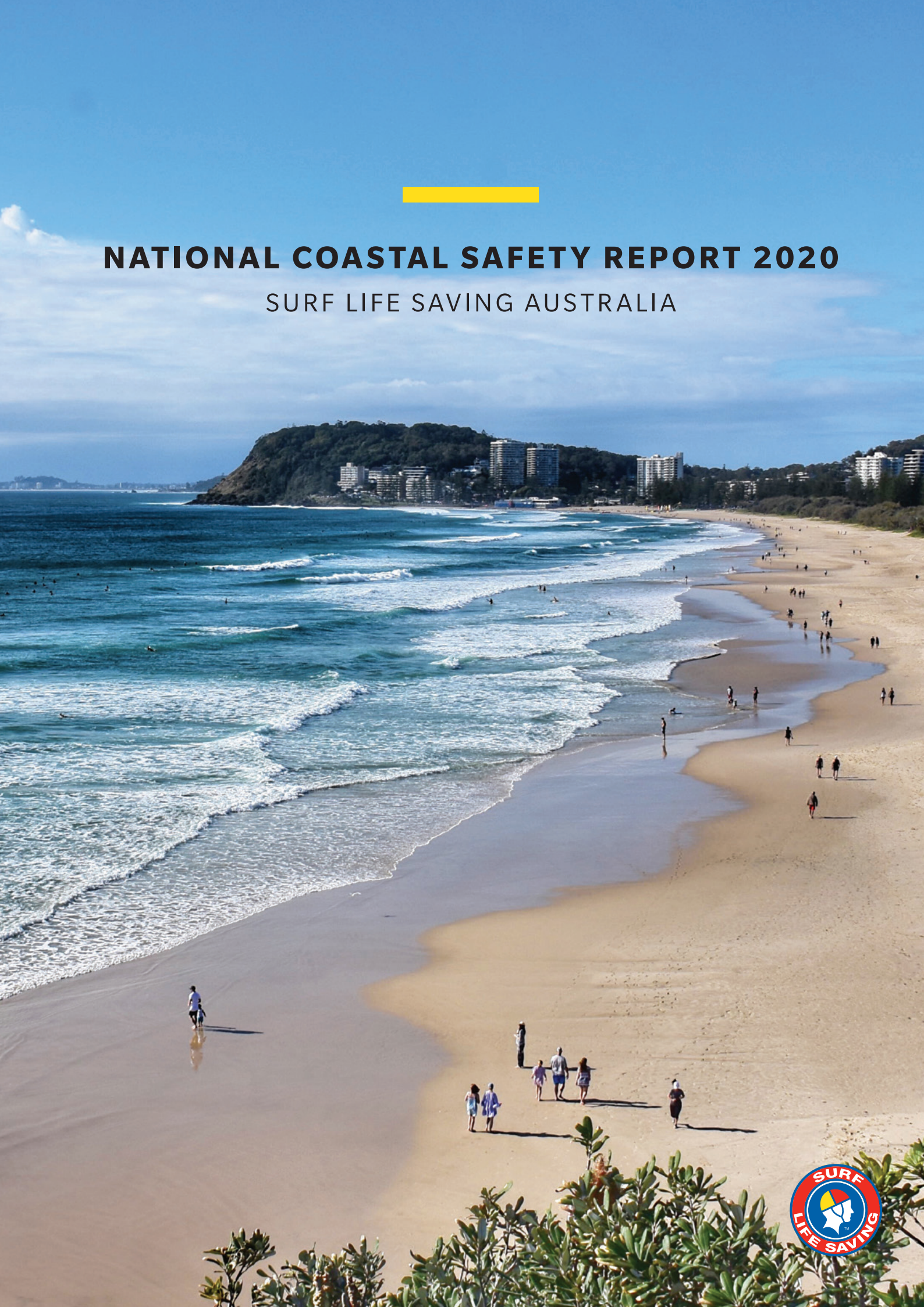
NATIONAL COASTAL SAFETY REPORT 2020

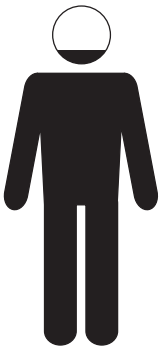
SURF LIFE SAVING AUSTRALIA



DROWNING

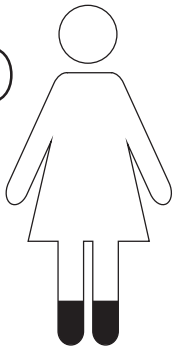
SNAPSHOT

125
COASTAL & OCEAN DROWNING DEATHS



86%
MALE

14%
FEMALE



Location

36%
AT THE BEACH

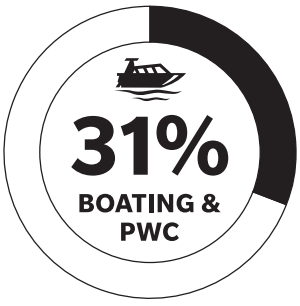
33%
OFFSHORE

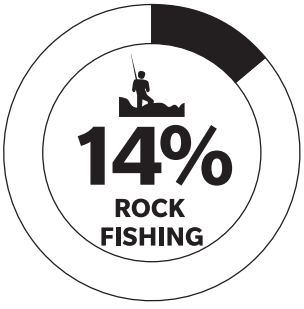
21%
ROCK/CLIFF

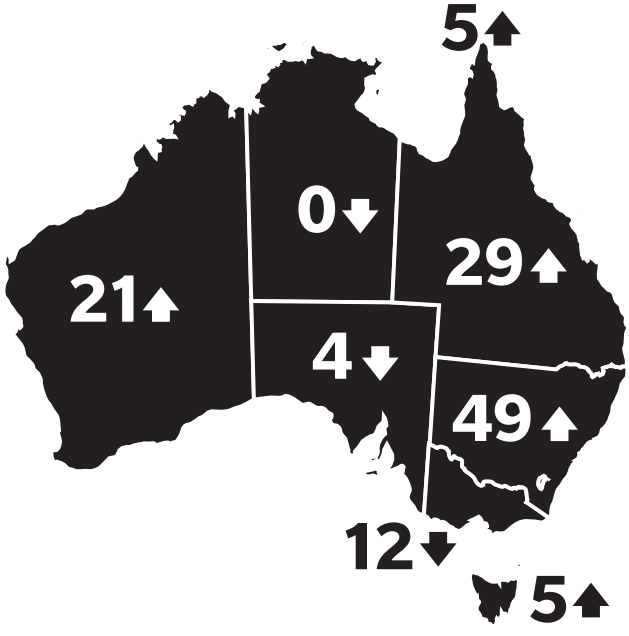
AT LEAST 5KM FROM A LIFESAVING SERVICE

55%

Activity







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INTRODUCTION

It is unlikely that anyone could have foreseen the 12 months that were set to unfold from 1 July 2019 through to 30 June 2020. With fires, floods, storms and a global pandemic, this year has had everything and tragically, the number of coastal deaths has also risen, with 235 lives lost.

Coastal visitations increased from the previous year, with 14.1 million visitors on average visiting the coast 3.1 times each month, equating to over 500 million individual visitations in the last year. Swimming and wading was the most popular activity with fifty-two per cent of all coastal participation, followed by boating and fishing at thirteen per cent each.

Australians love the beach, with domestic and international visitors travelling to many of the incredible locations along the 52,000 kilometres of coastline and almost 12,000 beaches. However, as beautiful and enticing as our coastline may be it can also lead to situations that require emergency response actions to take place. More than 10,000 people are rescued on average each year, with over 7,500 people pulled from the water this past year along with almost 70,000 people being provided first aid. Surf lifesavers and Australian Lifeguard Services (ALS) lifeguards performed more than 1.6 million preventative actions.

The recent Deloitte Access Economics report 'The Social and Economic Value of Surf Life Saving Australia' identified that Surf Life Saving Australia provides a benefit to the community worth $6.5 billion a year, with 90% of these benefits derived through Surf Life Saving's coastal safety and lifesaving services. Further, the Deloitte's report revealed that without the actions taken by surf lifesavers and ALS lifeguards, an additional 800 critical injuries and 1,300 coastal deaths would occur each year.

The **National Coastal Safety Report 2020** is a comprehensive summary of the research undertaken by SLSA and presents analyses relating to participation, perceptions, lifesaving service delivery, coastal drowning and other fatal coastal incidents. While a strong focus towards drowning is maintained, almost half of all coastal deaths in the past twelve months were non-drowning related, providing evidence that further research is required in this area to understand the total picture with regards to lives lost around our coastline.

The **National Coastal Safety Report 2020** reports that 125 of the 235 deaths were due to drowning. This is the highest since 2015-16 and the fourth highest number recorded in the sixteen years of data collection and reporting. For the 2019-20 period, boating and PWC activities recorded the highest number of coastal drowning deaths (31%), followed by swimming/wading (20%), rock fishing (14%) and falls (10%). Males continue to be vastly over-represented in coastal drowning deaths (86%), while the 20-24 and 25-29 age groups were the highest represented followed by the 50-54 and 55-59 year age groups.

The 125 coastal drowning deaths this year is significantly above the 16-year average of 112 coastal drowning deaths. Continent of birth is known for 75% of coastal drowning deaths for the past 16-years. Of these 54% were Australian-born, 23% born in Asia and 15% born in Europe. Additionally, there were 69 unintentional coastal fatalities recorded. This is the highest recorded since 2013-14 and is above the 16-year average of 64. Boating and PWC, swimming and wading and falls were the most frequent activities being undertaken at the time of incident.

Lifejackets, when worn correctly, can significantly improve the outcome of coastal incidents. This year saw an increase in fatalities in boating, PWC and rock fishing activities. Since 2004, only four per cent of fatal rock fishing incidents were known to be wearing a lifejacket. Another alarming fact is while 85% of occasional watercraft users own a lifejacket, only 41% always wear it.

Since 2004, alcohol and drugs have contributed to one in five coastal unintentional fatal incidents (22%). Alcohol is the most common substance contributing to 13% of fatal incidents. Alcohol and drugs contributed to 57% of recreational jumping and 47% fall-related incidents, and one-third of PWC incidents (32%).

All coastal incidents resulting in the loss of life, or any long-term injury, have devastating impacts on families, friends and communities. Involvement in any major rescue, trauma or fatal event can create enduring financial and social impacts on the health and well-being of the community and of lifesaving personnel. Research is crucial for understanding why and how incidents occur and provides evidence to guide future prevention and mitigation strategies. The evidence contained in the **National Coastal Safety Report 2020** provides insights into causal factors for drowning deaths and other fatalities. This information is essential to evaluate current mitigation strategies and for developing those for the future.

I sincerely hope that this report will contribute to the reduction of drowning deaths in the community and with your support that we will reach our goal of having zero preventable deaths in Australian waters.

Adam Weir
Chief Executive Officer
Surf Life Saving Australia

TOTAL SERVICE PLAN

The Total Service Plan is SLSA's national drowning reduction strategy and service plan. It is created using an iterative process of analysis and review to identify coastal safety issues of national importance. This approach follows the public health model and is consistent with international risk management principles.

In collaboration with stakeholders, SLSA identifies coastal safety risks using incident monitoring, coastal risk assessments and participation analysis. This information is analysed to identify the top national coastal safety issues, priorities and blackspot areas that require intervention or mitigation strategies.

THE NATIONAL SAFETY AGENDA

The issues and blackspots identified through the Total Service Plan process form the basis of SLSA's National Safety Agenda. The agenda influences lifesaving operations, including services and equipment allocation. It drives public education, including evidence-based mitigation strategies, communications campaigns and pilot projects, and informs SLSA's research plan.

The Total Service Plan takes a risk management approach. It allows SLSA to use the evidence to ensure we locate lifesaving services and assets in areas of need and have appropriate public education programs and mitigation strategies to address the coastal safety issues and known blackspots. Embedded in the process is continual monitoring and evaluation to ensure the treatments and interventions are effective in reducing drowning deaths along the Australian coast.

The coastal safety needs of the Australian community reflected in the National Safety Agenda and the Surf Life Saving movement's capacity and capability to meet these needs are explored in the 'Capability' section of this report.

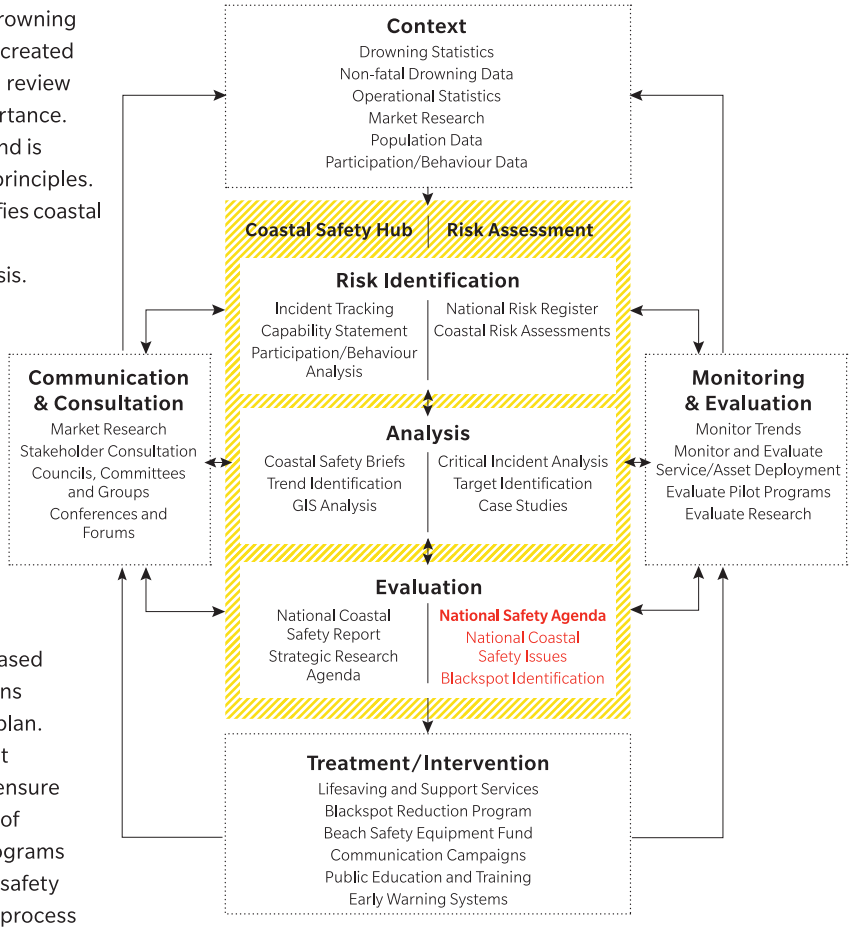
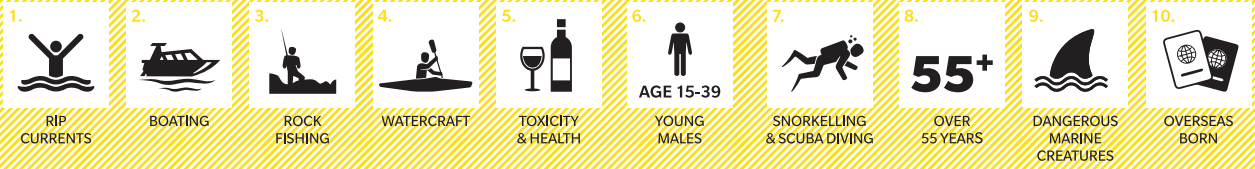


Figure 1

TOTAL SERVICE PLAN PROCESS OVERVIEW

The Total Service Plan aligns with the International Standard ISO 31000:2018 framework, which provides principles and guidelines for risk management.

