



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

Annual Report 2005



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The BSU herewith publishes the statistics of accidents and serious incidents at sea together with a report on its activities in the past financial year.

1 Preface

Improving precautions and arrangements for maritime safety through the conduct of investigations into incidents that have caused damage or danger - this briefly outlines the objective of the Maritime Safety Investigation Act (SUG).

Investigations are conducted not only by the BSU. While the staff of the BSU feel obligated to the principle that their investigations do not serve to determine facts for the purpose of allocating fault or to bring about disadvantages for individuals, nor to ascertain blame, liability or claims, the investigations of other authorities and bodies are aimed precisely at these objectives.

The BSU thus operates in a difficult field of tension. The determination of the objective causes and accompanying circumstances that have led to an accident serves solely to avoid similar accidents in future by publishing safety recommendations resulting from these and in so far to improve precautionary care for safety of shipping. The same facts, determined by other parties, are used by these other parties to clarify questions of blame and liability.

Accordingly the tightrope course of the BSU consists in considering and representing the incidents from all aspects without charging individuals. In addition to analysing many technical data that are available for this purpose, great importance is attached to the subjective opinion of all concerned. Here, however, the staff of the BSU are often faced with a legal dilemma. Although witnesses of an incident are basically obligated to make true statements about their observations, they can refuse to provide information in response to individual questions in as far as answering these would expose them or their families to the risk/danger of prosecution under criminal law, law governing irregularities or maritime law or some other considerable legal disadvantage.

By contrast, the BSU is obligated as set out in the Maritime Safety Investigation Act (SUG) to protect statements made in confidence to the investigators. Accordingly the contents of statements in an investigation report by the BSU is used as far as possible in such a way that no conclusion can be drawn as to the sources of the information.

Furthermore, there is as a matter of principle no right to study the investigation files of the BSU. Public authorities or lawyers of a party from the other side do not have any way of identifying a source of information of the BSU in this way either. Judicial authorities can obtain the documents for study within narrow limits. However, the confidential information gained by the BSU is subject to unrestricted prohibition of use.

The willingness to describe personal appraisals of accident circumstances to the BSU has a great deal to do with trust and confidence. Chiefly trust and confidence in

the fact that statements and opinions expressed to the BSU are not used for any purpose other than investigating the marine accident in accordance with the Maritime Safety Investigation Act (SUG) in accordance with the specifications outlined above, in particular that the source is not disclosed to other bodies.

The first director of the BSU, Mr. Dieter Graf, identified this area of trust-building as a central theme already when the BSU was set up in June 2002. After his retirement in August last year this area still remains crucial for the work of the BSU. It is still necessary to work on convincing those affected by a maritime accident and their legal representatives as well as the owners and operators of vessels. This is in order to clarify that there is no unrestricted right of refusing to make a statement, but only a right not to answer *individual* questions. And in particular also to stress that the representation of the subjective view of matters by those affected to the BSU helps to reconstruct decisions and actions and thus to do justice to the persons acting in an incident when this is described in the investigation report.

In the past year the cooperation with the waterway police of the coastal states, the Federal Police and the Waterway and Shipping Administration of the Federal Republic and the states, in particular the Vessel Traffic Services, was most encouraging. The contributory work by these bodies is an important constituent part of securing evidence and items that serve the maritime casualty investigation and determination of causes and promoting factors of an incident by the BSU.

International cooperation is taking up an increasingly broad scope in the work of the BSU. In a large number of maritime accidents more than one state is affected. Accidents in Germany territorial waters often occur on vessels sailing under a foreign flag. Conversely, accidents on or with vessels sailing under German flag take place not infrequently in foreign territorial waters and/or with participation by further vessels sailing under foreign flags. The code of the International Maritime Organisation for Investigating Accidents and Incidents at Sea (IMO Res. A.849(20)) that has been translated into German law in the SUG, is becoming increasingly important as a basis for joint investigations by two or more states, including the publication of joint reports. European (European Marine Accident Investigators Forum – EMAIF) and worldwide (Marine Accident Investigators International Forum – MAIIF) forums strengthen the implementation of the IMO Code and international cooperation. Efforts by the IMO to prescribe the code, divided into a mandatory and a recommending part, for worldwide shipping and also the proposal presented by the European Commission for a directive to specify the principles for investigating maritime casualties and to amend the Directives 1999/35/EC and 2002/59/EC will reinforce this trend.

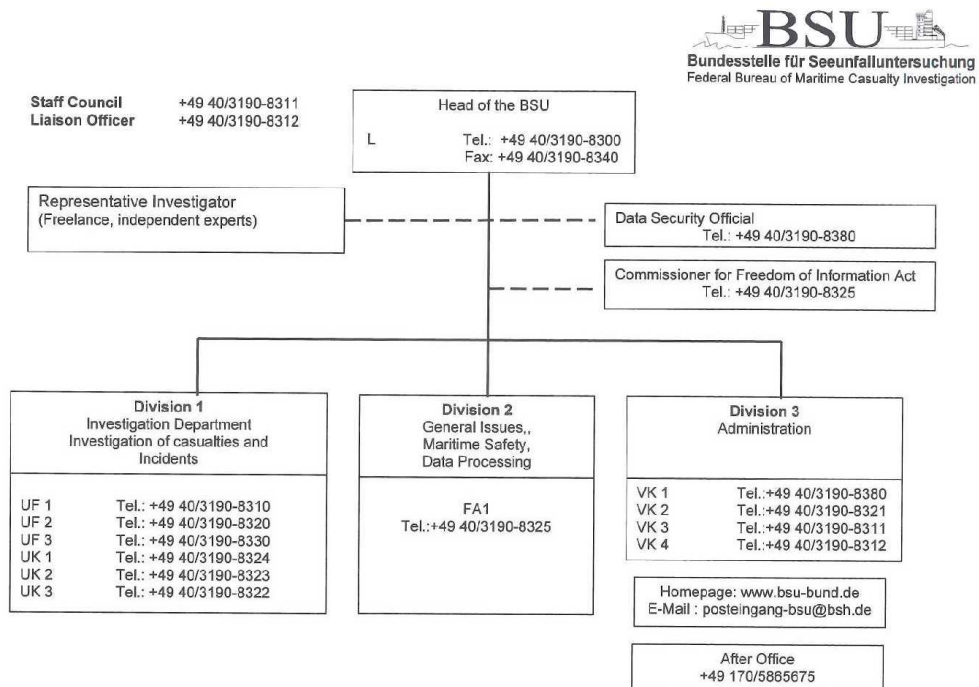
The core element of the SUG according to which maritime casualty investigation does not serve to attribute faults to individual persons and to sanction these and/or to clarify questions of liability, but instead to draw lessons from the incident and thus to improve the safety of shipping altogether is also the basic idea behind the IMO Code and the proposal for a directive of the European Commission. In so far the international efforts will press ahead with the concept of a "no-blame culture" for maritime accident investigations and thus become a further instrument for building trust and confidence.

2 Human resources development

The first Director of the BSU, Mr. Dieter Graf, retired on 15 August 2005. The Bureau is now headed by Mr. Jörg Kaufmann.

The BSU is divided into an investigation unit, Division 1, with three Lead Investigators and three Investigators. The position of one Lead Investigator was not staffed as of 15 August and could only be staffed again as of 1 April 2006 with a new Lead Investigator. Division 2, Basic Issues, is staffed by a mechanical engineer. In the administrative task division there is one desk officer for budget-specific and personnel matters, and three other desk officers involved in registering incoming accident reports, assisting in preparing accident reports and statistics.

In addition to the BSU's own personnel, the approx. 60 freelance, independent experts are deployed as required as representatives for investigating maritime casualties.



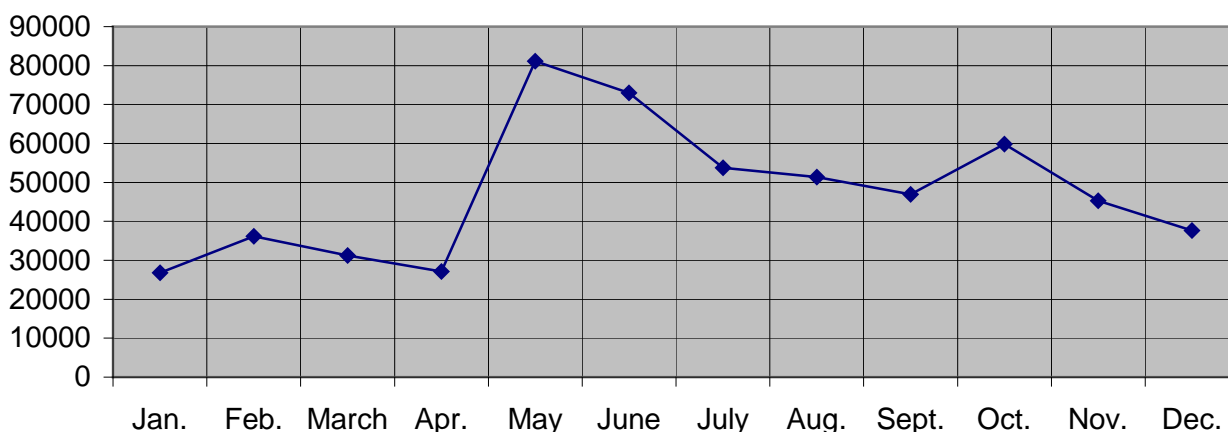
3 Internet presentation

The BSU Website www.bsu-bund.de has been revised. The publications have been restructured and divided into a German and an English presentation so that it is now easier to call up the respective pages.

At present over 500 participants are informed about current investigation reports and press releases via the Newsletter (in 2004 this went out to approx. 200 participants). The printed reports are only dispatched in a small circulation to the group of persons directly involved in an accident and those on a press mailing list.

Furthermore, it is possible to obtain a printed version on request from BSU, or to print the report from the Internet.

Enquiries successfully processed per month in 2005



Jan.	Feb.	March	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
26759	36189	31236	27150	81107	72968	53781	51390	46895	59854	45274	37673

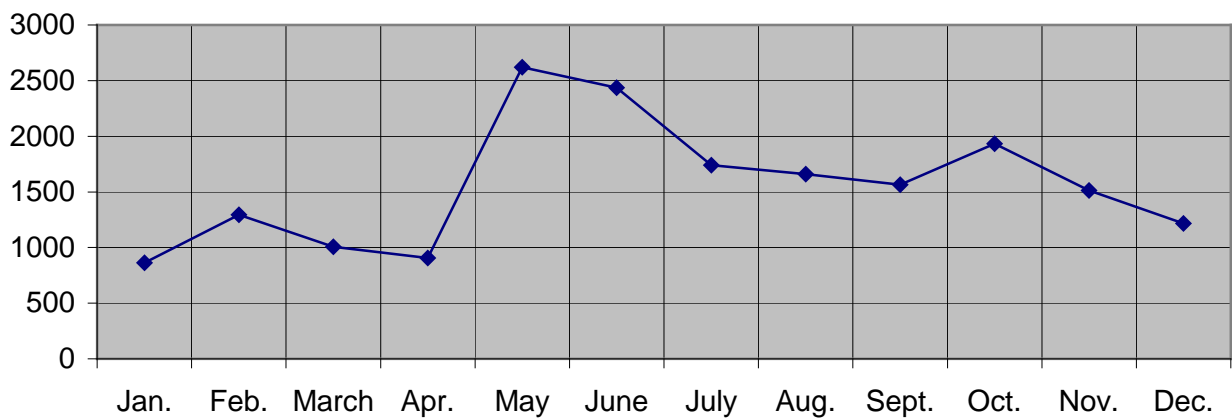
Average per month :	2005 : 47523	2004 : 23370	2003 : 5443
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The average number of enquiries processed per month has more than doubled by comparison with 2004. Two peaks can be seen in May with 81,107 and in October with 59,854 "clicks". The individual observation shows that in May the report "240/04 MADAME PELE" was called up over 50%. In October the report "203/04 SY ALLMIN" was clicked on over 66% and in November over 43% and December over 38%. The demand for such investigation reports from the leisure craft sector is encouragingly high, despite the generally tragic circumstances of the accidents.

From outside Germany the pages are called up on average by 9% of the total number of enquiries. An increase in foreign enquiries is noted after participation of the BSU in international conferences.

The Website is chiefly used during the daytime from 6.00 h to 18.00 h.

Average number of enquiries answered per day

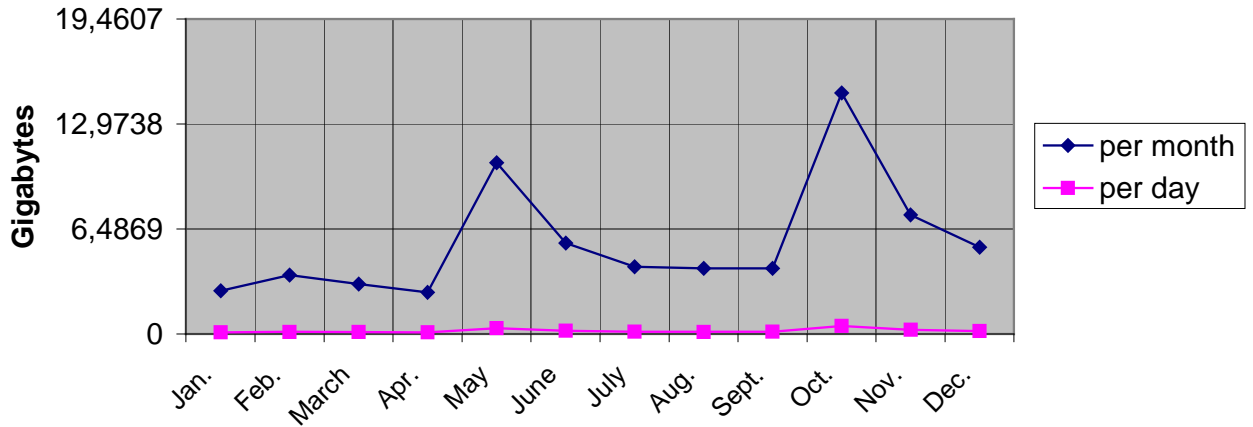


Jan.	Feb.	March	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
863	1295	1007	906	2619	2435	1739	1661	1565	1933	1512	1216

Average per day :	2005 : 1563	2004 : 768	2003 : 178
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The number of enquires answered per day shows the same trend as those per month. An increase in use altogether and the two peaks following publication of the leisure craft accidents in May and October are evident.

Volume of data dispatched in Gigabytes



	Jan.	Feb.	March	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
per month	2,665	3,647	3,089	2,582	10,58	5,617	4,137	4,048	4,058	14,91	7,359	5,361
per day	0,088	0,133	0,102	0,088	0,349	0,192	0,137	0,133	0,138	0,493	0,251	0,177

Average per month :

2006 : 5,671

2004 : 2,226

2003 : 0,524

An increase in the number of gigabytes sent and downloaded per month by comparison with 2004 and the peaks in use in the months mentioned can also be seen.

4 Public relations work and advanced training

The BSU contributes work to safety at sea with a view to preventing incidents and accidents in the meaning of § 1 Para. 2 Maritime Safety Investigation Act (SUG). On the one hand information on such incidents is published regularly and on the other hand BSU participates in lecture events. It is stipulated in SUG § 15 in conjunction with FIUUG § 28 that the BSU can, on request, send speakers to events addressing safety at sea or comparable events of the police or in disaster protection/emergency services. The lectures by BSU staff at police colleges and to Waterway Police units as well as the lecture event for a Chinese public that has now been held for the third time have become a permanent and continuous facility. Participation in panel discussions and lecture courses for shipping, lectures and speeches to nautical associations, sailing clubs and sailing schools also belong to the BSU fields of activity. The BSU made sectoral contributions to the 14th Marine Accident Investigators International Forum - MAIIF in August / September 2005 in Vanuatu.

Pursuant to § 12 Para. 6 SUG, the BSU is responsible for ensuring that the sectoral and technical capabilities and expertise of the Principal Inspectors, Inspectors and other specialists are maintained and adjusted in line with developments. The BSU staff regularly attend upgrading sessions of SAF and BAKöV. Three staff members attended a special course in London at a VDR manufacturers on the evaluation of voyage data recorders (VDR).

