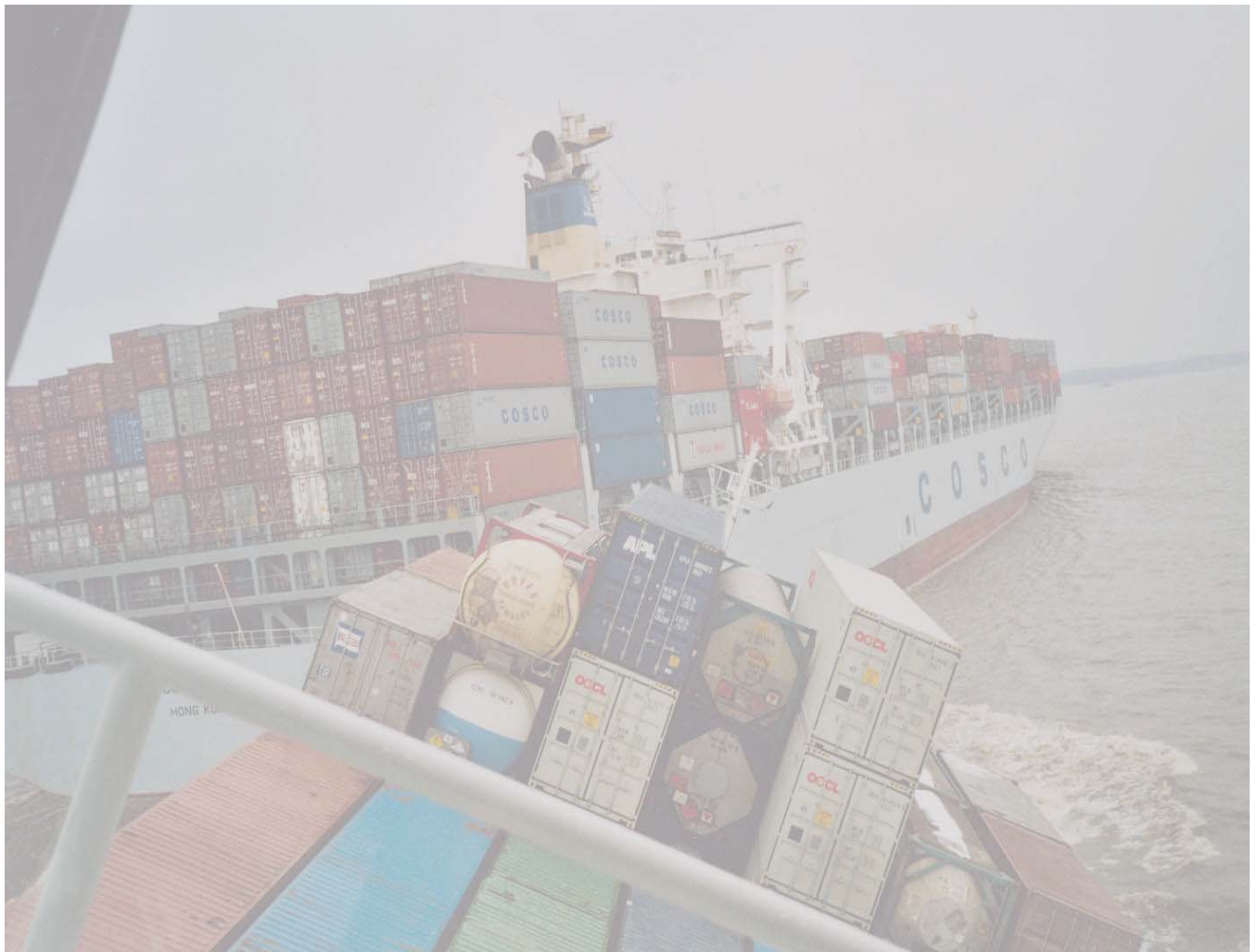




Bundesstelle für Seeunfalluntersuchung
Federal Bureau of Maritime casualty Investigation
Bundesoberbehörde im Geschäftsbereich des Bundesministeriums
für Verkehr, Bau- und Wohnungswesen

Annual Statistics 2004



(Photo Dr. Brigitte Karin Becker, Walldorf)

June 2005

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1 Preface

The obligation of a state to investigate marine casualties occurring in its own coastal waters or involving vessels sailing under its flag worldwide is stipulated in many international conventions (SRÜ, ILO, Freeboard, SOLAS and MARPOL Conventions). The IMO Code A 849(20) on investigating casualties and incidents at sea, introduced by an EC Directive via a system of binding inspections with regard to safe operation of Ro-Ro passenger vessels and high-speed passenger craft in liner service for the member states and to be made binding in future for all sea vessel casualties, defines these international obligations in more detail.

These international and Community-law obligations as well as standardisation of the law oriented the maritime casualty investigation to the paradigm of aviation accident investigations were stated by the legislature as two main reasons for putting the new Maritime Safety Investigation Law (SUG) into effect as of 20 June 2002. The most important innovation was the drawing of a strict division between ascertaining the causes of accidents and the consequences that can occur for persons involved in the casualty.

The investigation of the causes of accidents was transferred to the Federal Bureau of Maritime casualty Investigation (BSU), a supreme authority based in Hamburg reporting directly to the Federal Ministry of Transport, Building and Housing (BMVBW). The objective of the investigation is to improve precautions for safety at sea including occupational protection measures for seamen and environmental protection at sea. To this end accidents involving sea-going vessels within German territorial waters and outside of these are investigated if a vessel under German flag is involved.

By concentrating the investigation and research into causes of accidents at the BSU, it is possible to achieve a complete overview there of key areas of accidents in German coastal waters and maritime waterways and the ports located along these that can now be centrally registered and analysed.

The Federal Bureau of Maritime casualty Investigation herewith publishes the statistics on accidents and serious incidents at sea together with a report on its activities in the past business year.

2 Human resources development

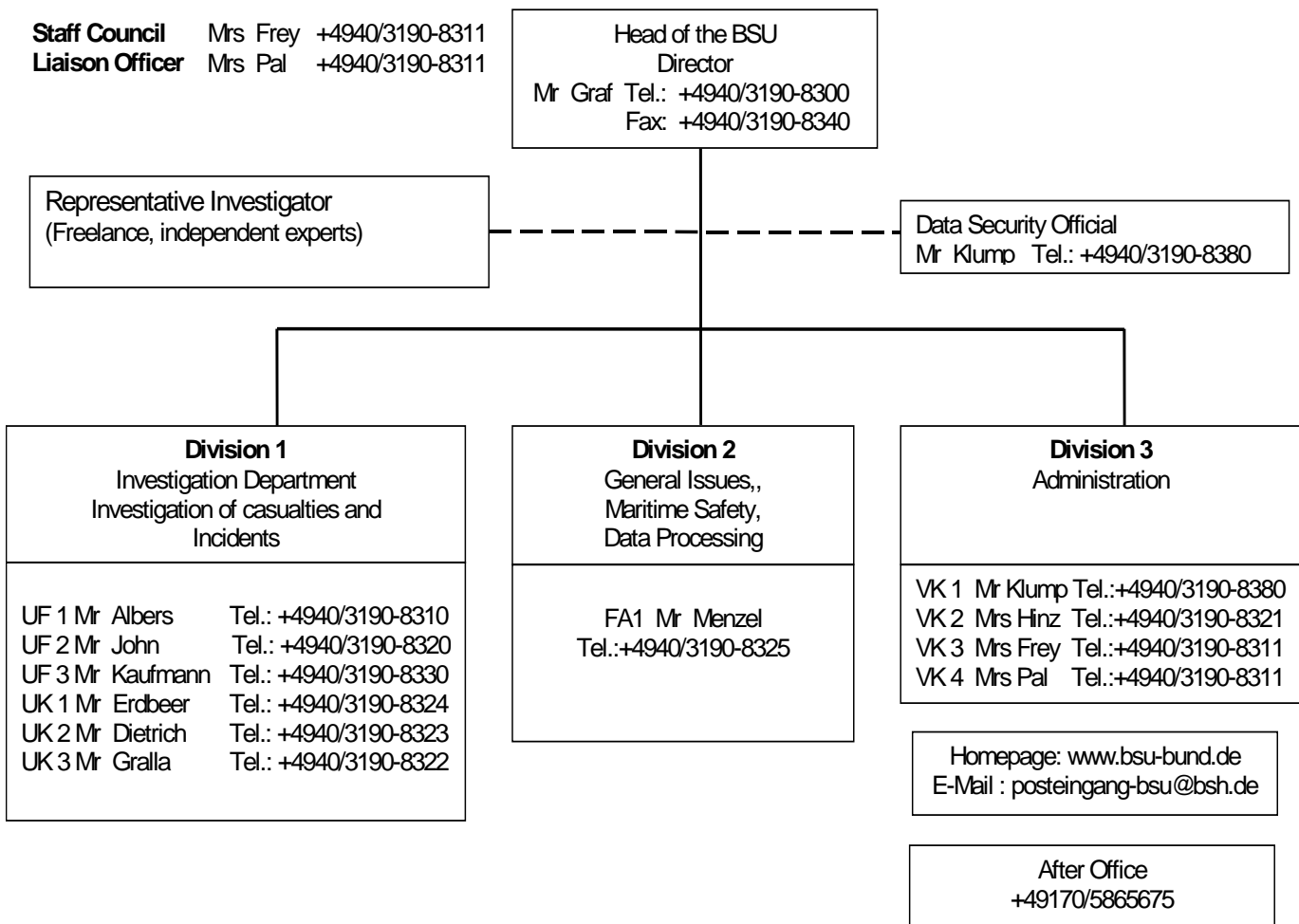
The Director of the Federal Bureau of Maritime casualty Investigation is Mr. Dieter Graf, Leitender Regierungsdirektor (roughly equivalent to Assistant Executive Officer).

The BSU is divided into an investigation unit, Division 1, with three Principal Inspectors and three Inspectors. These comprise a ship-building engineer and five master mariners who have acquired special additional expertise in various fields in the course of their professional careers.

Az.: 2004

Personnel changes occurred in Division 1 since one Inspector left at his own wish in May 2004 and this position could only be re-staffed again as of September. A mechanical engineer (FA 1) was appointed for Division 2, Basic Issues, as of October 2004 and is responsible in particular for analysing marine casualty investigations and supervising the implementation of safety recommendations issued by the BSU. Furthermore, he is to support the BSU in building up an appropriate database and in analysing vessel data (VDR) documenting the course of voyages. A desk officer for budget and personnel matters and three desk officers for registering incoming accident reports, preparing investigation reports and statistics are employed in the administration Division.

In addition to the BSU's own personnel, the over 60 freelance, independent experts are increasingly employed as representatives for investigating marine casualties. By analogy with aviation accident investigations, service contracts as well as investigation and accounting forms were developed together with this group of persons and the experts are commissioned separately and additionally for support depending on the nature of the cases.



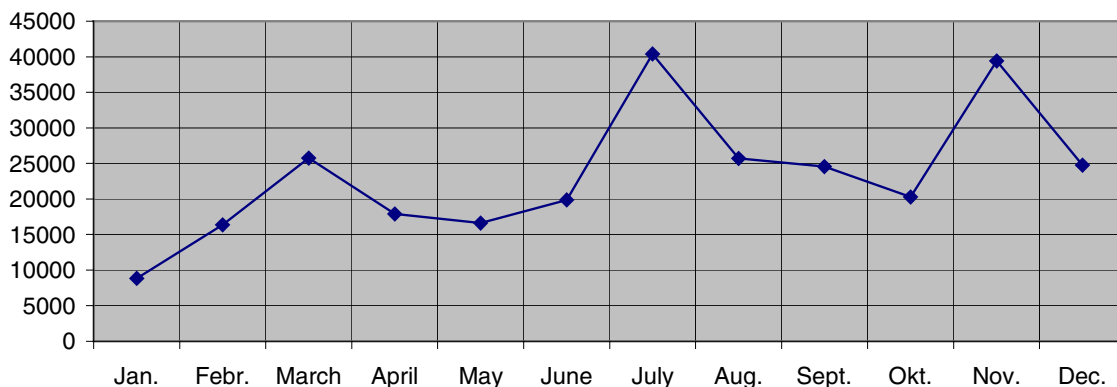
3 Internet presentation

The BSU Internet page www.bsu-bund.de set up in 2003 is being used increasingly in IT user circles. The graphic and content-specific updating of the Web pages is carried out per webhosting contract by an external firm, while the Internet Provider is the Germany's National Meteorological Service (DWD).

The Internet page was revised at the beginning of June. Changes include restructuring of the publications, a glossary, a topical running line on the title page and registration for a newsletter. At present over 200 subscribers to the newsletter - and the number is rising - are kept informed of current investigation reports and press releases.

The Internet pages with general information and investigation reports are published in German and English. In addition to dispatching the printed reports to the parties involved in the accident and the press, this ensures publication and broad dissemination of the investigation reports.

Enquiries processed successfully per month in 2004



Jan.	Febr.	March	April	May	June	July	Aug.	Sept.	Okt.	Nov.	Dec.
8824	16374	25754	17909	16621	19881	40387	25699	24577	20260	39401	24747
Average per month::									23370	In 2003:	5443

The number of enquiries processed on average per month has increased by more than 400 % by comparison with 2003. Whereas the monthly number of "clicks" in 2003 was 5443, in 2004 it increased to 23,370. The numbers of enquiries in March, July and November were well above average. The report "234/03 SY DEERN" was published in March, the report "338/03 SY LISA" in July and the report "122/04 SY RENI" in November. These were downloaded very often, in some cases with over 7000 individual enquiries. The demand for investigation reports from the leisure craft sector is thus encouragingly high.

