

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.

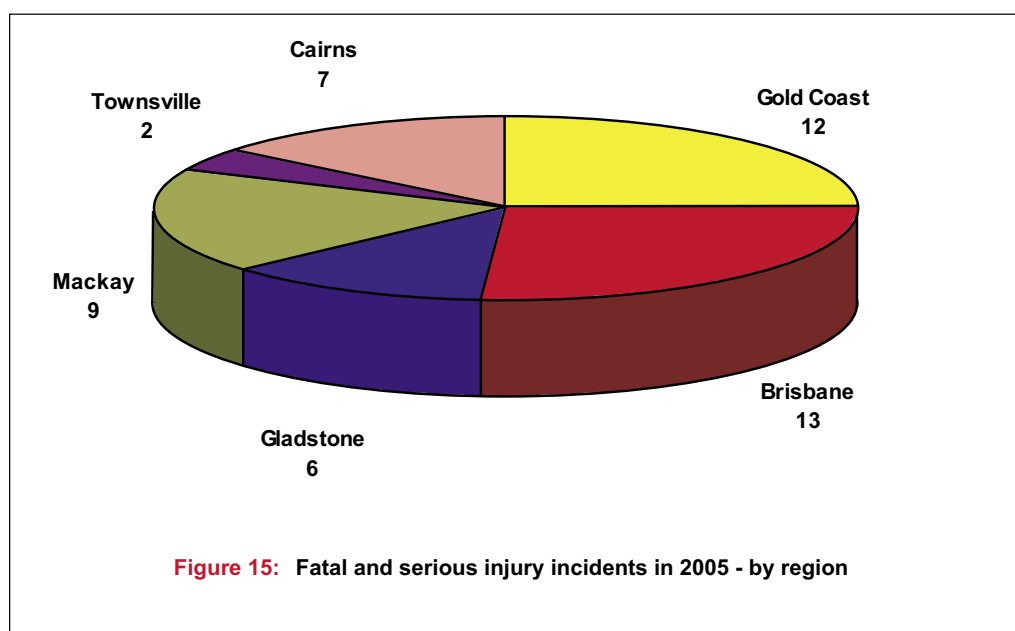


There was a combined total of 57 fatalities and serious injuries recorded from the reported marine incidents in 2005—12 fatalities and 45 serious injuries—up by more than 11 per cent on the previous four-year average of 51.25 fatal and serious injuries per annum.

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.

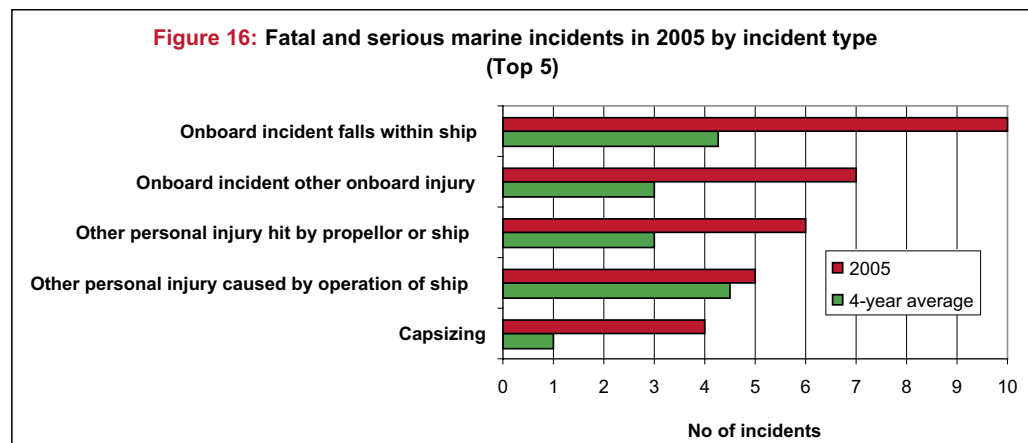
Gladstone region recorded six FSI incidents in 2005, the same number as reported in 2004. This was only marginally above the region's previous four-year average of five FSI incidents.