5 Maritime casualty investigations

5.1 National and international regulations

The SUG governs the responsibility of the BSU for investigating sea-going vessels sailing under all flags that suffer marine accidents within German territorial waters. This also includes traffic incidents on the way from and to ports in the Navigable Maritime Waterways. Furthermore, the BSU investigates marine casualties involving vessels sailing under the German flag occurring worldwide and further rights of assistance in international investigations arise when the BSU maintains claims of a "substantial German interest in the investigation".

Sea-going vessels in the meaning of the SUG also include sea-going leisure craft so that the BSU also conducts investigations on these vessels following incidents that cause damage or danger.

The definition of a marine casualty is set out in § 1 Para. 2 SUG, where it is stated:

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

These above points serve, depending on the consequences of the accident, to classify marine casualties in various groups. This classification is conducted in accordance with the IMO Res. A 849(20) - Code for the investigation of marine casualties and incidents - into **very serious marine casualty, serious marine casualty, marine casualty, and incident at sea**. This classification then decides on whether an accident must or can be investigated. In the "can" cases it is crucial whether a lesson can be drawn from the investigation of the accident or a new finding gained to avoid accidents of a similar kind

According to IMO Code A.849(20) the expression "serious injury" means an injury sustained by a person in connection with an accident that leads to inability to work for more than 72 hours during the first seven days after occurrence of the injury.

Very serious marine casualty (VSC)



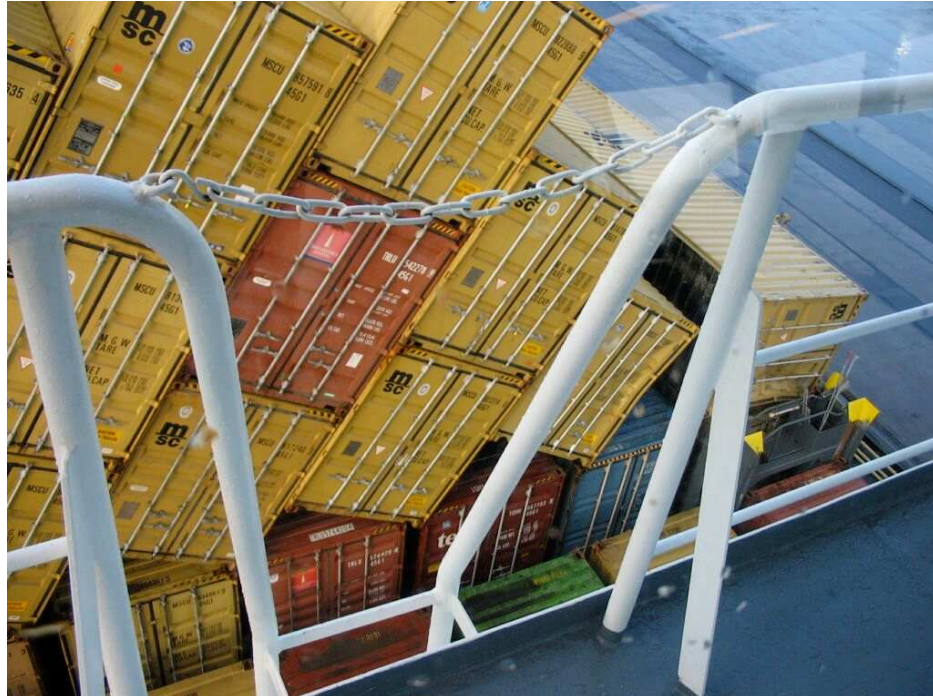
Foundering of SY ALLMIN on 29 June 2004 east of Rügen

Serious marine casualty (SC)



Collision of MV SUNA and MV MITHRIL on 9 August 2005 in the Kiel Canal

Less serious marine casualties (LSC) (incidents at sea, near misses)



Loss of containers from on board CMV YORKSHIRE on the River Elbe on 15 December 2005

All reports of accidents are fundamentally recorded and at least statistically evaluated.

Very serious marine casualties are always investigated, including all necessary IMO reports. For all other casualties work proceeds in accordance with § 11 Maritime Safety Investigation Act (SUG). The Head, or in his absence his Deputy, determines after consultation with the Lead Investigators and Investigators whether an investigation is to be conducted and how extensive this should be.

5.2 BSU procedure after a marine casualty

The BSU accepts incoming accident and fault reports and other notifiable matters under the Maritime Safety Investigation Act (SUG) at all times. This necessitates permanent on-call duty and availability so that work can be commenced on call. Since October 2003 a member of staff from our investigation unit is always on permanent call for one week at a time.

This daily work procedure is illustrated here with the example of a very serious marine casualty off the Brunsbüttel Lock :



Uprighting MV MARITIME LADY – 15 December 2005, 15:00 h

In the evening of 5 December 2005 the colleague on duty was in Kappeln. He was giving a lecture there within the framework of public relations work before the Nautical Association on the work of the BSU. As he was starting his homeward journey at 22.00 h after the lecture, his mobile telephone rang and the Waterway Police informed him of the collision of the three vessels "ARCTIC OCEAN – MARITIME LADY – SUNNY BLOSSOM". The colleague initially coordinated the further action to be taken with the Head of the BSU and then drove directly to Brunsbüttel. He reached the Water Police Station Brunsbüttel at 01.00 h in the

morning. The Head of the station first familiarised him with the situation at the scene. In order to talk to the responsible head of assignment, the Hamburg Water Police, our colleague went on board the Water Police Boat BÜRGERMEISTER WEICHMANN of the Hamburg Water Police at about 02.00 h. At about 03.30 h he went from there with one of the police investigation groups on board the ARCTIC OCEAN. Here he carried out initial investigations and questioning. After our colleague had left the ARCTIC OCEAN, at about 06.00 h he drove to the SUNNY BLOSSOM lying at the Elbe Hafen Pier in Brunsbüttel. There he contacted the investigation group of the Water Police who had conducted investigations on board this vessel. The Central Command for Maritime Emergencies, Germany was responsible for coordinating the entire action from Cuxhaven and for press work in this complex damage situation.

In the morning at about 09.00 h our colleague reached the office in Hamburg. After giving an oral report and carrying out initial office work on this case the colleague on duty ended this service unit at about noon.

That same day the Head of the BSU compiled an investigation team.

The telephone numbers and office times of the BSU are:

Monday to Thursday:	07.30 h to 16.00 h
Friday:	07.30 h to 14.30 h
Telephone number:	040-3190-8300
Fax number:	040-3190-8340

Outside office times:
 Mobile telephone number of
 the BSU investigator on duty **0170-58 65 675**

5.3 Evidence

The BSU investigation teams' access rights to relevant data and voyage records are governed by the Maritime Safety Investigation Act (SUG). Conventional evidence such as engine manoeuvre print-outs, course and rudder position print-outs, ship log records and charts are analysed and persons involved are questioned as witnesses. Accident analyses are increasingly making use of evaluations of technical equipment such as e.g. VDR, AIS, and ECDIS as well as shore radar, AIS and VHF recordings. The BSU staff have the necessary expertise and technical equipment for this. The staff of BSU have been trained on the VDR facilities of various manufacturers. The computers available can analyse and display nearly all data formats of all currently known VDR systems. Current problems in practice exist above all because the crews are not yet sufficiently trained in operating VDR in cases of data security. Furthermore, the duty of vessel operators and vessel commands to collaborate in accordance with Article 5 Maritime Safety Investigation Act (SUG) is not yet generally known and implemented.

5.4 Safety recommendations

The BSU can issue safety recommendations already before completing investigation proceedings if this appears advisable due to threat of imminent danger for preventive reasons. The BSU did not avail itself of this possibility in the year 2005. Generally the safety recommendations appear in the final reports.

In the year 2005 the BSU published safety recommendations in 10 investigation reports. Only one investigation report, No. 138/04 Collision of FC GRIETJE BOS with FC GRETJE GRE08 was published without a corresponding safety recommendation.

The safety recommendations in three investigation reports with fatal leisure craft accidents relate to failure to don life jackets. The BSU took one fatal accident occurring when a stand-by boat was set out as an occasion to draw attention intensively to the dangers of boat winches.

Following the death of a diver in the bowthruuster rudder canal, attention was drawn in a safety recommendation to the risks during maintenance works and underwater inspections.

In three collisions insufficient communication, insufficient lookout and disregard of the rules of right of way were to be complained of. In two cases technical defects gave rise to safety recommendations.

In nearly all safety recommendations the BSU again draws attention to valid directives, rules and laws and to the individual responsibility of the respective vessel commands.

5.5 Key casualty areas of accidents

The fatal accidents in the leisure craft area were reduced from 13 fatalities in 2004 to altogether 8 fatalities in 2005. By comparison with merchant shipping with 9 fatalities, almost 50% of fatalities still occur in the leisure craft segment.

In the year 2004 the BSU drew attention to the following faults and inadequacies in connection with the causes of accidents:

- Insufficient practice in "Person¹-over board" manoeuvres
- Failure to wear life jackets
- Failure to use life saving appliances
- Overestimation of qualifications
- No safety instructions and familiarisation of persons on board
- Poor voyage planning

These safety recommendations to leisure craft users have still not always been sufficiently observed and in the year 2005 **all** the persons who fell from leisure craft and subsequently died had failed to wear life jackets. During the post mortems it was mainly discovered that these persons had water in their lungs, indicating drowning

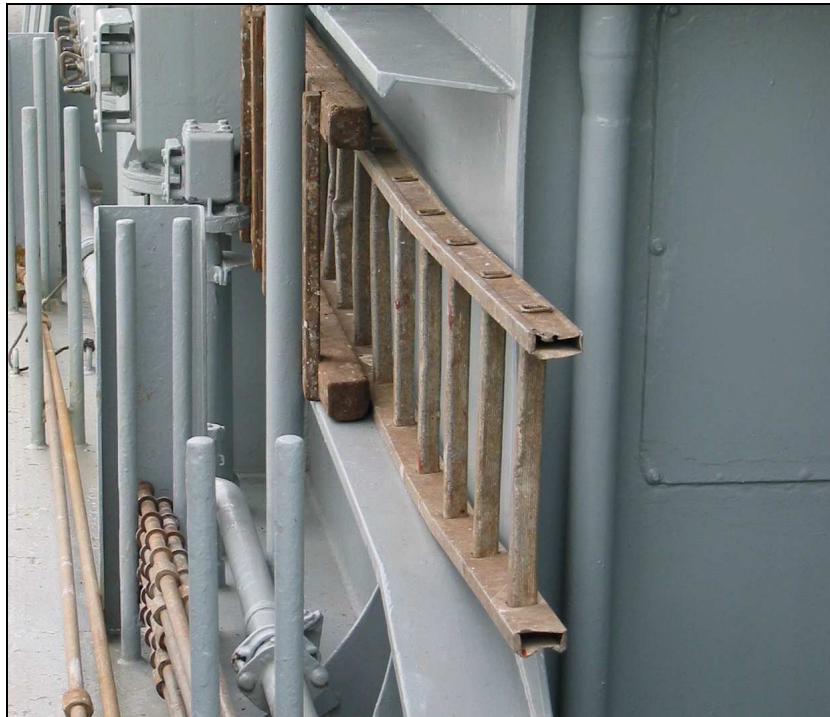
¹ Called "man over board" in other publications

with "individual responsibility" which could have been avoided if life jackets had been worn.

Three accidents on board sailing yachts would not have had a fatal outcome if passing over of the boom had been prevented by Bullentaljen/Bullenstander or other measures.

In Investigation Report 149/05 - Loss over board of the skipper with subsequent fatality on SY INA 2 - the BSU considered in detail systems for rescuing persons in the water. The recovery of helpless persons drifting in the water and the recovery systems necessary for this should be observed more especially by yachts with a high freeboard.

The fatal work accident on board the Container Vessel MV WERDER BREMEN prompted the BSU to draw attention to the risks of mobile wood/aluminium ladders:



Corroded aluminium ladder lacking rubber feet

This fatal accident is not attributable to the use of mobile ladders, but in the spirit of the SUG the BSU examines all marginal conditions of a marine accident in order to improve industrial safety for staff on board sea-going vessels. Safety culture on board is to be improved in particular by pointing out factors that promote accidents and publishing safety recommendations to prevent future incidents causing damage or danger.

The focal areas of accidents broken down by sea areas were found in the Baltic Sea, the Kiel Canal and the Elbe in 2005.

5.6 MCI completed with an investigation report in 2005

Published.	Report No.	Date of incid.	Name of vessel	Type of vessel	Nationality	Location of incident	Type of incident
01.02.05	145/04	20.06.04	Alena	Sailboat	Germany	South of Gedser	Personal accident
15.02.05	155/04	28.06.04	Pudong Senator / ENA 2	Container vessel / Tanker barge	Germany / Germany	Elbe	Collision
21.02.05	138/04	11.06.04	Grietje BOS / Gretje GRE 08	Fishing cutter / Fishing cutter	Niederlande / Germany	off Borkum	Personal accident
01.03.05	202/04	02.08.04	Harmonie	Fishing cutter	Germany	North of Baltrum	Personal accident
01.05.05	240/04	29.08.05	Madame Pele	Sailboat	Germany	Borkum	Personal accident
15.05.05	134/04	07.06.04	Hamburg Express	Container vessel	Germany	Bay of Biscay	Personal accident
01.06.05	181/04	11.07.04	CMA CGM Verlaine	Container vessel	Germany	Port of Malta	Personal accident
15.07.05	343/04	15.11.04	Rithi Bhum / Eastern Challenger	Container vessel / General cargo ship	Germany / Südkorea	Taiwan Straits	Collision
15.08.05	371/04	07.12.04	MSC Ilona / Hyundai Advance	Container vessel / Container vessel	Germany / Panama	Hongkong	Collision
15.09.05	381/04	381/04	Julius	Tug	Germany	Brunsbüttel	Personal accident
01.10.05	203/04	29.06.04	Allmin	Sailboat	Germany	Rügen	Personal accident

5.7 MCI completed with an internal report in 2005 or published by the lead investigation state or the BSU in 2006

Published	Report No.	Date of incident	Name of vessel	Type of vessel	Nationality	Location of incident	Type of incident
01.03.06 Norway	18/04	19.01.04	Rocknes	Bulk Carrier	Antigua & Barbuda	Bergen	Capsizing
01.02.06	45/04	01.03.04	Cosco Hamburg / P&O Nedlloyd Finland	Container vessel / Container vessel	P.R. China / Germany	Lower Elbe	Collision
Internal report	217/04	09.08.04	Galateia	Sailboat	Germany	Skagen	Personal accident
Internal report	2/05	02.01.05	Global Island	Cargo Ship	Portugal	Somalia	Personal accident
01.05.06	39/05	29.01.05	Stolt Fulmar	Motor Tanker	Cayman Isles	Hamburg	Collision
MAIB + BSU	126/05	08.04.05	Washington Senator / Lykes Voyager	Container vessel / Container vessel	Germany / UK	Taiwan Straits	Collision
15.02.06	146/05	27.04.05	Werder Bremen	Container vessel	Germany	Santa Cruz/ Teneriffe	Personal accident
01.04.06	149/05	01.05.05	Ina 2	Sailboat	Germany	North of Wustrow	Personal accident
01.06.06	166/05	05.05.05	Sinfonie Sylt	Sailboat	Germany	Flensburger Fjord	Personal accident
15.03.06	191/05	28.05.05	Andrea	Sailboat	Germany	Sweden	Personal accident
Internal report	264/05	17.07.05	Amsteldijk	Cargo Ship	Cyprus	Kiel Canal	Collision
MAIB	269/05	19.07.05	Savannah Express	Container vessel	Germany	Southampton	Collision
15.04.06	306/05	09.08.05	Seehund I	Motor boat	Germany	Süderpiep	Capsizing
Internal report	401/05	27.09.05	Julia	Leisure craft	Germany	Schobüller Bay	Foundering
MAIB	423/05	11.10.05	Lerrix	Container vessel	UK	Outside Kadetrinne	Grounding
Prelim. investiga- tion, passed on to flag state	494/05	05.12.05	Liliana Dimitrova	Bulk carrier	Bulgaria	Brake	Explosion

5.8 Investigation reports in progress

Planned publication.	Report	Date of incident	Name of vessel	Type of vessel	Nationality	Location of incident	Type of incident
	319/03	26.10.03	London Express	Container vessel	Germany	Atlantic	Personal accident
	175/04	09.07.04	Baltic Champion	Chemical Tanker	Isle of Man	Neue Weser Roads	Personal accident
	176/05	24.05.05	Libra Rio Grande	Container vessel	Germany	Port of New Orleans	Engine room fire
	187/05	30.05.05	Punjab Senator	Container vessel	Germany	Sri Lanka	Fire in container
	288/05	31.07.05	De Hoop	Traditional Vessel	Germany	Travemünde	Capsizing
	293/05	03.08.05	Atlantic	Traditional Vessel	Germany	Peenestrom	Stranding
	327/05	13.08.05	Unikum	Pirate Vessel	Germany	Port of Rostock	Personal accident
	332/05	19.08.05	Halifax	Tanker	Malta	Elbe, Buoy. 85a	Bottom contact
	347/05	25.07.05	Aliado / Kattegat	Sailboat / Sailboat	Germany / Germany	Rudkøbing/ Denmark	Collision
	455/05	20.10.05	Doria	Cargo Ship	Germany	Angola	Bottom contact
	465/05	13.11.05	Ilka	Cargo Ship	Germany	Scottish watersr	Bottom contact
	468/05	13.11.05	Finnsailor / General Grot-Rowecki	Ro-Ro-Cargo / Bulkcarrier	Sweden / Malta	Kadetrinne	Collision
	476/05	18.11.05	Comet / Sven	Cargo Ship Cargo Ship	Germany / Germany	Port of Hamburg	Collision
	491/05	07.09.05	Art	Motor boat	Germany	Spanish coast	Running aground
	495/05	05.12.05	Maritime Lady / Arctic Ocean / Sunny Blossom	Container vessel / Cargo Ship / Chemicals tanker	Gibraltar / UK / Bahamas	Brunsbüttel	Collision

5.9 National cooperation - ship's accident database

At present there are different ways of further processing of the data surveyed from the vessel accident reporting sheets within the scope of the German Federal Waterways and Shipping Administration. There are no informative statistics for the field of maritime **and** inland shipping that are comparable on a national basis.

