



NATIONAL COASTAL SAFETY REPORT 2011

A SUMMARY OF COASTAL
DROWNING DEATHS IN
AUSTRALIA

Australian for life. 

2010-11 NATIONAL COASTAL DROWNING SNAPSHOT

Overall

- > 61 coastal drowning deaths.
- > Below the seven year average of 89.

Demographic

- > 52 (85%) were males.
- > 14 (23%) were aged between 20-29 years.
- > 21 (34%) were of a foreign ethnicity. 5 (8%) of these were international visitors.

Time

- > 8 (13%) occurred between 3pm-4pm.
- > 25 (41%) occurred during summer.

Activity

- > 19 (31%) were attributed to swimming/wading.
- > 17 (28%) were attributed to boating.
- > 6 (10%) were attributed to rock fishing.
- > Rip currents contributed to 12 (20%) of all coastal drowning deaths.

Location

- > 29 (48%) occurred at a beach.
- > 22 (36%) lived less than 10km from their drowning location.
- > 20 (33%) lived more than 50km from their drowning location.
- > 30 (49%) individuals drowned over 5km from the nearest lifesaving service.

Definitions can be found on page 24.

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INTRODUCTION

For more than 100 years, Australians and visitors to Australia have been drawn to our coastline. With an estimated 100 million beach visitations each year, the task of ensuring the safety of everyone who visits Australia's 11,600+ beaches and approximately 36,000 kilometres of coastline is an extremely challenging one, and one that Surf Life Saving (SLS) is dedicated to.

Since 1907, when a group of surf life saving clubs on Sydney's beaches first emerged, the network of services protecting our coastline has grown rapidly. Today, volunteer surf lifesavers, SLS and council-employed lifeguards, rescue helicopters, rescue power craft, surveillance systems and radio control and coordination centres all work together to ensure that our beaches are the safest in the world. This collaborative approach to coastal safety is essential in preventing drowning along our coastline.

Despite this extensive network of services, coastal drowning deaths are still at unacceptable levels. In 2010-2011, there were 61 coastal drowning deaths* in Australia, and while this figure is down on last year's 84 coastal drowning deaths and the seven-year average of 89, it still shows that there is significant work ahead of us – every life lost is one life too many.

SLSA produces the National Coastal Safety Report to provide a detailed annual summary of coastal drowning deaths in Australia. In 2010-11 the report has adopted a more rigorous methodology to ensure the data provided is as thorough as possible and better assists all coastal safety service providers with evidence-based decision making.

I commend this report to you as part of the ongoing process to reduce coastal drowning deaths.

Brett Williamson OAM

Chief Executive Officer
Surf Life Saving Australia

METHODOLOGY

The 2010-11 National Coastal Safety Report contains information on all confirmed coastal drowning deaths for the period of 1 July 2010 to 30 June 2011. This information is correct as of 31 July 2011.

All care is taken to ensure the statistical information included in this report is correct. However, pending the outcome of ongoing coronial investigations, this data may be amended.

A validation of drowning data has recently been completed by Surf Life Saving Australia (SLSA) using the National Coroners Information System (NCIS). This process included a review of definitions, with new definitions for coastal drowning death, inland drowning death, ocean drowning death, and undetermined presented in the glossary of terms on page 24. A search query was performed for all deaths due to drowning between 1 July 2010 to 30 June 2011 and the new definitions were applied to generate this report.

Data Sources

SLSA collects incident data from our own SurfGuard Incident Report Database (IRD), the NCIS and by monitoring media reports for drowning incidents.

The information is verified with the assistance of each state Surf Life Saving centre and compiled for analysis by SLSA's Lifesaving and Research Departments. The following information is recorded for each drowning incident: state; date; drowning location; GPS coordinates; time; age; gender; incident type; activity information; whether the incident was work related; entered into IRD; IRD number; NCIS case number; whether the case is open/closed; whether the case was reported by the state; the original source of information; drowning location suburb; local government area; postcode; associated SLS club; month; day; season; quarter; victim's name; address; residence country; residence distance to coastline; residence distance to drowning location; victim's birth country; nationality; time in Australia; main language; additional activity information; the victim's experience in the activity; whether the incident was rip current related; detailed description of the incident; details relating to alcohol, drugs, or health conditions; weather conditions; wind conditions; sea conditions/wave size; wave type; water surface; temperature; tides; location to a lifeguarding service; whether the location was patrolled at the time; personnel who

*Correct at time of publication.

first sighted the incident; first rescued; other services involved; and resuscitation details.

The following variables are used to match drowning cases from more than one data source: incident date; location; age; gender; and incident description. The NCIS is considered the ‘gold standard’ when there is a discrepancy in the detail collected from different data sources.

Annual drowning rates are calculated using the Australian Bureau of Statistics (ABS) population statistics for each year and individual states. The rates are based on 100,000 members of the population. ABS numbers for the June quarter of each year or the latest data available for the current year is used for calculations.

Verification Process

The original drowning data that had been published in SLSA reports from 2004-2010 has been reviewed to ensure the validity of the data. Each case was analysed to ensure that the descriptions as ‘coastal drowning death’, ‘coastal death’, ‘inland drowning death’, ‘ocean drowning death’, and ‘undetermined’ meet both our current definitions and the NCIS information available. Deaths that are reported as ‘unintentional’, ‘unknown intent’ and ‘unlikely to know intent’ are included. Deaths are excluded if they are reported as ‘intentional deaths’, they are inland/ocean locations or drowning is not the primary cause of death.

The new list is compared to the original data and any necessary inclusions are made. All details are also matched with the NCIS reports. When incidents on our database were not found on NCIS, we liaised with NCIS personnel for help. Cases with detailed IRD and media reports are investigated and included whether the NCIS case number is found or not.

Limitations

Over years of investigation as part of the NCIS process, some cases are amended prior to their closure, resulting in changes to the classification of cases in our datasets. Therefore, the number of coastal drowning deaths published in this report may be different from annual totals previously reported. In an effort to produce a timely report on our current year’s data we acknowledge that these figures will change. Each year, the changes that occur in the previous year’s report will be made transparent. The data in this current report are not the final figures as 51 coastal drowning deaths reported remain open cases. Once closure occurs to

NCIS cases we can modify undetermined cases, those with unknown intent, and those where the cause of death is not drowning.

Details will not be provided in this report if incidents occur where there are less than 5 drownings per state to protect the privacy of the individuals.

What is a coastal drowning death?

SLSA defines a coastal drowning death as a fatality arising from the process of respiratory impairment from submersion/immersion in the foreshore, seabed, coastal water, and air space above a large body of water (harbour/bay/inlet), including areas up to 2NM offshore and of which the landward boundary is the line of mean high water, except that where that line crosses a river/inlet, the landward boundary at that point shall be the point upstream that is calculated by multiplying the width of the river/inlet mouth by 5. These unambiguous coastal/inland boundaries have been adopted from New Zealand’s Resource Management Amendment Act 1991 (NZ Ministry for the Environment, 1991).

Changes from previous reports

Activity categories have been changed to include beach activities, separate diving and snorkelling, and to specify rock fishing incidents. The verification process has modified previously reported totals as illustrated below:

Changes in the number of coastal drowning deaths per year as reported in 2010

Table 1

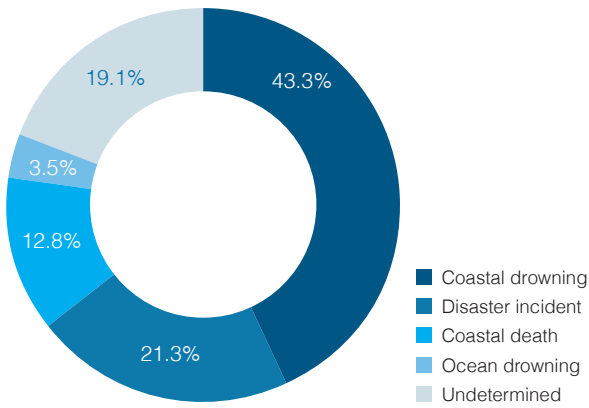
	2010 NCSR	2011 NCSR
2004-05	-	92
2005-06	96	103
2006-07	78	103
2007-08	88	92
2008-09	94	91
2009-10	82	84

We look forward to continuing our verification processes in the future to ensure the most correct data is being reported.

Suggested Citation

Surf Life Saving Australia (2011) National Coastal Safety Report 2011.

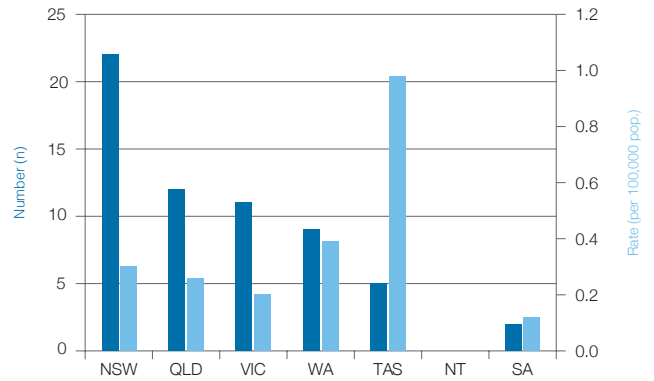
COASTAL DROWNING DEATHS IN 2010-11 NATIONAL



National fatality summary (n=141)

Figure 1

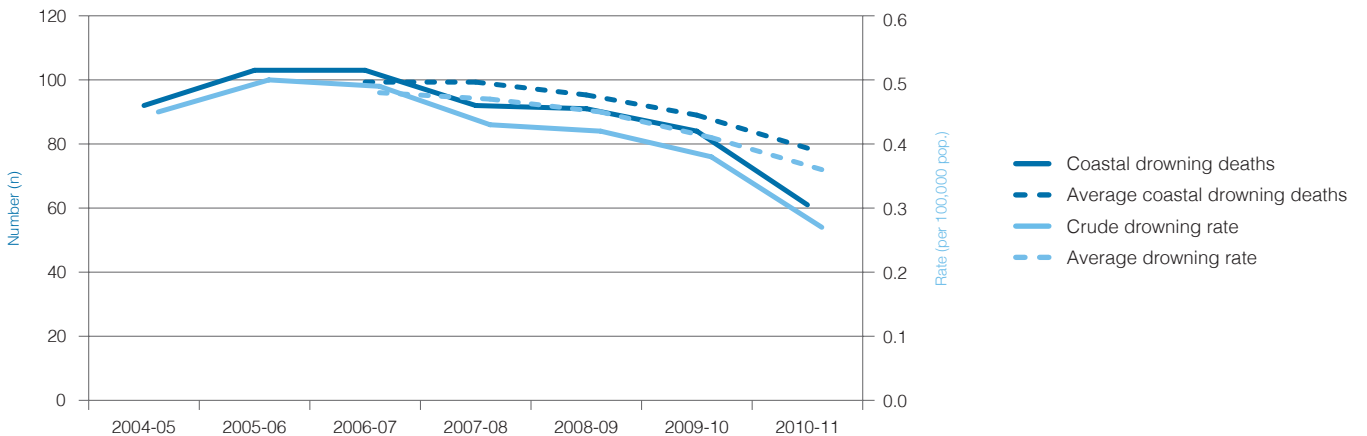
There were 61 coastal drowning deaths, 30 disaster incident deaths, 18 coastal deaths, five ocean drowning deaths and 27 undetermined deaths in 2010-11. The disaster incident deaths are a result of the Christmas Island incident described on page 22. Please refer to page 24 for definitions.



