Marine Incidents Annual Report 2003

Queensland Government

Maritime Safety Queensland

May 2004

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Cover and title page photograph – collision between two commercial passenger vessels – Pride of Airlie and Sun Paradise in the Whitsunday Passage on 18 November 2001.

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Director-General's Foreword

It is encouraging to see further improvement in Queensland's maritime safety outcome in 2003. While there has been continuing improvement over the past 25 years, the outcome for 2003 is commendable.

Queensland's population continues to grow faster than any other state in Australia, vessel registration numbers continue to grow, and on-water boating activity continues to grow as do retail boat sales. Despite increasing exposure and added pressure, boating in Queensland is safer today than at any time in the last three decades.

However, the challenge is ongoing and the boating community, both commercial and recreational, needs to be vigilant in embracing 'safety' as a culture—as a core boating value.

For its part, Maritime Safety Queensland since its establishment in October 2002 has demonstrated its commitment to the safe, efficient and environmentally sound use of Queensland's waterways. The agency's safety programs and education campaigns continue to play a vital part in making boating activity safe—as do the activities of external agencies such as the Queensland Water Police, the Queensland Boating and Fisheries Patrol and volunteer marine rescue organisations.

Reports like the Marine Incidents Annual Report help us to better understand why and how incidents occur on our waterways. Our objective in preparing the annual report on marine incidents is to assemble and analyse incident data in order to inform future decisions about maritime safety initiatives.

As Director-General of Queensland Transport, I am pleased to formally report on Queensland's maritime safety performance in 2003 and I look forward to the continued cooperation between Maritime Safety Queensland, commercial, fishing, and recreational boating communities and our partner agencies, the Queensland Water Police, the Queensland Boating and Fisheries Patrol and volunteer marine rescue organisations in 2004 to further improve safety on our waterways.

Bruce Wilson
Director-General
Queensland Transport

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Year in review

Queensland's good performance in terms of marine safety continued in 2003, with the best marine safety outcome for many years.

According to Australian Bureau of Statistics data, Queensland's maritime fatality rate per million of population has fallen over the last ten years by more than 62 per cent from 5.14 in 1990-1994 to 1.93 in 2000-2002. This compares with the rate for all of Australia for the same period that shows a decline from 7.68 to 2.07. Queensland improved from being ranked sixth of the eight Australian jurisdictions in the period 1990-1994 to second overall in the period 2000 - 2002, despite registered vessel numbers in Queensland increasing by more than 38 per cent.

In 2003, 645 marine incidents were reported in Queensland—a decrease of five incidents from the 650 incidents reported in 2002.

The most frequently reported types of marine incidents in 2003 were collisions between ships and unintentional groundings—each with 125 such incidents reported. Commercial passenger vessels and recreational sailboats were the most frequently involved vessels in reported marine incidents. 162 commercial passenger vessels and 101 recreational sailboats were involved in the 645 reported incidents during the year.

There were 28 incidents resulting in fatalities or serious injuries in 2003. The number of fatalities resulting from these incidents fell again in 2003—from 10 in 2002 to seven in 2003. This fatality outcome is well below the previous four-year average of 11 fatalities per annum. Five of the fatalities in 2003 resulted from incidents involving recreational vessels and two from incidents involving commercial vessels.

Queensland's maritime fatalities per million of population and per 100,000 registered vessels also reflect this downward trend.

There were 22 serious injuries requiring hospitalisation reported in 2003, down from 61 in 2002. The most frequent fatal and serious injury incident type in 2003 was 'person overboard', with six such incidents resulting in four fatalities and two serious injuries.

The major defining characteristics of incidents resulting in fatalities or serious injuries in 2003 included:

- good visibility (71.5 per cent)
- clear weather (71.5 per cent)
- daytime period (67.9 per cent)
- no damage (67.9 per cent)
- smooth waters (53.6 per cent)

Recreational speedboats, with 11 boats involved, were the most frequently involved vessel type in incidents that resulted in fatality or serious injury in 2003. Nine commercial passenger vessels were also involved in these more serious incidents in 2003.

A series of profiles later in this report examine a number of these incident characteristics and attributes in more detail.

1. Introduction

1.1 Background

This report provides an account of the health of Queensland's maritime safety environment as reflected by the number and nature of reported marine incidents for the year 2003. The report is made in accordance with section 127 of the *Transport Operations (Marine Safety) Act 1994* (the Act).

The report and the data and investigative systems underpinning the report together contribute to the following objectives outlined in section 3(2) of the Act:

(a) to allow the Government to have a strategic overview of marine safety and related marine operational issues; and

(b) to establish a system under which:

(i) marine safety and related operational issues can be effectively planned and efficiently managed; and

(ii) influence can be exercised over marine safety and related marine operational issues in a way that contributes to overall transport efficiency; and

(iii) account is taken of the need to provide adequate levels of safety with an appropriate balance between safety and cost.

1.2 Marine incidents defined

Section 123(1) of the Act defines a marine incident as an event causing or involving -

(a) the loss of a person from a ship; or

(b) the death of, or grievous bodily harm to, a person caused by a ship's operations; or

(c) the loss or presumed loss or abandonment of a ship; or

(d) a collision with a ship; or

(e) the stranding of a ship; or

(f) material damage to a ship; or

(g) material damage caused by a ship's operations; or

(h) danger to a person caused by a ship's operations; or

(i) danger of serious damage to a ship; or

(j) danger of serious damage to a structure caused by a ship's operations.

Consistent with the nationally endorsed data model for reporting marine safety incidents, a serious injury incident is defined as a marine incident where a person involved in the incident suffers any injury requiring admission to hospital.

1.3 Marine incident investigative and data systems

Section 125 of the Act requires marine incidents to be reported to Maritime Safety Queensland. All reported incidents are investigated—with more serious incidents undergoing more comprehensive investigation by trained and authorised shipping inspectors. Data from marine incident reports and subsequent investigation reports is recorded in a marine incident data management system. The data recorded is largely consistent with the national marine incident data set developed and endorsed by the National Marine Safety Committee. All Australian maritime jurisdictions are progressively moving toward full systems compliance with the national data set requirements.

Some incidents occurring in the maritime environment fall outside the earlier definition of a marine incident. These include workplace health and safety incidents that are not directly related to the operation of a vessel and collisions involving international trading vessels that are covered for reporting and investigation purposes under the *Navigation Act 1912 (Cwealth)*. To present a fuller picture of safety management within the maritime environment in Queensland, Maritime Safety Queensland maintains information on any such incidents involving a fatality that come to its attention. A review of out-of-scope fatal incidents is included in section 2.3.2 of this report.

1.4 Marine boards of inquiry

Under section 126 of the Act the Minister for Transport may on the recommendation of the chief executive, establish a board of inquiry into a reported marine incident. In 2002, the Minister convened a board of inquiry into the collision in the Whitsundays between two commercial passenger vessels, the Pride of Airlie and the Sun Paradise. A report on the board of inquiry was tabled in the Queensland Legislative Assembly on 13 November 2003. The report contains 41 findings of fact in relation to the collision and makes 13 recommendations. Maritime Safety Queensland is committed to implementation of the inquiry recommendations over the coming year with a view to preventing similar incidents from occurring and improving safety on our waters. A copy of the board of inquiry report is available at the Maritime Safety Queensland website: www.msq.qld.gov.au.

1.5 Structure of the report

As the report title implies, the focus is on marine incidents as a measure of maritime public safety. The report identifies the more significant incident categories and characteristics, and those showing significant change in 2003. This provides not only a sound basis for the determination of factors requiring further analysis, but also a sharper tool for shaping future maritime safety strategies and interventions.

The first section of the report includes interstate and intrastate trend analysis. These analyses are made using both population and the size of the registered vessel fleet as measures of potential exposure to marine incidents.

An examination is then made of comparative regional performance within Queensland before examining fatality and serious injury (FSI) incidents that carry a significantly higher social cost for the community.

Subsequent sections rank incident characteristics according to the extent of their involvement in incidents. This enables the identification of groupings of major incident characteristics and assessment of significant changes in the extent of their involvement in marine incidents over a five-year period.

The report then focuses on selected aspects of marine incidents for more detailed analysis. Interspersed among these selected profiles are a series of incident safety reports. These reports summarise marine incidents that actually occurred in Queensland in 2003. The reports highlight the lessons to be learnt from each incident. The cases presented here are representative only, and have been selected for the learning points that may benefit mariners confronted with similar circumstances.

To enable readers to gain further insight into marine incident trends and characteristics, time-series data for each characteristic of reported marine incidents are included at Appendix 1.

A review of the boating incidents reported by volunteer marine rescue organisations in 2003 is also included. Boating incidents represent an important early-warning barometer of safety performance in the maritime environment.

Regional volunteer marine rescue organisations perform an important role in the promotion and preservation of maritime safety in Queensland. They attend thousands of calls from boat operators for assistance each year and play a vital role in the practical handling of both marine and boating incidents.

The aim in this and future reports is to accurately represent the major features of marine incidents in Queensland, to identify areas where safety performance has improved, and to pinpoint hotspots for subsequent management.

In reading this and previous years' reports, it should be noted that at any given time, data and/or case details relating to reported marine incidents might be outstanding or incomplete. Consequently, marine incident data for recent years is subject to updating in subsequent years' marine incidents annual reports.

2. Marine incident trends

2.1 Australian marine fatality trends

To provide the broadest initial view of Queensland's relative maritime safety performance, the 2003 review commences with a comparison of Queensland's maritime fatality involvement per million of population with that of other Australian states and territories—based on Australian Bureau of Statistics (ABS) coroners' report data. While the ABS scope and definitions of water transport deaths vary slightly from those used by Maritime Safety Queensland for fatal marine incidents, the ABS data nonetheless allows a nationwide comparison from a common point of reference. For example, the ABS data may include water transport deaths that do not meet the 'marine incident' definition which relates specifically to the operation of a vessel. ABS data also is based on the year that coroners' reports are registered, rather than the year in which an incident may have occurred. The ABS data nonetheless resolves issues of comparability between individual jurisdictions' maritime incident data collections and definitions. Figure 1 shows that over the past 25 years, all states and territories in Australia have shown a marked improvement in maritime fatality rates per million of population. Table 1 at Appendix 1 provides comparative interstate water transport death rates for the period 1976 to 2002.

During the period 1994 to 1999, the data shows that the Queensland maritime fatality rate per capita exhibited both an absolute and a relative decrease compared with other jurisdictions. From ranking sixth of the eight jurisdictions in the 1990-94 period, Queensland's ranking improved to fourth over the period 1995-99. Queensland ranked second in Australia with a maritime fatality rate of 1.93 per one million of population for the period 2000 to 2002. This represents a fall of 25 per cent over the previous five-year average of 2.59 fatalities per million of population. Comparatively, the maritime fatality rate per million of population for all of Australia for 2000 to 2002 was 2.07. Coronial data for the 2003 calendar year was not available from the ABS at the time of printing this report.

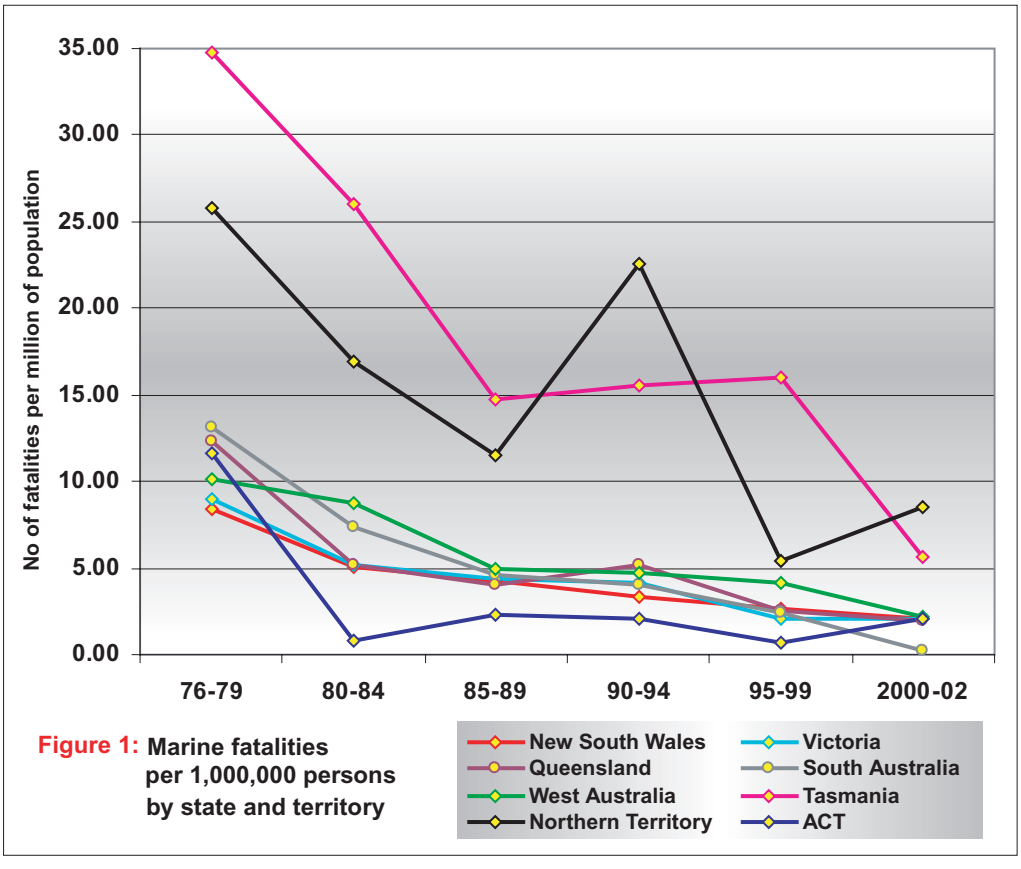


Figure 1: Marine fatalities per 1,000,000 persons by state and territory

During this three decade period numerous marine safety initiatives have been introduced at both the national and state levels, including:

- Compulsory boating safety equipment (1976)
- Recreational boating safety education campaigns (1978)
- Formal training courses for commercial marine licensing (1980)
- Voluntary training courses for recreational boating (1985)
- On-water random breath testing (1989)
- Introduction of electronic positioning radio beacons (EPIRBs) (1992)
- Introduction of formal recreational boat licence training option (1993)
- Positive flotation for vessels (1996)
- Introduction of boating weather service (1998)
- Introduction of on-water speed detection devices (1999)
- Know, Know, Know Your Boat education campaign (2000)
- BoatSmart education campaign (2003)

Maritime Safety Queensland is continuing to work closely with other maritime agencies like the Queensland Boating and Fisheries Patrol and the Queensland Water Police and with the maritime industry and boat operators to further improve Queensland marine safety performance.

2.2 Marine incidents in Queensland

2.2.1 Introduction

The analyses included in this report draw on data from 'reported' marine incidents. While the overall level of reporting of marine incidents is considered robust, there is an acknowledged indeterminate level of under-reporting of marine incidents in any given year. A comprehensive set of tables showing time-series trends for reported marine incidents from 1998 to 2003 is provided at Appendix 1.

When disaggregated, incidents numbers are often small and random variations can be large. For this reason, Maritime Safety Queensland generally assesses marine incident trends in terms of their rate of occurrence in the year under review compared with the average of the previous four years of data.

2.2.2 Reported marine incidents

In 2003, 645 marine incidents were reported in Queensland. This represents a decrease of five from the 650 incidents reported in 2002. The number of incidents reported in 2003 is generally consistent with the trend in recent years and the previous four-year average of reported marine incidents.

2.2.3 Marine incidents by severity

This section examines all reported marine incidents in Queensland. Incidents are analysed from two perspectives:

- the severity of resultant personal injury (Figure 2), and
- the severity of resultant property damage (Figure 3)

Figure 2 shows that total reported marine incidents fell slightly in 2003, but were generally in line with the trend over the previous five years. The aggregate numbers of reported marine incidents in recent years suggest that there may be a plateau occurring in the rate of marine incidents. Analyses in subsequent years will continue to monitor this aspect.

Figure 2 also shows reported marine incidents according to the severity of the personal injury outcome. Incidents resulting in fatality have fallen from 12 in 2000 to 7 in 2003. This compares favourably with the four-year average of 9.75 fatality incidents per year. Serious injury incidents fell significantly in 2003 to 21, compared with 53 in 2002 and a four-year average of 55.25. This fall can be attributed to improved safety on the water as well as more rigorous application of the 'hospitalisation' criterion for serious injury incidents.

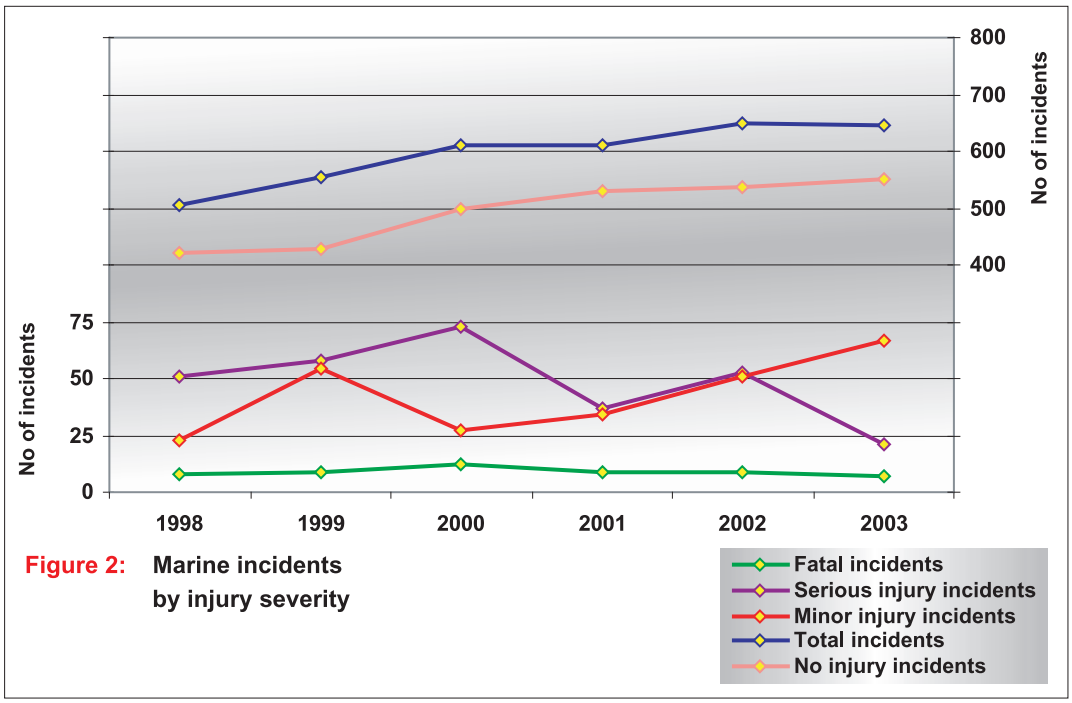


Figure 2: Marine incidents by injury severity

Incidents resulting in minor injuries have also been included in Figure 2. Minor injuries resulting from marine incidents appear to be generally consistent with recent trends. The marginally higher number of minor injury incidents reported in 2003 is consistent with the earlier mentioned fall in serious injury incident numbers. It is also encouraging to note the continuing growth in 'no injury' incidents—both in absolute and relative terms.