To simplify the analyses that are today partly conducted by hand and to introduce a standardised accident analysis, a uniform national vessel accident database is to be developed and introduced for maritime and inland shipping with a central data stock.

For this reason the Federal Ministry of Transport, Building and Housing² initiated a project group to design a vessel accident reporting sheet and build up a standard national vessel accident database (SUDaBa). Alongside various members from the maritime and inland shipping areas, the BSU has been collaborating in this project group from the start.

The aim is to design, develop and provide a functioning, holistic ship's accident database for the Federal Ministry of Transport, Building and Urban Development, the German Federal Waterways and Shipping Administration the waterway police of the German states.

Due to the partly widely varying work methods, procedures and technical conditions in inland and maritime shipping, the context for the project is very varied. By contrast with inland shipping, accident recording and processing in maritime shipping is statutorily and organisationally regulated by the Maritime Safety Investigation Act (SUG) and the work of the BSU.

The future vessel accident database is to be designed with consideration given to the organisational work procedures within the water police organisations of the German Federal States and the national German Federal Waterways and Shipping Administration (WSV), as well as the necessary IT resources. The surveying, recording and analyses of the data need to be regulated by law. Existing IT conceptions of the Federal Waterways and Shipping Administration and the Waterways Police are to be updated where required. A central solution is to be developed that will also ensure that data can be taken over from existing ship's accident databases, e.g. the BSU database too.

² with effect of 22.11.2005 Federal Ministry of Transport, Building and Urban Development

5.10 International cooperation

Marine casualty investigations

The exchange of information relevant for the respective accident and cooperation with other states generally functions well. Cooperation is regulated as follows in accordance with IMO Resolution A.849(20): (Code for the Investigation of Marine Casualties and Incidents)

- notify the flag states, other states with a substantial interest in an investigation and the IMO,
- agree on the Lead Investigation State and the strategy of joint investigation and co-ordination of the investigations by the Lead Investigation State
- draw up a joint investigation report,
- attach deviating positions as an annex if these have not been taken into account

EMSA

The European Maritime Safety Agency (EMSA) set up by the European Community as a consequence of the Erika accident integrates the BSU in its activities. The EMSA is there to advise the EU Member States in the field of marine safety in the broadest sense and also to coordinate in the field of marine accident investigation.

An interactive "European Marine Casualty Information Platform" (EMCIP) has already been projected, into which a database is to be integrated.

In addition a Directive is to be issued at European level to stipulate the principles for investigating accidents in maritime traffic according to which the IMO Resolution A.849(20) is to be binding for all Member States.

MAIIF - EMAIF

The BSU has been operating together with the Marine Accident Investigators International Forum (MAIIF) since this was set up in the year 2002 in association with other marine casualty investigating authorities operating worldwide.

At the constituting meeting in Helsinki in March 2005 the European states with participation by the BSU formed a sub-committee (EMAIF).

6 Annual statistics 2005

In the year 2006 altogether 11 investigation reports were published, four investigations were concluded with an internal report, and the BSU collaborated in two investigation reports published internationally. In further cases the BSU provided assistance for the investigations of various flag states.

During the period 1 January to 31 December 2005 altogether 548 incidents causing damage or danger were reported, registered and processed. This represents an increase of over 37 % by comparison with the preceding year. In the same reporting period the number of accidents under the IMO-Code rose from 116 to 122, representing an increase of only 5 %.

Consequently the rise in incidents reported is due primarily to an increase in the number of petty incidents reported that now account for 65 % (2004 just under 52 %) (see also page 25). The increase in the number of incidents reported shows that vessel commands and operators are increasingly fulfilling their obligation to report incidents causing damage or danger in accordance with § 7 of the Regulation on securing maritime shipping.

In the case of the 122 accidents under the IMO-Code³ it is notable that the number of Very Serious Marine Casualties (VSC) has risen from 13 to 16, representing a plus of 23 %, and the number of Serious Marine Casualties (SC) from 17 to 25, corresponding to a plus of 47 %. The number of VSCs due to foundering increased from 2 to 4, two merchant vessels and two leisure craft. With the SCs there was an increase in the number of vessel/vessel collisions and bottom contact/stranding from 3 to 7 and 2 to 7 respectively. These areas each concerned six merchant vessels and one leisure craft. In the breakdown by sea area there was an increase in VSCs in the Baltic Sea and of SCs outside German territorial waters (see also pages 27 and 28).

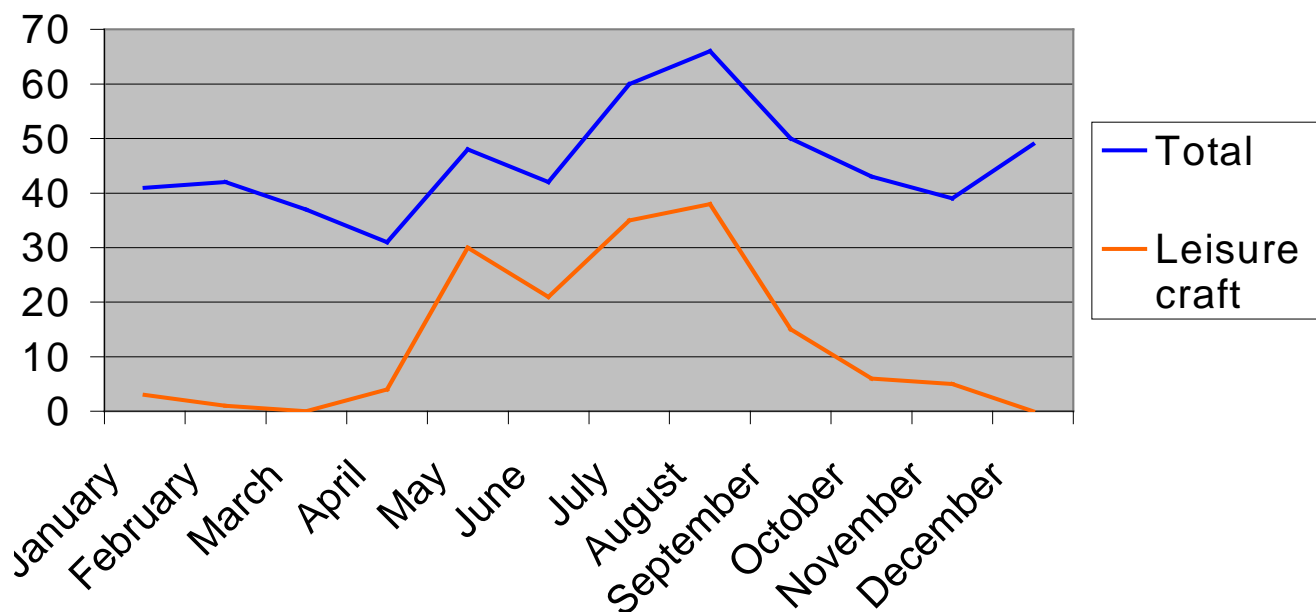
Altogether 17 (21) fatalities and 53 (66) injured persons were reported to the BSU. The figures in brackets are the figures for the preceding year. A downward trend is evident (see also pages 29 to 33).

Of the 548 marine casualties reported, 158 involved leisure craft. The number of incidents with leisure craft rose from 18 % to a good 24 % (see also page 45).

It is too early to try to derive informative trends from the annual BSU figures for the years 2003 to 2005 already. Further verification is needed from the coming years.

³ see Chapt. 5.1

Monthly distribution of the accident notifications

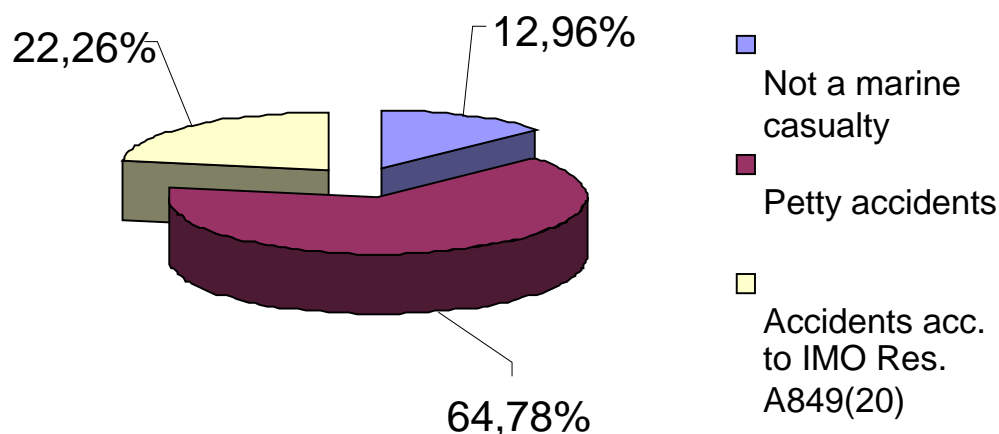


The distribution of reports of accidents by month shows that reports from leisure craft account for the majority in the summer months June, July and August. In June there were 21 reports from leisure craft and also 21 from merchant shipping. In July there were already 35 reports from leisure craft and 25 from merchant shipping, and in August 38 reports from leisure craft and 28 from merchant shipping.

Incidents reported and investigated

	2005		(2004)	
	548		398	
Accident classification of all accidents				
Not a marine casualty	71	12,96%	76	19,10%
Petty accidents	355	64,78%	206	51,76%
Accidents acc. to IMO-CodeA.849(20)	122	22,26%	116	29,15%

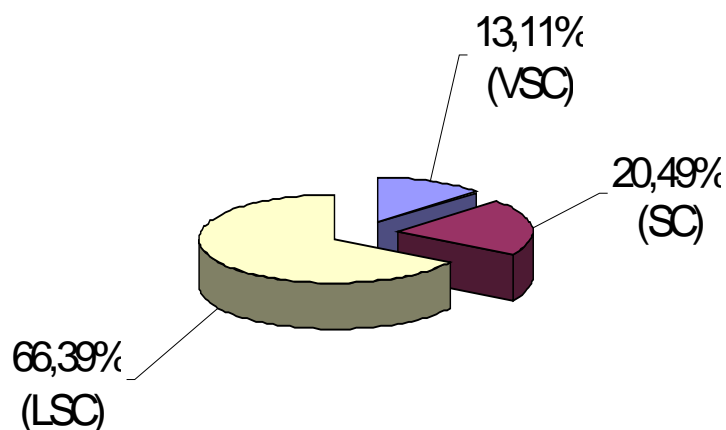
Accident classification of all incidents 2005



6.1 Accident classification by IMO Res. A.849(20)

	2005 :		(2004 :)	
	122		116	
Very Serious marine Casualty (VSC)	16	13,11%	13	11,21%
Serious marine Casualty (SC)	25	20,49%	17	14,66%
Less Serious marine Casualty (LSC)	81	66,39%	86	74,14%

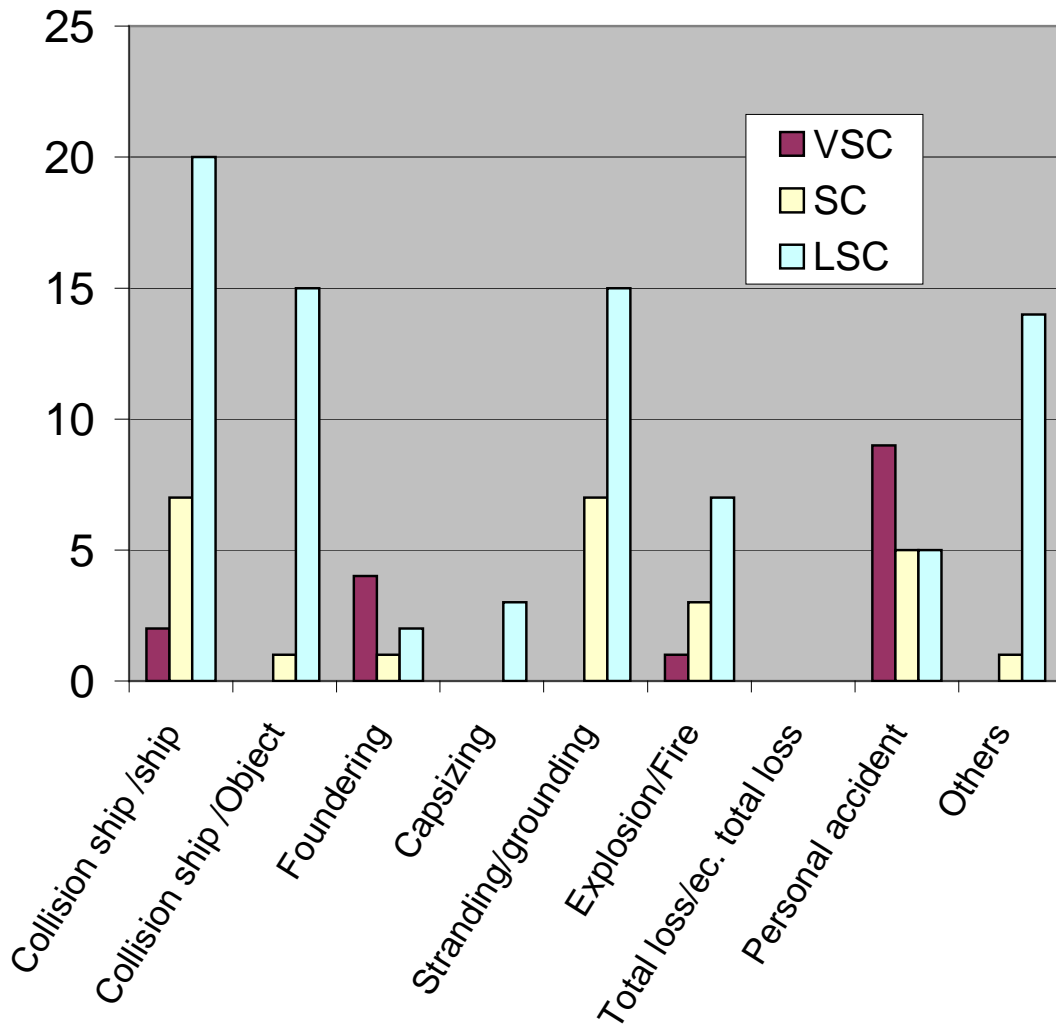
Accident classification acc. to IMO Res.
A.849(20)



The very serious, serious and less serious marine casualties according to the IMO-Code A.849(20) have declined on a pro-rated basis by comparison with total reports, although a steady increase in absolute figures over the last three years is evident. In 2003 altogether 106 marine casualties under the IMO-Code were reported, in 2004 the number was 116 and in 2005 it was 122.