Coastal drowning deaths by state (n=61)

Figure 2

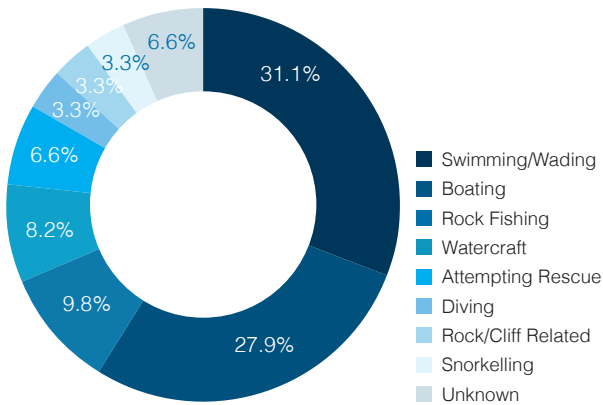
Of the 61 coastal drowning deaths, 22 (36%) occurred in NSW, 12 (20%) in QLD, 11 (18%) in VIC, nine (15%) in WA, five (8%) in TAS, two (3%) in SA, and none in NT. The national crude drowning rate is 0.27 per 100,000 population.



Seven year trend of coastal drowning deaths

Figure 3

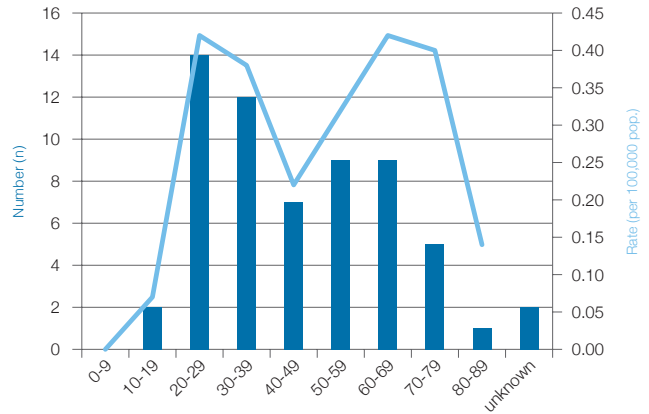
Both the number and rates of coastal drowning deaths have continued to decrease this year. The average rate of coastal drowning deaths from 2004-07 is 0.48, the current three year average rate is 0.36. This is a 25% reduction in the average rate of coastal drowning deaths.



Coastal drowning deaths by activity (n=61)

Figure 4

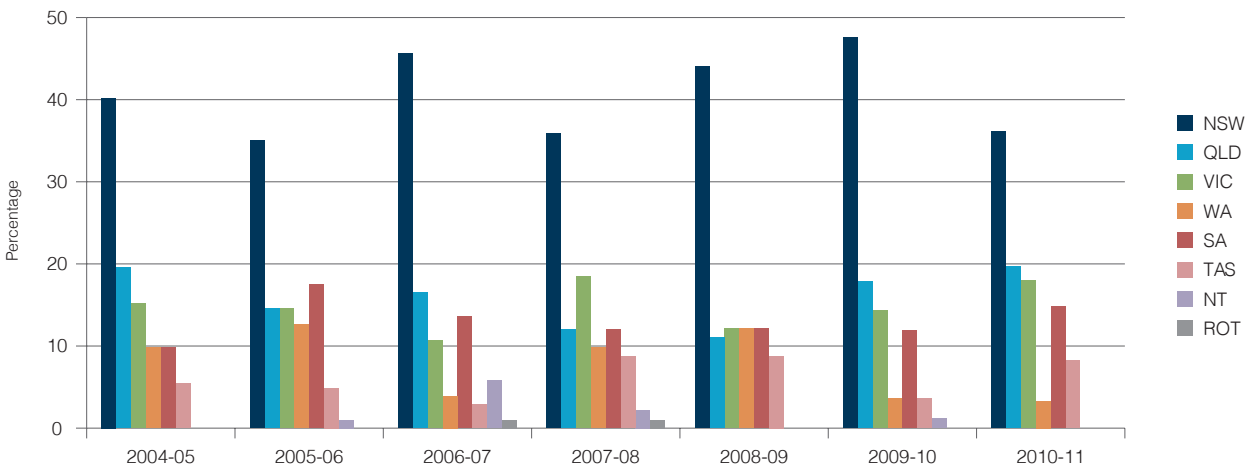
The majority of coastal drowning deaths occurred when an individual was participating in swimming or wading (19), boating (17), or rock fishing (6).



Coastal drowning deaths by age group (n=61)

Figure 5

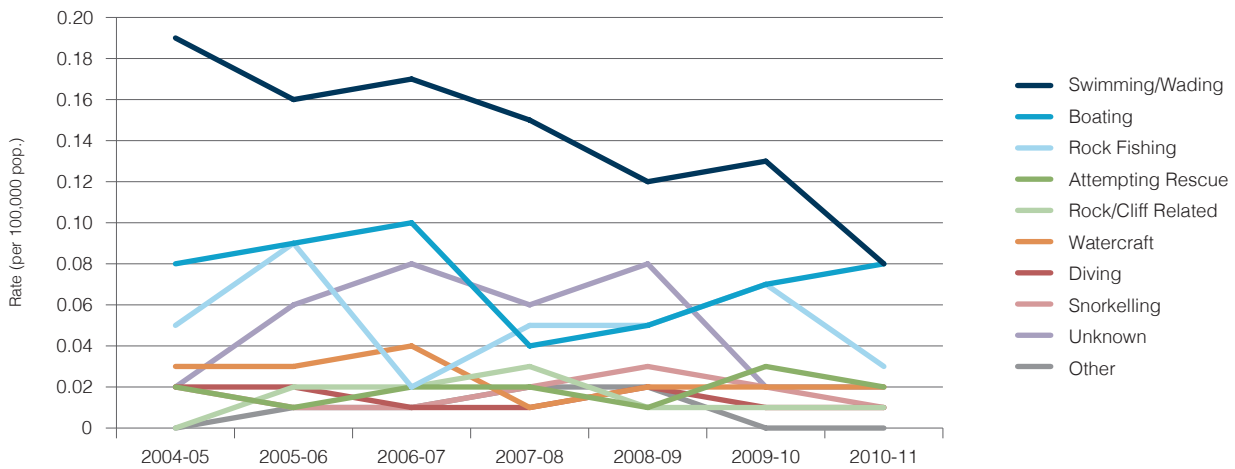
The age groups representing the highest rates of fatalities are 60-69 and 20-29 (0.42), 70-79 (0.40), and 30-39 (0.38).



Percentage of coastal drowning deaths by state

Figure 6

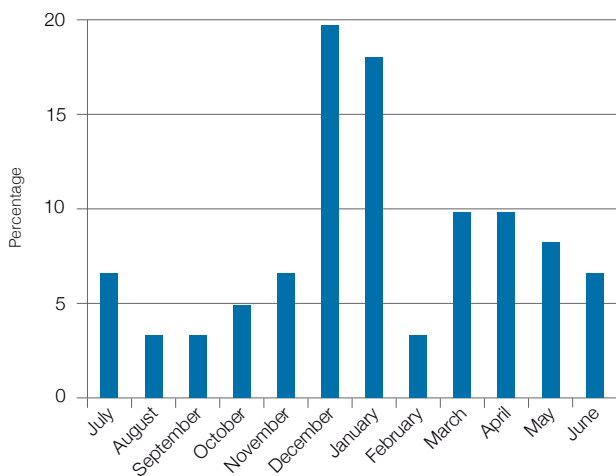
The total number of coastal drowning deaths from 2004-11 are illustrated with the percentage attributed to each state/territory annually.



Coastal drowning deaths by activity – 2004-05 to 2010-11

Figure 7

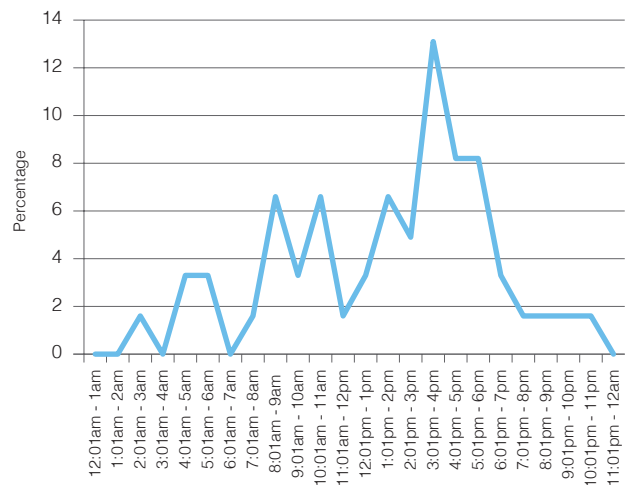
The rates of activity types being undertaken when coastal drowning deaths occur varies over time. Swimming and wading activity has decreased from a rate of 0.19 in 2004-05 to 0.08 in 2010-11, while deaths associated with boating activity has steadily increased over the last four years.



Coastal drowning deaths by month (n=61)

Figure 8

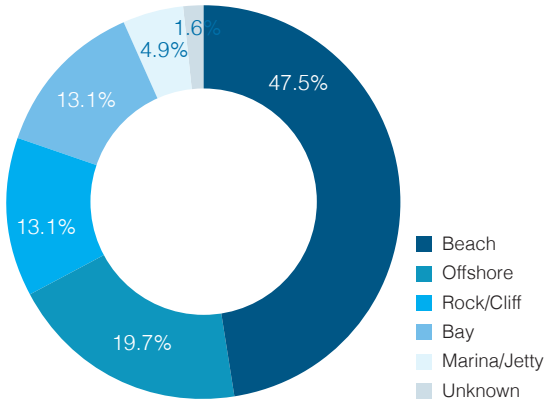
The highest percentages of coastal drowning deaths occur in the summer months of December, 12 (19.7%), and January, 11 (18.0%). 36 (59%) occur outside of the summer months.



Coastal drowning deaths by time (n=61)

Figure 9

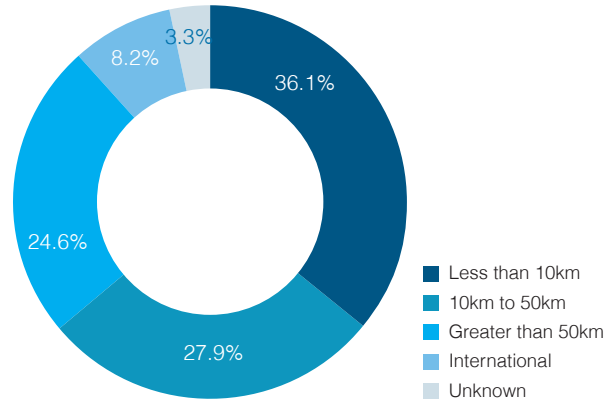
18 (29.5%) of coastal drowning incidents occurred between 3pm and 6pm, with eight (13.1%) occurring between 3pm-4pm.