The second view of incident severity relates to property damage and loss. The various dimensions of property damage and their relative involvement in marine incidents between 1998 and 2003 are shown in Figure 3.

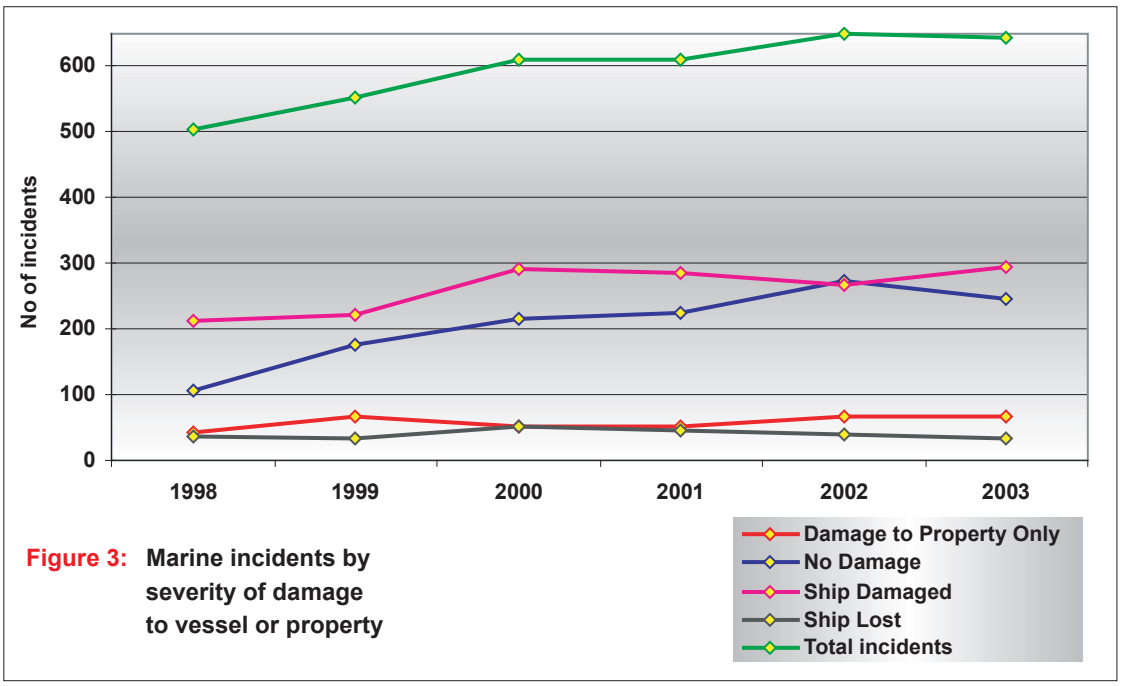


Figure 3: Marine incidents by severity of damage to vessel or property

The number of vessels deemed a total write-off/loss in terms of property damage (33) is down 17.5 per cent on the number of ships lost in 2002 and is well below the previous four-year average of 42 ships lost per year. 'Ships damaged' rose marginally in 2003—up from 268 in 2002 to 294 in 2003, and higher than the previous four-year average of 266.5. There was a corresponding fall in 2003 in the number of incidents where 'no damage' was reported.

2.2.4 Marine incidents by region

The Brisbane region recorded the greatest number of reported marine incidents (192) in 2003, while the Townsville region recorded the least number of reported incidents (49). Reported marine incidents in all regions are generally in line with their respective four-year averages. Figure 4 shows the number of reported marine incidents according to the region in which the incident occurred. Map 1 shows the comparative numbers of commercially and recreationally registered ships for each region.

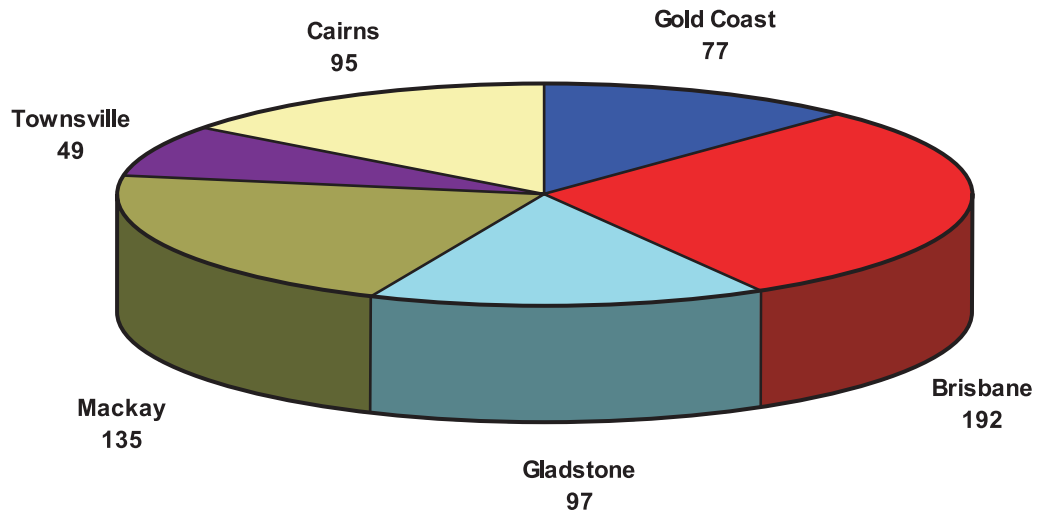
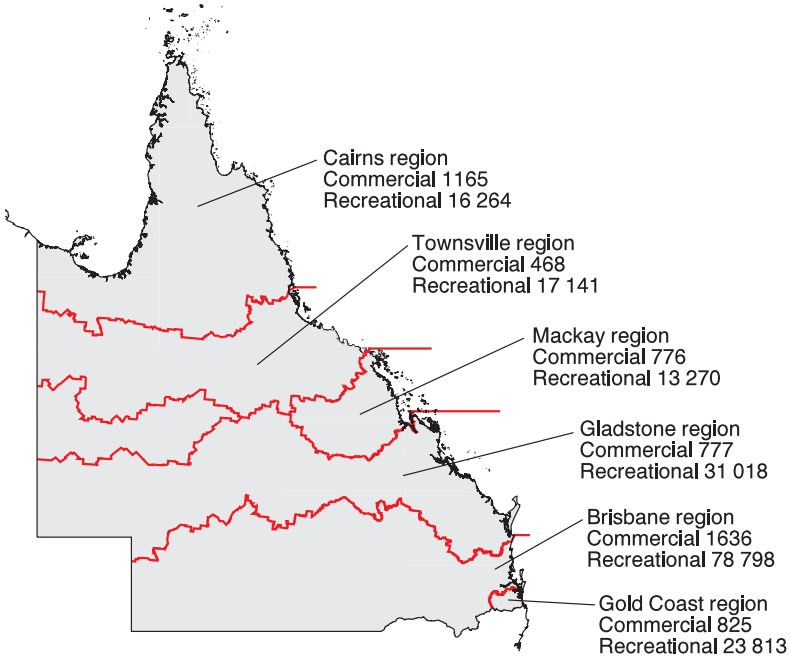


Figure 4: Marine incidents in 2003 - by region



Map 1: Registered ship numbers by region - 2003

2.2.5 Marine incidents by incident type

Figure 5 shows the trends for the five most frequently occurring types of marine incident reported in 2003. These five incident types accounted for 368 of the 645 recorded incidents in 2003.

Three of the top 5 incident types have shown increases in involvement in 2003.

The most frequent marine incident types in 2003 were 'collision between ships' and 'unintentional groundings', with 125 such reported incidents for each incident type. While 'collisions between ships' are in line with their previous four-year average of 124.25 reported marine incidents, 'unintentional groundings' are over-represented when compared with the 94 reported in 2002 and their previous four-year average of 107.25.

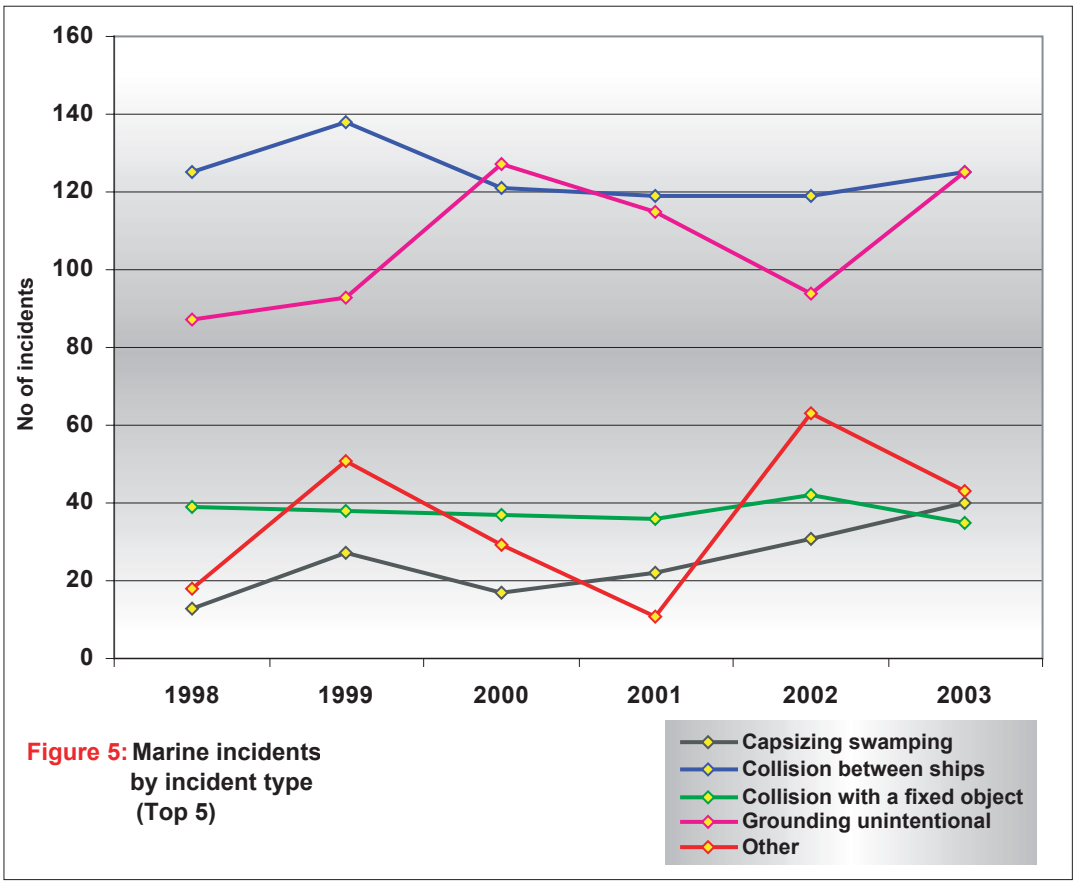


Figure 5: Marine incidents by incident type (Top 5)

2.2.6 Marine incidents by vessel type

Figure 6 shows the five vessel types that figured most frequently in reported marine incidents in Queensland in 2003 and their comparative representation since 1998. With the exception of commercial fishing vessels, the remaining four of the top five vessels have shown increases in involvement in marine incidents in 2003.

Commercial passenger vessels (162) are significantly over-represented when compared with their involvement in both 2002 (137) and their previous four-year average involvement in 134 marine incidents. The involvement of commercial non-passenger vessels in marine incidents in 2003 (93) has jumped significantly when compared with the 69 vessels involved in incidents in 2002 and their previous four-year average involvement in only 44.75 marine incidents.

In terms of recreational vessel involvement, both recreational sailboats and recreational motorboats are significantly over-represented when compared with their involvement in incidents in 2002 and their previous four-year average involvement in marine incidents. It is worth noting that the majority of vessels falling into these two recreational vessel categories do not presently require operators to be licensed.

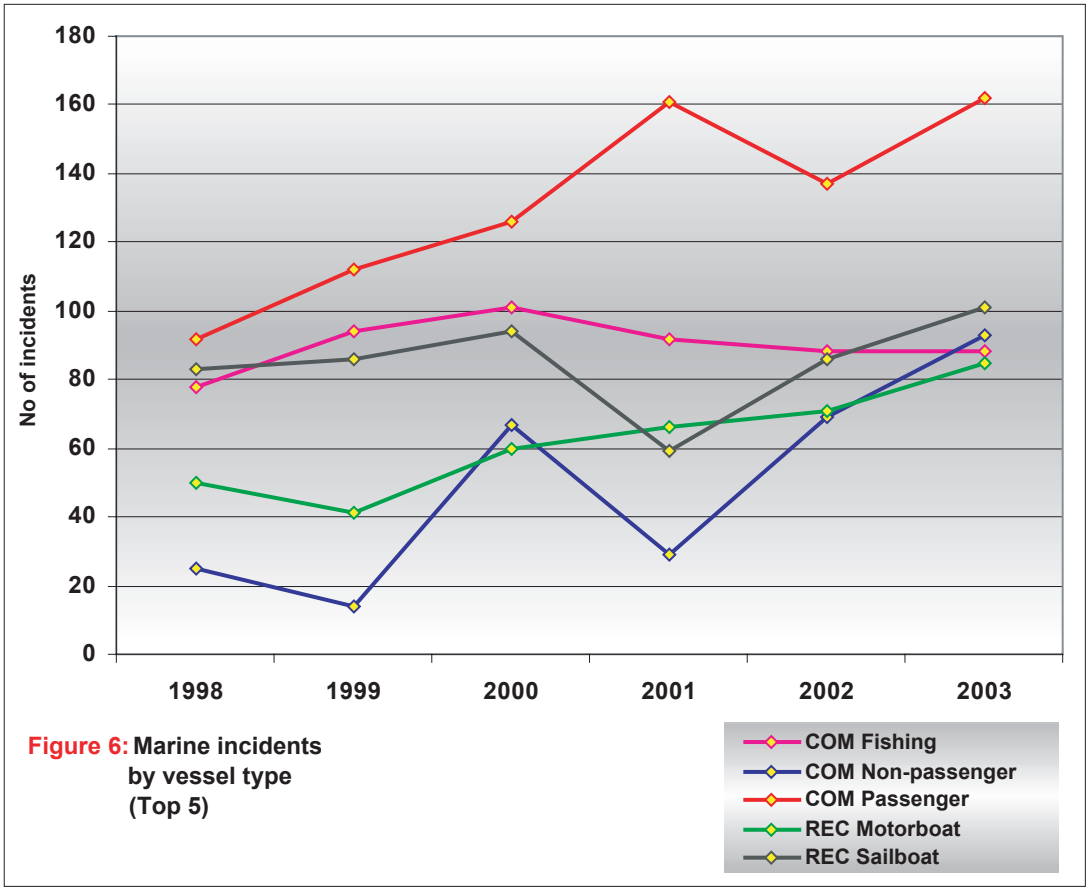


Figure 6: Marine incidents by vessel type (Top 5)

2.2.7 Marine incidents by location

563 of the 645 reported marine incidents in 2003 occurred in smooth, partially smooth and offshore waters, with all three locations showing increases compared with their previous four-year average involvement. Incidents occurring in inland waters (78) fell in 2003, from 101 in 2002 and a previous four-year average of 110.25 reported incidents. This could in part be due to more rigorous location definition of incidents occurring in non-tidal streams and catchments. It could also be attributable to reduced boating activity on inland waters as a result of extreme drought conditions. Figure 7 shows the location of reported marine incidents in 2003.

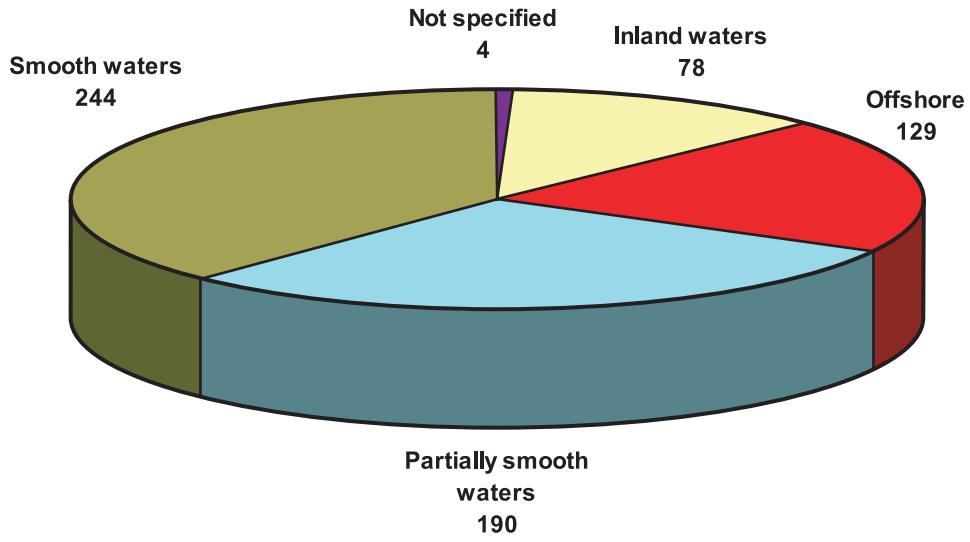


Figure 7: Marine incidents in 2003 - by location

The location descriptors used for recording marine incidents in Queensland are defined below:

- Inland waters – any navigable water that is not tidal, for example, non-tidal rivers, creeks, lakes and dams
- Smooth waters – any enclosed navigable tidal water other than waters defined by legislation as partially smooth waters, for example, tidal creeks, rivers, estuaries, harbours and bays
- Partially smooth waters – open stretches of water defined by legislation as partially smooth waters where wave heights under normal conditions do not exceed 1.5 metres, for example, open sections of Moreton and Hervey Bays
- Offshore waters – those waters that are beyond smooth and partially smooth waters including exposed coastal waters.

