % vessel/vessel collisions, 58 % vessel/object collisions) and 120 were grounding/stranding. All too often, on the basis of these events happening despite the availability of aids for accident prevention on board, the (overly) hasty conclusion is reached that an individual must have been at fault. However, accidents, and this applies to all types of accident, are not as simple. They are generally complex events characterised by the interaction of direct and indirect causes, contributing factors and other circumstances. It is the task of the Federal Bureau of Maritime Casualty Investigation to determine the full extent of this complex interaction and set it out in a concluding report, without apportioning blame or liability or asserting claims and without prejudicing any individual. The latter in particular always proves difficult when the casualty investigation reports of the Federal Bureau of Maritime Casualty Investigation are used in further proceedings for a purpose other than to learn from these casualty events for the future.

In line with the statement made at the beginning that a casualty is never monocausal, there are many factors that need to be examined in the event of a collision or grounding, and a casualty investigation must therefore cover a broad scope. The actions or failures to act of mariners, in this respect, should not be assessed isolated. The actions of the crew are decisively determined by their integration into the system as a whole. However, in this regard, less is to be expected of the individual mariner than it is of the vessels' owners and operators in terms of their safety management systems, as well as the International Maritime Organisation and the flag States with their crew regulations and training requirements.

Head of Bundesstelle für Seeunfalluntersuchung
(Federal Bureau of Maritime Casualty Investigation)

Jörg Kaufmann

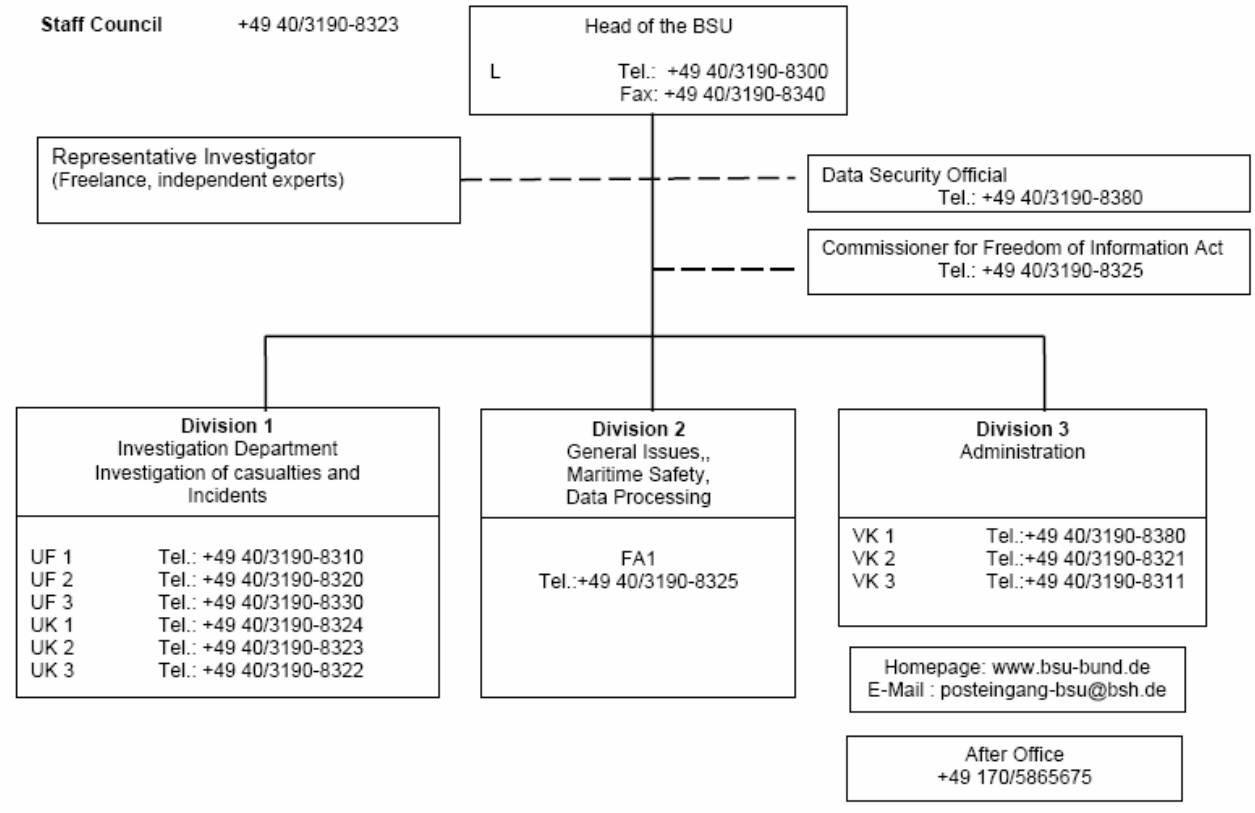
Published by:
Bundesstelle für Seeunfalluntersuchung
Bernhard-Nocht-Str. 78
20359 Hamburg

Head: Jörg Kaufmann
Tel.: +49 40 31908300
Fax.: +49 40 31908340
posteingang-bsu@bsh.de
www.bsu-bund.de

2 Human Resources Development

The one position in Division 2 (FA1) that became free in October 2007 was filled 1 April 2008.

In Division 3 (Administration), the employee VK4 retired on 31 December 2008. In view of general staff cutback measures in the public service sector, the position is not to be filled again. This measure reduced the total number of employees in the Federal Bureau, founded in 2002, to 11 people.



3 Marine Casualties

3.1 Competence

The German Maritime Safety Investigation Law (SUG) builds on the Code for the Investigation of Marine Casualties and Incidents (IMO Code) published by the International Maritime Organisation (IMO) in 1997 with its Resolution A.849(20).

The SUG regulates the competence and jurisdiction of the Federal Bureau of Maritime Casualty Investigation (BSU) for the investigation of accidents on seagoing vessels, regardless of their flag, occurring within German territorial waters. This also includes traffic to and from sea ports located on the navigable waterways, as well as incidents within the German Exclusive Economic Zone (EEZ). The BSU also investigates marine casualties occurring on board or involving the participation of a vessel sailing under German flag worldwide. Additional rights of cooperation in international investigations result when the BSU claims a "significant German interest in the investigation" of such events.

Seagoing vessels as defined by the SUG also include sea going leisure craft, so that the BSU will also perform investigations on such vessels following incidents that have caused damage or danger.

Figure 1: Determination of freeboard and rail height on a leisure craft

3.2 Accident reports

According to the SUG, the Ordinance Concerning Maritime Safety and the Additional Agreement between the Federal State and the five German Coastal States concerning shipping police law enforcement (Coastal Protocol), there is a duty to notify incidents that have caused damage or danger. These obligations concern in particular vessel commands on board ships sailing under German flag, the Waterway Police forces of the German States, the German Federal Police and a number of other authorities.

The IMO Code stipulates that reports from the bodies investigating marine casualties of the relevant coastal State be internationally forwarded to the pertinent authorities of the respective flag State(s) of the vessel(s) involved in an accident.

Figure 2: Serious marine casualty – collision of Vera & British Cygnet

Joint investigation with the flag State Isle of Man and coastal State Denmark
Investigation report CA102 published on 15 May 2008 (currently only available in English)

The BSU has an on-call duty and can therefore be reached at all times.

BSU telephone numbers and office hours:

Monday to Thursday:	07.30 to 16.00	
Friday:	07.30 to 14.30	
Telephone numbers for the Secretarial Office:	**+49 (0)40-3190**	**-8311** **-8321**
Fax number:	**+49 (0)40-3190**	**-8340**

On-call duty outside office hours: **+49 (0)170-58 65 675**

Email reports: posteingang-bsu@bsh.de

On the BSU website: www.bsu-bund.de

there is also a questionnaire available under "Downloads" with the title "BSU Report Form", which contains the most important details as a guideline for reporting a marine casualty to the BSU.