Location of coastal drowning deaths (n=61)

Figure 10

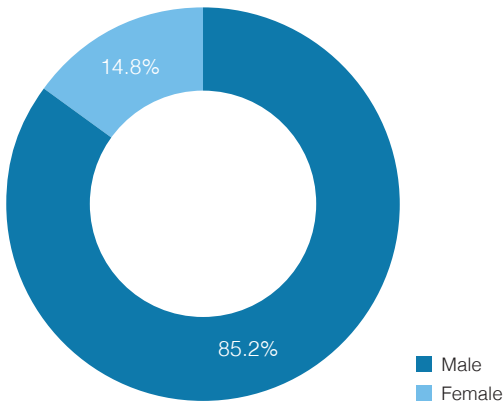
29 of coastal drowning deaths occurred at a beach location.



Distance from residence to drowning location (n=61)

Figure 11

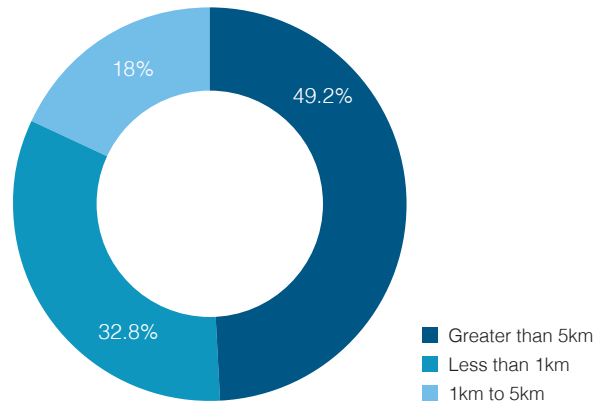
22 of individuals live less than 10km from the drowning location.



Coastal drowning deaths by gender (n=61)

Figure 12

Male individuals represent 52 of the coastal drowning deaths.

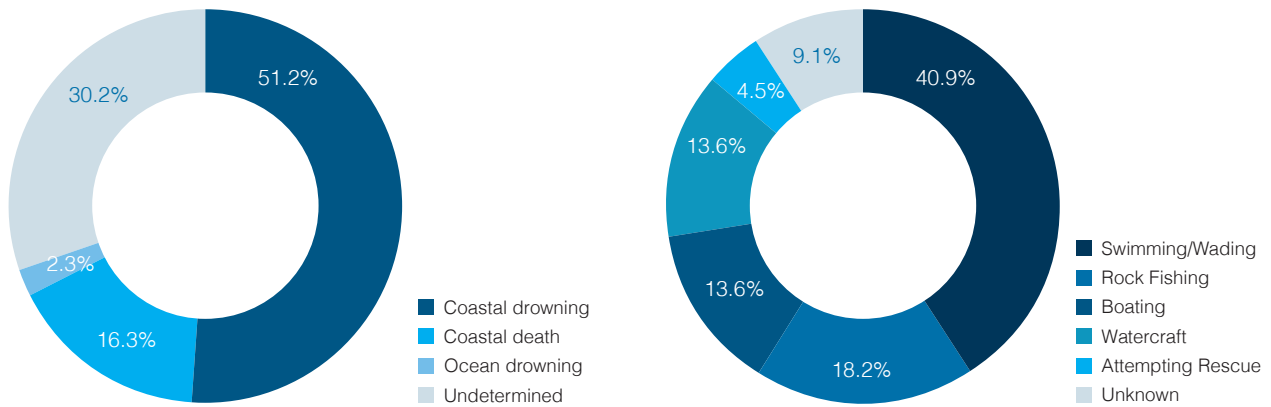


Distance from drowning location to lifesaving service (n=61)

Figure 13

30 individuals drowned greater than five kilometres from the nearest lifesaving service.

COASTAL DROWNING DEATHS IN 2010-11 NEW SOUTH WALES



New South Wales fatality summary (n=43)

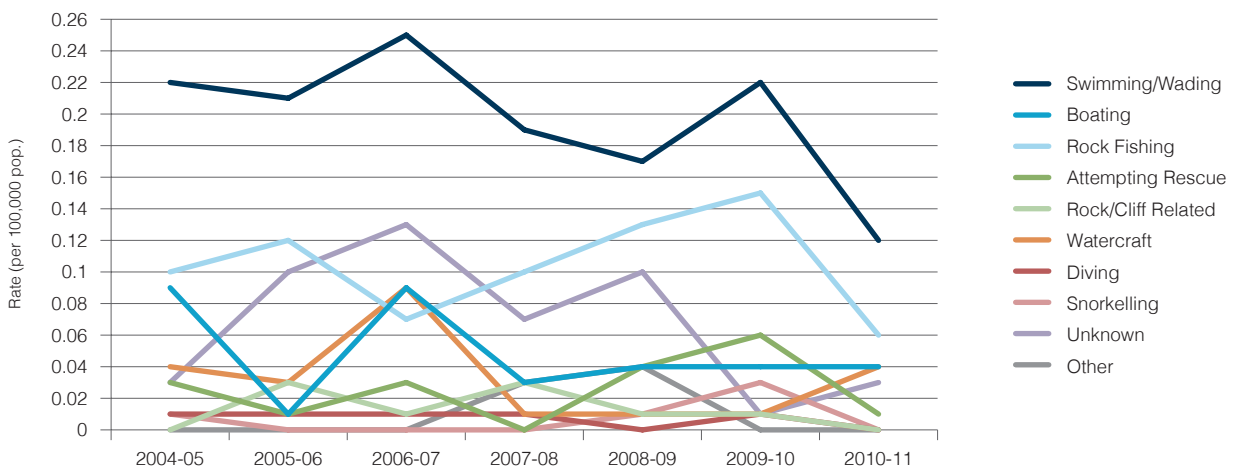
Figure 14

There were 22 coastal drowning deaths, seven coastal deaths, one ocean drowning death, and 13 undetermined deaths in NSW in 2010-11. This represents 36.1% of the national coastal drowning death total. Please refer to page 24 for definitions.

Coastal drowning deaths by activity (n=22)

Figure 15

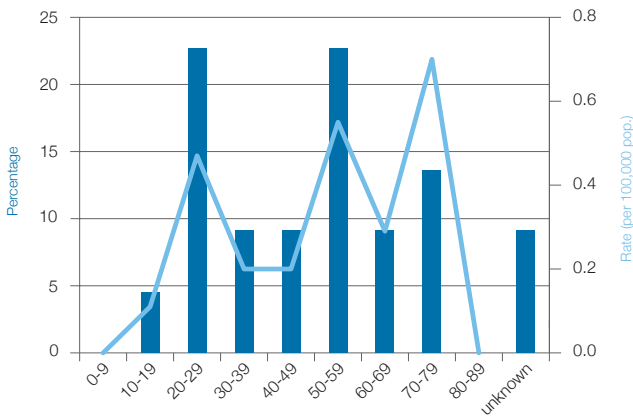
The majority of coastal drowning deaths in NSW occurred when an individual was participating in swimming or wading (9), rock fishing (4), or boating (3).



Coastal drowning deaths by activity – 2004-05 to 2010-11

Figure 16

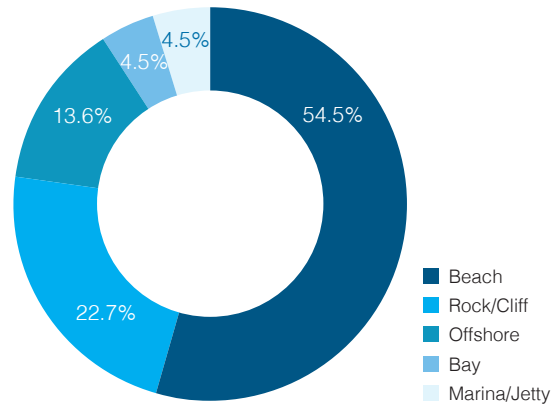
The rates of activity types being undertaken when coastal drowning deaths occur varies over time in NSW. The swimming and wading activity rate in 2010-11 is 0.12 which is 40% below the seven year average rate of 0.20.



Coastal drowning deaths by age group (n=22)

Figure 17

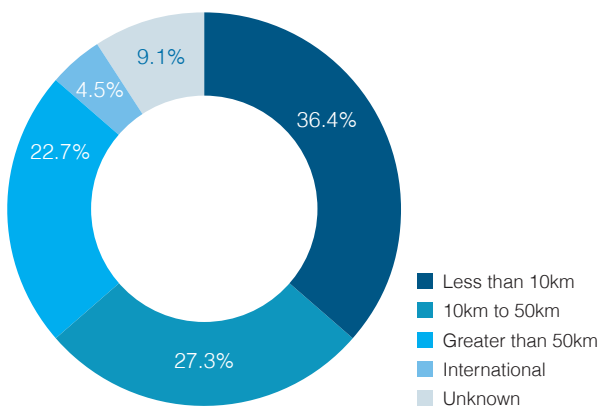
The 20-29 year old and 50-59 year old categories attributed the highest number of coastal drowning deaths (5) in NSW, while the 70-79 year old category had the highest rate per 100,000 population (0.70).



Coastal drowning deaths by location (n=22)

Figure 18

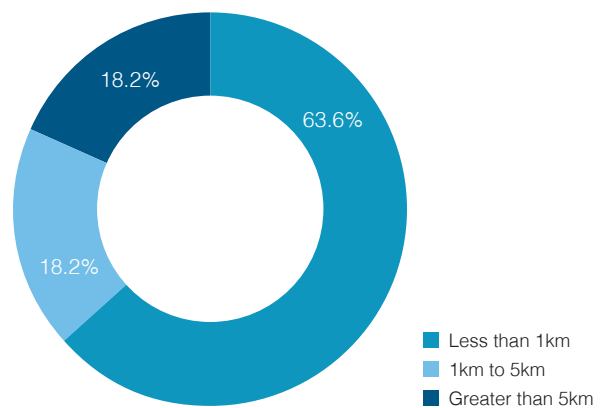
The majority of coastal drowning deaths in NSW occurred at a beach location (12), a rocky coast/cliff (5) or offshore (3).



Distance from residence to drowning location (n=22)

Figure 19

The majority of individuals who drowned in NSW resided less than 10km from the drowning location (8).

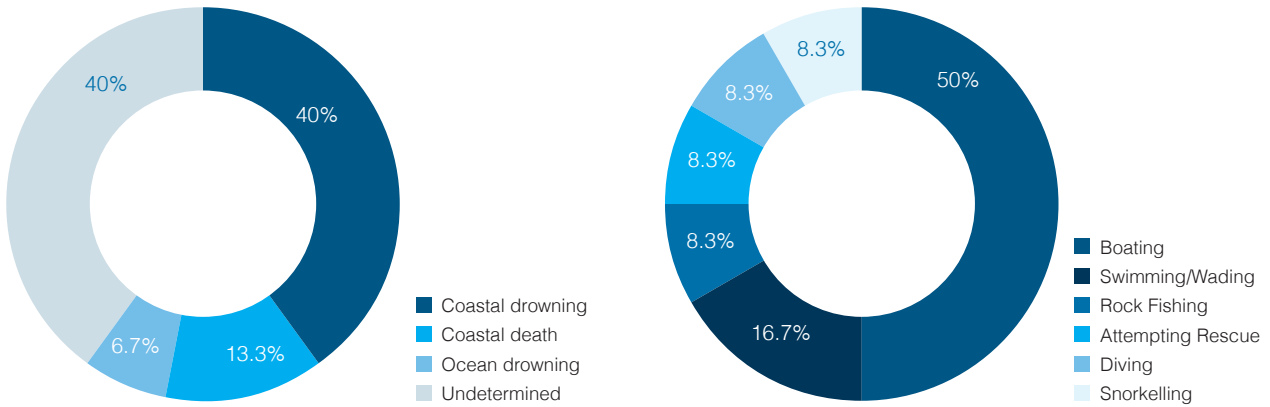


Distance from drowning location to lifesaving services (n=22)

Figure 20

14 individuals drowned less than one kilometre from the nearest lifesaving service.

