3.0 Queensland fatal marine incident trends

This section provides an analysis of fatal marine incidents in Queensland for 2006 in terms of past trends, and comparative trends in both population and registered vessel numbers.

3.1 Marine incident fatality trends

In 2006, there were 14 marine incidents that resulted in loss of life. 17 people died in these incidents, an increase of four over the 13 people who died in marine incidents in 2005. The 2006 fatality outcome is significantly over-represented when compared with the previous four-year average of 10.5 fatalities per year.

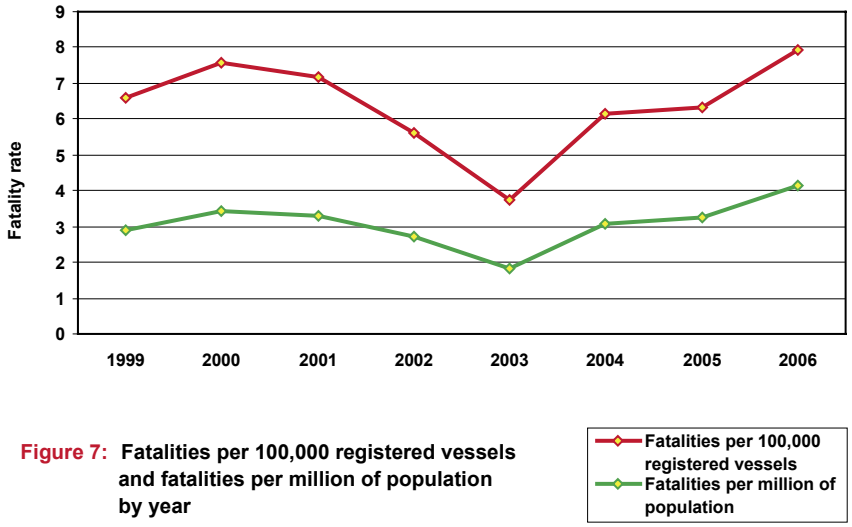

Figure 7: **Fatalities per 100,000 registered vessels and fatalities per million of population by year**

Figure 7 shows Queensland's marine fatalities per million of population and per 100,000 registered vessels for the past eight years. In the absence of more specific exposure data, these surrogate measures provide objective measures for comparing marine fatality outcomes year by year. Fatality rates relative to both vessels on register and total population have continued an upward trend since 2003. This rise follows a three year period where fatality rates were trending downwards.

Figure 8 compares trends in Queensland marine fatalities with vessel registration, population and marine incident trends since 1997 (index 1997 = 100). The annual fatality trend after a relatively flat period has trended upwards since 2003—growing faster than the State's population growth rate but still under the rate of growth in vessel ownership.

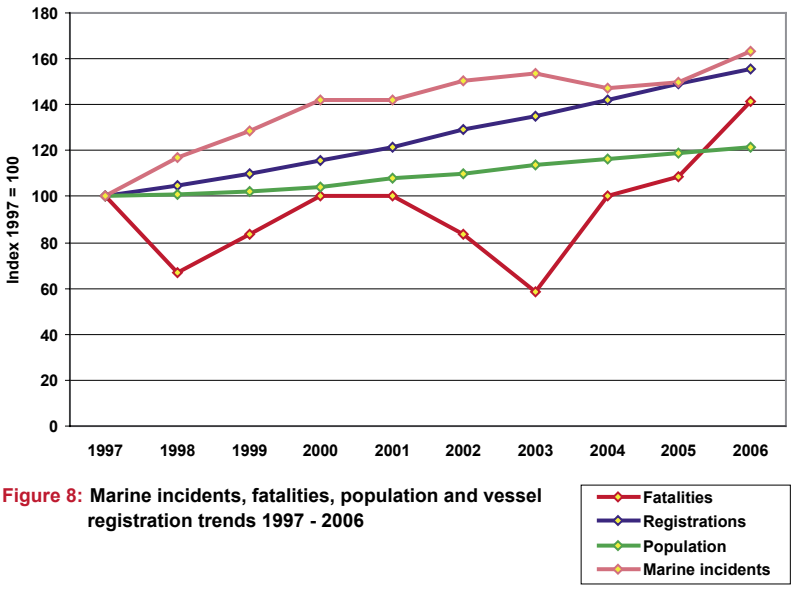

Figure 8: **Marine incidents, fatalities, population and vessel registration trends 1997 - 2006**

3.2 Profile of persons fatally injured

Of the 17 persons fatally injured in incidents in 2006, 16 were males and one was female. Eight of the deceased were the masters of the vessels involved, five were crew members and the remaining four were passengers. Figure 9 profiles the age and gender of the deceased. 59 per cent of those fatally injured were over 31 years of age and all but one were male. There were no children fatally injured in marine incidents in 2006.