The telephone numbers of the Secretarial Office, the fax number and the email address can only be used during the specified office hours. Outside of office hours, necessarily the BSU on-call duty should be notified of any accident via the mobile number provided!

3.3 Marine casualties reported in 2008

"Incidents that have caused damage or danger shall be events caused in the context of the operation of a ship in maritime navigation that have, in turn, caused or have led to

1. the death or disappearance of, or serious injury to a human being;

2. the actual or presumed loss, shipwreck constructive total loss, grounding, abandon or collision of a ship;

3. damage to the marine environment as a result of damage caused to one or more ships, or any other kind of material damage;

4. danger to a human being or ship; or the risk of heavy damage to a ship, an off-shore structure or installation, or the marine environment."

(cf. § 1 Para. 2 SUG)

Depending on the **consequences** of a marine casualty, the IMO Code classifies such incidents that have caused damage or danger as **Very Serious Casualty (VSC), Serious Casualty (SC), Less Serious Casualty (LSC)** or **Marine Incident**. The majority of notifications made to the BSU concern near misses, yet with inherent risks, or cases of minor importance with only negligible property losses. These cases are classified as **Incidents** and are generally entered in the BSU's database and statistically evaluated. Marine casualties on the other hand are of significance for the BSU's investigative work. This concerns in particular the **Very Serious Marine Casualties** resulting in death, total loss of a vessel or severe environmental pollution with spillage of more than 50 t of harmful substances, as well as the **Serious Marine Casualties**, in which fighting the consequences requires assistance from outside the vessel (medical assistance, towing, fire brigade intervention, etc.).

A total of 122 marine casualties were reported to the BSU in 2008. They break down into 75 marine casualties, 31 serious and 16 very serious marine casualties. The number of marine casualties reported to the BSU in total increased by 31 compared with 2007, with the number of very serious casualties rising by 6, that of serious casualties by 2 and that of less serious marine casualties by 23.

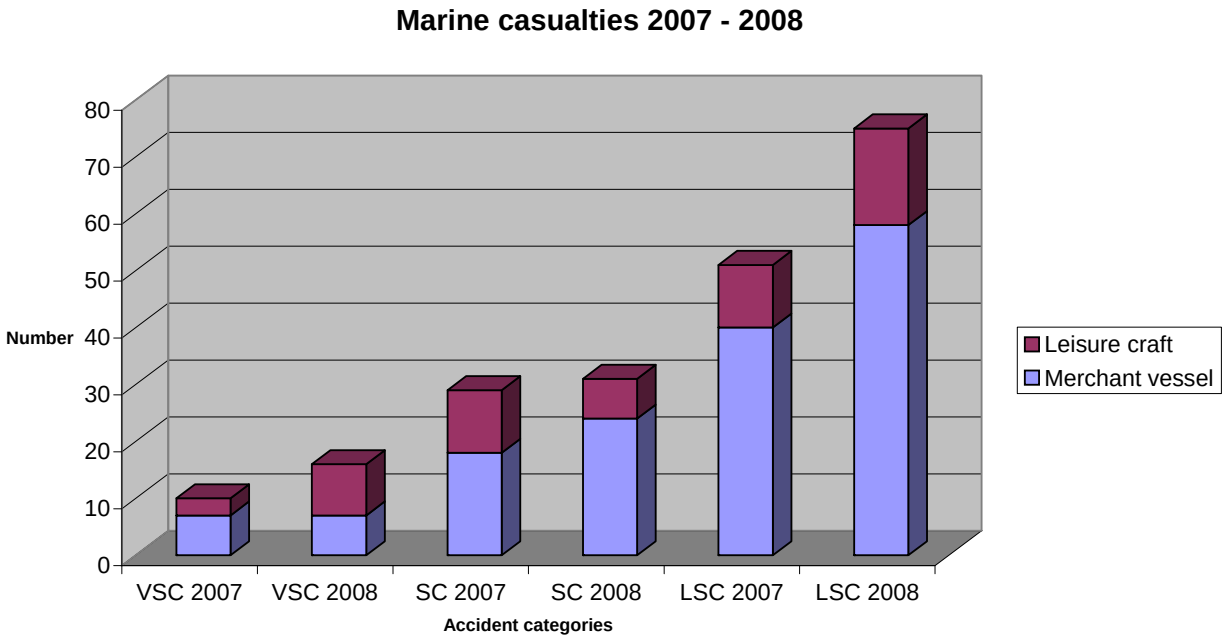


Figure 3: Marine casualties reported to the BSU 2007 - 2008

Within the German waters and irrespective of the flag and type of operation of the vessel(s) involved, there were 93 marine casualties, subdivided into 60 less serious casualties, 23 serious casualties and 10 very serious casualties. 66 of the 93 reported casualties concerned merchant vessels including fishing vessels.

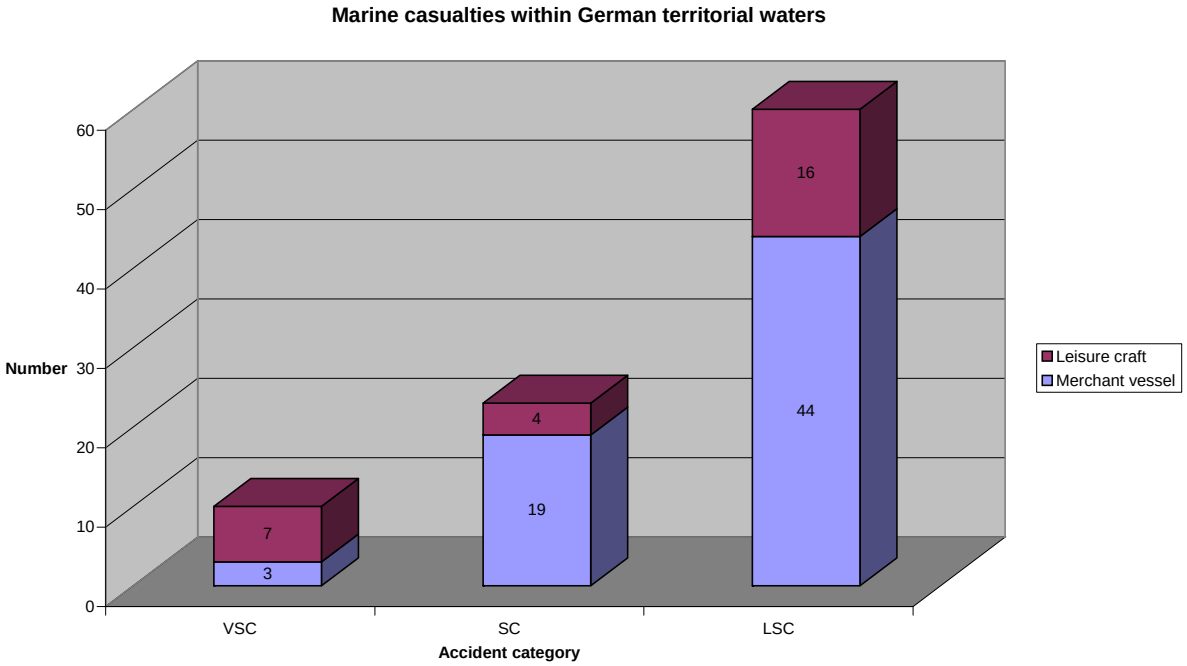


Figure 4: Marine casualties for 2008 within German waters

On board merchant vessels **sailing under German flag**, **irrespective of the scene of the accident,** there were 41 marine casualties, subdivided into 26 less serious casualties, 12 serious casualties and 3 very serious marine casualties, as well as 9 marine casualties on board fishing vessels (5 less serious casualties, 2 serious casualties and 2 very serious casualties). On 31st December 2008, 645 merchant ships and about 80 sea fishing vessels were registered under German flag[1].