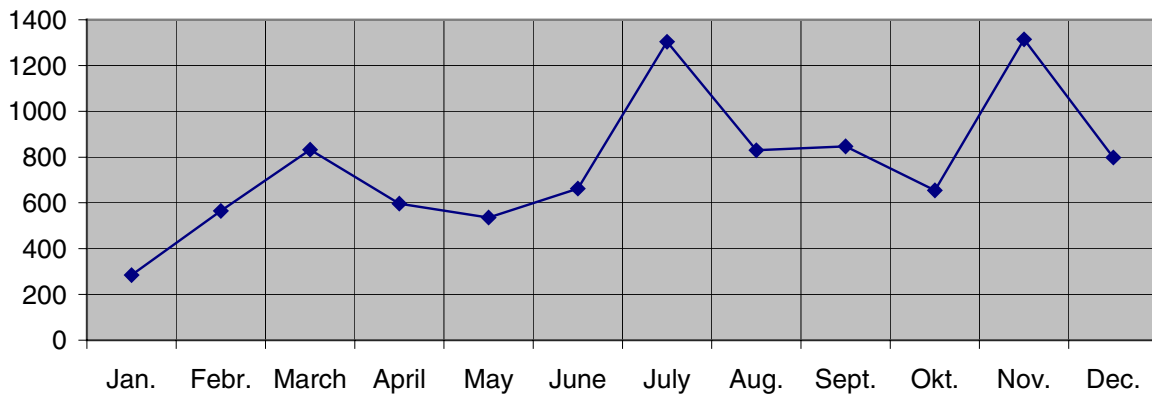
Az.: 2004

Website visitors from outside Germany account for on average 8 % of total enquiries. An increase was evident after the BSU attended the MAIF Conference in Capetown.

The Internet pages are largely consulted during daytime hours from 6.00 a.m. to 6.00 p.m., indicating that the majority of users are probably from the professional public. Judging by the individual list of domains and server reference reports, use in the hours after midnight also appears to be largely by the maritime sector overseas, as a result of time shifts.

The number of enquiries answered per day shows the same trend as the enquiries per month, with an increase in use up to fourfold by comparison with 2003.

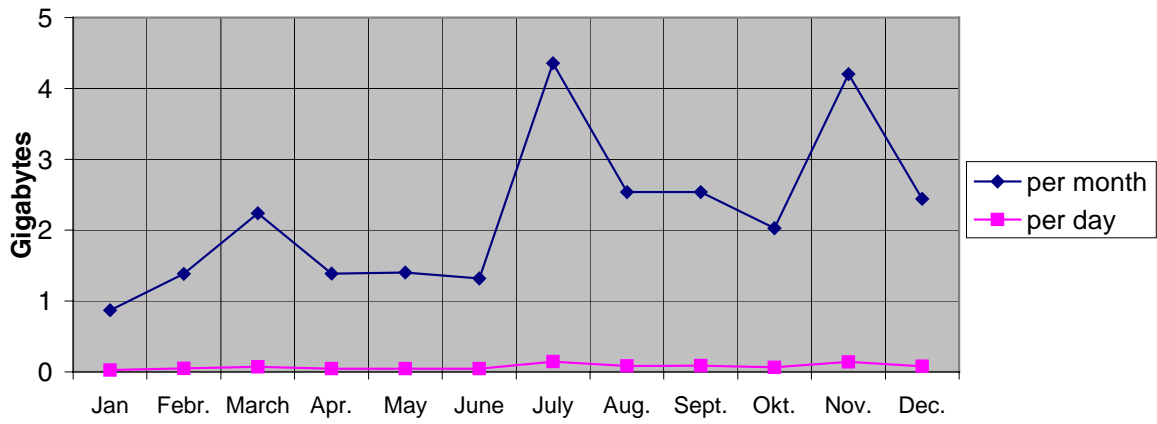
Average number of enquiries answered per day



Jan.	Febr.	March	April	May	June	July	Aug.	Sept.	Okt.	Nov.	Dec.
284	565	833	597	536	663	1304	830	847	654	1315	798
Average per day :									768	In 2003 : 178	

The quantity of gigabytes transmitted and downloaded per month also shows the increase over 2003 and the user peaks in the three months mentioned.

Quantity of data transmitted in gigabytes



	Jan	Febr.	March	Apr.	May	June	July	Aug.	Sept.	Okt.	Nov.	Dec.
per month	0,869	1,386	2,238	1,387	1,404	1,318	4,354	2,537	2,538	2,027	4,204	2,444
per day	0,028	0,049	0,074	0,047	0,046	0,045	0,144	0,084	0,089	0,067	0,143	0,08

Average per month :	2,226 GB	In 2003 :	0,524 GB
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4 Public relations work and upgrading 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 Law (SUG). On the one hand information on such incidents is regularly published 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 delegate second speakers to events about safety at sea or comparable events of the police or emergency services.

The lectures by BSU staff at police schools and to river and Waterway Police units have become a permanent and continuous facility. Participation in panel discussions and lecture courses for shipping, lectures to nautical associations, sailing clubs and sailing schools are all part of the BSU's field of activities. The structure and working modes of the BSU were presented during visits by delegations from the Spanish and Maltese Ministries of Transport. Sectoral contributions were made to the 13th Conference of the Marine Accident Investigators International Forum (MAIIF) at the beginning of October 2004 in Capetown.

According to § 12 Para. 6 SUG the BSU must ensure that the technical sectoral capabilities and expertise of the Principal Inspectors, Inspectors and other specialists are maintained and adapted in line with developments.

The BSU staff regularly attend upgrading events of SAF and BAKöV, as well as seminars offered on the open market, for example specialist seminars on electronic charts (ECDIS) at the Upgrading Centre of the Port of Hamburg.

Two BSU staff members attended a course on maritime casualty investigations at the World Maritime University (WMU) in Malmö in 2004 and were coached intensively in maritime casualty investigation. In addition BSU staff undertook various journeys on sundry container vessels and other craft in the estuary areas of the Rivers Elbe, Weser and Ems in order to acquire a relationship to practice.

The Deputy Director and a staff member visited the British Marine Accident Investigation Branch (MAIB) in Southampton in April for advanced training regarding the analysis of Voyage Data Recorders (VDR) and in the field of data recording and processing in marine casualties.

Various training courses for staff from the investigation sector were conducted by VDR manufacturers.

5 Maritime casualty investigations

5.1 National and international regulations

The Maritime Safety Investigation Law (SUG) governs the competence of the BSU for investigating sea-going vessels sailing under all flags that sustain marine casualties within German territorial waters. This also includes traffic incidents on the way from and to ports in maritime waterways. Furthermore, the BSU investigates marine casualties involving vessels sailing under the German flag occurring throughout the world and rights of assistance in international investigations arise when the BSU claims a "substantial German interest in the investigation". The definition of a marine casualty is set out in § 1 Para. 2 SUG, where it is stated: "Incidents causing damage or danger are incidents caused in connection with the operation of a vessel in sea shipping due to which

1. the death, disappearance or serious injury of a human being is caused,
2. the loss, presumed loss or shipwreck, grounding, abandonment or collision of a vessel is caused,
3. damage to the environment is caused as a consequence of damage to one or several vessels or other property damage is caused,
4. danger for human life or limb or a vessel or the danger of serious damage to a vessel, a maritime structure or the maritime environment is caused."

These above points serve, as a function of the severity of the accident, to classify marine casualties in various groups. This classification is conducted in accordance with the IMO Code A 849(20) - Code for the investigation of marine casualties and incidents - into **very serious marine casualty, serious 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.

Very serious marine casualty (VSC)



Sinking of FC NEPTUN on 30 July 2003, port of Norddeich

Serious marine casualty (SC)



Collision between MV BOUNDER and MV BBC SWEDEN
in the Kiel Canal on 19 December 2003

Marine incidents (incidents at sea, near misses) (MI)



Collision of MV FALCON BAY with wharf facilities
on 4 March 2003
in the port of Hamburg

Very serious marine casualties are always investigated, including all necessary IMO reports. For all other casualties work proceeds in accordance with § 12 SUG. The Director, or in his absence his Deputy, determines after consultation with the Principal Inspectors and Inspectors whether an investigation is to be conducted and how extensive this should be. All reports of accidents are fundamentally recorded and at least statistically evaluated.

5.2 BSU procedure after a marine casualty

The BSU has discussed and agreed upon the following reporting procedure with the Waterway Police offices and the Federal Border Guard on the German coast. This has already proved very successful in practice:

- Phase 1 After a marine casualty a first report or preliminary report is issued by telephone to the BSU during office hours, or to the stand-by mobile telephone of the BSU investigator on duty outside office hours.
- Phase 2 Report by fax in accordance with the relevant forms with a brief description of the facts in accordance with § 7 of the Regulation on Securing Shipping and, if available, a comment by the captain or master.
- Phase 3 After receipt or after the preliminary investigation conducted within the agreed framework it is clarified between the Waterway Police and the BSU whether these should investigate further for the BSU.

Petty damage (petty property damage, damage caused by suction and swell) is only reported by fax. The Water Police also report incidents causing damage or danger where withdrawal of a licence or ban on further travel could enter into question and any drunkenness offences to the Waterways and Shipping Directorate Nordwest.

The BSU office hours are:

Monday to Thursday:	07.30 a.m. to 4.00 p.m.
Friday:	07.30 a.m. to 2.30 p.m.
Telephone number:	040-3190-8300
Fax number:	040-3190-8340

Outside office hours:	
Mobile telephone number of the BSU investigator on duty	<u>0170-58 65 675</u>

5.3 Evidence

The investigation team has extensive rights of access to all data and records relevant for the voyage on board. This consists primarily of conventional evidence such as engine manoeuvre print-outs, course and rudder position print-outs, ship log records and the like. In addition, persons involved are questioned as witnesses if they are willing to make a statement at once.

In future the evaluation of technical evidence will become increasingly important within the framework of maritime casualty investigations (VDR, AIS, ECDIS). The BSU is

therefore endeavouring to acquire the necessary expertise in this field as quickly as possible and to procure the necessary equipment. The staff of BSU have been trained on the VDR facilities of various manufacturers. Two computers that can display all data formats of all VDR systems currently known were procured to evaluate the VDR data. Furthermore an additional laptop with appropriate storage capacity had to be procured to download data on board. The Federal Maritime and Hydrographic Agency (BSH) also regularly familiarises the BSU staff with the latest equipment submitted for type testing. Problems arise in practice above all because the VDR is only available on a few vessels so far and operations connected with saving data are still new territory for the crews as well. Furthermore, the obligation of the vessel operator and vessel command to assist in accordance with § 5 SUG is not yet generally known / implemented.

5.4 Safety recommendations

The BSU can issued safety recommendations already before completing investigation proceedings if this is expedient for preventive reasons due to the risk of danger in delay. The BSU has already availed itself of this possibility in a number of cases. Generally, however, the recommendations appear in the final report. Experience to date has already shown that both the supervisory authorities and the vessel operators and manufacturers affected react very sensitively to these safety recommendations. The recommendations have largely been implemented and the necessary safety improvements carried out.

In the year 2004 the BSU completed and published altogether 12 investigation reports with safety recommendations.

In two very similar cases these safety recommendations relate to leisure craft. Furthermore, an increasing number of recommendations have been issued relating to communication and understanding between persons and/or facilities involved in shipping.

Incorrect organisation and performance of work procedures was a further key area tackled by the publications. In addition technical defects were the cause of marine casualties on several occasions in 2004.

In nearly all the safety recommendations the BSU draws attention to valid guidelines, rules and laws, as well as to the individual responsibility of the relevant vessel command.

The BSU took a marine casualty involving a passenger vessel as an occasion to draw attention to the rules regarding use of the voyage data recorder (VDR).

In order to disseminate safety recommendations as widely as possible and thus improve the safety of shipping, all recommendations are regularly published on the BSU's homepage and dispatched to the relevant organisations, manufacturers, vessel operators etc.

Az.: 2004

The following investigation reports published in the year 2004 contain safety recommendations.