2.3 Queensland marine fatality trends

Figure 8 shows Queensland's maritime fatalities per million of population and per 100,000 registered vessels. In the absence of more definitive exposure data, these represent two surrogate but objective measures of exposure for maritime fatalities. Fatalities relative to both vessels on register and total population continue to trend downwards.

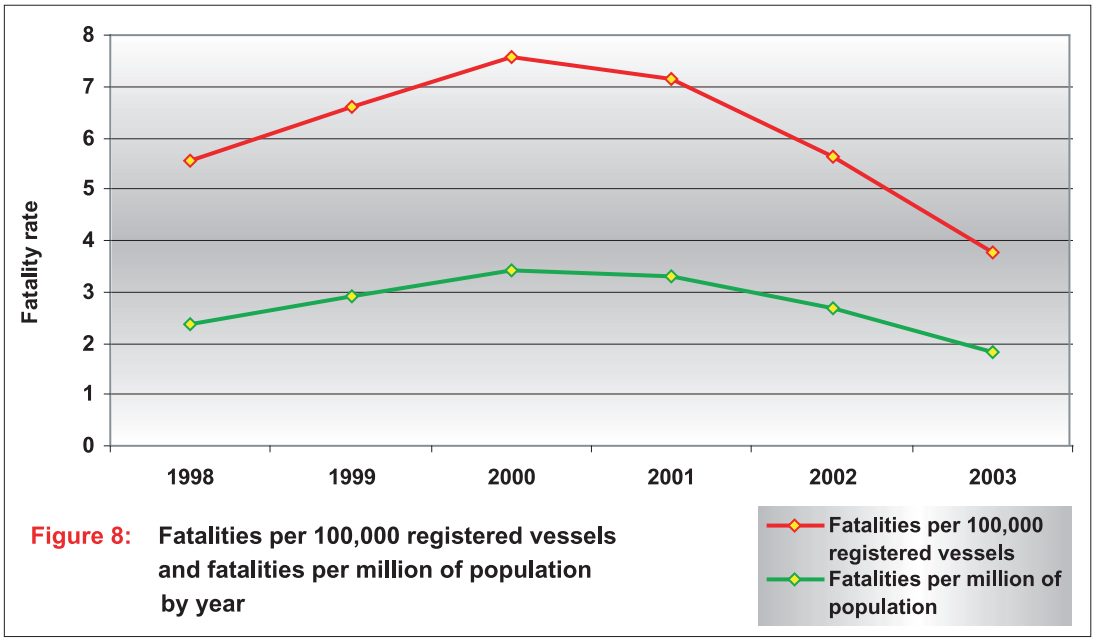


Figure 8: **Fatalities per 100,000 registered vessels and fatalities per million of population by year**

Figure 9 compares trends in Queensland marine fatalities with both vessel registrations and population since 1997 (index 1997 = 100). Fatalities in 2003 are 41.6 per cent lower than in 1997. Over the same period, Queensland's vessel registration numbers have grown by more than 35 percent and its population has increased by more than 13.7 per cent.

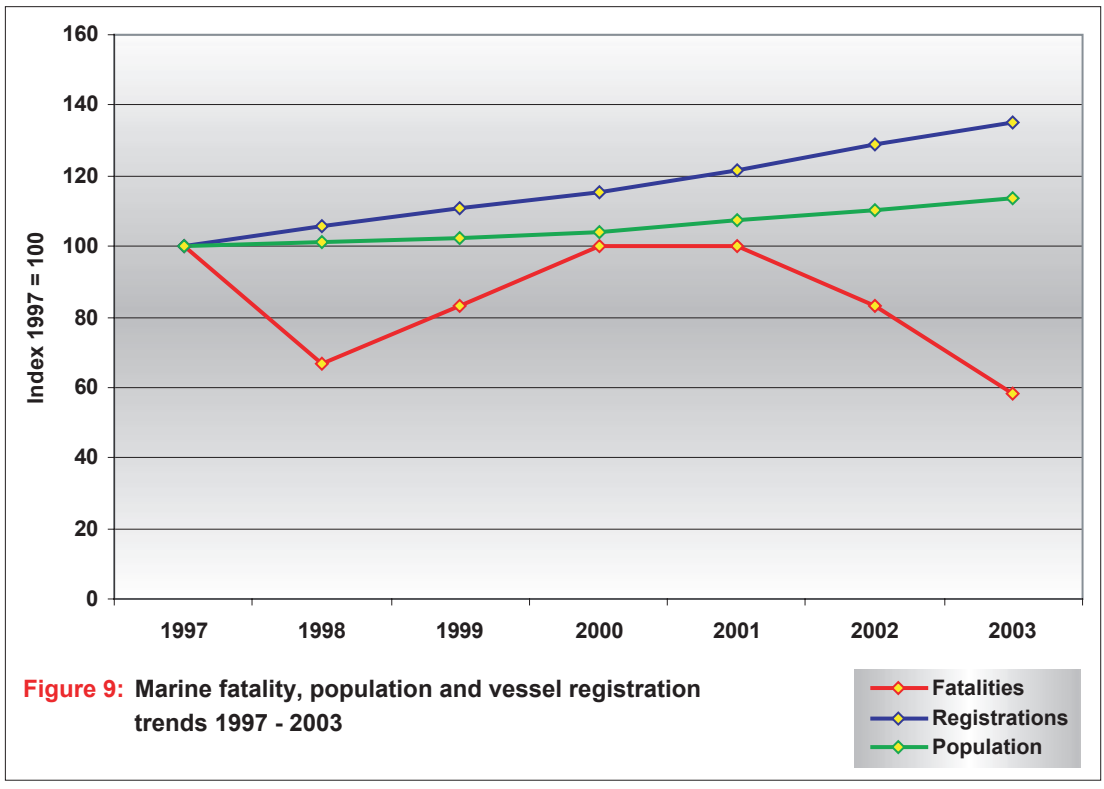


Figure 9: **Marine fatality, population and vessel registration trends 1997 - 2003**

2.3.1 Marine fatalities by vessel type

In Figures 10 and 11, marine incident fatality figures are broken down according to the two major vessel registration categories—recreational and commercial.

Figure 10 shows that five fatalities resulted from marine incidents involving recreational vessels in 2003. Recreational fatalities in 2003 are marginally below the previous four-year average of 5.25 fatalities per annum. This compares with growth in registered recreational vessel numbers in 2003 of nearly five per cent and 30 per cent over the period 1998 to 2003. The number of fatalities per registered recreational vessel continues to fall, despite both increasing numbers of recreational vessels on the waters and apparent increasing levels of recreational boating activity.

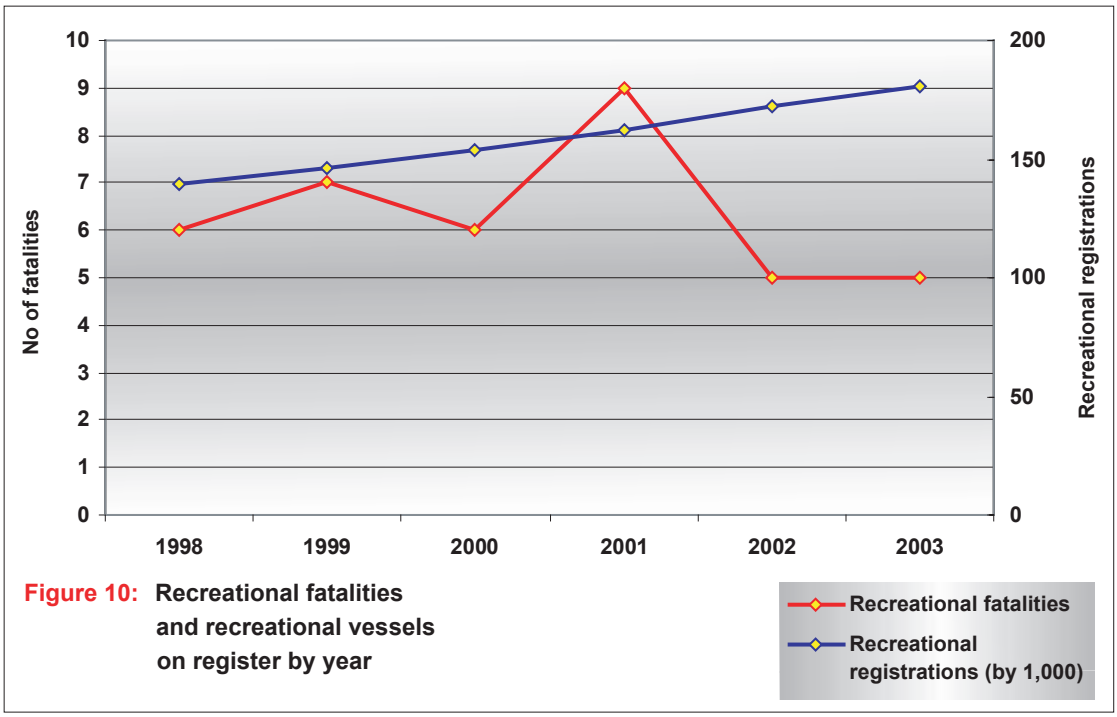


Figure 10: Recreational fatalities and recreational vessels on register by year

The growth trend in the number of commercially registered vessels is shown in Figure 11. There has been an increase in the number of commercially registered vessels of approximately 16 per cent over the period 1998 to 2003. Figure 11 shows there were two fatalities resulting from marine incidents involving commercial vessels in 2003. This represents a 60 per cent fall from 2002 and is well below the average of 4.25 fatalities per year for the previous four-year period.

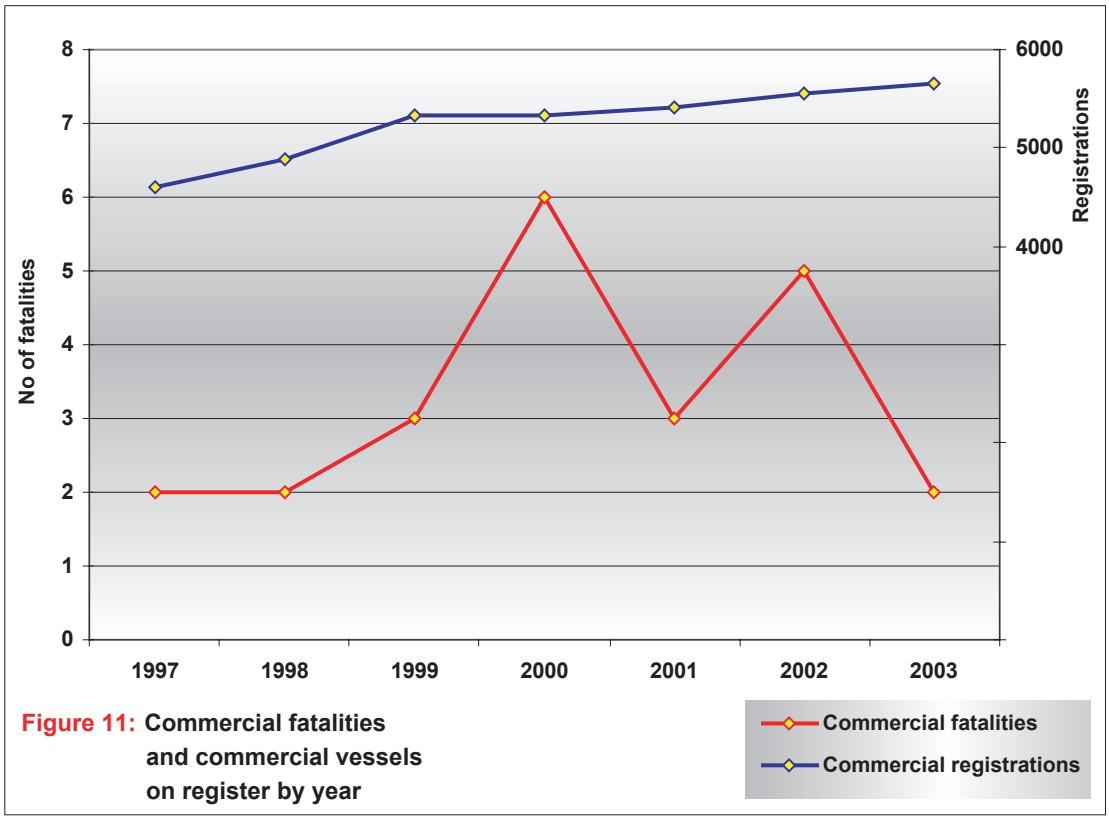


Figure 11: Commercial fatalities and commercial vessels on register by year

2.3.2 Out-of-scope marine fatalities

For a number of years Maritime Safety Queensland has captured data on incidents which occur in the maritime environment but are outside the scope of marine incidents as defined in the Act. They include fatality incidents where the death is attributable to natural causes, where the incidents fall directly within the scope of Queensland workplace health and safety or other Commonwealth legislation, or where the incident is not clearly connected with or attributable to the operation of a vessel.

As part of its marine incident case management system, Maritime Safety Queensland monitors these incidents to ensure that any necessary remedial action, which may include legislative changes, is taken. The data also enables the presentation of a fuller picture of safety in the maritime environment.

Figure 12 shows the number of fatalities resulting from both in-scope and out-of-scope incidents in the maritime environment for the period 2000 to 2003. Queensland's combined maritime fatalities, including out-of-scope fatalities, were 23 in 2000, 19 in 2001, 17 in 2002 and 16 in 2003.

The 2003 fatalities classified as out-of-scope included:

- four men who died while snorkelling—two were from commercial dive boats
- a woman who was found dead while participating in an introductory dive course
- a man who suffered a seizure and fell from his boat and drowned
- a passenger from a charter vessel who died while attempting to swim ashore

Out-of-scope maritime fatality data was not recorded before 2000.

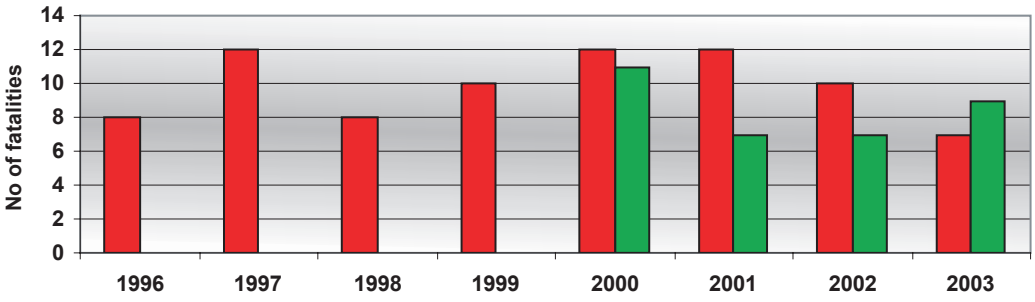


Figure 12: **Fatalities in the maritime environment**

2.4 Fatal and serious marine incidents in Queensland

The following sections examine marine incidents resulting in fatalities and serious injuries (FSI incidents).

2.4.1 Reported fatal and serious injury incidents

In 2003, Maritime Safety Queensland received reports of 28 FSI incidents—34 less than in 2002. This outcome is significantly below the previous four-year average of 65 FSI incidents per year. Part of the fall in FSI incident numbers in 2003 can be attributed to rigorous application of the 'hospitalisation' criterion outlined earlier in section 1.2.

Despite the significant fall in FSI incident numbers in 2003, Maritime Safety Queensland acknowledges that there is likely to be an indeterminate level of under-reporting of non-fatal marine incidents. Recent independent studies of hospital admissions data by Flinders and Monash Universities suggest a higher level of serious injuries from 'water transport' accidents than is reflected in Maritime Safety Queensland's reported marine incident data. Maritime Safety Queensland is examining options for monitoring Queensland hospital admissions data to more accurately determine the extent of serious injuries resulting from marine incidents.

There were seven fatalities resulting from marine incidents during 2003—three fewer than in 2002. This represents a 30 per cent fall from the number of fatalities recorded in 2002 and a 41.6 per cent fall from the number of fatalities recorded in both 2000 and 2001. Recorded fatalities in 2003 are also well below the previous four-year average of 11 fatalities per annum.

2.4.2 FSI incidents by region

Figure 13 shows the number of FSI incidents reported in each region during 2003.

All regions recorded falls in the number of reported FSI incidents in 2003 compared with their respective previous four-year average FSI incidents.

Brisbane region, with 7 reported FSI incidents in 2003, is significantly down on the region's previous four-year average of 22.25 FSI incidents.

Cairns region did not have any reported FSI incidents in 2003. This is a significant improvement when compared with the 12 reported FSI incidents in 2002 and a previous four-year regional average of 7.5 FSI incidents.

Gladstone region has continued its recent downward trend in FSI incidents with only five FSI incidents in 2003, compared with a previous four-year regional average of 10.5 FSI incidents.

Likewise, Mackay region has continued its recent downward trend in FSI incidents with only six FSI incidents in 2003, compared with a previous four-year regional average of 10.25 FSI incidents.

Gold Coast region, after recording 14 FSI incidents in 2002, recorded only seven FSI incidents in 2003—below the region's previous three-year average of 11.33 FSI incidents.

Townsville region recorded three FSI incidents in 2003, one more than in 2002, but still under-represented when compared with the region's previous four-year regional average of 4.25 FSI incidents.