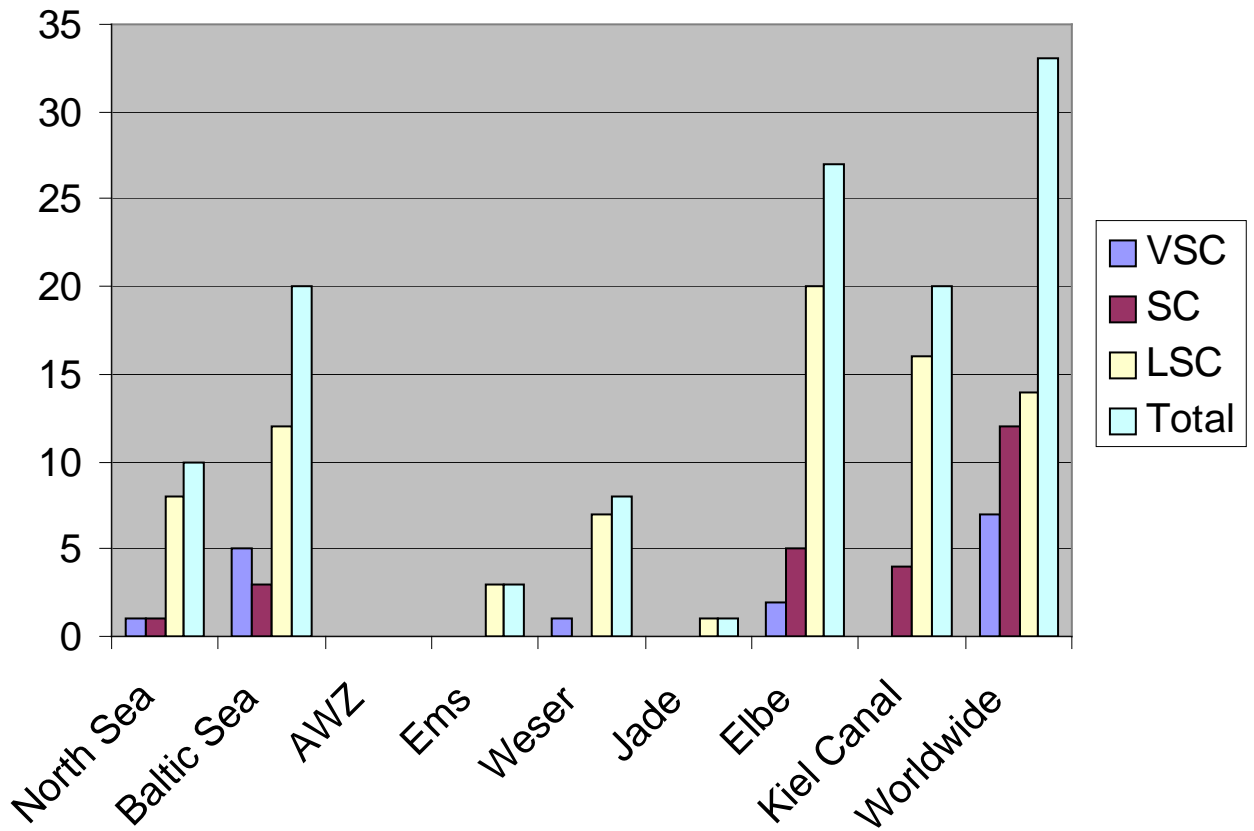
Frequency of types of accident acc. to IMO Res. A.849(20)

	VSC	SC	LSC
	2005 (2004)	2005 (2004)	2005 (2004)
Collision ship /ship	2 (2)	7 (3)	20 (19)
Collision ship /Object	0 (0)	1 (3)	15 (29)
Foundering	4 (2)	1 (2)	2 (0)
Capsizing	0 (1)	0 (0)	3 (5)
Stranding/grounding	0 (0)	7 (2)	15 (9)
Explosion/Fire	1 (0)	3 (2)	7 (2)
Total loss/ec. total loss	0 (0)	0 (0)	0 (0)
Personal accident	9 (8)	5 (5)	5 (11)
Others	0 (0)	1 (0)	14 (11)
Total	16	25	81



Distribution of incidents acc. to IMO Res. A.849(20)
Distribution of incidents by sea area

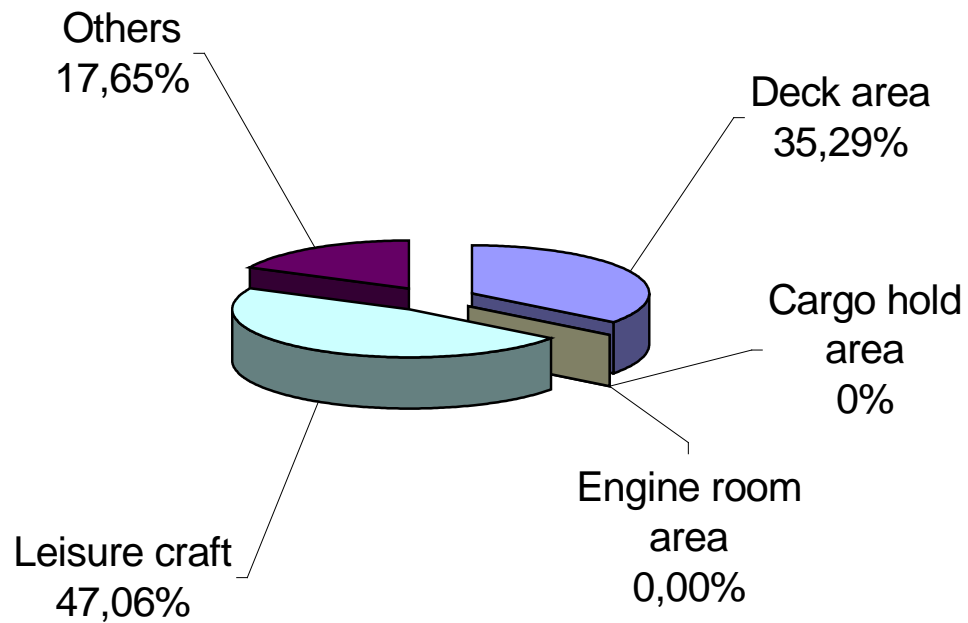
	VSC	SC	LSC	Total	2004
North Sea	1	1	8	10	(20)
Baltic Sea	5	3	12	20	(21)
AWZ	0	0	0	0	(0)
Ems	0	0	3	3	(2)
Weser	1	0	7	8	(19)
Jade	0	0	1	1	(2)
Elbe	2	5	20	27	(20)
Kiel Canal	0	4	16	20	(16)
Worldwide	7	12	14	33	(16)
Total	16	25	81	122	(116)



Fatalities 2005 broken down by location

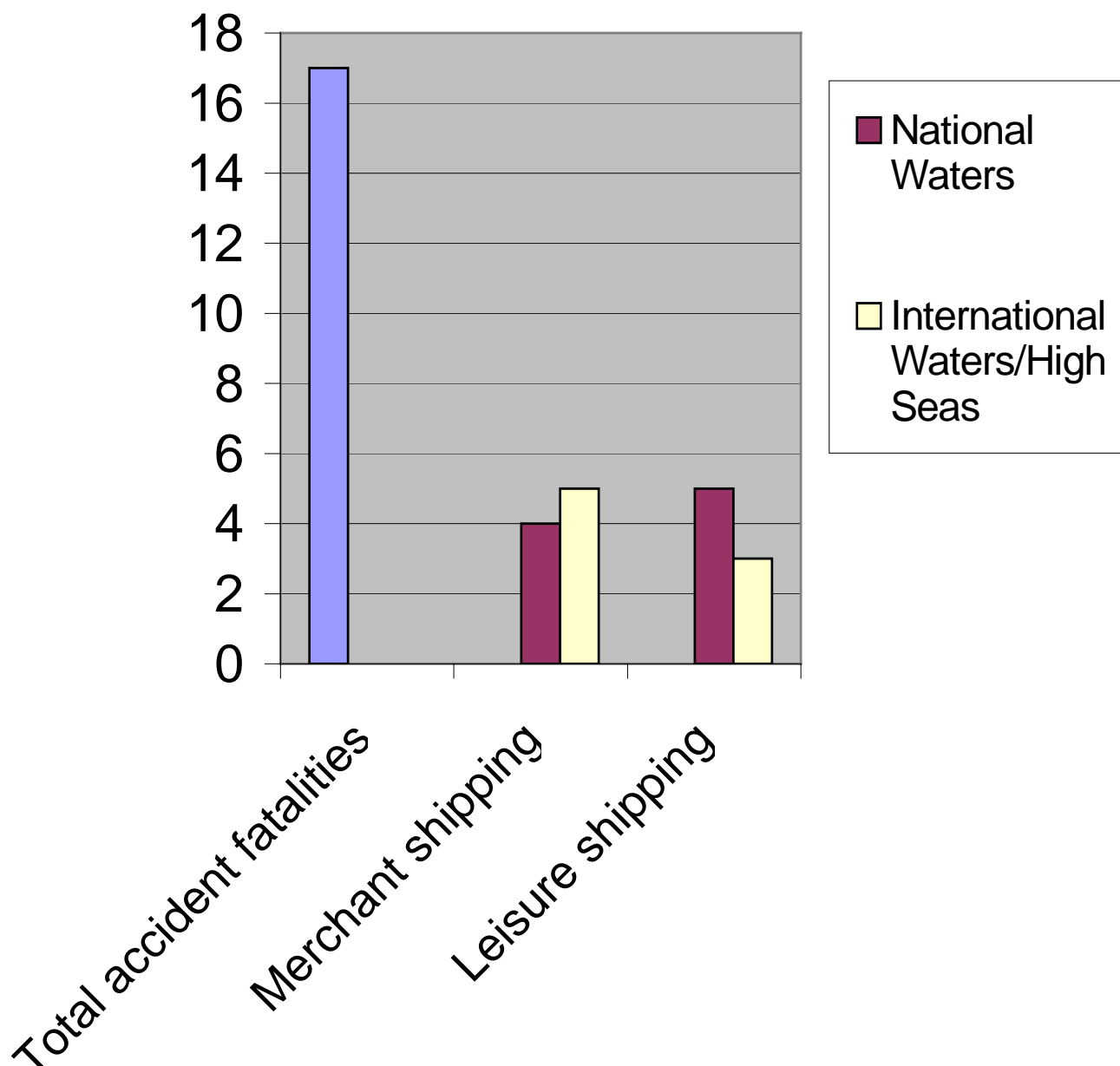
			2005		2004	2003
Total			17	Persons	21	12
1	Deck area	35,29%	6	persons	2	1
2	Cargo hold area	0,00%	.-	persons	1	2
3	Engine room area	0,00%	.-	persons	2	2
4	Leisure craft	47,06%	8	persons	13	6
5	Others	17,65%	3	Personen	3	1

Fatalities 2005 broken down by location



Number of fatalities broken down by water areas

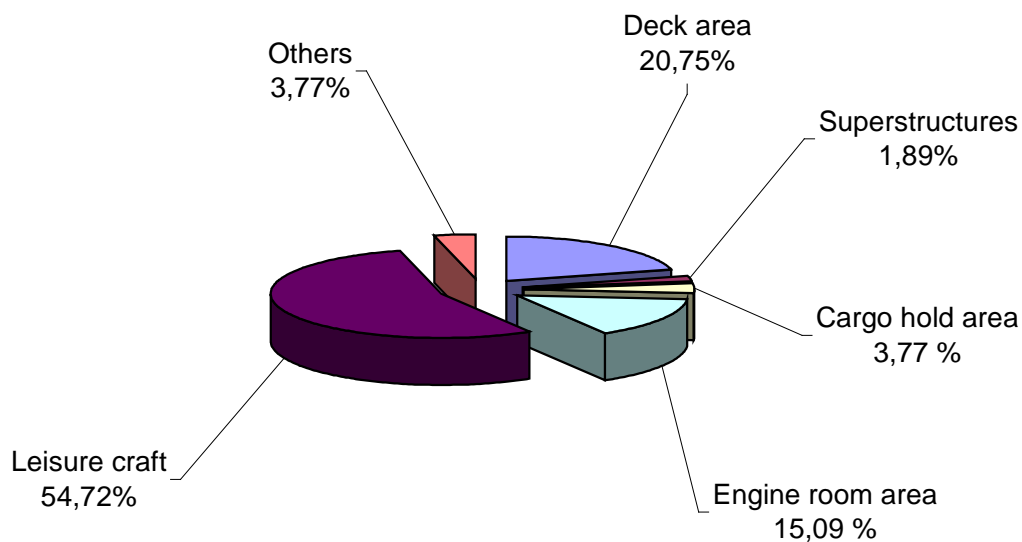
		National Waters		International Waters/High Seas	
	() = Preceding year				
Total accident fatalities	17 (21)				
Merchant shipping		4	(6)	5	(2)
Leisure shipping		5	(11)	3	(2)



Injured persons 2005 broken down by location

		2005		2004	2003
Total			53 Personen	66	53
1	Deck area	20,75%	11 Personen	21	14
2	Superstructures	1,89%	1 Personen	8	5
3	Cargo hold area	3,77%	2 Personen	4	2
4	Engine room area	15,09%	8 Personen	5	1
5	Leisure craft	54,72%	29 Personen	15	12
6	Others	3,77%	2 Personen	13	19

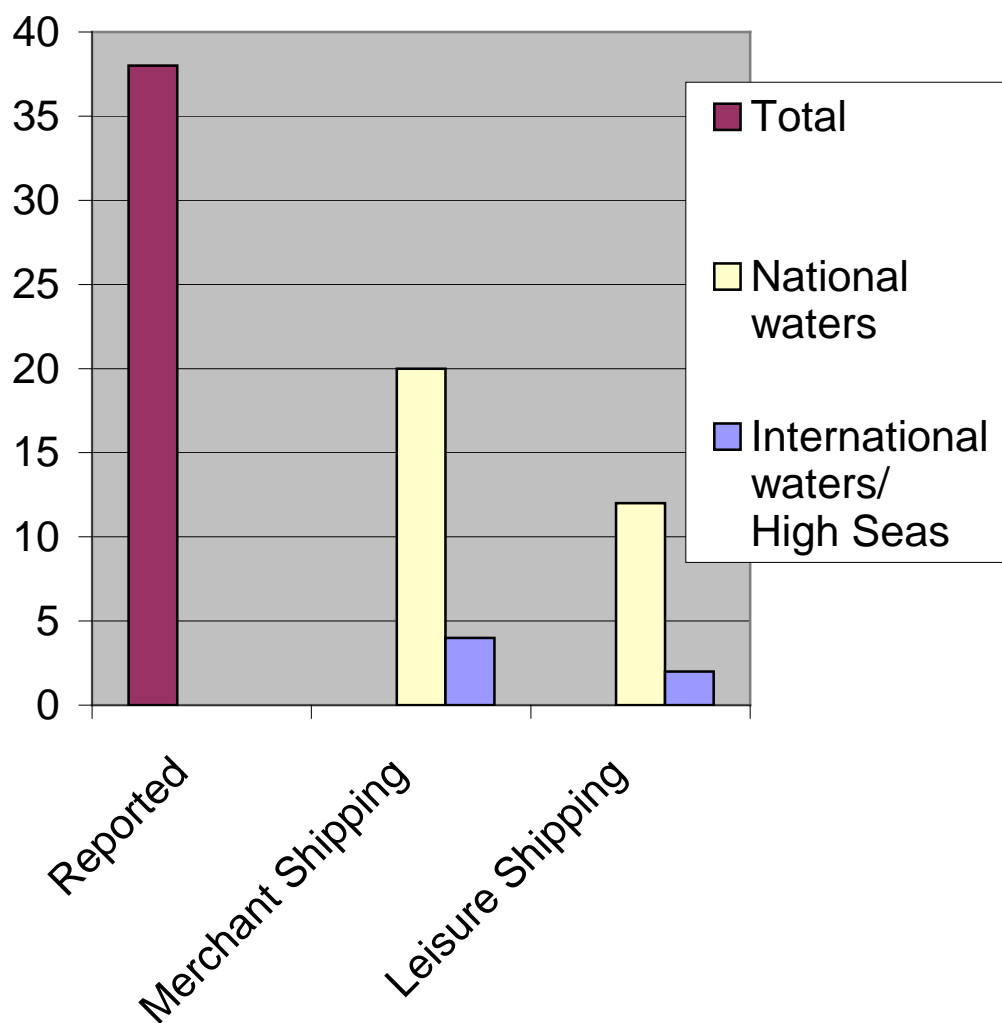
Injured persons 2005 broken down by location