Investigation Report 88/03

5 January 2004

Very serious marine casualty:

Fatal accident of the 2nd Nautical Officer of MV PETUJA in Hamburg on 11 March 2003

Investigation Report 54/03

15 February 2004

Marine casualty:

Collision of MV FALCON BAY with the Edgar-Engelhardt wharf and Köhlbrandhöft in Hamburg on 4 March 2003

Investigation Report 226/03

5 March 2004

Very serious marine casualty:

Foundering of FC NEPTUN in the port entrance of Norddeich on 30 July 2003

Investigation Report 262/03

1 April 2004

Very serious marine casualty:

Rupture of the towing line during tug operation between VOC FRONTIER and the Tug AXEL in the port of Lübeck on 1 September 2003

Investigation Report 314/03

3 May 2004

Marine casualty:

Serious back injury sustained by a passenger on the HSC HALUNDER JET on the Outer Elbe/German Bight on 11 October 2003

Investigation Report 338/03

1 July 2004

Very serious marine casualty:

Loss over board of a co-sailor from SY LISA on 8 November 2003, east of Fehmarn at the buoy "Staberhuk Ost"

Investigation Report 350/03

15 July 2004

Very serious marine casualty:

Death of a crew member on board MV AUTO ATLAS in the Northern Lock Bremerhaven on 11 November 2003

Investigation Report 315/03

2 August 2004

Very serious marine casualty:

Collision between MV GERMA and MV ESTECLIPPER in the Kiel Canal, Schwartenbek siding area, on 13 October 2003

Investigation Report 5/04

1 September 2004

Marine casualty:

Carbon monoxide poisoning of two crew members on MT SEATURBOT in Milford Haven (UK) on 3 January 2004

Investigation Report 330/03

15 September 2004

Very serious marine casualty:

Fatal accident during welding in the engine room workshop of SV DRESDEN EXPRESS on 26 October 2003

Investigation Report 382/03

1 October 2004

Very serious marine casualty:

Collision of MV BOUNDER with MV BBC SWEDEN in the Kiel Canal, Canal kilometer 43, on 19 December 2003

Investigation Report 122/04

1 November 2004

Very serious marine casualty:

Loss over board of the skipper of SY RENI in the Mecklenburger Bay south east of Fehmarn on 31 May 2004

5.4 Key casualty areas

Concentrating the investigating of and research into the causes of accidents at one authority has made it possible for the BSU to obtain a general overview of the key casualty areas in German coastal waters, maritime waterways and ports located along these. The accidents are now recorded and analysed centrally. A breakdown of the accidents by vessel type shows that freight vessels were involved most frequently, accounting for almost 45 % (214 cases), followed by leisure craft with over 18 % (88 cases). The BSU ascertained already early in 2004 that fatal accidents involving leisure craft have increased and it issued appropriate press releases. In 2003 only 6 persons were reported as fatal injuries with leisure craft, and in 2004 this figure increased to altogether 13 persons. The following very serious marine casualties involving leisure craft have been/are still being extensively investigated:

Investigation Report 122/04

31 May 2004

Loss over board of the skipper of SY RENI south-east of Fehmarn

Investigation Report 145/04

20 June 2004

Loss over board of the skipper of SY ALENA south of Gedser

Investigation Report 203/04

29 June 2004

Sinking of SY ALLMIN with two fatalities west of Sassnitz

Investigation Report 217/04

9 August 2004

Loss over board of the skipper of SY GALATEIA off Skagen

Investigation Report 240/04

29 August 2004

Foundering of SY MADAME PELE with two fatalities off Borkum

The causes of the accidents in the fatal leisure craft accidents investigated were almost identical and are based on the following faults and inadequacies:

- Insufficient practice in "man¹-over-board" manoeuvres
- Life jackets not worn
- Emergency equipment not used
- Qualifications overestimated
- Persons on board not instructed in safety procedures
- Poor voyage planning

¹ In other publications called "person over board"

5.5 Marine casualties investigated in 2002/2003/2004, completed with an investigation Report

Publication	Report No.	Date of accident	Name of vessel	Type of vessel	Nationality	Location of accident	Type of accident
01.01.04	88/03	11.03.03	Petuja	Container vessel	Germany	On board	Personal injury
15.02.04	54/03	04.03.03	Falcon Bay	Refrigerated vessel	Netherlands	Port of Hamburg	Ramming
05.03.04	226/03	30.07.03	Neptun	Fishing cutter	Germany	Norddeich	Capzising
20.03.04	234/03	03.08.03	Deern	Sailing yacht	Germany	E-Rügen	Collision
01.04.04	262/03	01.09.03	VOC Frontier/ Tug Axel	Freighter Tug	Bahamas Germany	Vorwerker Hafen	Rupture of towing line
15.04.04	156/03	03.06.03	Ivory Star I	Container vessel	Germany	Lagos	Running over pontoon
01.05.04	314/03	11.10.03	Halunder Jet	High-speed craft (HSC)	Germany	Voyage to Heligoland	Personal injury
10.05.04	213/02	19.12.02	P&O Nedlloyd Genoa/ Ebro	Container vessel Chem. Tanker	UK Portugal	Lower Elbe	Collision
01.07.04	338/03	08.11.03	Lisa	Sailing yacht	Germany	Fehmarn	Personal injury
15.07.04	350/03	11.11.03	Auto Atlas	RoRo vessel	Korea	Bremer- haven North Lock	Personal injury
01.08.04	315/03	13.10.03	Germa/ Esteclipper	Freighter Container vessel	Cyprus Luxemburg	Kiel Canal km 92	Collision
01.09.04	5/04	03.01.04	Seaturbot	Tank vessel	Germany	England	Personal injury
15.09.04	330/03	26.10.03	Dresden Express	Container vessel	Germany	Pacific	Personal injury
01.10.04	382/03	19.12.03	Bounder/ BBC Sweden	Freighter Freighter	Antigua& Barbuda Gibraltar	Kiel Canal km 43	Collision
01.11.04	122/04	31.05.04	Reni	Sailing yacht	Germany	Mecklen- burg Bay	Personal injury
01.02.05	145/04	20.06.04	Alena	Sailing yacht	Germany	South of Gedser	Personal injury
21.02.05	138/04	11.06.04	Grietje-BOS/ Gretje (GRE 08)	Fishing cutter Fishing cutter	Netherlands Germany	Off Borkum	Personal injury
01.03.05	202/04	02.08.04	Harmonie	Fishing cutter	Germany	North of Baltrum	Personal injury

5.6 Investigation Reports in progress from 2003/2004

Planned publication	Report No.	Date of accident	Name of vessel	Type of vessel	Nationality	Location of accident	Type of accident
	319/03	26.10.03	London Express	Container vessel	Germany	Atlantic	Personal injury
	18/04	19.01.04	Rocknes	Freighter	Antigua& Barbuda	Bergen	Capsizing
	45/04	01.03.04	Cosco Hamburg/ P&O Nedlloyd Finland	Container vessel Container vessel	Germany Hongkong	Lower Elbe	Collision
	134/04	07.06.04	Hamburg Express	Container vessel	Germany	Golf of Biskaya	Personal injury
	155/04	28.06.04	Pudong Senator/ ENA 2	Container vessel River tanker	Germany Germany	Parkhafen Hamburg	Collision
	175/04	09.07.04	Baltic Champion	Chem. tanker vessel	Isle of Man	Neue Weser Reede	Personal injury
	181/04	11.07.04	CGM Verlaine	Container vessel	Germany	Port of Malta	Personal injury
	203/04	29.06.04	Allmin	Sailing yacht	Germany	Rügen	Personal injury
	240/04	29.08.04	Madame Pele	Sailing yacht	Germany	Borkum	Personal injury
	343/04	15.11.04	Rithi Bhum/ Eastern Challenger	Container vessel Freighter	Germany Korea	Taiwan Straits	Collision
	371/04	07.12.04	MSC Ilona/ Hyundai Advance	Container vessel Container vessel	Germany Panama	Off Hongkong	Collision
	381/04	16.12.04	Julius	Tug	Germany	Kiel Canal	Foundering

5.7 International cooperation

In maritime casualty investigations

Cooperation with other states generally functions very well as regards the exchange of information relevant to the specific accident. In some cases, however, the procedure envisaged in accordance with IMO Resolution A.849(20) (Code for the Investigation of Marine Casualties and Incidents) that should proceed as follows is in need of improvement:

- Notification of the flag state, other substantially interested states in an investigation and IMO,
- Determining the lead investigation state and the joint investigation strategy as well as coordination of the investigations by the lead investigation state,
- Drawing up of a joint investigation report,
- Inclusion of deviating comments as an annex, if these have not been taken into account.

There are no problems in cooperation with the states along the North Sea and the Baltic Sea. The capacity for improvement in cooperation with other states lies in some cases in the fact that national legislation is not yet adapted (South Korea) or that only individual aspects of an accident are taken up specifically and appropriate safety recommendations pronounced (NTSB, USCG). The BSU has not succeeded in cooperating at all with some African countries, even though the German embassies there were called in too.

EMSA

The European Maritime Safety Agency (EMSA), set up as a consequence of the Erika accident, increasingly involves the BSU too in its activities. It aims to advise the EU Member States in the field of shipping safety in the broadest sense and to play a coordinating role in the field of marine casualty investigation too. To this end it has already drafted a "Marine Casualty Information Platform" integrating a database that is shortly to start a trial phase and then be made available to all Member States.

MAIIF

The BSU has also been working for three years now in the Marine Accident Investigators International Forum (MAIIF), a so far loose association of marine accident investigation authorities worldwide. The contacts established so far by the BSU with foreign investigation authorities at the annual meetings to date have already facilitated the work substantially in many cases and should be intensified further.

The MAIIF has set up a permanent office financed by the members and targets a constant adviser status at the IMO.

Az.: 2004

In the meantime the Southeast-Asian states have formed a sub-committee (AMAIF) with a view to coordinating marine casualty investigation there and improving cooperation with the participating states.

The European states aim to form a comparable sub-committee (EMAIF). The constituting meeting attended by the BSU was held in Helsinki on 2 and 3. March 2005.

6 Annual statistics 2004

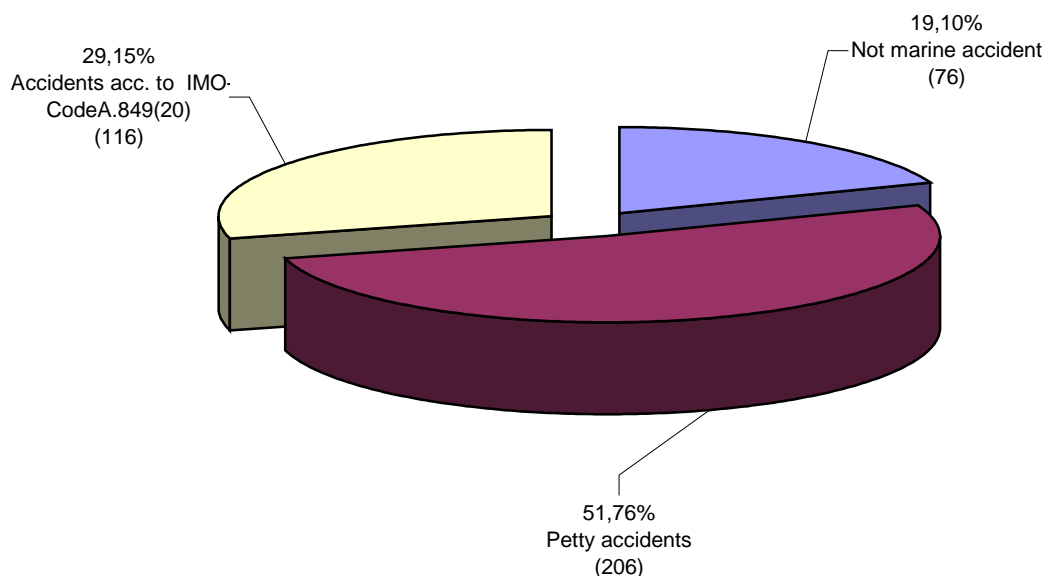
During the period 1 January to 31 December 2004 altogether 398 marine accidents were reported, registered and processed. These reports included 206 petty accidents and 76 accidents that are not marine casualties in the meaning of SUG. There were altogether 116 very serious and serious marine casualties and incidents at sea in accordance with IMO Code A 849(20). (In the year 2003 this figure had been 106 marine casualties.)

Altogether 21 fatalities and 66 cases of personal injury were reported to the BSU. In the year 2004 altogether 15 Investigation Reports were published.

Incidents reported and investigated

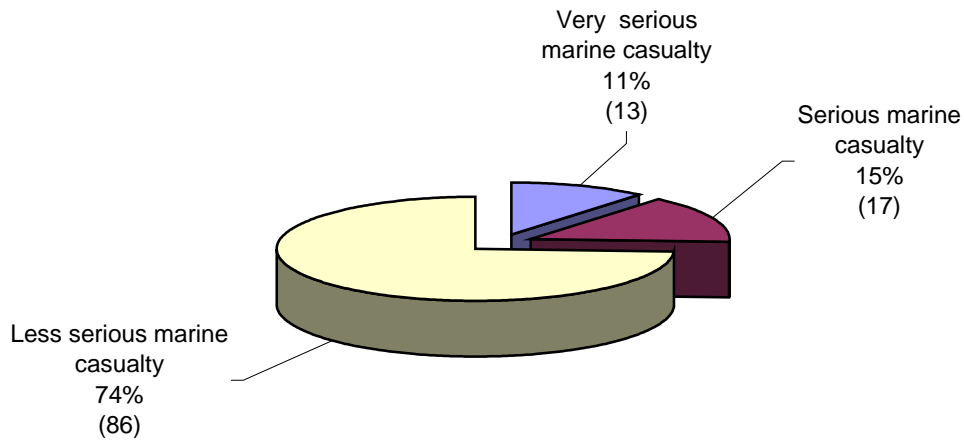
		398
Accident classification of all incidents		
Not marine accident	19.10%	76
Petty accidents	51.76%	206
Accidents acc. to IMO-Code A.849(20)	29.15%	116

