3. Queensland fatal and serious marine incidents

Section 3 analyses reported marine incidents that resulted in fatalities or serious injuries. It provides time series data and examines incident trends, types of vessels involved, types of incidents and other selected incident characteristics. Data is presented for both the number of fatal and serious injury incidents and the number of persons fatally or seriously injured.

Section 3.2.4 provides data on admissions to Queensland hospitals as a result of water transport accidents for the period July 2004 to June 2007. This is the first time hospital admissions data has been available to Maritime Safety Queensland. In addition to providing a summary of the hospital admissions data the section discusses the implications of the data for understanding the causes and consequences of marine incidents.

Section 4 provides a profile of persons fatally or seriously injured.

3.1 Summary of marine fatalities in 2007

In 2007 there were 10 fatal marine incidents which claimed the lives of 13 people, including one incident that resulted in four fatalities. Table 9 provides selected details for each incident. A further 35 people were identified as seriously injured in 33 reported incidents. Two incidents involved both fatalities and serious injuries. An injury is defined as serious when it results in admission to hospital.

Table 9: Fatal marine incidents, Queensland, 2007

Date	Incident Category	Vessel/s Involved	No. of Fatalities	Region	Area
4 Jan 07	Other*	Recreational Sailboat	1	Mackay	St Bees Island
17 Mar 07	Capsizing	Recreational Motorboat	1	Townsville	SE Abbot Point
5 May 07	Person overboard	Recreational Speedboat	1	Mackay	Seaforth
31 July 07	Collision with submerged object	Commercial paddle (row) boat	1	Cairns	Tully River
1 Sept 07	Collision between ships	2 x Recreational Speedboats	4	Brisbane	Nth Moreton Bay
13 Sept 07	Grounding unintentional	Recreational Speedboat	1	Brisbane	Wall of Port
16 Sept 07	Other personal injury (water skiing incident)	Recreational PWC (Jetski)	1	Brisbane	Bribie Island
6 Oct 07	Capsizing	Commercial paddle (row) boat	1	Cairns	Tully River
25 Oct 07	Person overboard	Recreational Speedboat	1	Brisbane	Pine River
13 Dec 07	Other personal injury, hit by propeller or ship	Commercial Passenger	1	Brisbane	Brisbane River

* **Skipper disappeared while diving to clear his anchor.**

3.2 Fatal and serious injury incidents in context

This section examines reported marine incidents resulting in fatalities or serious injury in 2007 in the context of outcomes from previous years and comparative vessel registration and population growth trends.

3.2.1 Fatal and serious injury incident time series analysis

While total reported marine incidents have been trending upwards the annual number of fatal incidents has remained relatively constant over the past five years. The increase in fatal injury incidents in 2006 appears, based on reported incidents in 2007, to have been a spike rather than the emergence of an upward trend.

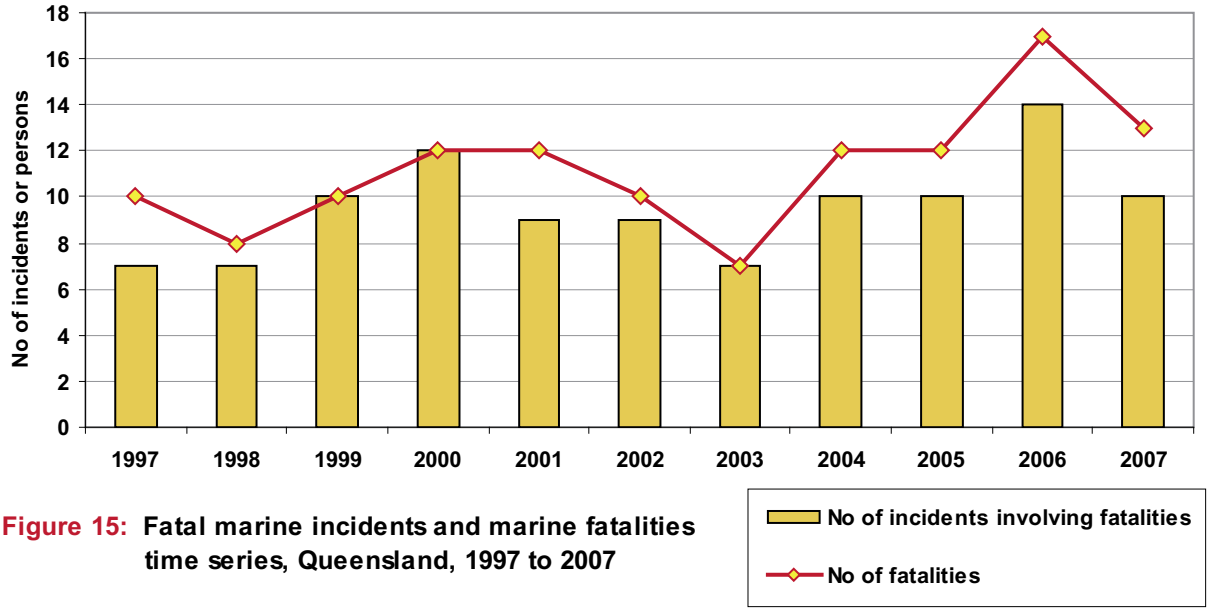


Figure 15: Fatal marine incidents and marine fatalities time series, Queensland, 1997 to 2007

Figure 15 shows the number of reported fatal marine incidents and the number of recorded fatalities for the period 1997 to 2007. In years where multiple fatality incidents have occurred the number of fatalities is higher than the number of fatal incidents.

The number of fatal incidents has remained relatively consistent over time however the number of fatalities per incident has increased. From 1997 to 2003 there was an average of 1.13 deaths per fatal incident. Since 2004 the average number of deaths per fatal incident has increased to 1.23.

While only one multiple fatality incident was recorded in 2007 the magnitude of the incident has increased the ratio of deaths per fatal incident for 2007 to 1.3. This is the second highest annual deaths per fatal incident ratio recorded since 1997, the highest being 1.33 in 2001.

Since 1997 there have only been three years, 1999, 2000 and 2003 when no multiple fatality incidents were recorded.

Figure 16 provides a time series profile from 1997 to 2007 for serious injury incidents and persons seriously injured. The number of serious injury incidents and the number of persons seriously injured have been trending downwards since 2000. 2007 was the third consecutive year to show a decline in both reported serious injury incidents and persons seriously injured.

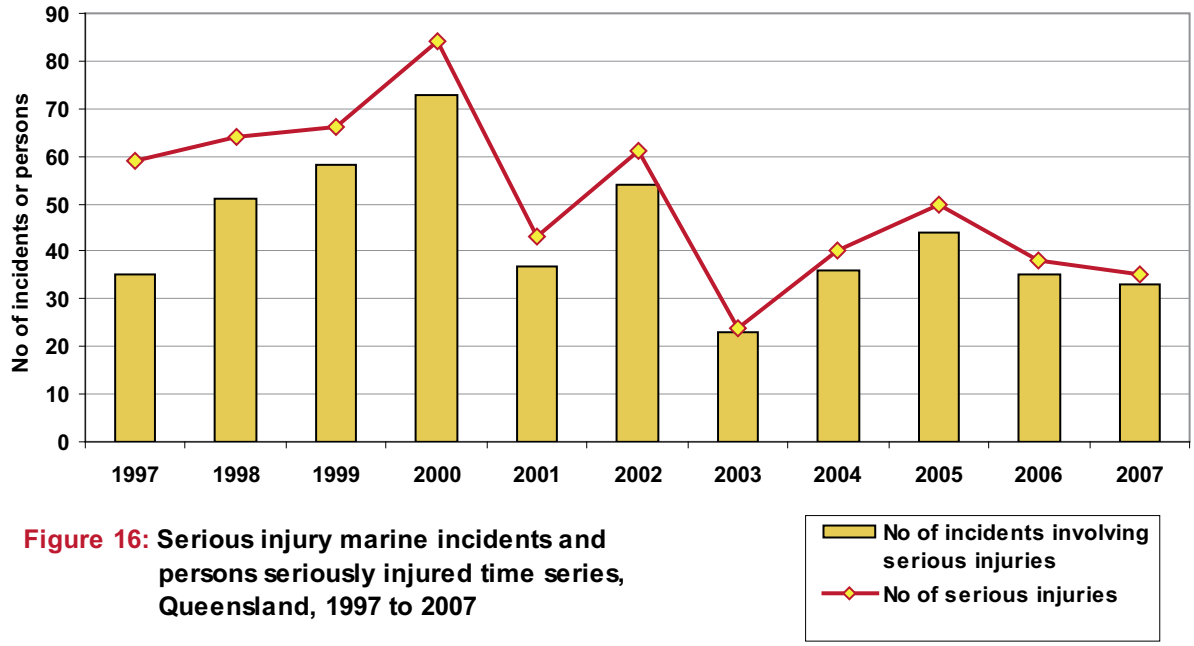


Figure 16: **Serious injury marine incidents and persons seriously injured time series, Queensland, 1997 to 2007**

3.2.2 Fatal and serious injury incident trends

Figure 17 shows the fatality rates for both reported incidents and persons fatally injured. The fatal incident data is provided per 100,000 registered ships and the persons fatally injured is provided per 100,000 registered ships and per million of Queensland's population.