The number of casualties has risen slightly in the past year. Based on a 5-year average, the very serious and serious casualties last year were slightly above the average, while less serious casualties were slightly below the average. On 31st December, a plus of nearly 100 commercial vessels were registered under German flag in 2008 compared with 2007, while the number of fishing vessels remained the same. The total number of vessel voyages in the individual estuaries within the German territorial waters (excluding transit traffic off the German coast outside of the estuaries) increased slightly from over 275,000 to some 282,000[2]. The accident rate in 2008 remained at a satisfactorily low level.

[1] Source: Federal Maritime and Hydrographic Agency
[2] Source: Traffic data from the Vessel Traffic Services of the Waterways and Shipping Directorate North and North-West

There were 34 marine casualties involving leisure craft (17 less serious casualties, 8 serious casualties and 9 very serious casualties), of which 28 (14 less serious casualties, 6 serious casualties and 8 very serious casualties) involved vessels under German flag. The nine very serious casualties included three fatalities caused by drowning as a result of a person falling overboard, with two of those who died being single-handed sailors. In the six remaining cases, the leisure craft was a total loss as a result of the marine casualty, in four of the cases following the ingress of water, once due to a fire in the engine room and once after running aground due to a loss of manoeuvrability. The number of very serious casualties involving leisure craft stood at nine, higher than the number involving merchant vessels (7). Compared with 2007, the number of very serious casualties and less serious casualties rose, while the number of serious casualties fell. Based on a 3-year average, the very serious casualties were above the average, the serious casualties were below the average and the less serious casualties were also slightly above the average.

Of the notifications received, there were a total of 13 incidents with 13 fatalities overall. Four cases were established as fatalities with natural causes without having been affected by the accident and were not dealt with any further as marine casualties. The other nine very serious marine casualties included, in addition to the three fatalities mentioned above due to drowning on leisure craft, six accidents on board merchant vessels, with three being caused by a fall and one resulting from loading work, one from handling lines and one from falling outboard.

73 incidents (50 on merchant vessels and 23 on leisure crafts) involving injured persons were reported to the BSU in 2008. Falls were the main cause both on merchant vessels (16 cases) and on leisure crafts (14 cases). On merchant vessels, accidents during work on machinery (13 cases) and line accidents (8 cases) were the next main causes.

Occupational personal accidents last year accounted for 30 % of all marine casualties reported to the BSU, representing an area of focus for BSU investigations, similarly to 2007. In addition to these personal accidents, collisions and grounding/stranding in particular also formed further areas of focus for BSU investigative activity. 30 % of the notifications classified as marine casualties involved a collision between two vessels or a vessel and an object, while 15 % involved stranding or grounding.

3.4 Marine casualties reported between 2004 and 2008

The five-year overview shows slight fluctuations in the **Very Serious Casualties** (VSC) and **Serious Casualties** (SC), whereas the **Less Serious Casualties** (LSC) were subject to greater annual fluctuations. In contrast to the significant decline in 2007, there was once again an increase last year. Compared with the five-year average, the figures for 2008 for very serious and serious casualties are slightly above the average but slightly below it for less serious casualties. In relation to the size of the fleet under German flag, and the number of traffic movements within German territorial waters, the level remains satisfactorily low overall.

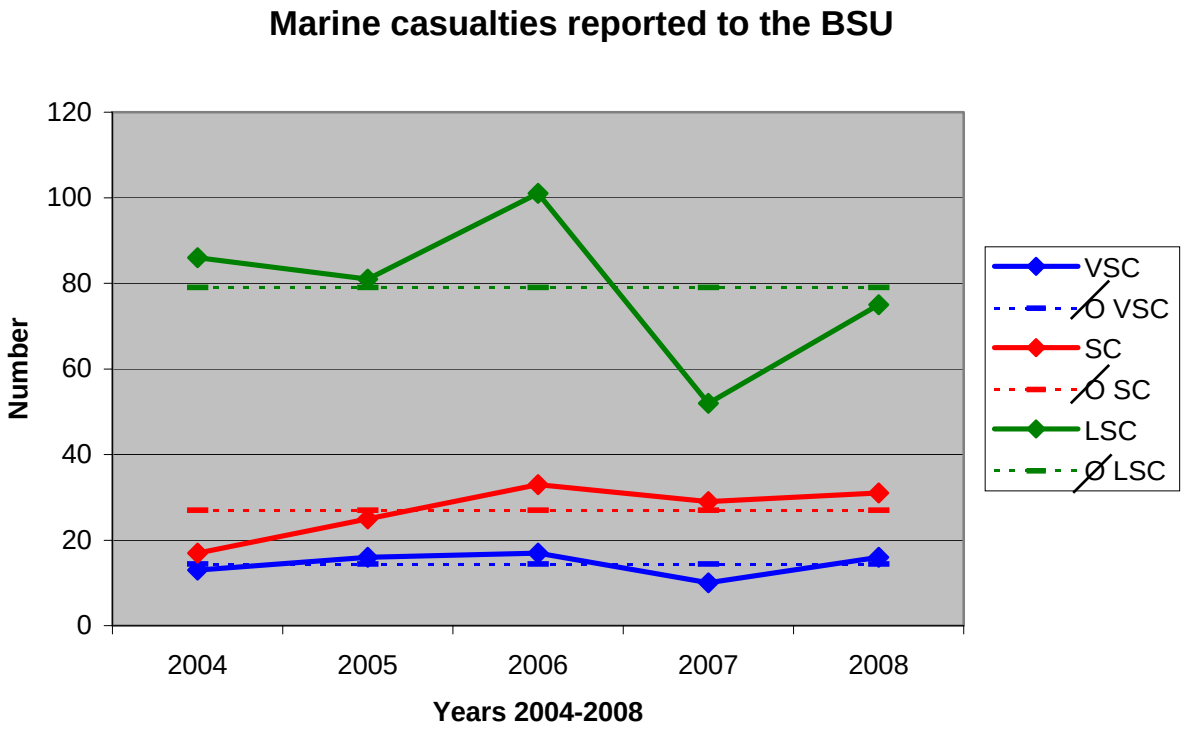


Figure 5: Marine casualties reported since 2004

3.5 Marine casualty investigations and reports in 2008

According to the IMO Code, flag States should ensure that a marine casualty investigation is carried out after every very serious casualty occurring on board one of their vessels. If the accident occurs in another country's waters, that coastal State is also entitled to carry out the marine casualty investigation. The flag State should then preferably also participate in this investigation. Other marine accidents may also be investigated beyond this scope.

According to the SUG, the investigation of a marine casualty shall serve "neither the detection or identification of facts for the purpose of assigning fault so as to create disadvantages to an individual or individuals nor the determination of anybody's faulty behaviour, liability, or claims. However, no investigation should stop short of an unrestricted presentation of causes merely for the reason that, from the outcome of the investigation, conclusions may be drawn on anybody's faulty behaviour or liability"[3]. This cause presentation is indeed carried out in the BSU's investigation reports. The conclusions presented in an investigation report, in individual cases, therefore enable inferences to be drawn with regard to individual misbehaviour or responsibility of the parties involved where this is necessary for the unlimited representation of the causes of the accident. The special intention of the investigation

[3] See § 9 (2) SUG

nonetheless consists not in sanctioning the parties involved, but in providing them with incentives to prevent future accidents and in involving them in a safety partnership. The concluding report of a marine casualty investigation is therefore not drawn up by the BSU with the objective of being used for the determination of fault or clarification of liability issues
Authorities whose procedures are oriented towards the allocation of penalties for erroneous conduct and/or the determination of liability pursue goals that are fundamentally different to those of the BSU.

The initiation and scope of an investigation are decided by the Head of the BSU, or by his deputy in his absence, without being subject to directives.