Accident classification of all incidents



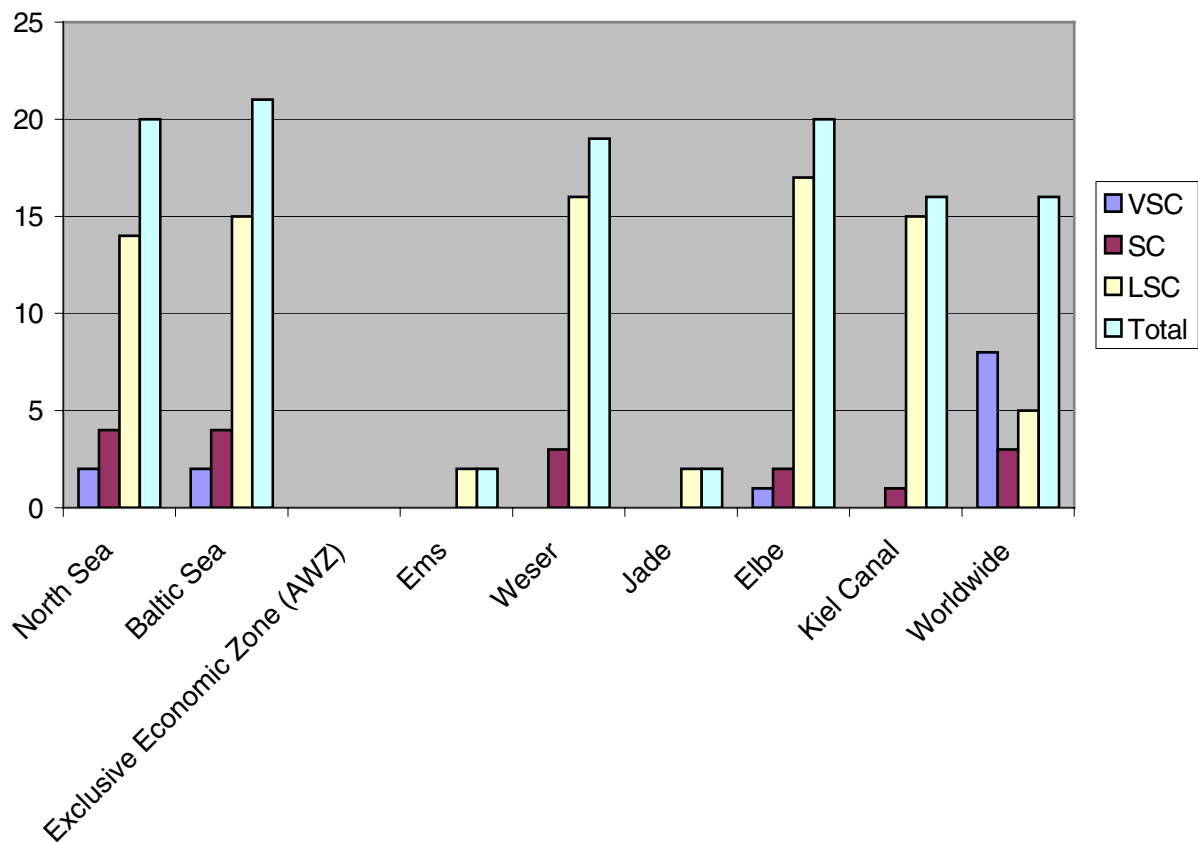
Accident classification acc. to IMO Code A.849(20)		116
Very serious marine casualty (VSC)	11,21%	13
Serious marine casualty (SC)	14,66%	17
Less serious casualty (LSC)	74,14%	86

**Accident classification according to IMO-
Code A.849(20)**



Breakdown of accidents by IMO Code A.849(20) Breakdown by sea waters altogether

	VSC	SC	LSC	Total
North Sea	2	4	14	20
Baltic Sea	2	4	15	21
Exclusive Economic Zone (AWZ)	0	0	0	0
Ems	0	0	2	2
Weser	0	3	16	19
Jade	0	0	2	2
Elbe	1	2	17	20
Kiel Canal	0	1	15	16
Worldwide	8	3	5	16
Total	13	17	86	116

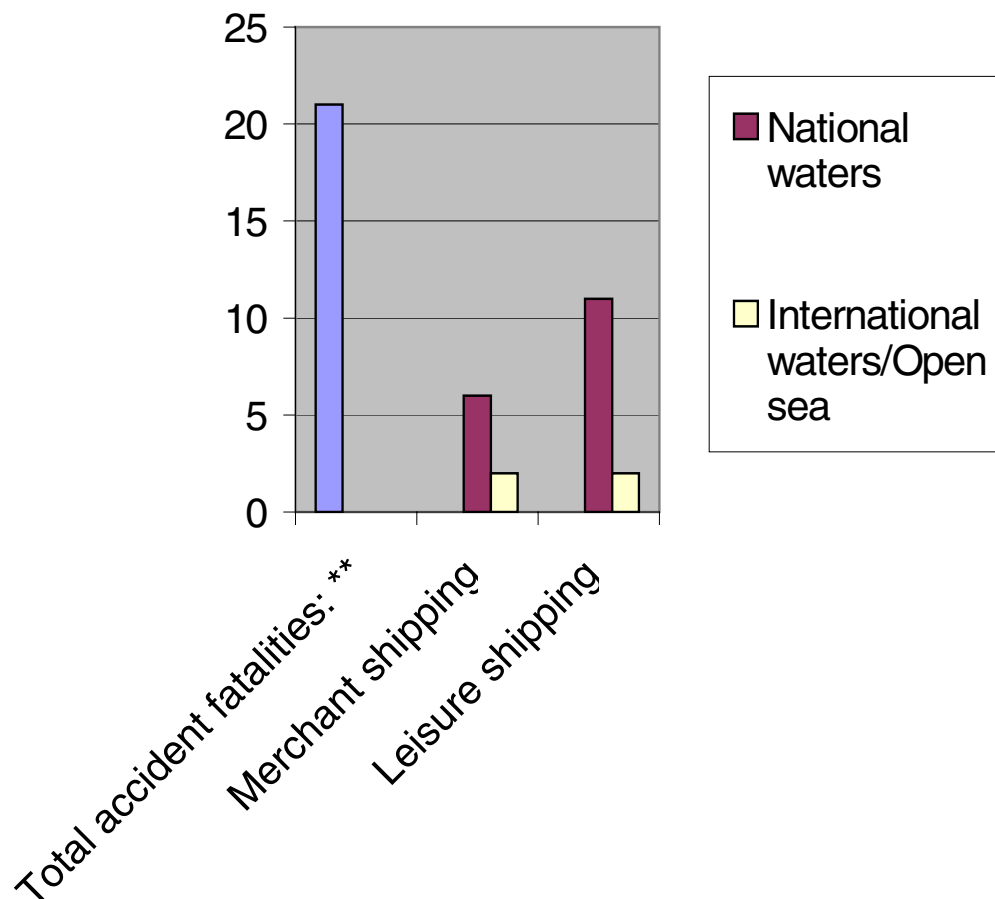


Distribution of fatalities between waters

	National waters	International waters/Open sea
Total accident fatalities: **	21	
Merchant shipping	6	2
Leisure shipping	11	2

**

Two accidents reported in National waters in the leisure shipping sector each claimed two lives. Otherwise there was one fatality per notification.

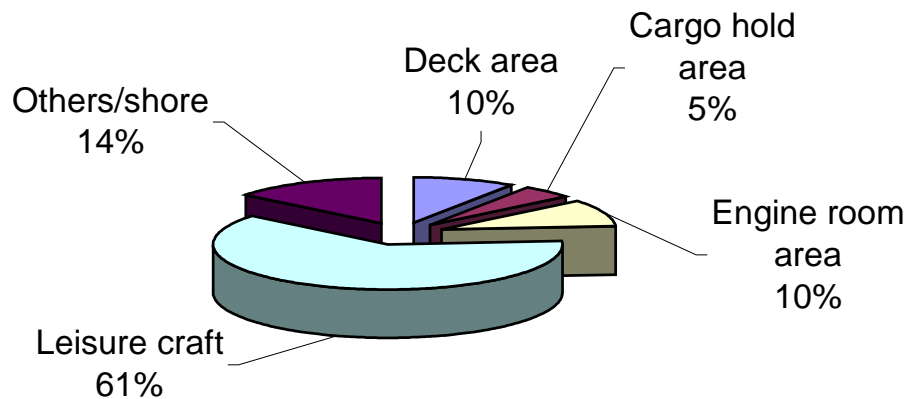


Fatalities 2004 broken down by location

Total		21	Persons
1	Deck area	9,52%	2 Persons
2	Cargo hold area	4,76%	1 Persons
3	Engine room area	9,52%	2 Persons
4	Leisure craft	61,90%	13 Persons
5	Others/shore	14,29%	3 Persons

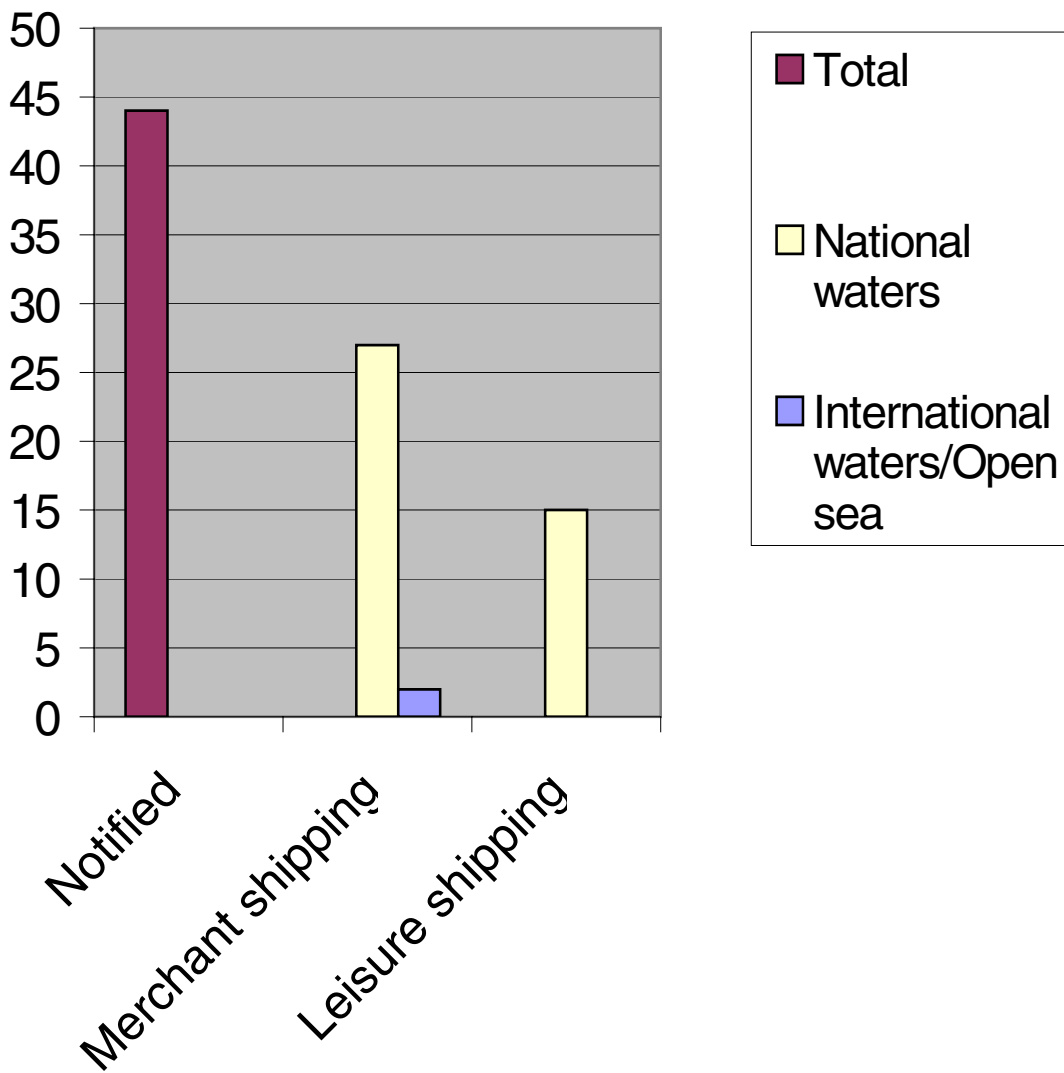
*(In the marine casualty "Rockness" 18 deceased were found who are not listed further here. An investigation is being conducted jointly with Norway, Antigua+Barbuda and Germany.)

Persons killed in 2004 broken down by location



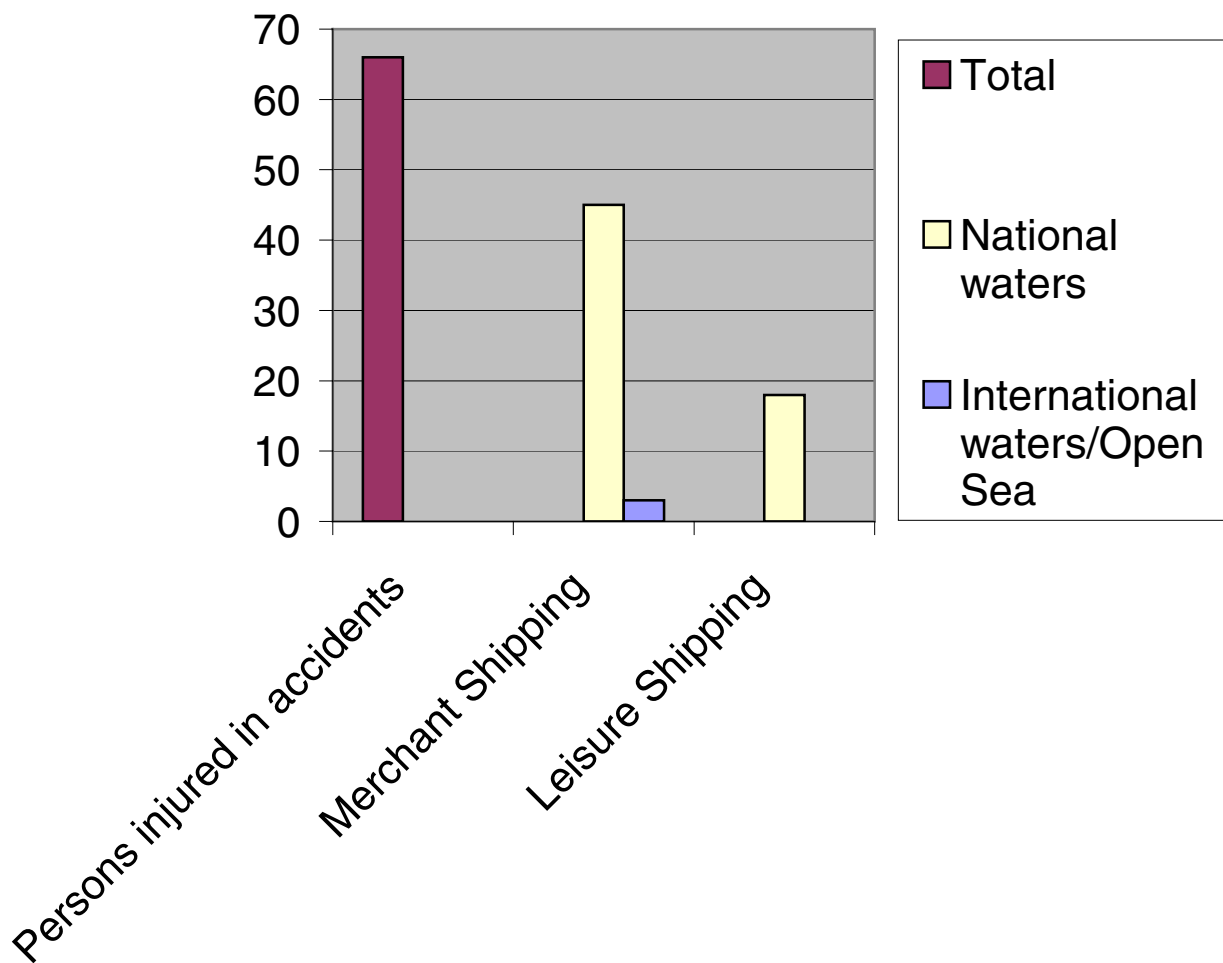
Accidents reported with one or more injured persons