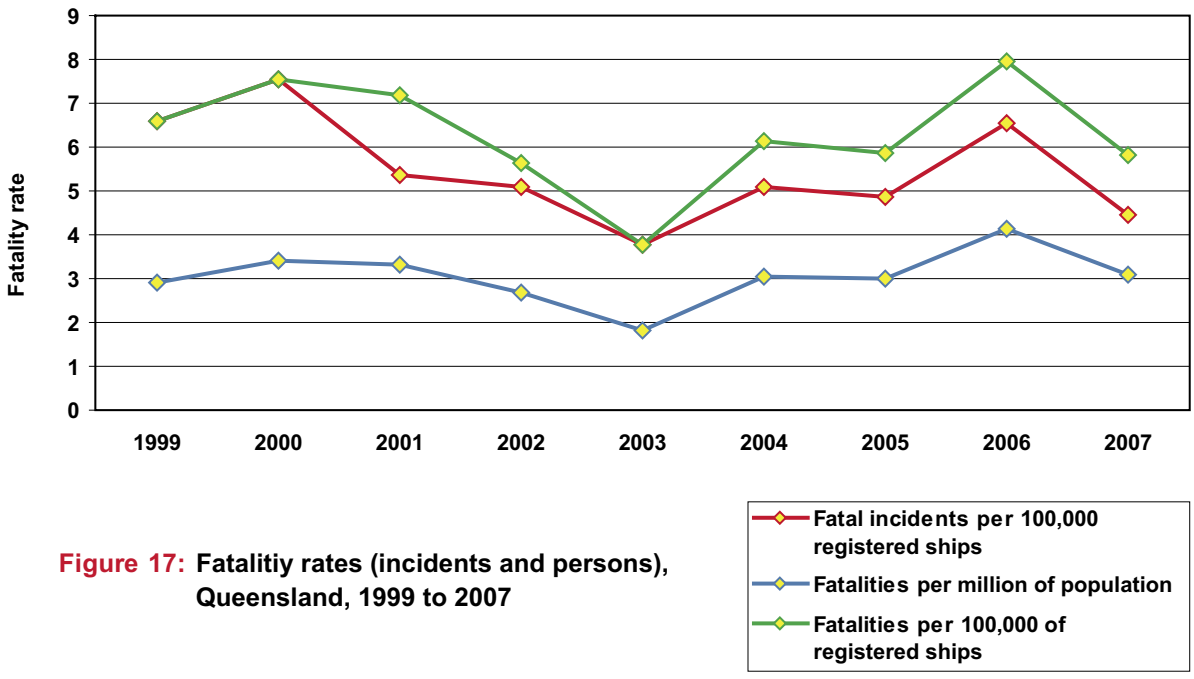


Figure 17: **Fatalitiy rates (incidents and persons), Queensland, 1999 to 2007**

The number of fatal incidents per 100,000 registered vessels has ranged between 3.8 and 7.6 for the past nine years. What appeared as a possible emerging upward trend in 2006 has returned in 2007 to be within the long term range. In 2007 there were 4.5 deaths per 100,000 registered vessels, below the nine-year average of 5.5.

Looking at persons fatally injured, both deaths per million of population and deaths per 100,000 registered vessels continue to be within the boundaries of the long term range. In 2007 there were 5.8 deaths per 100,000 registered vessels and 3.1 deaths per million of Queensland population.

Figure 18 shows similar comparisons for serious injuries. The number of serious injury incidents per 100,000 registered vessels and the number of persons seriously injured per 100,000 registered ship and per million of population declined significantly between 1999 and 2003. Since 2003 the serious injury rates have remained steady. In 2007 the rates were 14.7, 15.6 and 8.3 respectively.

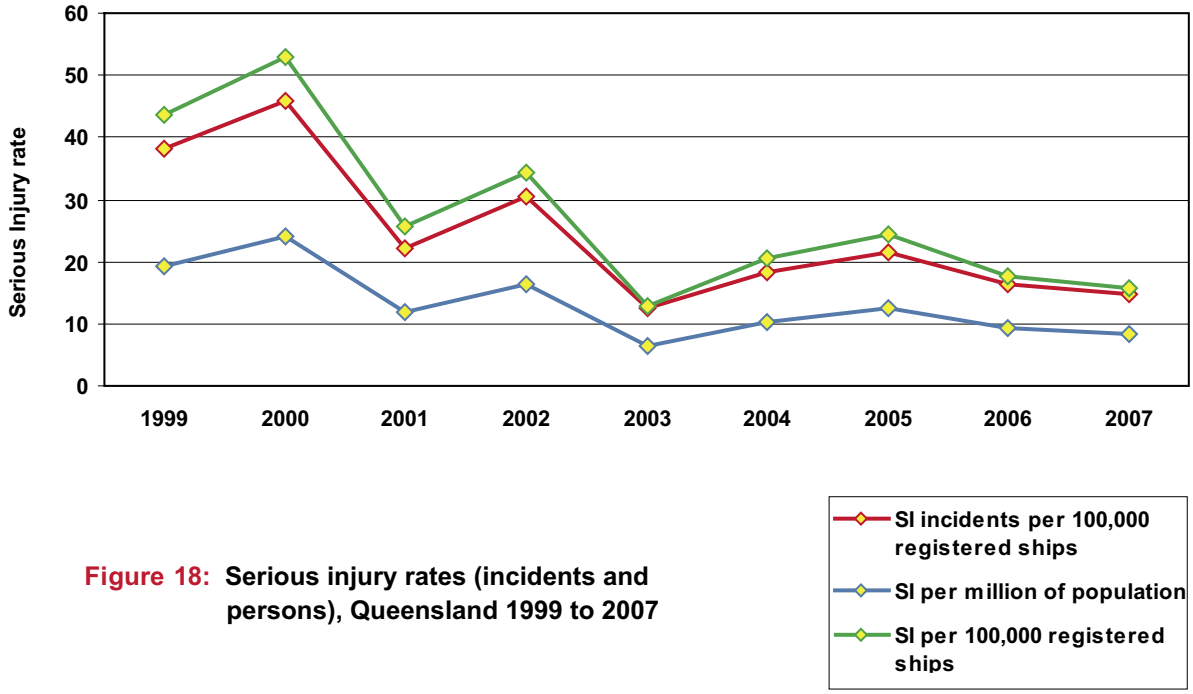


Figure 18: Serious injury rates (incidents and persons), Queensland 1999 to 2007

Fatality rates for incidents involving recreational and commercial vessels are very different. Figure 19 shows recreational fatalities per 100,000 registered recreational vessels. Figure 20 shows commercial fatalities per 1,000 registered commercial vessels. The scales chosen for figures 19 and 20 were selected to show in detail the changes in the fatality rates over time for each vessel type. On a larger scale the rates for commercial vessel fatalities would not appear as erratic.

In 2007 there were 10 recreational fatalities and 3 commercial fatalities. Recreational fatalities per 100,000 registered recreational vessels have ranged between 2 and 5.5 since 1997. The fatality rate in 2007 was 4.58 per 100,000 vessels which is below the rates for both 2005 and 2006.

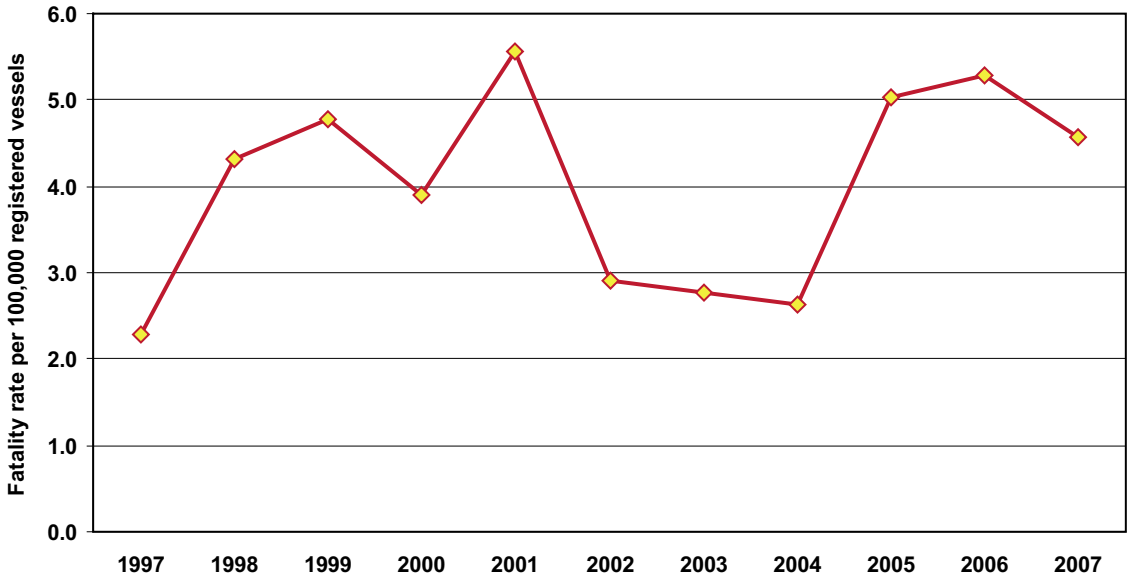


Figure 19: **Fatality rates for recreationall vessels, Queensland 1997 to 2007**

Fatalities per 1,000 registered commercial vessels have been consistently between 0.35 and 1.22 since 1997. In 2007 the commercial fatality rate was 0.52 per 1,000 registered commercial vessels. If the estimated 3,000 unregistered fishing vessels (refer Section 1.5.2) are included, the fatality rate per 1,000 commercial vessels decreases from 0.52 to 0.34 per 1,000 vessels.