COASTAL DROWNING DEATHS IN 2010-11 QUEENSLAND



Queensland fatality summary (n=30)

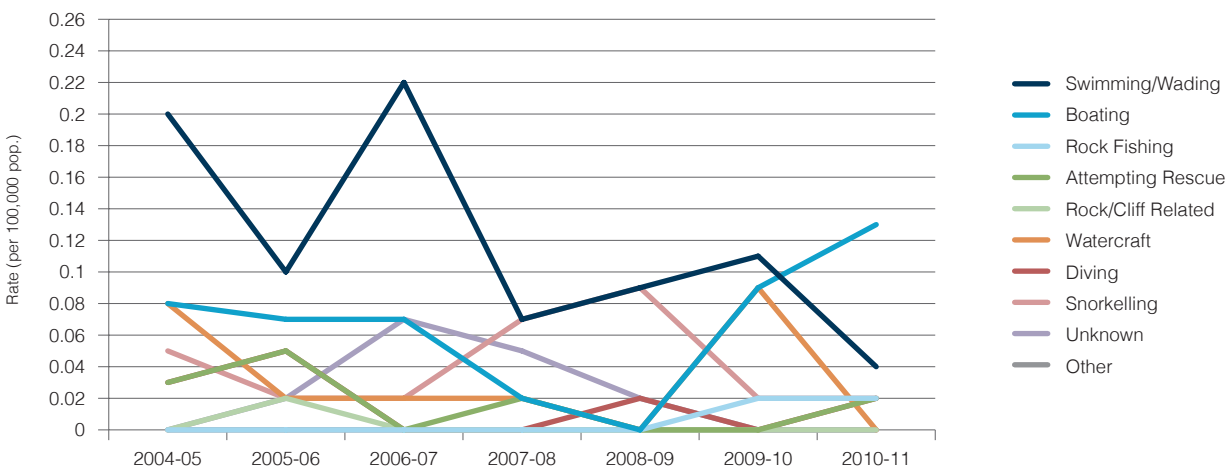
Figure 21

There were 12 coastal drowning deaths, four coastal deaths, two ocean drowning deaths, and 12 undetermined deaths in Queensland in 2010-11. This represents 19.7% of the national coastal drowning death total. Please refer to page 24 for definitions.

Coastal drowning deaths by activity (n=12)

Figure 22

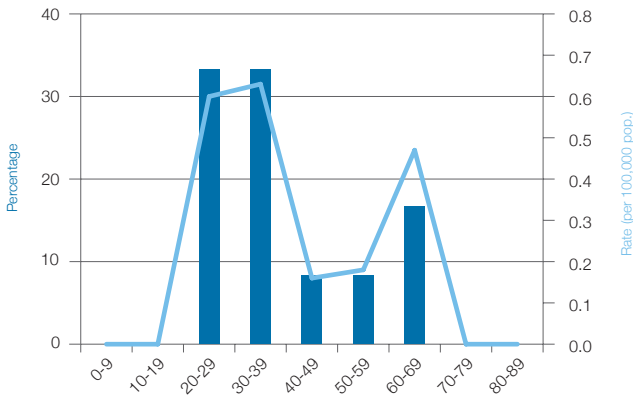
The majority of coastal drowning deaths in Queensland occurred when an individual was participating in boating (6) or swimming or wading (2).



Coastal drowning deaths by activity – 2004-05 to 2010-11

Figure 23

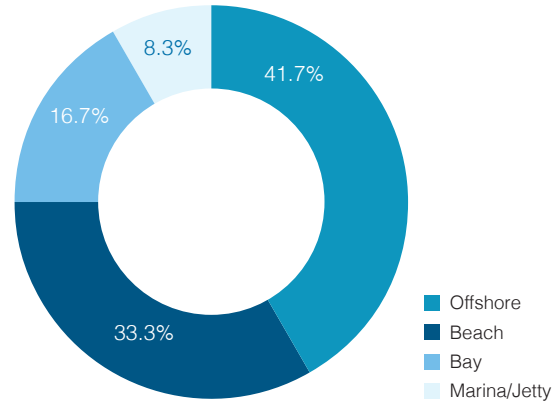
The rates of activity types being undertaken when drowning deaths occur varies over time in Queensland. The swimming and wading activity rate in 2010-11 is 0.04 which is 66% below the seven year average rate of 0.12. The 2010-11 boating rate (0.13) is 1.8 times the seven year average rate of 0.07.



Coastal drowning deaths by age group (n=12)

Figure 24

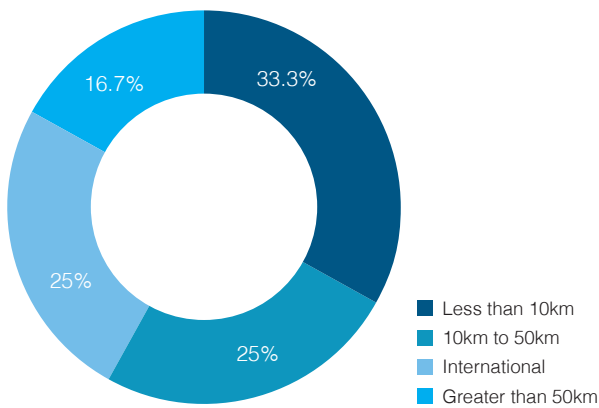
The 20-29 year old and 30-39 year old categories attributed the highest number of coastal drowning deaths with 4 each, with the 30-39 year old category having the highest rate per 100,000 population with 0.63.



Coastal drowning deaths by location (n=12)

Figure 25

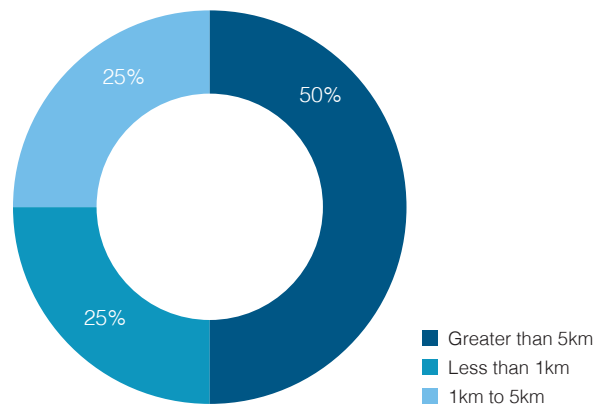
The majority of coastal drowning deaths in Queensland occurred offshore (5), at a beach (4) or in a bay (2).



Distance from residence to drowning location (n=12)

Figure 26

The majority of individuals who drowned in Queensland resided less than 10km from the drowning location (4).

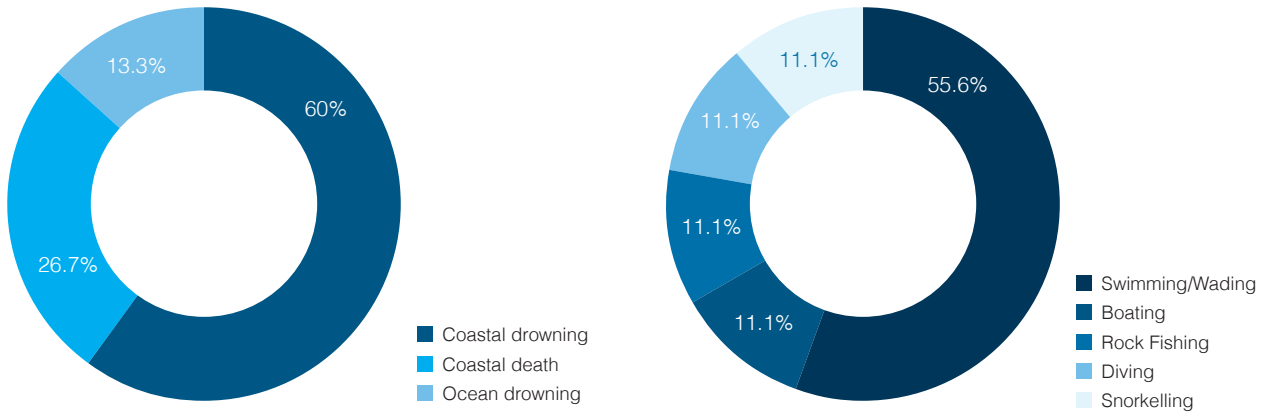


Distance from drowning location to lifesaving services (n=12)

Figure 27

Six individuals drowned greater than five kilometres from the nearest lifesaving service.

COASTAL DROWNING DEATHS IN 2010-11 WESTERN AUSTRALIA



Western Australia fatality summary (n=15)

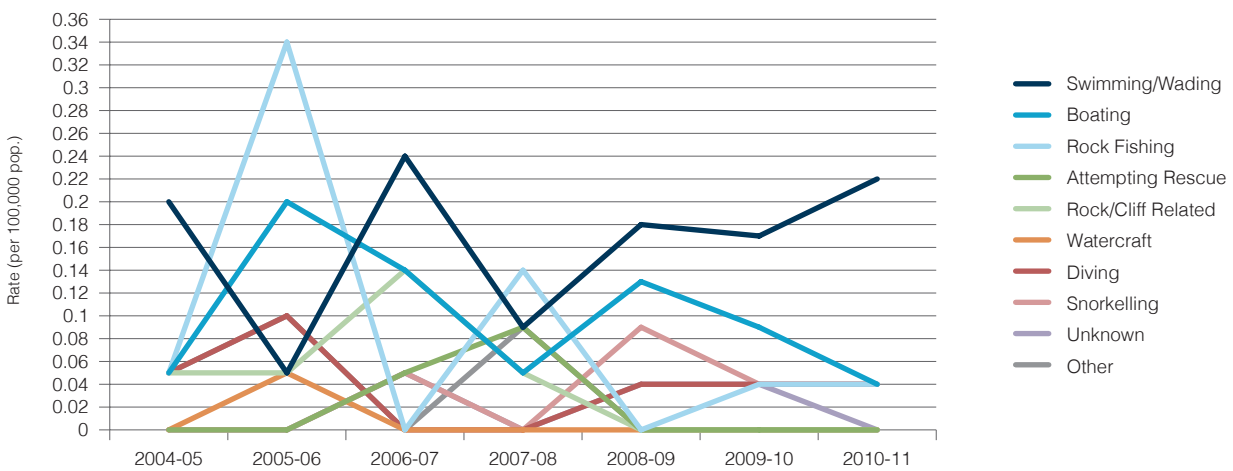
Figure 28

There were nine coastal drowning deaths, four coastal deaths, and two ocean drowning deaths in Western Australia in 2010-11. This represents 14.8% of the national coastal drowning death total. Please refer to page 24 for definitions.