Figure 6: Serious marine casualty, CMS "LT Cortesia"

(Source: MAIB)
Joint investigation with MAIB, UK
Investigation report 001/08 published on 15 March 2009

In 2008, the BSU initiated the investigation of 41 reported incidents. 12 of these incidents were dismissed following a preliminary investigation, and the remaining 29 cases were classified as very serious casualties, serious casualties or less serious marine casualties and investigated thoroughly. Three of these main investigations were carried out jointly with other countries and 26 were carried out solely by the BSU, of which one was concluded with an internal report. Two very serious casualties reported to the BSU were not investigated. Both cases involved sailing yachts under German flag that sank outside of German waters and could not be recovered. Particularly as no persons were injured, the cases were dismissed by the BSU following a preliminary investigation.

There were 21 investigations from previous years that had not yet been concluded. 23 investigations were concluded in 2008 and 20 investigation reports were published. 25 investigations were still ongoing on 31st December 2008.

Figure 7: Serious marine casualty, MS "Finnlady"

(Source: WSP)
Ongoing BSU marine casualty investigation on 31st December 2008

All casualty notifications, irrespective of the decision about a possible investigation, are always, as a minimum procedure, entered in the BSU database and evaluated statistically.

According to the IMO Code, marine casualties must be reported to the IMO in accordance with their category, with data of varying scope.
Furthermore, BSU produces publicly accessible investigation reports on the marine casualties it investigates, which are then also sent to the IMO. These reports can be limited to the description of the course of the accident and then be published in summary form without further collaboration from the parties involved. Otherwise, the BSU draws up a full report with a comprehensive analysis of the course of the accident and the safety recommendations derived from this, which is then firstly sent to the parties involved as a confidential draft prior to publication. The parties involved then have 60 days to comment on the draft. The BSU takes these opinions, if substantiated, into account in the final report.

Of the 23 main investigations concluded in 2008, two were dismissed by the relevant flag State and two more were summarised in one report, meaning that 20 investigation reports were published. 11 of these were concluded with a full report and nine with a summary report, and the reports were published. A joint investigation in co-operation with another State was concluded with the publication of the joint report, as well as one case concluded with an internal report.

Of those cases that were completed in 2008, the reports on the very serious casualties "Hoheweg" (report no. 564/06) and "Hanjin Gothenburg/Chang Tong" (report no. 450/07) carry particular weight.
When the fishing vessel "Hoheweg" sank at Nordergründe, all four members of the crew died on 8th November 2006. This marine casualty was one of the worst within German territorial waters in recent years, and the subsequent recovery of the wreck was extremely costly and time-consuming.

Figure 8: Very Serious Marine Casualty FV "Hoheweg"

Investigation report 564/06 published on 15 March 2008

In June 2008, another fishing boat capsized in the North Sea with no personal injury to be claimed, yet the cause of the accident was almost identical to that of the very serious casualty involving the FV "Hoheweg". This marine casualty investigation was concluded, after discussions with Germanischer Lloyd and the See-BG, with an internal report to the regulators about the problems of a decline in the stability of fishing vessels after conversions.

Following the collision between the German container ship "Hanjin Gothenburg" and the bulk carrier "Chang Tong", which was sailing under Panamanian flag, the latter sank several days after the accident. As the collision occurred off the coast of China, according to local interpretation in Chinese waters, the investigation of this very serious casualty was carried out for the first time in co-operation with China as the coastal State. This co-operation was more than positive.

Figure 9: Very Serious Casualty, CMS "Hanjin Gothenburg"/MS "Chang Tong"

Investigation report 450/07 published on 15 September 2008

All reports published by the BSU are grouped according to year of publication and posted on the BSU website www.bsu-bund.de under the heading "Publications".

3.6 Safety recommendations in 2008

According to the IMO Code, the goal of a marine casualty investigation is the prevention of similar accidents in the future. With this goal in mind, the lessons learnt from a casualty investigation are formulated as safety recommendations and then, as a rule, published with the concluding report. These recommendations are addressed at the organisation that seems best suited to implement measures to eliminate the identified safety gaps.

Preliminary safety recommendations can be issued by the BSU regardless of the stage of the investigation whenever the recognised safety gap appears to require immediate action.

In 2008, the BSU did not publish any preliminary safety recommendations, but did issue safety recommendations in 10 finally published reports.

All recommendations published by the BSU are grouped according to year of publication and posted on the BSU website www.bsu-bund.de under the heading "Publications".

3.7 Accident focus areas in 2008

Accidents involving persons in the course of apparently routine tasks on merchant ships were again a focal point of the marine casualties reported to the BSU in 2008. In contrast to 2007, however, last year there were no lifeboat and line handling accidents as main accident scenarios, but a much higher number of injuries were caused by falls and work on machinery. The evaluation of all occupational accidents recorded by the BSU since 2002 as part of a dissertation by the Central Institute of Occupational and Maritime Health[4] of the University Clinic Hamburg-Eppendorf supports the initial finding that a large number of fatal or at least very serious injuries are brought about by falls. However, the circumstances of the individual falls vary greatly. Of three fatal falls, one occurred in extremely heavy weather on the bridge, one occurred due to the influence of alcohol in the superstructure and the third occurred during welding work on the hatch cover in the shipyard. The pattern of the other falls is equally varied, as is that of the injuries occurring during work on machinery.

In the case of the accident types "Collision" and "Grounding/Stranding" that constituted another area of focus last year, the issue of bridge equipment is always an interesting and important aspect. However, of equal importance are considerations as to whether and how the individual components are interconnected and in particular how the "human" component has been incorporated into this system. Integrated navigation systems (INS) and integrated bridge systems (IBS) are topics currently being discussed worldwide in the context of the International Maritime Organisation (IMO). The implementation of such a holistic system solution is

[4] Hamburg Port Health Center, Institute of Occupational and Maritime Health (HPHC), WHO Collaborating Center for the Health of Seafarers

expected to take some time. But even without such an approach, new equipment regulations are creating the need to integrate new devices into existing bridge systems. As of 2002, the Automatic Identification System (AIS) for seagoing vessels gradually became a mandatory piece of equipment depending on the type of vessel, size and shipping routes. This system delivers much more than just the vessel name. A series of information issued at set intervals can also be used when making decisions to prevent collisions. When a vessel alters its course, the direction and rate of turn, for example, is an almost real time output via AIS, so that other vessels' commands are able to recognise this manoeuvre a long time before it appears on the radar. Another advantage is the fact that the AIS signal is not impaired by sea or weather clutter, ensuring stable availability in critical approach situations. The vessel contour provides additional information. In the case of another vessel, its size can be determined, unlike with the radar, where the size of a radar echo does not necessarily indicate the true vessel size. On your own vessel, the contour provides an additional benefit when visibility is reduced by showing the position of the vessel to the pier for example, even if it cannot be identified visually yet. An important prerequisite for this is correct setup and integration of the system. A review by the Federal Maritime and Hydrographic Agency jointly with the See-Berufsgenossenschaft determined that a number of systems on seagoing vessels that sail in German waters are still set up incorrectly. The information output by a faulty system does not, of course, provide any benefit, but may, on the contrary, even be misleading and therefore dangerous. Added to this is the possibility of the fulfilment of the carriage requirements by means of a stand-alone device without any connection to other bridge equipment. In the case of this solution, the additional information is often not taken into consideration in the decision-making process, as it is not available at the usual workstation and, due to the lack of any connection, it is impossible or extremely difficult to compare it with other information. Just as important as the setup and integration of the system, however, is the training of the crew. The common learning-by-doing approach to understand the functionality of a new device is hardly appropriate for making the most of any additional benefit. Instead, it tends to lead to the crew focussing on the essential basic functions without having any grasp of the full range of options.

