



2005

Marine Incidents

IN QUEENSLAND

May 2006



**Queensland
Government**

Maritime Safety
Queensland



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Director General's Foreword



As Director-General of Queensland Transport, I am pleased to formally report on Queensland's marine safety performance in 2005, as measured by marine incident numbers and outcomes.

Throughout 2005 Maritime Safety Queensland has continued to work at encouraging and fostering safety as a core value and culture within the commercial, fishing and recreational sectors of the boating industry and community. As I mentioned in last year's report, such a task is not without its challenges, but it is certainly worth pursuing.

In 2005, Queensland maintained the general trend of continuous improvement in marine safety outcomes seen over the past 25 years. While recorded marine incident fatality numbers did not fall in 2005, neither did they rise. This was in an environment of continuing strong growth in both population and registered vessel numbers and associated on-water boating activity.

Queensland's strong marine safety record is due in no small part to a range of key boating safety initiatives that Maritime Safety Queensland has introduced over recent years.

Some of the more notable initiatives in recent years have included the Know, Know, Know Your Boat and Boat Smart education campaigns, the extension of recreational boat licensing requirements to include displacement hull vessels and jet skis, the introduction of the BoatSafe recreational boat licence training and assessment scheme, the government's jet ski management plan and most recently the introduction of the 'Under 12-under 4.8m-underway' mandatory lifejacket wearing initiative. But it doesn't stop there. There a number of important marine safety initiatives currently being progressed including the introduction of the Torres Strait Marine Safety Program and the National Standard for Commercial Vessels, a suite of uniform commercial vessel safety standards Australia-wide.

It is pleasing to again be able to publish such a comprehensive set of statistics on marine incidents in Queensland. The report, Marine Incidents in Queensland 2005, is one of the tools available to maritime safety stakeholders to better understand why and how incidents occur on our waterways and to inform decisions about future maritime safety initiatives and about individual boating behaviour.

It is not just Maritime Safety Queensland that carries the responsibility for driving and maintaining Queensland's marine safety performance. It's a joint effort between a range of maritime stakeholders and interested parties. The challenge for government, industry and the boating community alike lies in working together to ensure that boating is both safe and enjoyable and continues to meet Queensland's maritime transport, tourism and recreational needs.

I want to take this opportunity to again thank Maritime Safety Queensland's partner agencies, the Queensland Water Police and the Queensland Boating and Fisheries Patrol for their assistance and support throughout 2005. I look forward in 2006 to continued cooperation between Maritime Safety Queensland, commercial, fishing, and recreational boating communities and our partner agencies to further improve safety on our waterways.

A handwritten signature in black ink, appearing to read 'Bruce Wilson', written in a cursive style.

Bruce Wilson
Director General
Queensland Transport

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According to the most recently available Australian Bureau of Statistics (ABS) water transport fatality data, Queensland's marine fatality rate per million of population fell by nearly 30 per cent from 2.59 in 1995 to 1999 to 1.83 in 2000 to 2004. The overall Australian water transport fatality rate for the same periods fell from 4.48 to 2.03 fatalities per million of population. Queensland is currently ranked third overall of the eight Australian jurisdictions in terms of its water transport fatality rate per million of population.

While Queensland recorded the same number of marine incident fatalities in 2005 as in 2004 and a small rise in the number of reported serious injuries, Queensland can reasonably anticipate, based on outcomes over a rolling five-year period, that its marine safety performance will continue the overall positive trend experienced over the past 25 years. Queensland's marine fatality trend per million of population and per 100,000 registered vessels is flat-lining if not trending slightly downwards.

By way of an annual snapshot for the calendar year 2005:

- There was a 'sameness' about 2004 and 2005—the same number of reported incidents and the same number of recorded fatalities.
- There were 633 marine incidents reported in Queensland—equal to the number of reported incidents in 2004 and marginally below the four-year average of 638.25.
- On average more than 65 per cent of all reported marine incidents occurred in the daytime, on a clear day, with good visibility.
- The most frequently reported types of marine incidents were collisions between ships (138) and unintentional groundings (116).
- There were 49 incidents reported as resulting in fatalities or serious injuries—five more incidents than in 2004, and higher than the previous four-year average of 44.25 reported incidents.
- Ten of these incidents resulted in 12 fatalities—the same number of fatalities as recorded in 2004. This fatality outcome is marginally over-represented when compared with the previous four-year average of 10.25 fatalities per annum.
- There was a significant over-representation of recreational vessels in fatal incidents in 2005. Ten of the 12 fatalities resulted from incidents involving recreational vessels, including four recreational speedboat incidents and two recreational PWC incidents. The remaining two fatalities involved commercial fishing vessels.
- 45 persons suffered serious injuries requiring hospitalisation—seven more than in 2004 and marginally above the previous four-year average of 41 serious injuries per annum.
- Human factors were identified as contributing to 75.5 per cent of the incidents involving fatality or serious injury. Inattention was identified in 38 per cent of these more serious incidents.
- While recreational vessels were over-represented in fatal incidents, commercial vessels accounted for 51 per cent of the vessels involved in both fatal and serious injury incidents.

1.1 Why report on marine incidents

According to a national study of marine fatalities commissioned by the National Marine Safety Committee, boating fatalities and serious injuries cost the Australian community in excess of \$350 million annually (O'Connor, 2004). This report provides an objective assessment of the condition of Queensland's maritime safety environment as reflected by the number and nature of reported marine incidents for the year 2005. 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 reported incidents 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 What are marine incidents


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.*

This report looks closely at marine incidents involving fatalities and serious injuries. Serious injury incidents refer to marine incidents in which a person involved in the incident suffered any injury requiring admission to hospital.

1.3 Marine incident data management

Section 125 of the Act requires marine incidents to be reported to Maritime Safety Queensland. All reported incidents are examined to some degree—with more serious incidents undergoing more comprehensive investigation by trained investigators. Data from marine incident reports and subsequent investigation reports is recorded in Maritime Safety Queensland's marine incident data management system (Caseman). The data elements recorded are 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 marine incident data set requirements.



The analyses included in this report draw on data from ‘reported’ marine incidents. While the level of reporting of marine incidents is generally considered robust, there is an acknowledged level of underreporting of marine incidents in any given year. Anecdotal evidence suggests that underreporting may be more prevalent in relation to incidents occurring in remote areas such as the Torres Strait and to incidents involving certain types of vessels such as jet skis. Maritime Safety Queensland continues to look for ways to improve incident reporting levels.

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

1.4 What’s in the report

The focus of the report is on reported marine incidents as a measure of public safety in the maritime environment. The report identifies the most frequently occurring incident types and their characteristics. It also identifies those incident types and characteristics showing significant change in 2005. This information provides a sound basis for determining priorities and shaping future maritime safety strategies and interventions.

The report includes a high-level comparative analysis of interstate marine fatality rates and more detailed intrastate trend analyses. These analyses are made using both population and the size of the registered vessel fleet as surrogate measures of potential exposure. Specific exposure data is not readily available for many aspects of commercial and recreational boating activity.

An examination is included of comparative regional performance within Queensland and of fatality and serious injury (FSI) incidents. These latter incidents carry a significantly higher social cost for the people concerned and 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 also focuses on selected features of marine incidents for more detailed analysis. Interspersed among these selected profiles are a series of incident case studies. These studies outline marine incidents that actually occurred in Queensland in 2005, highlighting 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 many characteristics of reported marine incidents are included in the Appendix to the report.

Unless otherwise stated, all the data presented in the report is sourced from the Maritime Safety Queensland’s Caseman marine incident data management system.

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’ reports.

It is also worth noting that when disaggregated, incident, fatality and serious injury 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.

1.5 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. There were no marine boards of inquiry convened during 2005.

2.0 Marine incidents in Queensland

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 underreporting of marine incidents in any given year. Maritime Safety Queensland continues to look for ways to improve compliance with statutory incident reporting requirements.

2.1 Reported marine incidents

In 2005, 633 marine incidents were reported in Queensland—the same number as reported in 2004. The number of incidents reported in 2005 is generally in line with the previous four-year average number of reported marine incidents (638.25). 12 fatalities and 45 serious injuries were reported as resulting from 49 of the reported marine incidents in 2005.

2.2 Marine incidents by severity

In this section all reported marine incidents in Queensland are analysed from the perspective of personal injury outcomes and property damage outcomes.

Figure 1 shows that total reported marine incidents in 2005 equalled the number reported in 2004. The aggregate numbers of reported marine incidents in recent years suggest an annual baseline in the low-to-mid six-hundreds. As mentioned earlier, there is an acknowledged indeterminate level of underreporting of marine incidents in any given year. Analyses in subsequent years will continue to monitor this aspect.

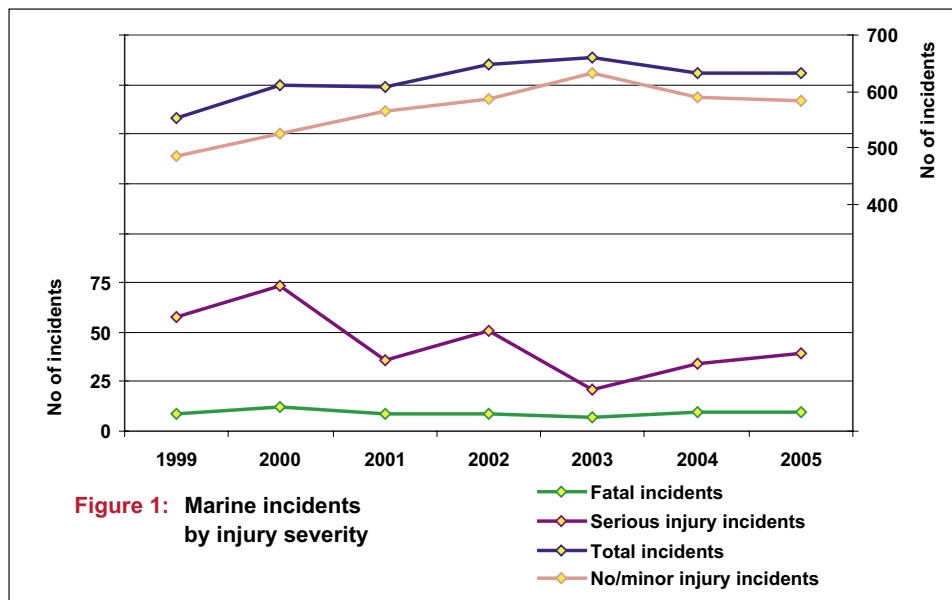
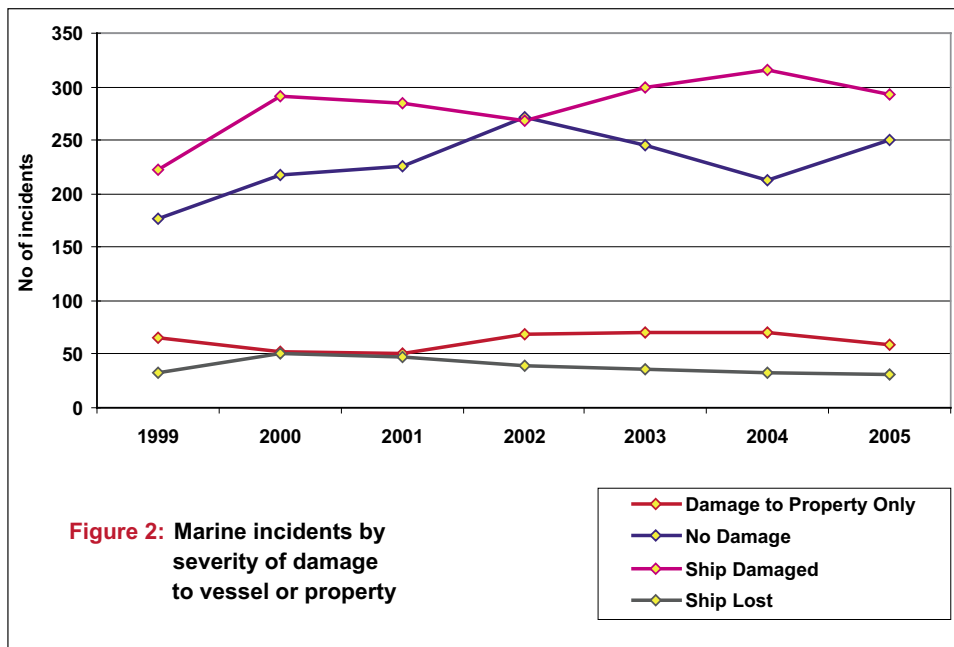


Figure 1 also shows reported marine incidents according to the severity of the personal injury outcome. Incidents resulting in fatality have risen from a low of seven in 2003 to 10 in 2005—marginally above the previous four-year average of 8.75 fatality incidents per year. Reported serious injury incidents increased in 2005 to 39 compared with 34 in 2004—also above the previous four-year average of 35.5.

The second overall view of incident severity relates to property damage and loss. The various dimensions of property damage and their relative involvement in marine incidents between 1999 and 2005 are shown in Figure 2.

The numbers of vessels deemed a total write-off/loss in terms of property damage continue to trend downwards. There were 31 vessels lost in 2005—down by two on the reported number of ships lost in 2004 and well below the previous four-year average of 39 ships lost per year.

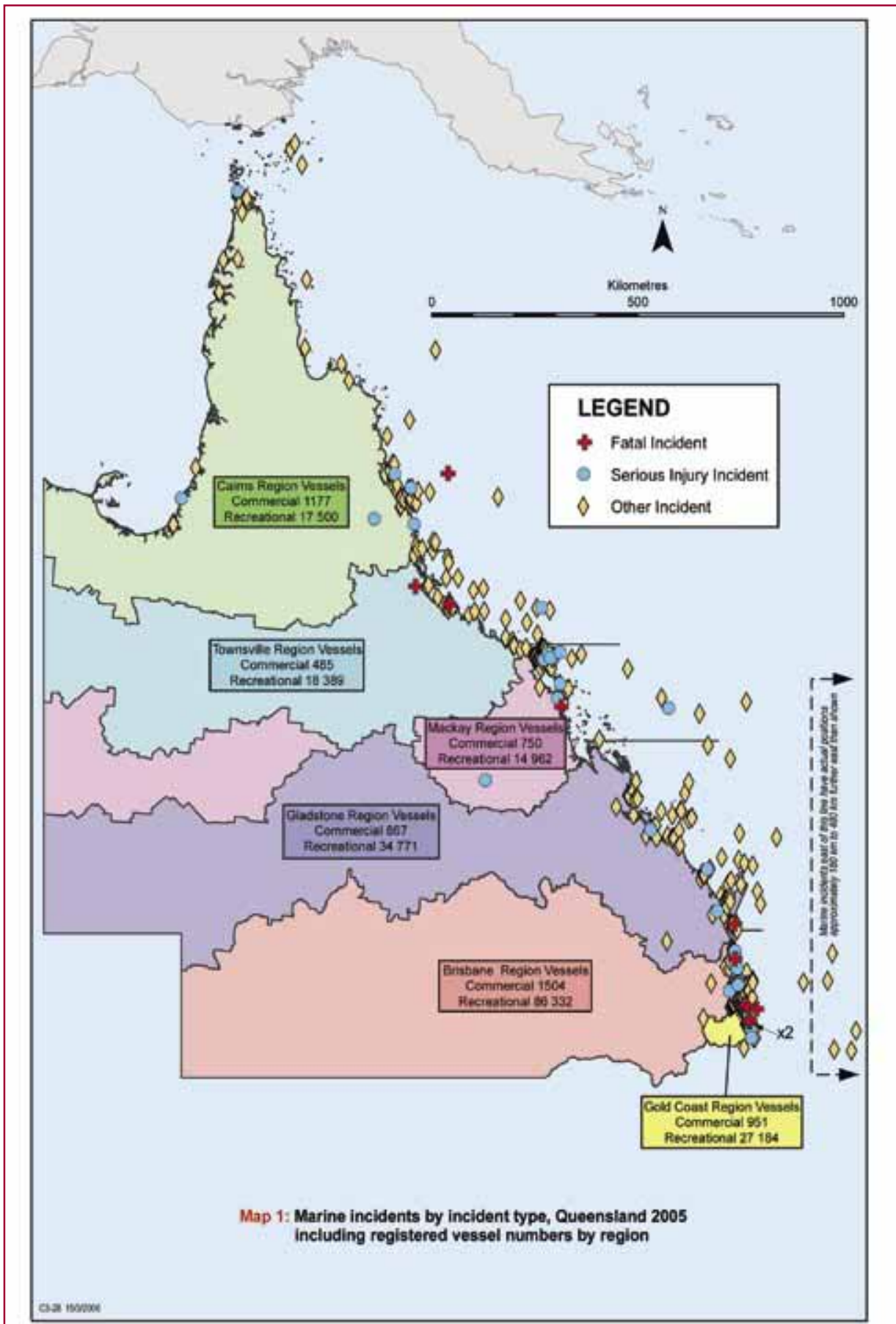


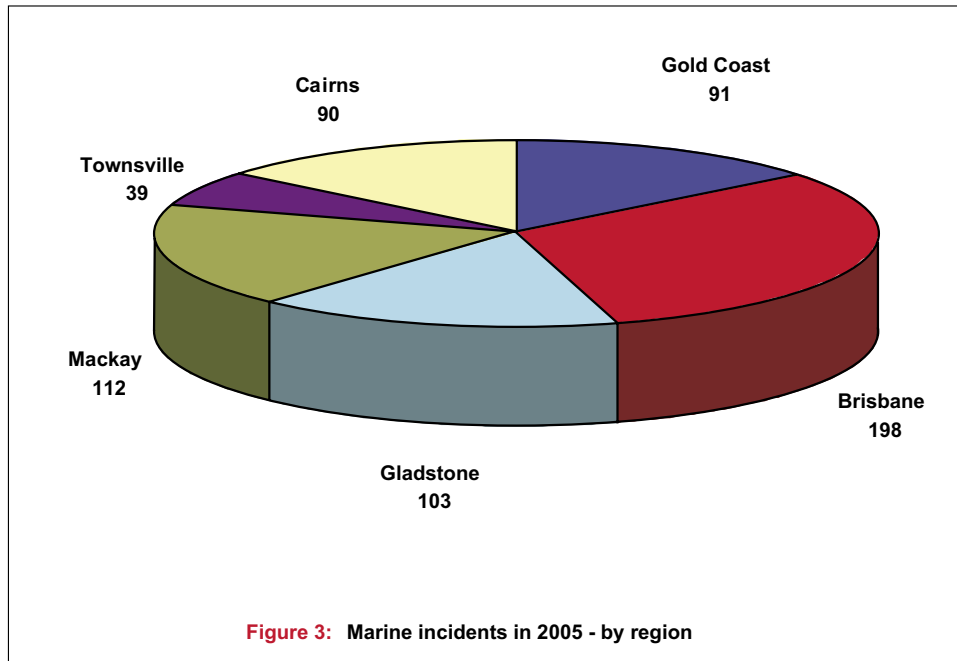
The number of ships damaged decreased from 316 in 2004 to 293 in 2005—in line with the previous four-year average of 292. There were 59 reported incidents where there was ‘damage to property only’ compared to 71 in 2004, well below the previous four-year average of 65. Encouragingly, the number of incidents in which there was no reported damage is up from 212 in 2004 to 250 in 2005—above the previous four-year average of 238.5.

