1. Introduction

The number and nature of marine incidents reported throughout the year is one of the measures used to assess Queensland's maritime safety performance. In accordance with section 127 of the *Transport Operations (Marine Safety) Act 1994* (the Act) Maritime Safety Queensland has prepared the following report on incidents reported for the year 2007.

The reporting, investigation, collection and analysis of data about marine incidents is an essential part of the process Maritime Safety Queensland employs to achieve the 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.

The aim in this and future reports is to accurately present the major features of marine incidents in Queensland, to identify areas where strategies and initiatives have had an impact and safety performance has improved, and to pinpoint hotspots for subsequent management.

1.1 Definition of a marine incident

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.

The marine incident definition excludes 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 on vessels involving death from natural causes.

1.2 Marine incident data collection

Section 125 of the Act requires the master and/or owner of a vessel involved in a marine incident to report that incident to Maritime Safety Queensland, Queensland Water Police or Queensland Boating and Fisheries within 48 hours. All incidents coming to the attention of Maritime Safety Queensland are reviewed with the more serious incidents being investigated by qualified and trained officers. The information gathered from the marine incident report form and from any ensuing investigation is recorded in Maritime Safety Queensland's marine incident data management system (CaseMan).

The marine incident data collection process can only capture those incidents that are reported. Maritime Safety Queensland is aware that there is a level of underreporting of marine incidents. The level of underreporting is considered to be related to factors such as the seriousness of incident, the remoteness of the incident location and the type of vessel involved. Generally data for marine fatalities is considered robust however the data becomes considerably less robust for minor incidents such as groundings that have not resulted in injury or damage.

While every effort has been made to produce consistent, reliable and timely data, under-reporting and the lag effect due to delays in reporting and completing investigations can hamper meaningful analysis.

Maritime Safety Queensland is continuing to look for ways to improve the reporting of incidents by the boating public. The agency is working closely with the marine insurance industry to improve incident reporting levels by requiring marine insurance claimants to provide evidence to the insurers of having lodged a marine incident report. Maritime Safety Queensland is also working closely with volunteer marine rescue organisations to provide education and advice to vessel operators about their marine incident reporting obligations.

In 2007 Maritime Safety Queensland gained access to hospital admission data relating to water transport accidents. The data represents a useful supplementary source of information about boating accidents resulting in serious injury. The hospital admissions data is discussed in Section 3.2.4.

Maritime Safety Queensland, along with other Australian maritime jurisdictions, is working towards full compliance with the National Marine Safety Committee's national marine incident data collection reference guide. Compliance with the reference guide has involved system, process and definitional changes. Uniform reporting across states will enable more accurate identification of national trends and comparisons for marine incident data.

1.3 Report contents

The focus of the report is on reported marine incidents as a measure of public safety in the maritime environment. The report presents the major features of marine incidents reported in Queensland in 2007.

Incident data contains information on both the incident and the number of persons fatally or seriously injured. Section 2 of this report focuses on the incidents themselves. It reviews the type of marine incidents that occurred during the year, the types of vessels involved in these incidents, where the incidents occurred and examines the characteristics of the incidents. Areas of significant change and any emerging trends or patterns are discussed.

Fatal and serious injury incidents carry a high social cost for the people concerned and for the community as a whole and warrant further analysis. Marine incidents that resulted in fatalities and/or serious injuries in 2007 are examined in Section 3. This section considers both the incident and persons injured. It provides a summary of fatal incidents and includes a time series and trend analysis. Details of types of vessels and incidents involved in fatal and serious injury incidents are considered together with contributing factors and incident location. As most fatal incidents occurring in 2007 are still under investigation or subject to legal proceedings incident specific information cannot be provided.

Hospital admissions data, which Maritime Safety Queensland gained access to in 2007, provides a supplementary source of data on serious injuries resulting from water transport accidents. Section 3.2.4 reviews the hospitalization data and its role in improving the understanding of marine incidents.

Section 4, *Persons fatally or seriously injured in marine incidents*, profiles the people fatally or seriously injured in reported marine incidents in 2007. It reports on gender, age, role on vessel and the nature of injuries sustained.

In addition to the brief analysis of incidents by Maritime Safety Queensland region in sections 2.5.2 and 3.5.2, detailed regional incident profiles are provided in Section 5. This section includes regional maps showing the location of all marine incidents occurring in each region since 2004 plotted by highest level of personal injury sustained.

Section 6 profiles two areas of particular interest to Maritime Safety Queensland in 2007 namely commercial white water rafting and boating safety in the Torres Strait.