There is a similar problem when it comes to considerations to avoid grounding/stranding and the mandatory requirement for all seagoing vessels to carry an electronic chart display and information system (ECDIS), which is currently being discussed in this context by the Maritime Safety Committee (MSC) of the IMO. In this case too, purchasing and installing the new system is not the real problem. Much more critical are the considerations about the integration of the new system with the existing equipment to ultimately form one logically integrated system. This system also remains incomplete without the integration of the human component. It is only after specific training that the operators become a coherent part of the overall system, making it a complete system. This, however, calls for type-specific training, which relates to the exact system used on board and that goes beyond pure basic theoretical training. This is the only way for operators to familiarise themselves fully with the functionality of the onboard ECDIS, thus helping to improve maritime safety.

Another problem in the area of electronic chart systems results from the overlap with the International Hydrographic Organization (IHO). An action plan adopted here aims to ensure that, by 2010, the necessary electronic nautical chart material is available

for the 800 most important ports worldwide and the main trade routes running between these ports. Even if this action plan is fulfilled, there will be no electronic nautical charts available or at least none that comply with the international standard for some remote sea areas worldwide in the future.

Perhaps the most significant aspect, however, with regard to bridge equipment is still the crew, i.e. the size and level of qualification of the bridge team and the allocation of tasks within this team, as well as its interaction with the technical components. Modern bridges are ergonomically optimised for single-handed operation. The fact that a bridge can be operated solely by one person, however, does not necessarily mean that this one person is fully able, in any situation, to gather together all available information to form an appropriate overall picture of the situation. Vessel command, safe navigation, prevention of collisions, log book documentation, processing of radio communication, etc. must all be carried out responsibly at the same time. The bridge equipment provides and, ideally, links information for this purpose. However, the final evaluation of this information is the responsibility of the bridge team, forming the basis for the decision to be made by the relevant vessel's command. However, if the bridge "team" only comprises one person in line with the single-handed bridge philosophy, then in a complex situation, it is often the case that either the operation of the equipment, the evaluation of information or the decision-making, or even several of these things, is neglected. The same happens if the bridge team does comprise more than one person but there is no or inadequate allocation of tasks and instructions.

The above list of possible factors to be highlighted in the event of a collision or grounding/stranding is by no means conclusive. However, it should show that the actions or failures to act on the part of mariners should not be judged in isolation. The actions of the crew are decisively determined by their integration into the safety system as a whole. However, in this regard, less is to be expected of the individual mariner than it is of the vessels owners and operators in terms of their safety management systems, as well as in particular the International Maritime Organisation and the flag States with their crew regulations and training requirements.

No local accident hotspot was identified in 2008. The most accidents, in absolute figures, within the BSU's scope of responsibility were registered on the Elbe, with the ports of Hamburg, Bützfleth, Brunsbüttel and Cuxhaven (18), in the area of the North Sea (20) and Baltic Sea (24), as well as in sea areas and ports outside of German waters (29). However, the accident rates are low in relation to the relevant volumes of traffic.

The leisure craft sector did not represent a particular area of focus in 2008. Overall, accidents involving leisure craft accounted for just 28 % of the marine casualties reported to the BSU, remaining at the same level as in 2007. What stood out, however, was the number of very serious casualties (9), meaning that this figure has tripled from 3 to 9, now accounting for over 50 % of all very serious marine casualties reported to the BSU.

During the evaluation of the fatalities due to drowning, it was determined that none of the people that fell overboard (3 from a leisure craft, 1 from a fishing boat) were wearing a life jacket.

3.8 Evaluations of voyage data recorders in 2008

From the viewpoint of the BSU, evaluation using a voyage data recorder (VDR) in the context of a marine casualty investigation is still unsatisfactory. The faults that occurred in previous years, ranging from inadequate audio quality of bridge microphones and missing recordings from individual sensors right through to complete failure of the VDR recording function, remained a problem for the BSU in 2008 too.

The mandatory requirement for merchant vessels with a gross tonnage greater than 3,000 to carry full-spec. or simplified voyage data recorders is to be implemented latest on 1st July 2010. These devices represent an increasingly significant investigation subject for the BSU. However, in order to support the marine casualty investigation to optimum effect, fault-free VDR operation on board seagoing vessels must be ensured. Faults during day-to-day operation can go unnoticed by crews, as they do not actively use the VDR. In the best-case scenario, they are identified and remedied during the annual inspection by a service engineer. However, they are often only revealed during a marine casualty investigation, and then possibly involve the loss or incompleteness of critical data.

The technical recommendation announced in the IMO circular (SN/Circ/246) to facilitate access to the VDR for the downloading and replaying of stored data by investigation authorities has since been implemented to a greater extent but not yet fully in the experience of the BSU.

The formulation of improved performance standards for voyage data recorders is being targeted internationally, and the implementation of these requirements should improve the usability of recorded data by marine casualty investigation authorities in future.

4 International, European and National Developments

The revision of the IMO Code with the aim of making this instrument, which was until now purely a recommendation, mandatory, was still on the IMO's agenda in 2008. For this purpose, the "Flag State Implementation" (FSI) sub-committee coordinated a draft of the revised Code, as well as an amendment to the international Safety of Life at Sea (SOLAS) convention. According to this, in SOLAS Chapter XI-1, a new Regulation 6 is intended to render parts I and II of the revised Code binding, while part III contains supplementary instructions, still on a recommendatory basis. The planned amendment to SOLAS was adopted on 16th May 2008 by the Maritime Safety Committee (MSC) with Resolution MSC.257(84), and the revised Code was adopted on the same day by means of Resolution MSC.255(84). It is expected to come into force on 1st January 2010.

At European level, in parallel, the political agreement achieved in the first half of 2007 under German Council presidency on a draft of a Directive of the European Commission for marine casualty investigation, was further negotiated. This draft of a Directive is intended to accomplish binding and uniform investigation, on the basis of the IMO Code, of marine casualties involving vessels sailing under the flag of an EU Member State or taking place along Member State coastlines. The final version of this draft of a Directive was negotiated between the Member States, the European Commission and the European Parliament in 2008. As part of the third Maritime Safety Package, the Directive was adopted by the Council at the end of February 2009 and was approved by the European Parliament at the beginning of March. Part of this Directive, in addition to the actual investigation of marine casualties, will also relate to the centralised recording of marine casualty data in one database[5] at the European Maritime Safety Agency[6].

The IMO Code, as a central standard during international marine casualty investigations, will thus be made binding in the foreseeable future. Joint investigations with other flag States and/or coastal States with a mutual exchange of information lead to more comprehensive findings with better acceptance of the final results and the concluding report. Whenever the respective national investigation procedures are built on the IMO Code, this regularly facilitates cooperation. Strengthening the IMO Code will lead to further harmonisation of the national investigation procedures, which will be still further reinforced within the European Union by the coming into force of the Directive.

This development towards consolidated international co-operation in the area of marine casualty investigations is supported by the BSU in particular by means of active participation in the MAIIF[7] and its European section, EMAIF[8]. These forums offer an exchange of information about current developments in global casualty events and for the further development of investigation procedures. They also

[5] European Maritime Casualty Information Platform EMCIP
[6] European Maritime Safety Agency EMSA
[7] Marine Accident Investigators International Forum MAIIF
[8] European Marine Accident Investigators Forum EMAIF

provide network linking to other investigation agencies. This network, in turn, formed the basis for a further exchange of ideas on a smaller scale. In 2008, bilateral meetings were held with marine casualty investigators from Panama, Japan, Norway and the Netherlands to conduct talks on improving cooperation.

At national level, the project “Analysis, Research and Information System” (Havarie Auswerte-, Recherche- und Informationssystem (HAVARIS; formerly “Vessel Accident Database” - SUDABA)) is ongoing, with the collaboration of the BSU. Today, if incidents are not investigated further by the BSU, the data collected by other German authorities is not stored centrally. This applies in particular to the inland navigable waterways in which the BSU has no competence or jurisdiction of any kind. Central recording in HAVARIS and a mid to long-term statistical analysis on this basis could, in future, provide a broader data pool for this area.