	National waters	International waters/Open sea
Total		
Notified	44	
Merchant shipping	27	2
Leisure shipping	15	0



Injured persons reported in accidents

	Total	National waters	International waters/Open Sea
Persons injured in accidents	66		
Merchant Shipping		45	3
Leisure Shipping		18	0

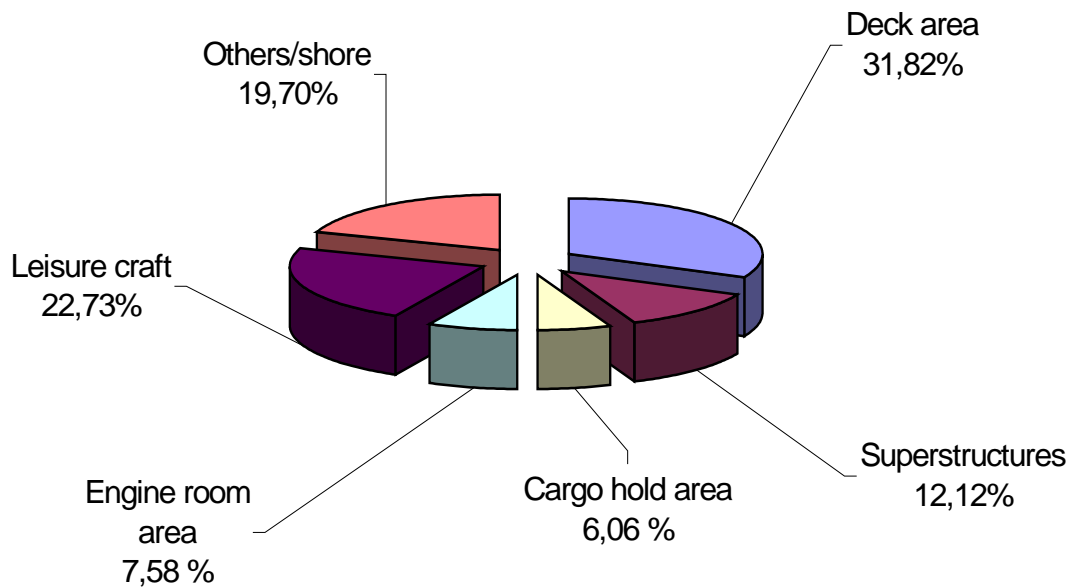


Injured persons 2004 broken down by location

Total	66	Persons
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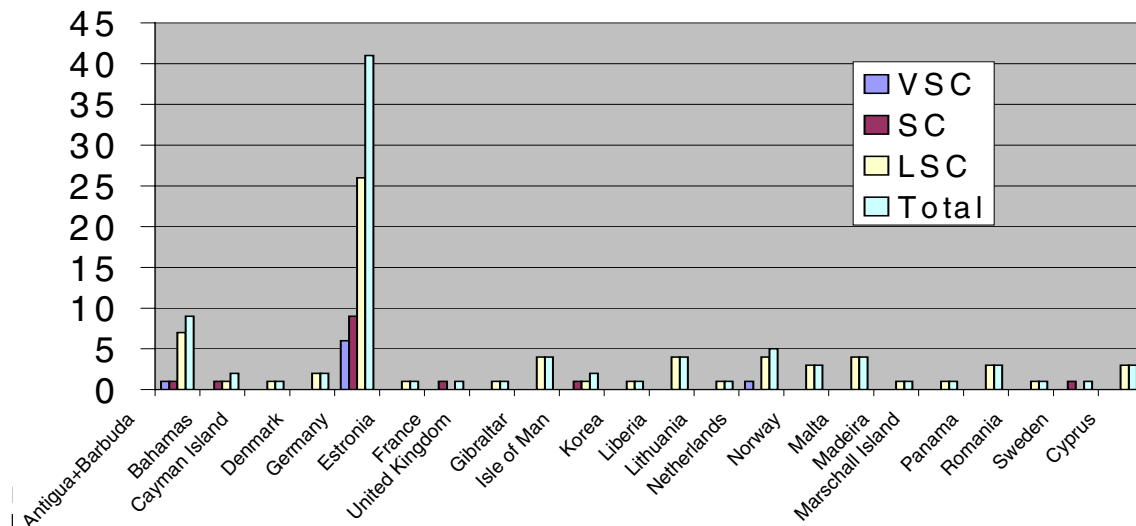
1	Deck area	31,82%	21	persons
2	Superstructures	12,12%	8	persons
3	Cargo hold area	6,06%	4	persons
4	Engine room area	7,58%	5	persons
5	Leisure craft	22,73%	15	persons
6	Others/shore	19,70%	13	persons

Injured persons 2004 broke down by location



**Number of accidents according to IMO Code A-849(20)
Flags of professional shipping involved in accidents**

	VSC	SC	LSC	Total
Antigua+Barbuda	1	1	7	9
Bahamas	0	1	1	2
Cayman Island	0	0	1	1
Denmark	0	0	2	2
Germany	6	9	26	41
Estonia	0	0	1	1
France	0	1	0	1
United Kingdom	0	0	1	1
Gibraltar	0	0	4	4
Isle of Man	0	1	1	2
Korea	0	0	1	1
Liberia	0	0	4	4
Lithuania	0	0	1	1
Netherlands	1	0	4	5
Norway	0	0	3	3
Malta	0	0	4	4
Madeira	0	0	1	1
Marschall Island	0	0	1	1
Panama	0	0	3	3
Romania	0	0	1	1
Sweden	0	1	0	1
Cyprus	0	0	3	3
Total	8	14	70	92



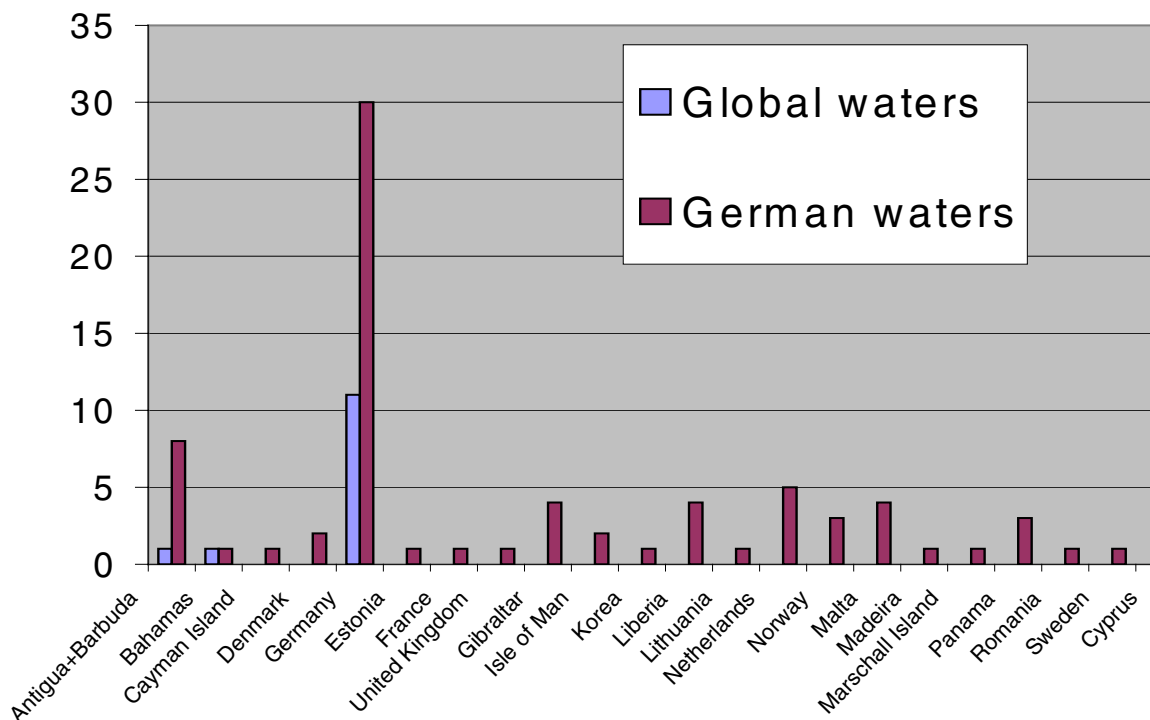
**Number of accidents according to IMO Code A.849(20)
Flags of leisure shipping involved in accidents.**

	VSC	SC	LSC	Total
Germany	5	3	14	22
Netherlands	0	0	2	2
Total	5	3	16	24

Az.: 2004

Number of accidents according to IMO Code A.849(20)
Flags and sea waters of the professional shipping involved in accidents

	Global waters	German waters
Antigua+Barbuda	1	8
Bahamas	1	1
Cayman Island	0	1
Denmark	0	2
Germany	11	30
Estonia	0	1
France	0	1
United Kingdom	0	1
Gibraltar	0	4
Isle of Man	0	2
Korea	0	1
Liberia	0	4
Lithuania	0	1
Netherlands	0	5
Norway	0	3
Malta	0	4
Madeira	0	1
Marschall Island	0	1
Panama	0	3
Romania	0	1
Sweden	0	1
Cyprus	0	3
Total	13	79

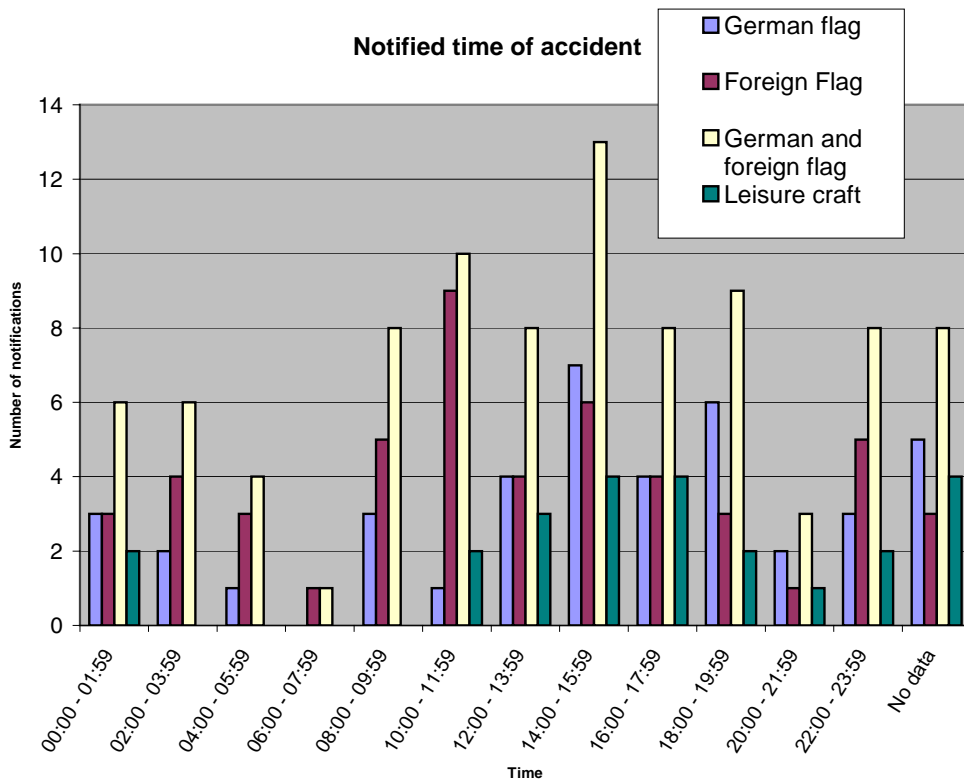


Flags and sea waters of the leisure shipping involved in accidents

	Global waters	German waters
Germany	3	19
Netherlands	0	2
Total	3	21

Number of accidents according to IMO Code A.849(20) Flags and sea waters of the shipping involved in accidents