Coastal drowning deaths by activity (n=9)

Figure 29

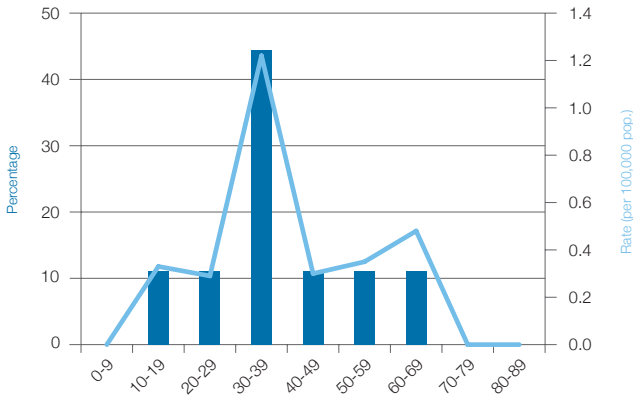
The majority of coastal drowning deaths in Western Australia occurred when an individual was swimming or wading (5).



Coastal drowning deaths by activity – 2004-05 to 2010-11

Figure 30

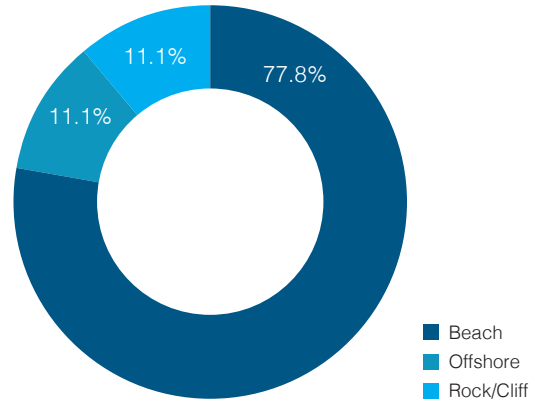
The activity trends in Western Australia illustrate an increase in the rate of swimming/wading coastal drowning deaths to 0.22 which is 1.4 times the seven year average of 0.16. Boating coastal drowning deaths have decreased to a rate of 0.04, 60% less than the seven year average of 0.10.



Coastal drowning deaths by age group (n=9)

Figure 31

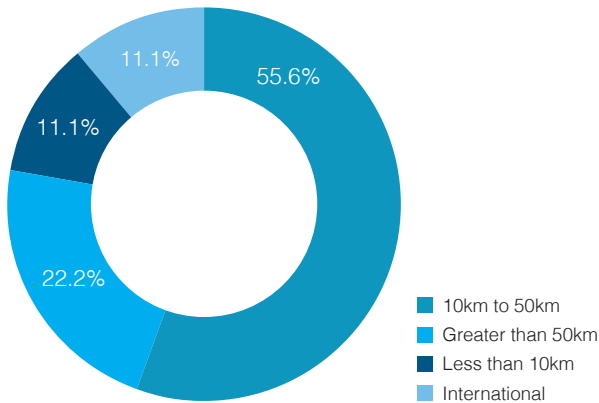
The 30-39 year old category attributed the most coastal drowning deaths in Western Australia (4), and also had the highest rate per 100,000 population (1.22).



Coastal drowning deaths by location (n=9)

Figure 32

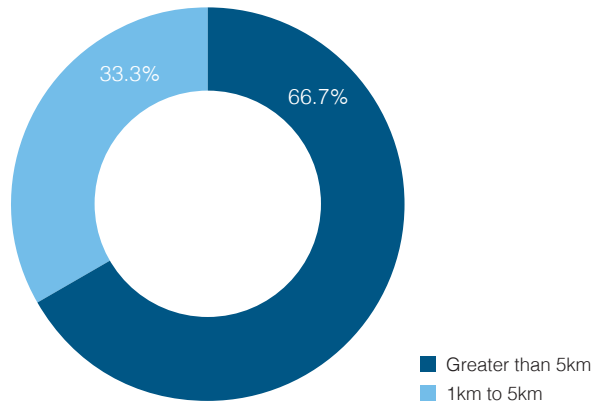
The majority of coastal drowning deaths in Western Australia occurred at a beach location (7).



Distance from residence to drowning location (n=9)

Figure 33

The majority of individuals who drowned in Western Australia resided between 10km and 50km from the drowning location (5).

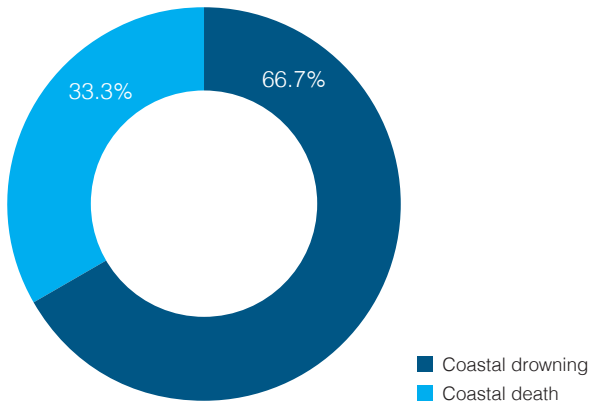


Distance from drowning location to lifesaving services (n=9)

Figure 34

Six individuals drowned greater than five kilometres from the nearest lifesaving service.

COASTAL DROWNING DEATHS IN 2010-11 SOUTH AUSTRALIA

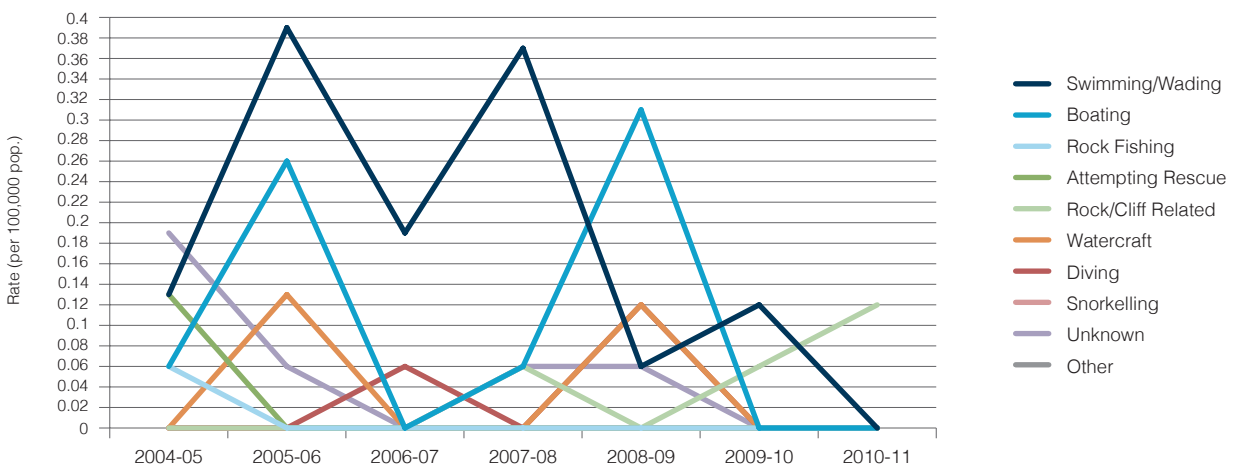


Due to the low number of coastal drowning deaths in South Australia further details will not be published to protect the privacy of these individuals.

South Australia fatality summary (n=3)

Figure 35

There were two coastal drowning deaths and one coastal death in South Australia in 2010-11. This represents 3.3% of the national coastal drowning death total. Please refer to page 24 for definitions.

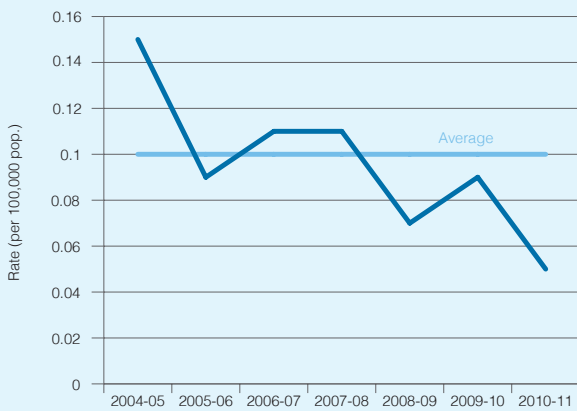


Coastal drowning deaths by activity – 2004-05 to 2010-11

Figure 36

The only coastal drowning deaths in SA in 2010-11 were associated with activities on a rocky coast or cliff, these are two of the four deaths associated with this activity type in the last seven years. The seven year average rates for swimming/wading and boating are 0.18 and 0.10 respectively.

CASE STUDY RIP CURRENTS



Rate of rip current-related coastal drowning deaths 2004-05 to 2010-11

Figure 37

Drowning deaths are recorded as rip related when there is a witness record describing the victim being swept away by a strong current. This methodology results in the actual number of rip current events being under reported.

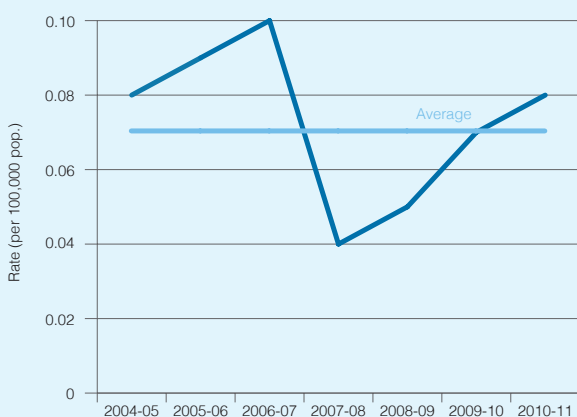
Rip currents remain one of the primary causes of coastal drowning deaths in Australia. During 2010-11, 42% of swimming or wading coastal drowning deaths (19) were attributed to rip currents (8).

In 2010-11 there were a total of 12 coastal drowning deaths attributed to rip currents, the three additional incidents occurred during attempting rescue (3) and watercraft (1) activities. This represents a reduction from the 2009-10 figure of 20, and the seven year average of 21.

Rip current related coastal drowning deaths accounted for 19.7% of total coastal drowning deaths nationally in 2010-11, less than the seven year average of 23.1%.

The 2010-11 rate of coastal drowning deaths relating to rip currents, as indicated in figure 37, is 0.05 per 100,000 population which is 50% below the seven year average rate of 0.10. In comparison, the total coastal drowning rate of 0.27 in 2010-11 represents a 36% reduction from the seven year average rate of 0.42.