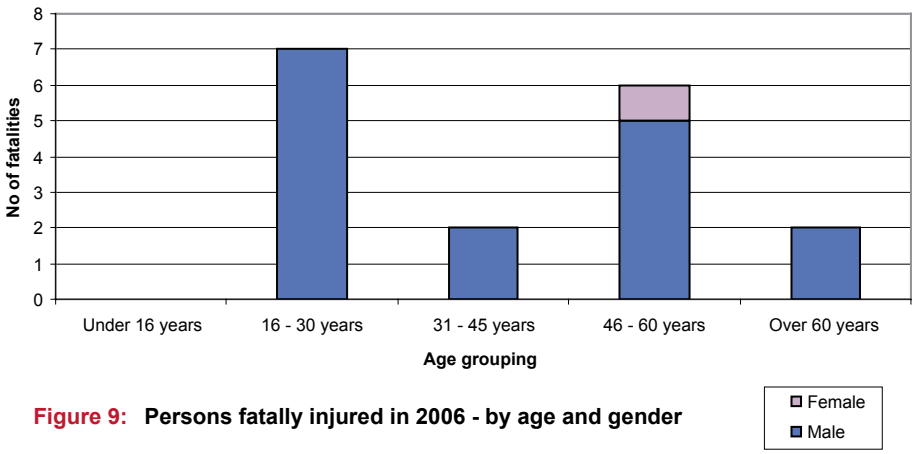

Figure 9: Persons fatally injured in 2006 - by age and gender

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 11 fatalities resulted from marine incidents involving recreational vessels in 2006—one more than the number recorded in 2005 and significantly above the previous four-year average of 6.25 recreational fatalities per annum. This compares with growth in registered recreational vessel numbers in 2006 of 4.60 per cent. The fatality rate per 100,000 registered recreational vessels continued to rise in 2006 following a significant increase in 2005—from a previous four-year average fatality rate of 3.33 deaths per 100,000 registered recreational vessels to 5.28 deaths per 100,000 registered recreational vessels in 2006.