Interspersed in the report are four case studies. The case studies outline recent marine incidents in Queensland. The case studies have been selected to highlight specific safety issues and to raise general safety awareness and provide learning points for mariners confronted with similar circumstances.

The Appendix contains a series of data tables which provide both time series data and 2007 data by region. The tables provide both a further breakdown of information contained in the body of the reports as well as additional incident characteristics not included elsewhere.

It should be noted that marine incident data is subject to change due to the time lags associated with reporting and investigating marine incidents. As new information becomes available the marine incident database is updated, this may cause previously reported data to change.

When disaggregating incident, fatality and serious injury data the resulting counts are frequently small and random variations can appear large particularly when expressed in percentage terms. To minimise the impact of these fluctuations the data analyses used in this report, where relevant, use the average of the previous four years of data as a basis for comparison with current year's data.

1.4 Marine boards of inquiry

Under section 131 of the Act the Minister may establish or re–establish a board of inquiry about a marine incident.

The board of inquiry must inquire into the circumstances and probable causes of the relevant marine incident. At the completion of the inquiry the board must give the Minister a written report outlining the board's findings. The Minister is required to table a copy of the report in Queensland's Legislative Assembly within 14 days of receiving the report.

In 2007, the Minister for Transport, on the recommendation of the General Manager, Maritime Safety Queensland, convened a board of inquiry into an incident in the Gulf of Carpentaria involving the ore carrying transfer vessel, Wunma. The full report of the Board of Inquiry is available online at:

www.msq.qld.gov.au

1.5 Setting the scene

The Queensland vessel fleet is dynamic; it is growing and changing, influenced by economic fortunes, population growth, demographic profiles, tourism and many other factors. Changes in these broad and diverse factors results in change to both the size and composition of the Queensland vessel fleet as well as the general level of interest and participation in boating.

Each year there are more Queenslanders holding a recreational marine drivers licence or owning a recreational vessel than ever before. The rate of growth in vessel ownership is out stripping the state's population growth. The pattern of vessel ownership and the types of vessels being purchased is also changing. All these factors directly or indirectly influence the trends and changes seen in the number and type of reported marine incidents. This section provides an overview of the key changes in the Queensland vessel fleet.

1.5.1 Recreational vessel fleet

The number of Queensland registered vessels has increased each year since 1997. In 1997 there were 40 registered vessels per 1,000 state residents. At the end of 2007 there were 53 vessels per 1,000 state residents (see Figure 1).