NATIONAL SAFETY AGENDA ISSUES



COMMUNITY

SECTION ONE

14.1M
Australian adults visited the coast in 2019/20

11.3M
Coastal activity participants

9.7M
Swimming/Wading participants

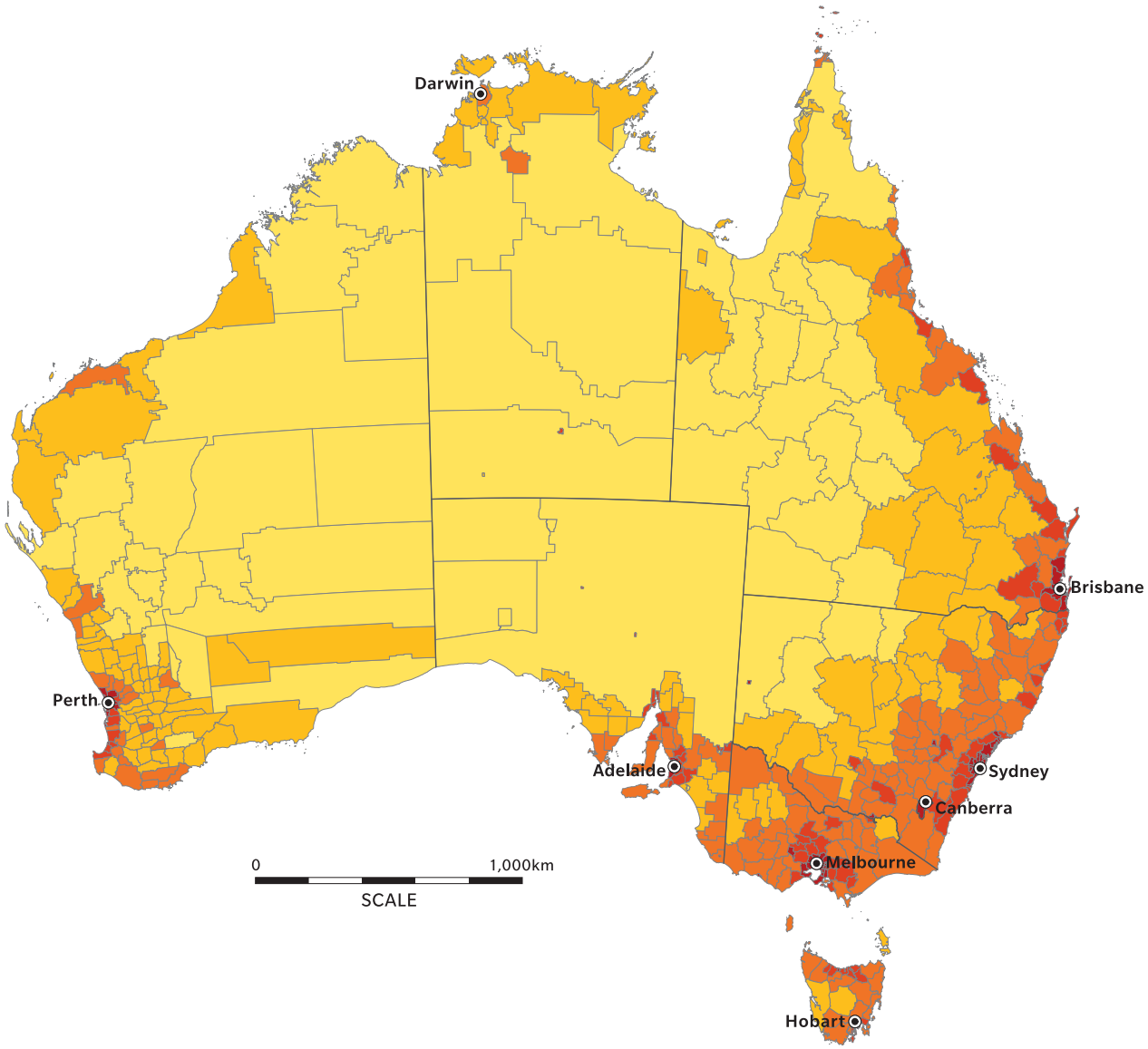

SURF RESCUE
DHL

AUSTRALIAN POPULATION

Figure 2

AUSTRALIAN POPULATION DENSITY PER LOCAL GOVERNMENT AREA (LGA)

This map shows the estimated Australian population density per LGA at June 2020. Most LGAs with a population density higher than 100 persons per square kilometre are located on Australia's coastal fringe.



COASTAL PARTICIPATION

2020

3.1
VISITS/MONTH

11.3M
COASTAL ACTIVITY PARTICIPANTS

2.2
HOURS/ VISIT

14.1M
TOTAL COASTAL VISITORS IN 2020

COASTAL PARTICIPATION SUMMARY

Australians love the coast. To better understand how the coast is used, the annual National Coastal Safety Survey (NCSS) explores Australian coastal participation and behaviours. In the last year the Australian coast received 14.1 million visitors who, on average, visited the coast 3.1 times each month. This equates to over 500 million individual visitations to the coast in the last year. There were 11.3 million coastal activity participants, with swimming and wading the most popular activity (52%), followed by land-based fishing (13%), boating (13%) and snorkelling (11%), Figure 3.

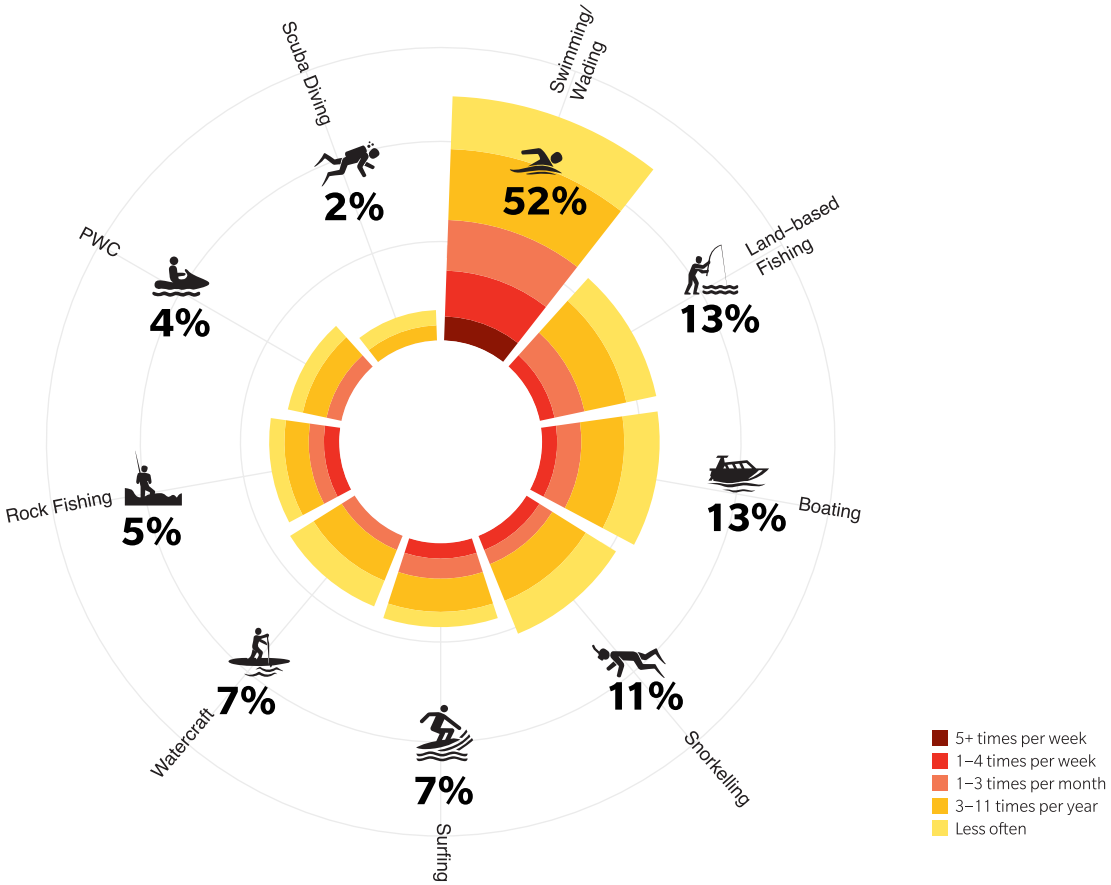


Figure 3

NCSS2020: COASTAL VISITATION BY ACTIVITY

Question: Which of the following coastal activities have you participated in during the past 12 months and how often do you participate in these activities? *NB: Data has been transformed for visualisation.*

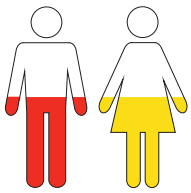
ACTIVITY PARTICIPATION

NCSS2020 PARTICIPATION BY GENDER, FREQUENCY & STATE

Coastal participation differs by activity, gender, frequency and state. These pages show the proportion of male and female participants, the number of total and frequent participants, how many hours annually frequent vs. occasional participants spend on an activity, and the percentage of the state population who participate in each activity.

SWIMMING/WADING

GENDER



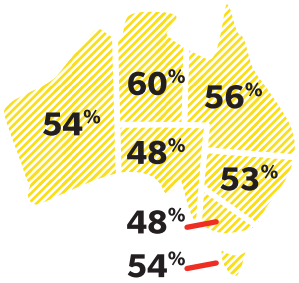
50% | 50%

FREQUENCY

TOTAL 9.7M
FREQUENT 3.3M

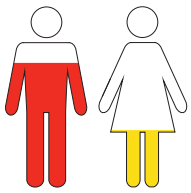
FREQUENT OCCASIONAL

STATE



ROCK FISHING

GENDER



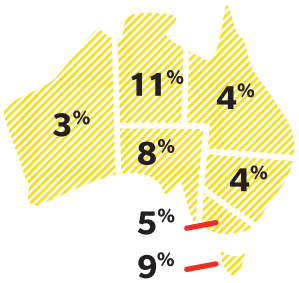
69% | 31%

FREQUENCY

TOTAL 0.9M
FREQUENT 0.4M

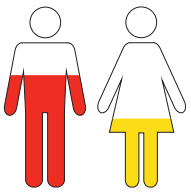
FREQUENT OCCASIONAL

STATE



LAND-BASED FISHING

GENDER



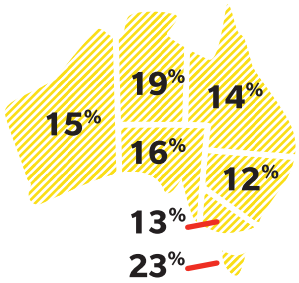
62% | 38%

FREQUENCY

TOTAL 2.5M
FREQUENT 0.8M

FREQUENT OCCASIONAL

STATE



53%

SWIMMERS/WADERS ALWAYS CHOOSE TO SWIM BETWEEN THE FLAGS

45%

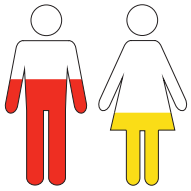
ROCK FISHERS USE A LIFEJACKET OR BUOYANCY AID

33%

LAND-BASED FISHERS USE A LIFEJACKET OR BUOYANCY AID

BOATING

GENDER



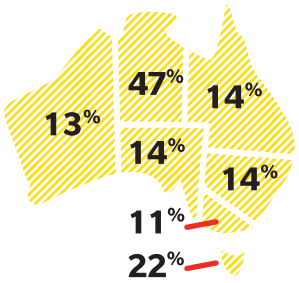
59% | 41%

FREQUENCY

TOTAL 2.5M
FREQUENT 0.7M

FREQUENT OCCASIONAL

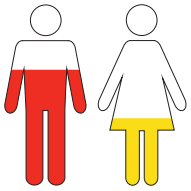
STATE



45%

BOATERS ARE FISHING FROM THEIR BOAT. 79% USE POWER BOATS

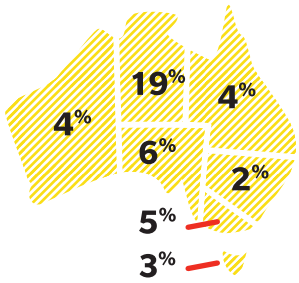
PWC



63% | 37%

TOTAL 0.7M
FREQUENT 0.2M

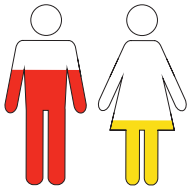
FREQUENT OCCASIONAL



90%

PWC USERS WEAR A LIFEJACKET

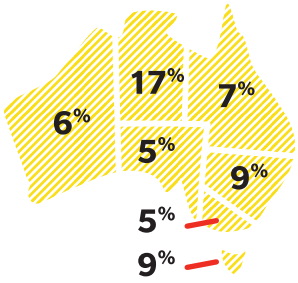
SURFING



64% | 36%

TOTAL 1.3M
FREQUENT 0.6M

FREQUENT OCCASIONAL



60%

SURFERS CHOOSE A LOCATION BECAUSE IT IS SAFE

ACTIVITY PARTICIPATION

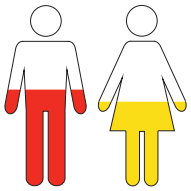
NCSS2020 PARTICIPATION BY GENDER, FREQUENCY & STATE