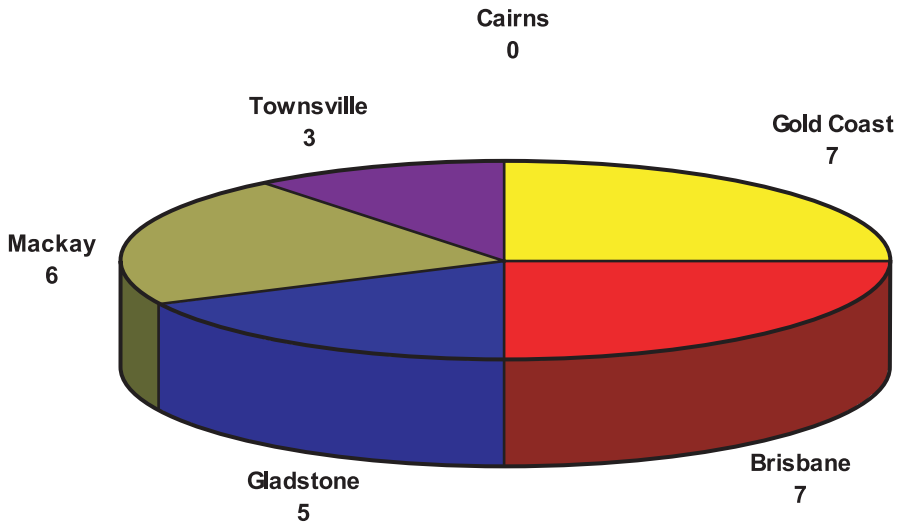


Figure 13: Fatal and serious injury incidents in 2003 - by region

2.4.3 FSI incidents by incident type

Figure 14 shows the trends for the five most frequently-occurring types of marine incident that resulted in either fatalities or serious injuries. These five incident types accounted for 20 of the 28 recorded FSI incidents in 2003.

Four of the top 5 incident types have shown falls in involvement in 2003.

The most frequent FSI incident type in 2003 was 'person overboard', with six such incidents resulting in four fatalities and two serious injuries. While 'person overboard' incidents in 2003 are well down on 2002 (9) and their four-year average involvement (9.75), the outcome from these incidents is often severe—with many resulting in death.

FSI incidents involving 'collisions between ships' were down markedly from 10 in 2002 to three in 2003—well below their previous four-year average FSI incident involvement of 7.75.

The only 'top 5' FSI incident type to record an increase in involvement in 2003 was 'personal injury – hit by propeller or ship' with four such incidents recorded, up one on 2002 and above the previous four-year average involvement of 2.25.

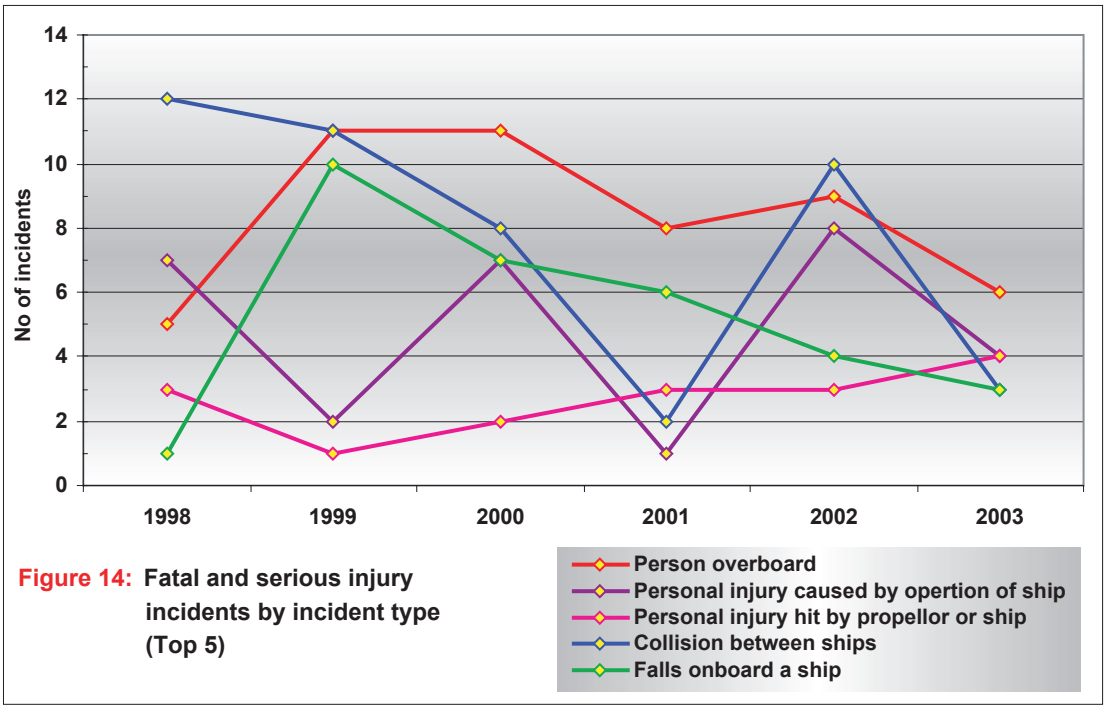


Figure 14: Fatal and serious injury incidents by incident type (Top 5)

2.4.4 FSI incidents by vessel type

Figure 15 shows the five vessel types that figured most frequently in FSI incidents in Queensland in 2003 and their comparative representation since 1998. Three of the vessel types have shown falls in FSI incident involvement in 2003—recreational speedboats, commercial fishing ships and other commercial ships.

Recreational speedboats and commercial fishing ships showed marked falls in involvement in 2003. Both vessel types are under-represented in 2003. The FSI incident involvement of recreational speedboats is down by some 35 per cent on involvement in 2002 and is under-represented compared with a previous four-year average involvement of 14.25. Incidents involving recreational jet skis are categorised separately, and are not included in recreational speedboat incident numbers. The FSI incident involvement of commercial fishing ships is down by 70 per cent on involvement in 2002 and is markedly under-represented compared with a previous four-year average involvement of eight.

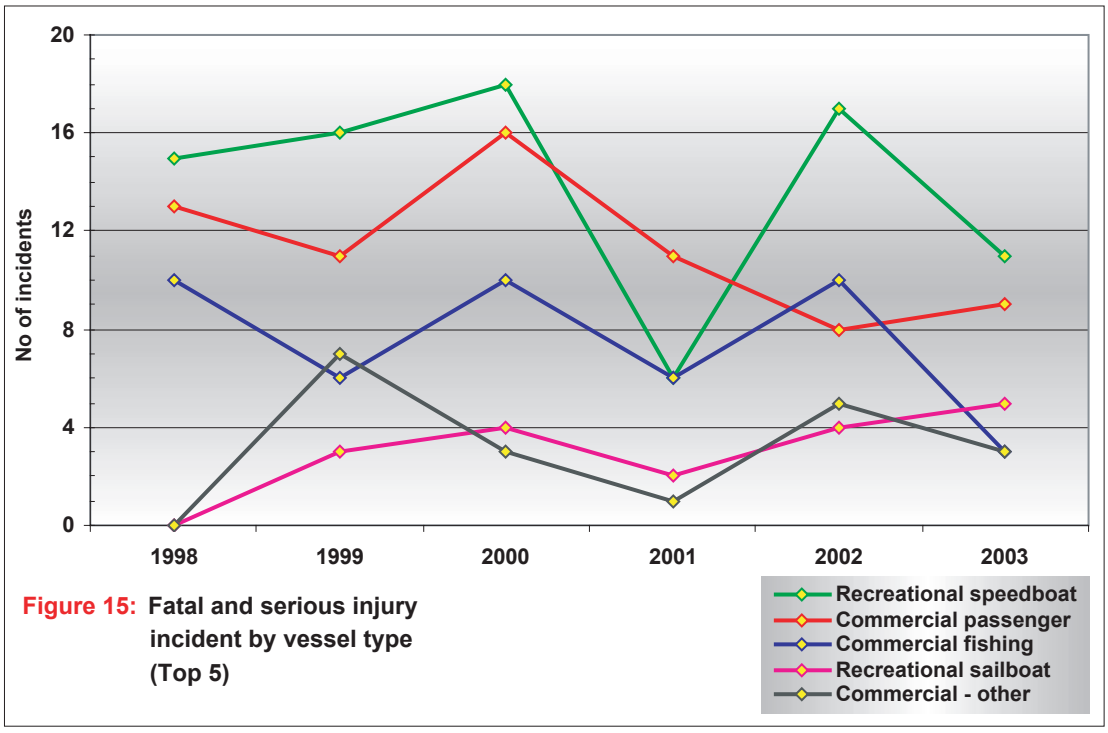


Figure 15: Fatal and serious injury incident by vessel type (Top 5)

2.4.5 FSI incidents by location

Fifteen (53.6 per cent) of the 28 reported FSI incidents in 2003 occurred in smooth waters. Only seven per cent of FSI incidents in 2003 occurred in inland waters, compared with more than 21 per cent inland water FSI incidents in 2002 and a previous four-year average of 23.7 per cent. This could be due in part to more rigorous location definition of incidents occurring in non-tidal streams and catchments. Figure 16 shows the location of reported FSI incidents in 2003.

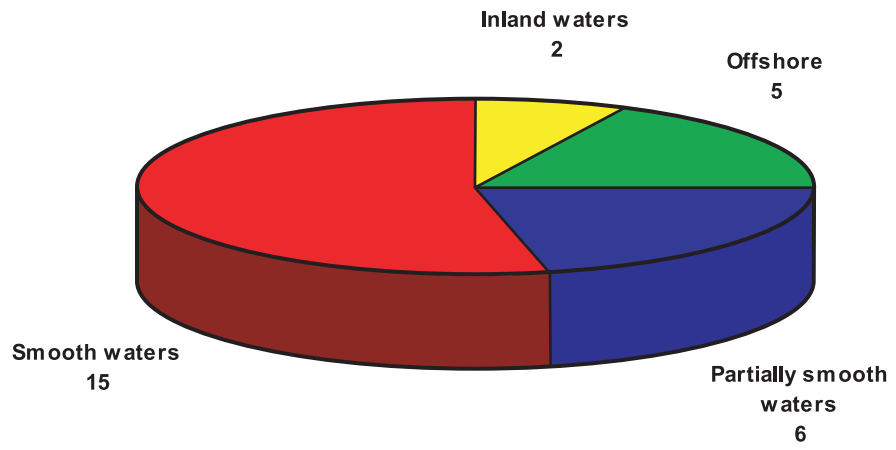


Figure 16: Fatal and serious injury incidents in 2003 - by location

2.4.6 FSI incidents—incident characteristics by extent of involvement

This section analyses FSI incidents in 2003 to determine the extent to which individual incident characteristics such as human contributing factors, weather conditions and vessel type were involved in these more serious incidents. The analysis, which focuses on the twenty-five most frequently occurring characteristics in FSI incidents, measures:

- the number of times each characteristic was reported or identified during investigation as being involved in a FSI incident, and
- changes in the extent of involvement of these characteristics in 2003 compared with their average rate of involvement in FSI incidents in the previous four-year period

Figure 17 shows the extent of involvement in 2003 for the 'top 25' incident characteristics together with their average rate of involvement over the previous four-year period. With significantly fewer reported FSI incidents in 2003, the majority of the top 25 most frequently occurring attributes are well under-represented when compared with their previous four-year average involvement. The exception is the 'Other personal injury—hit by propellor or ship' category. While there were only four such incidents resulting in either a fatality or a serious injury in 2003, they are over-represented when compared with their previous four-year average involvement in 2.25 FSI incidents.

As has been the case in recent years, the three most frequently occurring attributes of FSI incidents in 2003 related to ambient conditions including clear weather, good visibility and the daytime period. These factors were each involved in approximately 70 per cent of the 28 FSI incidents in 2003.

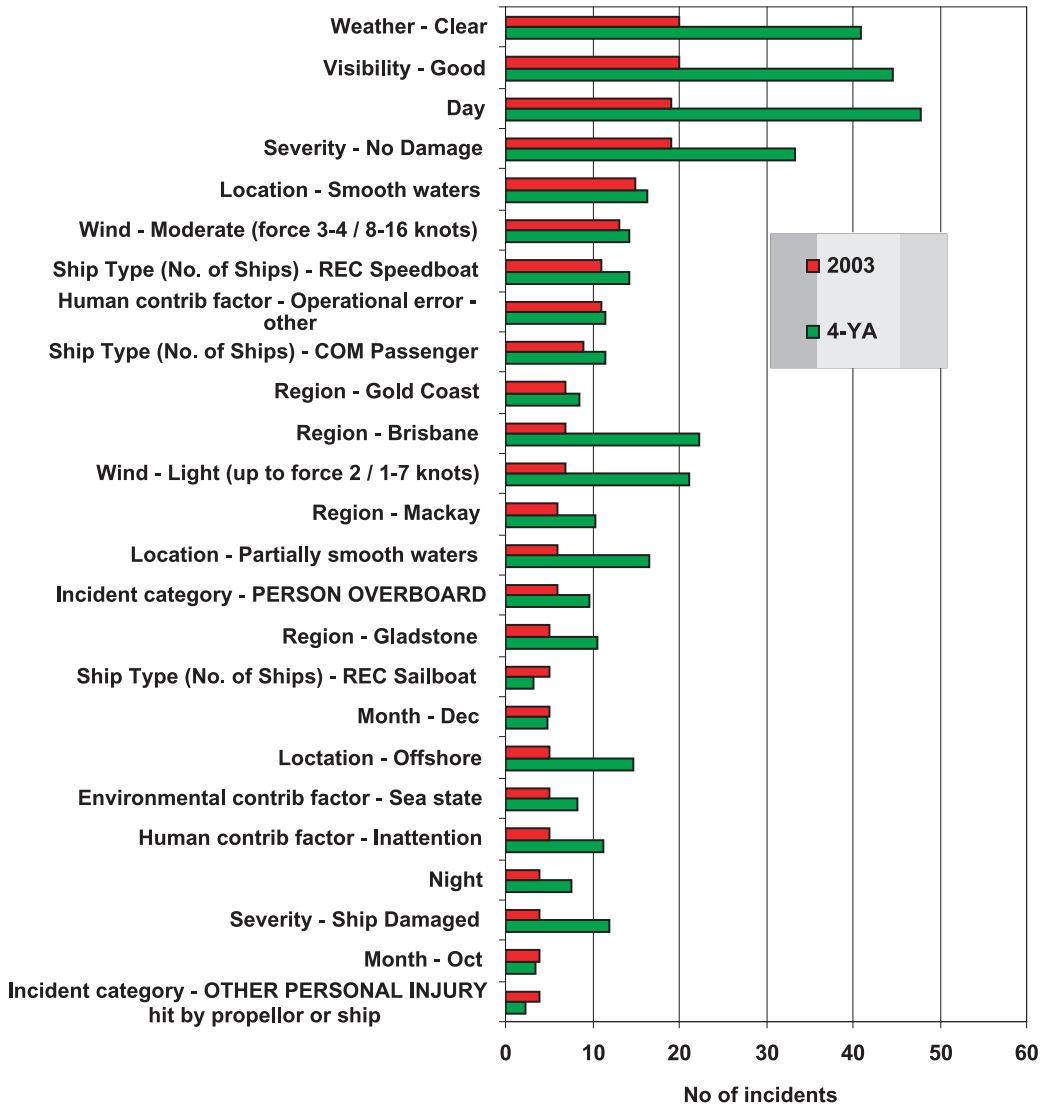
Nineteen of the 28 incidents involving fatality or serious injury in 2003 did not involve any physical damage to the vessels involved, or damage to other property.

The next most frequently occurring attribute of FSI incidents in 2003 was the 'smooth water' location. While the proportion of FSI incidents occurring in smooth waters has fallen relative to both 2002 and the previous four-year average proportionate involvement, more than 53 per cent of FSI incidents occurred in smooth waters. When combined with the fact that approximately 70 per cent of FSI incidents occurred in clear weather, good visibility and daylight hours, it begs the question 'why are so many serious incidents occurring in otherwise ideal boating conditions?' This question may be answered in part by the fact that these are the times and conditions when most boats are on the water and also by the fact that human operational error was identified as contributing to some 40 per cent of FSI incidents in 2003. In 2002, human operational error was identified as contributing to more than 46 per cent of FSI incidents.

Recreational speedboats were the most frequently involved vessel type in FSI incidents in 2003. Eleven recreational speedboats were involved in the 28 FSI incidents reported in 2003—up more than 10 per cent on their proportionate 2002 involvement. It is noteworthy that recreational speedboats were the sixth most frequently involved vessel in all reported marine incidents in 2003. This suggests that when recreational speedboats are involved in marine incidents the outcome is likely to be more severe. The involvement of recreational vessels in marine incidents is examined in more detail later in this report.

The most frequently occurring FSI incident type in 2003 was 'person overboard'. Six such incidents were recorded. These six incidents represent 21.5 per cent of all FSI incidents in 2003. This compares with a 15 per cent rate of involvement in FSI incidents in 2002. Less than three per cent of all reported marine incidents in 2003 were 'person overboard' incidents, indicating that when this type of incident occurs, the outcome is likely to be severe—resulting in death or serious injury.

Figure 17: **Characteristics ranked by size of involvement in marine incidents resulting in fatalities and serious injuries - Queensland**



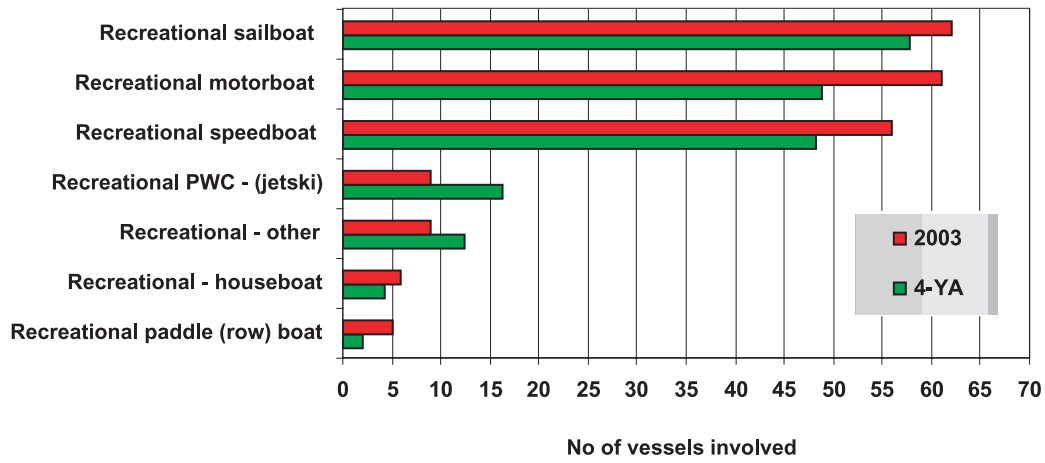
3. Selected marine incident profiles

3.1 Incidents involving recreational vessels

To provide a context for considering the involvement of recreational vessels in marine incidents, there were 180,304 recreational vessels registered in Queensland as at 31 December 2003, an increase of 4.88 per cent in the year. Recreational vessels represent 96.9 per cent of Queensland's total registered vessel fleet. Recreational speedboats, that is, boats capable of planing, make up 84 per cent of all registered recreational vessels. It is also noted that while recreational personal water craft (jet skis) represent only 3.7 per cent of all registered recreational vessels, their numbers grew in 2003 by more than 20 per cent compared to an overall increase in registered recreational vessel numbers of around five per cent. Recreational sailing vessels make up approximately 3.2 per cent of all registered recreational vessels in Queensland. Recreational motorboats make up approximately 12.7 per cent of all registered recreational vessels in Queensland.