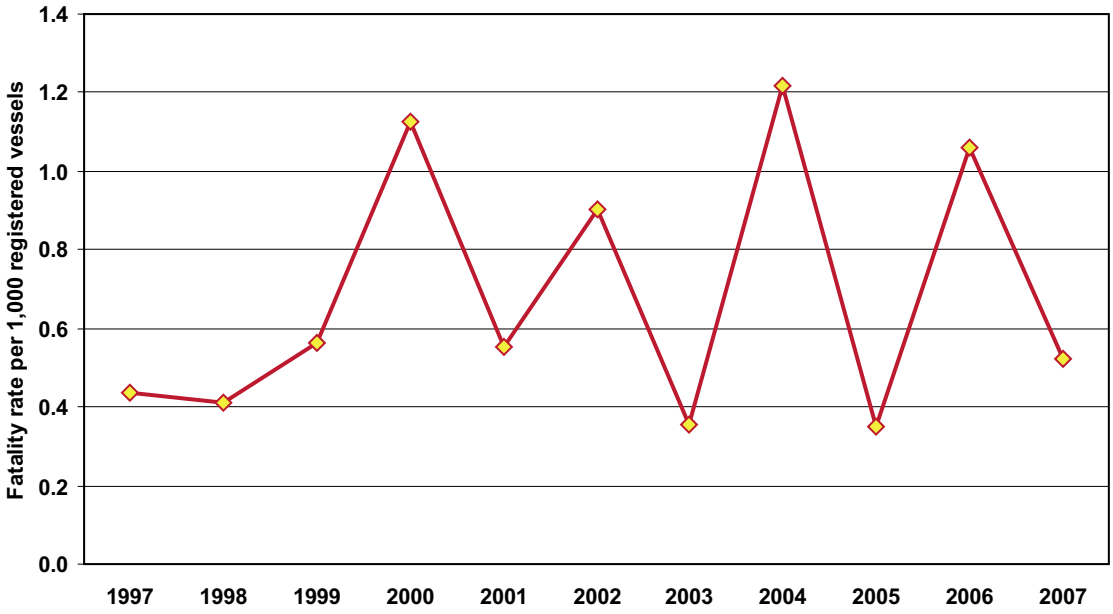


Figure 20: **Fatality rates for commercial vessels, Queensland 1997 to 2007**

Putting this on comparable terms to the recreational vessel analysis the commercial fatality rate per 100,000 registered vessels is 52.4 or 34.4 if unregistered fishing vessels are included.

3.2.3 Queensland in relation to Australia

Based on marine incident data collated by the National Maritime Safety Committee the number of reported marine incident fatalities in Queensland in 2007 has declined in comparison to the increase observed at the national level (see Figure 21). In 2007 there were 51 reported marine incident fatalities in Australia (data excludes the Northern Territory from August 2007), of which 13 were recorded in Queensland.

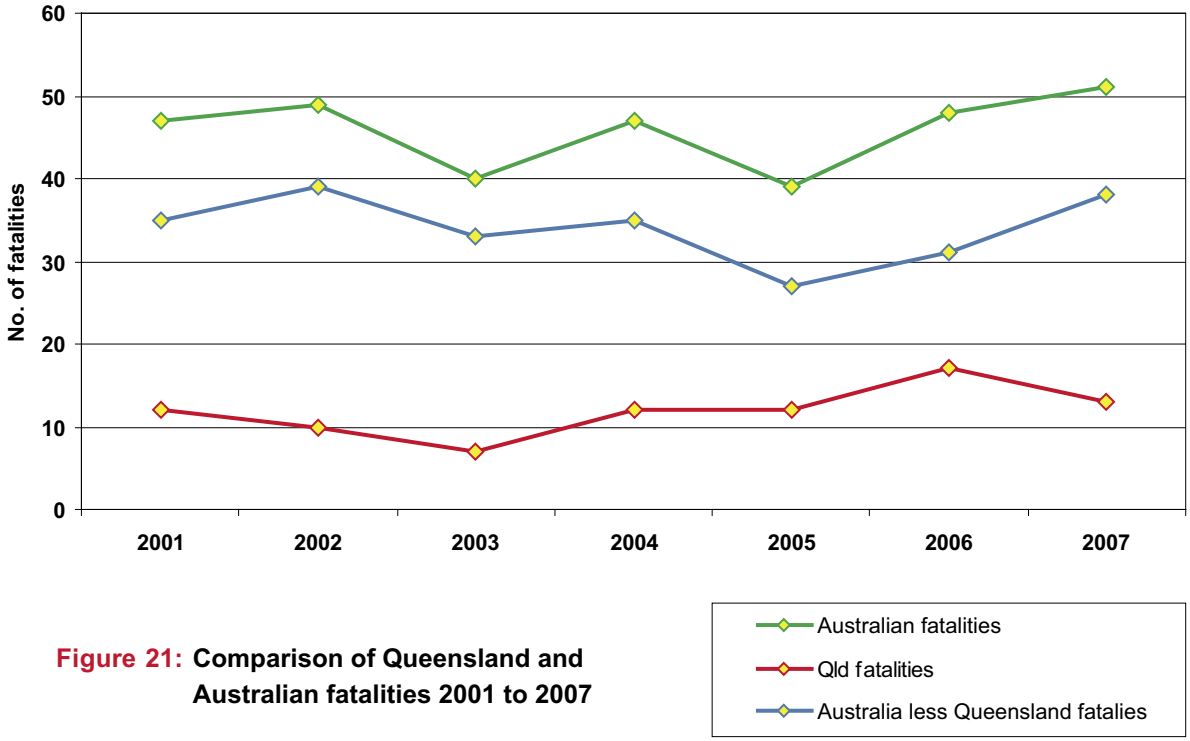


Figure 21: Comparison of Queensland and Australian fatalities 2001 to 2007

NOTE: NMSC data does not include the Northern Territory from August 2007

Since 2001 Queensland's reported marine incident fatalities, as a proportion of the Australian total, have ranged between 17.5 percent and 35.4 percent, averaging 25.9 percent for the seven-year period. In 2007, Queensland comprised 25.5 percent of Australian reported marine incident fatalities. This comparative data needs to be interpreted in the context of accelerating growth in boat ownership and associated boating activity in Queensland over the past decade.

3.2.4 Hospital admission data

In 2007 Queensland Health provided Maritime Safety Queensland with three years of de-identified unit record data for persons admitted to hospitals in Queensland as a result of water transport accidents. Water transport accidents are defined as accidents that occur on or involve a watercraft while on the water.

The water transport accident definition used by Queensland Health is much broader than the Queensland legislative definition of a marine incident (see Section 1.1). Not all water transport accidents are necessarily marine incidents. Where sufficient details of the incident have been provided in the Queensland Health data to determine that accident does not meet the criteria for a marine incident the data has been removed. In many instances this could not be determined. Queensland Health data is therefore likely to overstate the actual number of people seriously injured in marine incidents. Conversely, Maritime Safety Queensland's data, with the known issues of under-reporting, is believed to understate the number of persons seriously injured in marine incidents.

Maritime Safety Queensland defines serious injury marine incidents as those incidents that result in the admission of a person involved to hospital.

The Queensland Health data identifies 778 people as being admitted to hospital in Queensland from July 2004 to June 2007 as a result of water transport accidents. During this same period, Maritime Safety Queensland's marine incident data identifies 124 persons as being seriously injured in reported marine incidents. The real level of serious injury marine incidents probably lies somewhere in between—and in all likelihood closer to 778 than to 124.

Maritime Safety Queensland is working with Queensland Health, Queensland Emergency Services and the Queensland Police Service to identify options to improve the level of reporting to Maritime Safety Queensland of serious injury marine incidents.

Table 10 shows the number of persons hospitalised as a result of water transport accidents together with the comparative numbers of persons reported to and recorded by Maritime Safety Queensland as seriously injured in marine incidents for the period July 2004 to June 2007.