GENDER

FREQUENCY

STATE

SNORKELLING

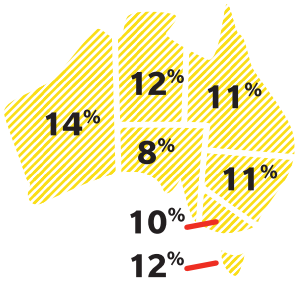


53% | 47%

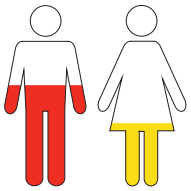
TOTAL 2M
FREQUENT 0.4M

70 HOURS — FREQUENT

5 HOURS — OCCASIONAL



SCUBA DIVING

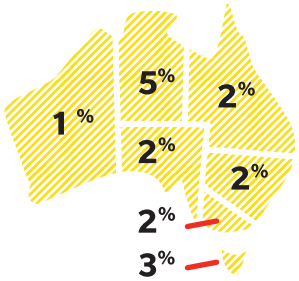


66% | 34%

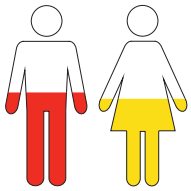
TOTAL 0.4M
FREQUENT 0.1M

70 HOURS — FREQUENT

5 HOURS — OCCASIONAL



WATERCRAFT

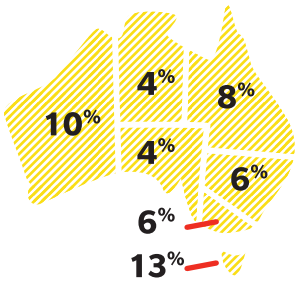


51% | 49 %

TOTAL 1.3M
FREQUENT 0.3M

100 HOURS — FREQUENT

5 HOURS — OCCASIONAL



57%

SNORKELLERS ALWAYS GO WITH ANOTHER PERSON

70%

SCUBA DIVERS ALWAYS STAY AN APPROPRIATE DEPTH FOR THEIR SKILL

48%

WATERCRAFT USERS ALWAYS WEAR A LIFEJACKET BUT 8 OUT OF 10 OWN ONE

ACTIVITY VISITATION

PARTICIPATION DURATION & FREQUENCY

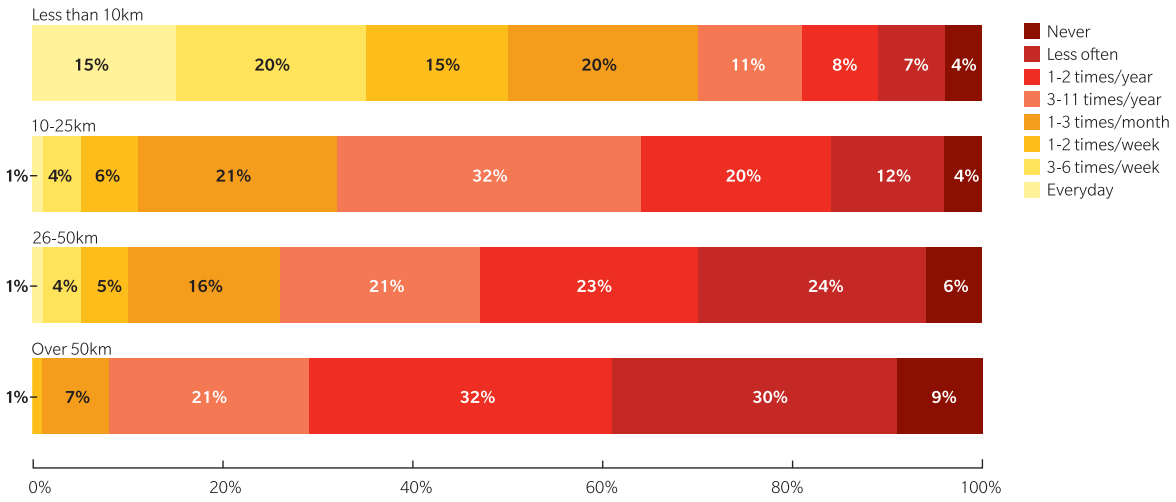
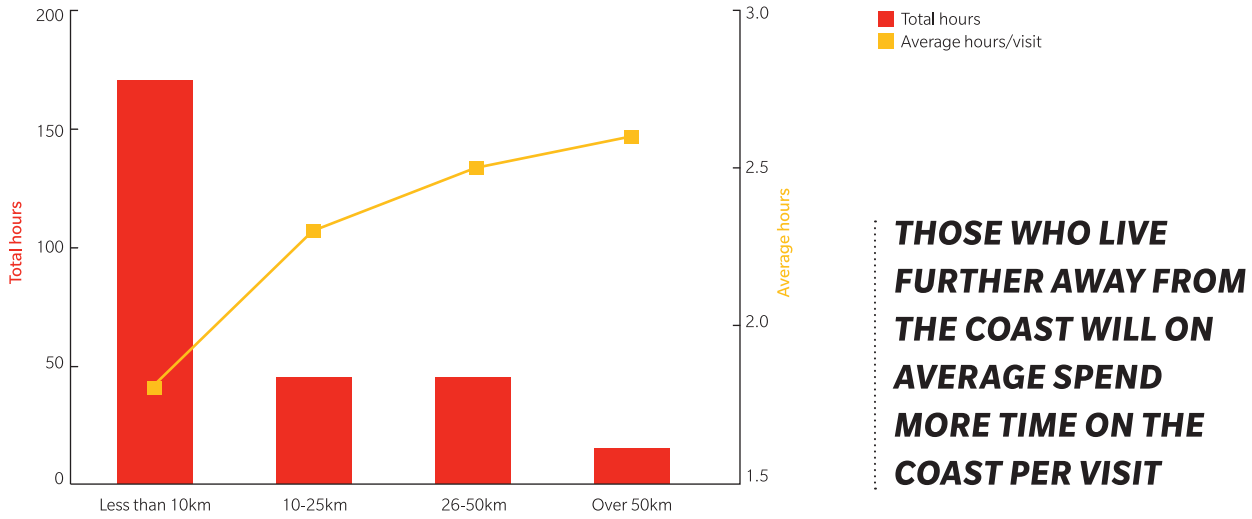


Figure 4

NCSS2020: FREQUENCY OF VISITS BY DISTANCE FROM THE COAST

People who live near the coast visit the coast more frequently than those who live further away. Fifty per cent of locals who live less than ten kilometres from the coast visit the coast at least once a week, while only one per cent of those who live more than fifty kilometres visit as frequently.



THOSE WHO LIVE FURTHER AWAY FROM THE COAST WILL ON AVERAGE SPEND MORE TIME ON THE COAST PER VISIT

Figure 5

NCSS2020: TOTAL NUMBER OF HOURS COMPARED TO AVERAGE HOURS SPENT ON THE COAST BY DISTANCE OF RESIDENCE FROM THE COAST

While people who live closer to the coast spend more time overall, their visits are substantially shorter when compared to those who live further away.

SWIMMING ABILITY

CONFIDENCE IN COASTAL ENVIRONMENTS

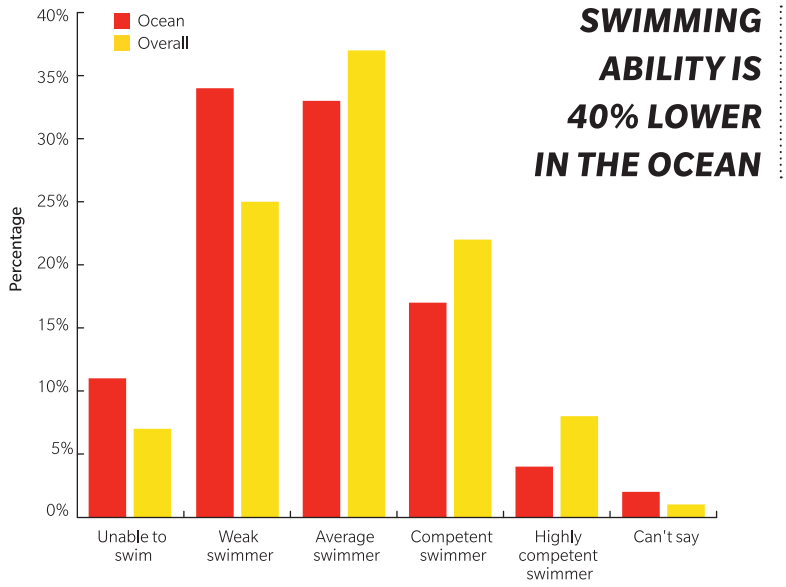


Figure 6

NCSS2020: OVERALL SWIMMING ABILITY COMPARED TO ABILITY TO SWIM IN THE OCEAN

Swimming ability in the ocean is rated lower than overall for average, competent and highly competent swimmers, but higher for weak or non-swimmers.

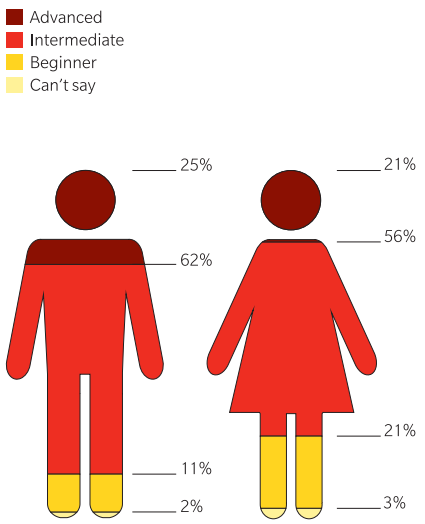


Figure 7

NCSS2020: SWIMMING ABILITY OF COASTAL SWIMMERS AND WADERS

More male swimmers rate their swimming ability as intermediate or advanced (87%) compared to females (77%).

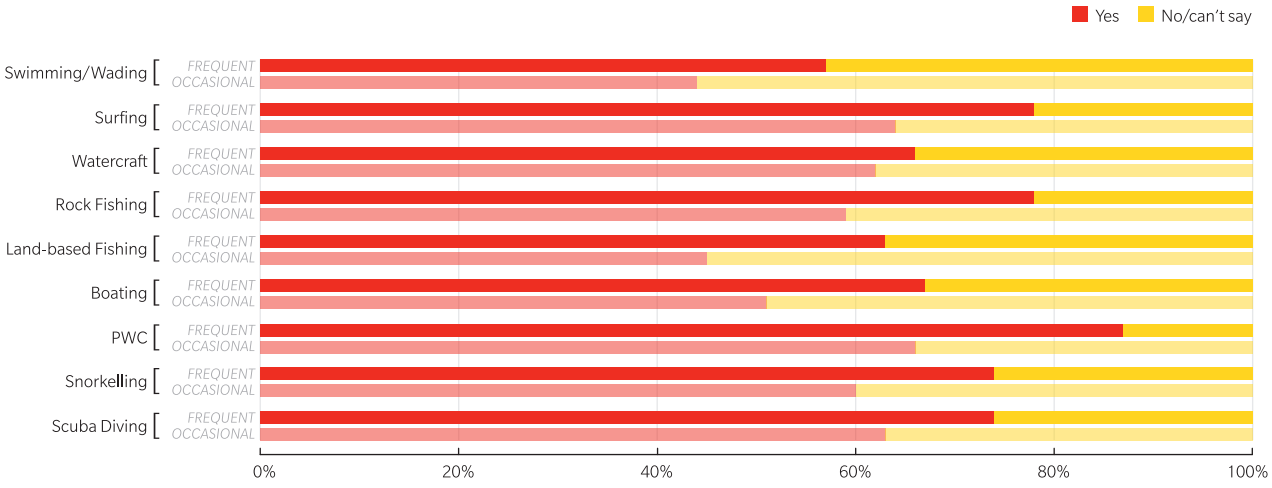


Figure 8

NCSS2020: THE ABILITY TO SWIM 50M IN THE OCEAN WITHOUT TOUCHING THE BOTTOM BY ACTIVITY, FREQUENT VS. OCCASIONAL PARTICIPANTS

Frequent participants report greater swimming ability than occasional participants, this is especially true for surfers and PWC users.

COASTAL SAFETY

HAZARD PERCEPTION

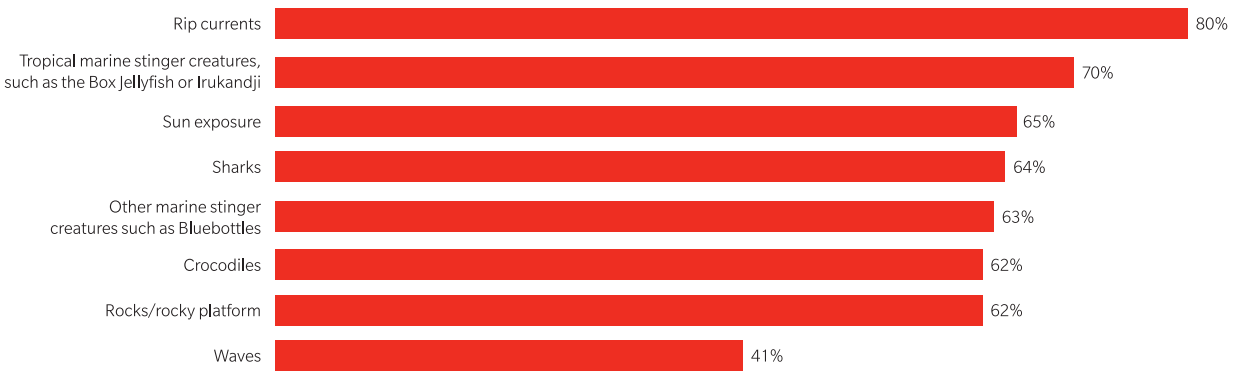


Figure 9

NCSS2020: COASTAL HAZARDS RATED EXTREMELY OR VERY HAZARDOUS

Rip currents remain the coastal hazard rated the most hazardous by Australians.

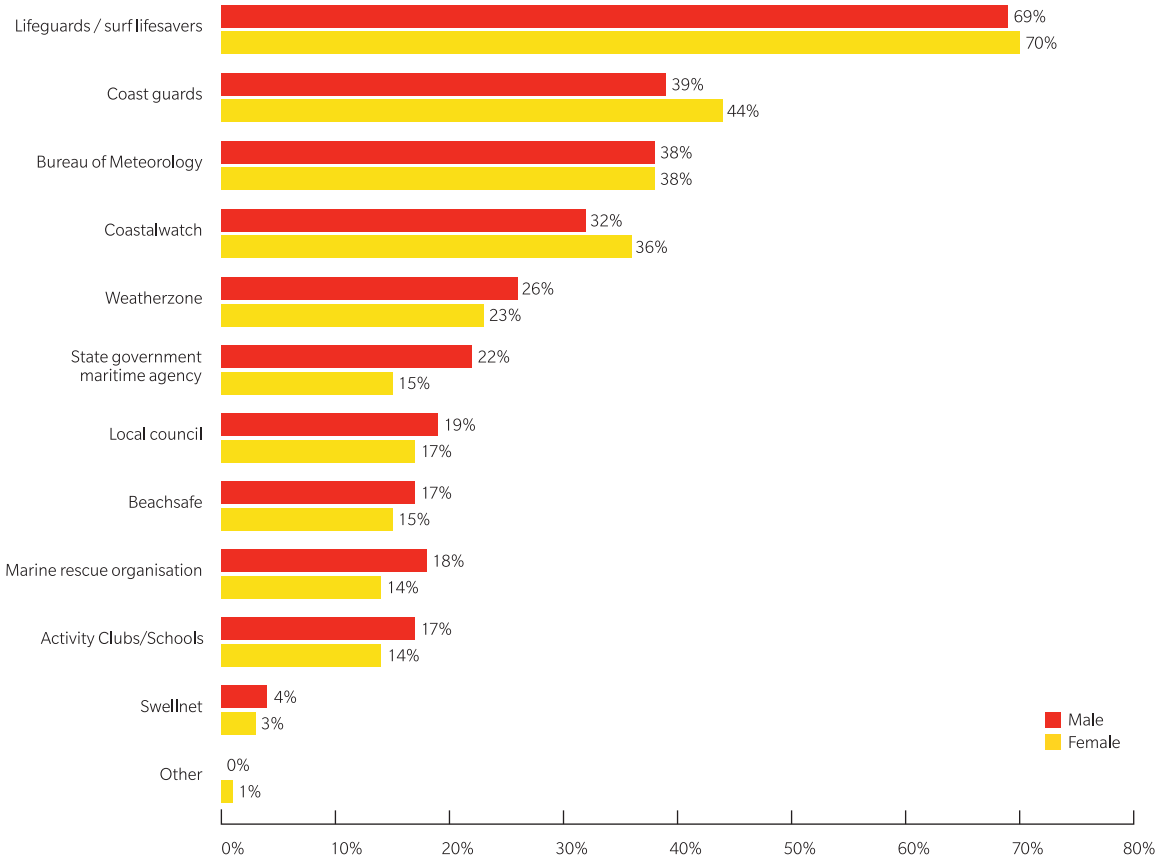


Figure 10

NCSS2020: WHICH AUTHORITY WOULD YOU TURN TO FOR COASTAL SAFETY INFORMATION?

Lifeguards and surf lifesavers are the most relied upon source for coastal safety information.

COASTAL SAFETY

STAYING SAFE & TAKING RISKS

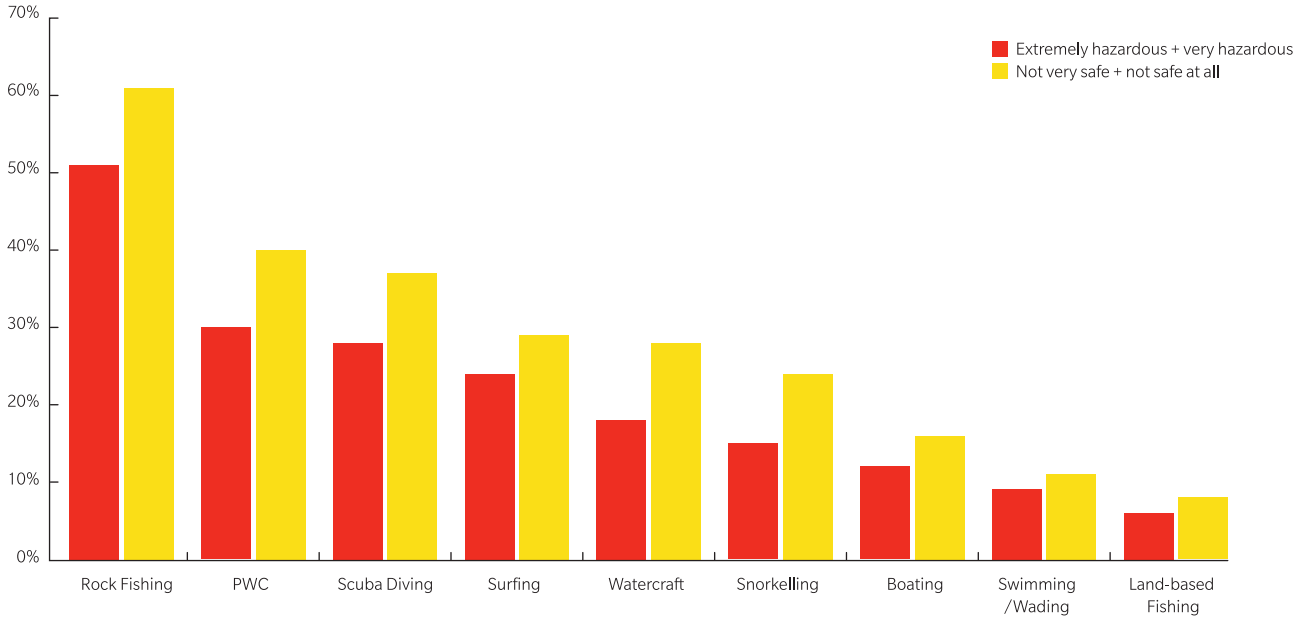


Figure 11

NCSS2020: COMPARING PERCEPTIONS: HAZARDOUS VS. NOT SAFE BY COASTAL ACTIVITY

This figure explores the contrasting perceptions surrounding whether an activity is considered not safe or hazardous.