In 2003, recreational vessels were involved in 208 (32.2 per cent) of the 645 reported marine incidents in Queensland—up marginally on their four-year average involvement in 190 incidents. Figure 18 shows the relative involvement of the different types of recreational vessels in the 208 recreational marine incidents, together with their previous four-year average involvement in incidents.

Figure 18: All incidents in 2003 - by recreational vessel type



More than 66 per cent of the incidents involving recreational vessels occurred in the daytime, in clear weather and good visibility. Fifty three per cent of the incidents resulted in the vessels being damaged. Approximately 40 per cent of the incidents occurred in smooth waters, 15 per cent in inland waters and the remaining 43 per cent in partially smooth and offshore waters. A little over 59 per cent of the incidents occurred in the Brisbane and Gold Coast regions.

The number of recreational vessels lost in marine incidents in 2003 is also noteworthy. Figure 19 shows clearly the over-representation of recreational vessels in the 'ship lost' incident outcomes for 2003. Of the 33 vessels lost in all reported marine incidents in 2003, 22 (66.6 per cent) were recreational vessels—seven recreational motorboats, one recreational (other), eight recreational sailing vessels, five recreational speedboats and one recreational houseboat. The number of recreational vessels lost is consistent with the previous four-year average of 21.5 recreational vessels lost. Recreational sailing vessels lost continue to be over-represented compared with the previous four-year average for lost sailing vessels.

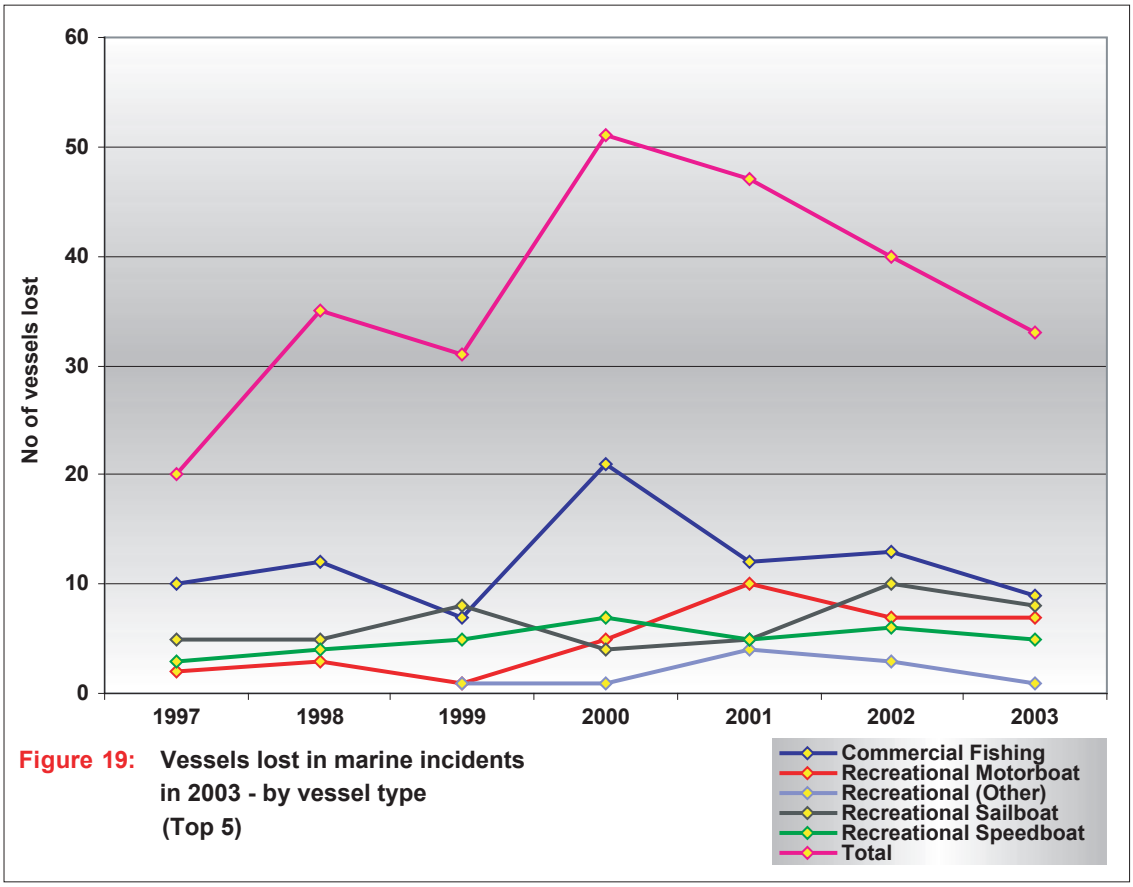


Figure 19: **Vessels lost in marine incidents in 2003 - by vessel type (Top 5)**

Recreational vessels were involved in 15 FSI incidents in 2003—53.5 per cent of all the reported FSI incidents in Queensland compared with 45 per cent in 2002. However, the number of recreational vessel FSI incidents was well down on the four-year average of 29 units of involvement. Recreational vessel incidents resulted in five (71.5 per cent) of the seven marine incident fatalities recorded in 2003. Of the 22 serious injuries recorded in 2003, 10 (45.5 per cent) resulted from incidents involving recreational vessels.

Incident study 1 - Grounding and loss of recreational sailing boat

The vessel

Recreational sailing boat and tender

The incident

On a clear day, two friends went sailing on an inland reach of the Mary River. While one was an experienced boatie the other had never operated a sailing vessel.

On becoming aware the vessel's tender had broken free, they set out to retrieve it. The skipper left the vessel in the hands of his inexperienced companion, while he briefly went below deck. He did not give his companion any guidance or instruction on navigating the vessel.

The sailing boat ran aground on rock, started taking water and soon sank. While neither of the friends sustained injury, the ship was declared lost. The skipper was subsequently charged with unsafe operation of the ship and unlawful use of the ship.

Safety insights

- Vessel operators should not allow inexperienced persons to operate a vessel unsupervised
- Crew need to be competent for the tasks to be performed
- Vessel masters are responsible for charting and navigating a safe course

Recreational speedboats and recreational sailboats were the two recreational vessel classes most involved in FSI incidents in 2003. There were 11 recreational speedboats involved in FSI incidents, marginally under-represented when compared with their previous four-year average involvement of 14.25. Recreational speedboat incidents in 2003 resulted in four fatalities and seven serious injuries. While there were five recreational sailboats involved in FSI incidents in 2003, only one serious injury resulted. Recreational motorboat involvement in FSI incidents was down in 2003, with only two recreational motorboats involved. This compares with five in 2002 and a previous four-year average involvement of five. Recreational motorboat incidents resulted in one fatality and one serious injury in 2003.

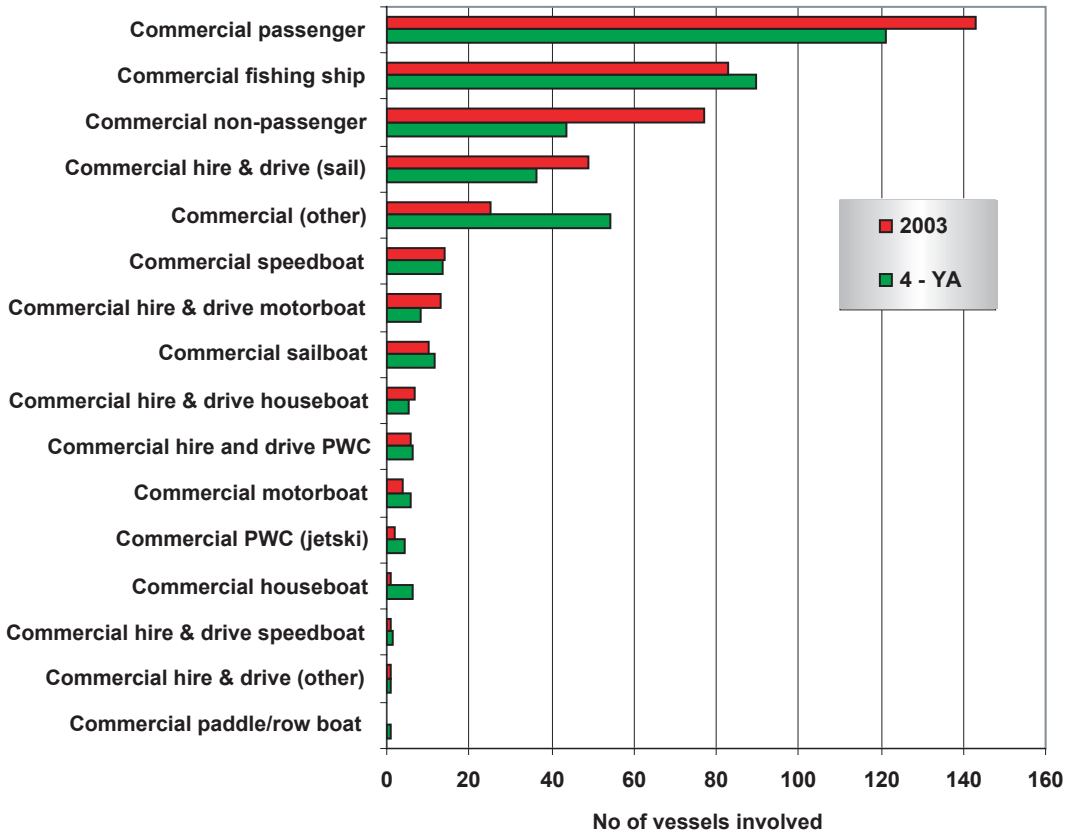
Analysis shows that the major factors associated with recreational vessel incidents involving fatality and/or serious injuries in 2003 were, as expected, incidents involving good visibility, daylight hours, smooth waters and clear conditions. These factors were involved in more than 60 per cent of recreational vessel FSI incidents.

A significant proportion of the state's total boating activity is concentrated in South-East Queensland. Combined, the Brisbane and Gold Coast regions account for 56.9 per cent of the state's registered recreational vessel fleet. Despite this concentration and activity level, only 46 per cent of total recreational vessel incidents involving fatality or serious injury in Queensland occurred in South East Queensland—down from more than 69 per cent in 2002. With such concentrated boating activity, the involvement of recreational vessels in FSI incidents in South East Queensland will continue to be monitored with a view to targeting compliance and educational initiatives in this area.

3.2 Incidents involving commercial vessels

The number of registered commercial vessels has been steadily increasing over the last five years as shown earlier in Figure 11 (1.8 per cent growth in 2003). In 2003, commercial vessels represented 3.03 per cent of Queensland's registered vessel fleet, but were involved in 436 (67.6 per cent) of the year's 645 reported marine incidents. Figure 20 shows the relative involvement of the different types of commercial vessels in marine incidents in 2003, together with their previous four-year average involvement in incidents.

Figure 20: All incidents by commerical vessel type - 2003



Looking at the more serious marine incidents, commercial vessels were involved in 13 (46.4 per cent) of the State's 28 FSI incidents in 2003—well below their four-year average involvement in 37.75 FSI incidents. This under-representation is consistent with the significantly smaller overall number of reported FSI incidents in 2003.

Two fatalities resulted from marine incidents in 2003 involving commercial vessels—one from a collision between a trading ship and a fishing vessel, and the other from a person who fell overboard from a commercial passenger vessel. There were also 12 serious injuries sustained as a result of incidents involving commercial vessels.

Incident study 2 - Fatal collision between two commercial vessels

The vessels

Commercial fishing trawler and a commercial bulk carrier

The incident

A commercial fishing trawler was operating at night in offshore waters. While sea conditions were rough, winds moderate and there was substantial cloud cover, visibility was reported as good.

The deckhand was considering winching-up given the prevailing conditions and the fact that a bulk carrier was understood to be moving through the area.

He was about to begin winching at the stern of the trawler when he noticed the trawler had changed course. He immediately headed for the wheelhouse – only to see the bow of a bulk carrier smash over the stern of the trawler.

The trawler sank quickly and the trawler's master was declared missing and later confirmed as dead as a result of the collision. The deckhand was recovered from the sea by another trawler in the vicinity and was subsequently transported by helicopter to hospital. Following a coronial inquest the second and third officers of the bulk carrier were charged with manslaughter.

Safety insights

- Extreme care must be taken and lookout maintained when operating in or near major shipping channels
- All vessel operators need to understand the manoeuvring limitations of large trading vessels
- Trading vessel operators are bound by the same safety obligations as all other vessel operators

From the perspective of regional involvement in commercial vessel FSI incidents, it is noteworthy that the Cairns region did not record any fatalities or serious injuries in 2003. All other regions had relatively low commercial vessel FSI incident numbers, consistent with the overall low number of FSI incidents reported in 2003.

In 2003, four (30.7 per cent) commercial vessel FSI incidents occurred in offshore waters. This is consistent with the relative involvement of commercial vessels in FSI incidents in offshore waters in the previous four-year period (29.5 per cent).

There were 11 marine incidents in 2003 involving commercial vessels where the incident type was defined as 'person overboard'. Three of these incidents resulted in one fatality and two serious injuries. Three of the commercial vessel FSI incidents resulted in serious injury caused by the operation of the ship. A further three commercial vessel FSI incidents resulted in serious injury as an outcome of onboard incidents.

Incident study 3 - Passengers injured in commercial vessel bar crossing

The vessel

Commercial passenger vessel

The incident

A commercial passenger vessel on the Gold Coast set out in the morning to travel offshore through the Southport Seaway. The seas were rough and the vessel operator and crew ensured all passengers were seated prior to entering the Seaway.

On impacting the first wave as the vessel proceeded through the Seaway one passenger was thrown from his seat and injured his ankle - later confirmed as a broken ankle. Unable to safely change the vessel's course, the master continued to navigate the vessel through the Seaway.

When negotiating the next wave a second passenger was thrown from his seat, injuring his back. The vessel was hit by two further waves. When the master considered it safe to turn the vessel around, he returned to base. The injured passengers were then transported to hospital for treatment. The vessel did not sustain any damage.

Safety insights

- Bar crossings present unique operational challenges and should only be undertaken by experienced operators with local knowledge – when it is safe to do so
- Sea, weather and bar conditions can change quickly and need to be carefully considered in trip planning
- It is sometimes more prudent to postpone offshore boating trips than risk people's lives

In terms of involvement of differing commercial vessel types, commercial passenger vessels were involved in five FSI incidents in 2003, other commercial vessels such as trading and bulk ships were involved in three FSI incidents and commercial fishing ships were involved in two FSI incidents.

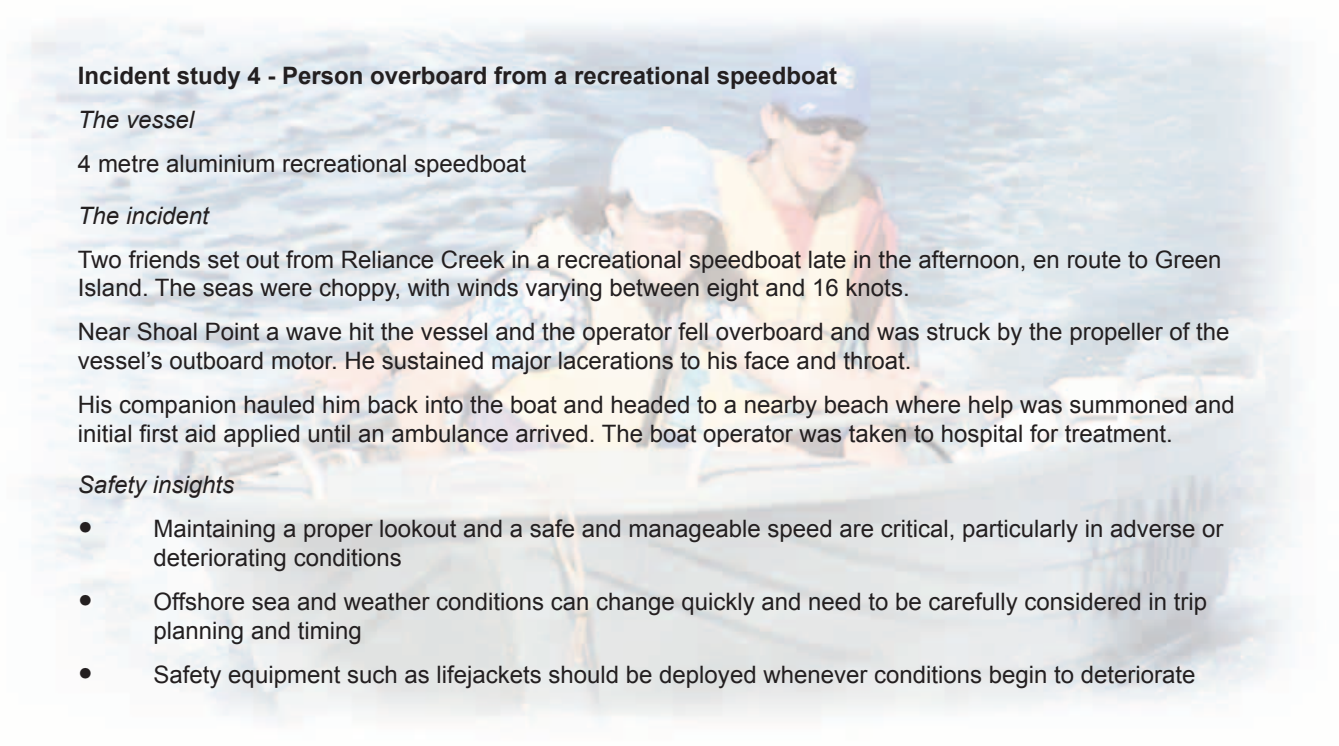
3.3 Incidents involving a person overboard

In 2003 there were 19 reported marine incidents involving a person overboard. Despite being marginally under-represented when compared with the previous four-year average involvement of 23, these incidents are significantly over-represented in terms of their outcome. While the 19 reported 'person overboard' incidents represent only 2.9 per cent of the 645 reported marine incidents in 2003, they account for more than 57 per cent of the marine incident fatalities recorded in 2003.