2.3 Marine incidents by region

The Brisbane region recorded the highest number of reported marine incidents (198) in 2005, while the Townsville region recorded the least number of reported incidents (39). Figure 3 shows the number of reported marine incidents according to the region in which the incident occurred.

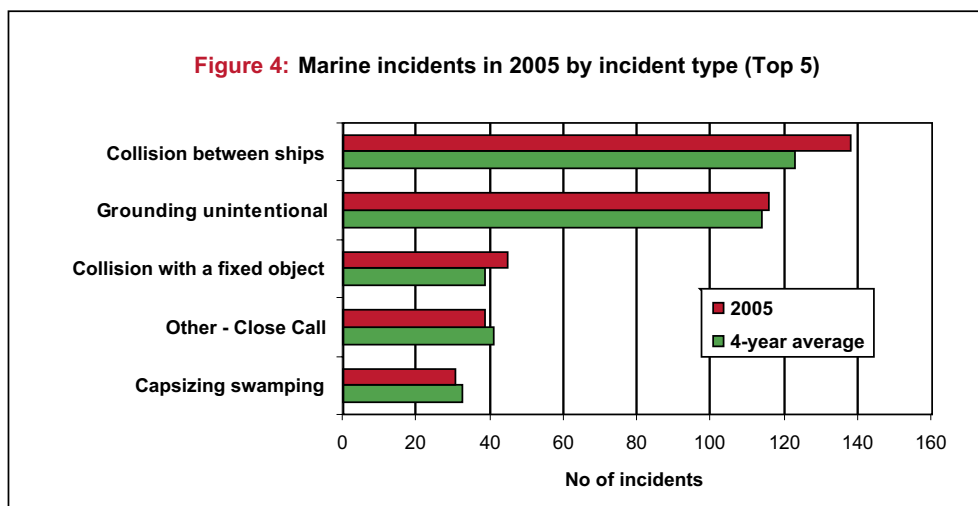
Map 1 shows spatially and by region where each of the reported marine incidents in 2005 occurred, together with the comparative numbers of commercially and recreationally registered vessels for each region.





2.4 Marine incidents by incident type

The five most frequently occurring types of marine incident reported in 2005 accounted for 369 (58.3 per cent) of the all reported incidents (n=633). Figure 4 shows the top five incidents types recorded in 2005 compared with their previous four year average involvement.



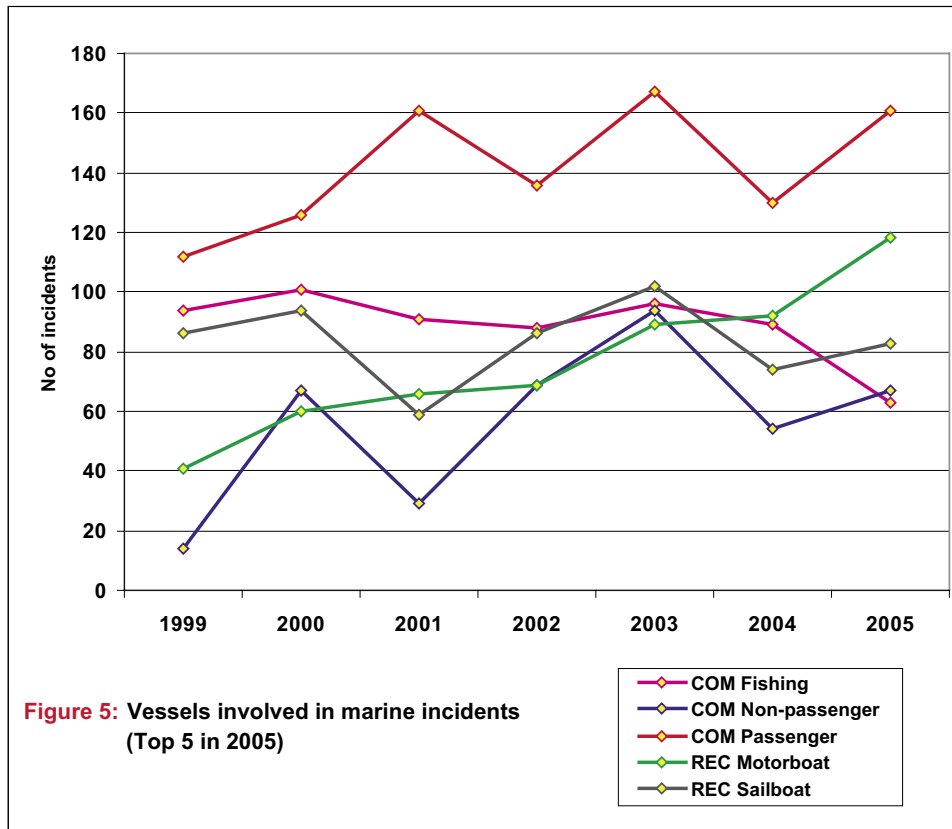
The most significant incident types in 2005 were ‘collision between ships’ and ‘unintentional groundings’, with 138 and 116 reported incidents respectively. In 2005 ‘collisions between ships’ were over-represented when compared with their previous four-year average involvement in reported marine incidents (123). ‘Unintentional grounding’ incidents were generally in line with their previous four-year average involvement in reported marine incidents.

2.5 Marine incidents by vessel type

Figure 5 shows the five vessel types that figured most frequently in reported marine incidents in Queensland in 2005 and their comparative representation since 1999. The top five vessel types

account for 492 (60.8 per cent) of all the vessels involved in reported incidents in 2005 (n=809).

Four of the top five vessel types show increases in their proportional involvement in marine incidents in 2005 compared to 2004. It is encouraging to see that commercial fishing ships (63) show a marked decrease in their involvement in marine incidents in 2005 compared to 2004 (89) and in terms of their previous four-year average involvement in reported marine incidents (91).



Commercial passenger vessels (161) were appreciably over-represented when compared with their involvement in 2004 (130) and their previous four-year average involvement in marine incidents (148.5). Likewise, recreational motorboats (118) were significantly over-represented when compared with their involvement in 2004 (92) and their previous four-year average involvement in reported incidents (79).

In terms of overall vessel involvement, commercial vessels accounted for 55.4 per cent of all vessels involved in incidents and recreational vessels made up 39.5 per cent of all vessels involved in incidents. Approximately five per cent (41) of the vessels involved in reported marine incidents in 2005 were not satisfactorily identified.

Recreational sailboats and recreational motorboats account for 25 per cent of all vessels involved in incidents and over 62 per cent of the recreational vessels involved in incidents. It is noted that from 1 September 2005, new recreational licensing provisions came into effect requiring operators of any recreational vessel powered by an engine of more than 4.5kW to be licensed. Previously, operators of recreational motorboats and auxiliary powered sailboats were permitted to operate these types of vessels without a licence.

2.6 Marine incidents by location

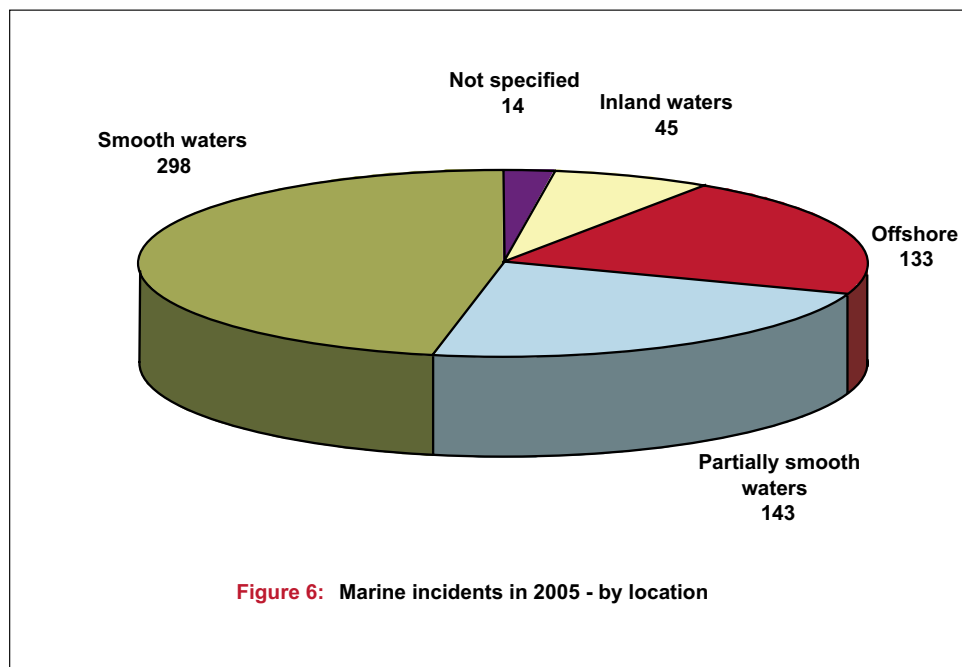
298 (47 per cent) of the reported marine incidents in 2005 (n=633) occurred within smooth water

limits. This compares with 281 incidents in smooth waters in 2004 and a previous four-year average involvement of 257.5. Incidents in offshore waters (133) were marginally over-represented when compared to 2004 (124) and a previous four-year average involvement of 127.5.

Incidents reported as occurring in inland waters and partially smooth waters showed decreases in both their absolute and relative representation in 2005. This could be due in part to more rigorous application of the location definition for incidents, particularly those occurring in non-tidal streams, impoundments and catchments. The decrease in the number of reported inland water incidents could also be related to impoundment closures due to low water levels. A number of major inland impoundments were closed to boating during 2005. Figure 6 shows reported marine incidents in 2005 according to the location in which they occurred.

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

- 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.



3.0 Queensland fatal marine incident trends

This section provides an analysis of fatal marine incidents in Queensland for 2005 in terms of past trends, and comparative trends in both population and registered vessel numbers.

3.1 Marine incident fatality trends

In 2005, ten of the 633 reported marine incidents resulted in loss of 12 lives - the same number of people who died in marine incidents in 2004. The 2005 fatality outcome is marginally over-represented when compared with the previous four-year average of 10.25 fatalities per year.

Figure 7 shows Queensland's marine fatalities per million of population and per 100,000 registered vessels for the past seven years. In the absence of more specific exposure data, these represent surrogate but objective measures of exposure for marine fatalities. Fatality rates relative to both vessels on register and total population have flattened in 2005 following a rise in 2004. The rise in 2004 was against recent downward trends.

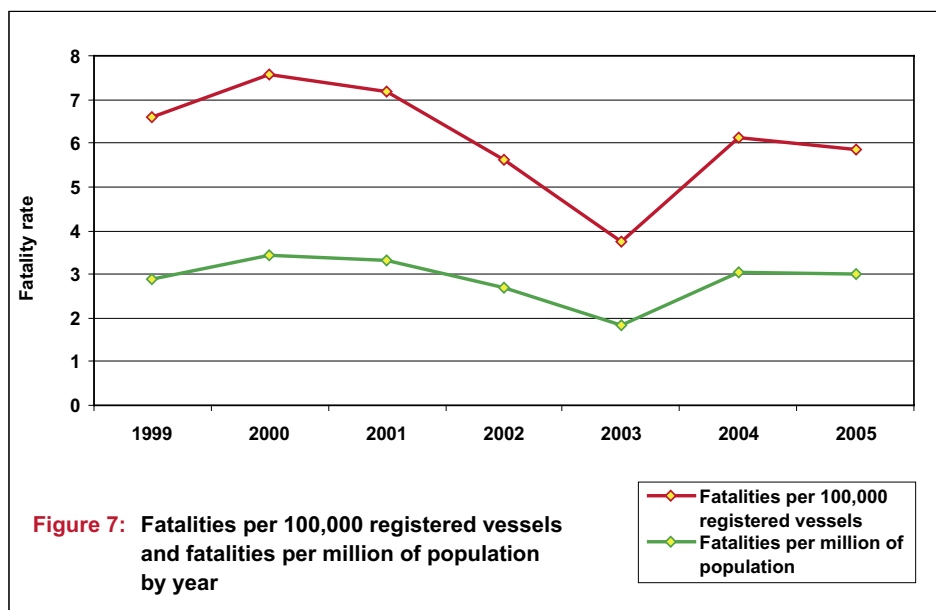


Figure 8 compares trends in Queensland marine fatalities with both vessel registration and population trends since 1997 (index 1997 = 100). Despite a higher number of marine incident fatalities in 2004 and 2005 (12, compared with 7 in 2003), the annual fatality trend since 1997 is flat-lining. Over the same period, Queensland's vessel registration numbers have grown by more than 51.3 per cent and the State's population has increased by more than 18.6 per cent.

3.2 Profile of persons fatally injured

Of the 12 persons fatally injured in incidents in 2005, nine were males and three were females. Eight of the deceased were the masters of the vessels involved and the remaining four were passengers. Figure 9 profiles the age and gender of the deceased. 75 per cent of those fatally injured were over 31 years of age and all were male. The three recorded female fatalities including a female child were all under 30 years of age.

3.3 Marine fatalities by vessel types

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

Figure 10 shows that 10 fatalities resulted from marine incidents involving recreational vessels in 2005—double the number recorded in 2004 and significantly above the previous four-year average

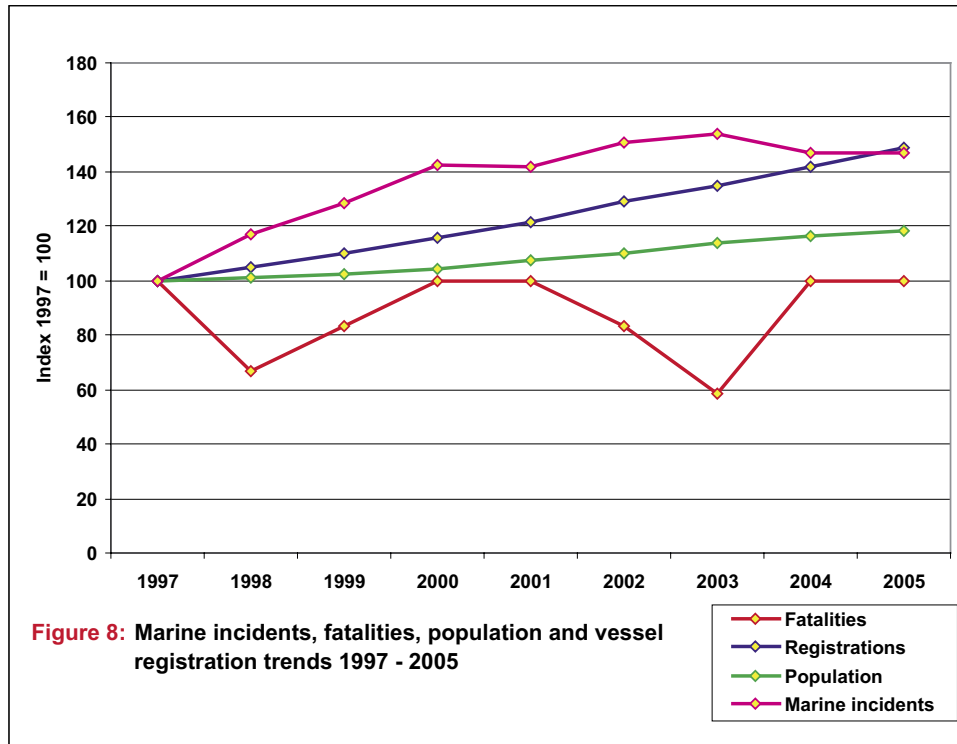


Figure 8: Marine incidents, fatalities, population and vessel registration trends 1997 - 2005

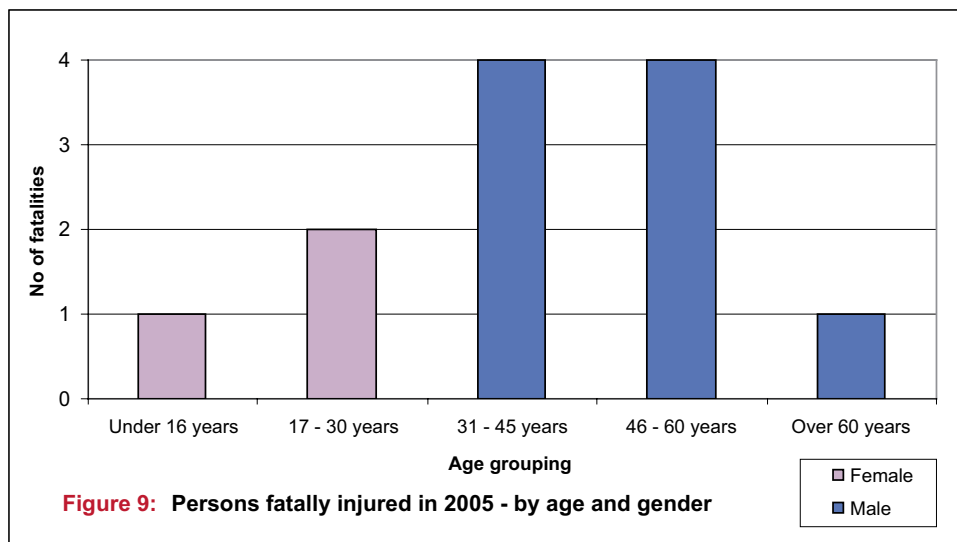


Figure 9: Persons fatally injured in 2005 - by age and gender

of 6 recreational fatalities per annum. This compares with growth in registered recreational vessel numbers in 2005 of 4.90 per cent and more than 52 per cent over the period 1997 to 2005. The fatality rate per 100,000 registered recreational vessels has risen significantly in 2005—from a previous four-year average fatality rate of 3.45 deaths per 100,000 registered recreational vessels to 5 deaths per 100,000 registered recreational vessels in 2005.