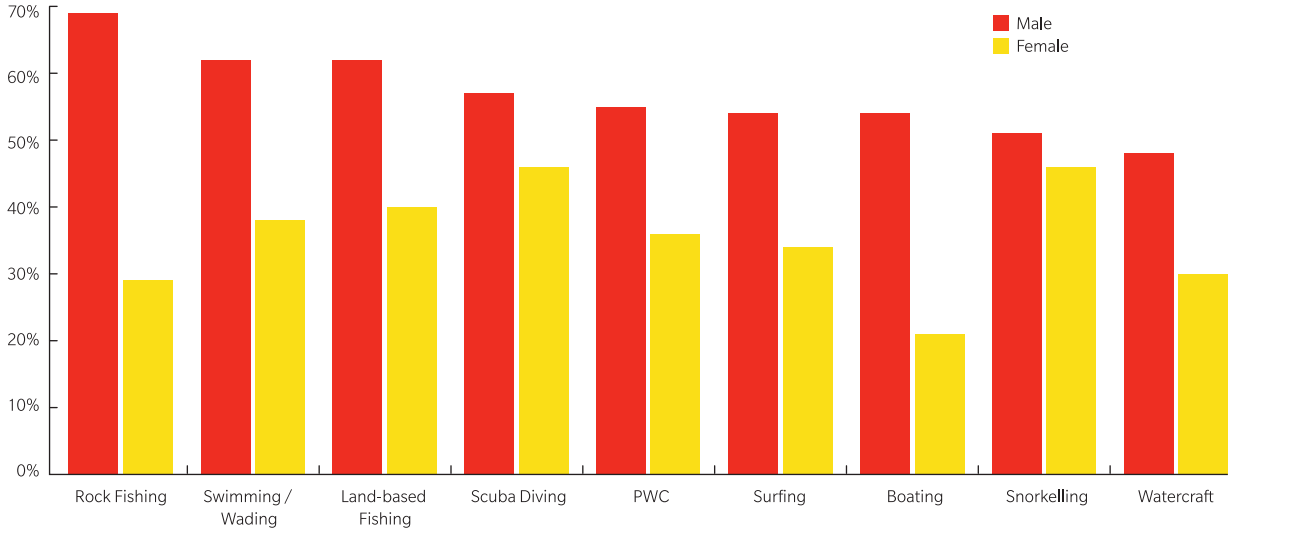


Figure 12

NCSS2020: PARTICIPANTS WHO BELIEVE THEY ARE EXPERIENCED ENOUGH TO TAKE SOME RISKS IN THEIR COASTAL ACTIVITY BY GENDER

Males continue to believe that they are experienced enough to take risks more than females across all coastal activities.

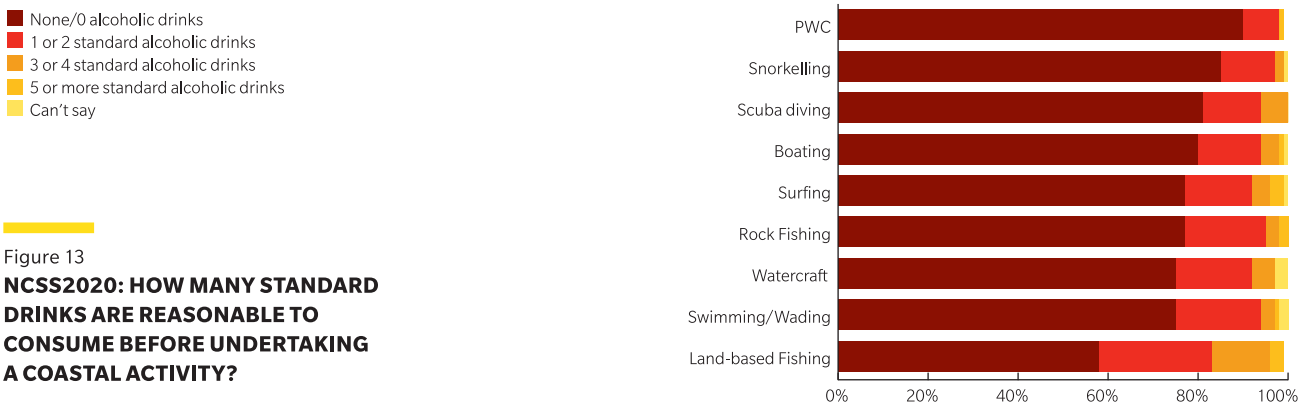


Figure 13

NCSS2020: HOW MANY STANDARD DRINKS ARE REASONABLE TO CONSUME BEFORE UNDERTAKING A COASTAL ACTIVITY?

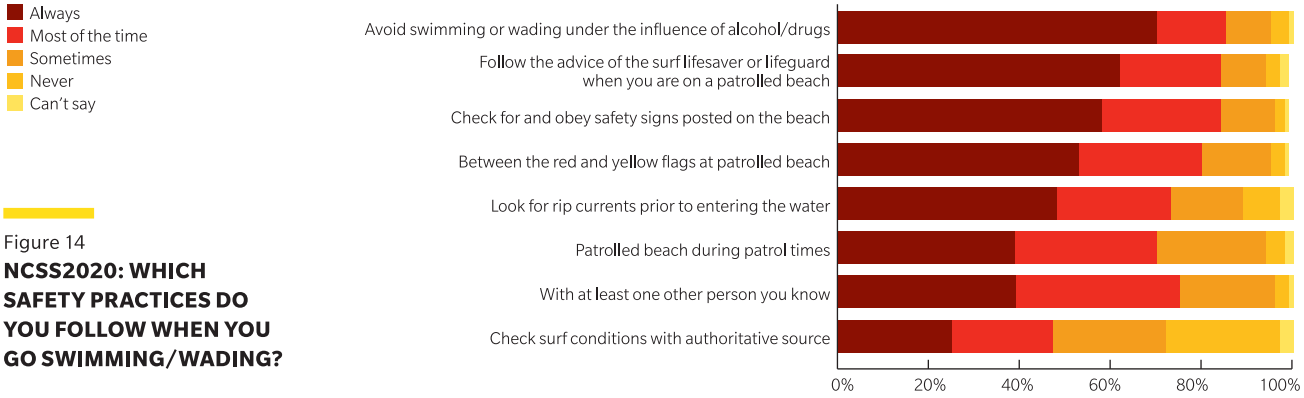


Figure 14

NCSS2020: WHICH SAFETY PRACTICES DO YOU FOLLOW WHEN YOU GO SWIMMING/WADING?

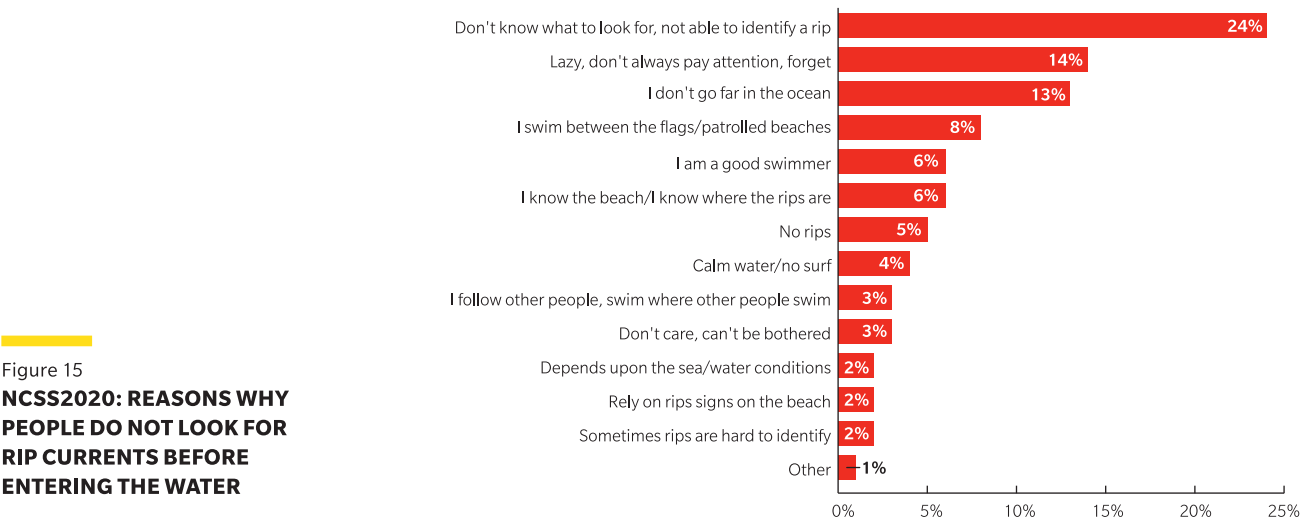


Figure 15

NCSS2020: REASONS WHY PEOPLE DO NOT LOOK FOR RIP CURRENTS BEFORE ENTERING THE WATER

FEATURE: MARINE STINGERS

The National Coastal Safety Survey (NCSS) reports one in six Australians have been stung by a marine stinger, mostly by bluebottles (Figure 18). Three out of four stings (77%) occurred along the eastern coast of Australia (Figure 18) and most occurred while swimming (74%, Figure 19). Lifesaving statistics (2009-20) report an average of 40,128 stings treated each year by surf lifesavers and lifeguards (Figure 16). While the presence of stingers and their movements can change with environmental variables (e.g. currents, wind and wave action) and due to behaviour (e.g. migration), the number of sting treatments given by lifesaving personnel appears to be increasing (Figure 16). This correlates with an increase in perceptions of marine stingers as a hazard within the Australian community since 2015 (Figure 17). A total of thirty per cent of respondents stings received treatment, and only forty-four per cent of these were treated by lifesaving services (Figure 19), indicating that true marine sting numbers are much higher than reported here.

Marine stings influence perceptions of beach recreation, particularly if those stung are tourists or infrequent beachgoers. An innovative project with UNSW Sydney and BoM will work to develop a prediction tool to enhance beach experience by increasing hazard awareness and enabling better preparation for coastal visitors. The ability to predict conditions when stinger risk is high will have social, environmental and economic benefits by informing beachgoers, lifesaving services and coastal communities.

By mitigating impacts of marine stingers, we hope to reduce risk perception and enhance the coastal experience for coastal visitors.

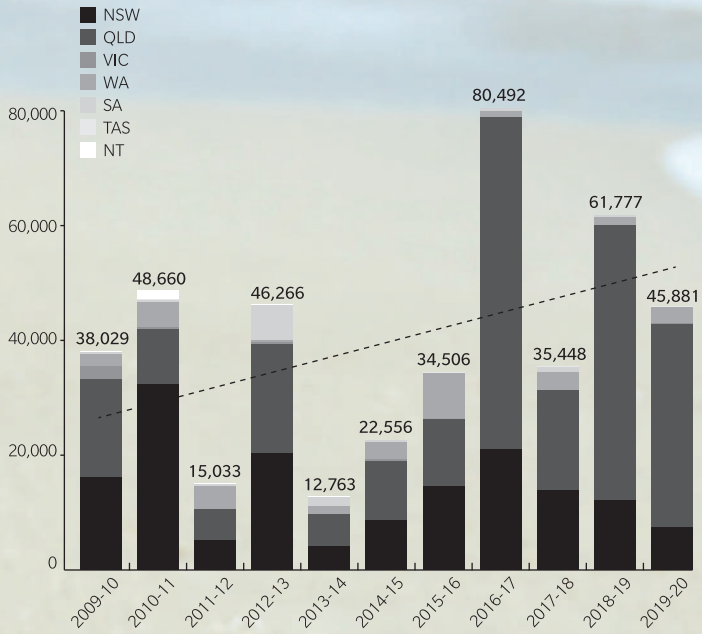


Figure 16

2009-20 STINGS TREATED NATIONALLY REPORTED BY STATE LIFESAVING SERVICES

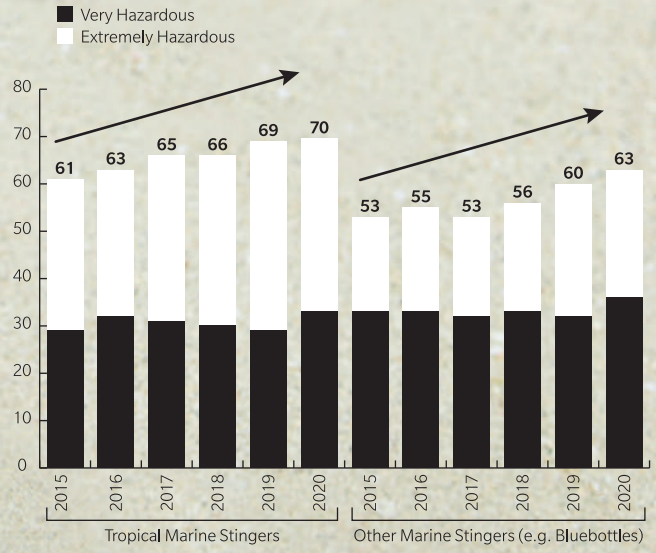


Figure 17

NCSS2015-20: 5-YEAR PERCEPTIONS OF MARINE STINGER HAZARDS

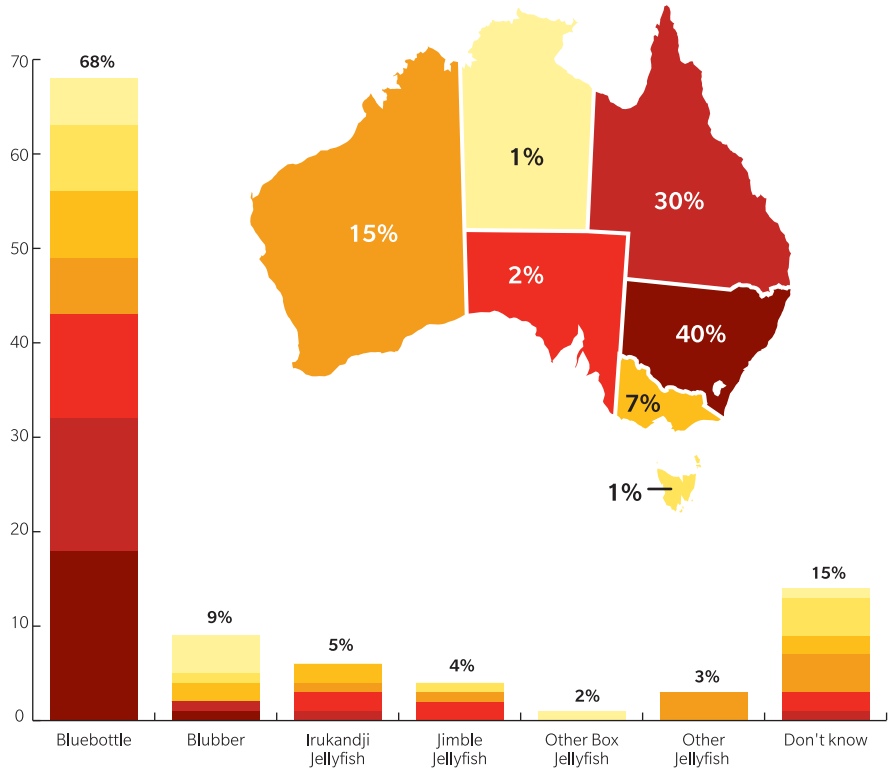


Figure 18

NCSS2020: WHICH MARINE STINGER WERE YOU STUNG BY AND WHERE?