Six of the 19 person overboard incidents in 2003 occurred in inland waters and a further six occurred in smooth waters. Two of the inland water person overboard incidents resulted in two fatalities. One fatality resulted from person overboard incidents in smooth waters.

Eleven of the 19 person overboard incidents reported involved commercial vessels and eight involved recreational vessels. However, three of the four recorded fatalities from person overboard incidents in 2003 resulted from recreational vessel incidents.

Human factors such as operational error, inattention and alcohol and drugs were identified as contributing to more than 73 per cent of the 19 reported person overboard incidents. More than 63 per cent of the reported person overboard incidents occurred in clear weather, good visibility and light to moderate winds.



Incident study 4 - Person overboard from a recreational speedboat

The vessel

4 metre aluminium recreational speedboat

The incident

Two friends set out from Reliance Creek in a recreational speedboat late in the afternoon, en route to Green Island. The seas were choppy, with winds varying between eight and 16 knots.

Near Shoal Point a wave hit the vessel and the operator fell overboard and was struck by the propeller of the vessel's outboard motor. He sustained major lacerations to his face and throat.

His companion hauled him back into the boat and headed to a nearby beach where help was summoned and initial first aid applied until an ambulance arrived. The boat operator was taken to hospital for treatment.

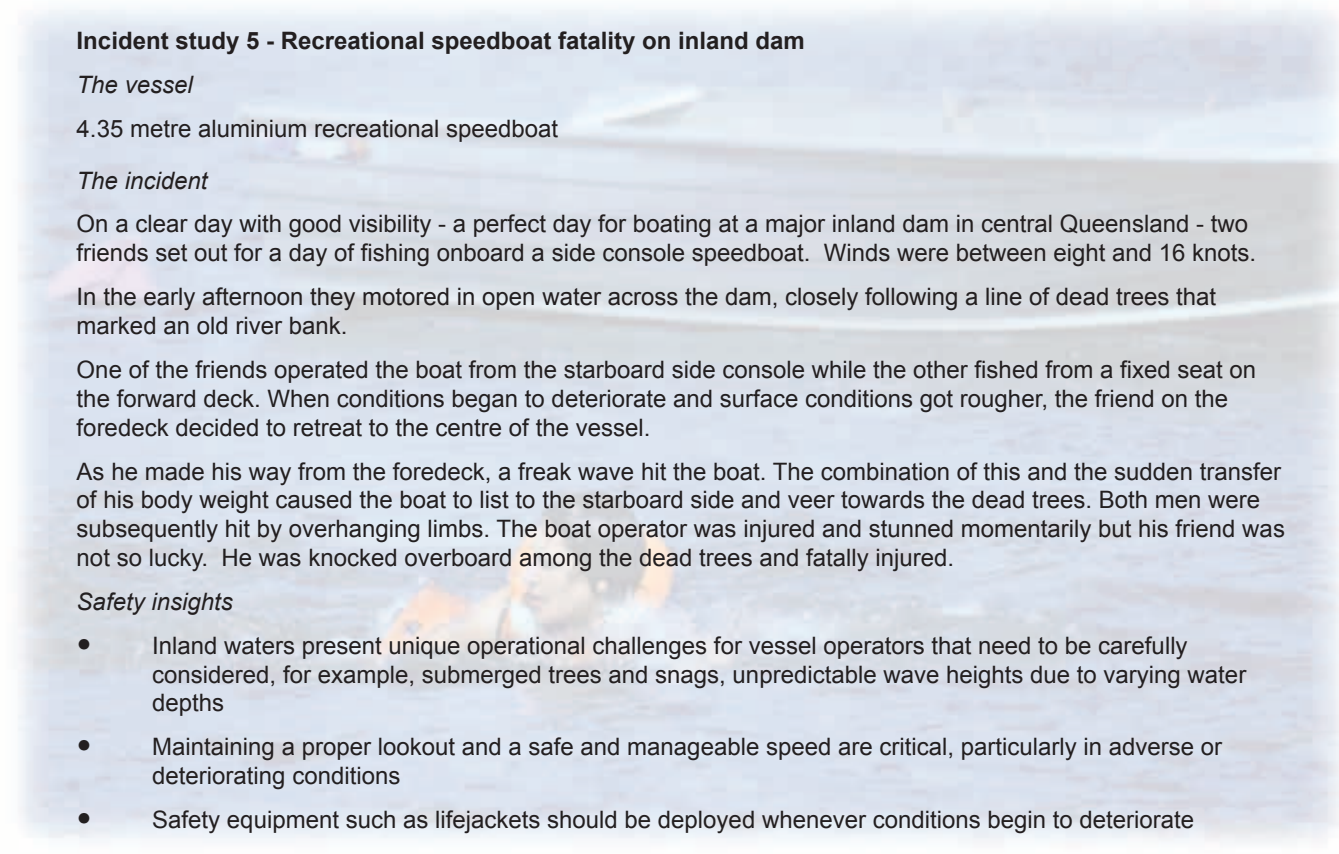
Safety insights

- Maintaining a proper lookout and a safe and manageable speed are critical, particularly in adverse or deteriorating conditions
- Offshore sea and weather conditions can change quickly and need to be carefully considered in trip planning and timing
- Safety equipment such as lifejackets should be deployed whenever conditions begin to deteriorate

3.4 Incidents occurring on inland waters

One of the priority outcome areas identified following the 2002 marine incident analysis was reducing the number and severity of marine incidents on inland waters. In 2002 there were 101 inland water incidents reported, representing 15.5 per cent of all reported marine incidents. Of these 101 incidents, 13 resulted in serious injuries. There were no inland water fatalities in 2002. In 2003, only 78 or 12.1 per cent of a total of 645 reported marine incidents were reported as inland water incidents. This represents a substantial fall when compared with the previous four-year average of 110.25 inland water incidents.

While only two of the 78 reported inland water incidents in 2003 were FSI incidents, both resulted in fatalities. The majority of the more serious 2002 inland water incidents involved water skiing or collisions with other boats or objects. The two fatal inland water incidents in 2003 resulted from a person falling overboard.



Incident study 5 - Recreational speedboat fatality on inland dam

The vessel

4.35 metre aluminium recreational speedboat

The incident

On a clear day with good visibility - a perfect day for boating at a major inland dam in central Queensland - two friends set out for a day of fishing onboard a side console speedboat. Winds were between eight and 16 knots.

In the early afternoon they motored in open water across the dam, closely following a line of dead trees that marked an old river bank.

One of the friends operated the boat from the starboard side console while the other fished from a fixed seat on the forward deck. When conditions began to deteriorate and surface conditions got rougher, the friend on the foredeck decided to retreat to the centre of the vessel.

As he made his way from the foredeck, a freak wave hit the boat. The combination of this and the sudden transfer of his body weight caused the boat to list to the starboard side and veer towards the dead trees. Both men were subsequently hit by overhanging limbs. The boat operator was injured and stunned momentarily but his friend was not so lucky. He was knocked overboard among the dead trees and fatally injured.

Safety insights

- Inland waters present unique operational challenges for vessel operators that need to be carefully considered, for example, submerged trees and snags, unpredictable wave heights due to varying water depths
- Maintaining a proper lookout and a safe and manageable speed are critical, particularly in adverse or deteriorating conditions
- Safety equipment such as lifejackets should be deployed whenever conditions begin to deteriorate

4. Boating incidents

4.1 Introduction

Boating incidents are those incidents which involved calls for assistance from volunteer rescue authorities for problems such as mechanical breakdowns, running out of fuel and fouled propellers.

While boating incidents are not counted as marine incidents (unless their severity qualifies them as such), boating incident data provided by regional volunteer marine rescue organisations has been included to supplement the analysis of marine incidents contained in this report. Boating incident reports also provide a useful tool for validation of the level of marine incident reporting by highlighting incidents that might have escaped the normal marine incident reporting process.

In 2003, regional volunteer marine rescue organisations including the Australian Volunteer Coastguard Association and the Queensland Volunteer Marine Rescue Organisation combined to provide a strong safety net for the professional and recreational maritime community in Queensland. As well as attending callouts for assistance, they continue to perform an important extension role for Maritime Safety Queensland in its administration of maritime safety programs.

4.2 Callouts for assistance

Voluntary marine rescue and coastguard flotillas reported responding to 2697 callouts for assistance state-wide in 2003—138 more callouts than in 2002 and marginally up on the previous four-year average of 2623 callouts.

Figure 21 shows comparative boating incident callout numbers for the past seven years.

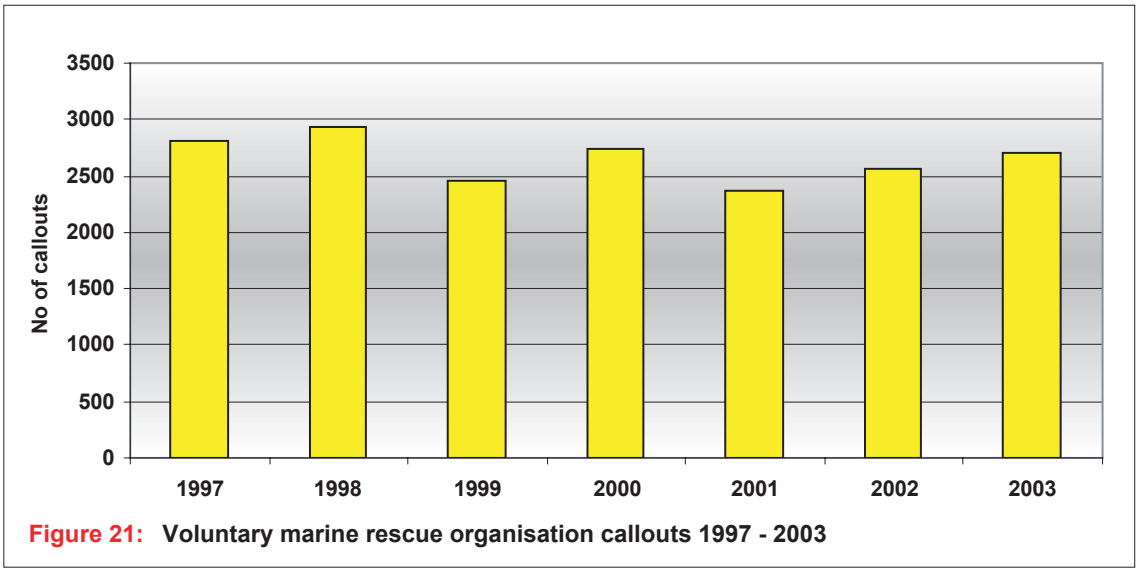


Figure 21: Voluntary marine rescue organisation callouts 1997 - 2003

South-East Queensland (Brisbane and Gold Coast regions) with more than 56 per cent of the state's registered vessel fleet, reported 2053 (76.1 per cent) of the state's callouts in 2003. This is significantly higher than this region's corresponding proportion of marine incidents (41.7 per cent), and well above the combined region's four-year average number of callouts of 1797 callouts. After the combined South-East Queensland region, the next most significant number of callouts occurred in the Gladstone region with 388 callouts (14.3 per cent)—in line with the region's four-year average number of callouts of 391.5.

Figure 22 provides a comparative regional breakdown of boating incident callout numbers over the last seven years. Disaggregated data for Gold Coast and Brisbane region boating incident callouts was not available to Maritime Safety Queensland until 2001.

It is noted that boating incident callout numbers in the Brisbane region have been increasing since 2001. It is not clear whether this is the result of more comprehensive reporting by volunteer organisations in the Brisbane region or whether there has been an increase in real terms in the number of boating incidents occurring. Reporting of boating incidents is voluntary. It is also noted that reported boating incidents in the Mackay region continue to be low relative to other regions. It is understood that this may be the result of under-reporting by volunteer organisations in the region.

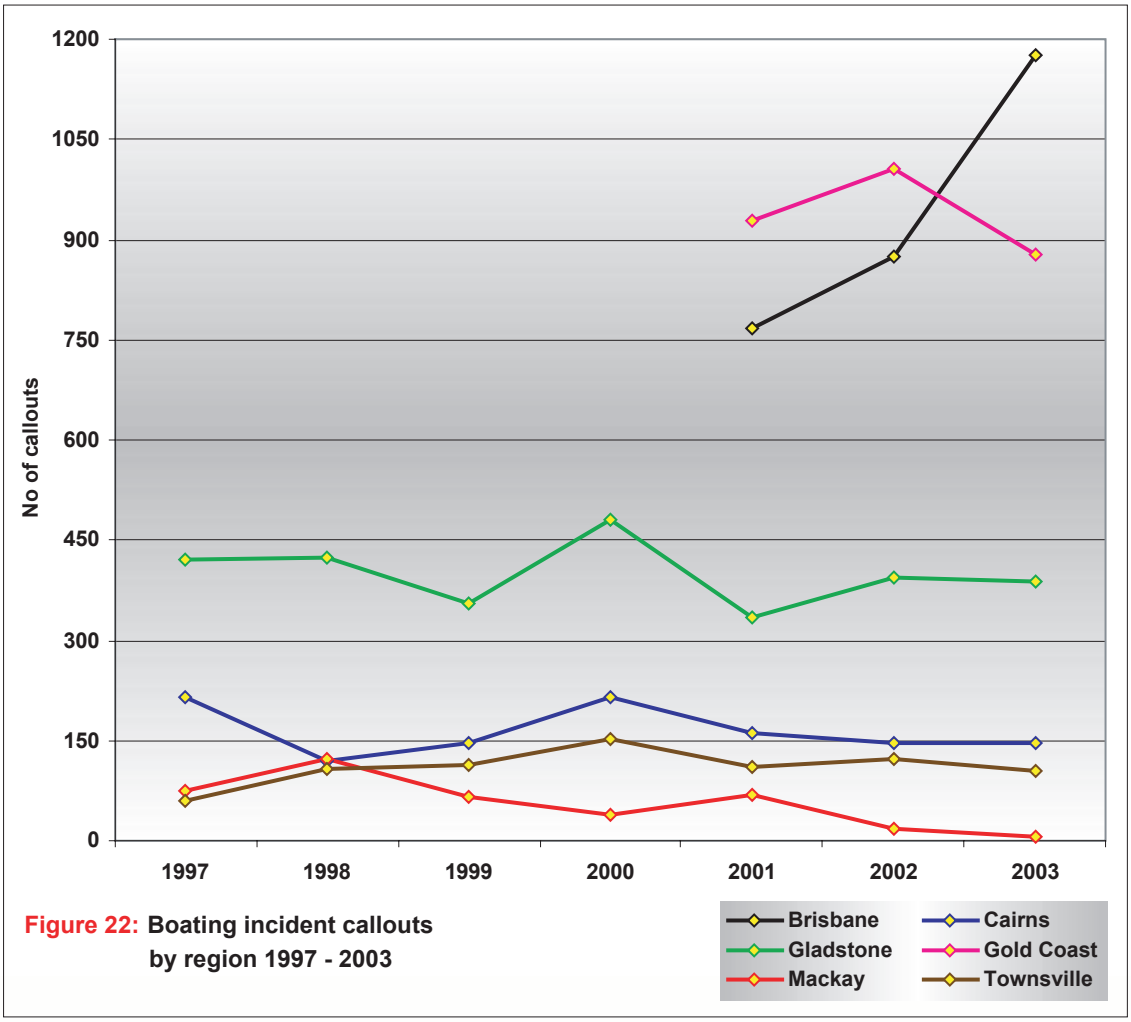


Figure 22: **Boating incident callouts by region 1997 - 2003**

Incident study 6 - Recreational boating incident

The vessel

3.8 metre aluminium recreational dinghy fitted with an old outboard motor

The incident

The 26 year old male owner of the dinghy went fishing in Moreton Bay by himself intending to return before dark. The vessel was not fitted with radio or any other communications device. Nor did the operator have any flares on board, as he intended to return during daylight. When he hadn't returned by 8pm his family contacted the local Coast Guard station to report him missing. The family did not know where he launched his boat or where he was intending to fish. The Water Police were contacted and a search of local boat ramps and an on-water search was commenced. At about 10:30 pm, the dinghy and its owner were located after he had rowed ashore. The dinghy owner was suffering exhaustion after rowing for some five hours following mechanical problems with the old outboard.

Safety insights

- There is significant risk associated with single person operation of a vessel. Extra care is required to ensure proper operation of equipment like engines and batteries
- Always tell family or friends on land where you are going and when you expect to return
- If you have radio equipment, advise your local Coast Guard/VMR stations of your movements
- Plan and prepare for the worst - carry emergency signalling devices like flares, V-sheets and torches so you can attract attention

4.3 Reasons for callouts

During 2003 the predominant reasons for the assistance provided by volunteer organisations included:

- breakdowns—1547 callouts (57.3 per cent)
- fuel problems—271 (10 per cent)
- grounding of the vessel—194 (7.2 per cent), and
- vessel sinking (taking on water)—169 (6.2 per cent)

Fuel problems mentioned above included contaminated fuel, leaking fuel lines and running out of fuel.

Figure 23 shows the top ten reasons for callout. These reasons for callout reinforce the ongoing need for marine safety education and awareness programs to address basic operational boating issues. Maritime Safety Queensland uses this data to inform initiatives like the BoatSMART campaign and other boating safety educational campaigns.

Tables 29 and 30 in Appendix 1 of this report provide further data relating to boating incidents.