Table 10: Comparison of reported marine incident serious injuries and water transport accident hospital admissions by region by financial year

MSQ Region	2004/2005		2005/2006		2006/2007		2004/2007 Total	
	MSQ	Qld Health	MSQ	Qld Health	MSQ	Qld Health	MSQ	Qld Health
Gold Coast	13	45	17	57	2	52	32	154
Brisbane	11	100	8	97	6	99	25	296
Gladstone	3	20	3	6	11	26	17	52
Mackay	8	21	7	21	3	23	18	65
Townsville	0	15	0	8	2	17	2	40
Cairns	11	43	8	69	11	59	30	171
All regions	**46**	**244**	**43**	**258**	**35**	**276**	**124**	**778**

Privacy legislation presently makes it difficult for Shipping Inspectors investigating marine incidents or media reports about marine incidents to directly access information from hospitals and emergency services about people believed to be involved in those incidents. Despite the differences in the comparative serious injury data, the hospital admissions data provides useful, complementary information about the characteristics and features of water transport accidents and those seriously injured in those accidents.

Figure 22 shows the age and gender distribution of the people hospitalised from water transport accidents. Males make up 76.3 percent of all persons hospitalised as a result of water transport accidents. The involvement of females as a group is relatively uniform across the age groupings—with females representing 23.7 percent of all water transport accident hospital admissions in Queensland.

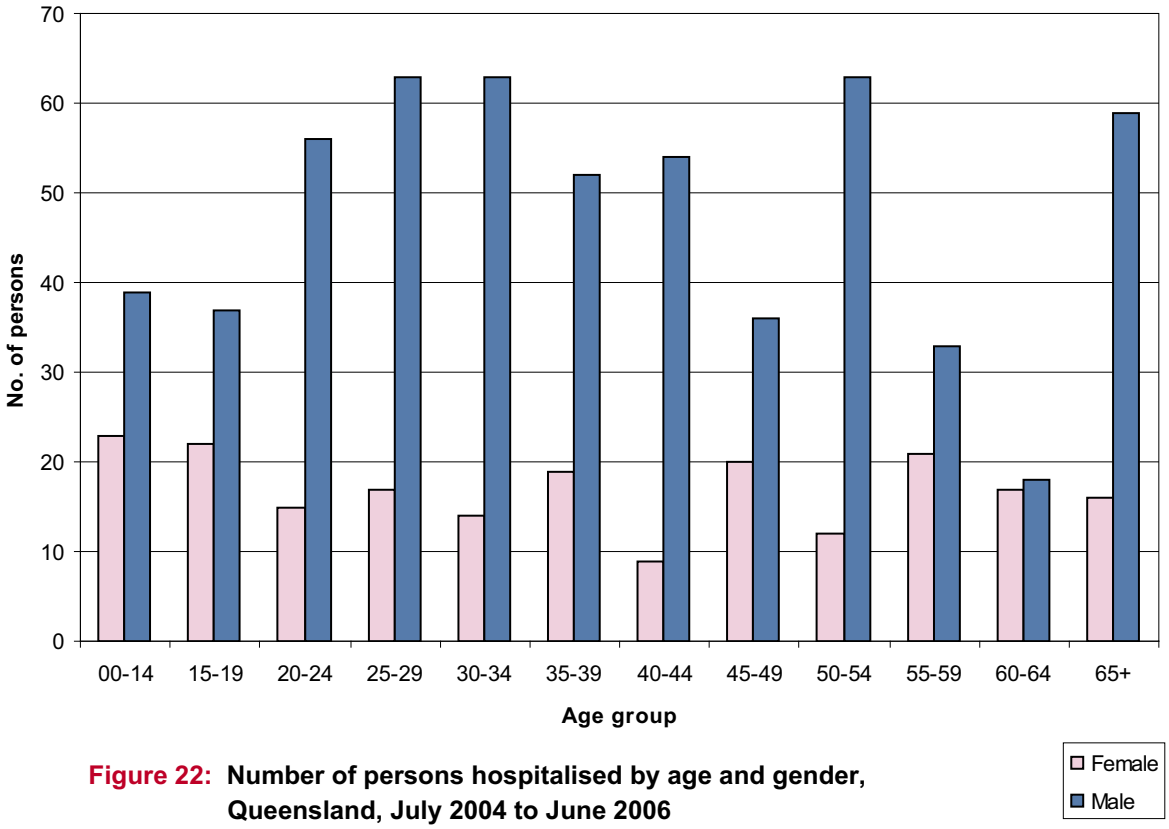


Figure 22: Number of persons hospitalised by age and gender, Queensland, July 2004 to June 2006

The 25 to 29 year old group are the most involved group with 10.3 percent of all hospital admissions. When compared with their relative proportion of the Queensland population (6.8 percent), the involvement of 25 to 29 year olds is more than 50 percent higher than could be expected. Likewise, 50 to 54 year olds are also over-represented by 50 percent in terms of their expected involvement. The other age group showing a higher level of involvement is the 30 to 34 year old group—43 percent higher than their proportionate representation within the Queensland population.

The hospitalisation data is also revealing in terms of the number of hospital patient bed days. With a total of 3,692 patient bed days (an average of just under five days per patient), the hospitalisation and allied health services cost of these water transport accidents is significant. The all-up *accident social cost* of these accidents is even greater.

The hospitalisation data also reveals that hospital admissions from water transport accidents are elevated during peak holiday periods (Easter, September and Christmas/New Year holidays). Maritime Safety Queensland's reported marine incident data does not mirror this trend as markedly, suggesting that infrequent recreational (holiday) boating contributes to both increased incident numbers and under-reporting to Maritime Safety Queensland during these periods.

Based on media coverage, Maritime Safety Queensland has long suspected that marine incidents involving personal watercraft (jet skis) are significantly under-reported. The hospitalisation data confirms media reports and gives a clue as to the relative level of under-reporting of jet skiing

incidents. According to the hospital admission data, 94 people were seriously injured and hospitalised as a result of jet skiing accidents between July 2004 and June 2007. Maritime Safety Queensland's reported marine incident data records only 19 people being seriously injured in incidents involving jet skis in the same period—4.4 times fewer serious injuries than reflected in the hospital admission records.

The 94 persons seriously injured in jet ski incidents spent a total of 538 days in hospital—an average of 5.7 days per person. Hospital stays ranged from one day to 77 days, with three people spending more than 40 days in hospital. The injuries sustained in these jet ski incidents are often serious, with fractures including spinal fractures, sprains and dislocations the most frequently recorded principal diagnoses, and head and facial injuries also prevalent.

Jet skiing is by and large a male dominated activity and this is also reflected in the hospitalisation data. 82 percent of those hospitalised (n=94) were males with 20 to 29 year olds the most involved age grouping (32 percent). Interestingly, this outcome is consistent with the age and gender profile of people seriously injured and killed in motor cycling accidents. There were 17 females seriously injured in jet skiing incidents of which six were in the 15 to 19 year age group.

3.3 Vessels involved in fatal and serious injury incidents

In 2007 there were 44 vessels involved in the 33 reported fatal or serious injury incidents. 25 or 56.8 percent were recreational vessels, 16 or 36.4 percent were commercial vessels and 3 or 6.8 percent were hire and drive vessels (see Figure 23).

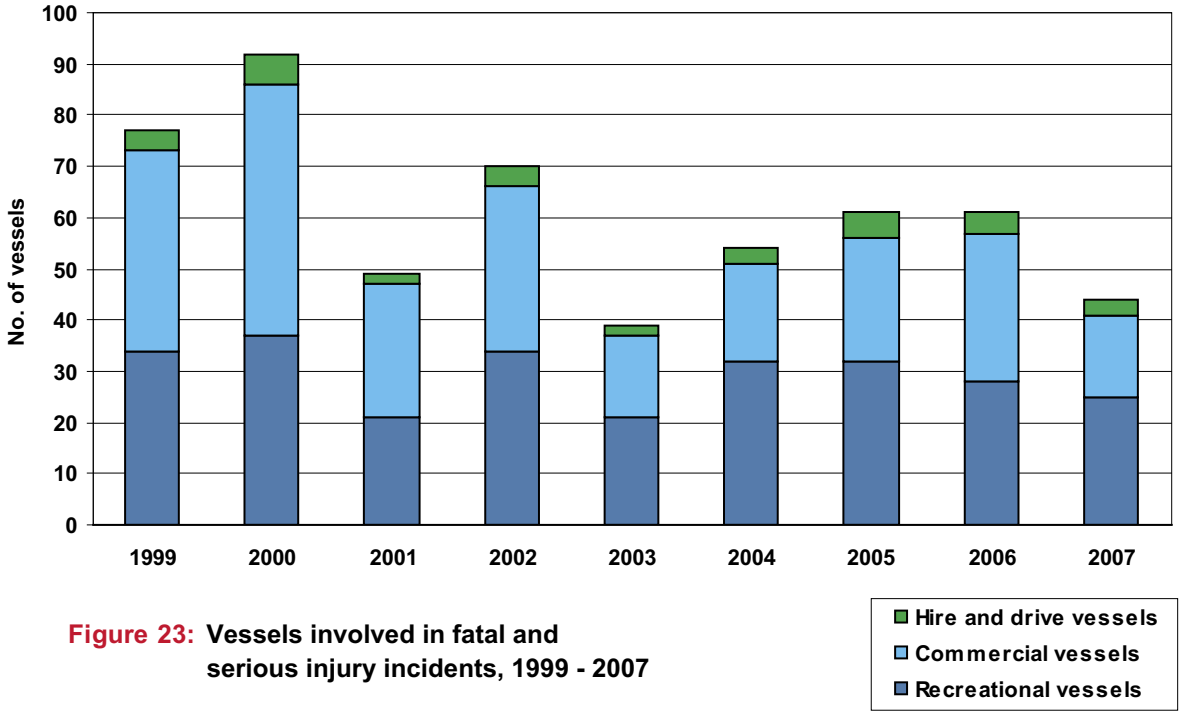


Figure 23: **Vessels involved in fatal and serious injury incidents, 1999 - 2007**