5 Public Relations

All publications of the BSU are published on its website www.bsu-bund.de. In addition to the investigation reports and safety recommendations, the website also contains annual reports, information concerning marine casualties currently under investigation, background information concerning the BSU and its investigation procedures, as well as important legislative and regulatory texts. The BSU makes every effort to provide all this information in German and English. However, there is generally a delay before the English versions are available. In addition, on its website, the BSU also provides links to other institutions dealing with marine casualty investigations.

The newsletter, which was first sent out by BSU to 200 recipients back in 2004, now informs 931 registered participants about current investigation reports and press releases. The printed reports are only sent out in a small print run to the parties directly involved in the accident and – according to a distribution list – to the press, maritime academies and archives. It is nevertheless possible to obtain a printed version on request from the BSU or to print the report from the internet.

An additional area of the BSU's public relations activities involved working on its external representation in 2008 too. Many of the bodies involved are still often unaware or only have a basic understanding of the new approach to marine casualty investigation. In this context, the BSU, as was already the case in previous years, has endeavoured to contribute towards a better understanding by means of presentations at shipping companies, to pilots, to the Waterway Police Departments, the German Federal Police, sailing clubs, etc. The presentation of the approach towards modern casualty investigation was also the subject of a lecture held by the BSU at the World Maritime University (WMU) of the IMO in Malmö, Sweden.

For the first time in August 2008, the BSU was represented with a stand at the Federal Government Open Day in Berlin.

6 Annual Statistics 2008

6.1 Marine casualties investigated that were concluded by means of an investigation report in 2008

Published	Report no.	Date of accident	Name of vessel	Type of vessel	Nationality	Scene of accident	Type of accident
01.02.2008	172/07	27.04.2007	Seacod	Tanker	Germany	South of the Azores	Personal accident
15.02.2008	116/08	22.03.2007	Volgo-Balt 209	General cargo vessel	Russia	Elbe, Buoys 3 + 5	Ground contact
15.03.2008	564/06	08.11.2006	Hoheweg	Fishing vessel	Germany	Nordergründe	Sinking
01.04.2008	558/07	16.11.2007	Ladoga-3	Bulk carrier	Belize	Darss peninsula	Ground contact
15.04.2008	356/07	07.08.2007	Kleiner Lump	Sailing yacht	Germany	Elbe, Light Buoy 37	Personal accident
15.04.2008	416/07	31.08.2007	Bahago II	Motorboat	Germany	Baltic / 3 nm northwest of Mövenort	Water ingress
02.05.2008	305/06	12.07.2006	Lass Uranus / Xin Fu Zhou	Container ship / Container ship	Germany / P. R. China	Port of Hamburg (Finkenwerder)	Collision
15.05.2008*	601/06	02.12.2006	Vera / British Cygnet	Container ship / Tanker	Germany / Isle of Man	Baltic, north of Fünen	Collision
01.06.2008	537/06	27.10.2006	Beluga Stimulation	Container ship	Germany	German Bight, Weser	Personal accident
15.06.2008	215/07	16.05.2007	Forest-1	Bulk carrier	St. Kitts & Nevis	Emden Harbour	Personal accident
01.07.2008	253/07	11.06.2007	Grande Nigeria	Ro-Ro cargo ship	Italy	Elbe, Wittenbergen	Swell damage
01.08.2008	554/07	31.10.2007	MSC Grace	Container ship	Panama	Weser / Neue Reede [New Roads]	Personal accident
15.08.2008	23/07	19.01.2007	Lena	Bulk carrier	Belize	Elbe	Personal accident
01.09.2008	101/06	13.03.2006	Jan Maria	Fishing vessel	Germany	West of Ireland	Personal accident
15.09.2008	450/07	15.09.2007	Hanjin Gothenburg / Chang Tong	Container ship / Bulk carrier	Germany / Panama	Yellow Sea	Collision
01.10.2008	45/07	12.01.2007	JRS Canis	Container ship	Cyprus	Elbe, Nordergründe	Cargo loss
15.10.2008	260/08	04.06.2008	Happy	Sailing yacht	Germany	Lübeck Bay	Personal accident
15.11.2008 together with 302/08	290/07	04.07.2007	MSC Martha	Container ship	Panama	Port of Bremerhaven	Personal accident
15.11.2008	302/07	04.07.2007	Northern Faith	Container ship	Germany	Port of Koper / Slovenia	Personal accident
01.12.2008	607/07	17.12.2007	Bugsier 11	Tug boat	Germany	Brunsbüttel	Ground contact
15.12.2008	180/08	03.05.2008	Intention IV	Sailing yacht	Germany	Warnmünde	Ground contact

* Investigation report of the flag state in collaboration with the BSU

6.2 Marine casualties investigated that were concluded in 2008 with an internal investigation report

Date	Report no.	Date of accident	Name of vessel	Type of vessel	Nationality	Scene of accident	Type of accident
Discontinued 30.01.2008	518/07	20.10.2007	Adler VI	Passenger ship	Germany	North Sea coastal waters	Fire
Discontinued 22.02.2008	*544/07	06.11.2007	Duncan Island	Container ship	Bahamas	Dutch coastal waters	Cargo loss
Discontinued 23.07.2008	049/08	27.01.2008	San Pedro Bridge	Container ship	Germany	South China Sea	Personal accident
Discontinued 05.05.2008	100/08	07.03.2008	Tampere	Ro-Ro cargo ship	Singapore	Port of Hamburg	Explosion in the engine room
Discontinued 08.04.2008	115/08	02.03.2008	Turin Express	Container ship	Germany	Caribbean	Ground contact with underwater object
Discontinued 20.06.2008	168/08	25.04.2008	Gefron	Sailing yacht	Germany	Canary Islands	Sinking
Discontinued 24.09.2008	206/08	12.05.2008	Bürgermeister O'wald (Elbe 1)	Museum ship (traditional ship)	Germany	Port of Hamburg	Collision
Discontinued 12.01.2009	213/08	09.05.2008	Polarstern	Passenger ship	Germany	Borkum	Ground contact
Discontinued 15.07.2008	242/08	28.05.2008	De Albertha	Traditional ship	The Netherlands	Kiel/Laboe	Personal accident
Discontinued 21.08.2008	*290/08	21.06.2008	Värmland	Container ship	Great Britain	Bremerhaven	Personal accident
Discontinued 13.10.2008	244/08	11.05.2008	Let's Go	Sailing yacht	Germany	Schlei estuary	Ground contact
Discontinued 13.10.2008	274/08	10.05.2008	Frau Sommer	Sailing yacht	Germany	Schlei estuary	Ground contact
Discontinued 13.10.2008	275/08	28.02.2008	Tamouré II	Sailing yacht	Germany	Canaries / Spain	Water ingress
Discontinued 19.12.2008	333/08	09.07.2008	Jan Looden	Fishing vessel	Germany	Ley fairway	Capsizing / sinking
Discontinued 17.12.2008	507/08	09.08.2008	Kaline / Ückermünde	Sailing yacht / fishing vessel	Germany / Germany	Port of Rostock	Collision
Discontinued 18.02.2009	570/08	14.11.2008	Longstone	Ro-Ro cargo ship	Great Britain	Lübeck	Collision