Majority of stings (77%) occurred along the eastern coast of Australia with bluebottles, responsible for 68% of marine stings. A small proportion of reported stings occurred overseas (4%). *NB: state colours correspond to figure.*

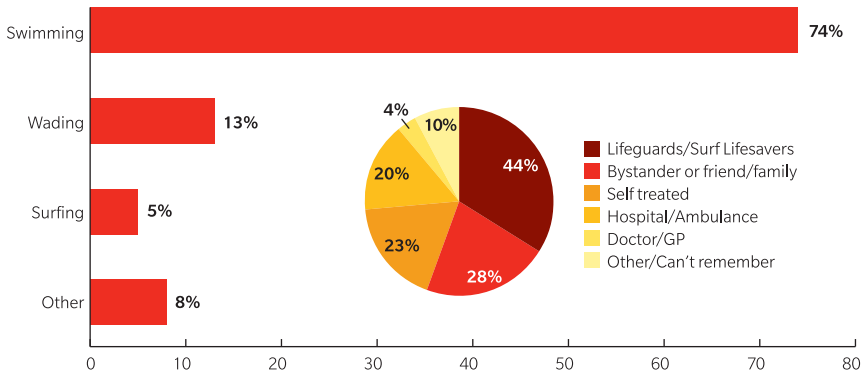


Figure 19

NCSS2020: WHAT ACTIVITY WERE YOU PARTICIPATING IN WHEN YOU WERE STUNG AND WHO TREATED YOUR STING?

17%
HAVE BEEN STUNG BY A MARINE STINGER

30%
RECEIVED TREATMENT FOR THEIR STING

44%
TREATED STINGS WERE TREATED BY LIFESAVING PERSONNEL

77%
STINGS ALONG EAST COAST OF AUSTRALIA

68%
MARINE STINGS WERE BY A BLUEBOTTLE

CAPABILITY

SECTION TWO

7,731 RESCUES

47,304 PROFICIENT MEMBERS

1,260,906 VOLUNTEER PATROL HOURS

1,140 IRBs

321 Clubs

202 RWC

CAPABILITY

Surf Life Saving (SLS) has significant capability to provide coastal surveillance patrols and aquatic search and rescue (SAR) operations, working in close partnership with police and other emergency services. These services are expertly delivered and managed by the 40,170 Bronze Medallion holders and 7,134 Surf Rescue Certificate holders (totalling 47,304 proficient surf lifesavers) through the 321 Surf Life Saving Clubs. This is alongside over 1,000 full time, seasonal and casual lifeguards. Surf lifesavers and lifeguards receive specialised training to industry best-practice standards under the Australian Qualifications Framework ensuring the community receives consistent service of the highest quality across the nation.

Radio communications provide support to all services via SLS coastal radio networks or government radio networks, which are connected to SLS communication and operation centres. These centres provide operational support, data management and when required coordinate the SLS emergency response system.

VOLUNTEER SURF LIFESAVERS

Our volunteer surf lifesavers are provided with fit-for-purpose equipment designed to operate in the hazardous and challenging conditions that SLS services encounter. Surf lifesavers utilise thousands of rescue boards and rescue tubes mostly around the red and yellow flagged patrol areas. They are supported by 1,140 inflatable rescue boats (IRB), allowing surf lifesavers to quickly navigate the surf zone and inshore environment.

Roving surveillance patrols that actively monitor stretches of coastline near a primary patrolled areas are vital to the SLS drowning prevention strategy. Surf lifesavers undertake these patrols using 410 side-by-side (SSV) and 4WD vehicles. Similarly, aerial surveillance can be undertaken through the fleet of 143 Unmanned Aerial Vehicles (UAVs).

SLS services extend beyond the red and yellow flags to provide surveillance and emergency response in isolated and hazardous coastal areas. Agile craft such as 202 rescue water craft (RWC) and six jet rescue boats (JRBs) allow surf lifesavers to access white-water areas such as coastal bars and rocky coastlines.

A fleet of eight offshore rescue boats (ORBs) and eight rigid-hull inflatable boats (RIBs) further extend the SLS response capability providing longer range surveillance, blue-water rescue and SAR operations.

SURF LIFESAVERS ARE PROVIDED WITH FIT-FOR-PURPOSE EQUIPMENT DESIGNED TO OPERATE IN HAZARDOUS AND CHALLENGING CONDITIONS

AUSTRALIAN LIFEGUARD SERVICE

The Australian Lifeguard Service (ALS) is a national lifeguard provider of beach and pool lifeguard services to 65 local government councils and land managers across Australia. It is the largest supplier of professional lifeguards in Australia.

ALS operations are fully integrated into the 24-hour surf emergency response system and work with SLS's volunteer lifesaving services including the strategically located Westpac Lifesaver Rescue Helicopter Services.

ALS patrols provide a range of services, from single-day patrols during periods of peak attendance (i.e. public holidays) to 365-day services for local governments. They are a crucial component in offering a seamless service to the community during peak periods. Several councils around Australia operate internal lifeguard services. Statistics for those services have not been included in this report.

WESTPAC LIFE SAVER RESCUE HELICOPTERS

For rapid, isolated or complex rescues, eight Westpac Life Saver Rescue Helicopters provide aerial support to lifesaving services and further extend our surveillance and SAR capability. These important assets also support police and other emergency services in a range of emergency and disaster situations.

WESTPAC LIFE SAVER RESCUE DRONES

Providing more eyes in the sky, the 53 Westpac Life Saver Rescue Drones provide support to current lifesaving services while extending the boundary and capability of service delivery.

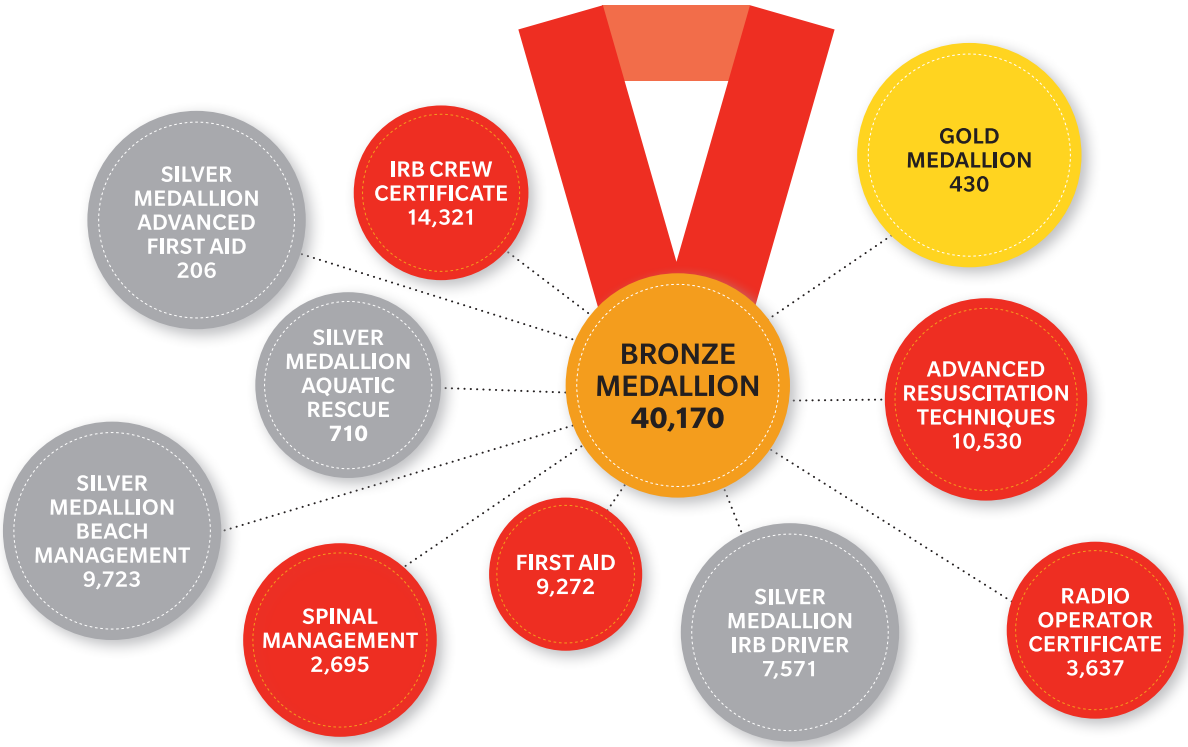


Figure 20

2019–20: QUALIFICATIONS HELD BY BRONZE MEDALLION HOLDERS

40,170 proficient Bronze Medallion holders also are proficient in nine other lifesaving awards, totalling over 59,000 additional lifesaving qualifications. This highlights the large amount of additional volunteer training our surf lifesavers undertake to ensure they are highly skilled first responders.

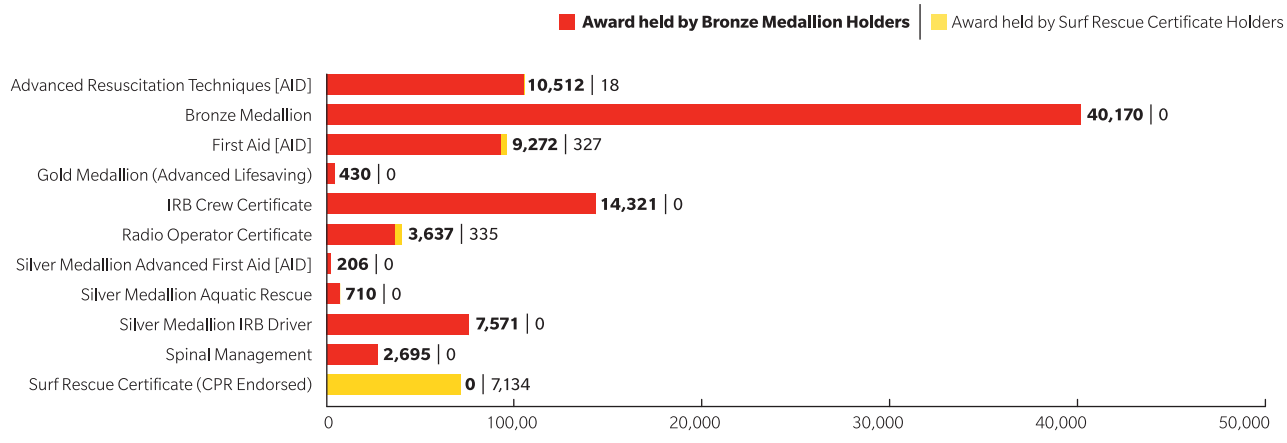


Figure 21

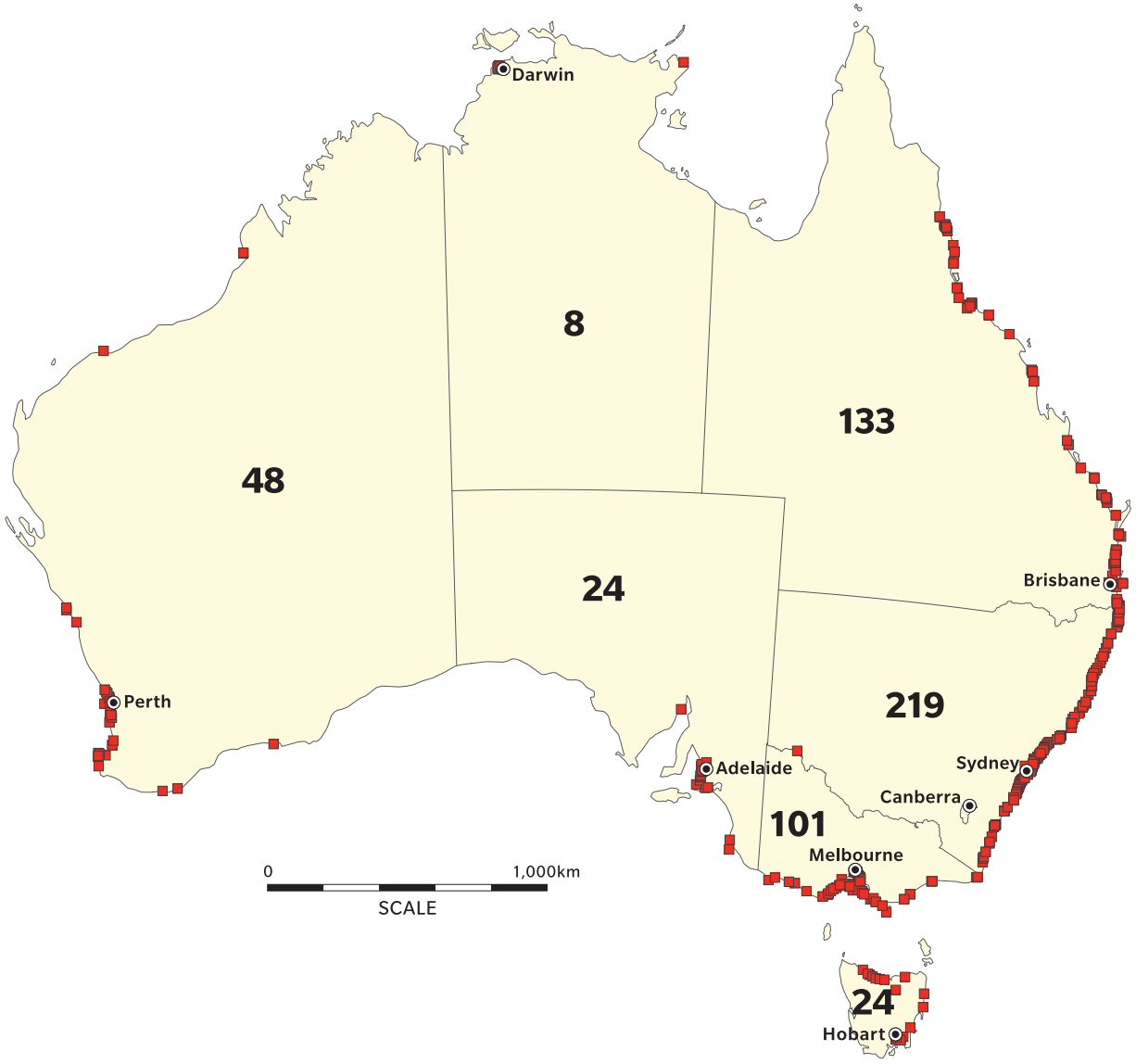
2019–20: TOTAL QUALIFICATIONS OF PROFICIENT LIFESAVERS

SURF LIFE SAVING SERVICES

Figure 22

2019–20: SURF LIFE SAVING SERVICES

There are 321 Surf Life Saving Clubs around Australia: 129 in New South Wales, 57 in Queensland, 57 in Victoria, 31 in Western Australia, 22 in South Australia, 22 in Tasmania and 3 in Northern Territory. The Australian Lifeguard Service provides 236 lifeguard services around Australia: 90 in New South Wales, 76 in Queensland, 44 in Victoria, 17 in Western Australia, 5 in Northern Territory, 2 in South Australia and 2 in Tasmania.