While the overall number of vessels involved in fatal and serious injury incidents has ranged widely, the general spilt between commercial and recreational vessel involvement has not shown the same level of variation particularly over the past four years. Recreational vessels have been between 45.9 percent and 59.3 percent of vessels involved in fatal and serious injury incidents over the last four years. Commercial vessels have comprised between 35.2 percent and 47.5 percent. Hire and drive vessels continue to comprise a small proportion of vessels involved in fatal or serious injury incidents ranging between 5.1 and 8.2 percent.

Recreational speedboats have consistently shown the highest level of involvement by recreational vessels in fatal and serious injury incidents. In the period 1999 to 2007, with the exception of 2001, speedboats represented between 46.9 percent and 64.7 percent of all recreational vessels involved in a fatal or serious injury incident. In 2007 16 or 64 percent of the 25 recreational vessels involved in fatal and serious injury incidents were speedboats (see Figure 24).

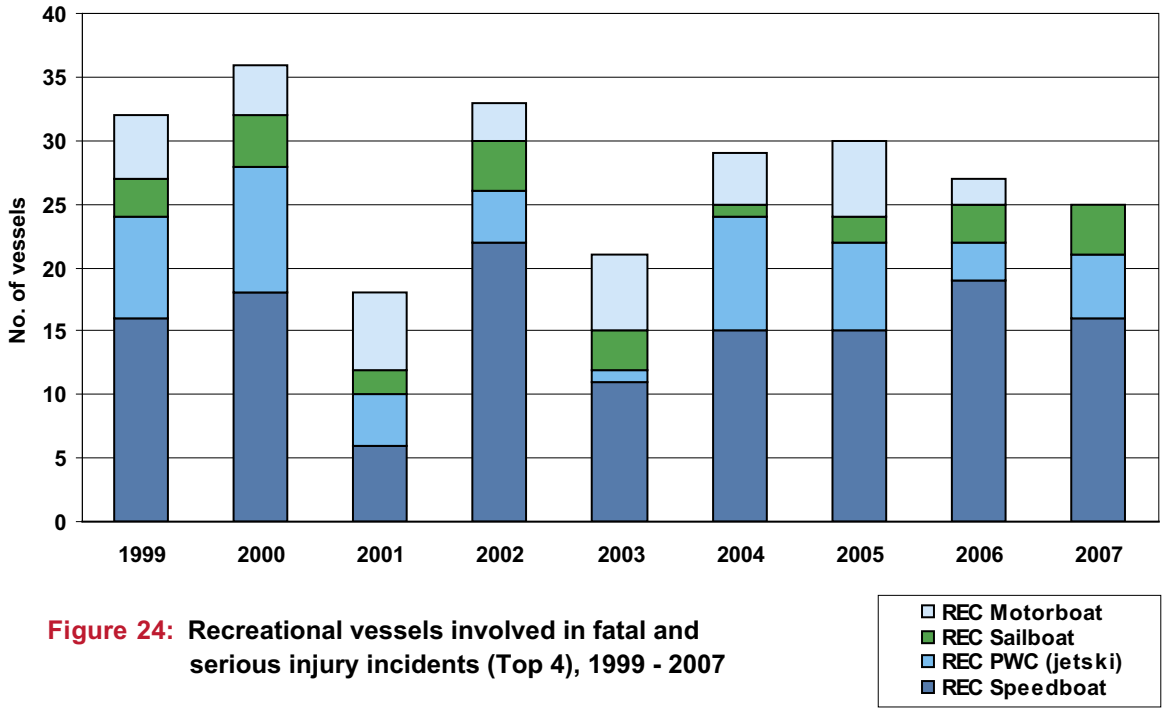


Figure 24: Recreational vessels involved in fatal and serious injury incidents (Top 4), 1999 - 2007

PWC (jet skis) are varied in their level of involvement in fatal and serious injury incidents. Their level of involvement has ranged from 4.8 percent to 28.1 percent since 1999. In 2007 jet skis made up 20 percent of the recreational vessels involved in fatal or serious injury incidents.

There have been between one and four sailboats involved in reported fatal or serious injury incidents each year since 1999. As a proportion they have represented between 3.1 percent and 16.0 percent of recreational vessels involved in fatal and serious injury incidents. In 2007 four sailboats were involved in fatal and serious injury incidents.

Using proportion of the fleet as a basis for comparison reveals recreational speedboats are actually under-represented in reported fatal and serious injury incidents. Speedboats comprise 80 percent of the recreational fleet but make up 64 percent of recreational vessels involved in reported fatal and serious injury incidents. Applying this same basis of comparison to sailboats and jet skis shows that both are over-represented in fatal and serious injury incidents when compared to their proportion of the registered recreational fleet (refer Table 11 on page 40).

Who is going to help you?

Since 2000, 21 people have drowned in Queensland after falling overboard from the vessel in which they were alone, or *effectively* alone. 15 of the fatalities were people who were boating alone, six were people who were either alone on the deck of the vessel or they were out of view of other people on the vessel. These deaths represent 20.4 percent of all marine incident fatalities since 2000. In 2007 there were two boating fatalities involving lone boaties.

While the circumstances that led to these 21 people falling overboard are varied, few would normally be considered dramatic—it was not generally a case of wild weather or seas. Most were situations that would not generally be considered that dangerous:

- one of the deceased was in a tender taking her dog to shore;
- another fell while leaning over doing maintenance on the stern of the boat while it was underway. His absence was not noticed by anyone else onboard for approximately 45 minutes;
- another man, trialling his new tinnie at a dam, turned the boat a little too sharply and fell overboard approximately 200 metres from the bank in full view of numerous people on shore—he drowned before the people on shore could reach him;
- two other men died in almost identical circumstances—they were out alone for a few days camping and fishing on inland rivers. After drinking heavily they took their boats out on the river to fish and somehow they each fell overboard and drowned.

Alcohol played a significant role in the recorded *boating alone* deaths. Six of the 13 people who died between 2000 and 2004 while boating alone had a blood alcohol concentration greater than 0.05 percent. Four of the deceased were more than three times the legal blood alcohol limit, three were more than four times the legal limit.

More significantly, lifejacket wearing or lack, of lifejacket wearing, was an overwhelming characteristic of the recorded boating alone fatalities. Of the 21 people who drowned after falling overboard it appears that none were wearing a lifejacket (PFD) at the time of the incident. In a majority of these cases it is likely that wearing a PFD would have saved the person's life. For the remainder, a PFD would have significantly increased their chances of survival.

Data collected from the PFD section of Maritime Safety Queensland's *Improving recreational boating safety survey 2007* showed that 48.7 percent of respondents believed operating alone was a higher risk situation that should require the boatie to wear a PFD.

In practice however, based on overseas research, only approximately 23 percent of people actually wear a PFD when boating alone. This wearing rate varied depending on the boat type. For example, for cabin motorboats as few as 12 percent of people boating alone indicated they "always" or "most of the time" wore a PFD, whereas for open motorboats this figure increased to 23 percent.

It appears then that people do consider vessel type when assessing their risk of falling overboard. But there are other factors such as boat size, distance from shore, weather conditions, a person's age, the presence of other people on the boat that should also be considered when assessing the likelihood of falling overboard. Risk however is not just about the likelihood of an event occurring—it is also about consequences of that event.

For people boating alone or people who are effectively alone while on deck the consequences of falling overboard are life threatening. The enormity of the potential consequences makes boating alone or effectively alone a high risk activity regardless of how unlikely such an event may be thought to be.

The Queensland fatality data shows that if you fall overboard while boating alone or effectively alone you risk being left behind as your vessel continues on, being injured in the fall and unable to get back in your vessel or keep yourself afloat, being knocked unconscious, being struck by the boat's propeller, becoming quickly exhausted and unable to swim or even hold on to a floating object or becoming incapacitated through exposure and hypothermia.