* Investigation report of the flag state in collaboration with the BSU

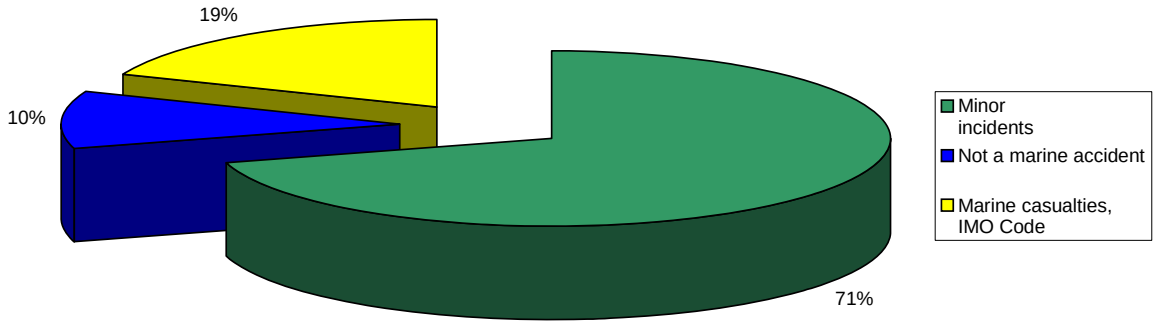
6.3 Ongoing investigations as at 31 December 2008

Report no.	Date of accident	Name of vessel	Type of vessel	Nationality	Scene of accident	Type of accident
001/08	02.01.2008	LT Cortesia	Container ship	Germany	English Channel	Ground contact
047/08	31.01.2008	Schleswig-Holstein	Passenger ship	Germany	Port of Fredericia/DK	Collision
107/08	12.03.2008	Hope Bay / Oceanic	General cargo ship / Tug boat	The Netherlands / Germany	Neuwerk Roads	Collision
149/08	04.04.2008	Wilhelmine / Pavel Korchagin	Tug boat / General cargo vessel	Germany / Russia	North Elbe	Collision
167/08	09.04.2008	Pacific Challenger	Container ship	Germany	Papua New Guinea	Ground contact
211/08	16.05.2008	Finnlady	Ferry	Finland	Port of Lübeck-Travemünde	Collision
212/08	18.05.2008	Ruiloba	Container ship	Spain	Bremerhaven	Personal accident
250/08	01.06.2008	Artur Becker / Raba	Training vessel / General cargo vessel	Germany / Poland	Off Rügen	Collision
254/08	30.05.2008	Norfolk Express	Container ship	Germany	Gulf of Suez	Ground contact
255/08	01.06.2008	APL Turquoise / Marfeeder	Container ship / Container ship	Singapore / Germany	Outer Weser	Collision
299/08	21.06.2008	Laboe / Röde Orm	Passenger ship / Sailing yacht	Germany / Germany	Kiel Bay	Collision
400/08	04.08.2008	Polarstern	Passenger ship	Germany	North Sea / Helgoland	Personal accident
404/08	03.08.2008	Sinus	Sailing yacht	Germany	Swedish waters	Personal accident
422/08	04.08.2008	Aredi	Sailing yacht	Germany	Waters off Rügen	Personal accident
491/08	14.09.2008	WMS Groningen	Container ship	Cyprus	Elbe, Wittenbergen	Swell
504/08	20.09.2008	Polaris / Crownbreeze	Ro-Ro cargo ship / General cargo vessel	Germany / the Netherlands	Kiel Canal, km 55	Collision
510/08	24.09.2008	Chicago Express	Container ship	Germany	Hong Kong Roads	Personal accident (typhoon)
548/08	26.10.2008	Beluga Sensation / Jerome H.	Container ship / Bulk carrier	Gibraltar / Antigua & Barbuda	Port of Kiel	Collision
557/08	28.10.2008	Covadonga	Chemical tanker	Panama	Brunsbüttel lock	Personal accident
563/08	07.11.2008	Ever Champion	Container ship	Germany	Elbe	Ground contact
*578/08	16.11.2008	Helgoland	Fishing vessel	Germany	70 nm west of Stavanger	Personal accident
612/08	12.12.2008	OOCL Finland / RMS Saimaa / Nordic Diana	Container ship / Bulk carrier / General cargo vessel	Great Britain / Antigua & Barbuda / the Netherlands	Kiel Canal, Brunsbüttel	Collision
617/08	16.12.2008	Freya	Chemical tanker	The Netherlands	Elbe, km 735	Collision
619/08	17.12.2008	Gretje Bruhns	Fishing vessel	Germany	Ditzum	Explosion
642/08	15.12.2008	Santa Alina	Container ship	Germany	Lagos	Personal accident

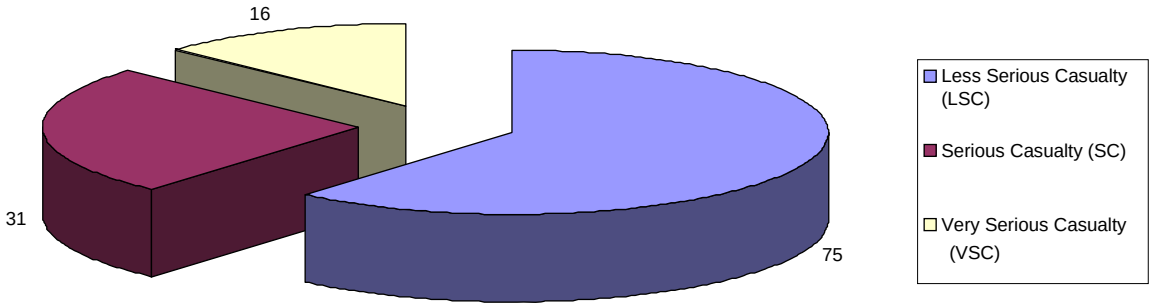
* Investigation report of the flag state in collaboration with the BSU