MEMBERSHIP CAPACITY

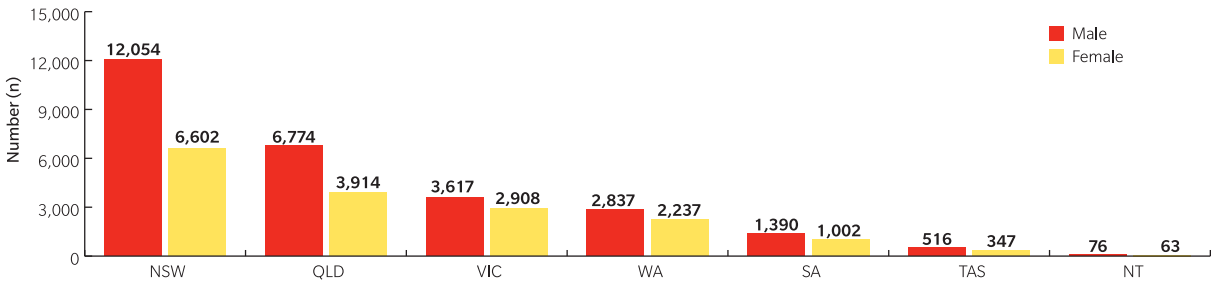


Figure 23

2019–20: PATROLLING MEMBERS

There were a total of 44,337 members who performed a patrol. This includes 8 unspecified gender.

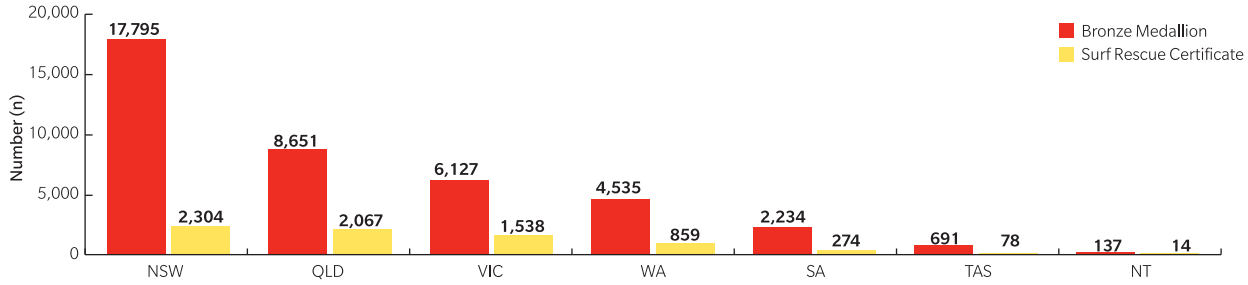


Figure 24

2019–20: PROFICIENT MEMBERS

There were a total of 40,170 proficient Bronze Medallion holders and 7,134 Surf Rescue Certificate holders.

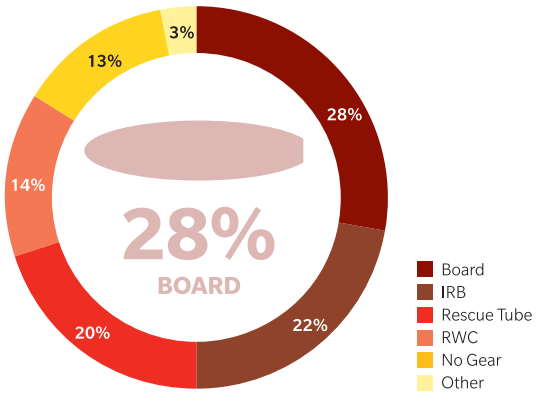
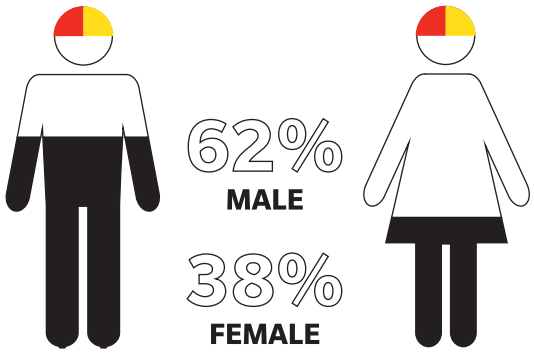


Figure 25

2019-20: EQUIPMENT USE IN RESCUES

2019-20: PATROLLING SURF LIFESAVERS

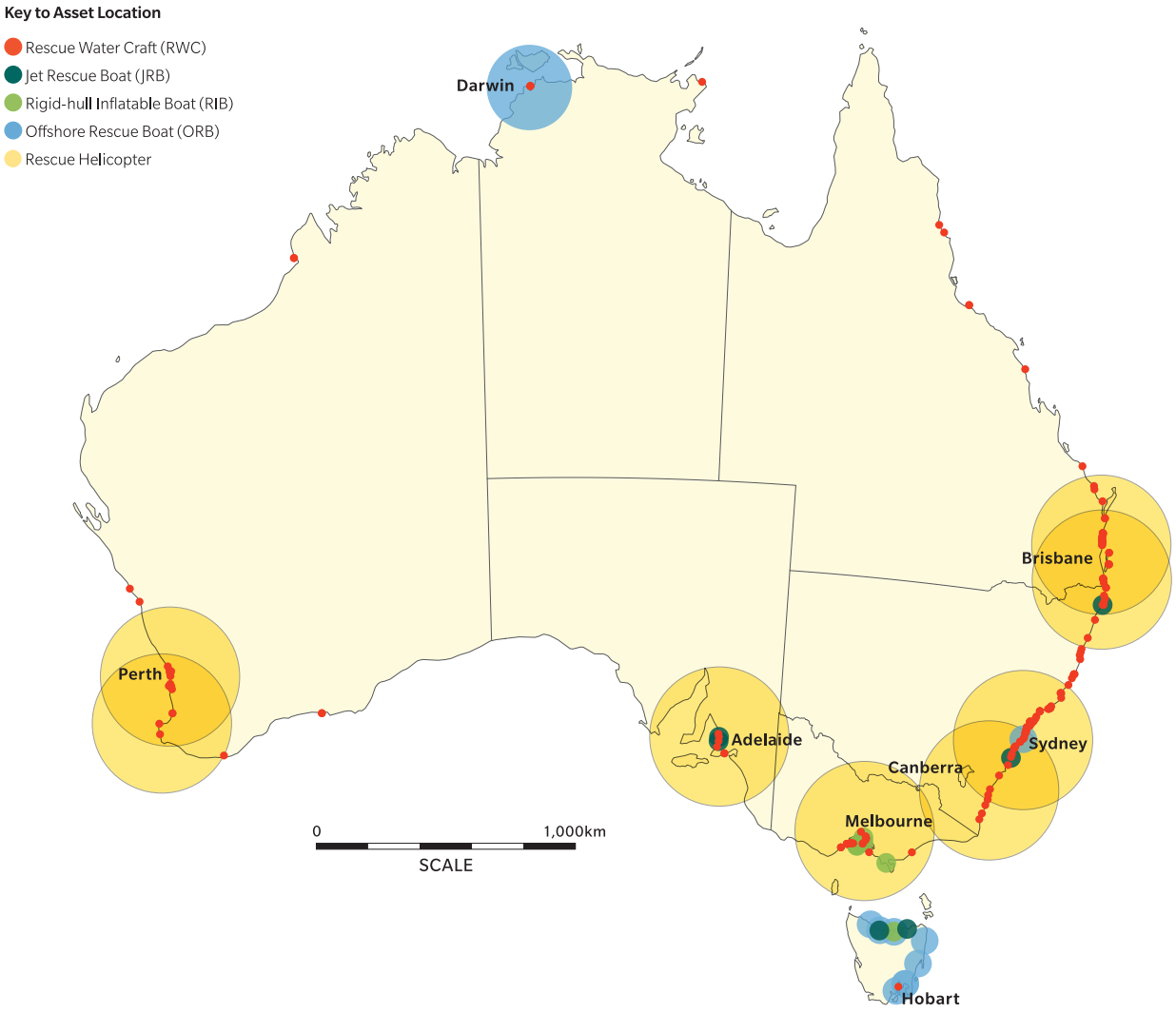


ASSET CAPABILITY

Figure 26

2019–20: SLS MAJOR ASSET LOCATION AND SERVICE RANGE

SLS maintains a fleet of 202 rescue water craft (RWC), as well as 6 jet rescue boats (JRB), 8 rigid-hull inflatable boats (RIB), 8 offshore rescue boats (ORB) and 8 rescue helicopters. Their locations and service ranges are depicted on this map.

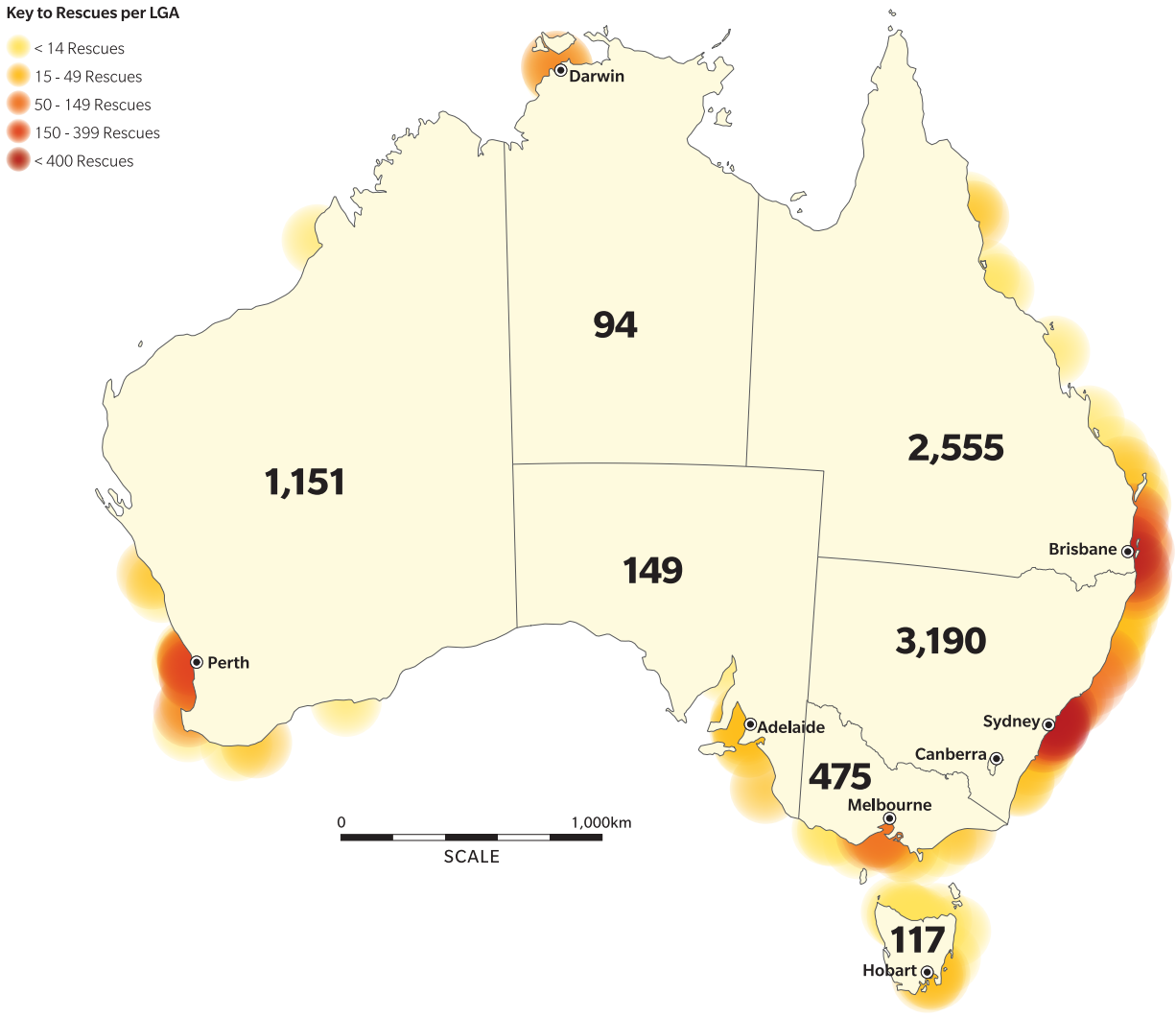


RESCUES

Figure 27

2019–20: RESCUES PER LOCAL GOVERNMENT AREA (LGA)

SLS lifesavers, lifeguards and lifesaving services performed 7,731 rescues across 118 LGAs around Australia.

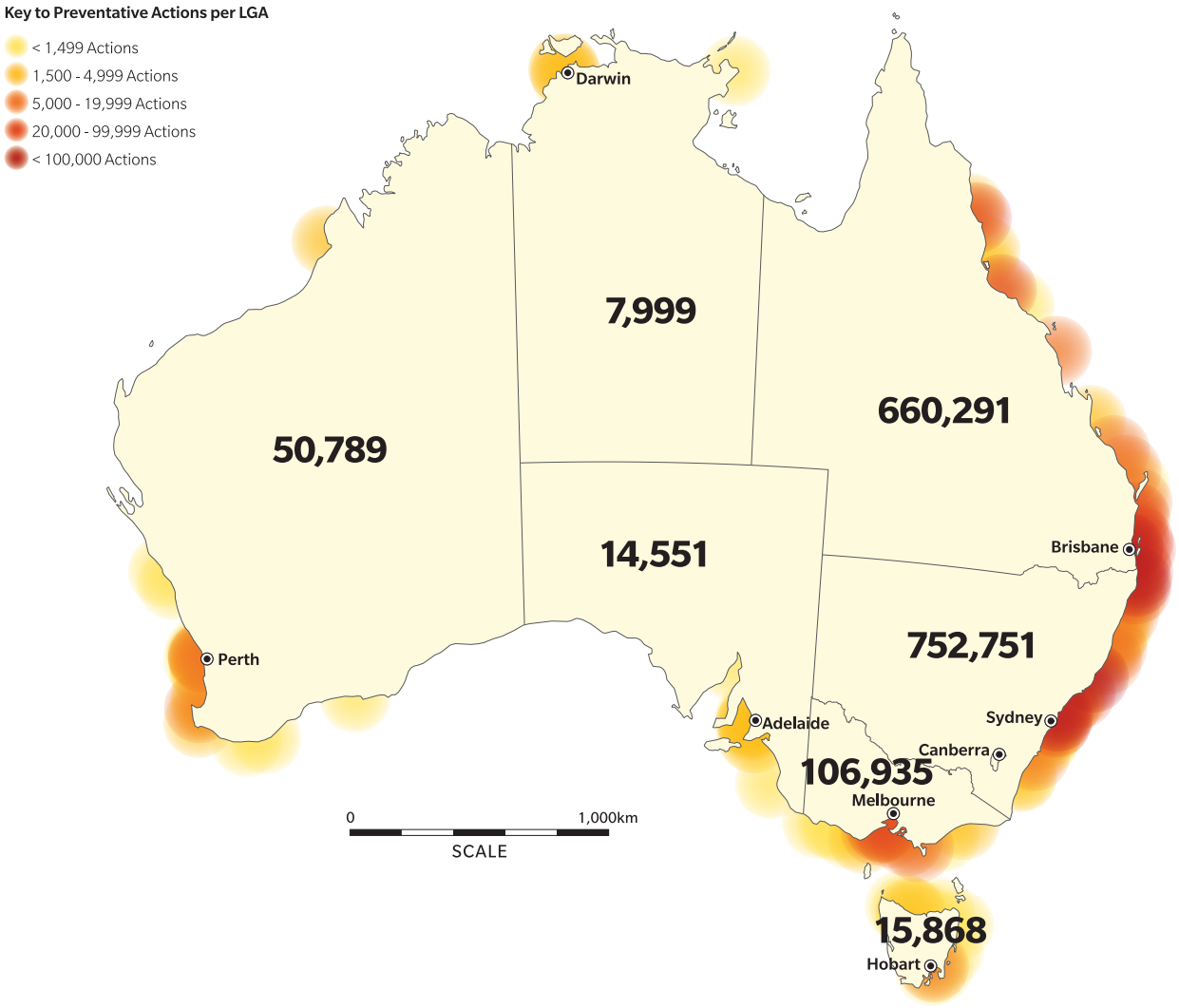


PREVENTATIVE ACTIONS

Figure 28

2019–20: PREVENTATIVE ACTIONS PER LOCAL GOVERNMENT AREA (LGA)

SLS lifesavers, lifeguards and lifesaving services performed 1,609,184 preventative actions across 118 LGAs around Australia.