Accidents reported with one ore more injured persons

()= preceding year

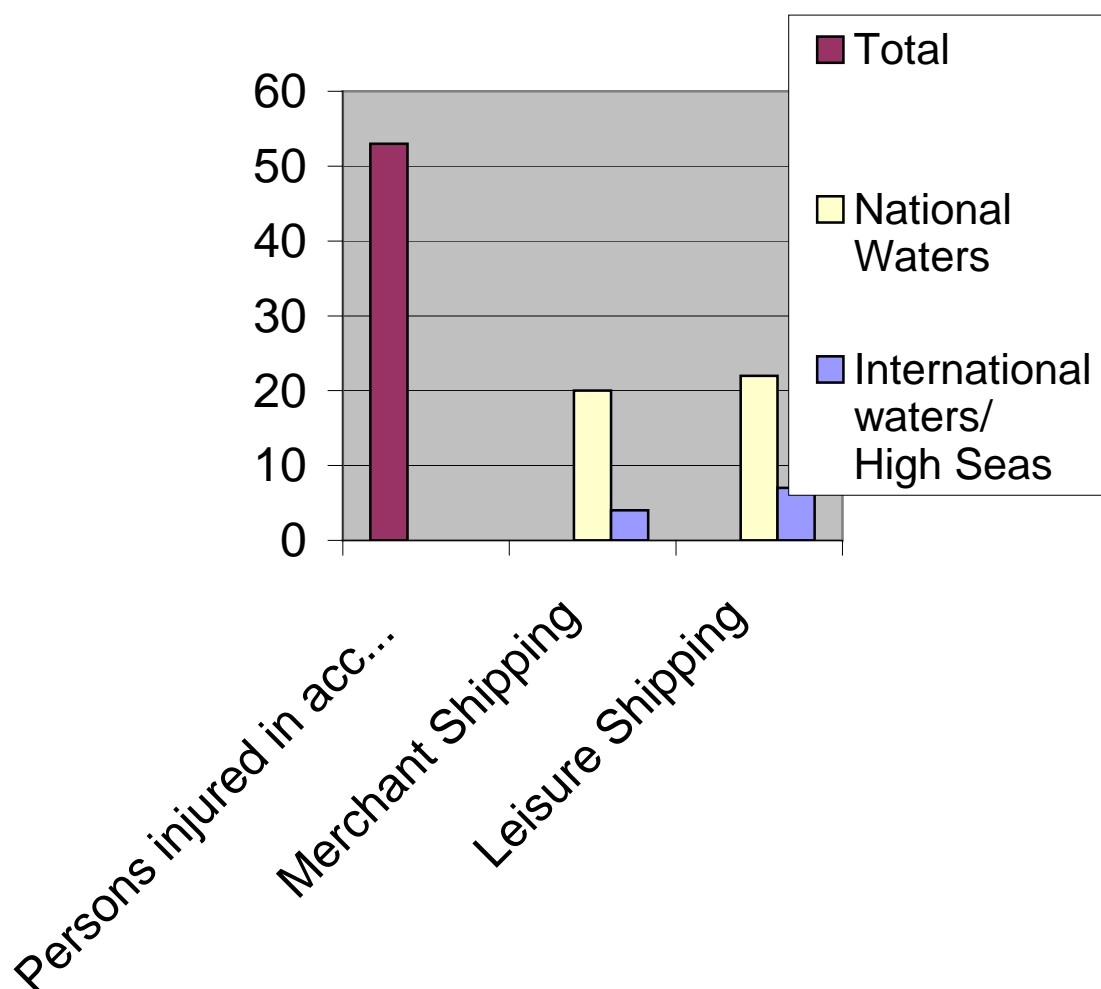
	Total	National waters		International waters/ High Seas	
Reported	38 (44)				
Merchant Shipping		20	(27)	4	(2)
Leisure Shipping		12	(15)	2	(0)



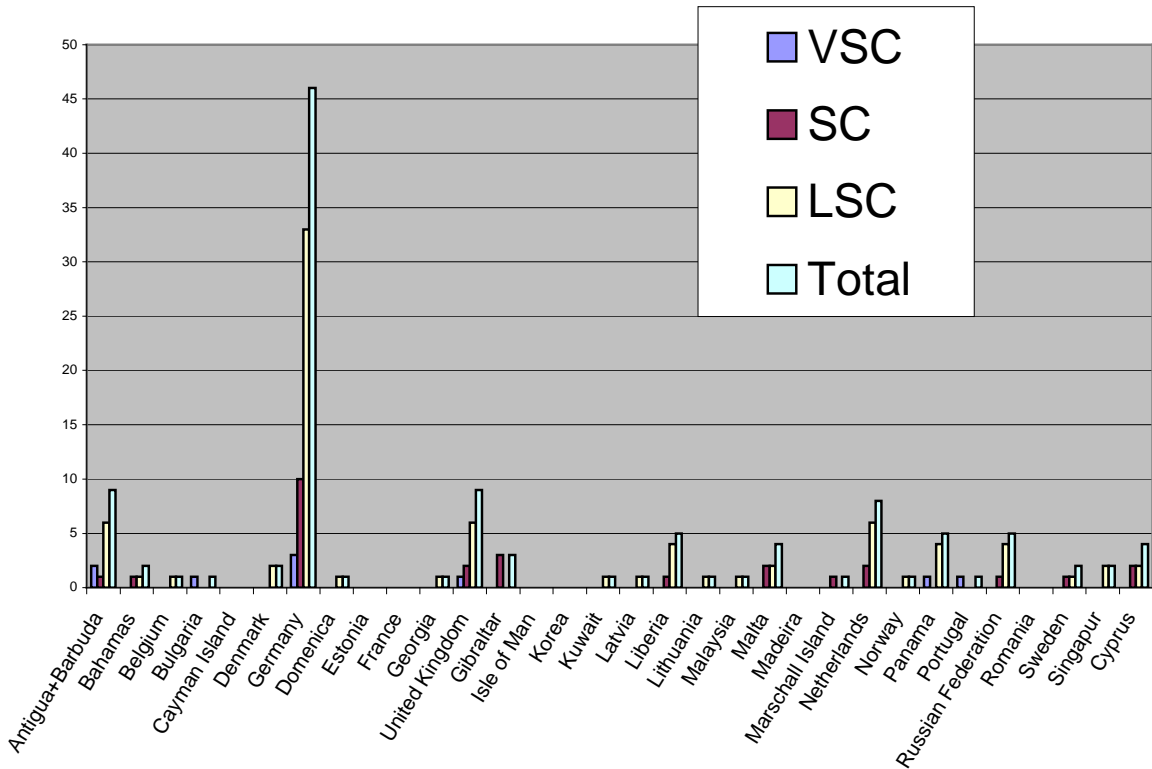
Injured persons reported in accidents

	Total	National Waters	International waters/ High Seas	
Persons injured in accidents	53 (66)			
Merchant Shipping		20	(45)	4 (3)
Leisure Shipping		22	(18)	7 (0)

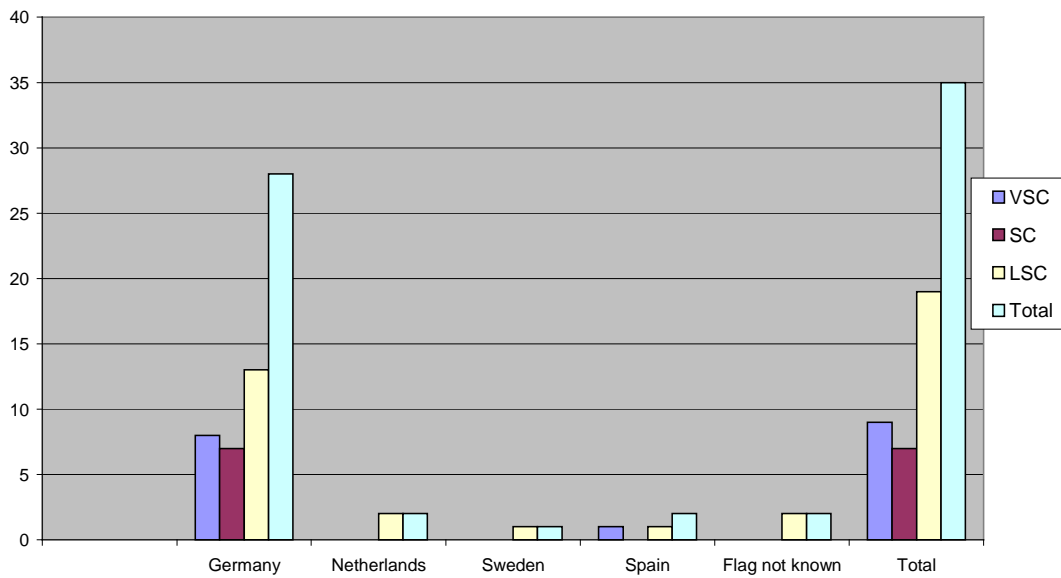
()= Preceding year



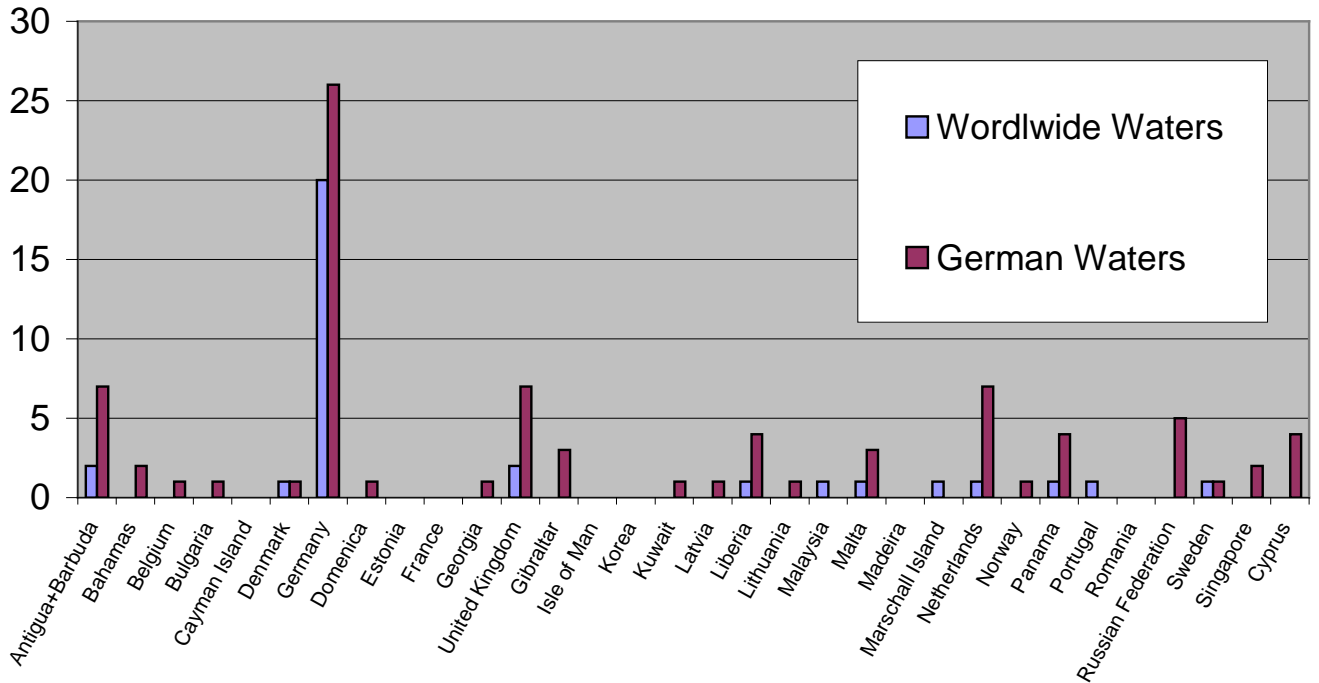
Flags of Merchant Shipping involved in the accidents



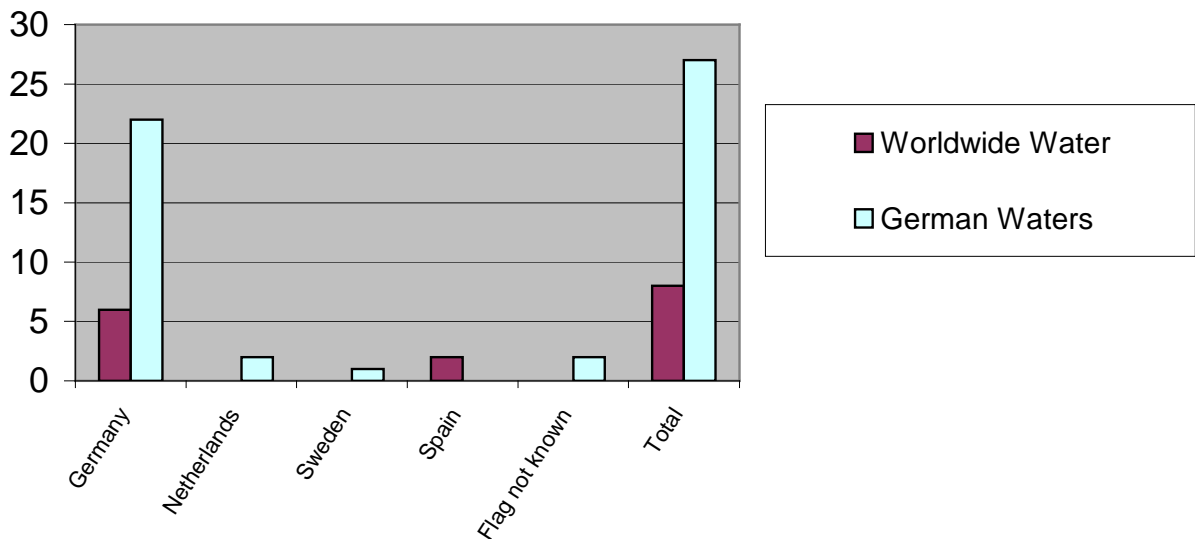
Flags of leisure shipping involved in accidents