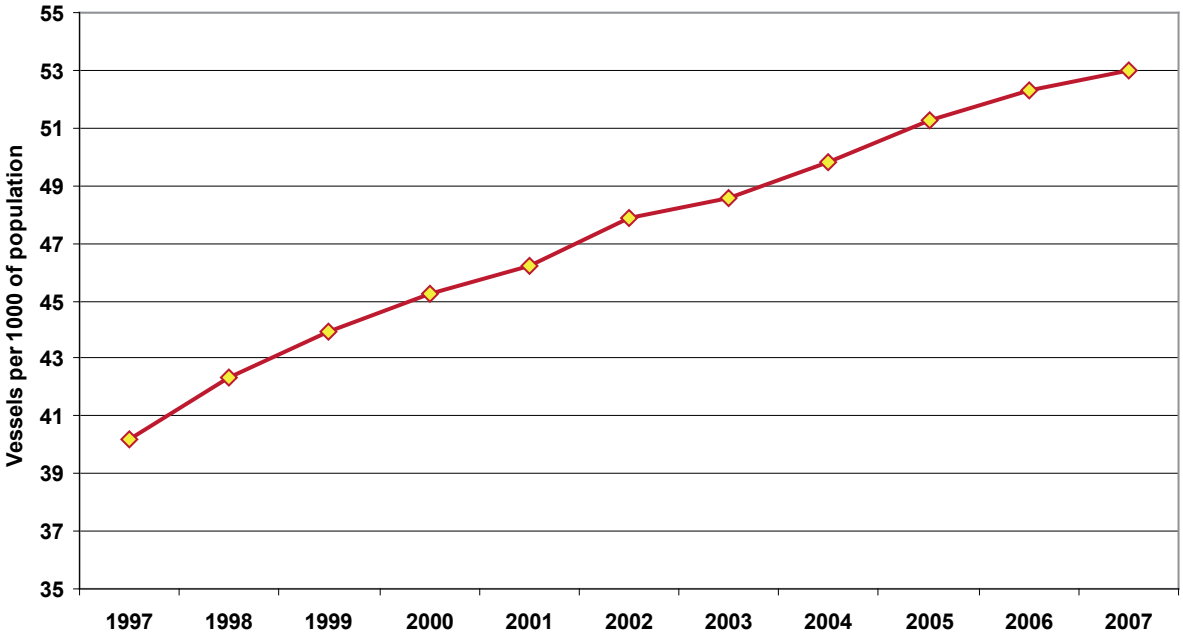


Figure 1: Registered vessels per 1000 of Queensland population

The growth in registered vessel numbers is occurring predominately in the recreational fleet. Recreational registrations have increased 34.4 percent since 2001. This represents an additional 56,110 vessels or on average an extra 9,350 registered vessels each year. In 2007, 1 in 15 Queenslanders aged 16 years or older owned a registered recreational boat.

Of the additional 56,110 recreational vessels registered in Queensland since 2001 38 percent are in the Brisbane region and 17.2 percent are in the Gold Coast region. Overall the number of vessels in the south east corner of Queensland has increased by 33.7 percent or 30,990 vessels. In 2007 Brisbane and Gold Coast regions contained 56 percent of all registered recreational vessels in Queensland.

Composition of the recreational fleet, on the basis of vessel type, has shown only modest change since 2001 (refer Table 1). The proportion of jet skis has increased from 2.7 percent of the recreational fleet in 2001 to 4.9 percent in 2007, sailing boats have increased 0.1 percentage points to 3.2 percent over the same period. Motorboats (motorised boats not capable of planning) have decreased from 13.5 percent of the fleet in 2001 to 11.8 percent in 2007, speedboats have decreased from 80.6 percent to 80.0 percent.

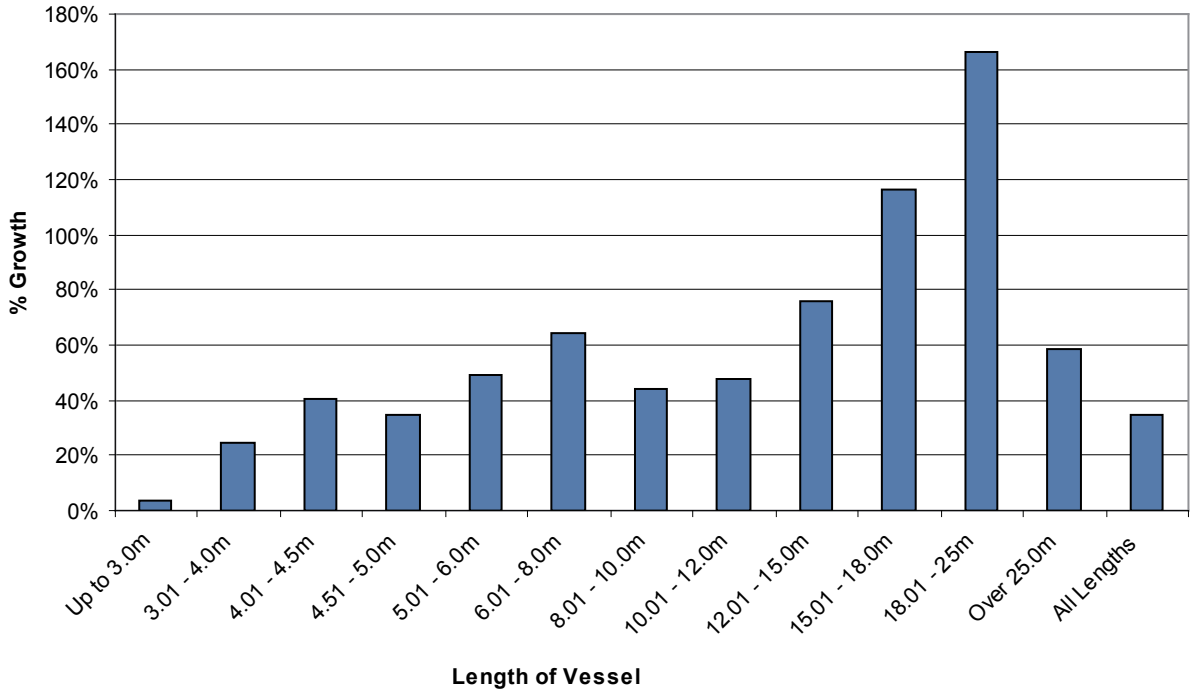
Table 1: Registered recreational fleet by vessel type: 2001 to 2007 comparison