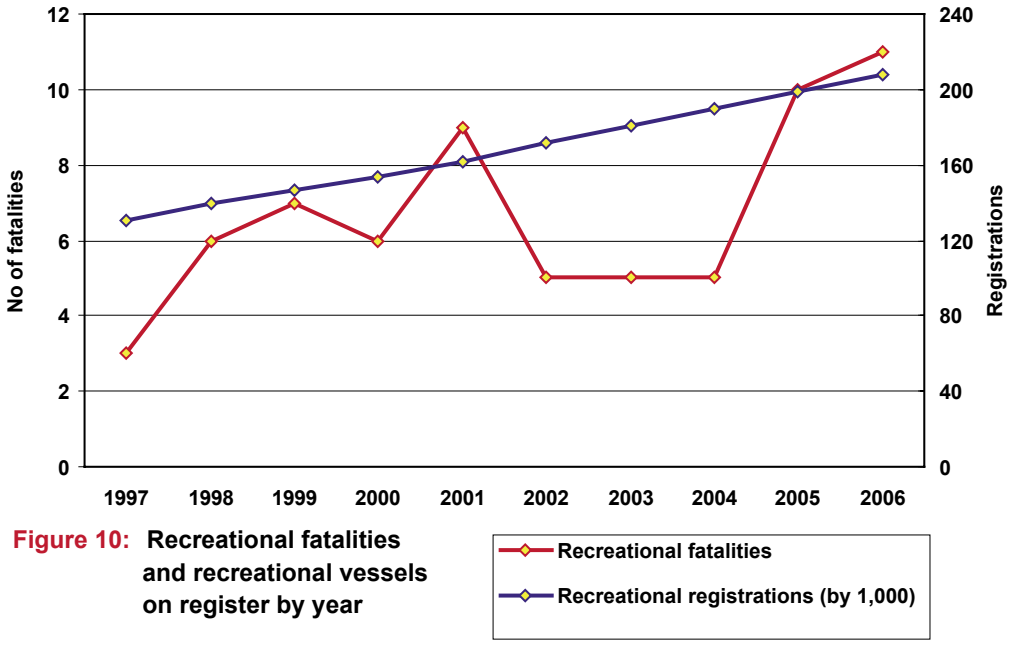

Figure 10: Recreational fatalities and recreational vessels on register by year

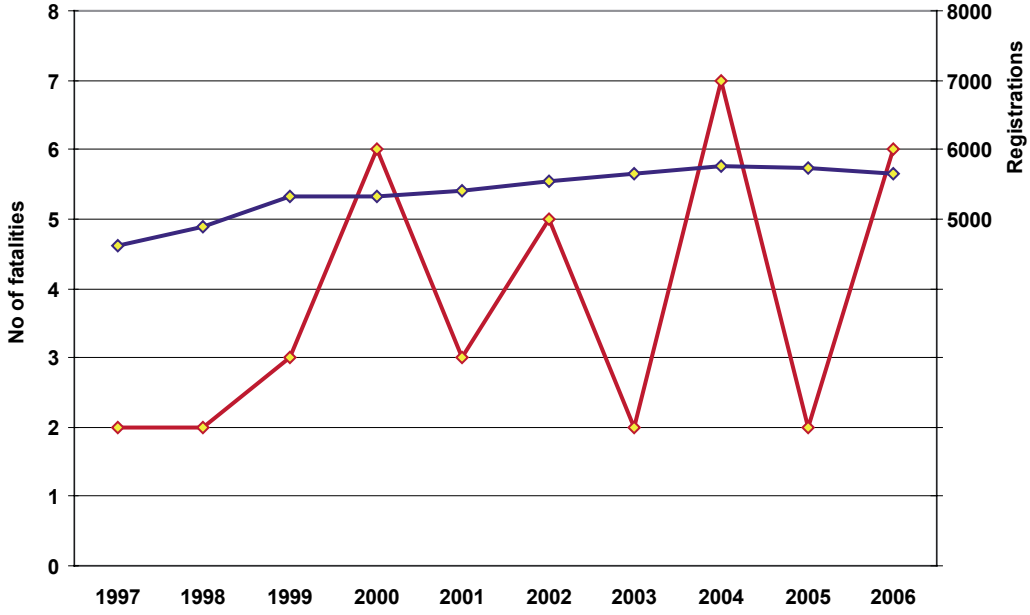

Figure 11: **Commercial fatalities and commercial vessels on register by year**

The growth trend in the number of commercially registered vessels is shown in Figure 11. There has been an increase in the number of commercially registered vessels of approximately 22.9 per cent over the period 1997 to 2006. Figure 11 shows there were six fatalities resulting from marine incidents involving commercial vessels in 2006. This represents a significant increase from the two commercial vessel fatalities recorded in 2005 and is well above the average of 4 commercial vessel fatalities per year for the previous four-year period. Five of the recorded commercial vessel fatalities in 2006 resulted from incidents involving commercial fishing vessels. The remaining commercial vessel fatality involved a commercial non-passenger vessel.

Of the 14 recorded fatal incidents, five involved commercial fishing vessels, four involved recreational speedboats, two involved recreational sailing vessels, two involved recreational motorboats and the remaining incident involved a commercial non-passenger vessel. The involvement of commercial fishing vessels in fatal incidents was a feature of the reported marine incidents in 2006. The involvement of commercial fishing ships 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, 13 of the incidents resulted in people in the water. Of these 13 incidents, six were person overboard incidents, four were capsize incidents, two involved collisions and one involved a person being hit by the vessel's propeller. 16 persons died in these 13 incidents. 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 14 fatal incidents according to their incident type.

3.5 Marine fatality incidents by location

In terms of fatal incident location, seven of the fatal incidents occurred in offshore water limits, four in smooth water limits, two in partially smooth water limits and one in inland waters.