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

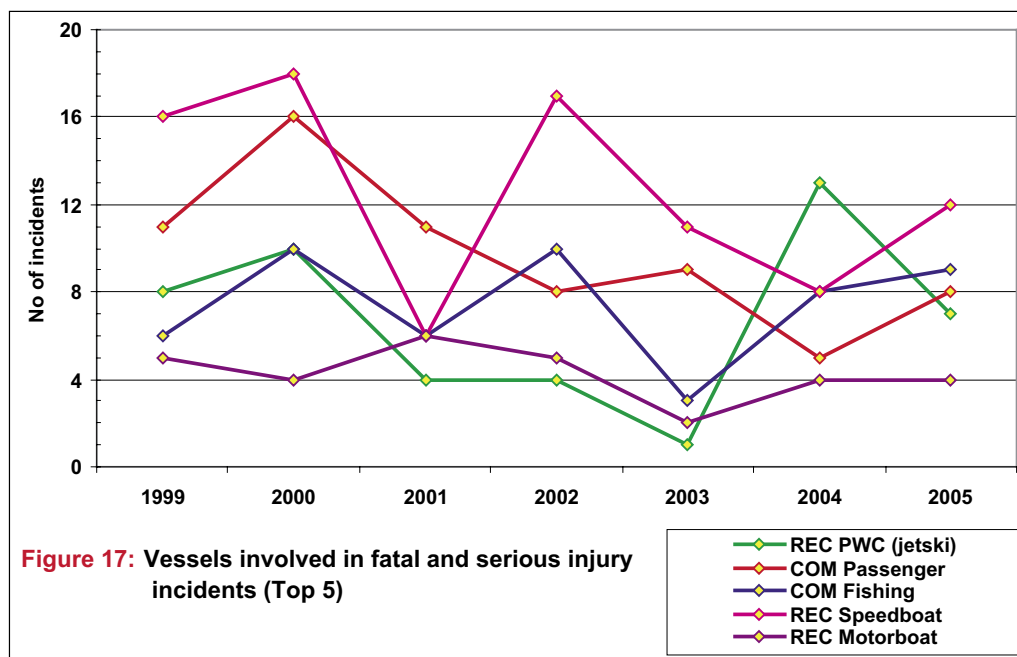


Figure 17: Vessels involved in fatal and serious injury incidents (Top 5)

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.

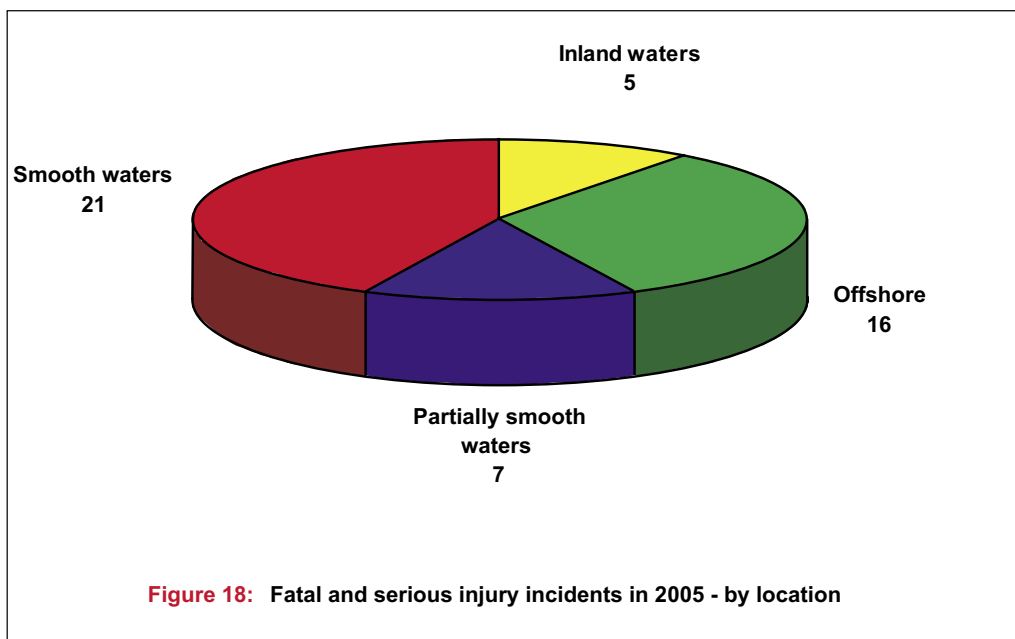
There were three fatalities and 13 serious injuries that resulted from the 16 offshore FSI incidents compared with six fatalities and 18 serious injuries from the 21 FSI incidents in smooth waters. Figure 18 shows the location of reported FSI incidents in 2005.