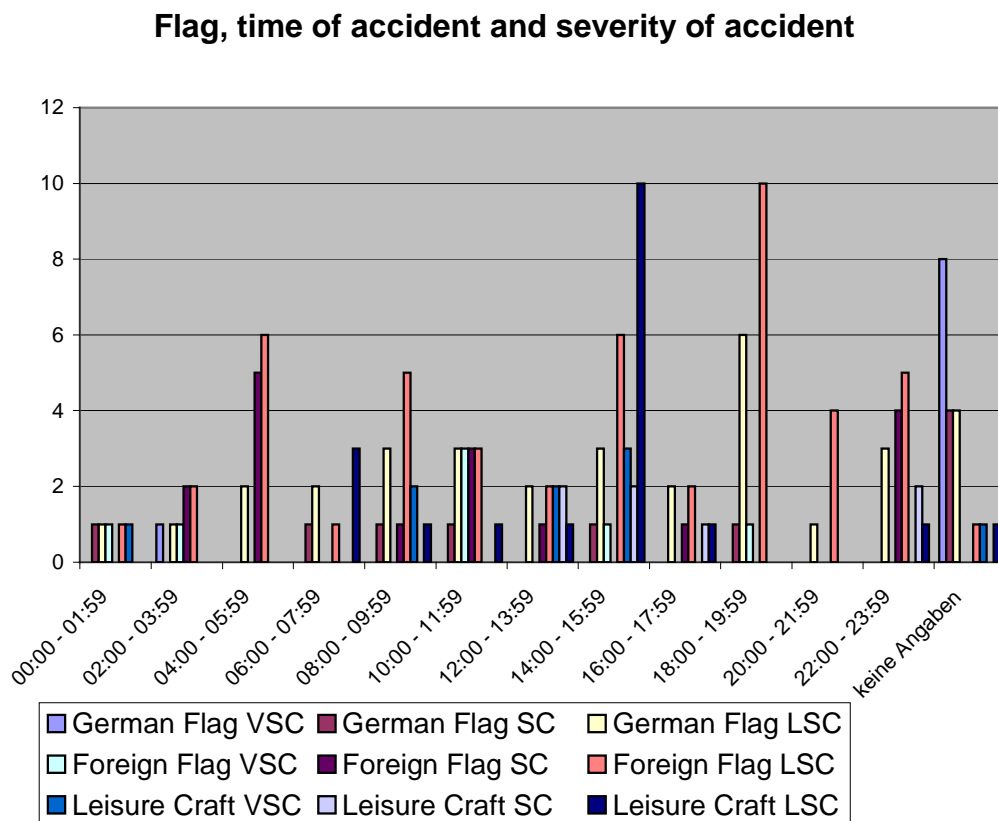
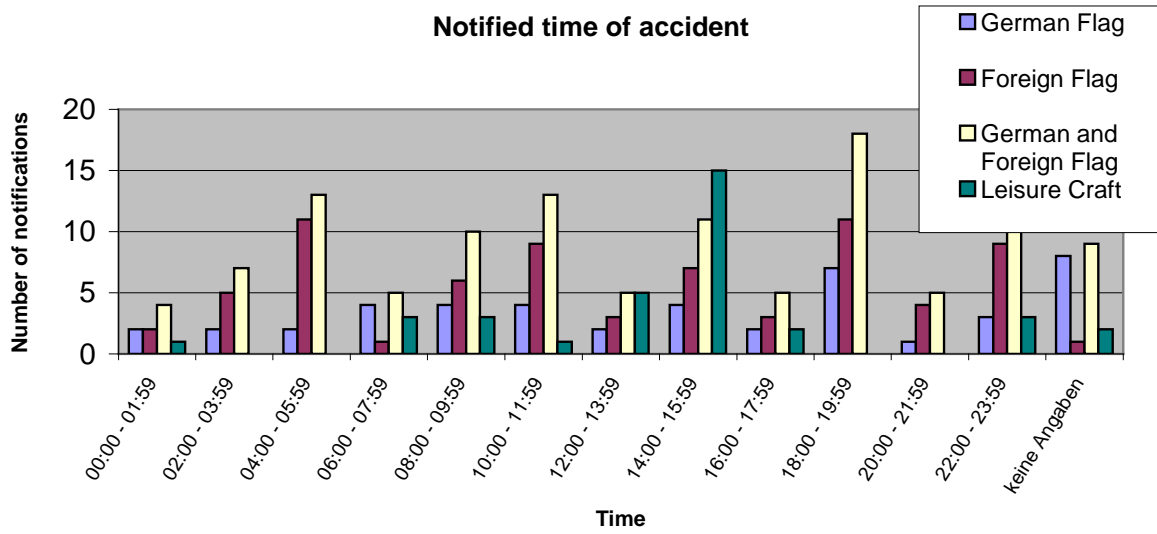


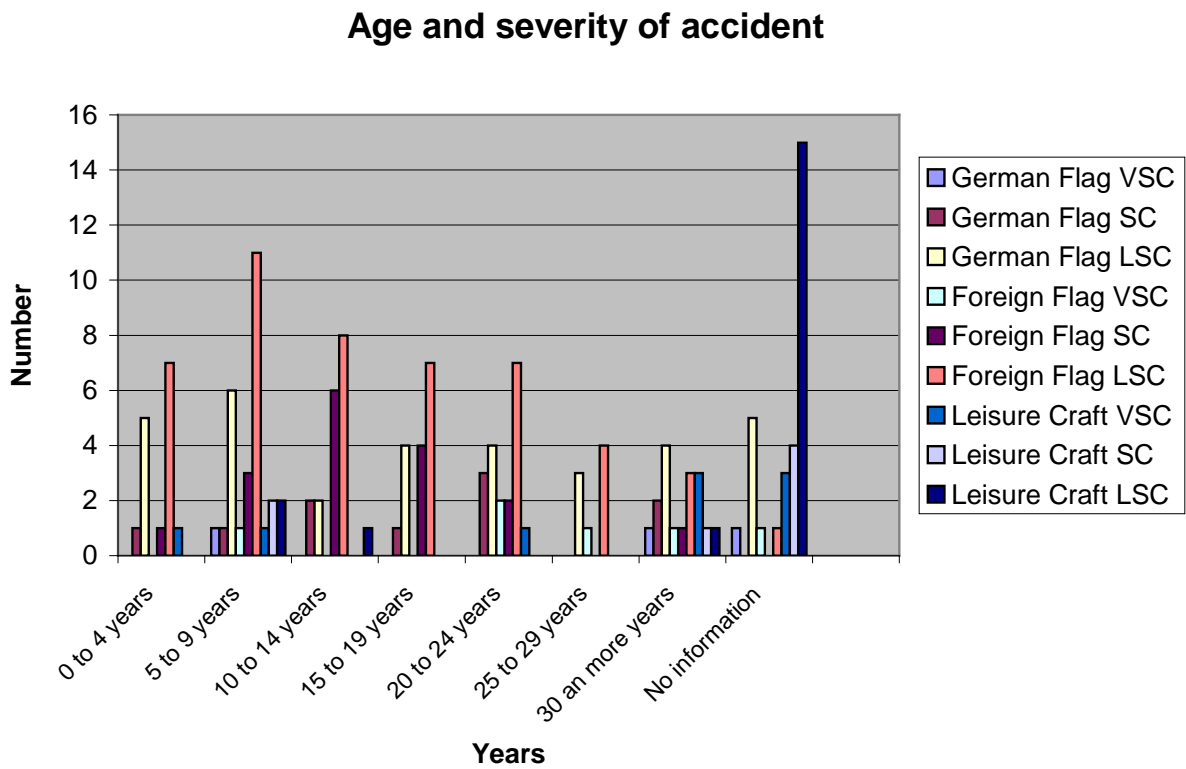
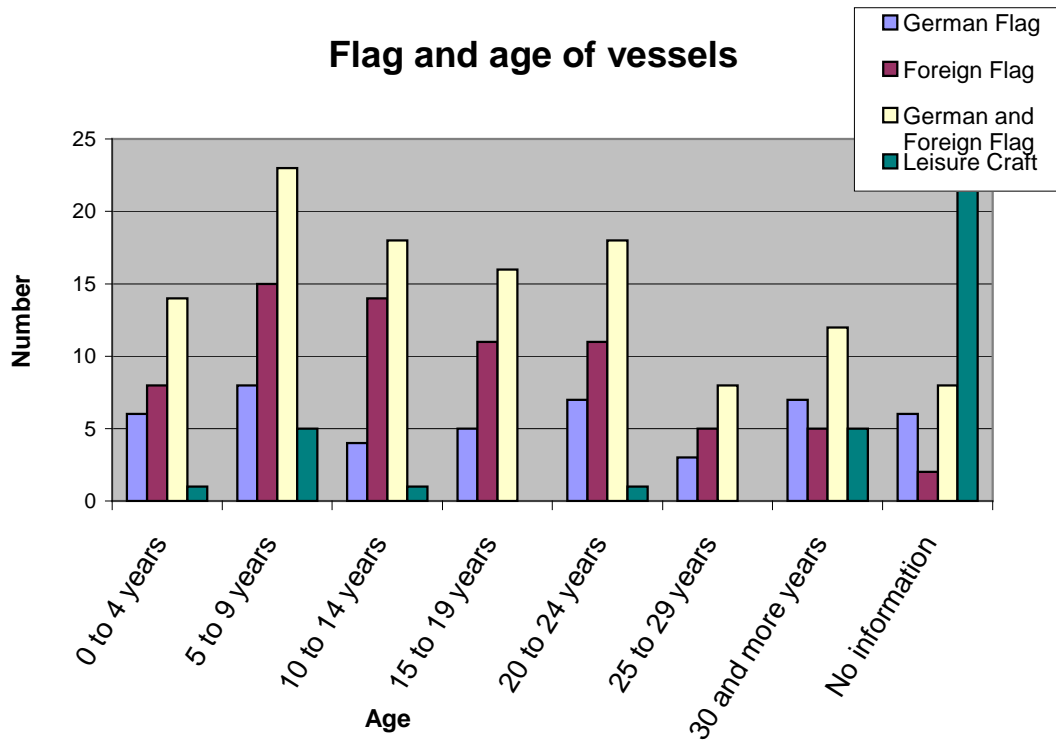
Flag and sea area of merchant shipping involved in accidents



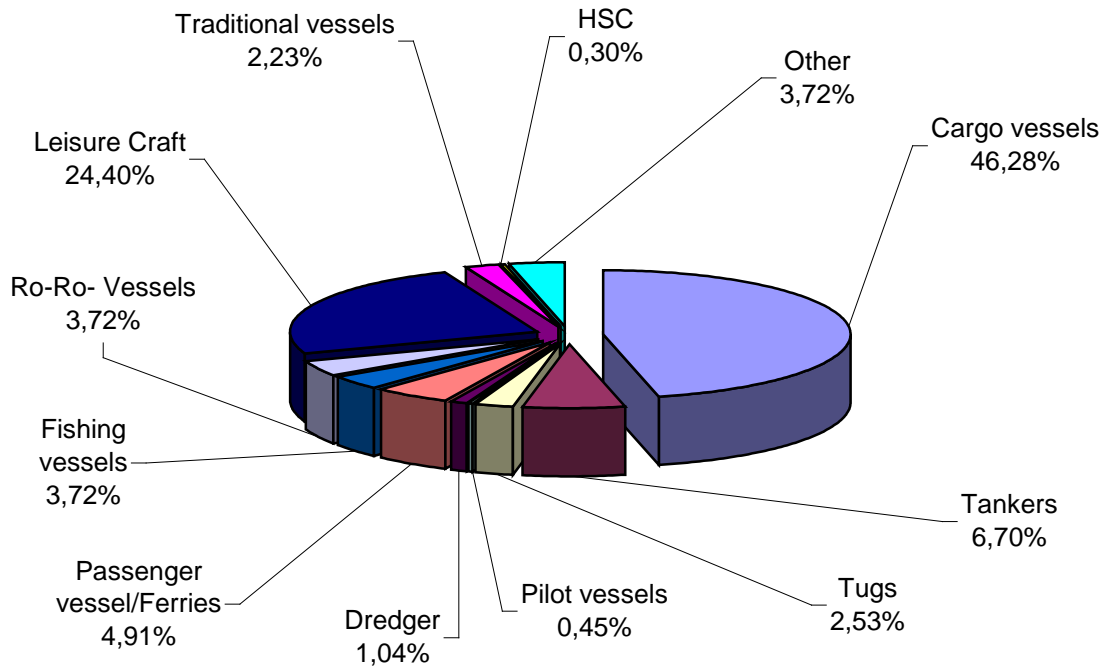
Flag and sea area of leisure shipping involved in accidents



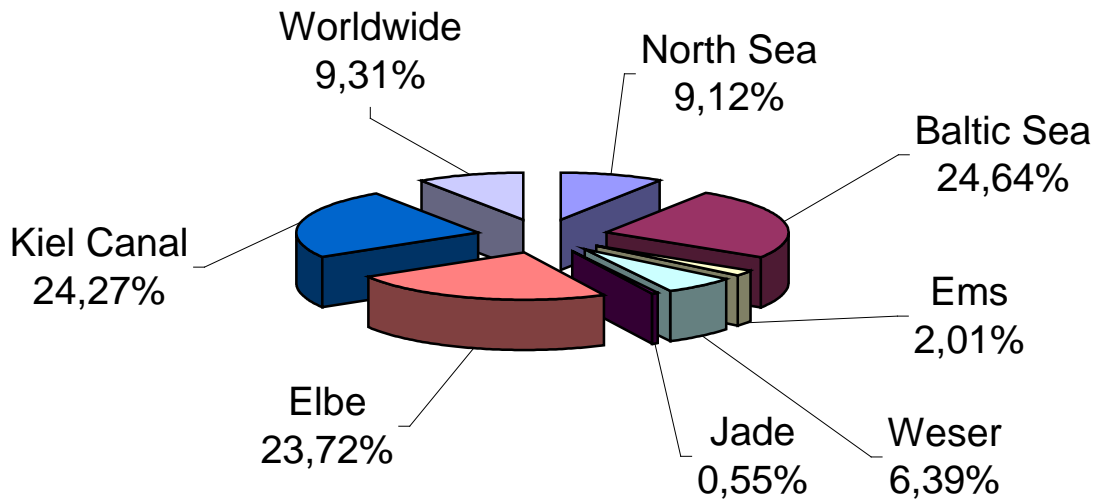




Incidents broken down by vessel types



Incidents broken down by sea areas



Breakdown of accidents acc. to IMO Res. A.849(20)
Flags of Merchant Shipping involved in accidents

	SSU	SU	WSU	Gesamt 2005	(2004)
Antigua+Barbuda	2	1	6	9	9
Bahamas	0	1	1	2	2
Belgium	0	0	1	1	0
Bulgaria	1	0	0	1	0
Cayman Island	0	0	0	0	1
Denmark	0	0	2	2	2
Germany	3	10	33	46	41
Domenica	0	0	1	1	0
Estonia	0	0	0	0	1
France	0	0	0	0	1
Georgia	0	0	1	1	0
United Kingdom	1	2	6	9	1
Gibraltar	0	3	0	3	4
Isle of Man	0	0	0	0	2
Korea	0	0	0	0	1
Kuwait	0	0	1	1	0
Latvia	0	0	1	1	0
Liberia	0	1	4	5	4
Lithuania	0	0	1	1	1
Malaysia	0	0	1	1	0
Malta	0	2	2	4	4
Madeira	0	0	0	0	1
Marschall Island	0	1	0	1	1
Netherlands	0	2	6	8	5
Norwegen	0	0	1	1	3
Panama	1	0	4	5	3
Portugal	1	0	0	1	0
Russia	0	1	4	5	0
Romania	0	0	0	0	1
Sweden	0	1	1	2	1
Singapore	0	0	2	2	0
Cyprus	0	2	2	4	3
Total	9	27	81	117	92

Breakdown of the accidents acc. To IMO Res. A849(20)
Flag of Merchant Shipping involved in accidents

	VSC	SC	LSC	Total in 2005	(2004)
Germany	8	7	13	28	22
Netherlands	0	0	2	2	2
Sweden	0	0	1	1	0
Spain	1	0	1	2	0
Flag not known	0	0	2	2	0
Total	9	7	19	35	24

Breakdown of accidents acc. to IMO Res. A.849(20)

Flag and sea area of Merchant Shipping involved in accidents

	Worldwide Waters		German Waters	
	2005	2004	2005	(2004)
Antigua+Barbuda	2	1	7	8
Bahamas	0	1	2	1
Belgien	0	0	1	0
Bulgaria	0	0	1	0
Cayman Island	0	0	0	1
Denmark	1	0	1	2
Germany	20	11	26	30
Domenica	0	0	1	0
Estonia	0	0	0	1
France	0	0	0	1
Georgia	0	0	1	0
United Kingdom	2	0	7	1
Gibraltar	0	0	3	4
Isle of Man	0	0	0	2
Korea	0	0	0	1
Kuwait	0	0	1	0
Latvia	0	0	1	0
Liberia	1	0	4	4
Lithuania	0	0	1	1
Malaysia	1	0	0	0
Malta	1	0	3	4
Madeira	0	0	0	1
Marschall Island	1	0	0	1
Netherlands	1	0	7	5
Norway	0	0	1	3
Panama	1	0	4	3
Portugal	1	0	0	0
Rumänien	0	0	0	1
Russia	0	0	5	0
Sweden	1	0	1	1
Singapore	0	0	2	0
Cyprus	0	0	4	3
Total	33	13	84	79