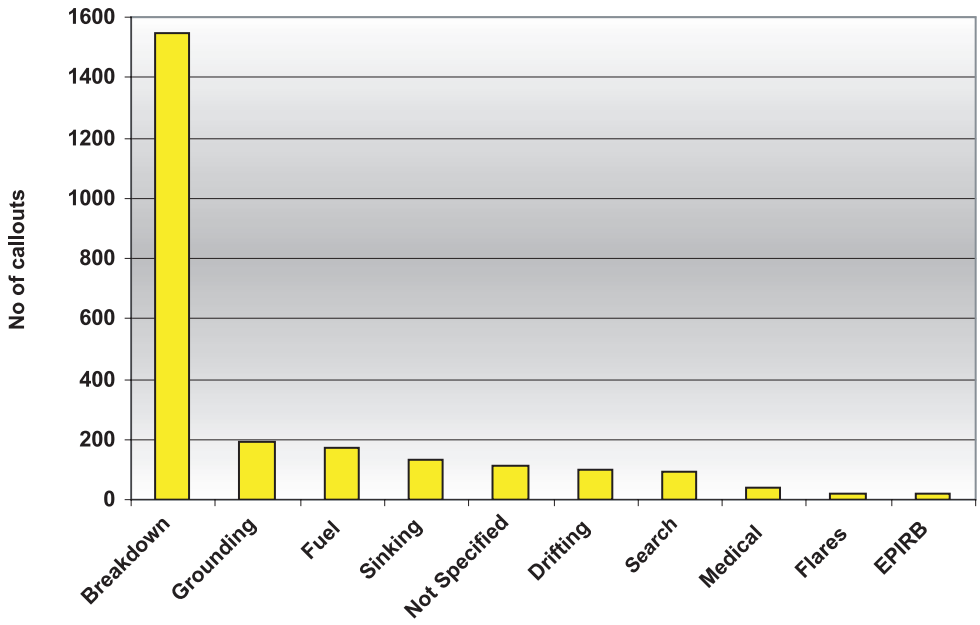


Figure 23: Boating incident callouts - by reason for callouts - 2003

Appendix 1

Marine incident related tables

In this appendix, the major characteristics of reported marine incidents are presented in a time-series format. The sources for the majority of data are Maritime Safety Queensland's marine incident database, the commercial vessel registration database and Queensland Transport's recreational vessel registration database. Australian Bureau of Statistics data is also used.

For ease of reference, the following codes are used for the six Maritime Safety Queensland regional operations areas:

- Gold Coast (GC)
- Brisbane (BN)
- Gladstone (GL)
- Mackay (MK)
- Townsville (TV)
- Cairns (CN)

It should be noted that the Gold Coast region was only established for reporting purposes in 2000.

The acronym PWC is used throughout these tables and refers to personal watercraft, or jet skis as they are better known.

Wind forces used in these tables are based on the Beaufort Scale.

A list of the tables included in this appendix is provided on the next page.

Tables

Table 1 Marine fatalities per 1,000,000 persons 1976 to 2002 by state and territory

State / territory	76-79	80-84	85-89	90-94	95-99	2000-02
New South Wales	8.45	5.10	4.27	3.29	2.65	2.10
Victoria	9.03	5.16	4.37	4.10	2.04	2.07
Queensland	12.31	5.23	4.02	5.14	2.59	1.93
South Australia	13.18	7.35	4.59	3.99	2.43	0.23
West Australia	10.09	8.70	4.94	4.71	4.12	2.23
Tasmania	34.82	26.03	14.70	15.59	15.96	5.63
Northern Territory	25.81	16.94	11.52	22.53	5.38	8.47
Australian Capital Territory	11.63	0.86	2.27	2.05	0.65	2.07

Source: Australian Bureau of Statistics

Table 2 Incidents involving fatalities and serious injuries 1998 - 2003 and year 2003 by region

Incidents	1998	1999	2000	2001	2002	2003	GC	BN	GL	MK	TV	CN
No of incidents involving fatalities	8	9	12	9	9	7	0	2	3	1	1	0
No of incidents involving serious injuries	51	58	73	37	53	21	7	5	2	5	2	0
Fatality/serious injury incidents	**59**	**67**	**85**	**46**	**62**	**28**	**7**	**7**	**5**	**6**	**3**	**0**

Table 3 Fatalities and serious injuries 1998 - 2003 and year 2003 by region

Fatalities and serious injuries	1998	1999	2000	2001	2002	2003	GC	BN	GL	MK	TV	CN
No of fatalities	8	10	12	12	10	7	0	2	3	1	1	0
No of serious injuries	64	66	84	43	61	22	7	6	2	5	2	0
Total fatalities and serious injuries	**72**	**76**	**96**	**55**	**71**	**29**	**7**	**8**	**5**	**6**	**3**	**0**

Table 4 Environmental factors contributing to fatal and serious injury incidents 1998 - 2003 and year 2003 by region

Environmental factors	1998	1999	2000	2001	2002	2003	GC	BN	GL	MK	TV	CN
Bar conditions	0	3	3	0	1	1	1	0	0	0	0	0
Floating or submerged object	2	1	1	1	1	0	0	0	0	0	0	0
Hazardous season (cyclones etc)	0	1	1	0	0	0	0	0	0	0	0	0
Hazardous waters - coral reefs	0	0	0	1	0	0	0	0	0	0	0	0
Hazardous waters - shifting channels	0	0	0	1	1	0	0	0	0	0	0	0
Hazardous waters - uncharted hazards	0	0	0	1	1	0	0	0	0	0	0	0
Heavy traffic area	1	0	0	0	1	1	1	0	0	0	0	0
Other	0	0	4	2	0	1	1	0	0	0	0	0
Poor visibility	1	0	1	1	5	0	0	0	0	0	0	0
Sea state	4	6	16	7	19	5	0	1	2	2	0	0
Wash of passing vessel	4	3	1	1	3	1	1	0	0	0	0	0
Wind	2	1	1	3	20	1	0	0	1	0	0	0
Total environmental factors attribution	**14**	**15**	**28**	**18**	**52**	**10**	**4**	**1**	**3**	**2**	**0**	**0**

Table 5 Human factors contributing to fatal and serious injury incidents 1998 - 2003 and year 2003 by region

Human factors	1998	1999	2000	2001	2002	2003	GC	BN	GL	MK	TV	CN
Alcohol or drugs	3	2	1	1	0	1	0	0	1	0	0	0
Commercial pressure	0	1	1	1	0	0	0	0	0	0	0	0
Excessive speed	3	6	3	4	3	3	2	1	0	0	0	0
Fatigue	0	2	0	2	0	1	0	0	0	1	0	0
Inadequate training of crew	2	1	4	2	4	2	2	0	0	0	0	0
Inappropriate instructions to crew - other	1	0	0	0	2	1	0	0	1	0	0	0
Poor communication of instructions to crew	0	0	0	0	3	0	0	0	0	0	0	0
Inattention	6	5	20	9	18	5	0	4	0	0	1	0
Insufficient maintenance	0	1	0	0	0	0	0	0	0	0	0	0
Insufficient planning	0	0	2	1	4	0	0	0	0	0	0	0
Navigation error-failure to keep proper lookout	5	2	2	1	7	1	1	0	0	0	0	0
Navigation error-lack of knowledge/experience	5	1	3	1	5	0	0	0	0	0	0	0
Navigation error-other	0	4	1	1	3	2	0	2	0	0	0	0
Navigation error-violation of Collision regs	3	1	1	2	3	2	0	0	0	0	2	0
Operational error-other	2	6	11	14	27	11	4	2	2	3	0	0
Poor communications	0	1	0	1	3	0	0	0	0	0	0	0
Violation of standard procedures	4	1	0	1	10	1	0	0	0	1	0	0
Violation of statutory rules or standards	1	0	2	0	9	1	0	0	0	1	0	0
Total human factors attribution	**35**	**34**	**51**	**41**	**101**	**31**	**9**	**9**	**4**	**6**	**3**	**0**

Table 6 Material factors contributing to fatal and serious injury incidents 1998 - 2003 and year 2003 by region

Material factors	1998	1999	2000	2001	2002	2003	GC	BN	GL	MK	TV	CN
Bridge or navigation failure	0	0	2	0	0	0	0	0	0	0	0	0
Electrical failure	0	0	1	1	0	0	0	0	0	0	0	0
Equipment failure - other	2	5	0	1	1	0	0	0	0	0	0	0
Fuel or gas leak	0	0	1	1	0	0	0	0	0	0	0	0
Hull failure	0	1	0	1	1	0	0	0	0	0	0	0
Inadequate stability - other	0	0	1	1	0	0	0	0	0	0	0	0
Inappropriate hull or equipment-design fault	0	0	3	1	1	0	0	0	0	0	0	0
Insufficient maintenance of hull/equipment	0	2	0	0	3	0	0	0	0	0	0	0
Insufficient safety equipment	0	0	0	0	0	0	0	0	0	0	0	0
Machinery failure	3	1	0	0	5	1	0	0	0	0	1	0
Other	1	2	9	1	1	1	0	0	1	0	0	0
Shore structure badly designed/maintained	0	0	1	0	0	0	0	0	0	0	0	0
Total material factors attribution	**6**	**11**	**18**	**7**	**12**	**2**	**0**	**0**	**1**	**0**	**1**	**0**

Table 7 Fatal and serious injury incident type 1998 - 2003 and year 2003 by region

Incident type classifications	1998	1999	2000	2001	2002	2003	GC	BN	GL	MK	TV	CN
Capsizing	0	1	1	1	2	0	0	0	0	0	0	0
Capsizing flooding	0	1	1	0	0	0	0	0	0	0	0	0
Capsizing sinking	1	0	3	0	1	0	0	0	0	0	0	0
Capsizing swamping	2	4	2	2	3	0	0	0	0	0	0	0
Collision between ships	12	11	8	2	10	3	0	1	0	0	2	0
Collision with a fixed object	2	2	4	3	2	0	0	0	0	0	0	0
Collision with an animal	0	0	0	0	0	0	0	0	0	0	0	0
Collision with floating object	3	0	0	1	0	0	0	0	0	0	0	0
Collision with overhead obstruction	0	0	1	0	0	0	0	0	0	0	0	0
Collision with submerged object	0	0	2	0	1	0	0	0	0	0	0	0
Collision with a wharf	0	0	0	0	0	0	0	0	0	0	0	0
Explosion	1	2	1	2	1	0	0	0	0	0	0	0
Fire	0	2	0	0	1	1	0	0	0	1	0	0
Grounding intentional	1	1	1	0	0	0	0	0	0	0	0	0
Grounding unintentional	1	2	5	1	0	1	0	1	0	0	0	0
Loss of ship	1	0	0	0	2	1	0	1	0	0	0	0
Loss of stability	0	0	0	0	0	0	0	0	0	0	0	0
Onboard incident crushing or pinching	3	5	4	0	3	1	0	1	0	0	0	0
Onboard incident falls within ship	1	10	7	6	4	3	1	1	1	0	0	0
Onboard incident other onboard injury	8	5	16	5	5	2	1	0	0	1	0	0
Other	1	0	0	2	0	0	0	0	0	0	0	0
Other - Close Call	0	0	0	0	0	0	0	0	0	0	0	0
Other - Crime Issue	0	0	0	0	0	0	0	0	0	0	0	0
Other - Ship Adrift	0	0	0	0	0	0	0	0	0	0	0	0
Other personal injury caused by operation of ship	7	2	7	1	8	4	2	2	0	0	0	0
Other personal injury diving incident	1	1	1	0	1	0	0	0	0	0	0	0
Other personal injury hit by propellor or ship	3	1	2	3	3	4	1	0	1	2	0	0
Other personal injury parasailing incident	2	1	0	1	0	0	0	0	0	0	0	0
Other personal injury water ski incident	3	3	5	5	4	2	2	0	0	0	0	0
Person overboard	5	11	11	8	9	6	0	0	3	2	1	0
Structural failure	0	0	1	1	0	0	0	0	0	0	0	0
Incident types distribution	**58**	**65**	**83**	**44**	**60**	**28**	**7**	**7**	**5**	**6**	**3**	**0**

Table 8 Location of fatal and serious injury incidents 1998 - 2003 and year 2003 by region

Location classifications	1998	1999	2000	2001	2002	2003	GC	BN	GL	MK	TV	CN
Not specified	3	1	1	1	0	0	0	0	0	0	0	0
Inland waters	19	17	18	12	13	2	0	0	1	1	0	0
Offshore	11	10	20	10	19	5	0	2	1	1	1	0
Partially smooth waters	10	27	19	10	10	6	1	0	0	3	2	0
Smooth waters	15	10	25	12	18	15	6	5	3	1	0	0
Distribution by location classifications	**58**	**65**	**83**	**45**	**60**	**28**	**7**	**7**	**5**	**6**	**3**	**0**

Table 9 Fatal and serious injury incidents by month 1998 - 2003 and year 2003 by region

Months	1998	1999	2000	2001	2002	2003	GC	BN	GL	MK	TV	CN
January	10	7	14	3	11	2	1	0	0	1	0	0
February	7	5	4	0	4	2	1	0	0	1	0	0
March	1	5	14	5	2	1	1	0	0	0	0	0
April	2	11	10	4	5	1	0	0	1	0	0	0
May	9	7	7	3	5	2	0	0	0	1	1	0
June	10	4	6	2	5	2	1	1	0	0	0	0
July	3	2	7	6	8	2	0	2	0	0	0	0
August	0	5	8	6	3	2	0	1	0	1	0	0
September	5	6	4	1	8	3	3	0	0	0	0	0
October	4	2	4	6	2	4	0	0	1	2	1	0
November	2	5	2	5	1	2	0	0	2	0	0	0
December	5	6	3	4	6	5	0	3	1	0	1	0
Fatality/serious injury incidents	**58**	**65**	**83**	**45**	**60**	**28**	**7**	**7**	**5**	**6**	**3**	**0**

Table 10 Fatal and serious injury incidents 1998 - 2003 by region

Region	1998	1999	2000	2001	2002	2003
Gold Coast	0	0	10	10	14	7
Brisbane	30	27	29	13	20	7
Gladstone	9	17	16	5	4	5
Mackay	7	11	15	7	8	6
Townsville	5	7	7	1	2	3
Cairns	7	3	6	9	12	0
Not specified	0	0	0	0	0	0
Fatality/serious injury incidents by regions	**58**	**65**	**83**	**45**	**60**	28

Table 11 Fatal and serious injury incidents by time of day 1998 - 2003

Time of day	1998	1999	2000	2001	2002	2003
Not specified	1	1	5	4	2	1
Dawn	0	3	3	1	1	2
Day time	40	52	62	33	44	19
Dusk	3	3	3	1	5	2
Night time	14	6	10	6	8	4
Fatality/serious injury incidents by TOD	**58**	**65**	**83**	**45**	**60**	28

Table 12 No. of ships involved in fatal and serious injury incidents 1998 - 2003 by ship type

Ship type	1998	1999	2000	2001	2002	2003
Not specified	0	0	0	0	0	0
COM Fishing	10	6	10	6	10	3
COM Hire & Drive	0	0	0	0	0	0
COM Hire & Drive (House)	3	0	0	0	0	0
COM Hire & Drive (Motor)	0	0	0	2	2	0
COM Hire & Drive (PWC)	4	3	3	0	3	1
COM Hire & Drive (Sail)	1	0	3	0	0	0
COM Hire & Drive (Speed)	2	1	0	0	0	0
COM Houseboat	0	0	1	0	0	0
COM Hovercraft	1	0	0	0	0	0
COM Motorboat	1	0	0	1	0	0
COM Non-passenger	0	2	11	1	5	1
COM Other	0	7	3	1	5	3
COM Passenger	13	11	16	11	8	9
COM PWC (jetski)	1	1	1	1	0	0
COM Sailboat	0	7	0	0	0	1
COM Speedboat	4	5	7	5	6	0
REC Houseboat	3	2	1	0	1	0
REC Motorboat	7	5	4	6	5	2
REC Other	0	0	0	2	1	0
REC Paddle (row) boat	1	0	0	1	1	0
REC PWC (jetski)	4	8	10	4	4	1
REC Sailboat	0	3	4	2	4	5
REC Speedboat	15	16	18	6	17	11
No of ships by ship types	**70**	**77**	**92**	**49**	**72**	**37**

Table 13 Visibility in fatal and serious injury incidents 1998 - 2003 and year 2003 by region

Visibilty	1998	1999	2000	2001	2002	2003	GC	BN	GL	MK	TV	CN
Not specified	9	9	13	5	14	5	0	3	1	0	1	0
Poor	4	1	3	3	2	1	0	0	1	0	0	0
Fair	12	8	12	3	2	2	0	0	1	1	0	0
Good	33	47	55	34	42	20	7	4	2	5	2	0
Fatality/serious injury incidents	**58**	**65**	**83**	**45**	**60**	**28**	**7**	**7**	**5**	**6**	**3**	**0**

Table 14 Weather in fatal and serious injury incidents 1998 - 2003 and year 2003 by region

Weather	1998	1999	2000	2001	2002	2003	GC	BN	GL	MK	TV	CN
Not specified	13	7	14	5	10	4	0	3	1	0	0	0
Clear	37	46	46	32	40	20	7	3	2	6	2	0
Cloudy	3	5	16	6	4	3	0	0	2	0	1	0
Flood	0	0	0	0	0	0	0	0	0	0	0	0
Hazy	2	1	2	1	1	0	0	0	0	0	0	0
Other	1	0	1	0	2	1	0	1	0	0	0	0
Rain	2	6	4	1	3	0	0	0	0	0	0	0
Fatality/serious injury incidents	**58**	**65**	**83**	**45**	**60**	**28**	**7**	**7**	**5**	**6**	**3**	**0**

Table 15 Wind in fatal and serious injury incidents 1998 - 2003 and year 2003 by region

Wind	1998	1999	2000	2001	2002	2003	GC	BN	GL	MK	TV	CN
Not specified	20	7	15	4	12	5	0	3	2	0	0	0
No wind	8	6	9	5	9	1	0	0	0	0	1	0
Light (up to force 2 / 1-7 knots)	12	25	22	22	16	7	4	2	0	1	0	0
Moderate (force 3-4 / 8-16 knots)	11	16	20	7	14	13	3	2	2	4	2	0
Strong (force 5-7 / 17-33 knots)	6	11	15	7	9	2	0	0	1	1	0	0
Gale (force 8 and above / more than 33 knots)	1	0	2	0	0	0	0	0	0	0	0	0
Fatality/serious injury incidents	**58**	**65**	**83**	**45**	**60**	**28**	**7**	**7**	**5**	**6**	**3**	**0**

Table 16 Environmental factors contributing to marine incidents 1998 - 2003 and year 2003 by region