CASE STUDY BOATING



Rate of boating-related coastal drowning deaths 2004-05 to 2010-11

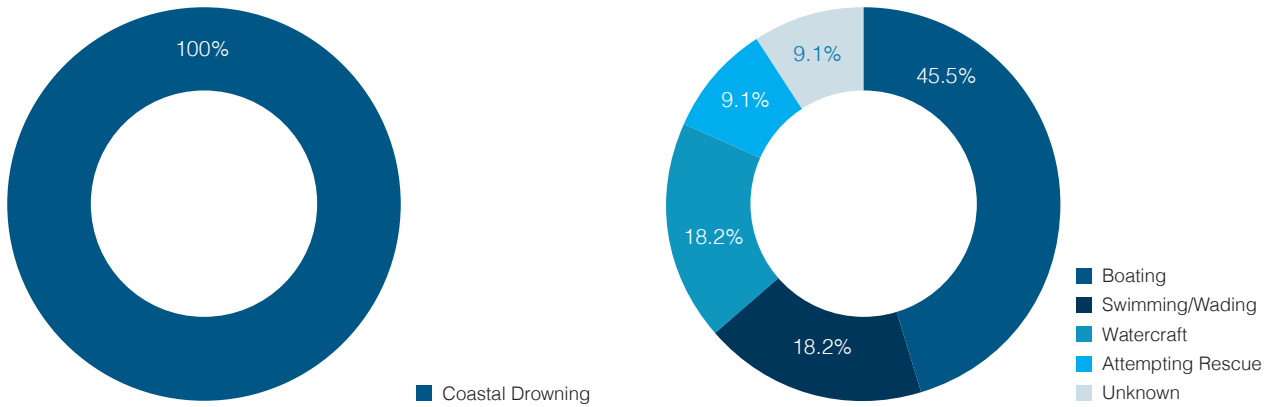
Figure 38

In 2010-11 there were 17 coastal drowning deaths attributed to boating-related incidents. This represents 27.9% of total coastal drowning deaths, second only to swimming or wading activities.

The rate of coastal drowning deaths related to boating has been increasing over the last four years, in contrast to the national coastal drowning death rate.

The rate of boating-related coastal drowning deaths in 2010-11, as indicated in figure 38, was 0.08, significantly greater than the 2007-08 rate of 0.04 per 100,000 population. This is a 14% increase over the seven year average rate of 0.07.

COASTAL DROWNING DEATHS IN 2010-11 VICTORIA



Victoria fatality summary (n=11)

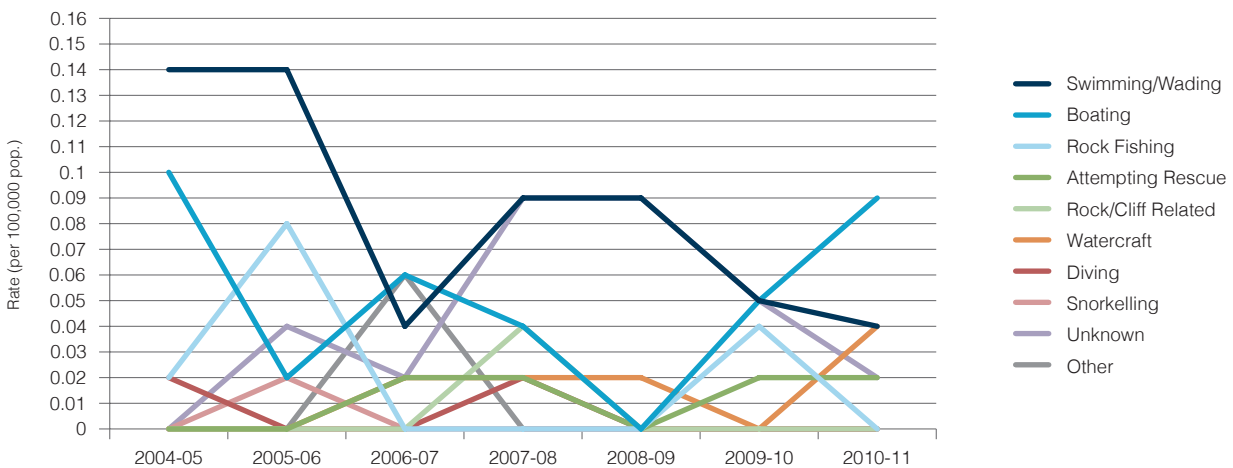
Figure 39

There were 11 coastal drowning deaths in Victoria in 2010-11. This represents 18% of the national coastal drowning death total. Please refer to page 24 for definitions.

Coastal drowning deaths by activity (n=11)

Figure 40

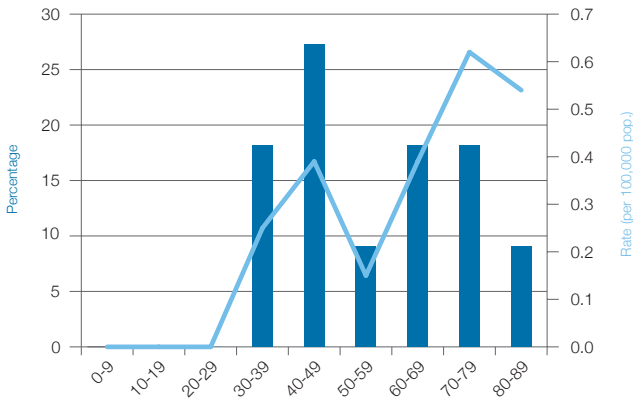
The majority of coastal drowning deaths in Victoria occurred when an individual was participating in boating (5), swimming or wading (2), or using non powered watercraft (2).



Coastal drowning deaths by activity – 2004-05 to 2010-11

Figure 41

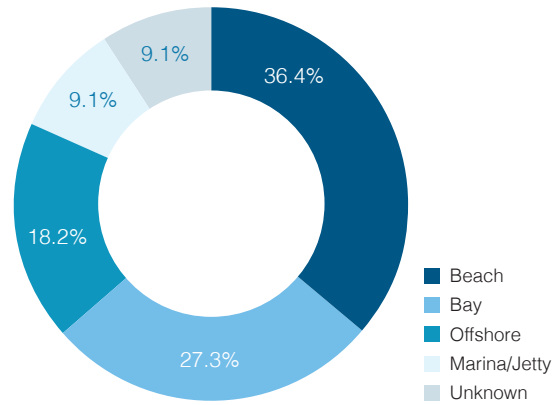
The rates of activity types being undertaken when coastal drowning deaths occur varies over time in Victoria. The swimming and wading activity rate in 2010-11 is 0.04 which is 50% below the seven year average rate of 0.08 while boating trend has continued to increase over the last three years to a rate of 0.09 which is 1.8 times the seven year average rate of 0.05.



Coastal drowning deaths by age group (n=11)

Figure 42

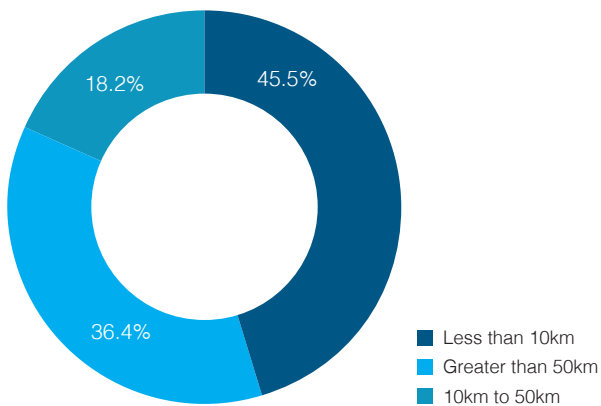
The 40-49 year old age category attributed the most coastal drowning deaths in Victoria (3), while the 70-79 year age group had the highest rate per 100,000 population (0.62).



Coastal drowning deaths by location (n=11)

Figure 43

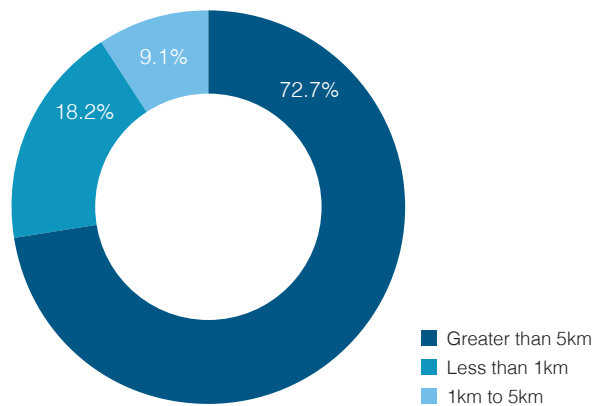
The majority of coastal drowning deaths in Victoria occurred at a beach location (4), a bay (3) or offshore (2).



Distance from residence to drowning location (n=11)

Figure 44

The majority of individuals who drowned in Victoria resided less than 10km from the drowning location (5).

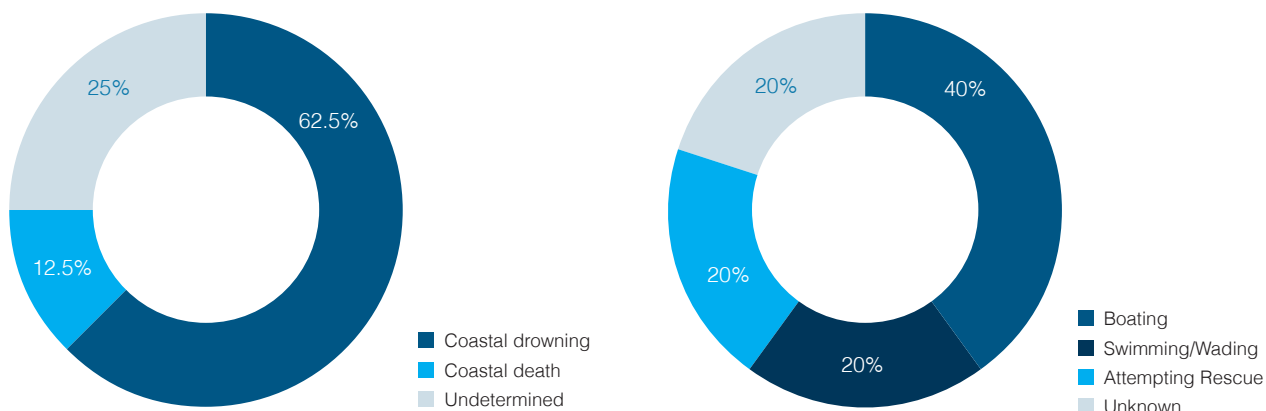


Distance from drowning location to lifesaving services (n=11)

Figure 45

Eight individuals drowned greater than five kilometres from the nearest lifesaving service.

COASTAL DROWNING DEATHS IN 2010-11 TASMANIA



Tasmania fatality summary (n=8)

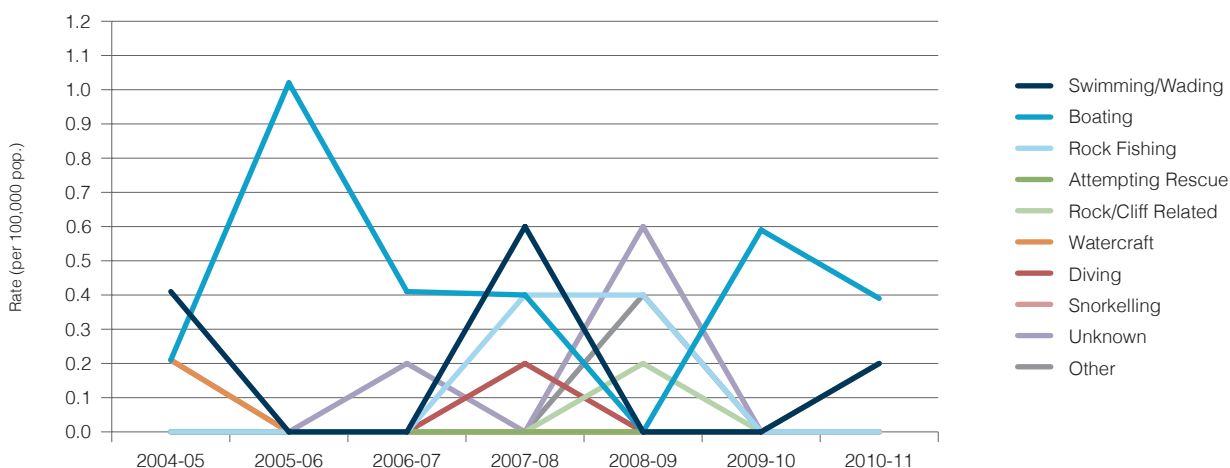
Figure 46

There were five coastal drowning deaths, one coastal death, and two undetermined deaths in Tasmania in 2010-11. This represents 8.2% of the national coastal drowning death total. Please refer to page 24 for definitions.