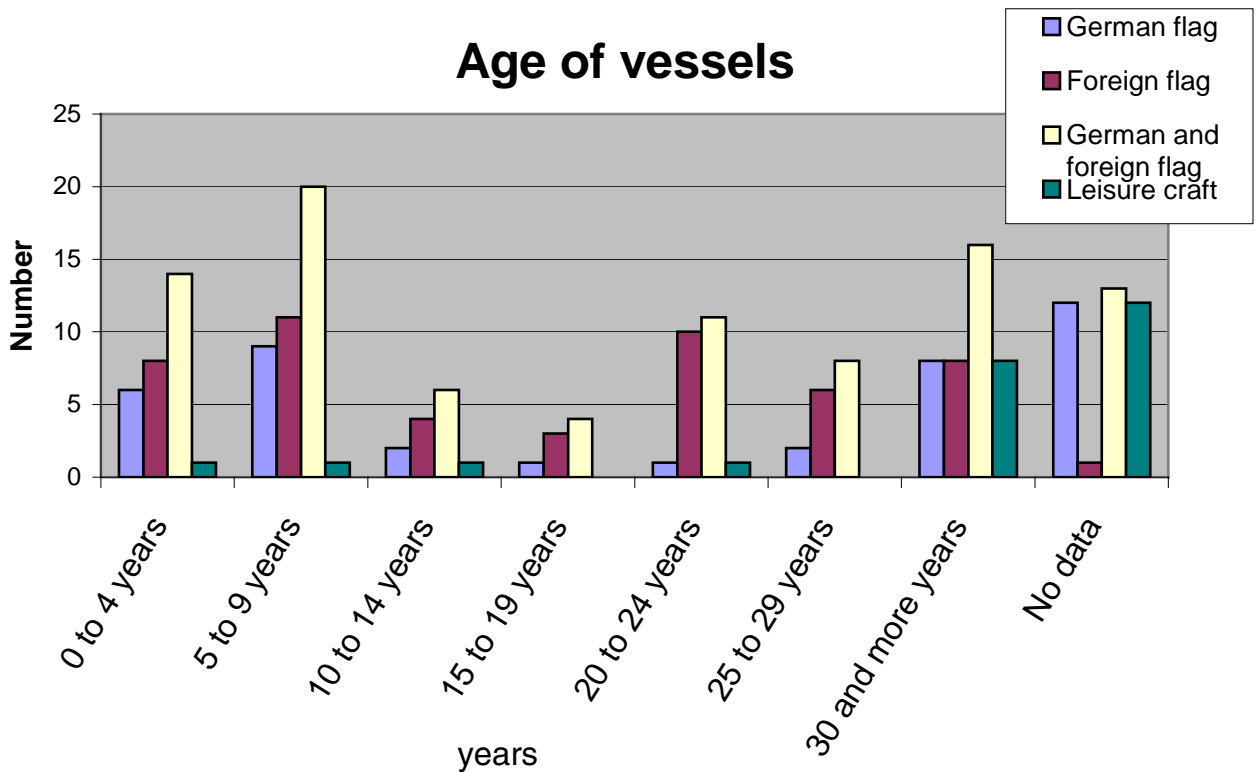
		German flag	Foreign Flag	German and foreign flag	Leisure craft
1	00:00 - 01:59	3	3	6	2
2	02:00 - 03:59	2	4	6	0
3	04:00 - 05:59	1	3	4	0
4	06:00 - 07:59	0	1	1	0
5	08:00 - 09:59	3	5	8	0
6	10:00 - 11:59	1	9	10	2
7	12:00 - 13:59	4	4	8	3
8	14:00 - 15:59	7	6	13	4
9	16:00 - 17:59	4	4	8	4
10	18:00 - 19:59	6	3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



Number of accidents according to IMO Code A.849(20)

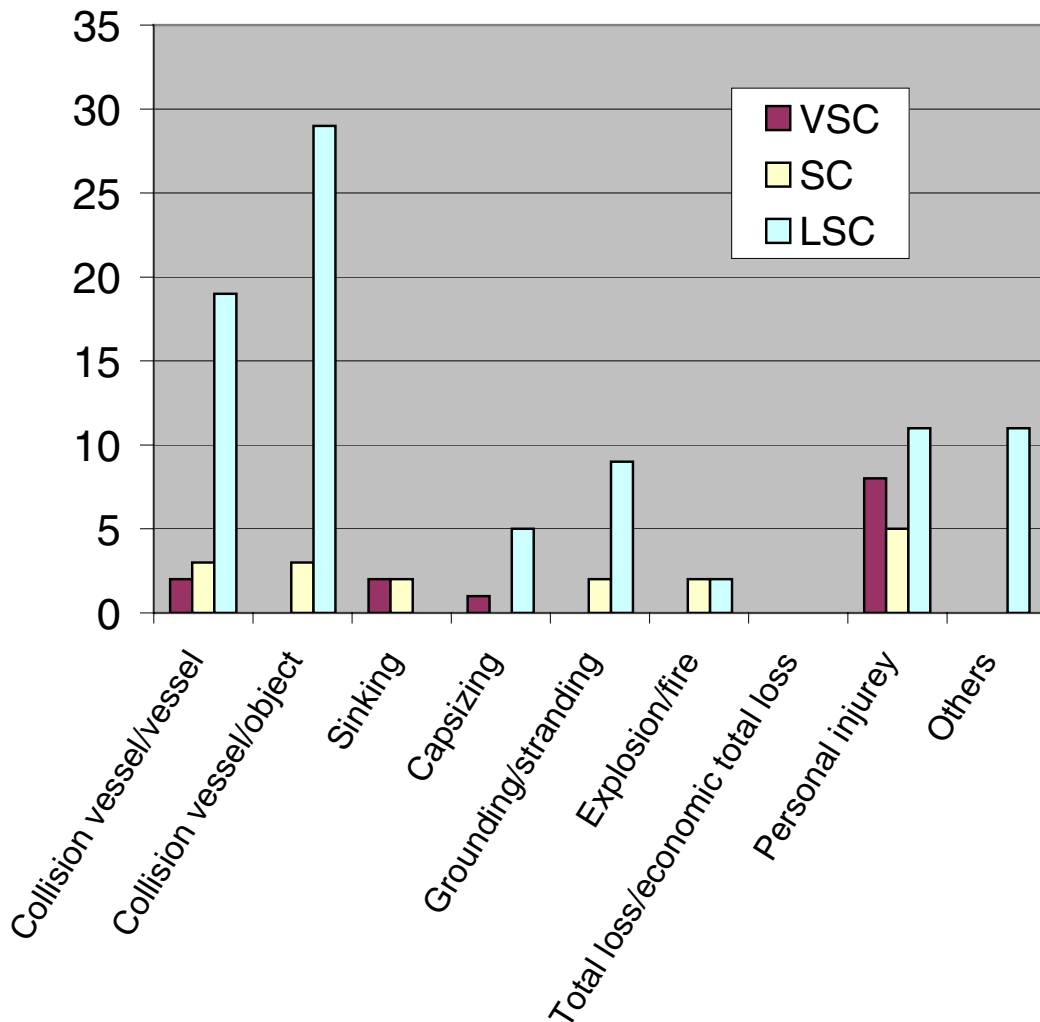
Flag and age of the vessels involved in the accidents

		German flag	Foreign flag	German and foreign flag	Leisure craft
1	0 to 4 years	6	8	14	1
2	5 to 9 years	9	11	20	1
3	10 to 14 years	2	4	6	1
4	15 to 19 years	1	3	4	0
5	20 to 24 years	1	10	11	1
6	25 to 29 years	2	6	8	0
7	30 and more years	8	8	16	8
8	No data	12	1	13	12



Frequency of types of casualty according to IMO Code A.849(20)

	VSC	SC	LSC
Collision vessel/vessel	2	3	19
Collision vessel/object	0	3	29
Sinking	2	2	0
Capsizing	1	0	5
Grounding/stranding	0	2	9
Explosion/fire	0	2	2
Total loss/economic total loss	0	0	0
Personal injury	8	5	11
Others	0	0	11
Total	13	17	86



In 2004 one accident with severe environmental pollution, release of 50 tonnes or more pollutants, was notified.
 (Foundering of Inlandtaker MT "ENA 2" after collision with "PUDONG SENATOR")

All reported incidents between 1 January and 31 December 2004**398**

Absolute per cent

1) Distribution of the incidents between ship types, total**479**

1 Dry-cargo freighters	214	44,68%
.1 Dry-cargo freighters of less than 100 GRT	0	
.2 Dry-cargo freighters of 100 to 499.99 GRT	11	2,30%
.3 Dry-cargo freighters of 500 to 1,599.99 GRT	18	3,76%
.4 Dry-cargo freighters of 1,600 to 4,999.99 GRT	85	17,75%
.5 Dry-cargo freighters of 5,000 GRT and more	94	19,62%
.6 Inland dry-cargo freighters	6	1,25%
2 Tanker	36	7,52%
.1 Tankers of less than 100 GRT	0	
.2 Tankers of 100 to 499,99 GRT	2	0,42%
.3 Tankers of 500 to 1,599,99 GRT	1	0,21%
.4 Tankers of 1,600 to 4,999.99 GRT	13	2,71%
.5 Tankers of 5,000 GRT and more	14	2,92%
.6 Inland tankers	6	1,25%
3 Tugs/Pilot vessel	27	5,64%
.1 Tugs	20	4,18%
.2 Pilot vessels	5	1,04%
.3 Dredgers	2	0,42%
4 Passenger vessels/Ferries	19	3,97%
.1 Passenger vessels on national voyages	16	3,34%
.2 Passenger vessel on international voyages	3	0,63%
.3 Inland passenger vessels	0	0,00%
5 Fishing vessels	31	6,47%
.1 Coastal fishing vessels	31	6,47%
.2 Deep-sea fishing vessels	0	0,00%
6 Ro-Ro-vessels	24	5,01%
7 Sport fishing craft	8	1,67%
8 Water craft without driving power	2	0,42%
9 Floating work gear (pontoons)	0	0,00%
10 Public service craft	6	1,25%
11 Bundeswehr (army) craft		
.1 Warships incl. Submarines	1	0,21%
.2 Auxiliary vessels of the Bundeswehr	1	0,21%
12 Commercially used small craft		
.1 Commercially used small craft up to 50 GRT	0	0,00%
.2 Commercially used small craft	1	0,21%

Az.: 2004

13 Leisure craft	88	18,37%
.1 Sailboats used by the owner	59	12,32%
.2 Motorboat used by the owner	23	4,80%
.3 Rented sailboats (with engine)	5	1,04%
.4 Rented motorboats	1	0,21%
14 Traditional vessels	12	2,51%
15 HSC (High Speed Craft)	1	0,21%
16 Other craft	8	1,67%

2) Distribution on sea waters

	398	
1-1 North Sea	44	11,06%
1-1-1 Within the territorial waters	42	10,55%
1-1-2 Open sea in the area of the German continental shelf	1	0,25%
1-1-3 Traffic Separation Schemes in the area of the German continental shelf	1	0,25%
1-2 Baltic Sea	89	22,36%
1-2-1 Flensburger Förde	2	0,50%
1-2-2 Kieler Förde	11	2,76%
1-2-3 Trave	10	2,51%
1-2-4 Within the territorial waters	65	16,33%
1-2-5 Open Sea within the area of the German continental shelf	1	0,25%
1-2-6 Traffic Separation Schemes in the area of the German continental shelf	0	0,00%
1-3 Ems	11	2,76%
1-4 Weser	47	11,81%
1-4-1 Hunte	1	0,25%
1-5 Jade	3	0,75%
1-6 Elbe	90	22,61%
1-6-1 Tributary waters of the Elbe	3	0,75%
1-7 NOK	88	22,11%
1-7-1 Kiel-Holtenau	24	6,03%
1-7-2 Brunsbüttel	40	10,05%
1-7-3 Rendsburg	0	0,00%
1-7-4 Strecke	24	6,03%
1-8 Worldwide	22	5,53%

3) Age of the vessels

479

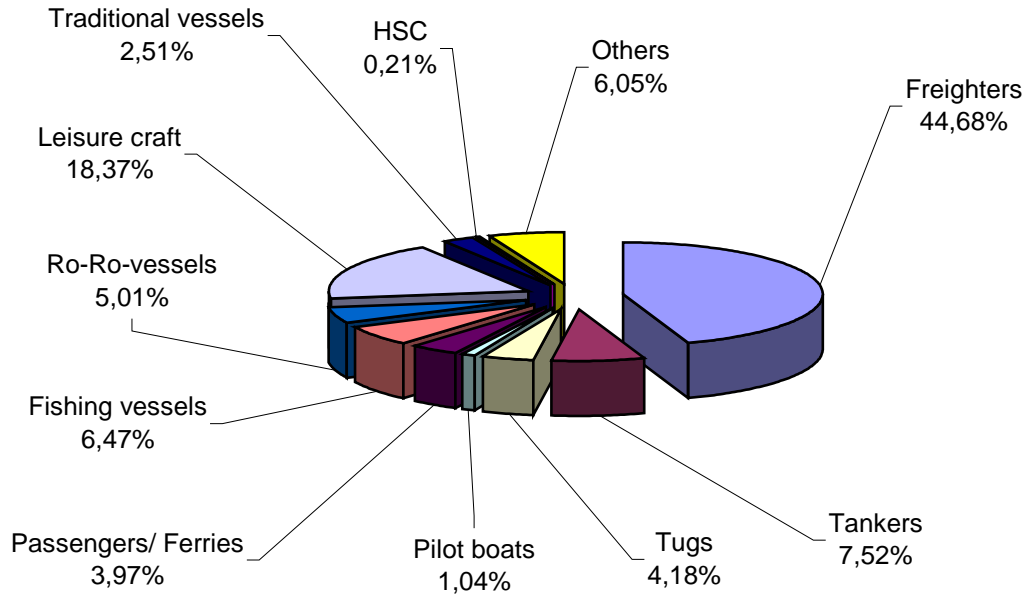
1	0 to 4 years	49	10,23%
2	5 to 9 years	63	13,15%
3	10 to 14 years	39	8,14%
4	15 to 19 years	29	6,05%
5	20 to 24 years	38	7,93%
6	25 to 29 years	19	3,97%
7	30 years and over	65	13,57%
8	No data	177	36,95%