Environmental factors	1998	1999	2000	2001	2002	2003	GC	BN	GL	MK	TV	CN
Abnormal tidal conditions	24	17	7	15	5	4	1	0	1	0	1	1
Bar conditions	5	9	3	2	12	18	9	7	0	0	0	2
Floating or submerged object	17	24	25	17	11	7	1	3	2	0	0	1
Hazardous season (cyclones etc)	6	15	5	1	0	3	0	1	0	2	0	0
Hazardous waters - coral reefs	6	2	24	30	23	22	1	0	0	15	0	6
Hazardous waters - lack navigation aids	0	1	2	1	1	1	1	0	0	0	0	0
Hazardous waters - shifting channel	1	1	3	9	5	6	1	5	0	0	0	0
Hazardous waters - uncharted hazards	3	0	2	7	4	2	0	2	0	0	0	0
Heavy traffic area	5	5	5	2	7	3	1	1	0	0	0	1
Other environmental contributing factor	3	5	27	35	23	17	3	9	2	3	0	0
Poor visibility	14	18	16	16	16	10	0	3	1	4	1	1
Sea state	31	61	68	78	75	70	3	27	13	15	7	5
Wash of passing vessel	22	19	7	13	14	9	1	4	2	0	0	2
Wind	44	24	21	60	42	66	8	23	6	17	6	6
Total environmental factors attribution	**181**	**201**	**215**	**286**	**238**	**238**	**30**	**85**	**27**	**56**	**15**	**25**

Table 17 Human factors contributing to marine incidents 1998 - 2003 and year 2003 by region

Human factors	1998	1999	2000	2001	2002	2003	GC	BN	GL	MK	TV	CN
Alcohol or drugs	6	4	6	6	6	7	0	2	5	0	0	0
Commercial pressure	1	4	11	9	6	3	0	1	0	1	0	1
Excessive speed	10	21	15	17	16	10	2	4	1	2	1	0
Fatigue	4	8	4	9	2	6	0	2	1	2	0	1
Inadequate training of crew	8	6	14	20	13	13	4	1	1	4	1	2
Inappropriate Harbour/Port Authority advice	0	0	2	2	0	0	0	0	0	0	0	0
Inappropriate advice to ship - Pilot	0	4	0	0	2	0	0	0	0	0	0	0
Inappropriate Vessel Traffic System advice	1	0	0	1	1	0	0	0	0	0	0	0
Inappropriate instructions to crew - other	2	1	1	3	4	6	1	2	1	1	0	1
Poor communication of instructions to crew	3	0	3	4	4	1	0	1	0	0	0	0
Inattention	22	30	64	73	64	55	2	31	7	7	3	5
Insecure mooring	15	10	33	28	19	25	4	4	3	8	1	5
Insufficient crew numbers	0	1	0	1	0	1	0	0	1	0	0	0
Insufficient fuel	3	2	2	1	3	0	0	0	0	0	0	0
Insufficient maintenance	3	6	6	10	5	8	0	0	3	4	1	0
Insufficient planning	5	9	11	12	9	17	0	5	1	8	0	3
Navigation error-failure to keep proper lookout	24	33	17	37	25	45	3	4	7	24	1	6
Navigation error-lack of knowledge/experience	66	58	33	36	14	37	0	11	1	21	0	4
Navigation error-other	20	33	29	37	24	20	2	7	1	6	1	3
Navigation error-violation of Collision regs	28	15	5	22	13	20	2	5	2	5	3	3
Operational error-other	40	45	66	122	118	133	35	18	24	40	6	10
Overloading	0	0	2	4	0	1	0	0	0	0	0	1
Poor communications	6	3	3	6	7	1	0	0	0	1	0	0
Poor ship to shore communications	0	0	0	2	2	3	0	1	1	1	0	0
Violation of standard procedures	27	3	1	26	16	22	0	10	1	6	0	5
Violation of statutory rules or standards	4	7	9	21	22	16	3	6	0	1	0	6
Total human factors attribution	**298**	**303**	**337**	**509**	**395**	**450**	**58**	**115**	**61**	**142**	**18**	**56**

Table 18 Material factors contributing to marine incidents 1998 - 2003 and year 2003 by region

Material factors	1998	1999	2000	2001	2002	2003	GC	BN	GL	MK	TV	CN
Bridge or navigation failure	0	4	5	2	1	3	0	0	0	1	0	2
Electrical failure	3	3	9	19	13	9	0	0	1	4	1	3
Equipment failure - other	28	33	33	25	22	29	0	7	1	12	4	5
Fuel or gas leak	6	3	1	10	2	4	0	1	0	1	2	0
Hull failure	12	8	12	16	16	12	2	4	2	0	2	2
Inadequate stability - other	2	1	3	6	0	1	0	0	0	1	0	0
Inadequate stability - overloading	0	0	2	1	0	1	0	0	1	0	0	0
Inadequate stability - shifting cargo	1	0	0	1	1	2	0	0	0	1	0	1
Inappropriate hull or equipment-construction fault	2	0	2	5	6	1	0	0	0	0	1	0
Inappropriate hull or equipment-design fault	2	2	7	9	3	7	0	0	0	4	0	3
Insufficient maintenance of hull or equipment	5	12	10	6	5	3	0	0	1	2	0	0
Insufficient safety equipment	1	0	0	0	5	2	0	0	0	0	0	2
Machinery failure	21	25	25	41	47	49	0	17	10	8	3	11
Other material contributing factor	2	14	36	32	28	22	1	10	5	3	2	1
Shore structure badly designed/maintained	5	5	4	4	5	4	0	1	0	1	2	0
Total material factors attribution	**90**	**110**	**149**	**177**	**154**	**149**	**3**	**40**	**21**	**38**	**17**	**30**

Table 19 Incident type 1998 - 2003 and year 2003 by region

Incident type	1998	1999	2000	2001	2002	2003	GC	BN	GL	MK	TV	CN
Capsizing	10	11	19	16	14	13	0	8	1	3	0	1
Capsizing flooding	4	5	5	12	7	8	0	1	2	3	1	1
Capsizing sinking	30	23	19	23	29	21	4	5	4	1	4	3
Capsizing swamping	13	27	17	22	31	40	10	10	7	3	3	7
Collision between ships	125	138	121	119	119	125	31	35	18	13	9	19
Collision with a fixed object	39	38	37	36	42	35	4	8	6	7	3	7
Collision with an animal	0	0	0	1	2	2	0	0	0	2	0	0
Collision with floating object	17	6	12	7	11	8	0	4	1	0	1	2
Collision with overhead obstruction	1	0	3	0	2	0	0	0	0	0	0	0
Collision with submerged object	8	18	24	15	18	18	6	9	1	0	0	2
Collision with wharf	10	16	13	20	18	22	1	11	1	2	2	5
Explosion	9	2	2	5	1	1	0	1	0	0	0	0
Fire	9	22	18	28	17	31	1	10	5	6	3	6
Grounding intentional	4	3	10	2	2	2	0	1	0	1	0	0
Grounding unintentional	87	93	127	115	94	125	5	28	11	52	10	19
Loss of ship	14	10	23	1	7	13	0	4	6	1	1	1
Loss of stability	0	1	0	3	0	2	0	2	0	0	0	0
Onboard incident crushing or pinching	4	8	5	1	5	5	1	1	2	0	1	0
Onboard incident falls within ship	5	17	9	19	18	19	1	5	7	2	2	2
Onboard incident other onboard injury	26	12	20	15	10	10	1	3	1	5	0	0
Other	18	48	29	10	62	43	1	14	10	11	2	5
Other - Close Call	29	5	29	40	50	29	0	16	3	3	0	7
Other - Crime Issue	0	1	1	10	2	1	0	0	1	0	0	0
Other - Ship Adrift	2	0	6	20	10	12	0	1	0	5	1	5
Other personal injury caused by operation of ship	9	5	10	7	18	10	3	3	2	2	0	0
Other personal injury diving incident	1	1	3	1	2	2	0	0	2	0	0	0
Other personal injury hit by propellor or ship	3	1	3	5	6	10	2	5	1	2	0	0
Other personal injury parasailing incident	2	1	0	1	2	0	0	0	0	0	0	0
Other personal injury water ski incident	8	8	10	8	5	4	3	1	0	0	0	0
Person overboard	10	22	21	25	24	19	3	5	5	2	3	1
Structural failure	7	8	16	22	21	15	0	1	0	9	3	2
All incidents	**504**	**550**	**612**	**609**	**649**	**645**	**77**	**192**	**97**	**135**	**49**	**95**

Table 20 Locations of incidents 1998 - 2003 and year 2003 by region

Location	1998	1999	2000	2001	2002	2003	GC	BN	GL	MK	TV	CN
Not specified	59	8	7	1	1	4	0	3	1	0	0	0
Inland waters	141	130	108	102	101	78	18	37	9	1	10	3
Offshore	81	72	114	115	138	129	12	35	30	15	12	25
Partially smooth waters	91	234	160	151	153	190	8	40	21	90	14	17
Smooth waters	132	109	223	241	257	244	39	77	36	29	13	50
All incidents	**504**	**553**	**612**	**610**	**650**	**645**	**77**	**192**	**97**	**135**	**49**	**95**

Table 21 Incidents by month 1998 - 2003 and year 2003 by region

Month	1998	1999	2000	2001	2002	2003	GC	BN	GL	MK	TV	CN
January	64	48	66	59	60	54	10	16	9	7	4	8
February	39	43	49	40	55	40	5	15	10	7	1	2
March	28	46	52	58	57	57	10	16	4	13	2	12
April	37	52	64	54	58	47	6	15	4	9	7	6
May	47	47	49	38	46	47	6	10	4	15	5	7
June	40	47	40	50	63	60	10	21	9	9	5	6
July	30	44	61	48	37	54	5	17	8	13	3	8
August	40	45	60	66	48	61	7	22	6	17	4	5
September	46	43	47	42	61	43	5	13	7	7	2	9
October	52	47	52	51	58	66	1	15	10	18	8	14
November	39	42	34	58	52	61	7	10	17	9	6	12
December	42	49	38	46	55	55	5	22	9	11	2	6
All incidents	**504**	**553**	**612**	**610**	**650**	**645**	**77**	**192**	**97**	**135**	**49**	**95**

Table 22 Incidents 1998 - 2003 by region

Region	1998	1999	2000	2001	2002	2003
Gold Coast	-	1	73	75	79	77
Brisbane	226	221	179	198	198	192
Gladstone	64	89	94	76	87	97
Mackay	104	131	119	128	123	135
Townsville	46	45	46	51	59	49
Cairns	64	66	101	82	104	95
Region not advised	0	0	0	0	0	0
All incidents	**504**	**553**	**612**	**610**	**650**	**645**

Table 23 Damage category 1998 - 2003 and year 2003 by region

Damage	1998	1999	2000	2001	2002	2003	GC	BN	GL	MK	TV	CN
Not specified	46	1	0	0	2	4	0	2	2	0	0	0
Damage to Property Only	44	66	53	51	68	68	12	27	6	7	8	8
No Damage	106	176	217	226	272	245	15	82	45	57	15	31
Ship Damaged	213	222	291	285	268	295	48	72	36	69	22	48
Ship Lost	35	32	51	47	40	33	2	9	8	2	4	8
All incidents	**444**	**497**	**612**	**609**	**650**	**645**	**77**	**192**	**97**	**135**	**49**	**95**

Table 24 Incidents by time of day 1998 - 2003 and year 2003 by region

Time of day	1998	1999	2000	2001	2002	2003	GC	BN	GL	MK	TV	CN
Not specified	16	18	51	22	41	35	2	4	5	6	5	14
Dawn	22	35	19	22	26	26	3	10	5	1	3	4
Day	312	354	382	386	410	417	61	123	60	99	22	52
Dusk	48	31	34	58	59	55	5	18	5	8	4	14
Night	106	115	126	122	114	112	6	37	22	21	15	11
All incidents	**504**	**553**	**612**	**610**	**650**	**645**	**77**	**192**	**97**	**135**	**49**	**95**

Table 25 No. of ships in incidents 1998 - 2003 by ship type

Ship type	1998	1999	2000	2001	2002	2003
COM Fishing	78	94	101	92	88	88
COM Hire & Drive	0	2	0	0	0	0
COM Hire & Drive (House)	9	3	4	4	1	0
COM Hire & Drive (Motor)	6	7	8	10	10	11
COM Hire & Drive (Other)	11	0	0	2	0	1
COM Hire & Drive (PWC)	6	7	7	5	2	2
COM Hire & Drive (Sail)	17	27	43	46	30	48
COM Hire & Drive (Speed)	2	1	2	0	0	1
COM Houseboat	4	8	7	11	11	8
COM Hovercraft	1	0	0	0	0	0
COM Motorboat	15	5	11	8	6	6
COM Non-passenger	25	14	67	29	69	93
COM Other	79	113	46	66	89	48
COM Paddle (row) boat	1	0	1	0	3	0
COM Passenger	92	112	126	161	137	162
COM PWC (jetski)	12	6	6	9	10	11
COM Sailboat	15	47	8	15	14	20
COM Speedboat	15	16	8	12	22	14
REC Houseboat	8	8	7	9	5	8
REC Motorboat	50	41	60	66	71	85
REC Other	13	15	16	30	34	16
REC Paddle (row) boat	3	0	5	2	3	4
REC PWC (jetski)	14	26	27	17	21	11
REC Sailboat	83	86	94	59	86	101
REC Speedboat	71	82	84	56	69	75
Not specified	14	6	10	32	51	5
Unknown ship type	9	10	3	10	10	0
No of ships by ship type	**653**	**736**	**751**	**751**	**842**	**818**

Table 26 Visibility in incidents 1998 - 2003 and year 2003 by region

Visibility	1998	1999	2000	2001	2002	2003	GC	BN	GL	MK	TV	CN
Not specified	60	67	89	33	92	89	1	37	21	1	13	16
Poor	57	53	64	61	50	52	6	8	13	14	2	9
Fair	74	73	96	112	67	70	8	13	9	21	9	10
Good	313	360	363	404	441	434	62	134	54	99	25	60
All incidents	**504**	**553**	**612**	**610**	**650**	**645**	**77**	**192**	**97**	**135**	**49**	**95**

Table 27 Weather in incidents 1998 - 2003 and year 2003 by region

Weather	1998	1999	2000	2001	2002	2003	GC	BN	GL	MK	TV	CN
Not specified	74	56	67	31	72	71	2	30	20	2	7	10
Clear	314	347	364	427	447	414	57	120	49	92	29	67
Cloudy	35	55	83	72	63	90	9	26	18	23	9	5
Flood	0	0	3	1	0	1	0	0	1	0	0	0
Hazy	12	7	15	16	27	19	2	6	2	3	1	5
Other weather	7	10	12	8	7	4	0	2	2	0	0	0
Rain	62	78	68	55	34	46	7	8	5	15	3	8
All incidents	**504**	**553**	**612**	**610**	**650**	**645**	**77**	**192**	**97**	**135**	**49**	**95**

Table 28 Wind in incidents 1998 - 2003 and year 2003 by region

Wind	1998	1999	2000	2001	2002	2003	GC	BN	GL	MK	TV	CN
Not specified	127	65	62	37	69	63	1	28	16	1	4	13
No wind	28	32	57	47	57	49	8	18	5	7	4	7
Light (up to force 2 / 1-7 knots)	128	140	168	217	196	176	30	58	22	26	7	33
Moderate (force 3-4 / 8-16 knots)	125	185	172	186	209	228	28	63	36	54	22	25
Strong (force 5-7 / 17-33 knots)	78	116	130	104	107	122	10	22	16	45	12	17
Gale (force 8 and above / more than 33 knots)	18	15	23	19	12	7	0	3	2	2	0	0
All incidents	**504**	**553**	**612**	**610**	**650**	**645**	**77**	**192**	**97**	**135**	**49**	**95**

Table 29 Boating incidents 1998 - 2003 by region

Region	1998	1999	2000	2001	2002	2003
South East Queensland	2174	1769	1845	n/a	n/a	n/a
Gold Coast	n/a	n/a	n/a	927	874	878
Brisbane	n/a	n/a	n/a	768	1005	1175
Gladstone	424	356	480	335	395	388
Mackay	121	65	40	68	17	7
Townsville	106	114	151	111	122	104
Cairns	118	147	216	160	146	145
Annual totals	**2943**	**2451**	**2732**	**2369**	**2559**	**2697**

Table 30 Boating incidents by callout reason 2003 by region

Region	Breakdown	Grounding	Fuel	Sinking	Not Specified	Drifting	Search	Medical	Flares	EPIRB
Brisbane	606	77	74	47	65	45	56	21	9	7
Cairns	100	6	14	4	2	6	3	1	1	3
Gladstone	238	22	27	16	18	15	14	7	7	6
Gold Coast	527	85	46	63	25	31	13	11	3	2
Mackay	5	0	2	0	0	0	0	0	0	0
Townsville	71	4	6	4	5	1	6	0	3	0
Callout reason totals	**1547**	**194**	**169**	**134**	**115**	**98**	**92**	**40**	**23**	**18**

Table 31 Commercial and recreational registrations 1998-2003 by region

Recreational registrations						
Region	**1998**	**1999**	**2000**	**2001**	**2002**	**2003**
Gold Coast	16392	17544	18695	20130	22052	23813
Brisbane	63662	66986	70310	74018	75514	78798
Gladstone	22469	23430	24391	25826	29270	31018
Mackay	9692	10055	10417	11046	12632	13270
Townsville	13065	13610	14154	14989	16618	17141
Cairns	13816	14693	15570	16143	15829	16264
Totals	**139096**	**146318**	**153537**	**162152**	**171915**	**180304**
Commercial registrations						
Region	**1998**	**1999**	**2000**	**2001**	**2002**	**2003**
Gold Coast	693	728	727	727	763	825
Brisbane	1434	1585	1569	1596	1580	1636
Gladstone	716	768	744	752	778	777
Mackay	641	700	711	751	765	776
Townsville	413	480	473	466	485	468
Cairns	983	1074	1105	1123	1178	1165
Totals	**4880**	**5335**	**5329**	**5415**	**5549**	**5647**
Total registrations						
Region	**1998**	**1999**	**2000**	**2001**	**2002**	**2003**
Gold Coast	17085	18272	19422	20857	22815	24638
Brisbane	65096	68571	71879	75614	77094	80434
Gladstone	23185	24198	25135	26578	30048	31795
Mackay	10333	10755	11128	11797	13397	14046
Townsville	13478	14090	14627	15455	17103	17609
Cairns	14799	15767	16675	17266	17007	17429
Totals	**143976**	**151653**	**158866**	**167567**	**177464**	**185951**