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 24.5 per cent over the period 1997 to 2005. Figure 11 shows there were only two fatalities resulting from marine incidents involving commercial vessels in 2005. This represents a significant decrease from the seven commercial vessel fatalities recorded in 2004 and is well below the average of 4.25 commercial vessel fatalities per year for the previous four-year period. Both of the recorded commercial vessel fatalities in 2005 resulted from incidents involving commercial fishing vessels.

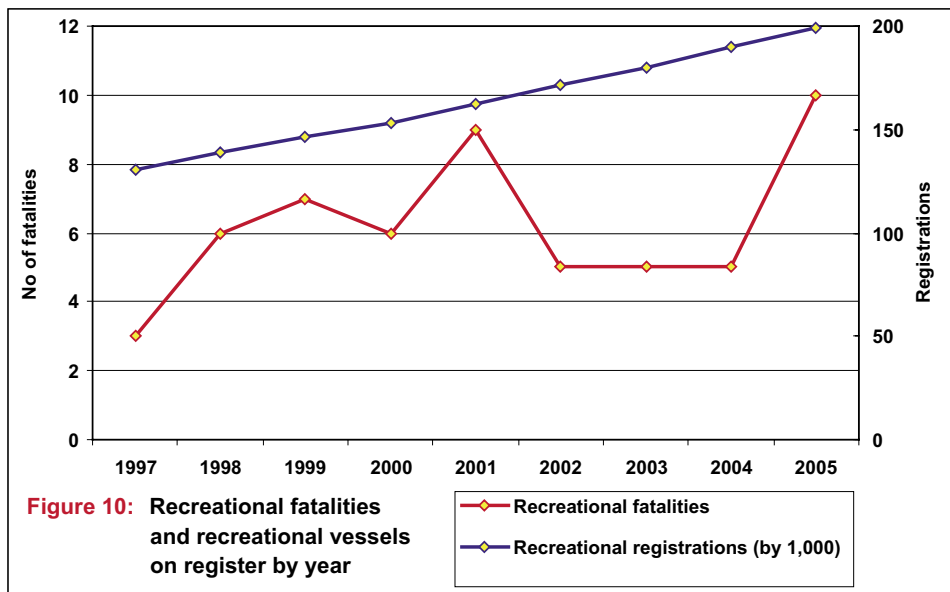


Figure 10: Recreational fatalities and recreational vessels on register by year

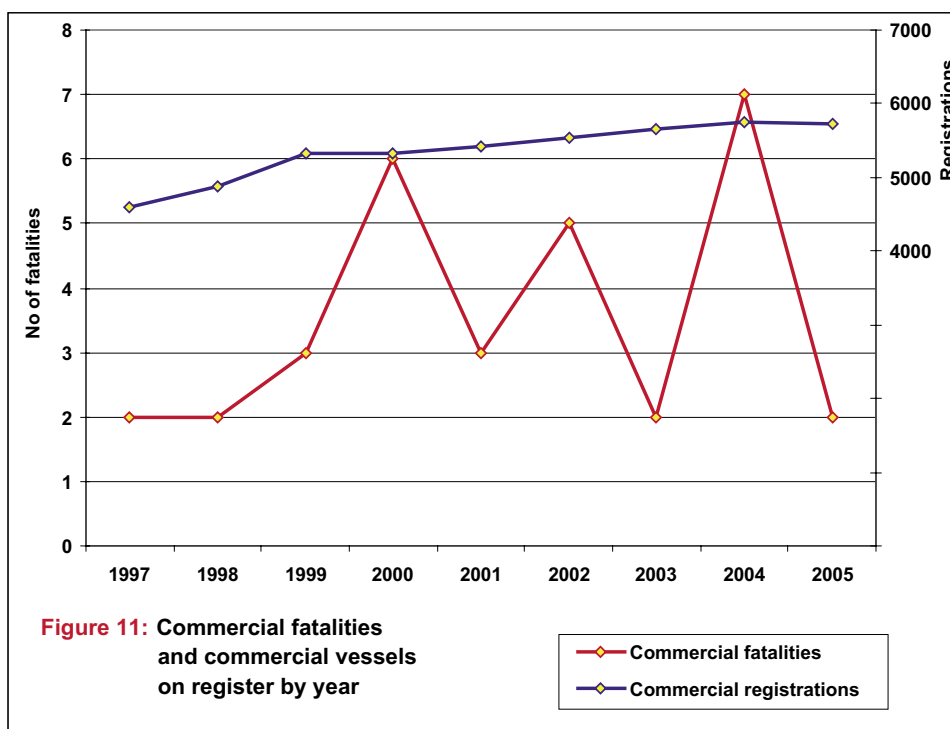


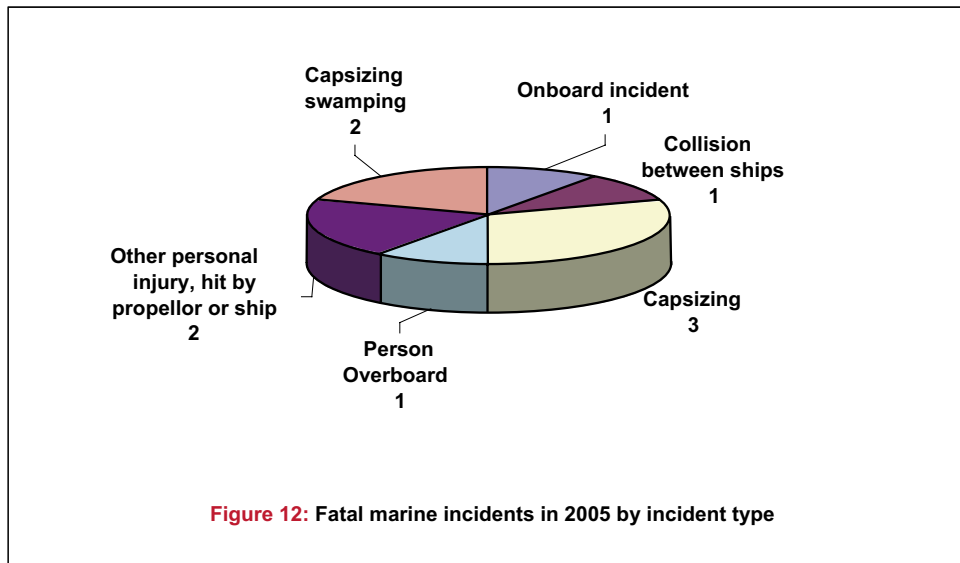
Figure 11: Commercial fatalities and commercial vessels on register by year

Of the 10 recorded fatal incidents, three involved recreational speedboats, two involved recreational jet skis, two involved commercial fishing ships and the remaining three incidents involved a recreational motorboat, a recreational sailboat and a recreational row boat respectively. The involvement of jet skis in fatal and in serious injury incidents was a feature of the reported marine incidents in 2005. The involvement of jet skis in marine incidents is examined in more detail later in this report.

3.4 Marine fatalities by incident types

Looking at marine fatality incidents by their incident type, six of the incidents resulted in people in the water. Of these six incidents, five were capsizing incidents and one involved a person overboard. Eight persons died in these six incidents alone. This highlights the potentially severe outcomes from

incidents involving persons overboard or in the water, particularly if they are not wearing life jackets. Figure 12 shows the 10 fatal incidents according to their incident type.



3.5 Marine fatality incidents by location

In terms of fatal incident location, five of the fatal incidents occurred in smooth water limits, two in partially smooth water limits, and three in offshore waters.

3.6 Out-of-scope marine fatalities

For a number of years Maritime Safety Queensland has captured data on incidents which occur in the marine 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 remedial action, including possible legislative changes, is taken. The data also enables the presentation of a fuller picture of safety in the marine environment.

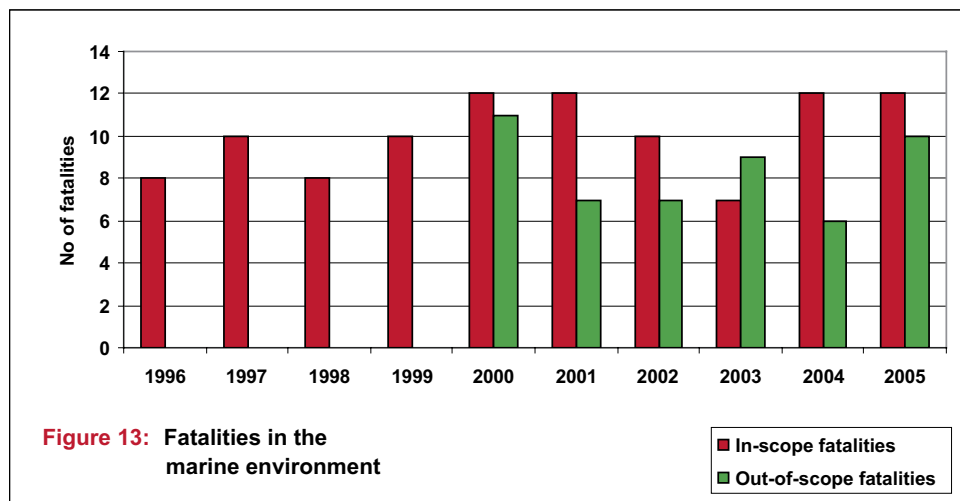


Figure 13 shows the number of fatalities resulting from both in-scope and out-of-scope incidents in the marine environment for the period 2000 to 2005. Queensland's combined marine fatalities, including out-of-scope fatalities, were 23 in 2000, 19 in 2001, 17 in 2002, 16 in 2003, 18 in 2004 and 22 in 2005. Out-of-scope marine fatality data was not recorded by Maritime Safety Queensland prior to 2000.

The 2005 fatalities classified as out-of-scope included the loss of:

- Five persons including four adults and one child missing onboard a Commonwealth immigration vessel on a voyage between Badu and Sabai Islands in the Torres Strait. While this incident is out-of-scope, the wider issue of boating safety in the Torres Strait is examined in more detail later in this report.
- Two male persons who suffered heart attacks while onboard commercial passenger vessels.
- Three male persons who appear to have suffered heart attacks while fishing unaccompanied—one remains missing and is presumed dead.

3.7 Marine fatality trends – Queensland in relation to Australia

To provide a broader view of Queensland's relative maritime safety performance, the 2005 review includes 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-related deaths may vary slightly from those used by Maritime Safety Queensland for fatal marine incidents, the ABS data 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. Reconciling Maritime Safety Queensland's fatality numbers with the ABS data is therefore not possible.

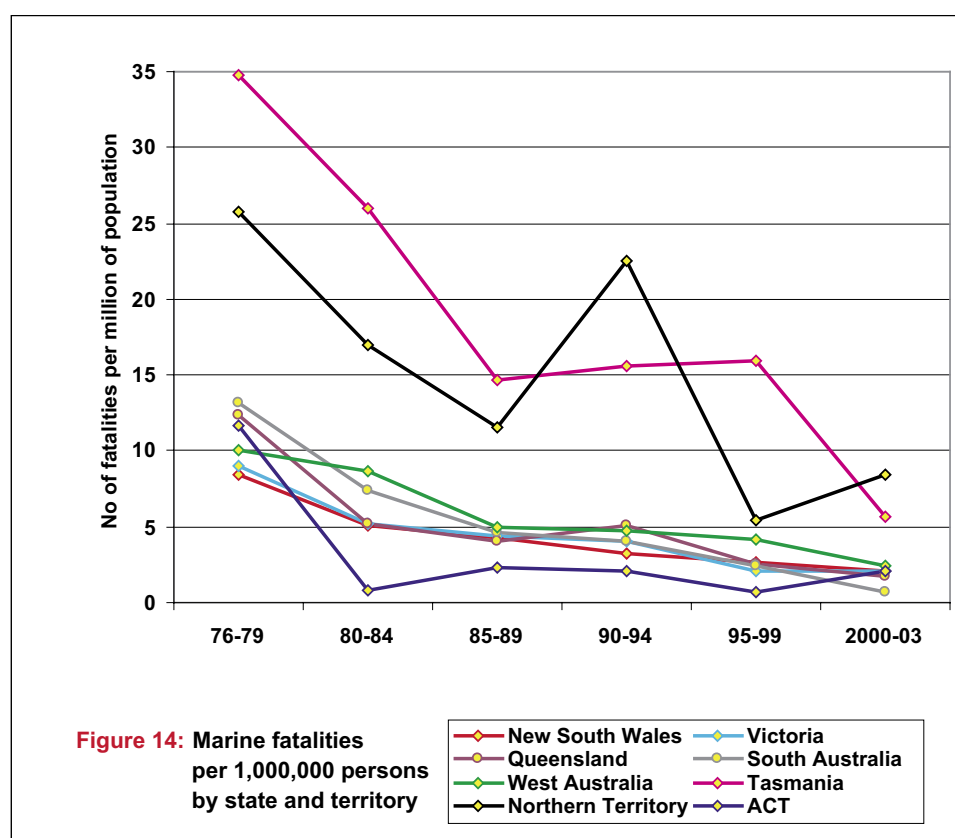


Figure 14: Marine fatalities per 1,000,000 persons by state and territory

◆ New South Wales ◆ Victoria
◆ Queensland ◆ South Australia
◆ West Australia ◆ Tasmania
◆ Northern Territory ◆ ACT

The ABS data does however resolve issues of comparability between individual jurisdictions' maritime incident data collections and definitions. Figure 14 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 in the Appendix provides comparative interstate water transport death rates for the period 1976 to 2004.

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. In the period 2000 to 2004, Queensland ranked third in Australia with a maritime fatality rate of 1.83 per one million of population. This represents a fall of nearly 30 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 2004 was 2.03. Coronial data for the 2005 calendar year was not available from the ABS at the time of printing this report.

Over the last three decades numerous marine safety initiatives have been introduced both nationally and in Queensland, including:

- Compulsory boating safety equipment (1976)
- Introduction of annual 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)
- Boat Smart education campaign (2003-2004)
- Commencement of major commercial boating industry 'safety culture' program (2004)
- Torres Strait Boating and Alcohol Program (2004)
- Extended recreational boat licensing requirements for displacement hull vessels (2005)
- A jet ski management plan including the introduction of mandatory jet ski licensing requirements (2005)
- Full implementation of the BoatSafe training and assessment scheme for recreational boat licensing (2005)
- Commencement of the *Transport Operations (Marine Safety—Examining and Training Program Approvals (Recreational Ships and Personal Watercraft)) Standard 2005*

A number of specific boating safety initiatives are being progressed in Queensland in 2006. These include:

- Full implementation of the jet ski licensing requirements from 1 January 2006
- Remake of a number of Marine Safety Standards
- Introduction of the Australian Builder's Plate for recreational vessels from 1 July 2006
- Enhanced training standards for commercial and recreational marine training providers
- Rule changes concerning the wearing of life jackets

3.8 Full implementation of the jet ski licensing requirements from 1 January 2006

Following a major review of jet ski operations in Queensland in 2004 and in recognition of the increasing involvement of jet skis in marine incidents, the government in late 2004 announced the implementation of a jet ski management plan. The plan included a range of initiatives aimed at addressing and improving jet ski safety, noise and amenity concerns. From a safety perspective, mandatory jet ski licensing requirements became effective on 1 January 2006. The BoatSafe competency-based training and assessment scheme for recreational boat licensing in Queensland introduced in July 2004, now incorporates a mandatory jet ski training and assessment module to facilitate jet ski training and licensing in Queensland.

3.9 Remake of Transport Operations (Marine Safety) Standards

Four new standards came into effect on 1 March 2006. The standards replaced interim standards that expired on 28 February 2006. The standards include:

- Accreditation Standard which sets out revised requirements to qualify for accreditation as a ship builder, ship designer or marine surveyor.
- Designing and Building Commercial Ships Standard which sets out the required outcomes for designing and building commercial and fishing ships and provides for prescriptive and performance based approaches to meet the outcomes and gives greater flexibility in the application of the Australian Transport Council endorsed parts of the National Standard for Commercial Vessels.
- Miscellaneous Equipment Standard for Commercial Ships which sets out the outcomes to be achieved by the miscellaneous equipment with which a commercial ship or fishing ship should be equipped and provides for prescriptive and performance based approaches to meet these outcomes.
- Miscellaneous Equipment Standard for Recreational Ships which provides guidance on how to satisfy the general safety obligation that a recreational ship be appropriately equipped whether or not that ship is required to be registered.

3.10 Introduction of the Australian Builder's Plate for recreational vessels

From 1 July 2006, all new recreational vessels manufactured in or imported into Australia will by law be required to show an Australian Builder's Plate (ABP). The main aim of the ABP is to provide information to vessel users on a vessel's capability and capacity, to encourage safer boating. The introduction of the ABP will necessitate builders applying minimum safety standards to key elements in the design of recreational vessels. The new ABP requirements are not retrospective.