4) Times of marine casualties

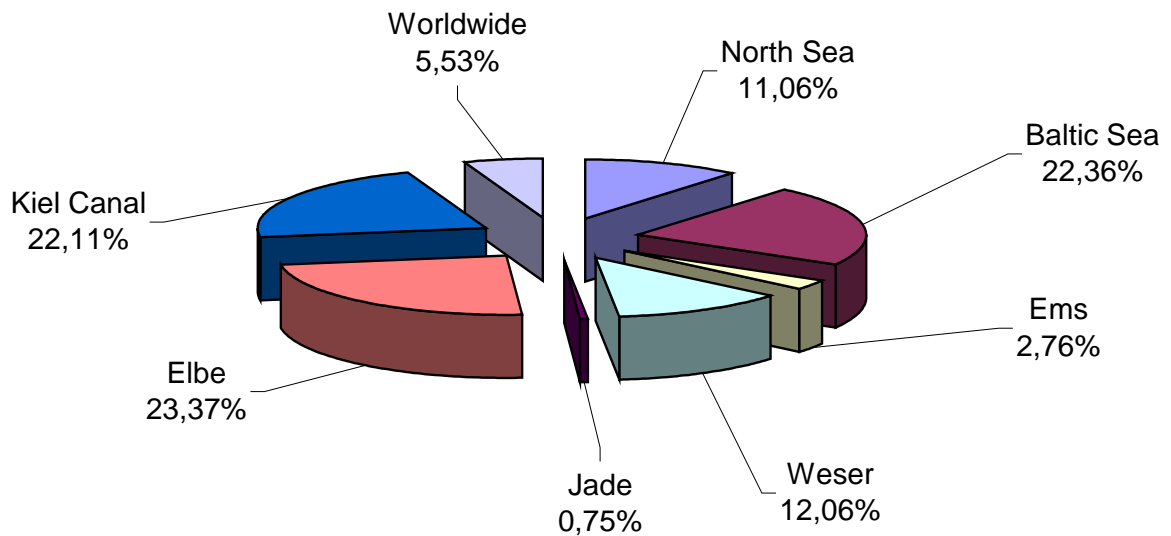
398

1	00:00 - 01:59	31	7,79%
2	02:00 - 03:59	23	5,78%
3	04:00 - 05:59	19	4,77%
4	06:00 - 07:59	20	5,03%
5	08:00 - 09:59	36	9,05%
6	10:00 - 11:59	28	7,04%
7	12:00 - 13:59	45	11,31%
8	14:00 - 15:59	47	11,81%
9	16:00 - 17:59	36	9,05%
10	18:00 - 19:59	39	9,80%
11	20:00 - 21:59	17	4,27%
12	22:00 - 23:59	25	6,28%
13	No data	32	8,04%

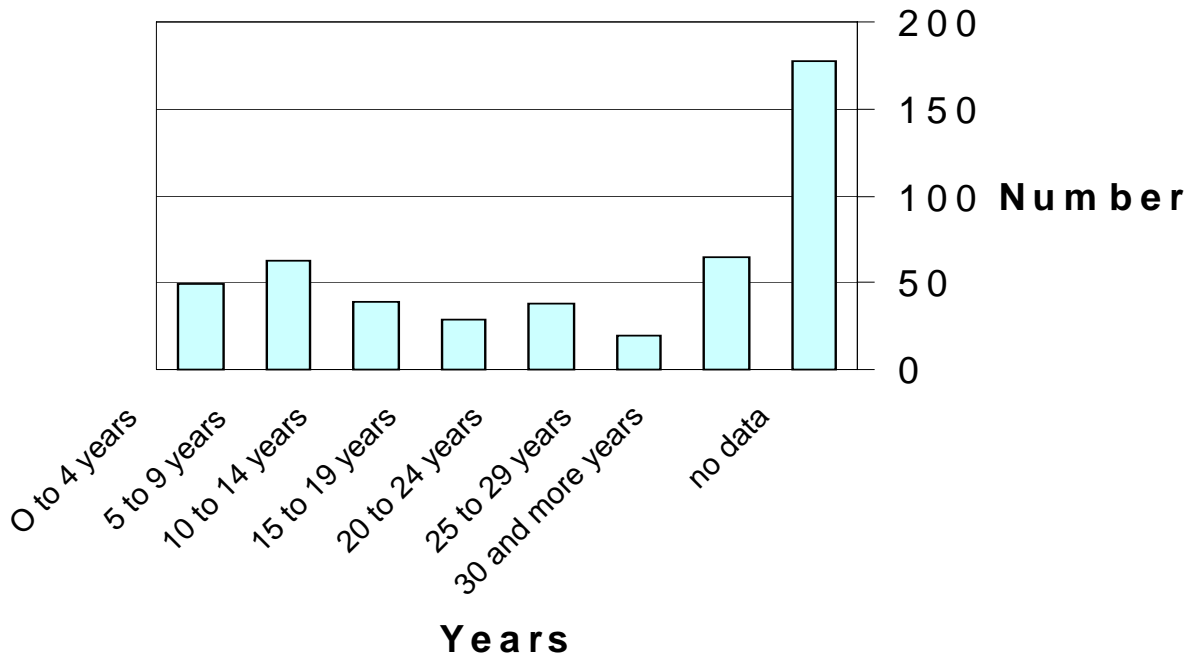
Distribution of incidents by ship type



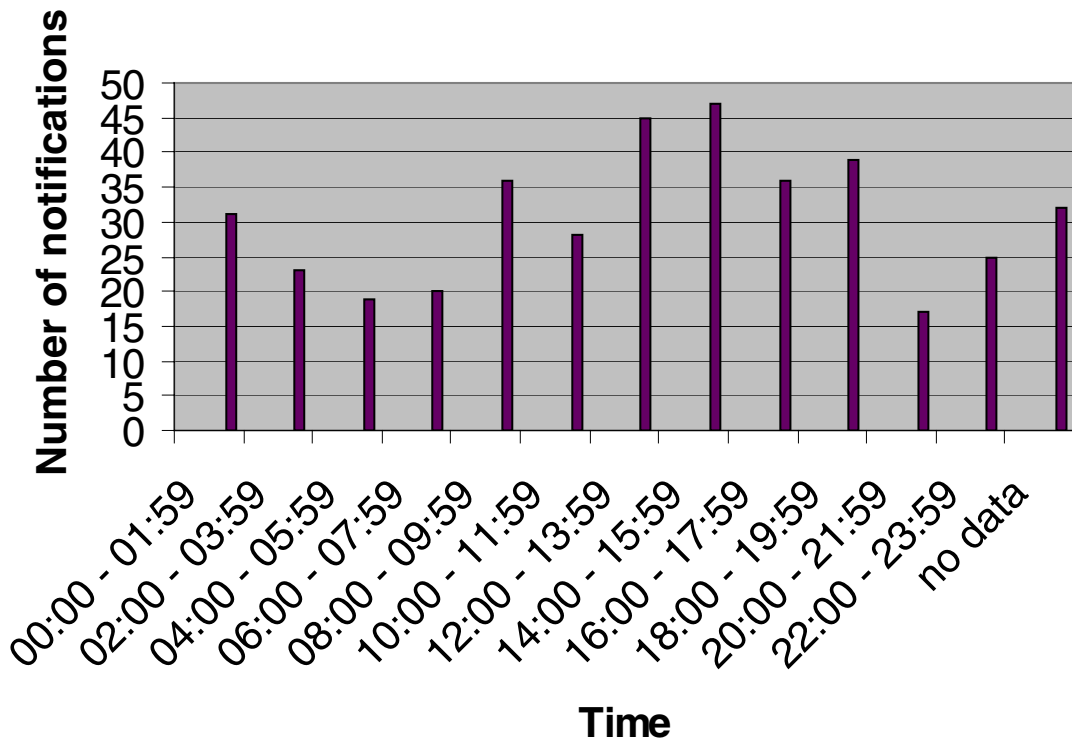
Distribution of incidents by sea waters



Age of the vessels



Reported time of accident



Type of accident for 2004

	Water ingress	Capsizing	Grounding/embankment contact	Collision		Fire/Explosion				Engine failure/steering gear problems	Others	Accidents with personal injuries (fatalities, injuries)	
				Vessel/vessel	Vessel/object	Engine room	Cargo holds	Accommodation	Leisure craft			Fatalities	Injured

1 Dry cargo freighters

- .1 Dry-cargo freighters of less than 100 GRT
- .2 Dry-cargo freighters of 100 to 499,99 GRT
- .3 Dry-cargo freighters of 500 to 1,599.99 GRT
- .4 Dry-cargo freighters of 1,6000 to 4,999.99 GRT
- .5 Dry-cargo freighters of 5,000 GRT
- .6 Inland dry-cargo freighters

1			1	5	2					1			
			3	7	7					1			
	1		14	23	33					2	8		
1			7	36	33					3	5	22	4
				2	2					1	1		15

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
- .4 Tankers of 1,600 to 4,999,99 GRT
- .5 Tankers of 5,000 GRT
- .6 Inland tankers

				1							1		
													1
			3	5	3	1				1			
			4	1	4						1		8
				3	1					1	1		1

3 Tugs/Pilot vessels

- .1 Tugs
- .2 Pilot vessels
- .3 Dredgers

	2	3	6	7							2		2
		1	2								2		
			1							1			

4 Passenger vessels/Ferries

- .1 Passenger vessels on national voyages
- .2 Passenger vessels on international voyages
- .3 Inland passenger vessels

		2	4	5						1	1	2	8
		1		1			1						

5 Fishing vessels

- .1 Coastal fishing vessels
- .2 Deep-sea fishing vessels

1	2	1	2	9	3	2		1		3	4	1	7
---	---	---	---	---	---	---	--	---	--	---	---	---	---

6 Ro-Ro-vessels

			1	4	14					3	2		1
--	--	--	---	---	----	--	--	--	--	---	---	--	---

7 Sport fishing craft

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

8 Water craft without driving power

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

9 Floating work gear

--	--	--	--	--	--	--	--	--	--	--	--	--	--

10 Public service craft

				4	1								1
--	--	--	--	---	---	--	--	--	--	--	--	--	---

11 Bundeswehr (army) craft

- .1 Warships (incl. Submarines)
- .2 Auxilliary vessels of the Bundeswehr

				1									
				1									

12 Commercially used small craft

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

					1								

13 Leisure craft

- .1 Sailboats used by the owner
- .2 Motorboats used by the owner
- .3 Rented sailboats (with engine)
- .4 Rented motorboats

4			19	18					1	2	8	9	10
2	1	2	6	6						1	2	2	2
				1	1					1			2
										1			

14 Traditional vessels

	1		4	2	2					1	1		2
--	---	--	---	---	---	--	--	--	--	---	---	--	---

15 HSC (High Speed Crafts)

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

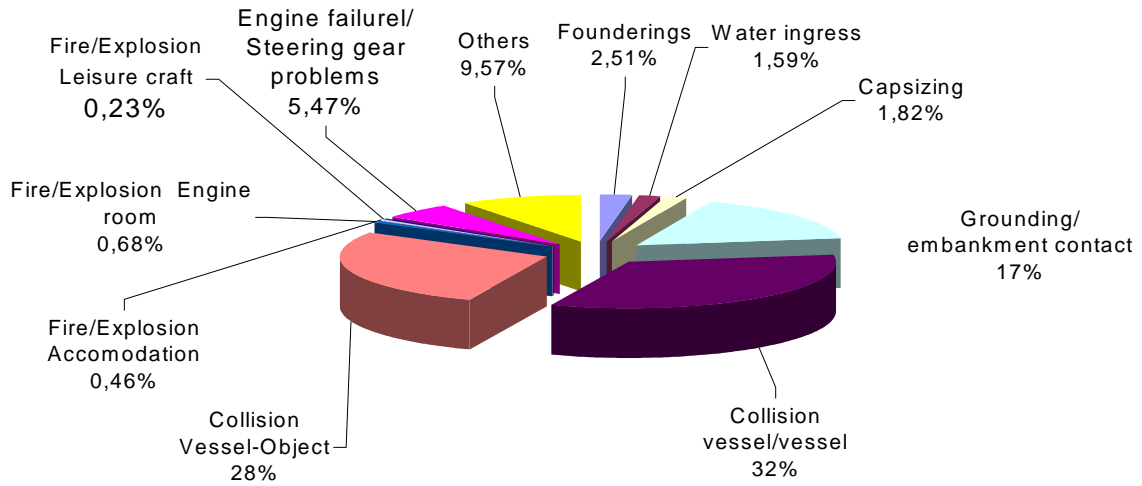
16 Other craft

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

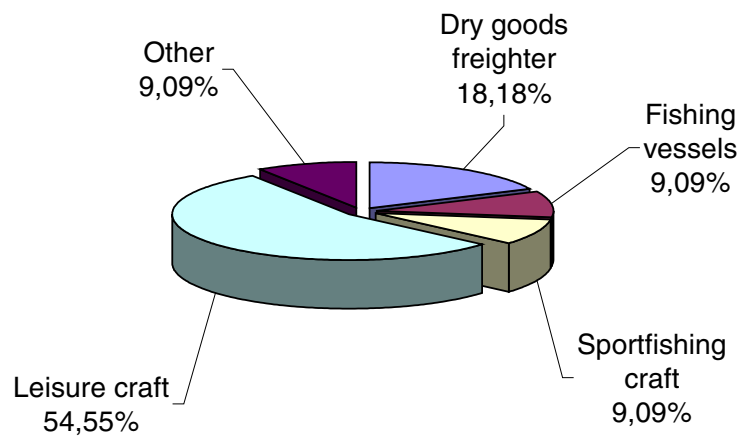
Summary of all crafts (multiple census) without accident which resulted in death or injuries