Coastal drowning deaths by activity (n=5)

Figure 47

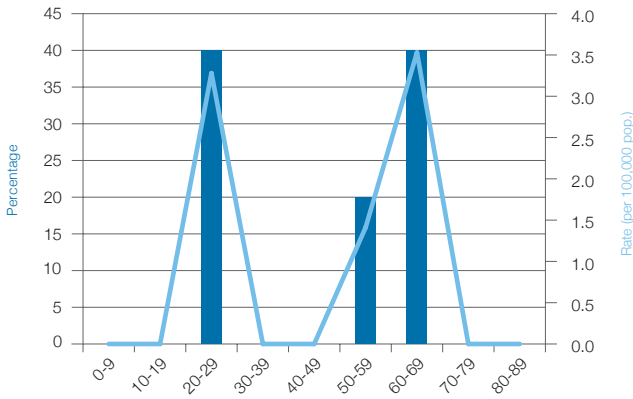
The majority of coastal drowning deaths (2) in Tasmania occurred when an individual was participating in boating.



Coastal drowning deaths by activity - 2004-05 to 2010-11

Figure 48

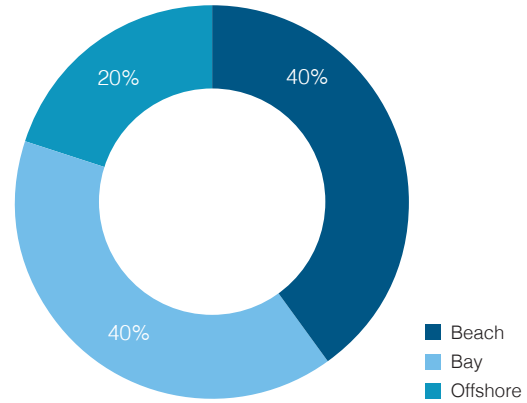
Rates of swimming/wading are above and boating rates are below the seven year average rates in Tasmania. The coastal drowning death rate during swimming or wading activities in 2010-11 is 0.20, above the seven year average of 0.17 and boating rates are 0.39, less than the seven year average rate of 0.43.



Coastal drowning deaths by age group (n=5)

Figure 49

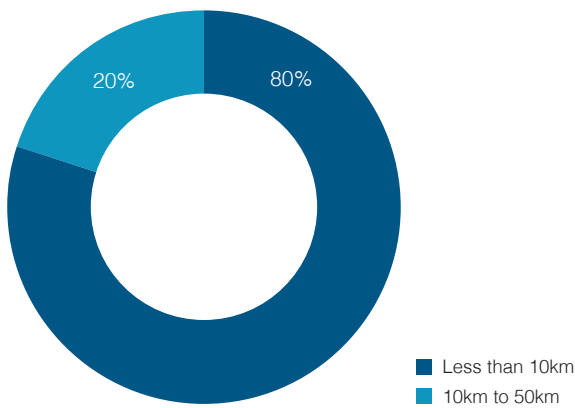
The 20-29 year old category and the 60-69 year old category attributed the most coastal drowning deaths in Tasmania (2), with the 60-69 year old category had the highest rate per 100,000 population (3.53).



Coastal drowning deaths by location (n=5)

Figure 50

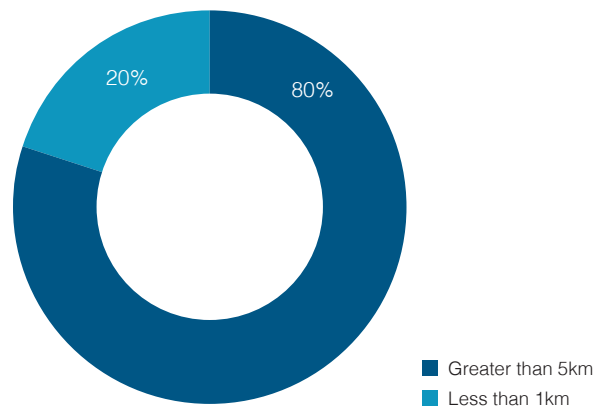
The majority of coastal drowning deaths in Tasmania occurred at a beach (2) or bay (2) location.



Distance from residence to drowning location (n=5)

Figure 51

The majority of individuals who drowned in Tasmania resided less than 10km from the drowning location (4).

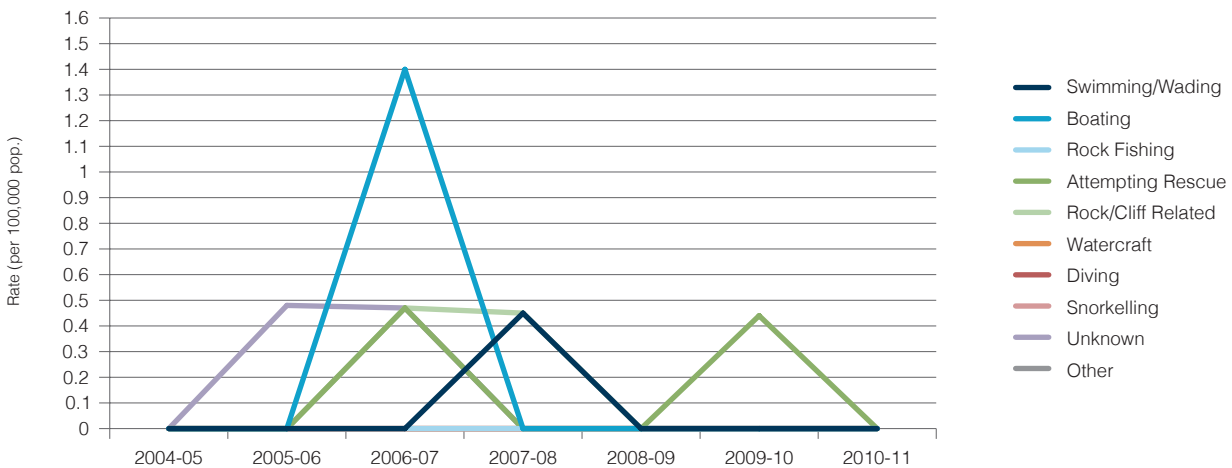


Distance from drowning location to lifesaving services (n=5)

Figure 52

Four individuals drowned greater than five kilometres from the nearest lifesaving service.

COASTAL DROWNING DEATHS IN 2010-11 NORTHERN TERRITORY



Coastal drowning deaths by activity – 2004-05 to 2010-11

Figure 53

There were no coastal drowning deaths in the Northern Territory in 2010-11. The highest seven year average rates are associated with boating activities (0.20). The Northern Territory has the lowest average rate for swimming or wading deaths (0.06) of all states.

COASTAL DROWNING DEATHS IN 2010-11 REMOTE OFFSHORE TERRITORIES

Remote offshore territories incident summary

Table 2

Body not found – missing person	20
Undetermined disaster incident deaths	30
Total	50*

*All incidents are related to the refugee boat crash on Christmas Island

Geoscience Australia recognises the following locations as Remote Offshore Territories (ROT): Christmas Island, Cocos (Keeling) Islands, Coral Sea Islands, Norfolk Island, Heard Island and McDonald Islands, and the Australian Antarctic Territories.

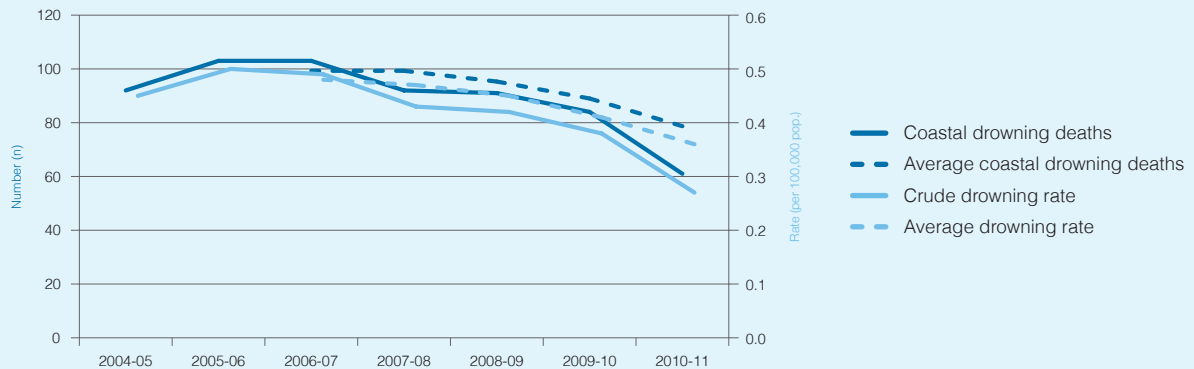
Coastal Drowning Deaths in ROTs will be listed in their own separate category in this, and future issues of the National Coastal Safety Report.

Media reports describe a refugee boat crash on Christmas Island, 5 December 2010, that resulted in up to 50 deaths. This is classified as a disaster incident because ten or more people were suddenly killed. Please see the definition on page 24.

There are only 20 of these cases closed within the NCIS at the time of this publication. All of these cases have been closed with a cause of death (COD) as “Body not found-missing person”. We don’t include these as drowning deaths. We will describe the other possible 30 individuals as ‘undetermined’ until coroner reports are produced. We will update this data in future reports as we will with other open cases that do not have a COD listed.

CASE STUDY

50% DROWNING DEATH REDUCTION BY 2020?



Seven year trend of coastal drowning deaths

Figure 54

The Australian Water Safety Council (AWSC) launched the Australian Water Safety Strategy in October 2008. This strategy includes an aim to achieve a 50% reduction in drowning deaths by the year 2020 (AWSC, 2008).

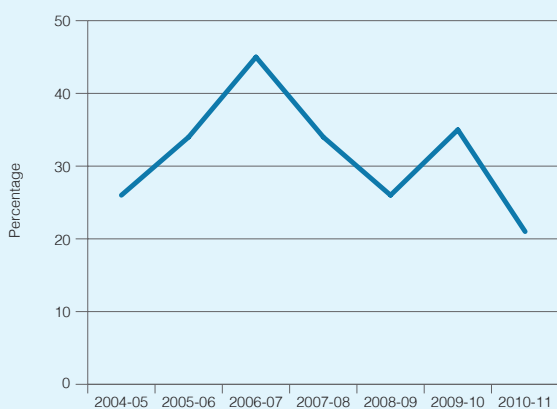
The AWSC calculated a baseline average from drowning death data collected from 2004-05

to 2006-07. The average rate of coastal drowning deaths during the same period was 0.48 per 100,000 population.