Vessel Type	2001		2007	
	No	%	No	%
Motorboat	21938	13.5	25830	11.8
Speedboat	131391	80.6	175292	80.0
Sailboat	5123	3.1	7103	3.2
PWC (Jetski)	4471	2.7	10808	4.9
Total fleet	**162923**	**100**	**219033**	**100**

While the composition of the recreational fleet has been relatively constant in terms of vessel type it is changing on basis of vessel length. Since 2001 there has been a 111.9 percent increase in the number of registered recreational vessels over 12 metres and a 121 percent increase in the number of vessels over 15 metres.

At the other end of the spectrum vessels five metres or less (excluding jet skis) are progressively declining as a proportion of the total fleet. In 2001 these vessels comprised 74.9 percent of the registered recreational fleet whereas in 2007 they made up 69.4 percent, a decrease of 5.5 percentage points (refer Table 2). Figure 2 shows the percentage change within each vessel length category from 2001 to 2007

Figure 2: Growth in Queensland recreational vessel registrations by vessel length from 2001 to 2007



While growth in the number of large registered vessels is very high in percentage terms they still represent only a small proportion, 3.4 percent, of the overall registered recreational fleet.

Table 2: Comparative recreational fleet numbers by length, Queensland 2001 to 2007

Length	2001		2007		% Change 2001-2007
	No	%	No	%	
Jet ski	4471	2.7	10808	4.9	141.7
5m or less	122037	74.9	152007	69.4	24.6
5.01 to 8m	28763	17.7	44277	20.2	53.9
8.01 to 10m	3122	1.9	4497	2.1	44.0
10.01 to 15m	4096	2.5	6485	3.0	58.3
Over 15m	434	0.3	959	0.4	121.0
Total fleet	**162923**	**100.0 %**	**219033**	**100.0 %**	**34.4 %**

1.5.2 Commercial vessel fleet

The commercial fleet comprises registrable fishing vessels, all hire and drive vessels, passenger vessels (certified to carry more than 12 passengers) and non-passenger vessels (certified to carry 12 passengers or less and all other commercial vessels). In the period 2002 to 2007 the only vessel classification to show growth was non-passenger vessels. Passenger vessels numbers have remained static while commercial fishing vessels and commercial hire and drive vessels numbers have declined.

Table 3: Registered commercial fleet by vessel type: 2002 to 2007 comparison

Commercial Classification	2002		2007	
	No	%	No	%
Passenger	713	12.9	714	12.5
Non-Passenger	2787	50.2	3359	58.8
Fishing*	903	16.3	678	11.9
Commercial Hire & Drive	1146	20.7	959	16.8
Total fleet	**5549**	**100**	**5710**	**100**

*** In addition to the 678 registered fishing vessels there are an estimated 3000 fishing vessels that do not currently require registration. These fishing vessels are typically under 10 metres or bay boats.**

In 2007 there were 225 or 25 percent fewer registered commercial fishing vessels than in 2002. Overall commercial fishing vessel numbers have declined from 16.3 percent of the commercial fleet in 2002 to 11.9 percent in 2007. The commercial hire and drive classification has fallen 16.3 percent or 187 vessels over the same period. In contrast the number of non-passenger vessels has increased 20.5 percent and in 2007 represented 58.8 percent of the registered commercial vessel fleet. Passenger vessel registration numbers remain largely unchanged.

1.5.3 Licensing

At the end of 2007, 600,193 people held a Queensland recreational marine drivers licence - an increase of 30,662 from 2006. The ratio of licence holders to registered recreational vessels has remained constant at approx 2.74 licence holders per registered recreational vessel.

Based on eligible population 1 in 5.5 Queenslanders aged 16 years or older and 1 in 3 Queensland males aged 16 years or older hold a recreational marine drivers licence.

At 31 December 2007, 50,264 people held a Queensland PWC (jet ski) licence. This represents a ratio of 4.65 licence holders per registered recreational jet ski. This ratio is steadily increasing.

Of the 600,193 recreational marine drivers licence holders approximately 3.2 percent are aged 20 years or less, 10.2 percent are aged 70 years or more and 14 percent are female.

The number of commercial marine qualification certificates of competency issued in Queensland each year has remained relatively constant over the past seven years. The number of certificates issued has ranged from a high of 1,263 licences in 2001 to a low of 947 in 2004. In 2007 1,080 commercial certificates were issued.