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

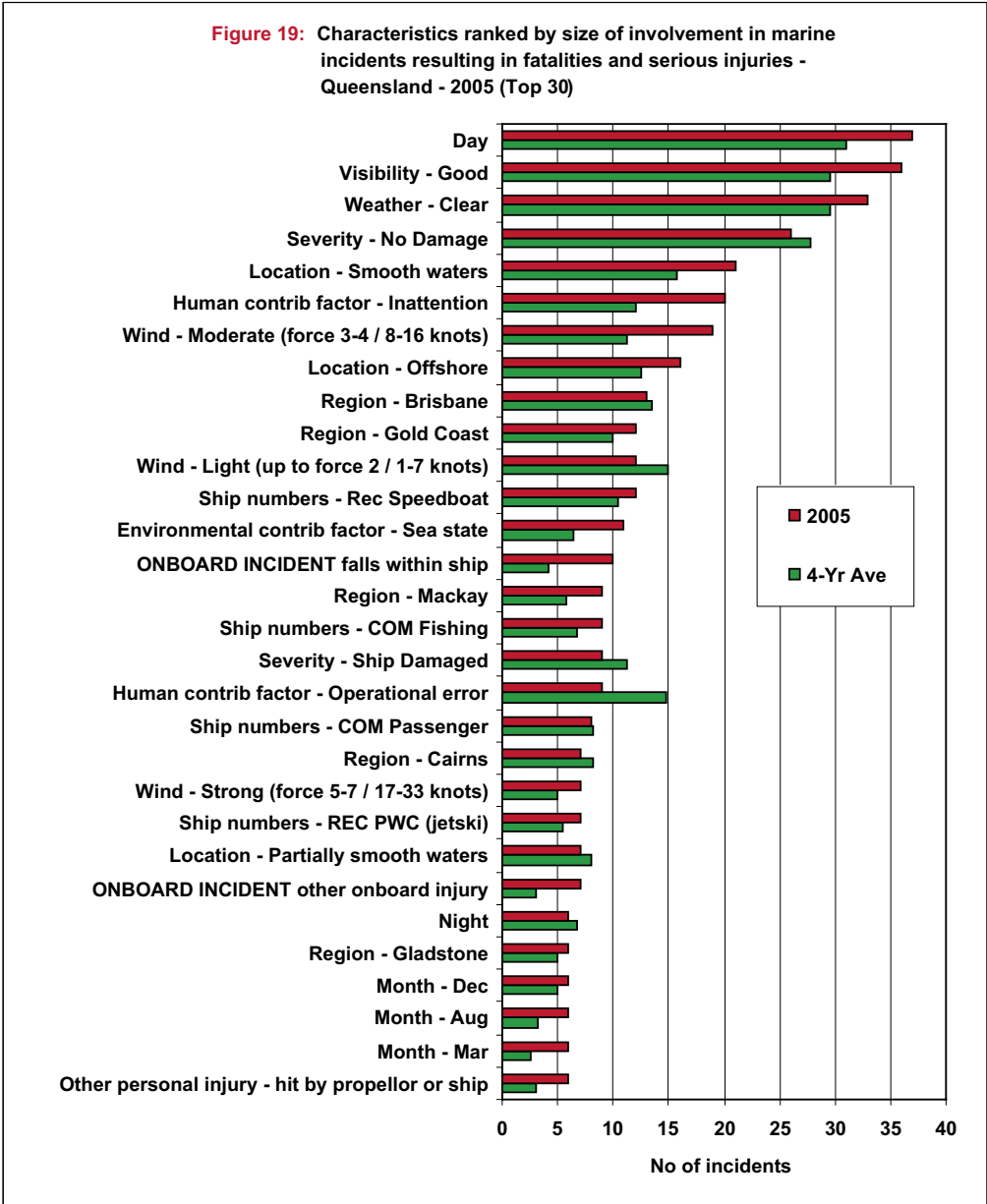
When compared with the previous four-year average involvement, there has been a 114.8 per cent increase in the occurrence of onboard incidents resulting in fatalities and/or serious injuries in 2005. 20 (40.8 per cent) of the 49 recorded FSI incidents in 2005 were identified as onboard incidents. This 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—



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.