No-one is a survivor until they are rescued. Boaties can significantly increase their chances of survival by wearing a PFD and by not impairing their abilities through excessive alcohol consumption. There are numerous new inflatable lifejacket products on the market that are comfortable and do not interfere with normal boating activity. Boaties could also consider carrying a personal EPIRB. Even wearing an engine cut off lanyard may increase a person's survivability by making it possible to get back and into their boat after falling overboard. It may be marginally less convenient to wear a PFD and it may cost extra to purchase a personal EPIRB—but if you fall overboard while boating alone who is going to help you?

Here are some more interesting research findings that have implications for your decision about wearing a PFD or carrying a personal EPIRB when boating alone or effectively alone:

- A experiment to test peoples' ability to tread water showed that 18 percent of people could not tread water for as long as they thought they could—54.4 percent found it more difficult than they expected and after the test 47 percent of the participants decreased the length of time they now expected to be able to tread water. This experiment was conducted in a warm swimming pool supervised by lifeguards. There were no waves to buffet the swimmers or currents to swim against and the participants had no cause for panic or concern.
- In the United Kingdom (UK) a study found that as many swimmers drown as do non-swimmers.
- The same UK study determined that 55 percent of open water drownings occurred within three metres of safety.
- A Canadian study found that 41 percent of boating-related drownings occurred within 10 metres of the shore. The figure increased to 63 percent within 15 metres of the shore.
- In water 10 to 15 degrees Celsius a person has a predicted survival time of two hours—the predicted survival time increases to 7 hours if the person is wearing a PFD.

Table 11: Recreational vessel involvement in fatal and serious injury incidents compared to vessel registrations, 2007

Recreational Vessels	2007	
	% of registered recreational fleet	% of vessels involved in fatal and serious injury
Speedboat	80	64
Jet ski	4.9	20
Sailboat	3.2	16
Motorboat	11.8	0
Total fleet	**100**	**100**

Motorboats, which comprise 11.8 percent of the recreational vessel fleet, were not involved in any reported fatal or serious marine incidents in 2007.

Commercial vessel types do not show any consistent pattern of involvement in fatal and serious injury incidents. As can be seen in Figure 25 the level of involvement for the top four vessel types has fluctuated widely without any obvious or persistent trend.

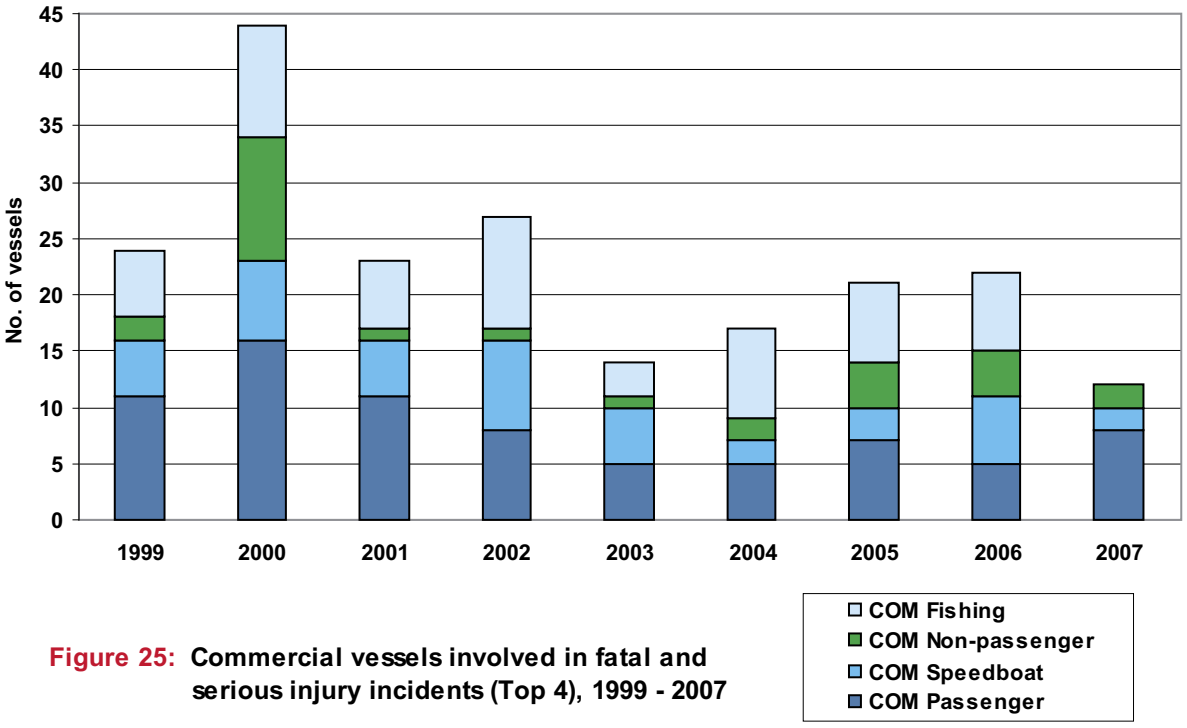


Figure 25: Commercial vessels involved in fatal and serious injury incidents (Top 4), 1999 - 2007

Notable in 2007 is the absence of any commercial fishing vessel involvement in reported fatal or serious injury incidents. Commercial fishing vessels have historically had a high level of involvement in commercial fatal and serious marine incidents. 2007 is the first year in the nine years under review where commercial fishing vessels did not figure in fatal or serious injury incidents.

Maritime Safety Queensland has been trialling and implementing a range of initiatives to improve safety awareness, standards and practices within the Queensland commercial fishing industry. While in the early stages the programs have seen an increase in the number of commercial fishing vessels

carrying life rafts and a general increase in the level of awareness of critical safety issues among fishing vessel owners and their crews.

Commercial passenger vessels had the highest level of involvement in fatal and serious injury incidents within the commercial vessel category in 2007. Eight commercial passenger vessels were involved in such incidents, representing 50 percent of all involved commercial vessels (excluding hire and drive).

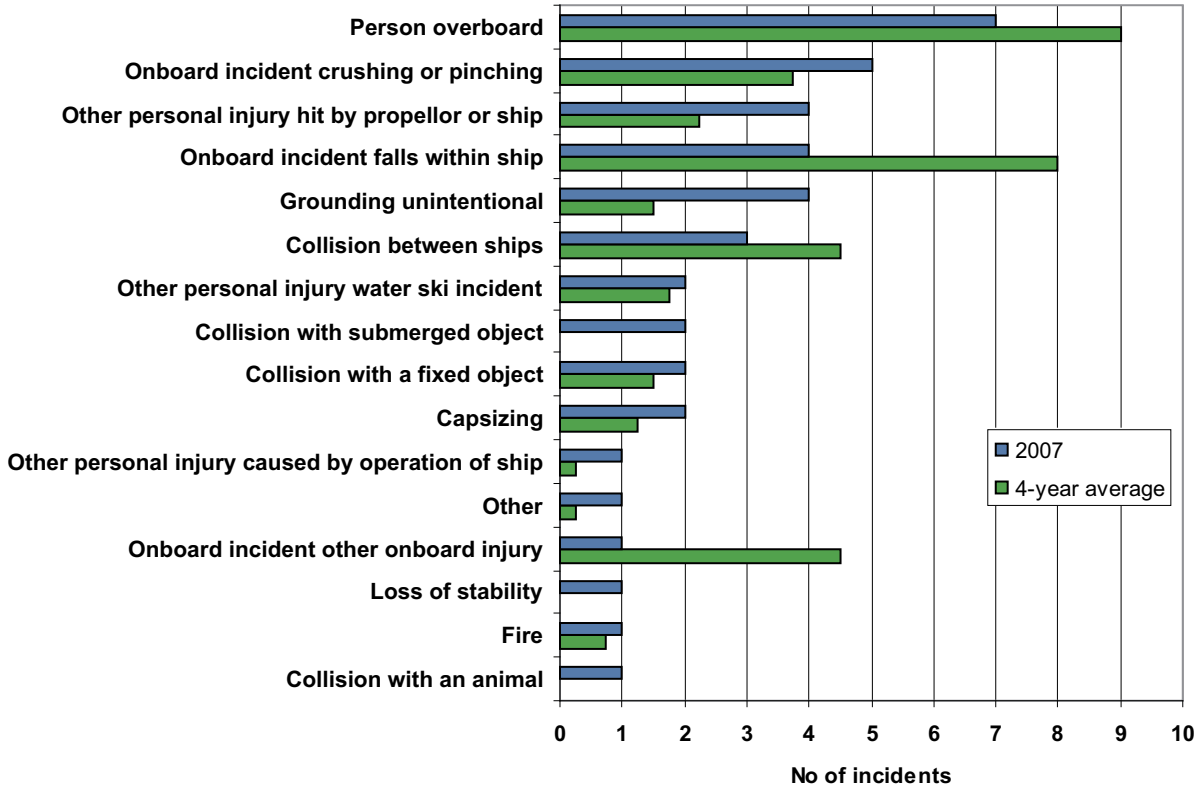
Two commercial hire and drive house boats and one hire and drive jet ski were involved in serious injury incidents in 2007.