6.4 Overall reports and marine casualties reported in 2008

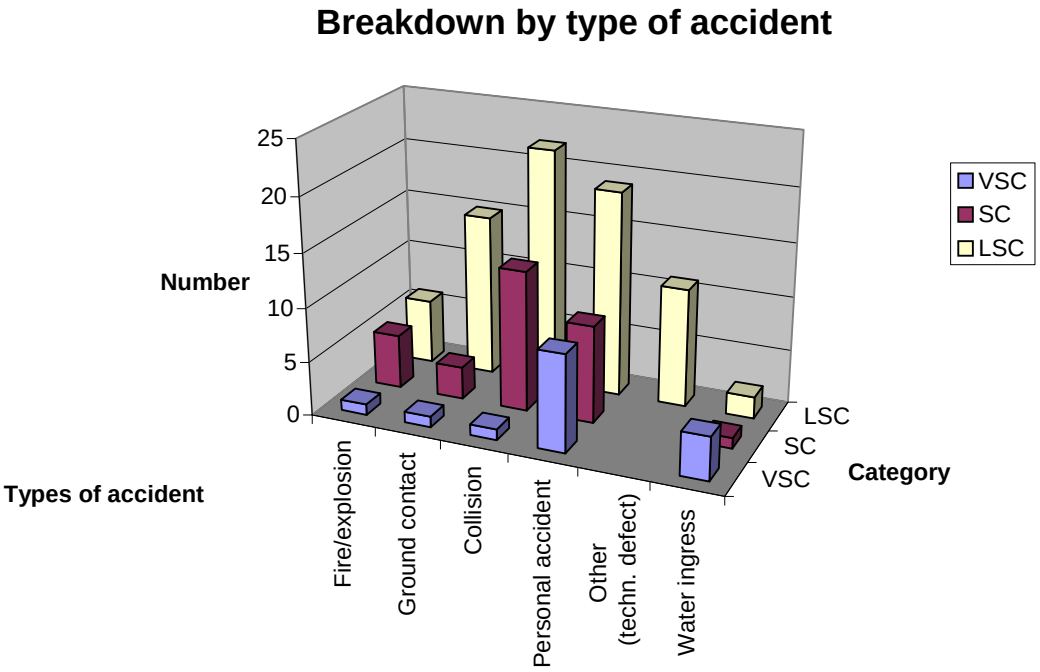
Overall reports to the BSU

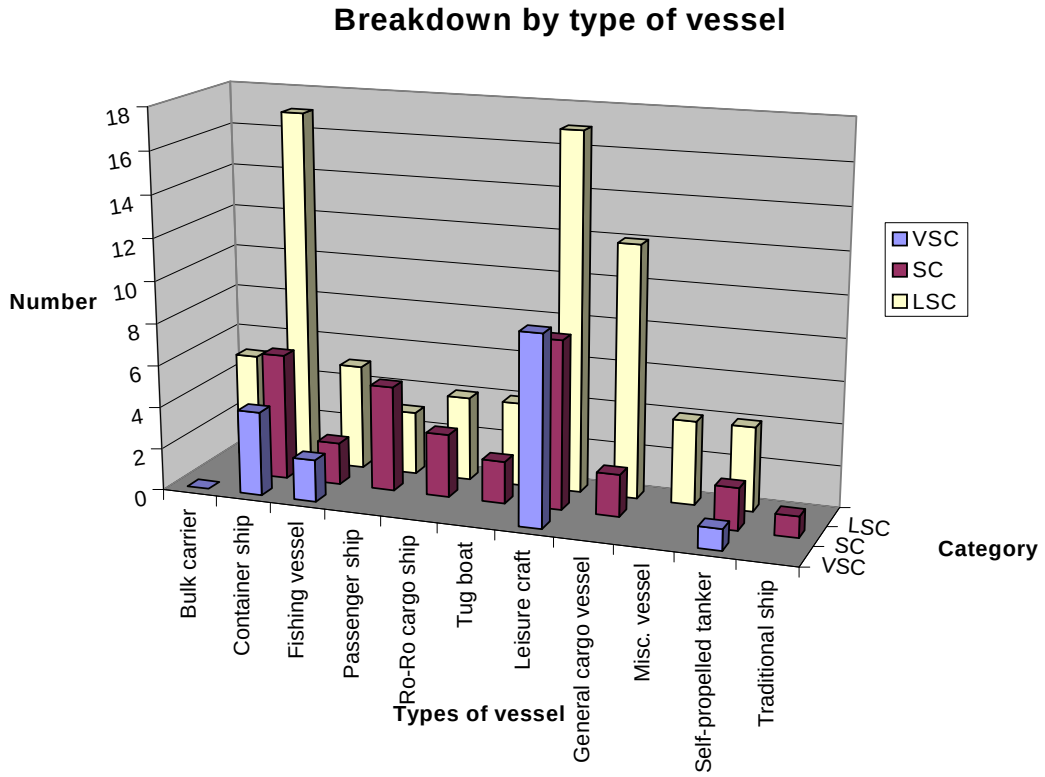


Marine casualties according to IMO Code

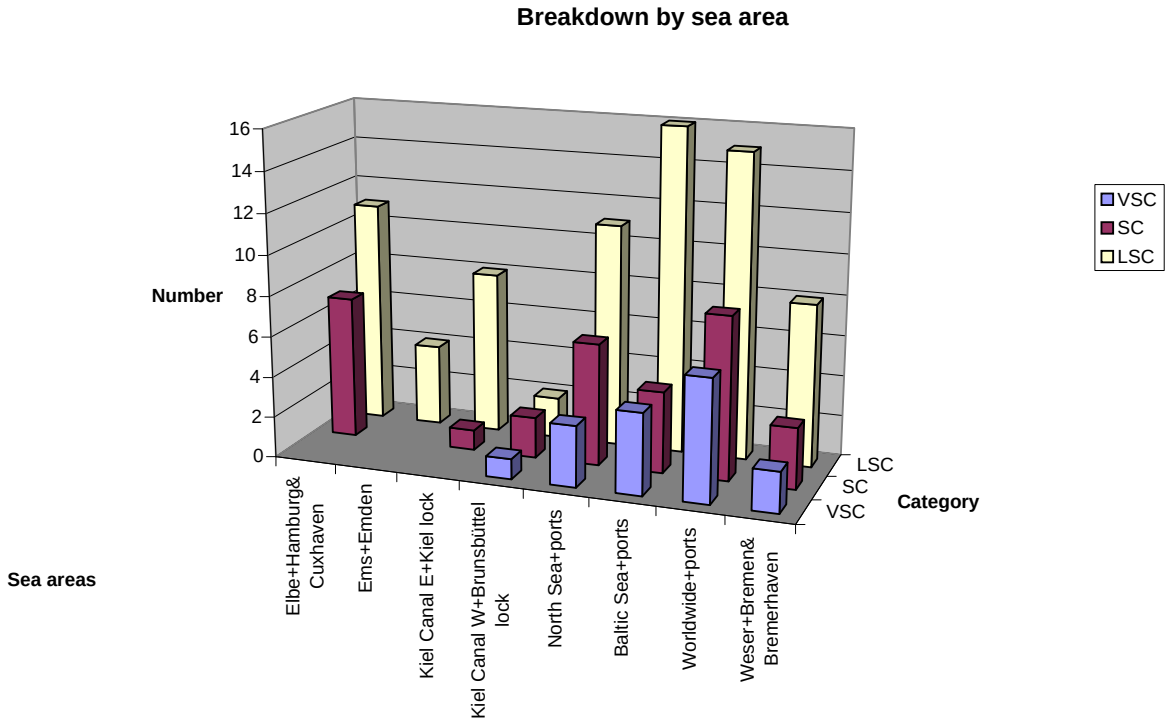


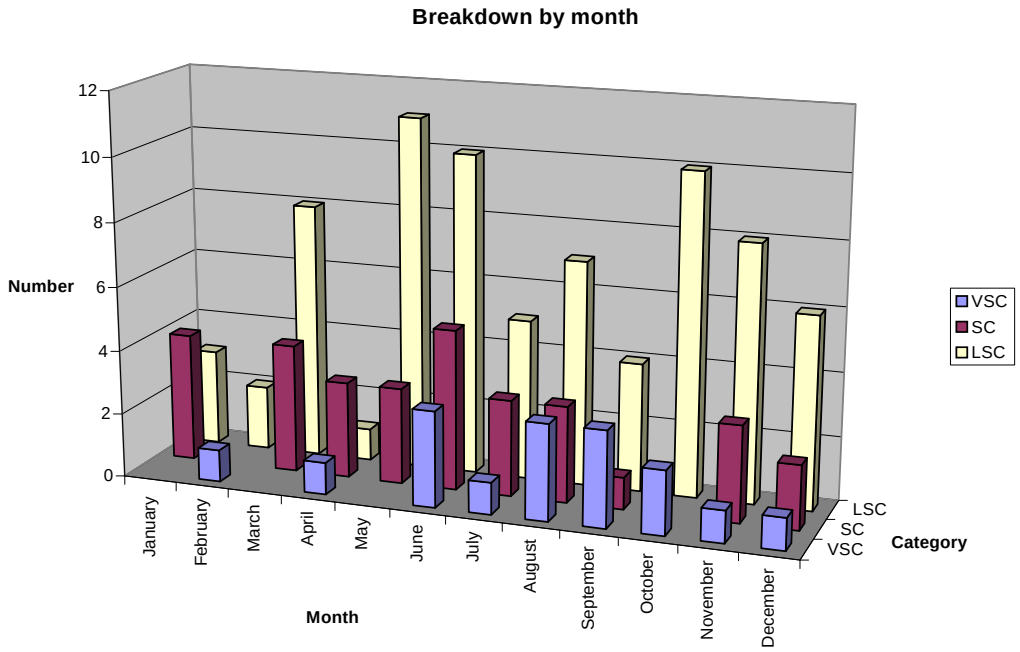
6.5 Breakdown of marine casualties by type of accident and vessel





6.6 Breakdown of marine casualties by sea area and month





6.7 Breakdown of marine casualties by cause of death and injury