11	5	8	73	147	121	3	0	2	1	24	42	39	66
----	---	---	----	-----	-----	---	---	---	---	----	----	----	----

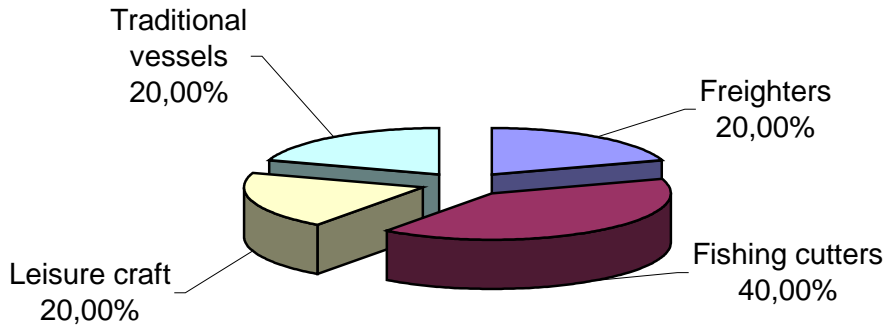
Types of accident for 2004



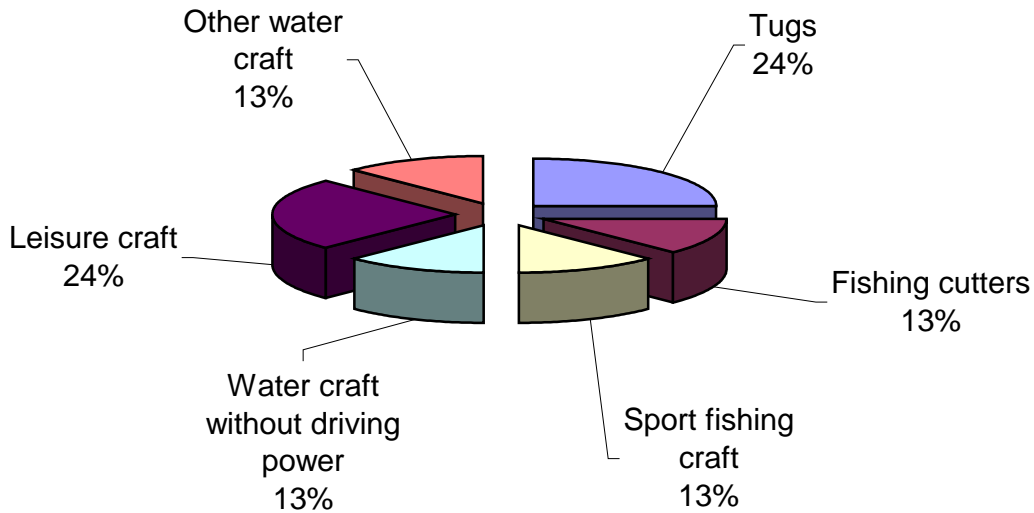
Foundering 2004, broken down by vessel type



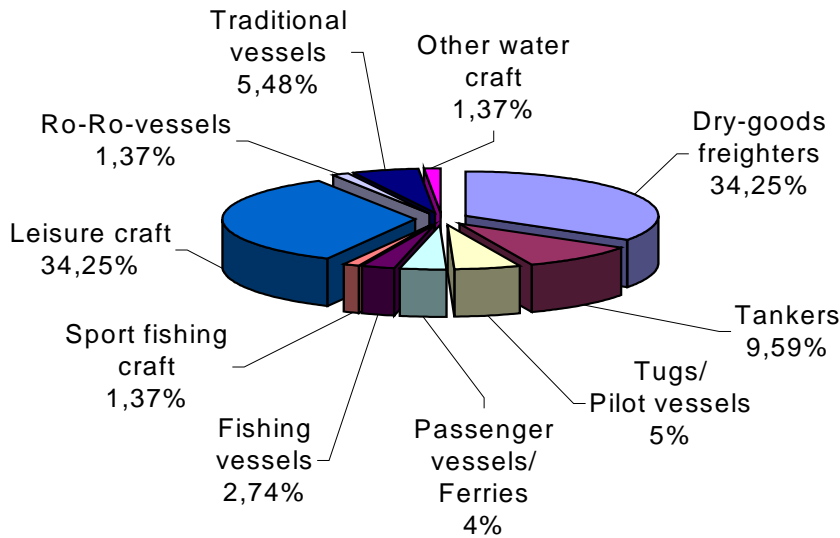
Water ingress 2004, broken down by vessel type



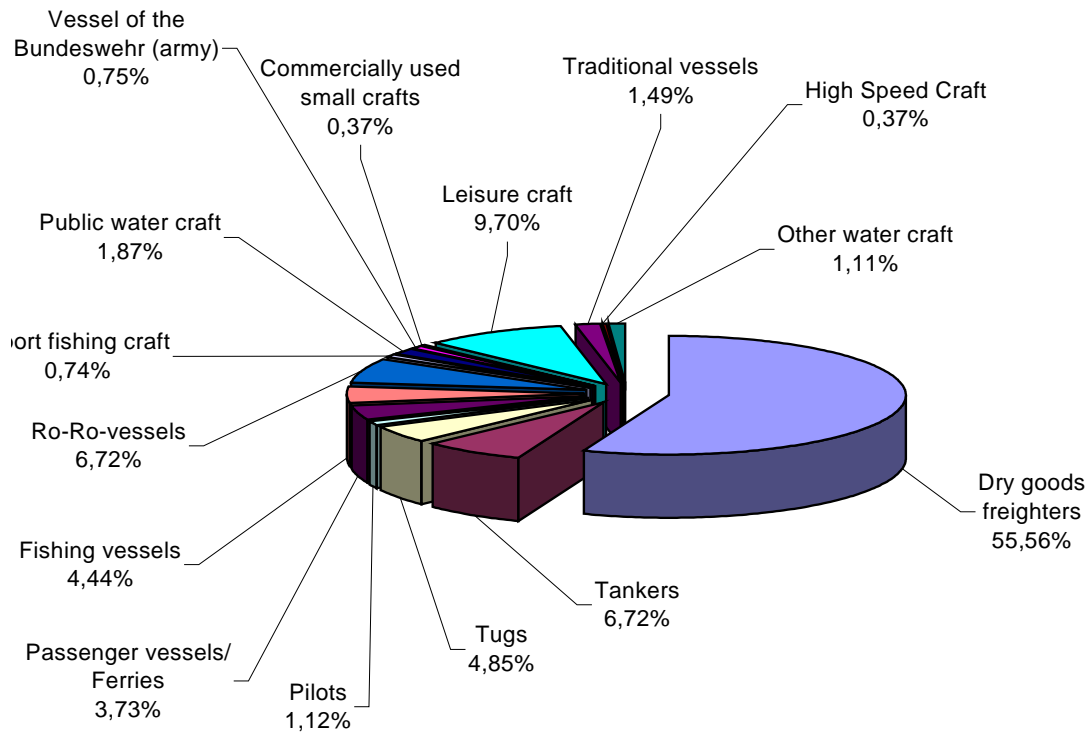
Capsizing 2004, broken down by vessel type



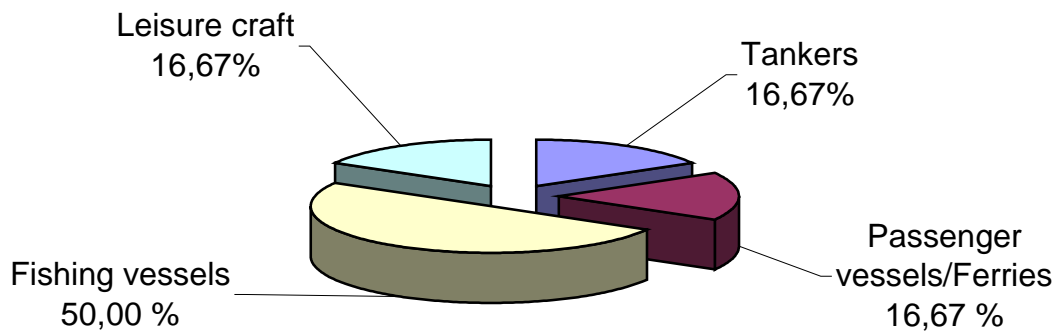
**Grounding/embankment contact,
 broken down by vessel type**



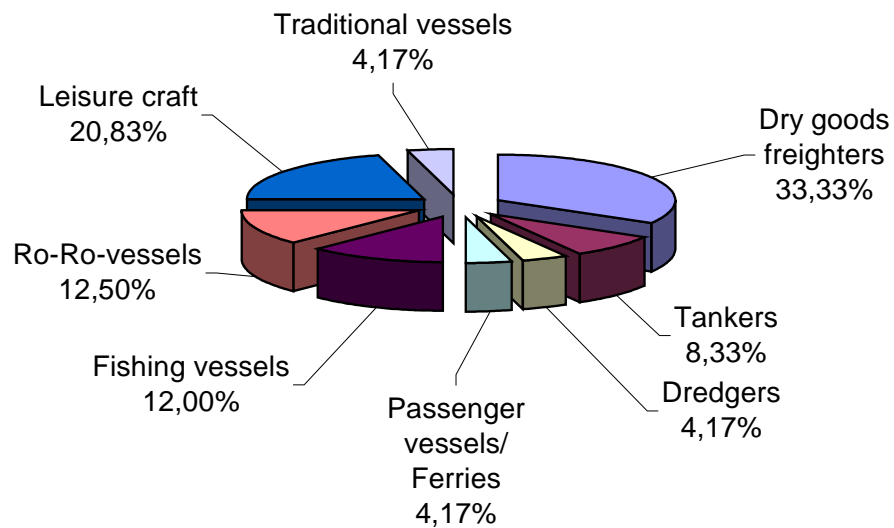
Collision 2004, broken down by vessel type



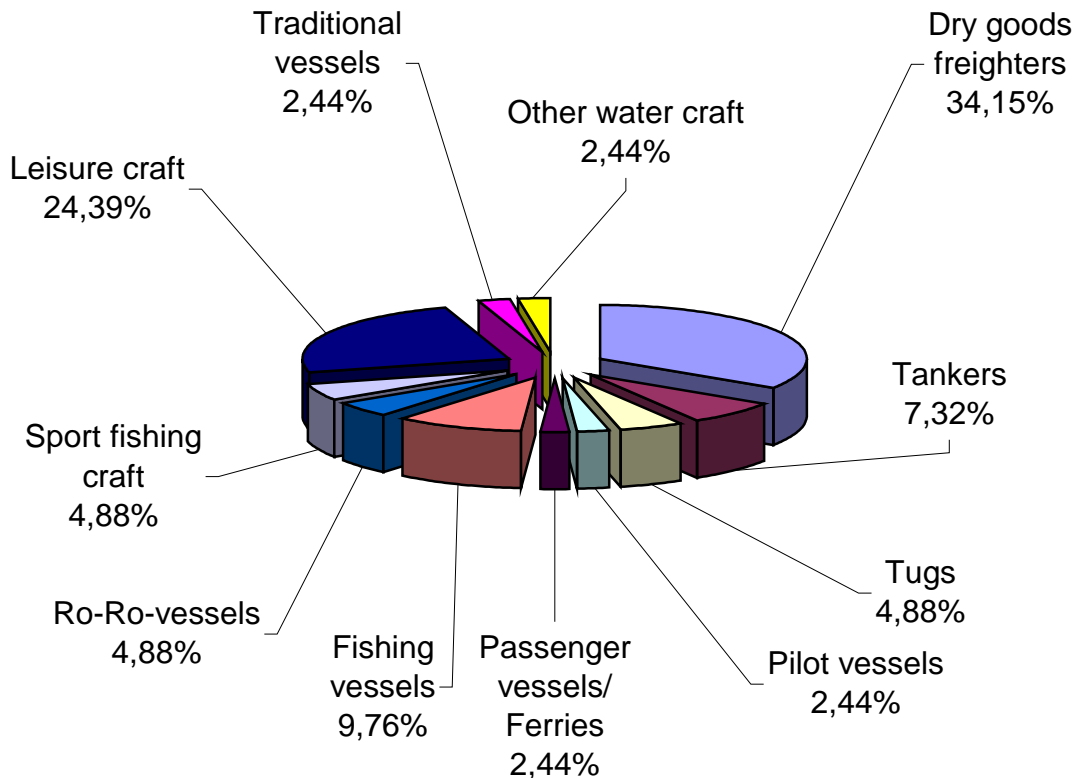
Fire/Explosion 2004, broken down by vessel type



Engine failure/steering gear problems



Other accidents 2004, broken down by vessel type



The investigations are conducted in conformity with the law to improve safety of shipping by investigating marine casualties and other incidents (Marine Safety Investigation Law - SUG) of 24 June 2002. According to this the sole objective of the investigation is to prevent future accidents and malfunctions. The investigation does not serve to ascertain fault, liability or claims.

The German version shall prevail in any interpretation of the investigation report.

Issued by:
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