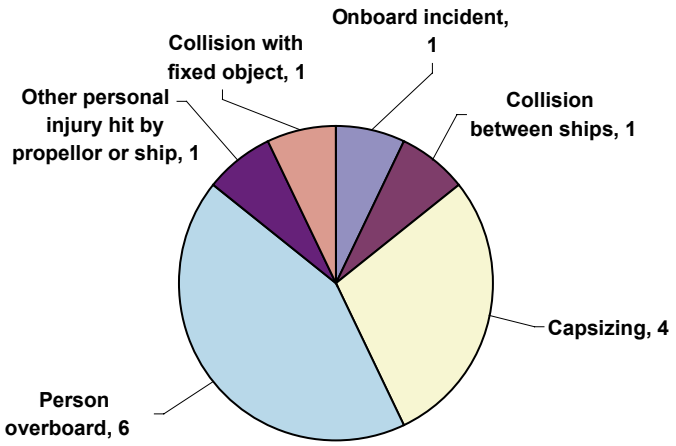

Figure 12: **Fatal marine incidents in 2006 by incident type**

3.6 Out-of-scope marine fatalities

Maritime Safety Queensland captures data on incidents which occur in the marine environment but are outside the scope of marine incidents as defined in the Act. These 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 wherever possible to ensure that any remedial action, including possible legislative changes, is taken. The data also enables the presentation of a more comprehensive picture of safety outcomes in the marine environment.

Figure 13 shows the number of known fatalities resulting from both in-scope and out-of-scope boating incidents in the marine environment for the period 2000 to 2006. Queensland's combined marine fatalities, including known out-of-scope fatalities, were 22 in 2006. Out-of-scope marine fatality data was not recorded by Maritime Safety Queensland prior to 2000.

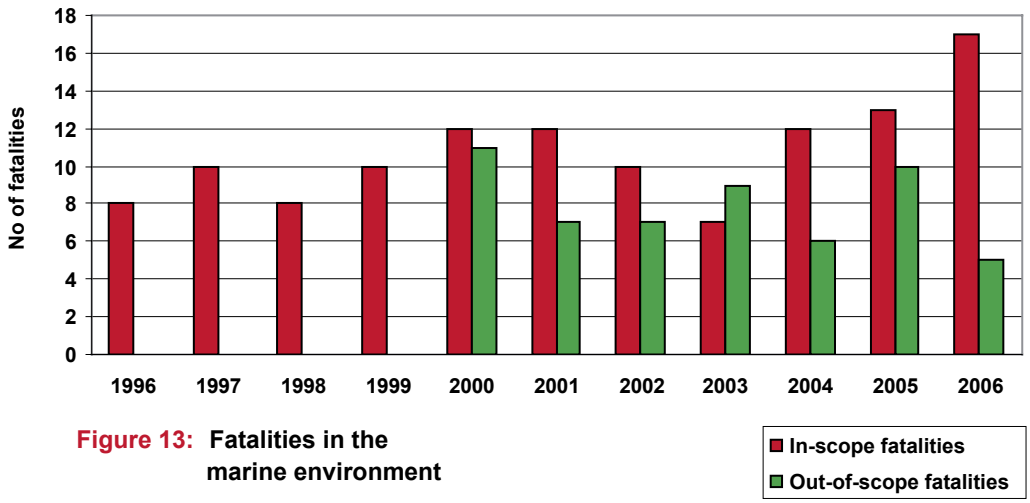

Figure 13: **Fatalities in the marine environment**

The five fatalities classified in 2006 as out-of-scope included the loss of:

- Three male tourists who died from heart attacks or other medical conditions while snorkelling or diving from commercial passenger/charter vessels.
- Two male recreational sailors who died after suffering heart attacks while aboard their vessels.

3.7 Marine fatality trends – Queensland in relation to Australia

To provide a broader view of Queensland's relative maritime safety performance, the 2006 review again includes a comparison of Queensland's water transport fatality involvement per million of population with that of other Australian states and territories—based on Australian Bureau of Statistics (ABS) data. While the ABS scope and definitions of water transport-related deaths may vary 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 strictly meet the 'marine incident' definition concerning the operation of a vessel. ABS data also is based on the year that coroners' reports are registered, rather than the year in which a fatality may have occurred. Reconciling Maritime Safety Queensland's annual fatality numbers with the ABS data is therefore not possible.

The ABS data does however resolve issues of historical data accuracy and comparability between individual jurisdictions' maritime incident data collections and definitions. Figure 14 shows that over the past 30 years, all states and territories in Australia have generally shown marked improvements in marine fatality rates per million of population. Table 1 in the Appendix provides comparative interstate water transport death rates for the period 1976 to 2005.