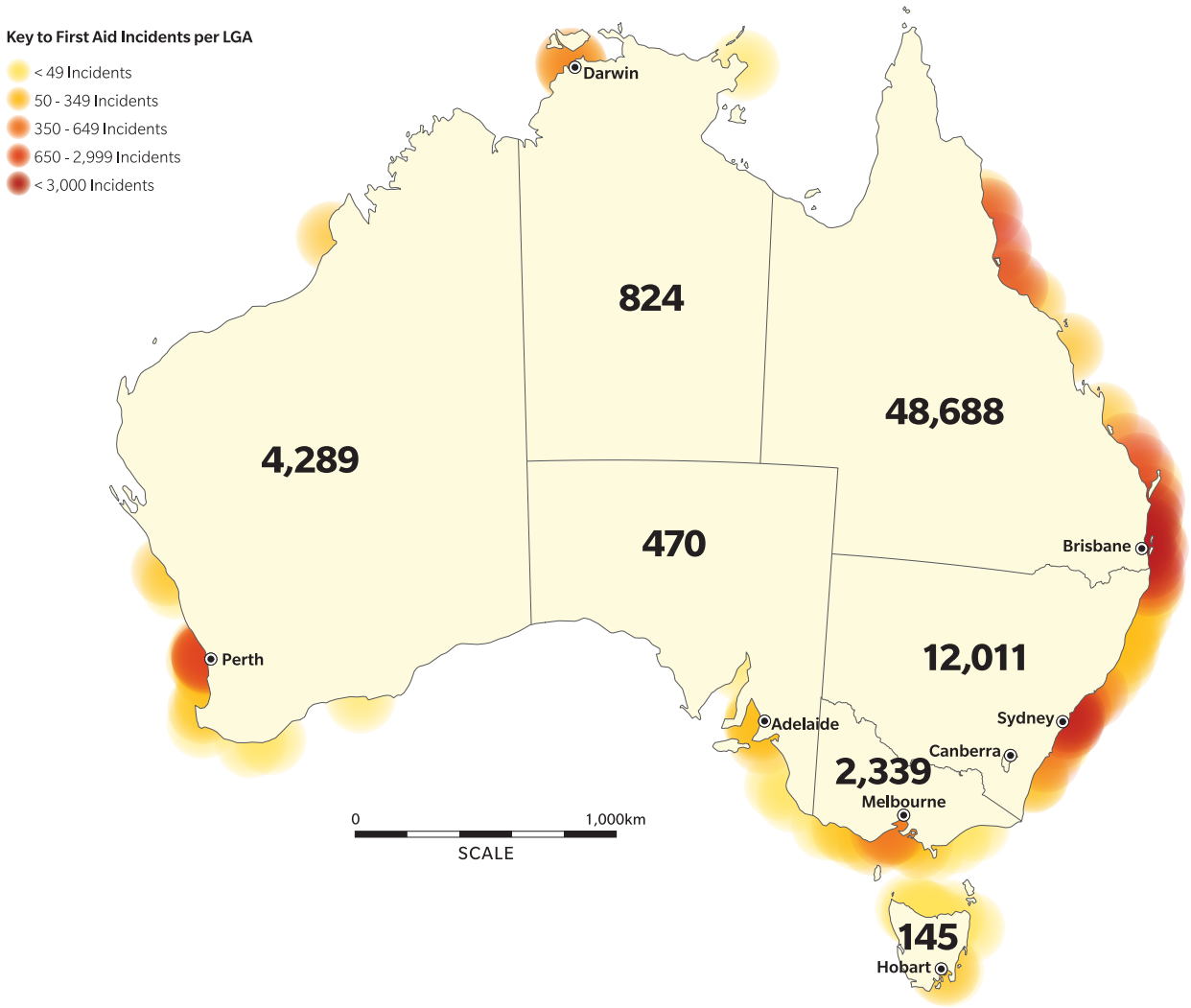


FIRST AID

Figure 29

2019–20: FIRST AID PER LOCAL GOVERNMENT AREA (LGA)

SLS lifesavers, lifeguards and lifesaving services performed 68,766 first aid treatments across 118 LGAs around Australia.



FEATURE: LIFEJACKETS

Correct and appropriate lifejacket use can significantly improve the outcome of coastal incidents, especially with respect to survival. 2019-20 recorded an increase in fatalities in boating, PWC and rock fishing activities (Figure 32), which all strongly recommend lifejacket use. Boating, PWC, rock fishing and watercraft are recreational activities for which lifejacket use is recommended and here we explore associated behaviours, perceptions and fatalities. The NCSS2020 showed that most boaters and PWC users own a lifejacket and a significant proportion always wear it (Figure 30). While not all activity participants always wear their lifejacket (Figure 30 and 31), this number is increasing, except for PWC users (Figure 31). Frequent watercraft and rock fishers are more safety-conscious with much higher proportions wearing lifejackets (Figure 30) – highlighting occasional users as a high-risk user group.

The majority of fatal rock fishing (80%) and watercraft (87%) incidents were not wearing a lifejacket (this number could be higher with lifejacket use unknown for many cases). On the other hand, half of all PWC-related deaths (50%) were wearing a lifejacket (Figure 33). This suggests that lifejackets may have been incorrectly fitted, sized or poorly maintained, but could also indicate the influence of other factors such as alcohol or drugs, or other dangerous behaviours e.g. craft operation at high speeds.

These results emphasise the importance of wearing lifejackets while participating in these activities and confirm the need for further research into this focus area.

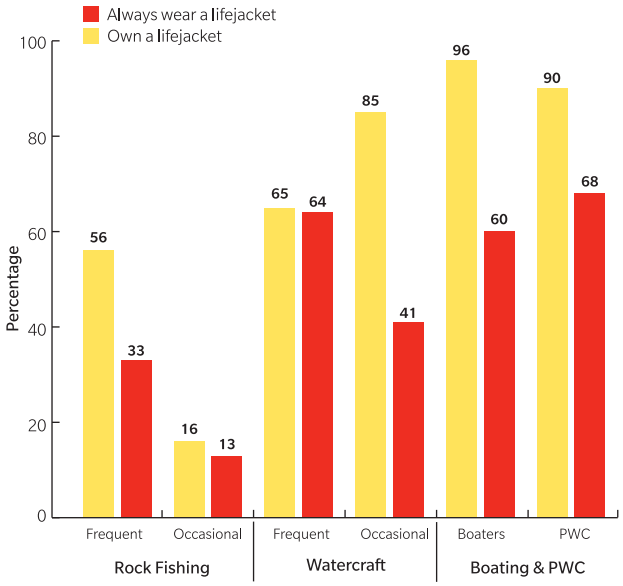


Figure 30

NCSS2020: LIFEJACKET USE BY ROCK FISHING, WATERCRAFT, BOATING AND PWC PARTICIPANTS

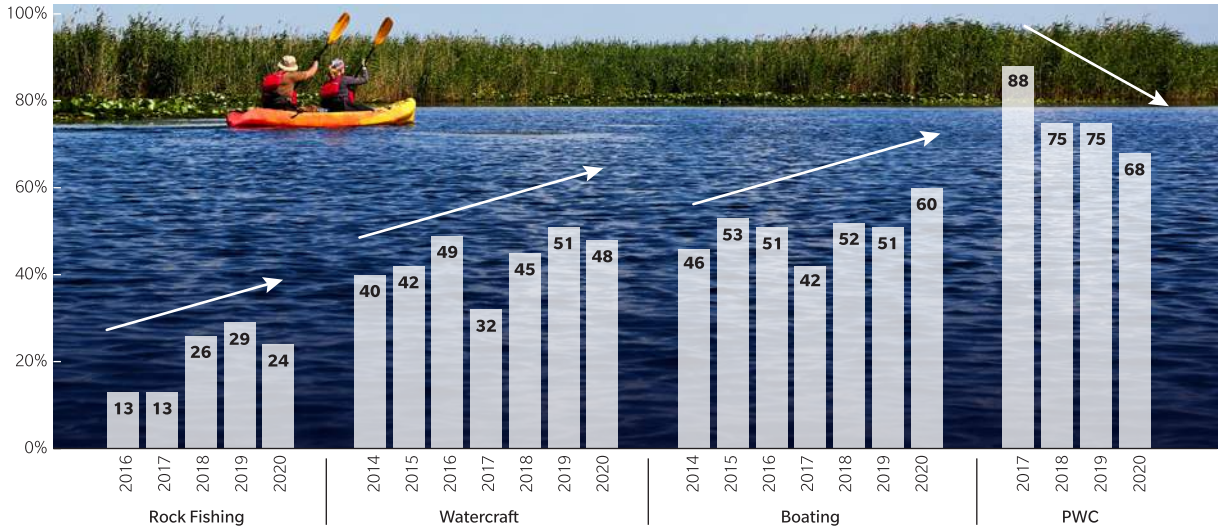


Figure 31

2014-20: LIFEJACKET USE AND BEHAVIOURAL CHANGE OVER TIME

Percentage of survey respondents who report to always wear a lifejacket or buoyancy aid when participating in these activities.

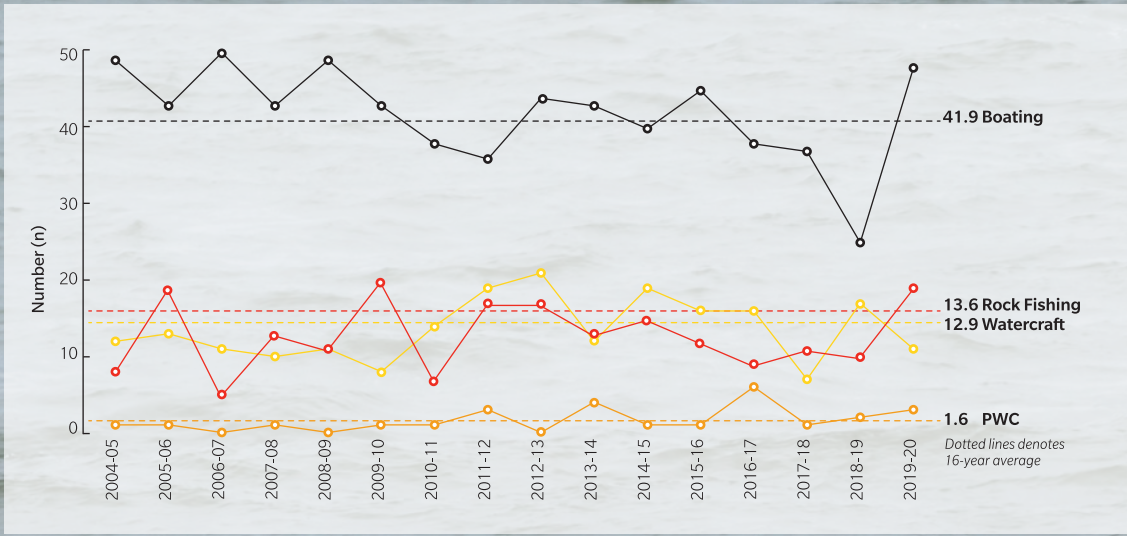


Figure 32

FATAL COASTAL INCIDENTS COMPARED TO 16-YEAR AVERAGE FOR ROCK FISHING, WATERCRAFT, BOATING AND PWC ACTIVITIES

Dotted line denotes 16-year average.

13%

OCCASIONAL ROCK FISHERS ALWAYS USE A LIFEJACKET

85%

OCCASIONAL WATERCRAFT USERS OWN A LIFEJACKET, BUT ONLY

41%

ALWAYS WEAR IT

4%

FATAL ROCK FISHING INCIDENTS WERE WEARING A LIFEJACKET

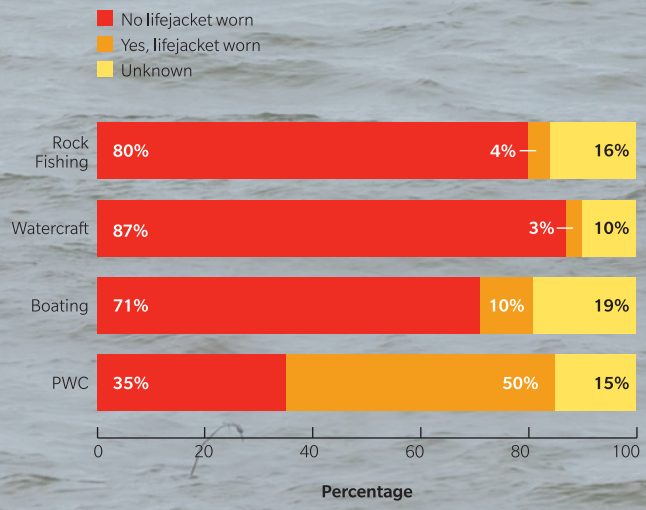
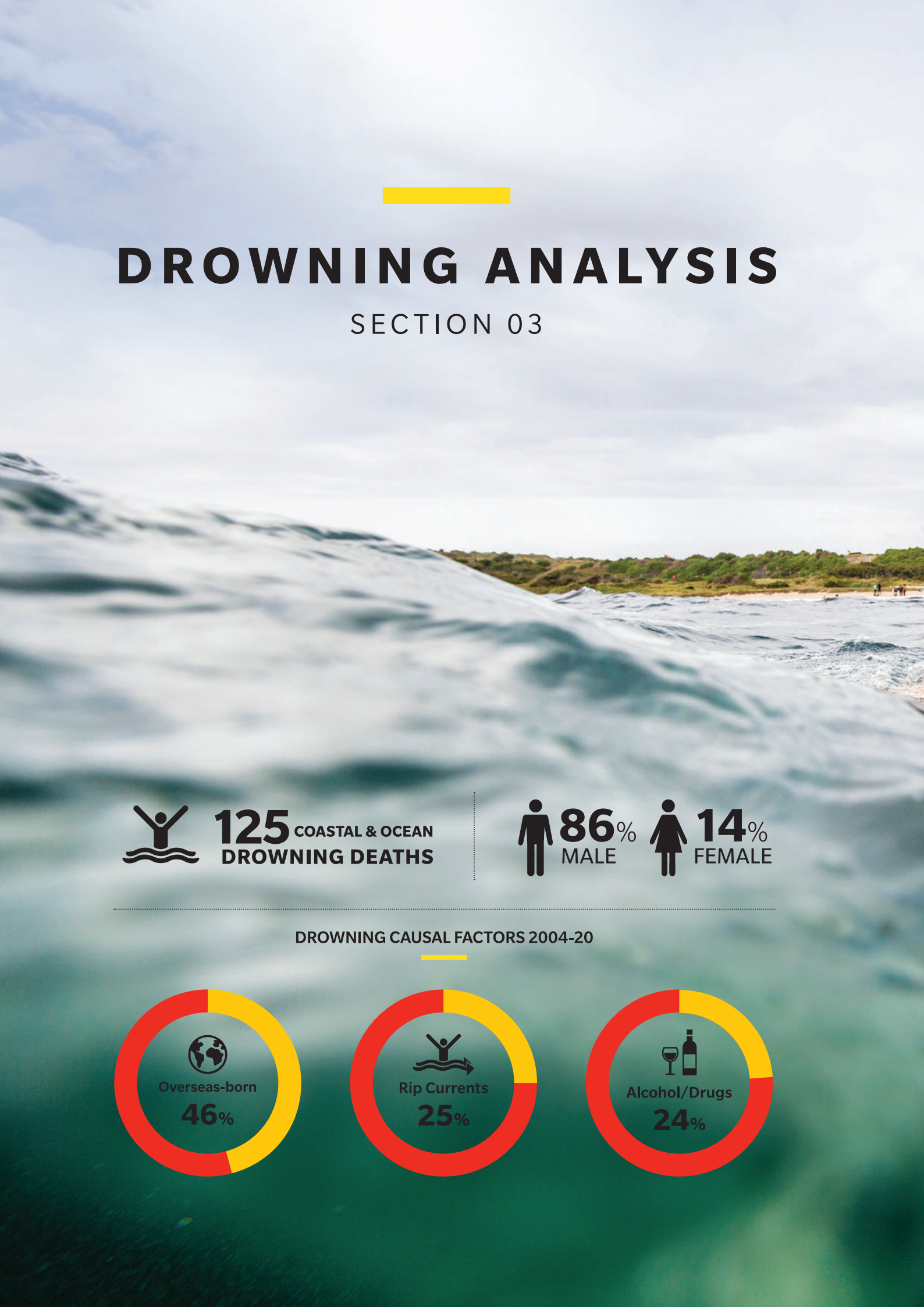


Figure 33

2004-20: PROPORTIONAL LIFEJACKET USE IN FATAL ROCK FISHING, WATERCRAFT, BOATING & PWC INCIDENTS

DROWNING ANALYSIS

SECTION 03



125 COASTAL & OCEAN DROWNING DEATHS

86% MALE **14%** FEMALE

DROWNING CAUSAL FACTORS 2004-20


SRDOBN

NATIONAL DROWNING & FATALITY OVERVIEW

2019-20: YEAR IN REVIEW

During 2019-20, Australia experienced unprecedented extremes from floods and bushfires to the ongoing global pandemic. These challenges have had dramatic impacts on tourism and travel (domestic and international) and saw restrictions placed on how and where people could use the coast. As the uncertainty continues and coastal recreation evolves accordingly, ongoing monitoring and research is needed to ensure coastal safety practices remain relevant.