Table 11 in the appendix provides data for all vessels involved in reported fatal and serious injury marine incidents for period 2002 to 2007.

3.4 Fatal and serious injury incident types

Figure 26 shows fatal and serious injury incidents in 2007 according to incident type and compares the 2007 results with the previous four-year average.

Figure 26: Fatal and serious marine incidents in 2007 by incident type



Person overboard incidents were the most frequently occurring fatal and serious injury incident type for 2007. Of the seven person overboard incidents in 2007 two resulted in fatalities and five in serious injuries.

Both fatal person overboard incidents were males boating alone and not wearing a personal flotation device (lifejacket) at the time of the incident. In the five serious injury incidents there were either other people in the vessel who provided assistance or the vessel was part of a commercial hire and drive operation that was being monitored from onshore and immediate assistance was available.

The main incidents types over-represented in 2007 when compared to the previous four-year average were:

- onboard incident - crushing or pinching;
- other personal injury - hit by propeller or ship;
- grounding unintentional; and
- collision with a submerged object.

Give yourself a chance

Boating alone involves a greater level of risk than boating with others. What can be simple issues on a boat with two or more people can be disastrous for the solo boatie. Two lone boaties died in 2007 when they fell from their small boats—eight have died in similar incidents since 2000.

When boating alone extra care must be taken to ensure you keep yourself as safe as possible. For a 45 year old man out alone in his dinghy for a day's fishing his failure to take some simple safety precautions may have cost him his life.

The solo boatie was in his 4.3m dinghy on the Pine River on a weekday morning. At Deep Water Bend he was seen standing in his dinghy while underway. When next seen he was in the water waving his arms for help but by the time help arrived he was face down in the water with his dinghy, motor running, in the mangroves nearby.

It is believed that while standing to steer his boat he may have encountered the wash of a larger vessel and fell overboard when the boat rocked. Though lifejackets were stowed on the boat he was not wearing one. And even though there was a motor safety cut off lanyard, which would have stopped the motor when he fell overboard, he had not attached it.

Had he remained seated in the boat it is unlikely he would have fallen overboard. Having fallen overboard had he been wearing a lifejacket and/or had the lanyard attached there is every chance he would not have drowned.

Safety insights

When boating alone:

- Wear your lifejacket.
- Use your outboard motor safety cut off lanyard if it has one—it could save your life.
- Do not stand up in small boats particularly when underway.
- Be aware of the risks and take additional precautions.

If you regularly go boating alone and your motor does not have a safety cut off lanyard consider having one installed.

Incident types under-represented in 2007 were:

- person overboard;
- onboard incidents falls within ships;
- collision between ships; and
- onboard incident - other onboard injury.

3.5 Fatal and serious injury incident locations

3.5.1 By waters

Figure 27 shows the location of fatal and serious incidents by waters. Consistent with the distribution of all reported marine incidents in 2007 (refer Section 2.5.1), smooth waters were, at 41 percent, the most frequent location for fatal and serious injury incidents. Five of the ten fatal incidents in 2007 occurred in smooth waters.

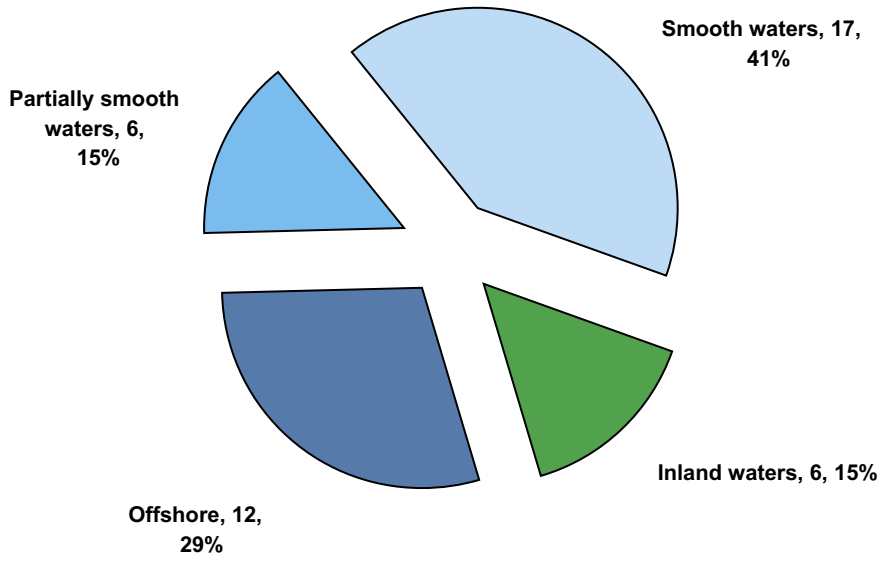


Figure 27: Fatal and serious injury incidents in 2007 - by location

Offshore waters and inland waters were over-represented in fatal and serious injury incident in 2007 when compared to the distribution pattern for all incidents. 20.5 percent of all reported incidents occurred in offshore waters whereas offshore waters account for 29 percent of fatal and serious injury incidents. Likewise inland waters comprised 9.8 percent of all incidents but 15 percent of fatal and serious injury incidents.

Partially smooth waters were under-represented in the fatal and serious injury data in 2007 making up 22.2 percent of all incidents but only 15 percent of fatal and serious injury incidents. Smooth waters were also under-represented to lesser degree making up 45.4 percent of all incidents and 41 percent of fatal and serious injury incidents.

The number of offshore fatal and serious injury incidents reported in 2007 (12) is well below the 2006 level (20).

Table 7 in the appendix provides times series data for the location of fatal and serious injury incidents.

3.5.2 By region

Figure 28 shows the distribution of fatal and serious injury incidents by region. Most fatal and serious injury incidents in 2007 occurred in Brisbane region (26 percent). This included five of the ten fatal incidents. The southeast corner of Queensland, that is Brisbane and Gold Coast regions combined, accounted for 46 percent of all reported fatal and serious injury incidents in 2007. While above the figure for 2006 (36.7 percent) the 2007 result is below the preceding four-year average of 48.3 percent.

Gladstone region, which recorded 18 percent of all incidents recorded only 9.1 percent of fatal and serious injury incidents in Queensland in 2007.

Section 5 of this report provides a map for each region showing the location of all fatal, serious injury and other incidents occurring within each region from 2004 to 2007. The section also provides a more detailed analysis of regional incident outcomes.

Table 9 in the appendix provides fatal and serious injury marine incident data by region for the period 2002 to 2007.