Flag and sea area of leisure shipping involved in accidents

	Worldwide Waters		German Waters	
	in 2005	in 2004	in 2005	in 2004
Germany	6	3	22	19
Netherlands	0	0	2	2
Sweden	0	0	1	0
Spain	2	0	0	0
Flag not known	0	0	2	0
Total	8	3	27	21

Breakdown of accidents acc. to IMO Res. A.849(20)

Flags and time of accidents of vessels involved in accidents

		German Flag		Foreign Flag		German and Foreign Flag		Leisure Craft	
		(.)	(.) 2004	(.)	(.)	(.)	(.)	(.)	(.)
1	00:00 - 01:59	2	(3)	2	(3)	4	(6)	1	(2)
2	02:00 - 03:59	2	(2)	5	(4)	7	(6)	0	(0)
3	04:00 - 05:59	2	(1)	11	(3)	13	(4)	0	(0)
4	06:00 - 07:59	4	(0)	1	(1)	5	(1)	3	(0)
5	08:00 - 09:59	4	(3)	6	(5)	10	(8)	3	(0)
6	10:00 - 11:59	4	(1)	9	(9)	13	(10)	1	(2)
7	12:00 - 13:59	2	(4)	3	(4)	5	(8)	5	(3)
8	14:00 - 15:59	4	(7)	7	(6)	11	(13)	15	(4)
9	16:00 - 17:59	2	(4)	3	(4)	5	(8)	2	(4)
10	18:00 - 19:59	7	(6)	11	(3)	18	(9)	0	(2)
11	20:00 - 21:59	1	(2)	4	(1)	5	(3)	0	(1)
12	22:00 - 23:59	3	(3)	9	(5)	12	(8)	3	(2)
13	No information	8	(5)	1	(3)	9	(8)	2	(4)

Breakdown of accidents acc. to IMO Res. A.849(20)

Flag, time of accident and severity of accident

		German Flag			Foreign Flag			Leisure Craft		
		VSC	SC	LSC	VSC	SC	LSC	VSC	SC	LSC
1	00:00 - 01:59		1	1	1		1	1		
2	02:00 - 03:59	1		1	1	2	2			
3	04:00 - 05:59			2		5	6			
4	06:00 - 07:59		1	2			1			3
5	08:00 - 09:59		1	3		1	5	2		1
6	10:00 - 11:59		1	3	3	3	3			1
7	12:00 - 13:59			2		1	2	2	2	1
8	14:00 - 15:59		1	3	1		6	3	2	10
9	16:00 - 17:59			2		1	2		1	1
10	18:00 - 19:59		1	6	1		10			
11	20:00 - 21:59			1			4			
12	22:00 - 23:59			3		4	5		2	1
13	No information	8	4	4			1	1		1

Breakdown of accidents acc. to IMO Res. A.849(20)

Flag and age of the vessels involved in accidents

		German Flag	German Flag 2004	Foreign Flag	Foreign Flag 2004	German and Foreign Flag	German and Foreign Flag	Leisure Craft	Leisure Craft 2004
1	0 to 4 years	6	(6)	8	(8)	14	(14)	1	(1)
2	5 to 9 years	8	(9)	15	(11)	23	(20)	5	(1)
3	10 to 14 years	4	(2)	14	(4)	18	(6)	1	(1)
4	15 to 19 years	5	(1)	11	(3)	16	(4)	0	(0)
5	20 to 24 years	7	(1)	11	(10)	18	(11)	1	(1)
6	25 to 29 years	3	(2)	5	(6)	8	(8)	0	(0)
7	30 and more years	7	(8)	5	(8)	12	(16)	5	(8)
8	No information	6	(12)	2	(1)	8	(13)	22	(12)

Breakdown of accidents acc. to IMO Res. A.849(20)

Flag, severity of accident and age of vessels involved in accidents

		German Flag			Foreign Flag			Leisure Craft		
		VSC	SC	LSC	VSC	SC	LSC	VSC	SC	LSC
1	0 to 4 years		1	5		1	7	1		
2	5 to 9 years	1	1	6	1	3	11	1	2	2
3	10 to 14 years		2	2		6	8			1
4	15 to 19 years		1	4		4	7			
5	20 to 24 years		3	4	2	2	7	1		
6	25 to 29 years			3	1		4			
7	30 and more years	1	2	4	1	1	3	3	1	1
8	No information	1		5	1		1	3	4	15

Reported incidents from 1 Januar to 31 December 2005

548

Absolut Percent

1) Incidents broken down by vessel types

672

1 Dry-Cargo Vesel	311		46,28%
.1 Dry-Cargo Vessels of less than 100 GRT		2	
.2 Dry-Cargo Vessels of 100 to 499.99 GRT		7	1,04%
.3 Dry-Cargo Vessels of 500 to 1.599.99 GRT		35	5,21%
.4 Dry-Cargo Vessels of 1.600 to 4.999,99 GRT		132	19,64%
.5 Dry-Cargo Vessel of 5000 GRT and more		121	18,01%
.6 Inland Dry-Cargo Vessel		14	2,08%
2 Tankers	45		6,70%
.1 Tankers of less than 100 GRT		0	
.2 Tankers of 100 to 499.99 GRT		1	0,15%
.3 Tankers of 500 to 1.599.99 GRT		7	1,04%
.4 Tankers of 1.600 to 4.999.99 GRT		19	2,83%
.5 Tankers of 5000 GRT and more		14	2,08%
.6 Inland Tankers		4	0,60%
3 Tugs and Pilot boats	27		4,02%
.1 Tugs		17	2,53%
.2 Pilot Vessels		3	0,45%
.3 Dredger		7	1,04%
4 Passenger Vessel/Ferries	33		4,91%
.1 Passenger Vessels in national trade		21	3,13%
.2 Passenger Vessel worldwide		8	1,19%
.3 Inland Passenger Vessels		4	0,60%
5 Fishing Vessels	25		3,72%
.1 Coastal Fishing Vessels		22	3,27%
.2 Fishing Vessels on High Seas		3	0,45%
6 Ro-Ro-Vessels		25	3,72%
7 Leisure Craft Fishing Vessels		3	0,45%
8 Water Craft without propulsion		1	0,15%
9 Flotating Working Gear (Ponton)		0	0,00%
10 Public Authority Water Craft		5	0,74%
11 Vessels of the Navy			
.1 Warship (including submarines)		4	0,60%
.2 Auxiliary Vessels of the Navy		0	0,00%

13 Leisure Craft	161	23,96%
.1 Sailing Boats used by the owner	122	18,15%
.2 Motor Boats used by the owner	28	4,17%
.3 Rented Motor Boats (with engine)	7	1,04%
.4 Rented Motor Boats	4	0,60%
14 Traditional Vessels	15	2,23%
15 HSC (High Speed Craft)	2	0,30%
16 Other Water Craft	15	2,23%

2) Distribution by sea areas

	548	
1-1 North Sea	50	9,12%
1-1-1 Within the territorial waters	47	8,58%
1-1-2 High Seas in the area of the continental shelf	2	0,36%
1-1-3 Traffic Separation Scheme in the area of the continental shelf	1	0,18%
1-2 Baltic Sea	135	24,64%
1-2-1 Flensburg Bay	7	1,28%
1-2-2 Kiel Bay	11	2,01%
1-2-3 Trave	9	1,64%
1-2-4 Within the territorial waters	107	19,53%
1-2-5 High Seas in the area of the continental shelf	1	0,18%
1-2-6 Traffic Separation Scheme in the area of the continental shelf	0	0,00%
1-3 Ems	11	2,01%
1-4 Weser	34	6,20%
1-4-1 Hunte	1	0,18%
1-5 Jade	3	0,55%
1-6 Elbe	128	23,36%
1-6-1 Tributary waters of the Elbe	2	0,36%
1-7 NOK	133	24,27%
1-7-1 Kiel-Holtenau	20	3,65%
1-7-2 Brunsbüttel	61	11,13%
1-7-3 Rendsburg	0	0,00%
1-7-4 Strecke	52	9,49%
1-8 Worldwide	51	9,31%

3) Age of the vessels

672

1	0 to 4 years	78	11,61%
2	5 to 9 years	78	11,61%
3	10 to 14 years	64	9,52%
4	15 to 19 years	46	6,85%
5	20 to 24 years	69	10,27%
6	25 to 29 years	45	6,70%
7	30 and more years	68	10,12%
8	No information	224	33,33%

4) Time of accidents

548

1	00:00 - 01:59	22	4,01%
2	02:00 - 03:59	22	4,01%
3	04:00 - 05:59	30	5,47%
4	06:00 - 07:59	33	6,02%
5	08:00 - 09:59	41	7,48%
6	10:00 - 11:59	54	9,85%
7	12:00 - 13:59	60	10,95%
8	14:00 - 15:59	76	13,87%
9	16:00 - 17:59	59	10,77%
10	18:00 - 19:59	54	9,85%
11	20:00 - 21:59	34	6,20%
12	22:00 - 23:59	30	5,47%
13	No information	33	6,02%

6.2 Type of accidents 2005

Foundering	Water ingress	Capsizing	Grounding/Bottom Contact	Collision	Ship/Ship	Ship/Objet	Engine Room	Cargo Holds	Accommodation	Leisure Craft	Fire/Explosion	Engine Failure/Steering Gear problems	Other	Accidents with personal injuries	Accident with personal injuries
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1 Dry-Cargo Vessels

- .1 Dry-Cargo Vessel of less than 100 GRT
- .2 Dry-Cargo Vessels of 100 to 499.99 GRT
- .3 Dry-Cargo Vessels of 500 to 1.599.99 GRT
- .4 Dry-Cargo Vessels of 1.600 to 4.99.99 GRT
- .5 Dry-Cargo Vessels of 5000 GRT and more
- .6 Inland Dry-Cargo Vessels

			1	1												
			1	3	2							1				
			8	9	14							3	1			
	1		28	39	39			1			12	10		2	2	2
			13	38	31	4					12	15		8	4	13
2			3	8							1					

2 Tankers

- .1 Tankers of less than 100 GRT
- .2 Tankers of 100 to 499.99 GRT
- .3 Tankers of 500 to 1.599.99 GRT
- .4 Tankers of 1.600 to 4.999.99 GRT
- .5 Tankers of 5000 GRT and more
- .6 Inland Tankers

				1												
			1	2	3								1			
			1	3	8							4	2	1		1
			3	3	4							1	2	1		1
				1								2		1		1

3 Tugs/Pilot Vessels

- .1 Tugs
- .2 Pilot Vessels
- .3 Dredger

			2	4	6								3	2		1
				1	1									1		1
			2		4	1										

4 Passenger Vessels/Ferries

- .1 Passenger Vessel in national waters
- .2 Passenger Vessels in international waters
- .3 Inland Passenger Vessels

			4	7	1	1					1	5	2			2
				2	3			1				1	1			1
			1	2								1				

5 Fishing Vessels

- .1 Coastal Fishing Vessels
- .2 High Seas Fishing Vessels

		2	2	7								4	4	3	2	2
												1	2			

6 Ro-Ro Vessels

			2	6	10	2						2		3	1	2
--	--	--	---	---	----	---	--	--	--	--	--	---	--	---	---	---

7 Leisure Craft Fishing Vessel

				3												
--	--	--	--	---	--	--	--	--	--	--	--	--	--	--	--	--

8 Water Craft without propulsion

			1													
--	--	--	---	--	--	--	--	--	--	--	--	--	--	--	--	--

9 Floating Working Gear (Ponton)

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Untergang	Wassereinbruch	Kenterung	Grundberührung/ Böschungsböhr	Kollision	Brand/Explosion			Maschinenausfall/ Ruderan- lagenprobleme	Sonstiges	Unfälle mit Personenschäden	Unfälle mit Personenschäde n (Tote, Verletzte)	
				Schiff/Schiff	Schiff/Objekt	Maschinenraum	Laderäume	Unterkünfte	Sportboote		Tote	Verletzte

10 Public authority vessels

			1	2						2		
--	--	--	---	---	--	--	--	--	--	---	--	--

11 Navy vessels

- .1 Warships (including submarines)
- .2 Auxiliary vessels of the Navy

			1	2	1							

12 Commercially used Small Craft

- .1 Commercially used small craft up to 50 GRT
- .2 Commercial used small craft of more than 50 GRT

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13 Leisure Craft

- .1 Sailing boats used by the owner
- .2 Motor boats used by the owner
- .3 Rented sailing boats
- .4 Rented motor boats

1	2	4	31	54	6				2	4	7	11	5	16
1	1		6	10					1	2	5	2	1	6
		1	2	1	2						1			1
				2	1					1				

14 Traditional Vessels

	1	1	1	9	1						2			
--	---	---	---	---	---	--	--	--	--	--	---	--	--	--

15 HSC (High Speed Craft)

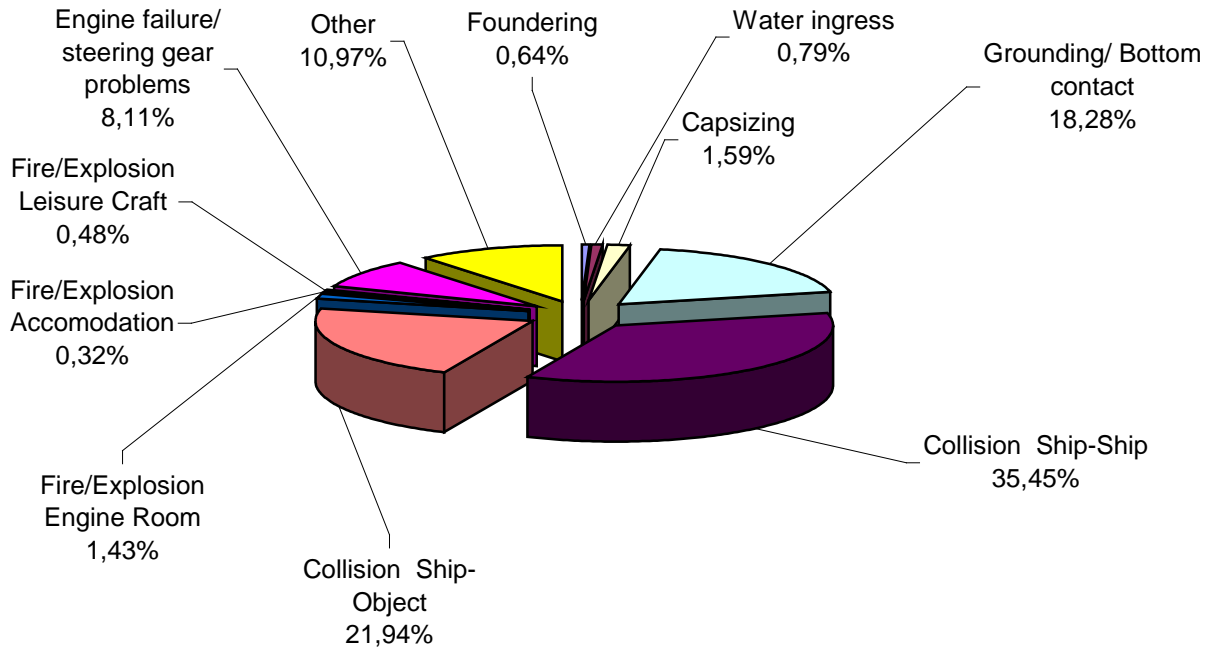
						1					1			
--	--	--	--	--	--	---	--	--	--	--	---	--	--	--