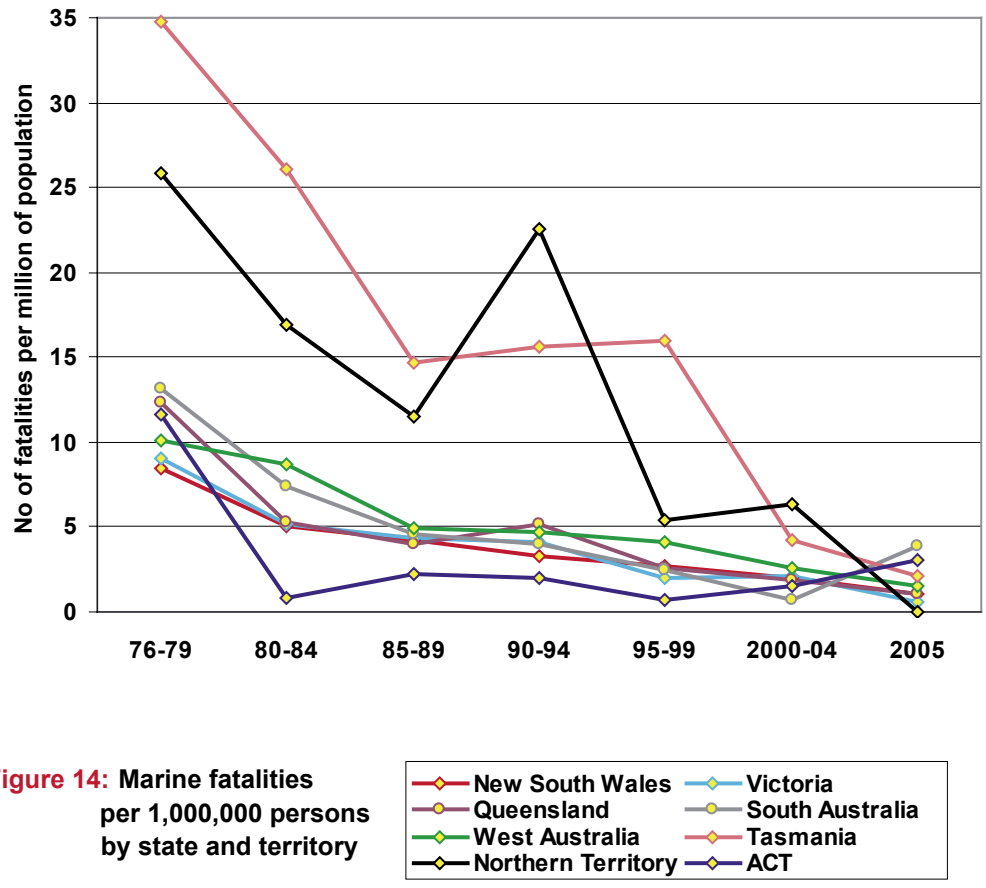

Figure 14: Marine fatalities per 1,000,000 persons by state and territory

During the period 1994 to 1999, the data shows that the Queensland water transport 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 2005, Queensland maintained its number three ranking with a water transport fatality rate of 1.01 per one million of population. This represents a fall of nearly 45 per cent over the previous five-year average of 1.83 fatalities per million of population. Comparatively, the water transport fatality rate per million of population for all of Australia for 2005 was 1.23. Coronial death data for the 2006 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 (National—1976)
- Introduction of annual recreational boating safety education campaigns (National—1978)
- Formal training courses for commercial marine licensing (National—1980)
- Voluntary training courses for recreational boating (1985)
- On-water random breath testing (1989)
- Introduction of electronic position indicating radio beacons (EPIRBs) (National—1992)
- Introduction of formal recreational boat licence training option (1993)
- Positive flotation for vessels (National—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*
- Full implementation of the jet ski licensing requirements (2006)
- National introduction of the Australian Builder's Plate for recreational vessels (2006)
- Formation of BoatSafe Training Association of Queensland (BTAQ) (2006)
- Commencement of BoatSafe Statewide Compliance Audit Program (2006)
- Commencement of fishing ship safety equipment trials (2006)
- Commencement of competency–based training and assessment pilot program for Master Class 5 commercial marine licence (2006)
- Commencement of four new Transport Operations (Marine Safety) Standards (2006)
- Introduction of compulsory life jacket wearing—legislation and education campaign (2006)