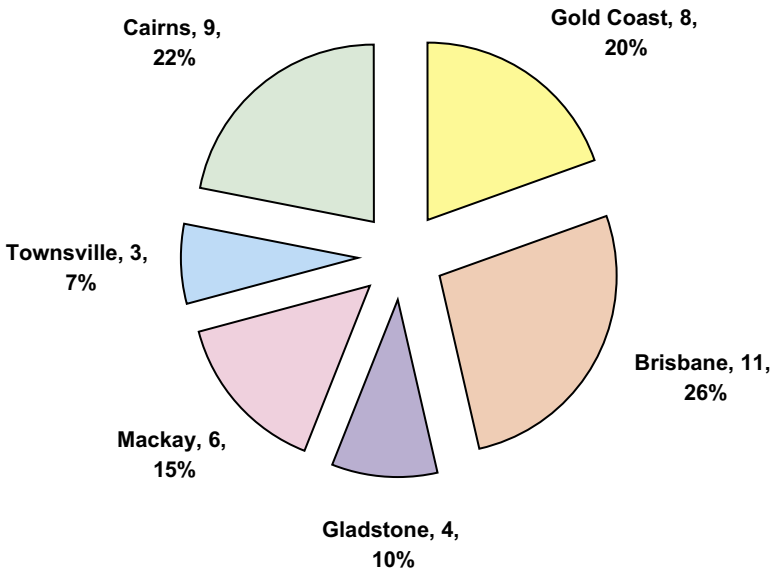


Figure 28: Fatal and serious injury incidents in 2007 - by region

3.6 Characteristics of fatal and serious injury incidents

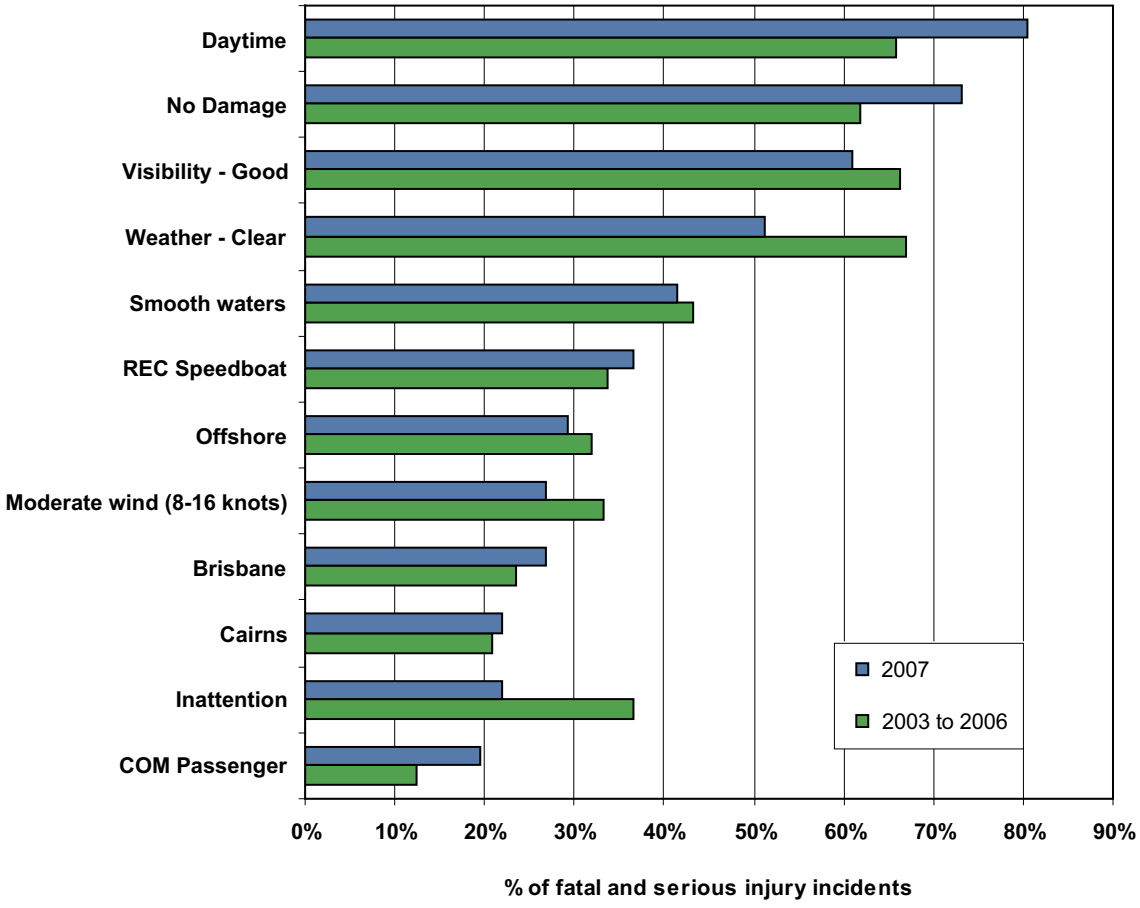
This section examines the extent to which characteristics such as human contributing factors, weather conditions, vessel type and location were involved in fatal and serious injury incidents.

3.6.1 Selected characteristics

Figure 29 shows the 10 most frequently occurring fatal and serious injury incident characteristics in 2007. The data is based on the number of times each characteristic was reported or identified during investigation as having contributed to or as prevailing at the time of the incident.

Clearly evident from Figure 29 is that the majority of fatal and serious injury marine incidents occur in the daytime, with good visibility and clear weather. In 2007, 80.5 percent of fatal or serious marine incidents in Queensland occurred during daytime, 61.8 percent occurred in good visibility and 51.2 percent were in clear weather. 41.5 percent occurred in smooth waters.

Figure 29: Proportion of fatal and serious injury incidents with given characteristics, Queensland, 2007 (Top 12)



The figure also shows that despite the media coverage given to dramatic marine incidents most fatal and serious injury marine incidents occur in innocuous circumstances with 73.2 percent of fatal and serious injury incidents occurring without any damage to the vessel.

In 2007 proportionally more fatal and serious injury incidents occurred during the daytime compared to the period 2003 to 2006. The proportion of vessels undamaged in the incidents was also higher compared to the previous four-years.

Fewer incidents in 2007 recorded clear weather as prevailing at the time of the incident compared to 2003 to 2006. The breakdown of the weather category provided in Table 13 in the appendix shows that for 11 of the 41 fatal and serious injury incidents in 2007 the weather was not specified. It is likely that a number of the fatal and serious injury cases are yet to be finalised and may still be awaiting classification.

Expect the unexpected

Safe boating has as much to do with hazard perception and recognition as it does with seaworthy boats and safety equipment. Mid morning on a fine day, a lone 19 year old man was driving his 4 metre tinnie in a coastal creek in north Queensland. There were other moored vessels nearby and according to witnesses, the tinnie was travelling too fast for the prevailing conditions and the nearby boats.

Without forewarning the driver of the tinnie noticed a saltwater crocodile surface not far ahead of his boat. He was unable to take evasive action and collided with the crocodile at speed. He was thrown from the boat into the creek and was subsequently run over by the now-circling tinnie. An off duty ambulance officer in a nearby boat immediately responded, recovering the driver from the murky waters and providing first aid until emergency services arrived. Luckily, if you can call it luck, the crocodile played no further part in the incident and was not seen again.

The tinnie driver was subsequently hospitalised with serious injuries including a broken back, broken jaw, fractured skull, dislocated shoulder, cuts to temple and severe cuts to throat and jaw caused by the boat's propeller.

Safety insights

- Operate your vessel at a safe speed, having regard to the prevailing conditions and circumstances.
- If your outboard motor has a safety cut off lanyard use it—it could save your life. If it doesn't consider getting one fitted.
- Speeding near moored boats is not only a breach of safety regulations, it is dangerous.
- Do not stand up in small boats when underway.
- Wear a personal flotation device when boating alone.
- Always take additional precautions when boating alone.

3.6.2 Timing of fatal and serious injury incidents

There were 23 incidents involving a recreational vessel that resulted in fatal or serious injury. Of these 23 incidents:

- 11 occurred on the weekend–seven on a Sunday and four on a Saturday;
- nine occurred during school or public holidays;
- 18 occurred either on a weekend or during school or public holidays;
- two occurred at night (both of which were fatal incidents);
- five occurred between 6.30am and 10am, four of which were on a weekend or during school holidays;
- 11 occurred between midday and 6pm;
- six occurred between 2pm and 4pm; and
- five occurred on a Sunday between 1.30pm and 4.45pm.

Of the 18 fatal or serious injury incidents that involved a commercial vessel:

- five occurred during school or public holidays;
- four occurred on a weekend;
- seven occurred on a Tuesday;

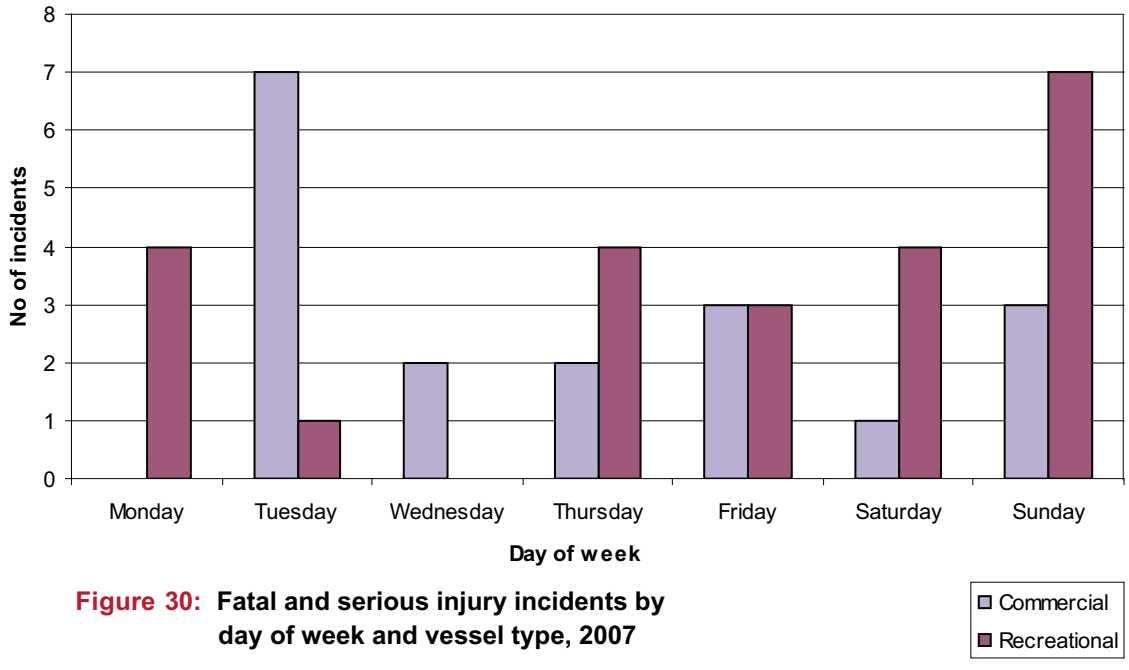


Figure 30: Fatal and serious injury incidents by day of week and vessel type, 2007