3.11 Rule changes concerning the wearing of lifejackets

From 1 April 2006 regulation changes made lifejacket wearing compulsory in certain high-risk situations. The first group affected are children under the age of 12 years when travelling in an open vessel under 4.8 metres in length that is ordinarily required to be equipped with lifejackets. The second group includes all vessel occupants of the same group of vessels when those vessels are crossing any one of eight designated coastal bar entrances in Queensland. A wider review of lifejacket wearing requirements is being undertaken and will include a formal public consultation process later in 2006.

4.0 Fatal and serious marine incidents

This section examines the combination of marine incidents that resulted in fatalities and serious injuries (FSI incidents).

4.1 Reported fatal and serious injury incidents

In 2005, Maritime Safety Queensland received reports of 49 FSI incidents—5 more than in 2004. This FSI incident outcome is marginally above the previous four-year average of 44.25 FSI incidents per year.

Based on recent independent studies of hospital admissions data which suggest a higher level of serious injuries from 'water transport' accidents, it is acknowledged that there is a level of under-reporting of non-fatal injury marine incidents. Maritime Safety Queensland continues to examine options for monitoring Queensland hospital admissions data to more accurately determine the extent of serious injuries resulting from marine incidents.

Incident study 1 >

Lifejackets - under 12, under 4.8, underway!

The vessel: 4.3 metre aluminium dinghy

The incident

A father and his two little girls aged six and three were out for a day's boating in smooth waters in a regional Queensland boat harbour. For some unknown reason, the six year old girl appears to have stood up while the boat was underway. In the process, it seems she overbalanced and fell overboard. The father, who was driving at the time, immediately dived in to rescue his little girl, inadvertently leaving the motor in gear.

Locals, who saw the boat going in circles, managed to stop the boat and were surprised to find the three year old toddler alone in the boat. There appears to be very little information about what really happened, but the tragedy is that both father and daughter drowned that day. The little girl's body was found shortly after by locals, but the father's body was not found until the next day.

While the boat had been equipped with life jackets, they were not serviceable nor were they suitable for children. Neither the father nor his daughters were wearing life jackets at the time.

Safety insights

- The lesson from this tragedy is clear – the father and his daughter did not need to die. If they had been wearing a life jacket, they would almost certainly have lived.
- If there is one important message to come from this, it is that life jackets should not ever be considered a boating accessory that gets stowed away and forgotten. All children should wear them at all times when a boat is underway, regardless of swimming ability. For all other passengers, life jackets should be stored in an immediately accessible area – an unforeseen situation may arise at any time.
- Life jackets need to be suitable for the passengers onboard. That means that if children are onboard, there must be life jackets appropriate to their age and size.
- Like all boating equipment, life jackets need to be maintained. Damaged and out-of-date safety equipment is not only illegal, but potentially unsafe.

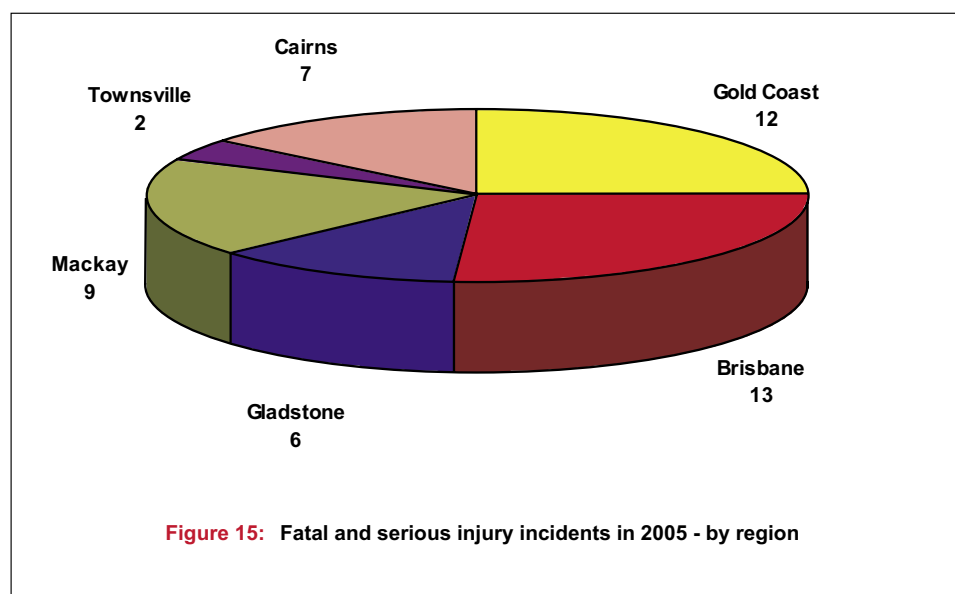


There was a combined total of 57 fatalities and serious injuries recorded from the reported marine incidents in 2005—12 fatalities and 45 serious injuries—up by more than 11 per cent on the previous four-year average of 51.25 fatal and serious injuries per annum.

4.2 FSI incidents by region

Figure 15 shows the number of FSI incidents reported in each region during 2005.

In 2005 two regions recorded fewer FSI incident numbers than in 2004. Cairns region recorded a significant decrease in the number of recorded FSI incidents—with 7 recorded FSI incidents in 2005, down from 12 in 2004 and marginally under-represented when compared with the region's previous four-year regional average of 8.25 FSI incidents per annum.



The Brisbane region, with 13 recorded FSI incidents, recorded the highest number of FSI incidents in 2005. Despite this, the outcome is marginally down on its 2004 result of 14 FSI incidents, and the region's previous four-year average of 13.5 FSI incidents. While the Brisbane region has approximately 43 per cent of the state's registered vessel fleet, the 13 FSI incidents reported for the Brisbane region represent approximately 26 per cent of the total reported FSI incidents in 2005 (n=49). The 13 incidents resulted in three fatalities and 10 persons seriously injured. Of the 13 FSI incidents, seven were recreational vessel incidents including two speedboat incidents and two jet ski incidents. Six of the incidents involved commercial vessels.

Gold Coast region recorded the next highest number of reported FSI incidents in 2005 with 12 recorded FSI incidents. These 12 incidents resulted in two fatalities and 12 persons seriously injured. While Gold Coast region has approximately 14 per cent of the state's registered vessel fleet, the 12 recorded FSI incidents represent approximately 25 per cent of the total FSI incidents in Queensland in 2005. This suggests that vessel traffic density increases the likelihood of incidents and the severity of incident outcomes. Like Brisbane region, the Gold Coast region's FSI incidents were predominantly recreational vessel-related with ten recreational vessels and four commercial vessels reported as involved in the 12 FSI incidents.

There were nine recorded FSI incidents in the Mackay region in 2005—up significantly on the two reported FSI incidents in the region in 2004 and the region's previous four-year average of 5.75 FSI incidents. The nine FSI incidents resulted in the loss of two lives and the hospitalisation of ten persons.

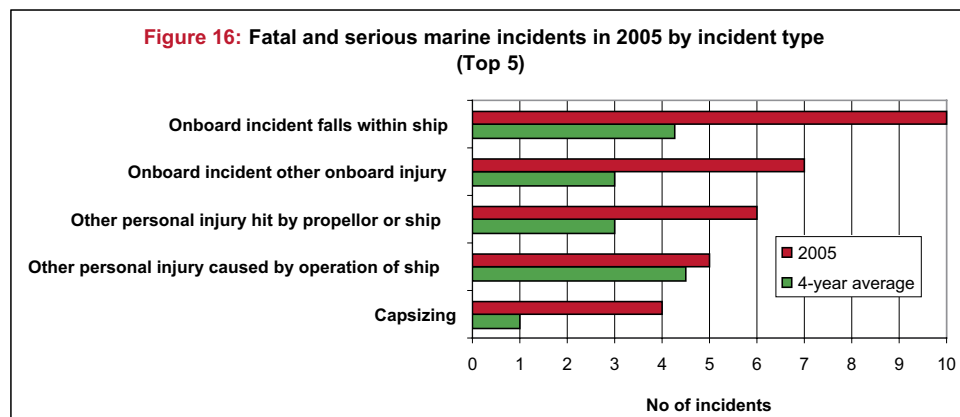
Gladstone region recorded six FSI incidents in 2005, the same number as reported in 2004. This was only marginally above the region's previous four-year average of five FSI incidents.

Townsville region recorded only two FSI incidents in 2005. Unfortunately, these incidents resulted in three fatalities. Both the fatal incidents involved recreational vessels—a recreational sailboat and a recreational speedboat. There were no serious injuries reported for the Townsville region in 2005.

4.3 FSI incidents by incident type

The five most frequently occurring types of fatal and serious injury incidents reported in 2005 accounted for 32 (65.3 per cent) of the all reported incidents (n=49). Figure 16 shows the top five incidents types reported in 2005 compared with their previous four-year average involvement.

Four of the top 5 incident types have shown marked increases in involvement in 2005. The one remaining top 5 FSI incident type had the same number of FSI incidents reported in 2005 as in 2004.



The most frequently-occurring FSI incident types in 2005 were 'onboard injury falls within ship' (10) and 'onboard incident other onboard injury' (7). These 17 incidents resulted in one fatality and 16 serious injuries. While onboard injury incidents as a group accounted for 8.5% of all reported marine incidents in Queensland (n=633), they made up 40.8 per cent (20) of the FSI incidents in 2005 (n=49).

There were six 'other personal injury hit by propeller of ship' FSI incidents and five 'other personal injury caused by operation of ship' FSI incidents in 2005. These personal injury incidents as a group (12) made up 24.5 per cent of FSI incidents and resulted in two fatalities and 10 serious injuries. Comparatively, the 'personal injury' incident categories accounted for 4.1% of all reported marine incidents in Queensland.

There were 79 'capsizing' incidents reported in 2005 compared to 86 reported in 2004. Seven of these 79 incidents resulted in six fatalities and three serious injuries. This highlights the potentially severe outcomes from these types of incidents where people end up overboard or in the water, particularly if they are not wearing life jackets.

4.4 FSI incidents by vessel type and length

The 49 FSI incidents reported in 2005 involved 55 vessels. Figure 17 shows the five vessel types that figured most frequently in FSI incidents in Queensland in 2005 and their comparative involvement since 1999. The five most frequently occurring vessel types involved in FSI incidents in 2005 were:

- Recreational speedboats (12)
- Commercial fishing vessels (9)
- Commercial passenger vessels (8)

Propeller turns nasty

The vessel: 4.3 metre aluminium recreational speedboat

The incident

A small outboard powered tinnie with the driver and two women on board was being used to tow a kneeboarder. One of the women found it funny when the kneeboarder had a spill and fell off the board. At the same time as the driver turned the boat sharply to pick up the fallen skier, the amused female passenger stood up to look at what was happening. Despite a desperate grab at the boat's bimini frame, she fell overboard taking the frame and bimini cover with her.

The driver immediately slowed down, but not before the bimini cover dragged the woman inwards into the still turning propeller and she suffered deep cuts to both of her legs.

The injured woman was quickly rescued by another passing boat and taken to a nearby medical centre for emergency treatment.



Safety Insights

- The master of any boat has a general obligation to ensure the safety of all on board. A big part of that obligation is to make sure that passengers do not stand in small tinnies while they are underway, particularly when the boat is being used for water skiing activities.
- Masters are also responsible for operating their boat safely. Extreme turning manoeuvres should be avoided to minimise risk to unsuspecting passengers.

- Recreational PWC/jet skis (7)
- Recreational motorboats (4)

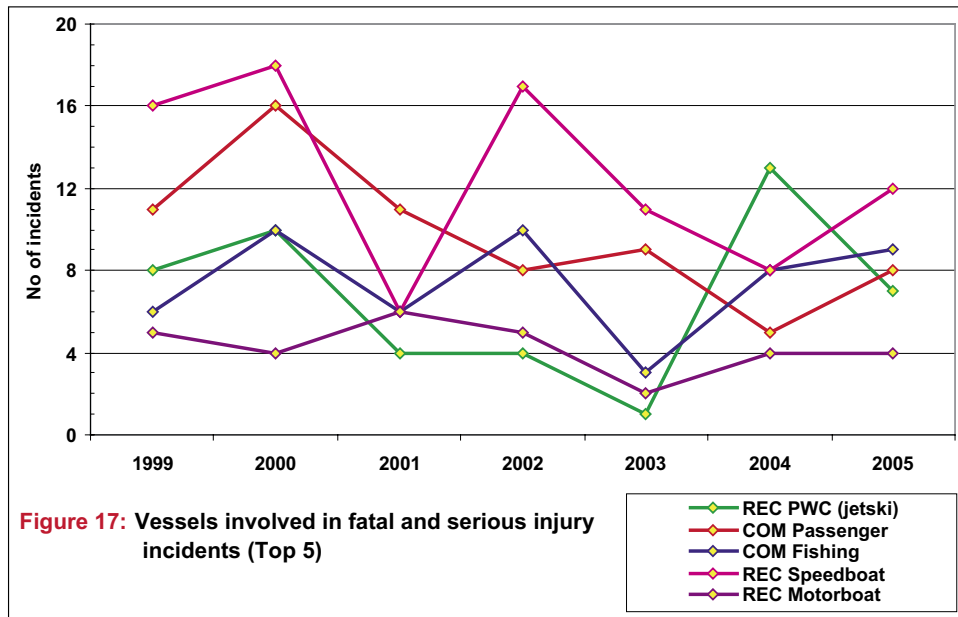
Three of the vessel types showed increases in FSI incident involvement in 2005—recreational speedboats, commercial fishing ships and commercial passenger ships.

There were 12 recreational speedboats involved in FSI incidents in 2005, up from eight in 2004 and marginally over-represented when compared with a previous four-year average involvement of 10.25. FSI incidents involving recreational speedboats resulted in the loss of four lives together with the hospitalisation of 14 others.

Similarly, there was an increase in the involvement of commercial passenger vessels in FSI incidents – from five in 2004 to eight in 2005, but marginally below their previous four-year average involvement of 8.25. Commercial fishing ships continue to be over-represented in FSI incidents when compared with their previous four-year average involvement. There were nine commercial fishing ships involved in FSI incidents in 2005. These incidents resulted in the loss of two lives and serious injuries to five of the fishing ships' masters or crew.

The number of recreational motorboats involved in FSI incidents remained the same in 2005 as in 2004.

While the number of recreational jet skis involved in FSI incidents in 2005 (7) showed a significant fall from the 13 involved in 2004, these incidents resulted in two fatalities and two serious injuries. Following a major review of jet ski operations in Queensland in 2004 and in recognition of increasing involvement of jet skis in serious marine incidents, the government announced a jet ski management



plan which commenced in 2005. The plan included a range of initiatives aimed at addressing and improving jet ski safety, noise and amenity concerns. From a safety perspective, new mandatory jet ski licensing requirements became effective from 1 January 2006.

Of the 55 vessels involved in the 49 FSI incidents in 2005, 31 (56 per cent) were under eight metres in length. 23 of these were recreational vessels and eight were commercially registered vessels. Eleven of the vessels involved in FSI incidents in 2005 were over 15 metres in length—compared with only five in 2004. All eleven vessels were commercially registered. Looking at the ten incidents in 2005 that resulted in fatalities, there were twelve vessels involved. Ten of these vessels were less than 8 metres in length with all except one recreationally registered. The remaining two vessels ranged in length from 8 to 18 metres—one a commercial fishing vessel and the other a recreational sailing vessel.

4.5 FSI incidents by location

Twenty-one (42.9 per cent) of the reported FSI incidents in 2005 occurred in smooth waters, three more than in 2004. A further sixteen (32.6 per cent) of the reported FSI incidents occurred in offshore waters. Only 10 per cent of FSI incidents in 2005 occurred in inland waters.

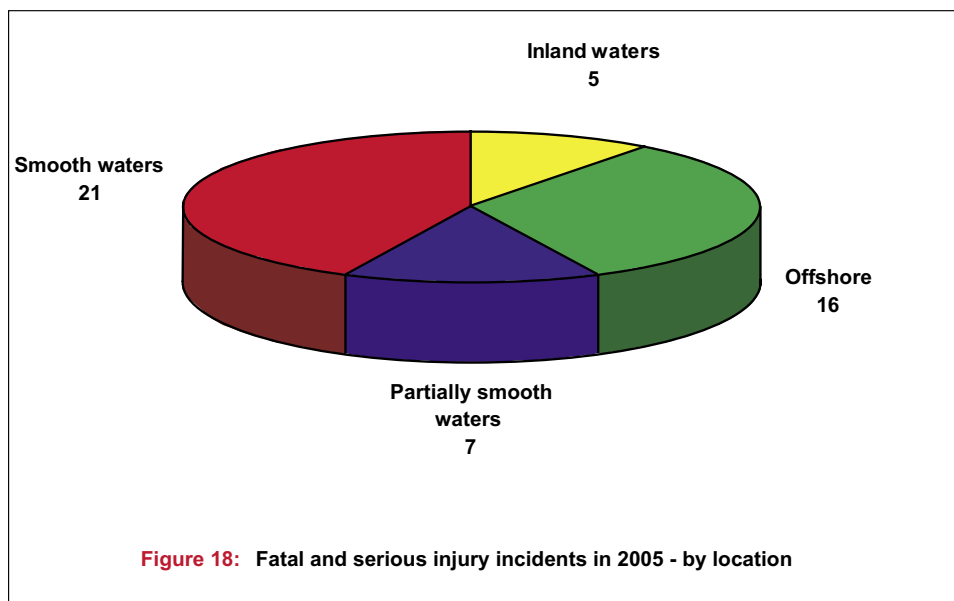
There were three fatalities and 13 serious injuries that resulted from the 16 offshore FSI incidents compared with six fatalities and 18 serious injuries from the 21 FSI incidents in smooth waters. Figure 18 shows the location of reported FSI incidents in 2005.

4.6 FSI incidents—incident characteristics by extent of involvement

This section analyses FSI incidents in 2005 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 thirty 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 2005 compared with their average rate of involvement in FSI incidents in the previous four-year period

Figure 19 shows the extent of involvement in 2005 for the 'top 30' incident characteristics together



with their average rate of involvement over the previous four-year period. The majority of the 30 most frequently occurring attributes are over-represented when compared with their previous four-year average involvement. This could be attributable in part to more rigorous identification of factors contributing to the more serious FSI incidents in 2005.