16 Other Water Craft

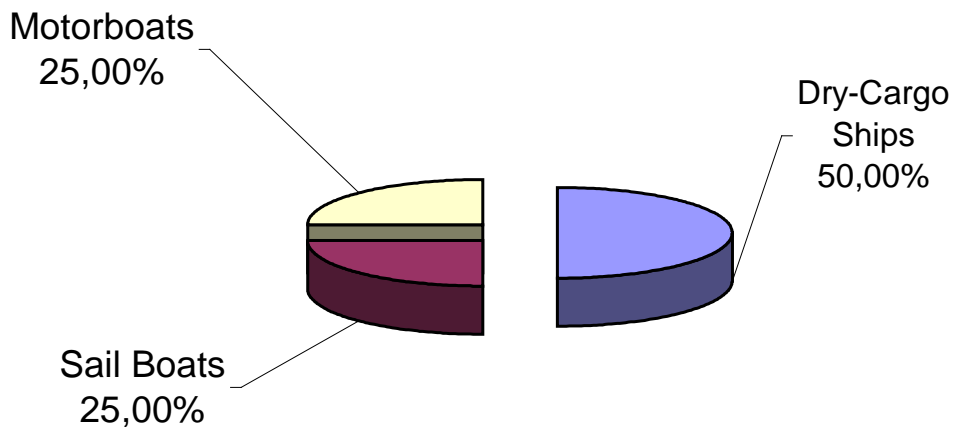
		2		3	1						4	5	2	3
--	--	---	--	---	---	--	--	--	--	--	---	---	---	---

Gesamt:	4	5	10	115	223	138	9	0	2	3	51	69	43	17	53
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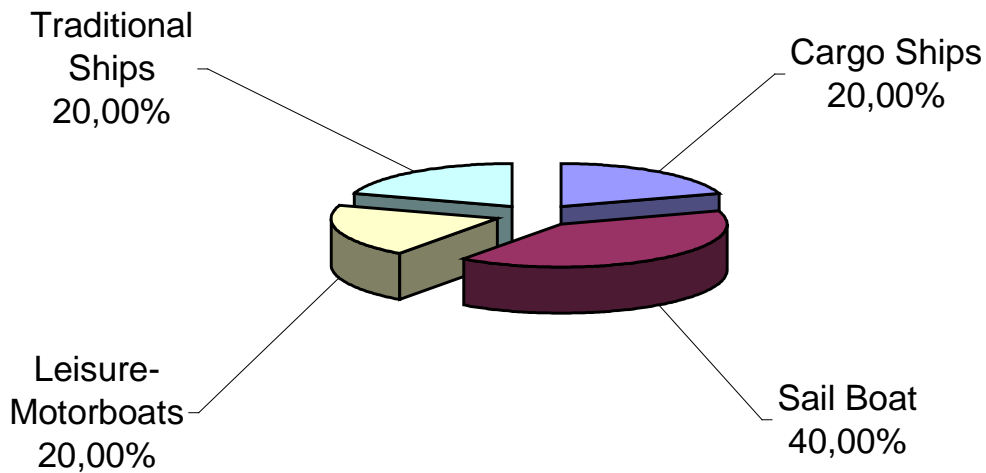
Type of accidents 2005



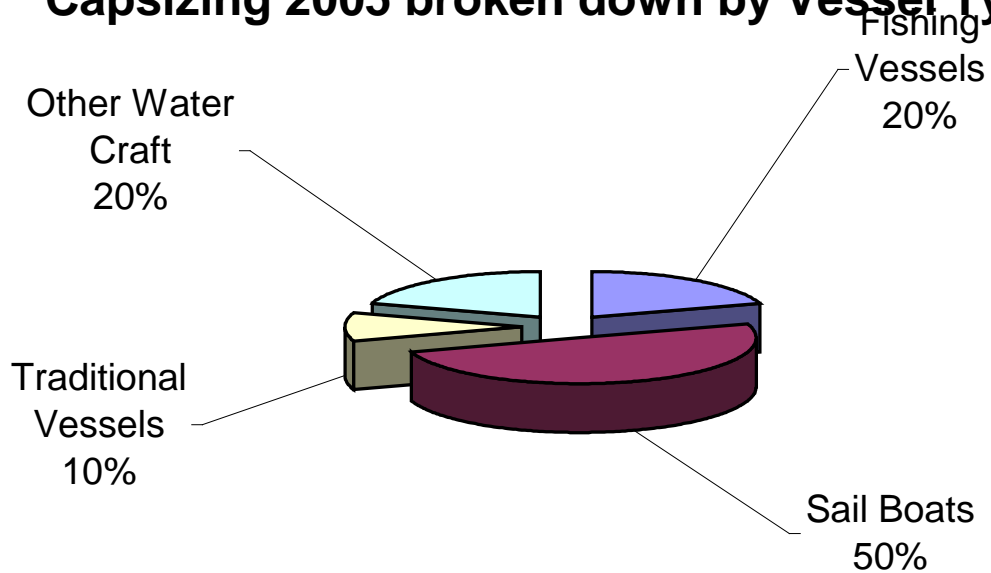
Foundering 2005 broken down by vessel types



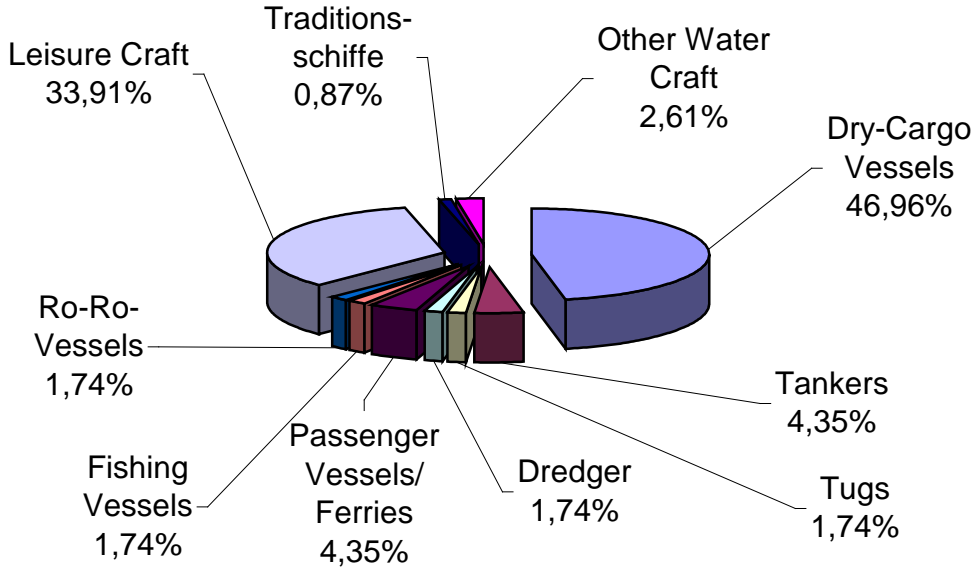
Water ingress 2005 broken down by Vessel Types



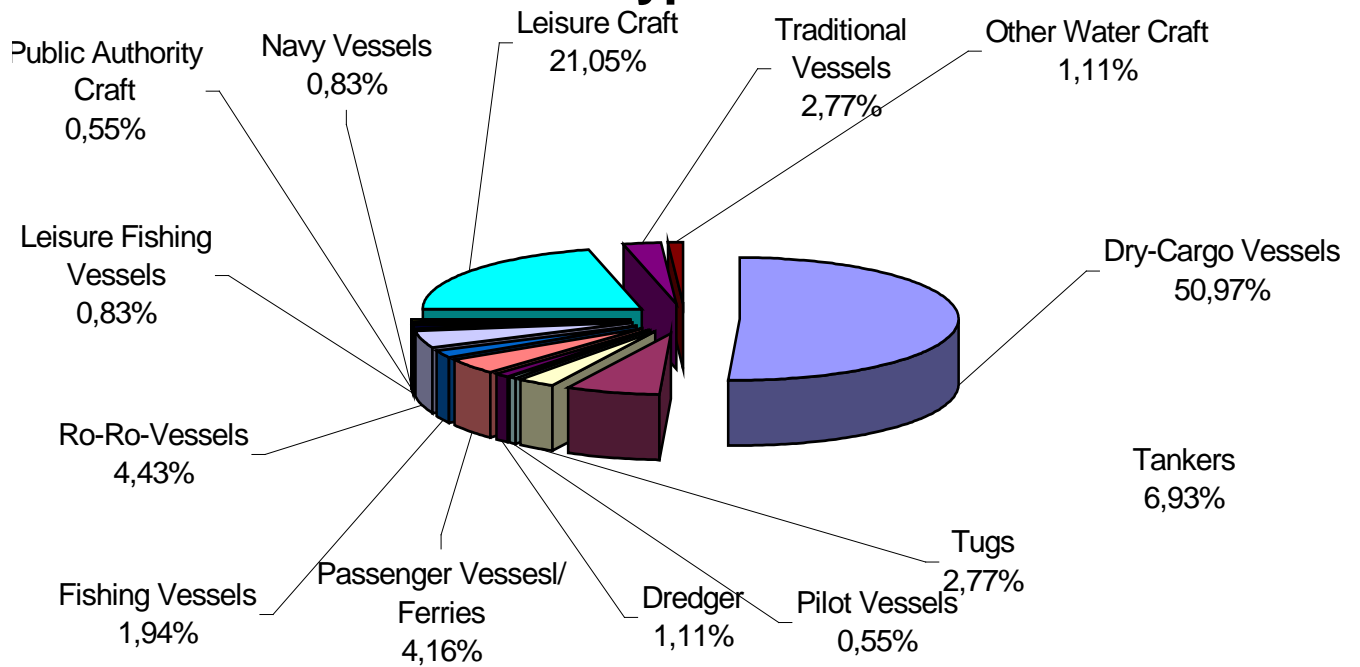
Capsizing 2005 broken down by Vessel Types



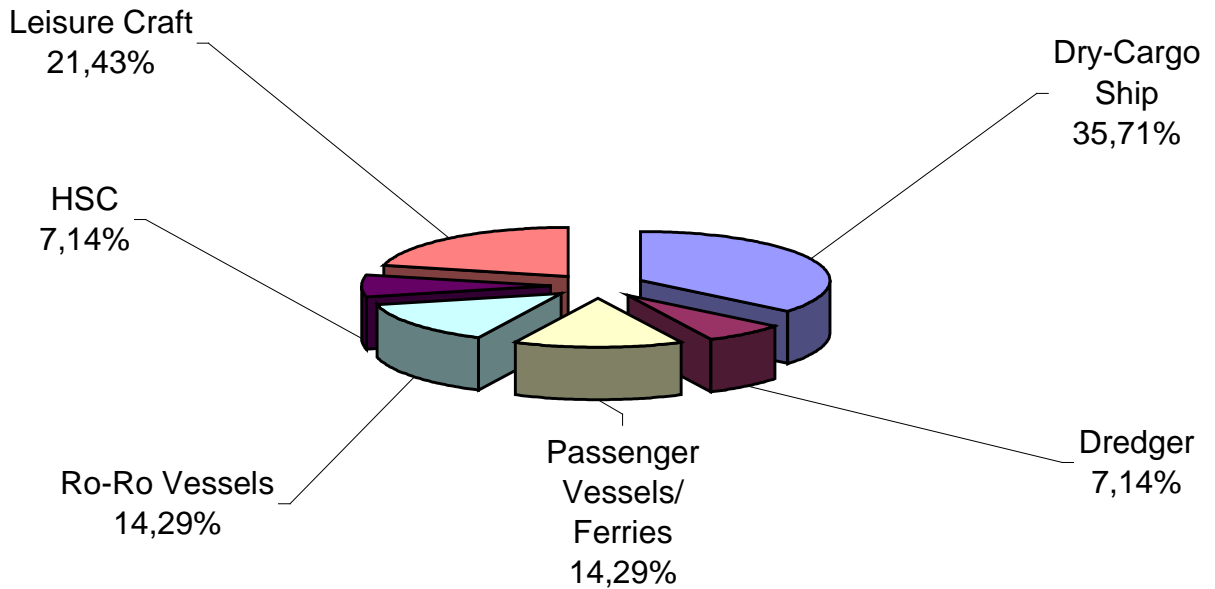
Grounding/ Bottom Contact broken down by Vessel Types 2005



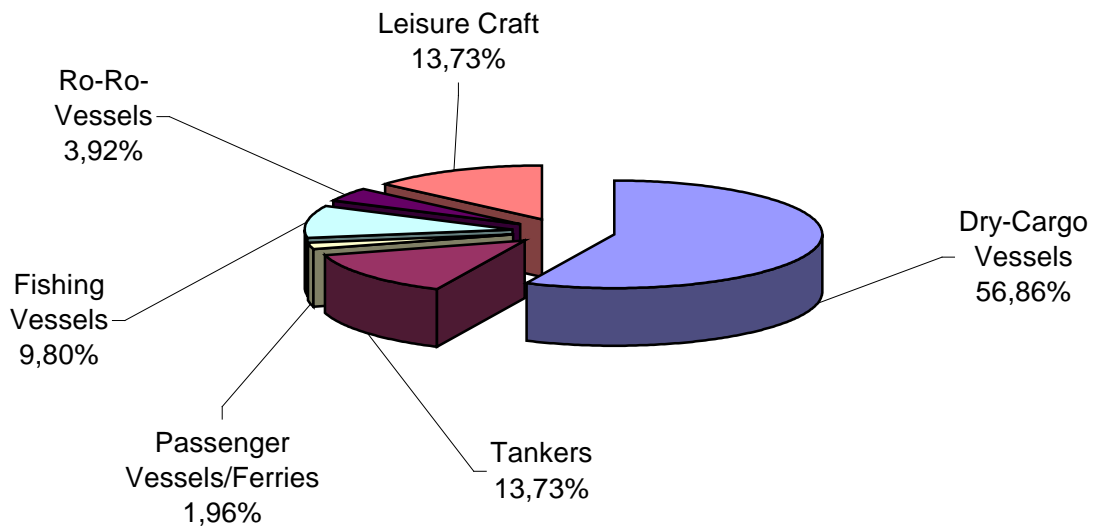
Collision 2005 broken down by vessel types



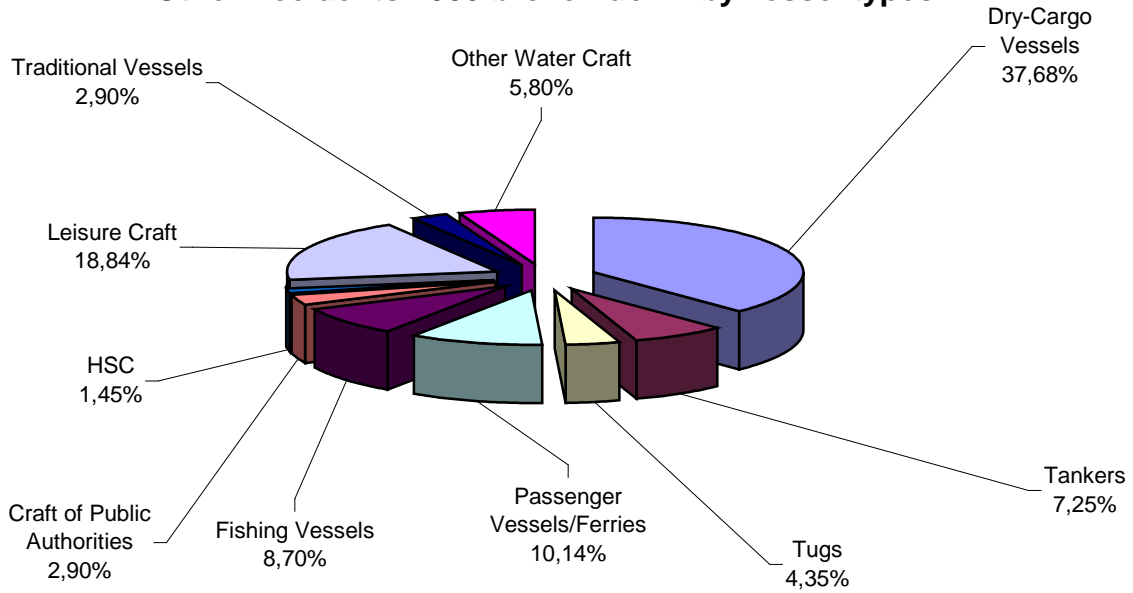
Fire/Explosion 2005 broken down by vessel types



Engine Failure / Steering Gear Problems



Other Accidents 2005 broken down by vessel types



Issued by:
 Bundesstelle für Seeunfalluntersuchung
 (Federal Bureau of Maritime Casualty Investigation)
 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