The last three years (2008-09 to 2010-11) have been analysed resulting in a current average rate of 0.36. This is a 25% reduction in the rate of coastal drowning deaths. SLSA strives to continue this trend to meet and hopefully surpass the goal of a 50% reduction by 2020.

CASE STUDY

COASTAL DROWNING DEATHS OF FOREIGN ETHNICITY



Individuals of foreign ethnicity coastal drowning deaths

Figure 55

The number of coastal drowning death victims of a foreign ethnicity has decreased in 2010-11 but still represents a significant proportion of the total drowning toll.

In 2010-11, 21 coastal drowning victims were of a foreign ethnicity. This represents 34.4% of all coastal drowning deaths this year. The average percentage of coastal drowning deaths has not changed much over time. The baseline three year (2004-07) average is 35.0%, the current three year (2008-11) average is 34.9%. When the last seven years of data are averaged, individuals of foreign ethnicity make up 35.2% of coastal drowning deaths.

This over-representation of persons of a foreign ethnicity in our drowning data remains consistent and will continue to be an intervention priority.

GLOSSARY OF TERMS

ALS

Australian Lifeguard Service.

Attempting rescue

An individual makes an effort to remove someone from a dangerous situation.

AWSC

Australian Water Safety Council – also Australian Water Safety Conference.

AWSS

Australian Water Safety Strategy.

Bay

A body of water partially enclosed by land but with a wide mouth, affording access to the sea.

Beach

An expanse of sand or pebbles along a shoreline.

Blackspot

An area with a high concentration of coastal/ocean incidents and a high probability/risk of ongoing reoccurrence.

Boating

Individuals using either a powered vessel or sailing boat for pleasure and/or fishing.

Coastal

The foreshore, seabed, coastal water, and air space above a large body of water (harbour/bay/inlet), including areas up to 2NM offshore and of which the landward boundary is the line of mean high water, except that where that line crosses a river/inlet, the landward boundary at that point shall be the point upstream that is calculated by multiplying the width of the river/inlet mouth by 5. (Adopted from the Resource Management Amendment Act 1991 - New Zealand)

Coastal death

A fatality arising from various circumstances (e.g. heart attack, boat collision, fall, shark attack) occurring where the location of the death is coastal.

Coastal drowning death

Where the location of the drowning is on the coast, in the ocean up to 2NM off-shore or inland up to 5 times the width of the inlet/river.

Crude drowning rate

The crude drowning rate is a comparative rate of drowning to the size of the population in that area.

Disaster incident

An exceptional event which suddenly kills 10 or more people; reportedly affects 100 or more individuals; a state of emergency is declared; or there is a call for international assistance (CRED, 2009). This may be a result of a natural disaster such as severe flooding or a tsunami; or a technological disaster such as a mechanised mode of transport accident.

Diving

Engaging in recreational or commercial SCUBA diving.

Drowning

The process of experiencing respiratory impairment from submersion/immersion in liquid.

Drowning death

A fatality arising from the process of respiratory impairment as a result of submersion/immersion in liquid.

First Aid

Immediate or emergency assistance given on the spot to people suffering from illness or injury.

Fishing

The act of catching fish.

Foreign ethnicity

Individuals who identify with a cultural group other than Australian based on heritage, language, or shared customs. This identification is extrapolated from reported data such as the individuals' country of birth and the main language spoken at home.

Hotspot

An area with a low/medium concentration of coastal/ocean incidents combined with a high number of rescues/preventative actions.

HRS

Helicopter rescue service.

ILS

International Life Saving Federation.

Inland

An area that is beyond the line of mean high water or beyond a landward distance of 5 times the width of the coastal inlet/river mouth.

Inland death

A fatality arising from various circumstances (e.g. heart attack, boat collision, fall, shark attack) occurring where the location of the death is not considered coastal, but occurs in an inland body of water such as a river, lake, creek, or dam.

Inland drowning death

A fatality arising from the impairment of respiratory function as a result of immersion in liquid, where the location of the drowning is not considered coastal but occurs in an inland body of water such as a river, lake, creek, or dam.

International

An individual who is confirmed to reside overseas and/or is a temporary visitor to Australia.

IRB

Inflatable rescue boat.

JRB

Jet rescue boat.

Lake

An inland body of water surrounded by land.

Leisure activity

An activity commenced on land such as play, walking, jogging, or cycling.

Lifeguard

Typically a paid employee at a beach or another aquatic environment whose role is to rescue people in danger of drowning or prevent them getting into that situation.

Lifesaving service

A service which exists to provide aquatic safety services to the public.

Marina/jetty

A boat basin offering dockage and other service for small craft, or a pier/wharf.

NCIS

National Coroners Information System.

Ocean death

A fatality arising from various circumstances (e.g. heart attack, boat collision, fall, shark attack) occurring where the location of the death is in the ocean greater than 2NM offshore, but no greater than 12NM.

Ocean drowning death

Where the location of the drowning is in the ocean greater than 2NM offshore, but no greater than 12NM.

Open ocean

The seabed, water and air space above the water between 2NM and 12NM (the Australian territorial waters limit) offshore.

ORB

Offshore rescue boat.

Patrolled location

A location supervised constantly or periodically by a lifesaving service.

Prevention

Where intervention by a lifesaving resource averts a person/s from getting into a potentially life threatening situation.

Rescue

Where intervention by a lifesaving resource removes a person/s from a life threatening or potentially life threatening situation.

Resuscitation

Preservation or restoration of life by establishing and maintaining a person's airway, breathing and circulation.

RIB

Rigid inflatable boat.

Rip current

A narrow seaward flowing current of water moving through a surf zone (Short,2003).

Rock/cliff

A rocky shoreline that may or may not have a high steep face.

Rock/cliff related

An activity besides fishing that is performed on a rocky shoreline or off a groyne.

River

A natural stream of water flowing into an ocean or bay.

RWC

Rescue water craft - sometimes called a personal water craft.

Rock fishing death

A fatality arising from various circumstances occurring (e.g. wave motion, loss of footing) where the victim was participating in fishing activities on a rocky coast immediately prior to or during the incident.

Service gap

An area identified as having an inadequate level of resources to meet public safety demands.

Service season & hours

Vary between states due to climactic factors, but in the context of this report, the season is for the period July 2010 to June 2011.

Snorkelling

Swimming with a snorkel and face mask.

Support operations

Rapid response rescue units, not affiliated to any one surf life saving club.

Surfcom

SLS radio communications centre which assists in managing the communications of lifesaving operations and data collection.

Surf lifesaver

Typically a volunteer at a beach or another aquatic environment whose role is to rescue people in danger of drowning or prevent them getting into that situation.

Swimming

A person who is active while immersed in water.

Total service plan

An assessment of current and future lifesaving resources, national blackspots, hotspots and trends.

Undetermined

Cases that are not associated with a closed coroner's report on NCIS are often left 'undetermined' until an official cause of death has been determined. Some examples are cases where bodies have been found washed up on the beach, reports of individuals struggling in coastal environments are made and the bodies are not found, or a suspected heart attack in a coastal environment rather than death due to immersion. These deaths will all be followed up on and the incident category updated once coroner determinations are made accessible.

Wading

A person who is partially immersed in water while standing.

Watercraft

A piece of non powered recreational equipment used in the water which is not a boat. Examples include surfboards, boogie boards, and windsurfers.

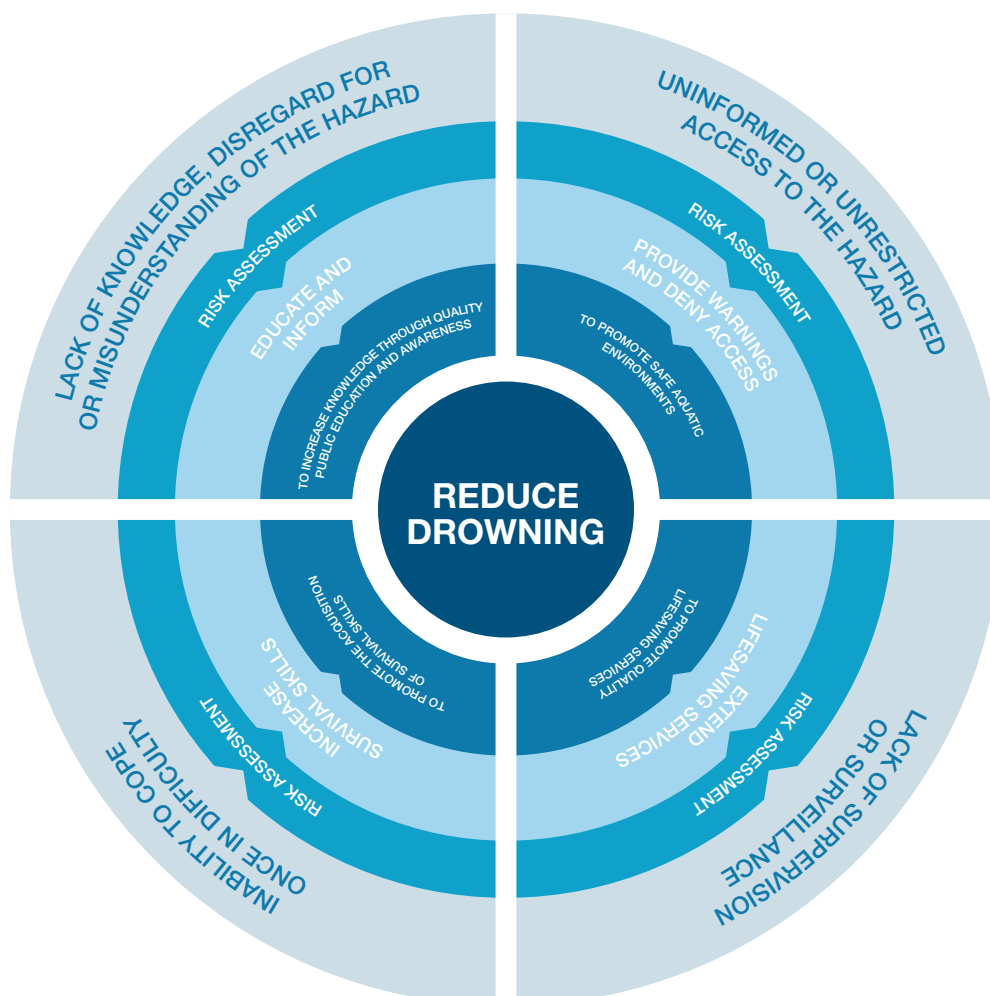
WHY DO PEOPLE DROWN?

An understanding of why people drown is significant when developing drowning prevention strategies. Four key factors have been identified that may lead to accidental drowning, known as the 'Drowning Chain'. Any of these factors alone, or a combination, could lead to death by drowning (George, 2011).

Drowning chain and drowning prevention strategies

Table 3

Drowning Chain	Drowning Prevention Strategies
Lack of knowledge, disregard or misjudgement of a hazard	Education and information
Uninformed, unprotected or unrestricted access to a hazard	Denial of access, improvement of infrastructure and/or provision of warnings
Lack of supervision or surveillance	Provision of supervision
Inability to cope once in difficulty	Acquisition of survival skills



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With thanks

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Surf Life Saving receives valuable Government funding to commence valuable initiatives and programs. However, we rely on the generosity of the community and corporate support to ensure they continue.

To help Surf Life Saving, please donate to the Surf Life Saving Foundation:

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