The most notably over-represented attributes in FSI incidents in 2005 were:

- Onboard incidents
- Other personal injury – hit by propeller or ship

When compared with the previous four-year average involvement, there has been a 114.8 per cent increase in the occurrence of onboard incidents resulting in fatalities and/or serious injuries in 2005. 20 (40.8 per cent) of the 49 recorded FSI incidents in 2005 were identified as onboard incidents. This compares with a total of eight such incidents reported in 2004. One person died and 19 were hospitalised as a consequence of onboard incidents in 2005. The most frequently occurring FSI incident type in 2005 was ‘onboard incident – falls within ship’. Ten such incidents were recorded in 2005, resulting in ten persons being hospitalised. These 10 incidents represent 20.4 per cent of all FSI incidents reported in 2005 and account for 22.2 per cent of all serious injuries recorded in 2005.

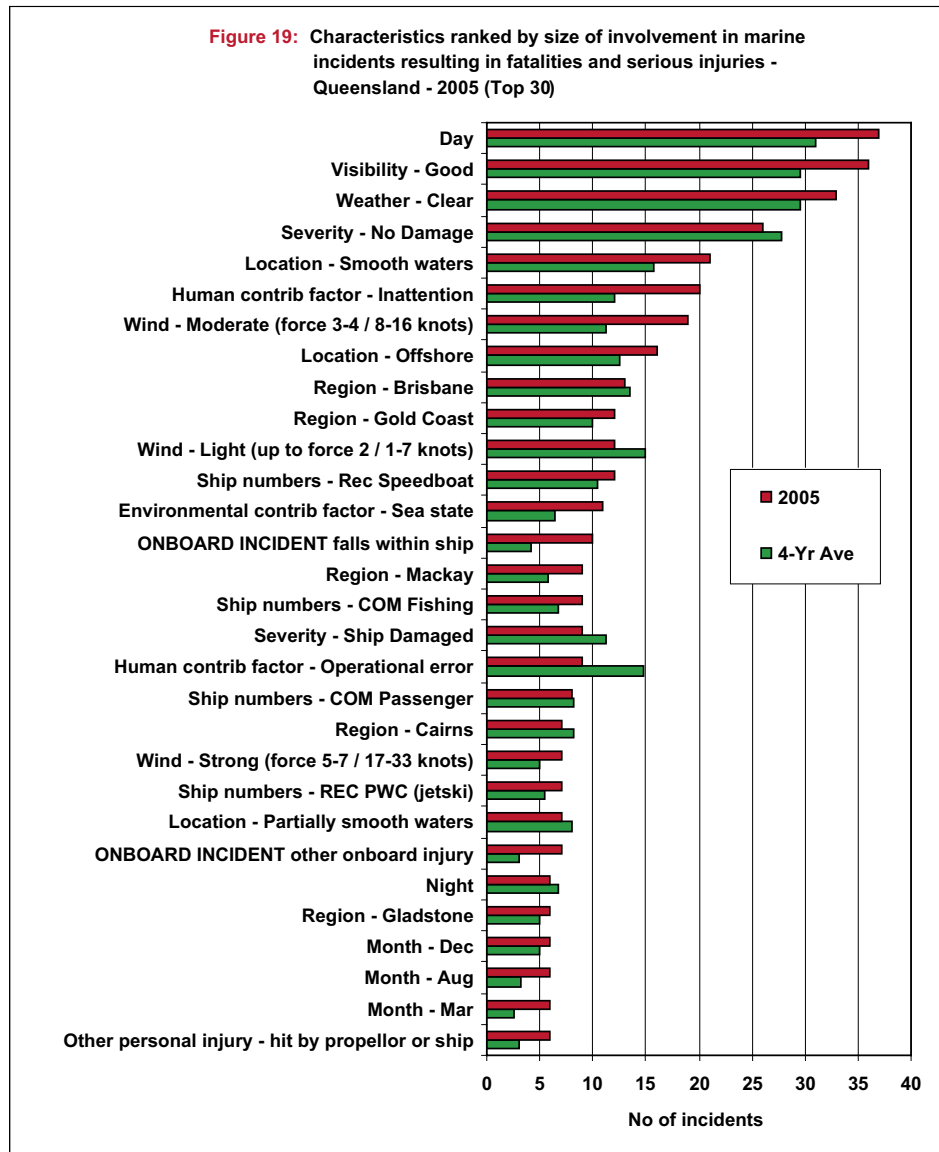
Less than one per cent (6) of all incidents reported in 2005 involved a person being hit by a vessel or by a vessel’s propeller. Despite this, the ‘Other personal injury – hit by propeller or ship’ incident type accounts for more than 12 per cent of reported FSI incidents and more than 10.5 per cent of all recorded fatalities and serious injuries in 2005. The six recorded incidents represent a 100 per cent increase in 2005 over the previous four-year average FSI involvement for this incident type. Two people died and four were hospitalised as a result of these six incidents. This illustrates the potentially severe consequences from this arguably preventable type of incident.

As has been the case in recent years, ambient conditions including clear weather, good visibility and the daytime period were the most frequently occurring attributes of FSI incidents in 2005. These factors characterise more than 75 per cent of the 49 FSI incidents in 2005.

Of the incidents involving fatality or serious injury in 2005, more than 50 per cent (26) did not result in any physical damage to either the vessels involved or to other property.

In 2005, the proportion of FSI incidents occurring in smooth waters increased relative to the number of smooth water FSI incidents in 2004. There were 21 smooth water FSI incidents reported in 2005–

Figure 19: Characteristics ranked by size of involvement in marine incidents resulting in fatalities and serious injuries - Queensland - 2005 (Top 30)



48.9 per cent of all FSI incidents in the year. This compares with 18 (41.8 per cent) smooth water FSI incidents in 2004. The previous four-year average number of smooth water FSI incidents was 15.75.

The number of FSI incidents occurring in offshore waters was the same in 2005 as for 2004 (16). These 16 incidents resulted in three fatalities and 13 serious injuries. This compares with the eight fatalities and 11 serious injuries recorded from offshore incidents in 2004. However, offshore FSI incidents continue to be over-represented by 28 per cent when compared with their previous four-year average involvement of 12.5 incidents. The most frequently occurring offshore FSI incidents in 2005 were onboard incidents (10). A further four incidents involved vessels capsizing. 14 of the 19 vessels involved in the 16 offshore FSI incidents in 2005 were commercial—including seven commercial fishing vessels and five commercial passenger vessels. Of the remaining five recreational vessels involved in offshore FSI incidents, two were recreational jet skis which collided, resulting in one person being hospitalised.

Another notably over-represented attribute in FSI incidents in 2005 was the involvement of the human contributing factor 'inattention'. When compared with the previous four-year average involvement, there has been a 66.7 per cent increase in the identification of inattention as a

contributing factor to FSI incidents. Inattention was identified as contributing to 20 (40.8 per cent) of the 49 FSI incidents reported in 2005.

Incident study 3 >

Driven to distraction

The vessel: 6 metre fibreglass recreational speedboat

The incident

A husband, wife and two friends were enjoying a day's outing on the Daintree River in the husband's speedboat. The husband, who was at the wheel, had the boat travelling at speed when he was momentarily distracted talking to one of his passengers. As a result, he went off course very quickly and wasn't able to take evasive action before running aground.

The boat ploughed into the shoreline mangroves at such a speed that it penetrated the mangroves by more than a boat length. Once it had completely stopped, the boat was so well hidden in the thick mangroves that it could only be located by the rescue helicopter.

All four people on board were injured, with the husband and wife being admitted to Mossman Hospital. The woman was subsequently airlifted to Cairns for further treatment.



Safety insights

- Maintaining a proper lookout and a safe and manageable speed are critical, especially when driving a boat in restricted rivers and waterways.
- Excessive speed is extremely dangerous. Anyone in charge of a boat should be aware of the provisions of Rule 6 of the Collision Regulations which says that every boat should go at a safe speed at all times. Going at a slower speed also allows more time for the driver to assess their options.
- A safe speed is one that takes into account all the prevailing conditions and circumstances – wind, weather, sea conditions, light, geography and any other boating activities happening at the time.

Recreational speedboats were the most frequently involved vessel type in FSI incidents in 2005. There were 12 (24.5 per cent) involved in the 49 FSI incidents reported in 2005—still marginally over-represented when compared with the eight recreational speedboats involved in FSI incidents in 2004 and a previous four-year average FSI incident involvement in 10.5. The involvement of recreational vessels in marine incidents is examined in more detail later in this report.

There were also nine commercial fishing vessels involved in the 49 reported FSI incidents in 2005, compared with eight in 2004 and a previous four-year average FSI incident involvement of 6.75. The nine vessels were involved in seven separate FSI incidents in 2005—resulting in two fatalities and five serious injuries. Commercial fishing vessels have consistently been among the most frequently involved vessels in FSI incidents, particularly those incidents involving fatalities. The involvement of commercial vessels and in particular, commercial fishing vessels in marine incidents is examined in more detail later in this report.

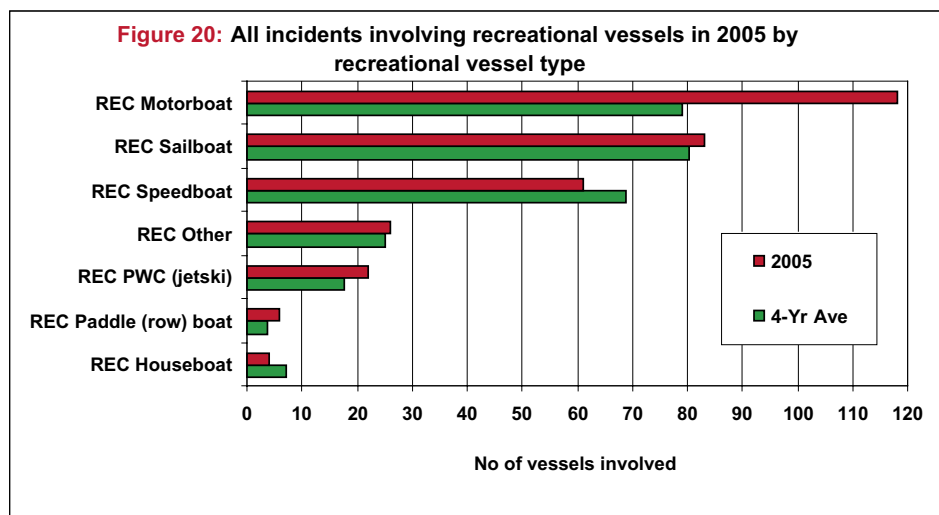
5.0 Selected marine incident profiles

5.1 Incidents involving recreational vessels

To provide a context for considering the involvement of recreational vessels in marine incidents, there were 199,138 recreational vessels registered in Queensland as at 31 December 2005—an increase of 9,305 (4.90 per cent) in the year, down marginally in percentage terms on the comparative increase in 2004 of 5.28 per cent and down markedly on the previous four-year average annual increase of 5.36 per cent. Recreational vessels represent 97 per cent of Queensland's total registered vessel fleet.

Recreational speedboats, that is, boats capable of planing, make up 84.54 per cent of all registered recreational vessels. It is also noted that while recreational personal water craft (jet skis) represent only 4.46 per cent of all registered recreational vessels, their numbers grew in 2005 by nearly 12 per cent compared with an overall increase in registered recreational vessel numbers of 4.90 per cent. Recreational motorboats make up approximately 12.2 per cent of all registered recreational vessels in Queensland. Recreational sailing vessels make up approximately 3.25 per cent of all registered recreational vessels in Queensland.

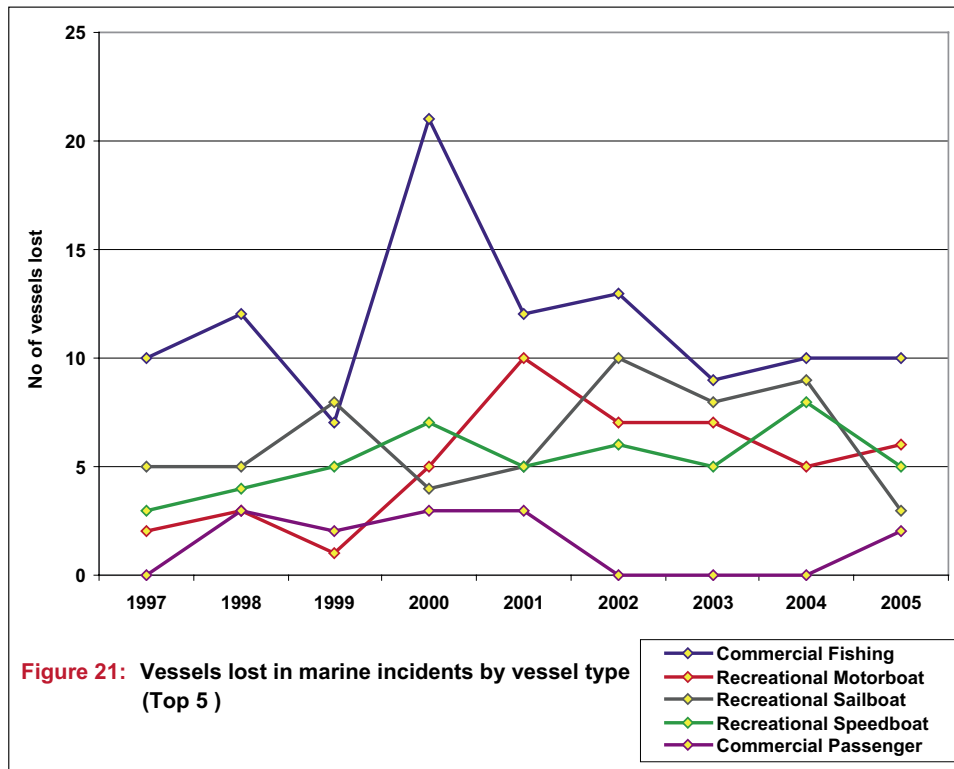
In 2005, recreational vessels were involved in 225 (35.5 per cent) of reported marine incidents in Queensland (n=633)—up by eight per cent on their four-year average involvement in 208.25 incidents. Figure 20 shows the relative involvement of the different types of recreational vessels in marine incidents together with their previous four-year average involvement in marine incidents.



More than 60 per cent of the incidents involving recreational vessels occurred in the daytime, in clear weather and good visibility. 53.3 per cent of the incidents resulted in the vessels being damaged. Approximately 45 per cent of the incidents occurred in smooth waters, 12.90 per cent in inland waters and the remaining incidents in partially smooth and offshore waters. A little over 60 per cent of the reported recreational incidents occurred in the Brisbane and Gold Coast regions. This level of recreational vessel incident involvement in these two regions is in line with their 57+ per cent share of the state's registered recreational vessel fleet.

The number of recreational vessels lost in marine incidents fell from 23 in 2004 to 15 in 2005. Figure 21 shows the involvement of the top three recreational vessel types in the 'ship lost' incident outcomes for the period 1997 to 2005. Of the 31 vessels lost in all reported marine incidents in 2005, 48.4 per cent were recreational vessels—six recreational motorboats, five recreational speedboats, three recreational sailing vessels and one recreational jet ski. The number of recreational vessels lost is well below the previous four-year average of 24.5 recreational vessels lost.

Recreational vessels were involved in 24 FSI incidents in 2005—49 per cent of all the reported FSI incidents in Queensland compared with 56.8 per cent in 2004. However, the number of recreational



vessel FSI incidents was marginally over-represented when compared with the four-year average of 21.5 units of involvement.

Recreational vessel incidents resulted in ten (83.3 per cent) of the 12 marine incident fatalities recorded in 2005. Of the 45 serious injuries recorded in 2005, 22 (48.9 per cent) resulted from incidents involving recreational vessels.

Recreational speedboats, recreational jet skis and recreational motorboats were the three most involved classes of recreational vessel in FSI incidents in 2005. There were 12 FSI incidents involving recreational speedboats, over-represented when compared with their previous four-year average involvement of 8.75. Recreational speedboat incidents in 2005 resulted in four fatalities and 14 serious injuries.

There were only four reported FSI incidents involving recreational jet skis in 2005. These incidents resulted in two fatalities and two serious injuries. The number of FSI incidents involving recreational jet skis was down in 2005 compared with eight incidents reported in 2004 and a previous four-year average involvement in four FSI incidents per year.

Recreational motorboat involvement in FSI incidents (4) in 2005 was marginally below their previous four-year average involvement in 4.5 FSI incidents per year. There was one fatality and four serious injuries resulting from recreational motorboat incidents in 2005.

Analysis shows that the predominant characteristics of recreational vessel incidents involving fatality and/or serious injuries in 2005 were, as expected, incidents occurring in good visibility, daylight hours and clear conditions. These factors were involved in more than 66.6 per cent of recreational vessel FSI incidents. 50 per cent of recreational vessel incidents involving fatality and/or serious injuries in 2005 occurred in smooth water limits.

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 more than 57 per cent of the state's registered recreational vessel fleet. Consistent with this concentration and the extensive associated

Faster than a speeding bullet – and deadly

The vessel: 5.75 metre fibreglass ‘Bullet 1850’ recreational powerboat

The incident

A high performance, purpose-built powerboat with a 250 horse power motor was travelling at very high speed in smooth waters inside South Stradbroke Island when the driver lost control. The boat, with three people on board, became airborne and flipped over.

Witnesses at the time suggested that the boat was actually travelling close to 160 kilometres per hour – the manufacturer’s top rated speed for that particular boat.

According to the witnesses, the boat appeared to have been racing (and winning) against another high powered boat just before the accident happened.

When the boat hit the water, it broke up and sank almost immediately. Police and ambulance officers arrived quickly, however one of the men lost his leg when the boat hit the water and later died in hospital. The driver of the boat was also seriously injured, suffering head injuries and a fractured leg.

Police subsequently retrieved the sunken boat and found that its port side had been ripped out on impact and that the top deck had cracked and dislodged.



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Safety insights

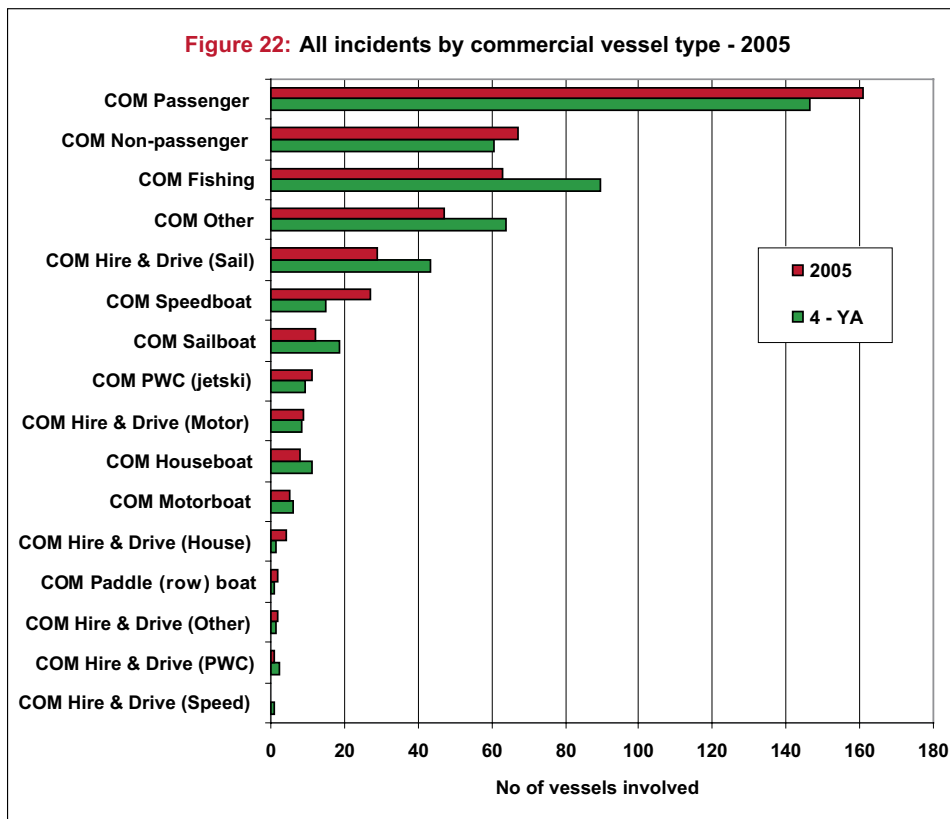
- As with life, with power comes responsibility.
- Masters are responsible for the safe operation of their vessel and for the safety of their passengers.
- Boat racing should only be done at approved racing events.
- Speed limits are in place for good safety reasons.
- To borrow from recent road safety campaign slogans, Speed Kills and Expect the Unexpected.

recreational boating activity in the south-east sector of the state, more than 62 per cent of total recreational vessel incidents involving fatality or serious injury in Queensland occurred in South-East Queensland. While in 2004 there were no recreational boating fatalities recorded in either region, five fatalities were recorded in 2005 in South-East Queensland. There were 12 people hospitalised as a result of reported recreational boating incidents in South-East Queensland in 2005—eight in the Gold Coast region and four in the Brisbane region. This compares with the 18 serious injuries recorded in 2004. 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.

5.2 Incidents involving commercial vessels

While the number of registered commercial vessels has been steadily increasing over the period 2000 to 2004 (7.8 per cent over the five-year period), registered commercial vessel numbers fell in 2005 by 0.24 per cent, as shown earlier in Figure 11. In 2005, commercial vessels represented 2.79 per cent of Queensland’s registered vessel fleet, but were involved in 404 (63.8 per cent) of the year’s

633 reported marine incidents. Figure 22 shows the relative involvement of the different types of commercial vessels in marine incidents in 2005, together with their previous four-year average involvement in incidents.



In 2005, Maritime Safety Queensland undertook a comprehensive assessment of strategic safety risks as part of its risk management framework. The capsizes of commercial fishing vessels and fire onboard commercial passenger vessels were identified among the highest ranked potential marine safety hazards. While these types of incidents can have potentially catastrophic safety outcomes and present real safety management challenges, there were relatively few such incidents reported in 2005.

There were 65 (10.3 per cent) reported commercial fishing ship incidents in 2005 (n=633), resulting in two fatalities and five serious injuries. Only ten of the commercial fishing ship incidents involved the capsizing of vessels, with one fatality resulting from one such incident. There were no reported serious injuries from commercial fishing ship capsizing incidents. Of the 150 reported commercial passenger vessel incidents in 2005, only seven involved a fire onboard. None of these seven incidents resulted in loss of lives or serious injuries.

Looking at the more serious marine incidents, commercial vessels were involved in 25 (51 per cent) of the State's 49 FSI incidents in 2005—marginally above their four-year average involvement in 22.75 FSI incidents.

Only two fatalities resulted from marine incidents in 2005 involving commercial vessels, compared with seven fatalities in 2004 and a previous four-year average fatality rate of 4.25. Of the 25 FSI incidents in 2005, 17 involved onboard incidents, five involved other personal injuries, two involved vessels capsizing and one involved an unintentional grounding. Of the 17 onboard incidents, seven involved falls, three involving crushing or pinching and the remaining seven involved some other form of onboard injury. Of the other personal injury incidents, three were caused by the operation of the vessel and two involved a person being struck by the vessel or its propeller.

Everything right goes wrong on the day

The vessel: 8.5 metre commercial spanner crabbing vessel.

The incident

A 53 year old self-employed commercial spanner crabber was travelling outbound on a treacherous section of a coastal bar when his engines stopped. He sent out a mayday call saying that his engines had failed and that he was floundering in very rough conditions. Return radio calls went unanswered, but an EPIRB activation was detected shortly after and the Energex helicopter was sent to the EPIRB co-ordinates.

The helicopter located an upturned boat in two to three metre seas on the ocean side of the bar. Meanwhile the local volunteer Coast Guard had been deployed and on arrival, the crew, despite very rough conditions, could see the fisherman trapped in lines below the upturned boat.

It was not until later the same day that the Police Dive Squad was able to find and retrieve the fisherman's body from under the boat. Police divers indicated that one of the man's arms and legs were entangled in the lines and they had to cut him free. Despite the fact that the man was wearing a lifejacket, had radioed for help and had activated his EPIRB, he drowned as a direct result of being trapped under the water.




Safety insights

- Crossing of coastal bars is always dangerous and can be extremely hazardous.
- Careful planning and consideration of prevailing bar conditions is essential before making a bar crossing.
- Engines, steering and other onboard controls should be checked before crossing a bar – never leave it to chance.
- Always expect the unexpected and be prepared to respond accordingly. For a commercial fisherman or crabber in a potentially cluttered work boat, this may mean carrying a cutting knife or tool.
- The most important lesson to be learned is that in spite of the fact that the man did everything right and apparently took every safety precaution, something still went wrong on the day.

The most frequently represented commercial vessels in FSI incidents in 2005 were commercial fishing vessels. There were nine commercial fishing vessels involved in seven separate incidents resulting in two fatalities and five serious injuries. This compares with eight commercial fishing vessels involved in FSI incidents in 2004 and a previous four-year average of 6.75 commercial fishing vessels involved in FSI incidents. One of the two fatalities resulted from a vessel capsizing while attempting a bar crossing and the other involved the master of a vessel being electrocuted. The five serious injuries were the result of onboard injuries while the vessels were operating.

The next most frequently involved commercial vessels were commercial passenger vessels. There were seven FSI incidents identified as commercial passenger vessel incidents in 2005. These incidents resulted in seven serious injuries. The seven commercial passenger vessel FSI incidents included six incidents involving onboard injuries and one personal injury incident caused by the operation of the vessel.



There were 16 commercial vessels lost as a result of marine incidents in 2005. Notably, ten were commercial fishing vessels. Despite the loss of 16 vessels, there were no fatalities or serious injuries resulting from these incidents.

From the perspective of regional involvement in commercial vessel FSI incidents, Brisbane and Mackay regions each recorded six FSI incidents in 2005, compared with four and one FSI incidents respectively in 2004. Cairns region recorded five commercial vessel FSI incidents in 2005 compared with eight in 2004. Cairns and Gladstone regions each recorded one commercial vessel fatality in 2005.

Almost 50 per cent (12) of the commercial vessel FSI incidents occurred in offshore waters in 2005. This is marginally over-represented when compared with the relative involvement of commercial vessels in FSI incidents in offshore waters in the previous four-year period (8.5).

5.3 Incidents involving jet skis

In December 2000 there were 3,348 registered recreational jet skis in Queensland. There were a further 166 jet skis registered for commercial use. At that time jet skis represented approximately 1.7 per cent of the total registered vessel fleet in Queensland.

At the end of December 2005 there were 8,909 recreationally registered jet skis and 230 commercially registered jet skis in Queensland, representing a 160 per cent increase in numbers over the six-year period. Growth in registered jet ski numbers in 2005 alone was marginally under 12 per cent, compared with 4.90 per cent for registered vessels generally. Jet skis currently make up approximately 4.46 per cent of all registered vessels in Queensland.

Historically, jet skis have not figured significantly in reported marine incidents. This is arguably attributable to significant level of under-reporting rather than an absence of incidents. Despite extensive media coverage about jet ski incidents and injuries, including the two fatal jet ski incidents late in 2005, there was a decrease in the number of reported jet ski incidents during 2005.

Following a comprehensive review of jet ski operations in Queensland, the government introduced a multi-faceted jet ski management plan. The mainstay of the management plan—mandatory jet ski licensing—took effect from 1 January 2006. To complement the new jet ski licensing requirements, Maritime Safety Queensland also ramped-up its jet ski safety education and on-water enforcement programs with the establishment during 2005 of a dedicated PWC compliance team.

In 2005, there were 30 reported marine incidents involving jet skis in Queensland. This compares with the 33 jet ski incidents reported in 2004 and a previous four-year average of 26.75 jet ski incidents. Human factors were identified as contributing to more than 73 per cent of the 30 reported jet ski incidents in 2005, with inattention, operator error and excessive speed the most frequently identified human contributing factors.

More than 83 per cent of the reported jet ski incidents involved collisions, either with another vessel, with the shore or with some other fixed structure. The majority (more than 63 per cent) of jet ski incidents occurred in smooth waters and approximately 70 per cent of the incidents occurred between the hours of 7:00am and 5:00pm, in clear weather conditions and in good visibility. 70 per cent of the incidents occurred in South-East Queensland. In terms of the types of jet skis involved, 16 were recreationally registered jet skis and 14 were commercially operated jet skis including nine commercial hire jet skis.

Turning to the more serious marine incidents, there were five jet ski incidents reported in 2005 that resulted in fatalities and serious injuries. These five reported incidents resulted in two fatalities and three serious injuries requiring hospitalisation. While jet skis currently comprise only 4.46 per cent of all registered vessels in Queensland, in 2005 jet ski incidents made up 10.2 per cent of reported incidents resulting in fatality or serious injury.

While there have only been a small number of recorded jet ski fatalities in Queensland, anecdotal evidence suggests that serious injury jet ski incidents are on the increase. Jet ski marine incident data

Freestyling – fun but fatal

The vessel: Two recreational jet skis

The incident

Two jet skis were freestyling in smooth waters near a popular Moreton Bay island. Both jet skiers, a man and a woman, happened to be driving friends' jet skis at the time. While both were wearing life jackets, neither driver held a boat licence or jet ski licence.

It appears from all reports that the two jet skis were travelling at high speed and crashed into each other. The male jet skier cannoned off the port side of the female's jet ski and up into her chest, driving her in the water. Spectators watching from the beach at the time immediately called 000 for an ambulance after seeing the woman struck by the jet ski.

An ambulance and the Careflight helicopter crews tried to resuscitate the woman, but weren't able to revive her. The intensity of the crash had caused extensive internal injuries, and she was pronounced dead at the scene.



Safety insights

- Jet skis are powerful machines, capable of reaching high speeds. Much like a motorbike on a road, they offer very little protection for riders in the event of a crash. It is imperative that jet ski riders are competent operators and have the necessary skills to handle more extreme manoeuvres and difficult situations.
- An unlicensed rider should only be driving a jet ski if accompanied and supervised by a licensed person. Observing from the beach is not acceptable supervision.
- The throttles on many types of jet skis are similar to the brakes on a bicycle or motorbike. Inexperienced drivers need to be more alert to the operational capacities and peculiarities of jet skis.
- Freestyling can be fun, but carries with it inherent risk of collisions. Unlicensed and inexperienced drivers should not be freestyling.

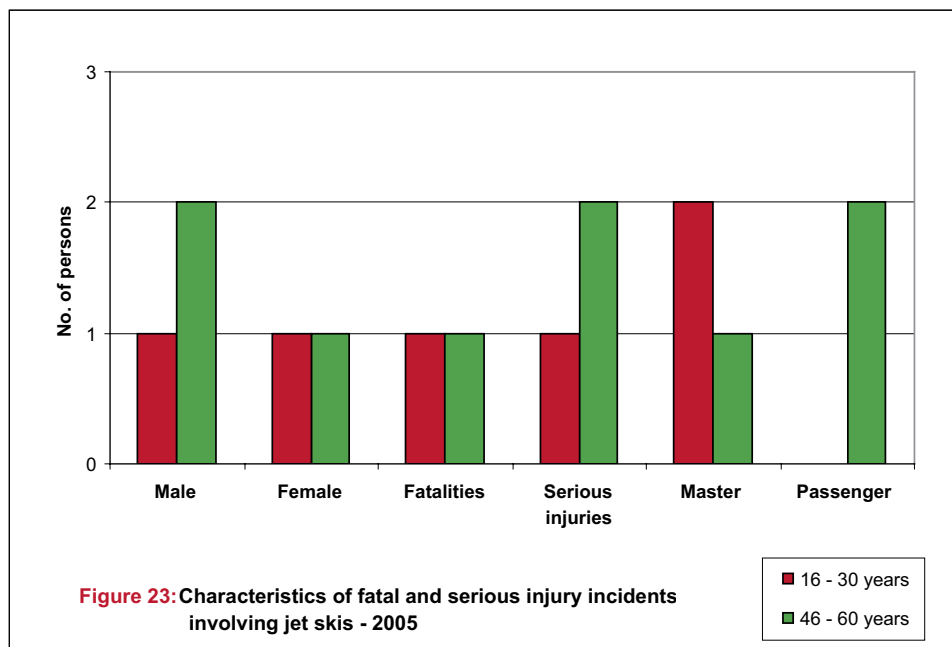
reported to Maritime Safety Queensland does not currently support this anecdotal evidence. However, it is acknowledged that there is a considerably higher level of under-reporting of marine incidents involving jet skis than for other vessel types. This view is supported by recent national studies of fatal and non-fatal injury water transport incidents and a yet to be published two-year study of jet ski injuries treated at the Gold Coast Hospital.

Of the two recorded jet ski fatalities in 2005, one involved a collision between a recreational jet ski and a recreational speedboat after the jet ski operator lost control of his craft. The jet ski operator died the following day from injuries sustained in the collision. The other jet ski fatality involved two recreational jet skis. The operator of one of the jet skis suffered fatal injuries after being hit by the second jet ski.

There were three jet ski incidents that resulted in the hospitalisation of three persons in 2005. Two of these incidents involved collisions with other recreational jet skis. The third incident involved a passenger on a commercial hire and drive jet ski who sustained a spinal injury as a result of the operation of the jet ski in rough waters.

Three of the FSI jet ski incidents, including one of the fatalities, occurred in the Gold Coast region. The other fatal incident occurred in Brisbane region. Over 60 per cent of the FSI jet ski incidents occurred in what would be deemed ideal operational conditions.

Of the five persons killed or seriously injured in jet ski incidents in 2005, three were male and two were female, and three were operating the vessels and two were passengers. Records indicate that none of the persons killed or seriously injured held a current boat or PWC licence. In terms of an age breakdown, the two persons fatally injured were aged 44 years and 20 years respectively. Figure 23 shows a range of incident attributes and personal characteristics of fatal and serious injury incidents involving jet skis broken up by age group.



The involvement of jet skis in marine incidents will continue to be closely monitored and reported annually, particularly in light of recent studies and media coverage about the extent of serious injuries sustained in jet ski incidents.

5.4 Boating safety in the Torres Strait

This year's annual report includes a special feature on boating and related safety issues in the Torres Strait. The loss of seafarers in the Torres Strait is one of the highest ranked potential safety hazards identified by Maritime Safety Queensland as part of a recent strategic safety risk assessment.

The region and its people

The Torres Strait stretches 150 kilometres from the tip of Cape York Peninsula in North Queensland to the south-west coast of Papua New Guinea. Islands, reefs, and coral and sand cays are scattered throughout the region. The northern-most island in the strait reaches to within five kilometres of the Papua New Guinea coastline.

The region comprises 18 island communities and two mainland communities, with populations ranging from 55 to 1,631. The islands are scattered over a geographic area of 48,000 square kilometres.

The region's total population is approximately 8,500—a little over 6000 being Torres Strait Islander and Aboriginal people. Being island communities, much of the activity in the Torres Strait is water-

based including both commercial fishing and traditional hunting for dugong and turtle. While some inter-island ferry services are available, travel between islands for social, education, health and cultural activities is more often than not undertaken in open tinnies or dinghies.

Boating operations in a difficult environment

The Torres Strait presents a number of complex navigational challenges. In addition to the many reefs, islands and rocks to be negotiated, the waters are also subject to significant tidal flows, steady, strong winds and frequently choppy seas—resulting in steep, short waves. These conditions pose a very real hazard to smaller open dinghies. The region is also notorious for its shark and salt water crocodile population further compromising survivability in the event of an incident.

Localised boating activity

There are approximately 700 community recreational boats in the Torres Strait region. These vessels are used within communities for a range of activities including:

- Fishing
- Inter-island commuting (for family, cultural, church, social and sporting events), and
- Hunting

Community vessels are typically 3.5 to 5 metre dinghies powered by 30 – 50 horsepower outboards. Maintenance of both vessels and outboard motors is poor, with extremely limited local access to outboard mechanics. It is often a case of *'run them till they stop'*. The maintenance problem is exacerbated by the fact that newer outboards, because of the technology they employ, are less conducive to self-maintenance or on-water breakdown maintenance.

As an outcome of a number of boating safety campaigns in the region in recent years, the carriage of safety equipment on board these community recreational vessels has improved, particularly for EPIRBs, life jackets and flares.

It is also important to recognise that 'recreational boating' in the Torres Strait context is not so much about leisure boating activity but more about a *means of transport*.

There are also about 50 commercially registered vessels operating in the straits. These vessels are typically engaged in:


- Fishing for crayfish
- Passenger ferry operations
- Shipping pilot transfer
- Inter-island carriage of cargo

These vessels and their operations are not monitored by shipping inspectors as frequently as comparable mainland based commercial vessels, primarily because of the area's remoteness.

Operational risks to seafarers in the Torres Strait area

As mentioned earlier, seafarers in the Torres Strait face heightened operational risks arising from difficult sea conditions and very limited access to vessel and engine maintenance. They also have very limited alternatives to travel by sea. While the carriage of safety equipment has improved, community vessels frequently will have very limited navigational equipment. The lack of proper trip planning, including accurate estimates of fuel requirements also seem to heighten the overall risk they face.

Overloading is another real boating safety challenge in the region. Community vessels in particular may be overloaded with people, goods and even fishing/hunting catches such as dugong. This



significantly diminishes vessel stability, particularly in the earlier-mentioned rough seas. It also reduces potential access to stored safety equipment in the event of an emergency. Coupled with these pro-active considerations are the very real limitations in terms of land-based response capability when incidents do occur.

Incident trends, outcomes and intelligence

A snapshot of reported marine incident data from Maritime Safety Queensland's marine incident database reveals a contradictory picture of boating safety in the Torres Strait. Between 1997 and 2005, there were 13 reported marine incidents in the Torres Strait that resulted in the loss of nine lives and the hospitalisation of a further nine people. The fatal incidents included the July 2004 Badu Island tragedy where two adults and a child lost their lives in one incident.

The data mentioned above does not include the tragic loss of the Commonwealth Immigration vessel 'Malu Sara' in the Torres Strait in October 2005. This incident alone resulted in the loss of four adults and one child.

What the incident data also does not reveal is the real number of incidents occurring day-to-day in the region. The reporting of marine incidents in the region is generally poor, unless the incident involves death or hospitalisation. In these instances the incident generally comes to Maritime Safety Queensland's attention through the media or authorities such as the police who are actively involved in incident response. It is recognized that cultural, awareness and accessibility barriers pose real challenges to the statutory reporting of marine incidents by seafarers in the Torres Strait region.

In 2005 Maritime Safety Queensland received only 14 reports of marine incidents having occurred in the Torres Strait area. The majority of these occurred within the confines of harbours or near boat ramps and jetties. Only three of the reported incidents occurred in the open, offshore waters of the Torres Strait.

By way of comparison, in 2004/2005 the Australian Maritime Safety Authority recorded 76 EPIRB activations in Queensland—45 (60 per cent) of which were marine activations in the Torres Strait. Queensland Police sources indicate that there were a total of 117 search and rescue operations mounted in the Torres Strait in the same 12 month period, 36 for vessels reported as overdue. What is apparent is that in the Torres Strait EPIRBs are being used by seafarers as a first resort (breakdown service) rather than a last resort safety tool. The problem is magnified when one considers that typically search and rescue operations take two days and cost is in the order of \$20,000 per search.

Improving boating safety in the Torres Strait

In late 2005, Maritime Safety Queensland embarked on a collaborative planning exercise with the Australian Maritime Safety Authority aimed at saving lives and reducing the number of seafarers lost by sustainably improving boating safety in the Torres Strait.

Together the two agencies are working to oversee the implementation of The Torres Strait Marine Safety Program. The program which is currently being developed is being tailored specifically to the Torres Strait region and aims to:

- Reduce the incidence of lost seafarers
- Increase the survivability of seafarers when lost
- Increase community and industry commitment to boating safety, and to
- Achieve these outcomes through partnerships with local communities, industry and government agencies.

Marine incident related tables

In the following pages, 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.

Notes:

The following abbreviations are used throughout the tables.

Description	Abbreviation
Brisbane region	BN
Cairns region	CN
Gladstone region	GL
Gold Coast region ¹	GC
Mackay region	MK
Personal watercraft	PWC
Townsville region	TV

¹The Gold Coast region was only established for reporting purposes in 2000.



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Table 1 Marine fatalities per 1,000,000 persons 1976 to 2004 by state and territory

State / territory	76-79	80-84	85-89	90-94	95-99	2000-03
New South Wales	8.45	5.10	4.27	3.29	2.65	2.05
Victoria	9.03	5.16	4.37	4.10	2.04	2.05
Queensland	12.31	5.23	4.02	5.14	2.59	1.78
South Australia	13.18	7.35	4.59	3.99	2.43	0.68
West Australia	10.09	8.70	4.94	4.71	4.12	2.45
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 2000 - 2005 and year 2005 by region

Incidents	2000	2001	2002	2003	2004	2005	GC	BN	GL	MK	TV	CN
No of incidents involving fatalities	12	9	9	7	10	10	2	3	1	1	2	1
No of incidents involving serious injuries	73	36	51	21	34	39	10	10	5	8	0	6
Fatality/serious injury incidents	85	45	60	28	44	49	12	13	6	9	2	7

Table 3 Fatalities and serious injuries 2000 - 2005 and year 2005 by region

Fatalities and serious injuries	2000	2001	2002	2003	2004	2005	GC	BN	GL	MK	TV	CN
No of fatalities	12	12	10	7	12	12	2	3	1	2	3	1
No of serious injuries	84	43	61	22	38	45	12	10	5	10	0	8
Total fatalities and serious injuries	96	55	71	29	50	57	14	13	6	12	3	9

Table 4 Environmental factors contributing to fatal and serious injury incidents 2000 - 2005 and year 2005 by region

Environmental factors	2000	2001	2002	2003	2004	2005	GC	BN	GL	MK	TV	CN
Bar conditions	3	0	1	1	1	2	0	2	0	0	0	0
Floating or submerged object	1	1	1	0	0	0	0	0	0	0	0	0
Hazardous season (cyclones etc)	1	0	0	0	0	0	0	0	0	0	0	0
Hazardous waters - coral reefs	0	1	1	0	0	1	0	0	0	0	0	1
Hazardous waters - shifting channels	0	1	1	0	0	0	0	0	0	0	0	0
Hazardous waters - uncharted hazards	0	1	1	0	0	1	0	1	0	0	0	0
Heavy traffic area	0	0	0	1	0	0	0	0	0	0	0	0
Other	4	3	1	2	3	1	0	2	0	0	0	0
Poor visibility	1	0	1	0	2	0	0	0	0	0	0	0
Sea state	16	5	6	5	7	10	1	4	1	3	0	1
Wash of passing vessel	1	1	2	1	3	1	1	0	0	0	0	0
Wind	1	1	2	1	0	0	0	0	0	0	0	0
Total environmental factors attribution	28	14	17	11	16	16	2	9	1	3	0	2

Table 5 Human factors contributing to fatal and serious injury incidents 2000 - 2005 and year 2005 by region

Human factors	2000	2001	2002	2003	2004	2005	GC	BN	GL	MK	TV	CN
Alcohol or drugs	1	1	0	2	2	2	0	1	0	0	1	0
Commercial pressure	1	1	0	0	1	1	0	1	0	0	0	0
Excessive speed	3	4	3	3	4	3	1	1	0	0	0	1
Fatigue	0	2	0	1	1	0	0	0	0	0	0	0
Inadequate training of crew	4	2	3	2	2	5	1	0	2	0	0	2
Inappropriate instructions to crew - other	0	0	1	1	0	1	0	0	0	0	0	1
Poor communication of instructions to crew	0	0	1	0	0	0	0	0	0	0	0	0
Inattention	20	9	12	3	13	20	1	4	2	5	0	3
Insufficient maintenance	0	0	0	0	1	0	0	0	0	0	0	0
Insufficient planning	2	0	0	0	1	1	0	0	0	0	0	0
Navigation error-failure to keep proper lookout	2	0	1	1	1	1	0	0	0	0	0	0
Navigation error-lack of knowledge/experience	3	1	2	0	0	2	0	1	0	0	0	0
Navigation error-other	1	1	0	0	0	0	0	0	0	0	0	0
Navigation error-violation of Collision regs	1	1	0	2	0	0	0	0	0	0	0	0
Operational error-other	11	13	16	8	6	9	3	1	0	3	0	0
Overloading	0	0	0	0	0	1	0	0	0	0	1	0
Poor communications	0	1	1	0	0	1	0	0	0	0	0	0
Violation of standard procedures	0	0	1	1	0	0	0	0	0	0	0	0
Violation of statutory rules or standards	2	0	0	1	0	3	2	0	0	0	0	0
Total human factors attribution	51	36	41	25	32	50	8	9	4	8	2	7

Table 6 Material factors contributing to fatal and serious injury incidents 2000 - 2005 and year 2005 by region

Material factors	2000	2001	2002	2003	2004	2005	GC	BN	GL	MK	TV	CN
Bridge or navigation failure	2	0	0	0	0	0	0	0	0	0	0	0
Electrical failure	1	1	0	0	0	0	0	0	0	0	0	0
Equipment failure - other	0	1	2	0	0	1	0	0	1	0	0	0
Fuel or gas leak	1	1	0	0	1	2	1	0	0	1	0	0
Hull failure	0	1	0	0	0	0	0	0	0	0	0	0
Inadequate stability - other	1	1	0	0	0	0	0	0	0	0	0	0
Inadequate stability - overloading	0	0	0	0	0	1	0	0	0	0	1	0
Inappropriate hull or equipment-construction fault	0	0	1	0	0	1	0	0	1	0	0	0
Inappropriate hull or equipment-design fault	3	0	1	0	1	0	0	0	0	0	0	0
Insufficient maintenance of hull/equipment	0	0	0	0	0	0	0	0	0	0	0	0
Insufficient safety equipment	0	0	0	0	0	0	0	0	0	0	0	0
Machinery failure	0	0	1	1	2	1	0	0	0	0	0	0
Other	9	3	1	2	3	0	0	0	0	0	0	0
Shore structure badly designed/maintained	1	0	0	0	0	0	0	0	0	0	0	0
Total material factors attribution	18	8	6	3	7	6	1	0	2	1	1	0

Table 7 Fatal and serious injury incident type 2000 - 2005 and year 2005 by region

Incident type classifications	2000	2001	2002	2003	2004	2005	GC	BN	GL	MK	TV	CN
Capsizing	1	1	2	0	1	4	1	2	1	0	0	0
Capsizing flooding	1	0	0	0	0	0	0	0	0	0	0	0
Capsizing sinking	3	0	1	0	3	0	0	0	0	0	0	0
Capsizing swamping	2	2	3	0	4	3	0	2	0	0	1	0
Collision between ships	8	2	10	3	6	3	3	0	0	0	0	0
Collision with a fixed object	4	2	2	0	4	1	0	0	0	0	0	1
Collision with an animal	0	0	0	0	0	0	0	0	0	0	0	0
Collision with floating object	0	2	0	0	1	0	0	0	0	0	0	0
Collision with overhead obstruction	1	0	0	0	0	0	0	0	0	0	0	0
Collision with submerged object	2	0	1	0	0	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	0	0	1	1	0	0	0	0	0
Fire	0	0	1	1	1	1	0	0	0	1	0	0
Grounding intentional	1	0	0	0	0	0	0	0	0	0	0	0
Grounding unintentional	5	1	0	1	1	3	0	0	1	0	0	2
Loss of ship	0	0	2	1	0	0	0	0	0	0	0	0
Loss of stability	0	0	0	0	0	0	0	0	0	0	0	0
Onboard incident crushing or pinching	4	0	3	1	4	3	0	0	1	1	0	1
Onboard incident falls within ship	7	6	4	3	4	10	3	4	0	3	0	0
Onboard incident other onboard injury	16	5	5	2	0	7	3	0	2	1	0	1
Other	0	2	0	0	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	1	8	4	5	5	1	0	1	1	0	2
Other personal injury diving incident	1	0	1	0	0	0	0	0	0	0	0	0
Other personal injury hit by propellor or ship	2	3	3	4	2	6	0	4	0	1	1	0
Other personal injury parasailing incident	0	1	0	0	0	0	0	0	0	0	0	0
Other personal injury water ski incident	5	5	4	2	2	1	0	1	0	0	0	0
Person overboard	11	8	9	6	6	1	0	0	0	1	0	0
Structural failure	1	1	0	0	0	0	0	0	0	0	0	0
Incident types distribution	83	44	60	28	44	49	12	13	6	9	2	7

Table 8 Location of fatal and serious injury incidents 2000 - 2005 and year 2005 by region

Location classifications	2000	2001	2002	2003	2004	2005	GC	BN	GL	MK	TV	CN
Not specified	1	1	0	0	0	0	0	0	0	0	0	0
Inland waters	18	12	13	2	4	5	1	0	2	1	0	1
Offshore	20	10	19	5	16	16	3	6	3	1	0	3
Partially smooth waters	19	10	10	6	6	7	0	0	0	5	2	0
Smooth waters	25	12	18	15	18	21	8	7	1	2	0	3
Distribution by location classifications	83	45	60	28	44	49	12	13	6	9	2	7

Table 9 Fatal and serious injury incidents by month 2000 - 2005 and year 2005 by region

Months	2000	2001	2002	2003	2004	2005	GC	BN	GL	MK	TV	CN
January	14	3	11	2	4	5	1	2	0	1	0	1
February	4	0	4	2	7	0	0	0	0	0	0	0
March	14	5	2	1	2	6	2	3	0	1	0	0
April	10	4	5	1	6	4	2	0	0	1	0	1
May	7	3	5	2	3	5	2	0	2	0	0	1
June	6	2	5	2	2	5	0	0	1	2	0	2
July	7	6	8	2	4	5	1	1	1	1	0	1
August	8	6	3	2	2	6	1	2	1	1	1	0
September	4	1	8	3	2	2	1	0	1	0	0	0
October	4	6	2	4	5	1	0	0	0	0	1	0
November	2	5	1	2	2	4	0	2	0	1	0	1
December	3	4	6	5	5	6	2	3	0	1	0	0
Fatality/serious injury incidents	83	45	60	28	44	49	12	13	6	9	2	7

Table 10 Fatal and serious injury incidents 2000 - 2005 by region

Region	2000	2001	2002	2003	2004	2005
Gold Coast	10	10	14	7	9	12
Brisbane	29	13	20	7	14	13
Gladstone	16	5	4	5	6	6
Mackay	15	7	8	6	2	9
Townsville	7	1	2	3	1	2
Cairns	6	9	12	0	12	7
Not specified	0	0	0	0	0	0
Fatality/serious injury incidents by regions	83	45	60	28	44	49

Table 11 Fatal and serious injury incidents by time of day 2000 - 2005

Time of day	2000	2001	2002	2003	2004	2005
Not specified	5	4	2	1	3	3
Dawn	3	1	0	2	3	0
Day time	62	33	46	19	26	37
Dusk	3	1	4	2	3	3
Night time	10	6	8	4	9	6
Fatality/serious injury incidents by TOD	83	45	60	28	44	49

Table 12 No. of ships involved in fatal and serious injury incidents 2000 - 2005 by ship type

Ship type	2000	2001	2002	2003	2004	2005
Not specified	0	0	0	0	0	0
COM Fishing	10	6	10	3	8	9
COM Hire & Drive	0	0	0	0	0	0
COM Hire & Drive (House)	0	0	0	0	0	2
COM Hire & Drive (Motor)	0	2	2	0	0	1
COM Hire & Drive (PWC)	3	0	3	1	0	1
COM Hire & Drive (Sail)	3	0	0	0	1	0
COM Hire & Drive (Speed)	0	0	0	0	1	0
COM Houseboat	1	0	0	0	0	0
COM Hovercraft	0	0	0	0	0	0
COM Motorboat	0	1	0	0	2	0
COM Non-passenger	11	1	5	1	2	4
COM Other	3	1	4	3	1	1
COM Passenger	16	11	8	9	5	8
COM PWC (jetski)	1	1	0	0	0	0
COM Sailboat	0	0	0	1	0	0
COM Speedboat	7	5	6	0	0	2
REC Houseboat	1	0	1	0	1	0
REC Motorboat	4	6	5	2	4	4
REC Other	0	2	1	0	0	0
REC Paddle (row) boat	0	1	1	0	1	2
REC PWC (jetski)	10	4	4	1	13	7
REC Sailboat	4	2	4	5	3	2
REC Speedboat	18	6	17	11	8	12
No of ships by ship types	92	49	71	37	50	55

Table 13 Visibility in fatal and serious injury incidents 2000 - 2005 and year 2005 by region

Visibility	2000	2001	2002	2003	2004	2005	GC	BN	GL	MK	TV	CN
Not specified	13	5	14	5	11	7	2	3	2	0	0	0
Poor	3	3	2	1	2	1	0	0	0	0	1	0
Fair	12	3	2	2	9	5	0	1	1	3	0	0
Good	55	34	42	20	22	36	10	9	3	6	1	7
Fatality/serious injury incidents	83	45	60	28	44	49	12	13	6	9	2	7

Table 14 Weather in fatal and serious injury incidents 2000 - 2005 and year 2005 by region

Weather	2000	2001	2002	2003	2004	2005	GC	BN	GL	MK	TV	CN
Not specified	14	5	10	4	11	7	3	3	1	0	0	0
Clear	46	32	40	20	26	33	6	9	4	7	2	5
Cloudy	16	6	4	3	2	5	1	1	1	1	0	1
Flood	0	0	0	0	0	0	0	0	0	0	0	0
Hazy	2	1	1	0	4	1	1	0	0	0	0	0
Other	1	0	2	1	0	2	1	0	0	1	0	0
Rain	4	1	3	0	1	1	0	0	0	0	0	1
Fatality/serious injury incidents	83	45	60	28	44	49	12	13	6	9	2	7

Table 15 Wind in fatal and serious injury incidents 2000 - 2005 and year 2005 by region

Wind	2000	2001	2002	2003	2004	2005	GC	BN	GL	MK	TV	CN
Not specified	15	4	12	5	10	4	1	2	1	0	0	0
No wind	9	5	9	1	3	4	1	1	1	0	1	0
Light (up to force 2 / 1-7 knots)	22	22	16	7	15	12	3	3	3	2	0	1
Moderate (force 3-4 / 8-16 knots)	20	7	14	13	11	19	5	4	0	3	1	6
Strong (force 5-7 / 17-33 knots)	15	7	9	2	2	7	1	2	1	3	0	0
Gale (force 8 and above / more than 33 knots)	2	0	0	0	3	3	1	1	0	1	0	0
Fatality/serious injury incidents	83	45	60	28	44	49	12	13	6	9	2	7

Table 16 Environmental factors contributing to marine incidents 2000 - 2005 and year 2005 by region

Environmental factors	2000	2001	2002	2003	2004	2005	GC	BN	GL	MK	TV	CN
Abnormal tidal conditions	7	15	5	4	9	19	1	5	1	2	2	8
Bar conditions	3	2	12	19	16	16	1	12	3	0	0	0
Floating or submerged object	25	17	12	12	19	22	2	12	3	2	1	1
Hazardous season (cyclones etc)	5	1	0	3	5	1	0	0	0	0	0	0
Hazardous waters - coral reefs	24	28	24	24	25	21	0	1	2	13	2	3
Hazardous waters - lack navigation aids	2	1	1	2	1	0	0	0	0	0	0	0
Hazardous waters - shifting channel	3	8	5	7	5	3	0	0	0	0	0	3
Hazardous waters - uncharted hazards	2	5	4	4	10	11	0	3	3	2	1	0
Heavy traffic area	5	2	6	2	9	4	0	1	0	2	0	1
Other environmental contributing factor	27	34	26	23	36	18	0	12	1	3	0	0
Poor visibility	16	9	12	10	14	11	1	4	2	2	0	1
Sea state	68	66	63	68	66	110	7	38	10	22	8	11
Wash of passing vessel	7	13	13	11	22	20	5	11	1	2	0	0
Wind	21	23	23	50	40	79	7	11	7	4	1	5
Total environmental factors attribution	215	224	206	239	277	335	24	110	33	54	15	33

Table 17 Human factors contributing to marine incidents 2000 - 2005 and year 2005 by region

Human factors	2000	2001	2002	2003	2004	2005	GC	BN	GL	MK	TV	CN
Alcohol or drugs	6	6	6	8	8	6	1	4	0	0	1	0
Commercial pressure	11	9	6	5	13	8	0	4	0	0	1	3
Excessive speed	15	17	16	12	23	25	2	12	3	1	1	5
Fatigue	4	9	2	6	5	4	0	1	1	1	1	0
Inadequate training of crew	14	18	13	13	10	26	3	5	7	3	0	7
Inappropriate Harbour/Port Authority advice	2	2	0	0	0	0	0	0	0	0	0	0
Inappropriate advice to ship - Pilot	0	0	2	0	2	0	0	0	0	0	0	0
Inappropriate Vessel Traffic System advice	0	1	1	1	0	1	0	0	0	0	0	1
Inappropriate instructions to crew - other	1	1	3	6	1	2	1	0	0	0	0	1
Poor communication of instructions to crew	3	3	2	1	1	4	0	1	0	0	0	1
Inattention	64	67	59	67	96	112	5	44	12	21	3	10
Insecure mooring	33	25	19	28	25	25	0	2	10	7	0	3
Insufficient crew numbers	0	1	1	1	1	2	1	0	0	0	0	0
Insufficient fuel	2	1	2	1	0	3	0	0	0	0	1	2
Insufficient maintenance	6	9	6	10	14	16	0	2	4	2	4	0
Insufficient planning	11	7	5	13	14	25	0	4	2	1	1	1
Navigation error-failure to keep proper lookout	17	23	19	34	36	46	1	6	8	11	1	4
Navigation error-lack of knowledge/experience	33	32	11	23	29	33	0	10	6	3	0	2
Navigation error-other	29	30	22	16	29	30	1	4	3	8	3	5
Navigation error-violation of Collision regs	5	16	10	17	19	29	6	7	2	4	1	1
Operational error-other	66	107	107	114	82	146	33	17	10	26	1	8
Overloading	2	1	0	2	0	5	0	1	0	0	1	0
Poor communications	3	5	5	1	6	14	0	2	0	0	0	1
Poor ship to shore communications	0	0	0	2	1	2	0	0	0	0	0	0
Violation of standard procedures	1	13	6	17	6	17	3	0	1	2	0	0
Violation of statutory rules or standards	9	11	11	11	19	28	5	1	0	5	1	0
Total human factors attribution	337	414	334	409	440	609	62	127	69	95	21	55

Table 18 Material factors contributing to marine incidents 2000-2005 and year 2005 by region

Material factors	2000	2001	2002	2003	2004	2005	GC	BN	GL	MK	TV	CN
Bridge or navigation failure	5	2	1	4	3	6	0	1	1	1	1	2
Electrical failure	9	18	15	9	12	2	0	1	0	0	0	1
Equipment failure - other	33	25	24	29	34	33	2	6	3	11	3	8
Fuel or gas leak	1	7	2	4	4	6	1	2	0	1	2	0
Hull failure	12	15	16	16	9	6	0	1	2	0	0	3
Inadequate stability - other	3	5	0	1	1	3	0	0	1	0	1	1
Inadequate stability - overloading	2	1	0	1	1	4	0	3	0	0	1	0
Inadequate stability - shifting cargo	0	1	1	1	1	5	0	2	0	0	0	2
Inappropriate hull or equipment-construction fault	2	4	5	3	1	4	0	0	3	0	0	1
Inappropriate hull or equipment-design fault	7	7	4	8	13	6	1	0	1	1	0	0
Insufficient maintenance of hull or equipment	10	6	2	3	7	10	0	2	2	2	0	0
Insufficient safety equipment	0	0	5	3	1	5	0	2	0	1	0	0
Machinery failure	25	34	44	50	42	40	4	6	8	8	4	5
Other material contributing factor	36	34	30	28	43	24	0	16	4	2	1	0
Shore structure badly designed/maintained	4	3	5	4	4	7	0	3	3	0	0	1
Total material factors attribution	149	162	154	164	176	161	8	45	28	27	13	24

Table 19 Incident type 2000 - 2005 and year 2005 by region

Incident type	2000	2001	2002	2003	2004	2005	GC	BN	GL	MK	TV	CN
Capsizing	19	16	14	12	13	15	4	5	3	0	0	3
Capsizing flooding	5	12	7	9	7	7	1	2	2	0	1	1
Capsizing sinking	19	23	29	20	28	26	2	10	8	0	2	4
Capsizing swamping	17	22	30	41	38	31	6	17	2	1	3	2
Collision between ships	121	119	119	125	129	138	34	37	26	18	6	17
Collision with a fixed object	37	35	42	35	44	45	8	23	4	3	1	6
Collision with an animal	0	1	3	2	2	2	0	0	1	1	0	0
Collision with floating object	12	8	11	8	11	9	0	2	3	1	1	2
Collision with overhead obstruction	3	0	2	0	1	1	0	1	0	0	0	0
Collision with submerged object	24	15	18	22	21	23	7	7	1	3	2	3
Collision with wharf	13	20	18	22	21	14	1	9	1	0	1	2
Explosion	2	5	1	1	2	3	1	1	0	0	1	0
Fire	18	28	17	32	25	14	2	4	1	2	1	4
Grounding intentional	10	2	2	2	3	1	0	0	0	0	1	0
Grounding unintentional	127	115	93	127	122	116	5	16	29	41	5	20
Loss of ship	23	1	7	13	1	0	0	0	0	0	0	0
Loss of stability	0	3	0	2	1	1	0	0	1	0	0	0
Onboard incident crushing or pinching	5	1	5	5	6	6	0	1	3	1	0	1
Onboard incident falls within ship	9	19	18	19	14	25	6	10	0	8	0	1
Onboard incident other onboard injury	20	15	10	11	9	23	5	8	2	5	0	3
Other	29	10	62	48	28	30	1	9	5	7	4	4
Other - Close Call	29	40	50	29	46	39	3	14	4	7	1	10
Other - Crime Issue	1	10	2	1	1	0	0	0	0	0	0	0
Other - Ship Adrift	6	20	10	13	6	6	0	2	1	2	1	0
Other personal injury caused by operation of ship	10	7	18	10	13	13	2	2	1	2	3	3
Other personal injury diving incident	3	1	2	2	1	1	0	0	0	0	1	0
Other personal injury hit by propellor or ship	3	5	6	10	5	6	0	4	0	1	1	0
Other personal injury parasailing incident	0	1	2	0	0	1	0	0	0	0	0	1
Other personal injury water ski incident	10	8	5	5	4	5	0	2	2	0	1	0
Person overboard	21	25	24	21	19	21	2	10	1	5	2	1
Structural failure	16	22	21	14	12	11	1	2	2	4	0	2
All incidents	612	609	648	661	633	633	91	198	103	112	39	90

Table 20 Locations of incidents 2000 - 2005 and year 2005 by region

Location	2000	2001	2002	2003	2004	2005	GC	BN	GL	MK	TV	CN
Not specified	7	1	1	3	0	14	0	1	12	1	0	0
Inland waters	108	102	101	78	74	45	24	11	6	1	2	1
Offshore	114	115	137	134	124	133	20	36	25	8	15	29
Partially smooth waters	160	151	153	195	154	143	2	36	23	62	13	7
Smooth waters	223	241	257	251	281	298	45	114	37	40	9	53
All incidents	612	610	649	661	633	633	91	198	103	112	39	90

Table 21 Incidents by month 2000 - 2005 and year 2005 by region

Month	2000	2001	2002	2003	2004	2005	GC	BN	GL	MK	TV	CN
January	66	59	60	54	59	60	6	22	9	12	4	7
February	49	40	54	39	53	46	4	17	8	8	2	7
March	52	58	57	57	52	64	10	21	9	13	2	9
April	64	54	58	47	58	36	6	9	4	5	3	9
May	49	38	46	47	49	50	11	10	6	14	2	7
June	40	50	63	60	51	46	4	12	11	11	4	4
July	61	48	37	56	43	57	7	16	9	11	3	11
August	60	66	48	61	48	56	6	15	10	14	5	6
September	47	42	61	45	48	62	9	24	17	4	2	6
October	52	51	58	66	61	53	6	15	7	10	7	8
November	34	58	52	65	53	47	8	14	7	4	3	11
December	38	46	55	64	58	56	14	23	6	6	2	5
All incidents	612	610	649	661	633	633	91	198	103	112	39	90

Table 22 Incidents 2000 - 2005 by region

Region	2000	2001	2002	2003	2004	2005
Gold Coast	73	75	79	77	80	91
Brisbane	179	198	198	195	204	198
Gladstone	94	76	87	104	81	103
Mackay	119	128	123	136	134	112
Townsville	46	51	59	49	44	39
Cairns	101	82	103	100	90	90
Region not advised	0	0	0	0	0	0
All incidents	612	610	649	661	633	633

Table 23 Damage category 2000 - 2005 and year 2005 by region

Damage	2000	2001	2002	2003	2004	2005	GC	BN	GL	MK	TV	CN
Not specified	0	0	2	6	1	0	0	0	0	0	0	0
Damage to Property Only	53	51	68	70	71	59	17	27	6	4	3	2
No Damage	217	226	271	245	212	250	29	82	41	45	18	35
Ship Damaged	291	285	268	299	316	293	41	82	51	59	16	44
Ship Lost	51	47	40	36	33	31	4	7	5	4	2	9
All incidents	612	609	649	656	633	633	91	198	103	112	39	90

Table 24 Incidents by time of day 2000 - 2005 and year 2005 by region

Time of day	2000	2001	2002	2003	2004	2005	GC	BN	GL	MK	TV	CN
Not specified	51	22	42	38	42	51	0	15	19	5	0	12
Dawn	19	21	26	26	21	19	1	8	6	2	1	1
Day	382	386	409	423	399	405	73	126	46	81	27	52
Dusk	34	59	58	55	45	50	7	15	11	8	2	7
Night	126	122	114	119	126	108	10	34	21	16	9	18
All incidents	612	610	649	661	633	633	91	198	103	112	39	90

Table 25 No. of ships in incidents 2000 - 2005 by ship type

Ship type	2000	2001	2002	2003	2004	2005
COM Fishing	101	91	88	96	89	63
COM Hire & Drive	0	0	0	0	0	0
COM Hire & Drive (House)	4	4	1	0	1	4
COM Hire & Drive (Motor)	8	10	10	11	3	9
COM Hire & Drive (Other)	0	2	0	1	1	2
COM Hire & Drive (PWC)	7	4	2	2	1	1
COM Hire & Drive (Sail)	43	46	30	48	49	29
COM Hire & Drive (Speed)	2	0	0	1	3	0
COM Houseboat	7	11	11	8	15	8
COM Hovercraft	0	0	0	0	0	0
COM Motorboat	11	8	6	10	5	5
COM Non-passenger	67	29	69	94	54	67
COM Other	46	66	89	51	55	47
COM Paddle (row) boat	1	0	3	0	1	2
COM Passenger	126	161	136	167	130	161
COM PWC (jetski)	6	9	10	13	6	11
COM Sailboat	8	15	14	20	25	12
COM Speedboat	8	12	21	14	12	27
REC Houseboat	7	9	5	7	7	4
REC Motorboat	60	66	69	89	92	118
REC Other	16	30	34	18	18	26
REC Paddle (row) boat	5	2	3	4	6	6
REC PWC (jetski)	27	17	21	11	22	22
REC Sailboat	94	59	86	102	74	83
REC Speedboat	84	56	69	77	73	61
Not specified	10	32	51	8	40	34
Unknown ship type	3	10	10	0	3	7
No of ships by ship type	751	749	838	852	785	809

Table 26 Visibility in incidents 2000 - 2005 and year 2005 by region

Visibility	2000	2001	2002	2003	2004	2005	GC	BN	GL	MK	TV	CN
Not specified	89	33	90	81	90	85	7	42	19	1	1	15
Poor	64	61	50	57	48	52	3	8	14	14	5	8
Fair	96	112	66	73	73	62	9	16	6	15	6	10
Good	363	404	443	450	422	434	72	132	64	82	27	57
All incidents	612	610	649	661	633	633	91	198	103	112	39	90

Table 27 Weather in incidents 2000 - 2005 and year 2005 by region

Weather	2000	2001	2002	2003	2004	2005	GC	BN	GL	MK	TV	CN
Not specified	67	31	70	64	62	67	7	31	14	1	2	12
Clear	364	427	449	429	432	407	61	127	70	69	24	56
Cloudy	83	72	63	92	67	78	10	21	10	20	7	10
Flood	3	1	0	2	3	4	0	1	0	2	1	0
Hazy	15	16	27	20	18	24	3	7	3	6	2	3
Other weather	12	8	7	7	9	11	2	1	1	4	1	2
Rain	68	55	33	47	42	42	8	10	5	10	2	7
All incidents	612	610	649	661	633	633	91	198	103	112	39	90

Table 28 Wind in incidents 2000 - 2005 and year 2005 by region

Wind	2000	2001	2002	2003	2004	2005	GC	BN	GL	MK	TV	CN
Not specified	62	37	67	57	61	65	10	28	12	0	2	13
No wind	57	47	57	51	44	32	10	9	8	2	2	1
Light (up to force 2 / 1-7 knots)	168	217	196	184	204	171	23	63	27	22	9	27
Moderate (force 3-4 / 8-16 knots)	172	186	209	237	172	213	37	43	33	49	19	32
Strong (force 5-7 / 17-33 knots)	130	104	108	125	128	118	7	37	19	34	6	15
Gale (force 8 and above / more than 33 knots)	23	19	12	7	24	34	4	18	4	5	1	2
All incidents	612	610	649	661	633	633	91	198	103	112	39	90

Table 29 Commercial and recreational registrations 2000 - 2005 by region

Recreational registrations							
Region	2000	2001	2002	2003	2004	2005	
Gold Coast	18695	20130	22052	23813	25641	27184	
Brisbane	70310	74018	75514	78798	82634	86332	
Gladstone	24391	25826	29270	31018	32980	34771	
Mackay	10417	11046	12632	13270	14077	14962	
Townsville	14154	14989	16618	17141	17627	18389	
Cairns	15570	16143	15829	16264	16874	17500	
Totals	153537	162152	171915	180304	189833	199138	

Commercial registrations							
Region	2000	2001	2002	2003	2004	2005	
Gold Coast	727	727	763	825	891	951	
Brisbane	1569	1596	1580	1636	1654	1504	
Gladstone	744	752	778	777	790	867	
Mackay	711	751	765	776	760	750	
Townsville	473	466	485	468	467	485	
Cairns	1105	1123	1178	1165	1186	1177	
Totals	5329	5415	5549	5647	5748	5734	

Total registrations							
Region	2000	2001	2002	2003	2004	2005	
Gold Coast	19422	20857	22815	24638	26532	28135	
Brisbane	71879	75614	77094	80434	84288	87836	
Gladstone	25135	26578	30048	31795	33770	35638	
Mackay	11128	11797	13397	14046	14837	15712	
Townsville	14627	15455	17103	17609	18094	18874	
Cairns	16675	17266	17007	17429	18060	18677	
Totals	158866	167567	177464	185951	195581	204872	