In 2019-20, there were 125 coastal and ocean drowning deaths recorded on the Australian coast. For the first time since SLSA began collecting data, boating and PWC activity recorded the highest number of drowning deaths, suggesting that this year people changed how they recreated on the coast. A further 110 other fatalities were also recorded, 69 of these unintentional. This equates to 235 fatal coastal incidents, with almost one in two fatal incidents being non-drowning related. SLSA has been reporting other coastal fatalities since 2017 to enhance our understanding of their impact on lifesaving services and the greater Australian community.

All coastal incidents, resulting in the loss of life or any long-term injury, have devastating impacts to families, friends and communities, including lifesaving personnel and other first responders. Involvement in any major rescue, trauma or fatal event can create enduring financial and social impacts on the health and well-being of the community and of lifesaving personnel. As Australia's peak coastal safety authority, surf lifesavers respond to all incidents that occur on the coast.

Research is crucial for understanding why and how incidents occur and provides evidence to guide future prevention or mitigation strategies and inform allocation of resources to appropriately support lifesaving services and the Australian community.

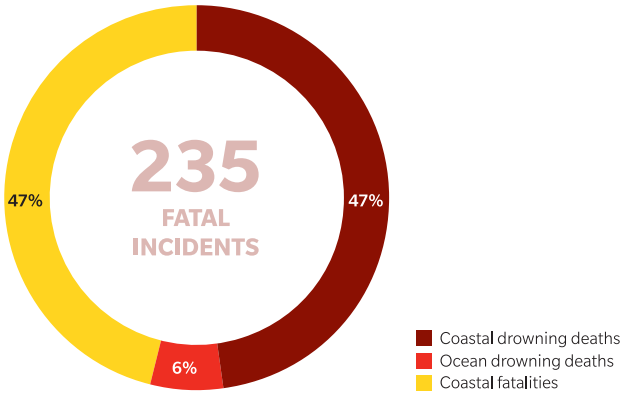
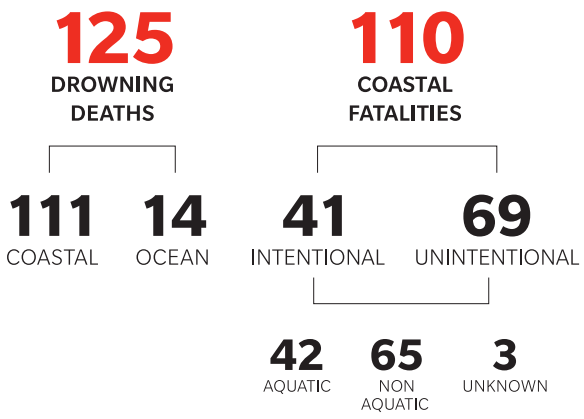


Figure 34
2019-20: OVERVIEW OF FATAL COASTAL & OCEAN INCIDENTS



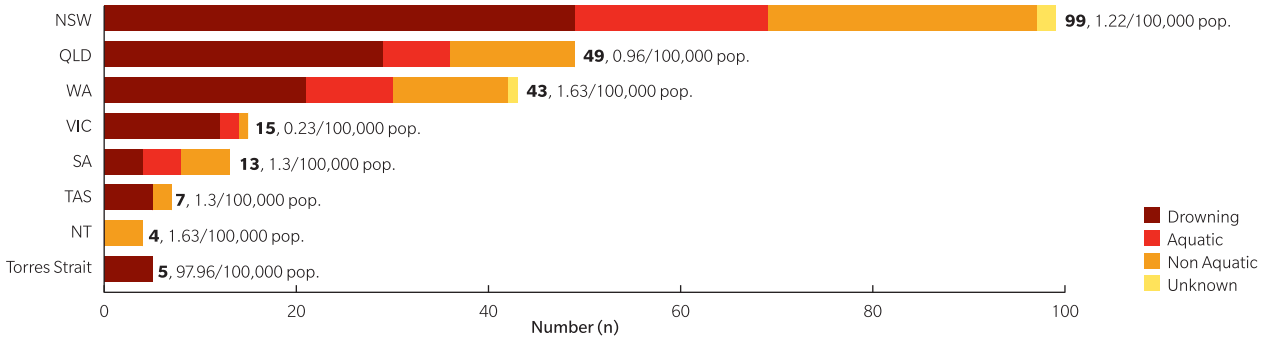


Figure 35
2019-20: OVERVIEW OF FATAL COASTAL & OCEAN INCIDENTS AND MORTALITY RATES BY STATE

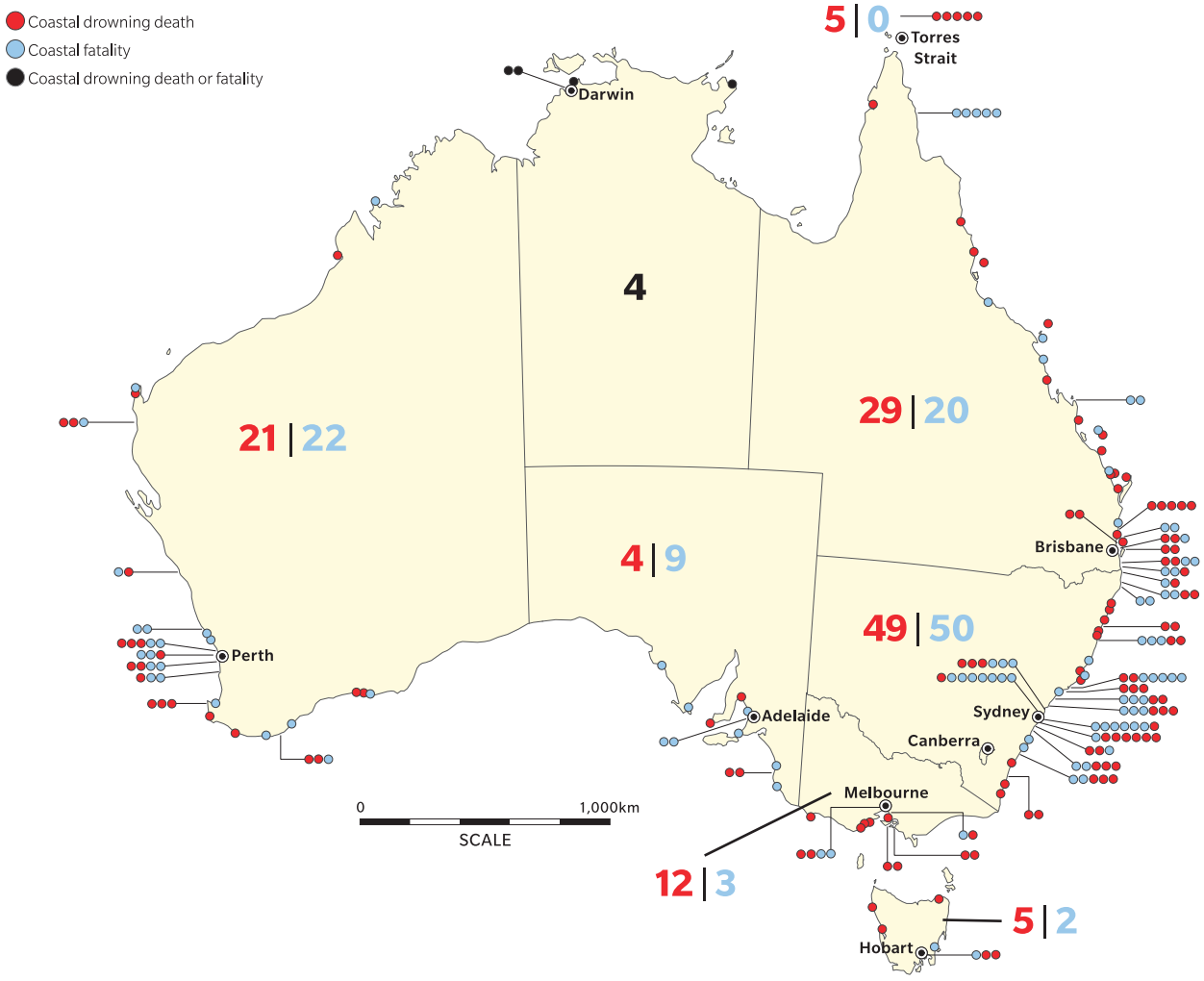


Figure 36

2019-20: COASTAL DROWNING DEATHS AND COASTAL FATALITIES BY STATE

In 2019-20 there were 125 coastal and ocean drowning deaths and 110 coastal fatalities (seven incidents had unknown locations). Red and blue numbers indicate drowning death and coastal fatality numbers respectively per state. Black numbers indicate both drowning death and fatality numbers combined.

2019-20: TOP 10 LOCAL GOVERNMENT COASTAL BLACKSPOTS

A blackspot is an area where a concentration of incidents are recorded and have a high probability/risk of ongoing reoccurrence. These areas recorded the highest numbers of fatal coastal incidents in 2019-20.

NSW: Port Stephens (9), Wollongong (6), National Parks and Wildlife Services (6), Northern Beaches (5), Shoalhaven (5) and Kempsey (5).

QLD: Gold Coast (7), Sunshine Coast (6) and Lockhart River (5).

Torres Strait: (5).

WA: Parks and Wildlife Services (7).

NATIONAL DROWNING OVERVIEW

2019-20: YEAR IN REVIEW

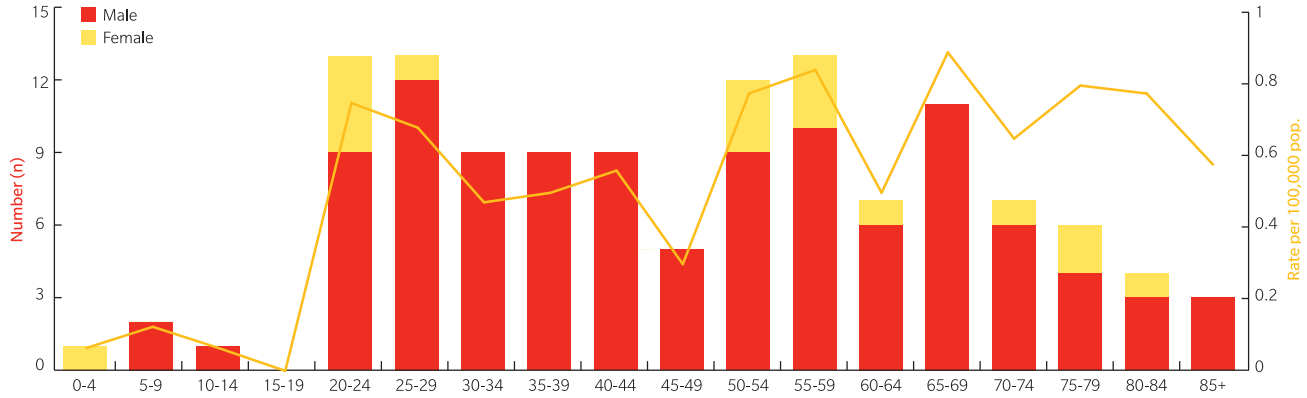


Figure 37

2019–20: COASTAL AND OCEAN DROWNING DEATHS BY AGE AND GENDER (N=125)

The highest number of drowning deaths were recorded for individuals between 20-29 years old and the 55-59 year old age group. 65-69 year olds recorded highest mortality rate (0.89/100,000 pop.). Overall 86% drowning deaths were male (n=108).

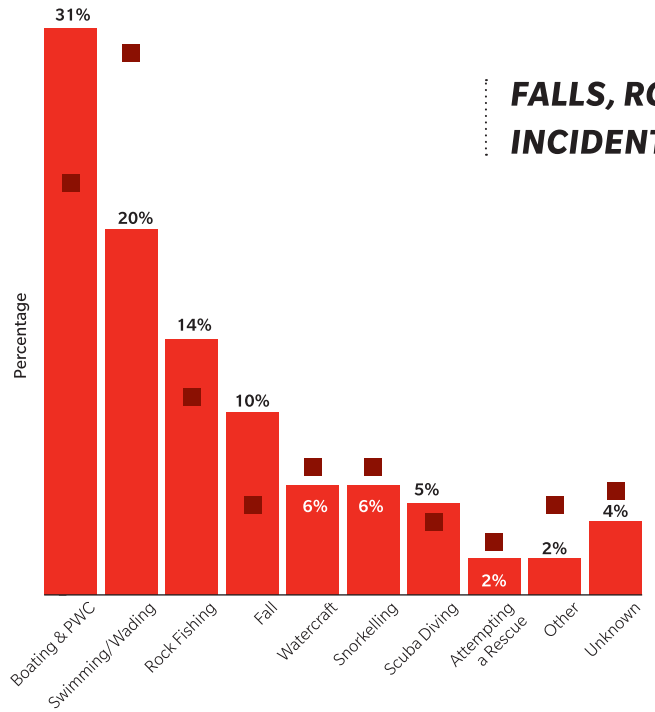


Figure 38

2019-20: COASTAL AND OCEAN DROWNING DEATHS BY ACTIVITY (N=125)

Boating & PWC activities recorded the most drowning deaths (n=39), followed by swimming/wading (n=25), rock fishing (n=18) and falls (n=12). Dark red squares (■) indicate 16-year average.

FALLS, ROCK FISHING, BOATING & PWC INCIDENTS INCREASED IN 2019-20

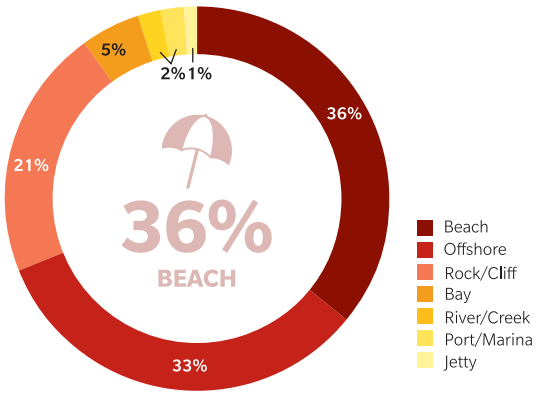


Figure 39

2019-20: COASTAL AND OCEAN DROWNING DEATHS BY LOCATION (N=125)

Most drowning deaths occurred at a beach (n=45), then offshore (n=41) and rock/cliff (n=26) locations.

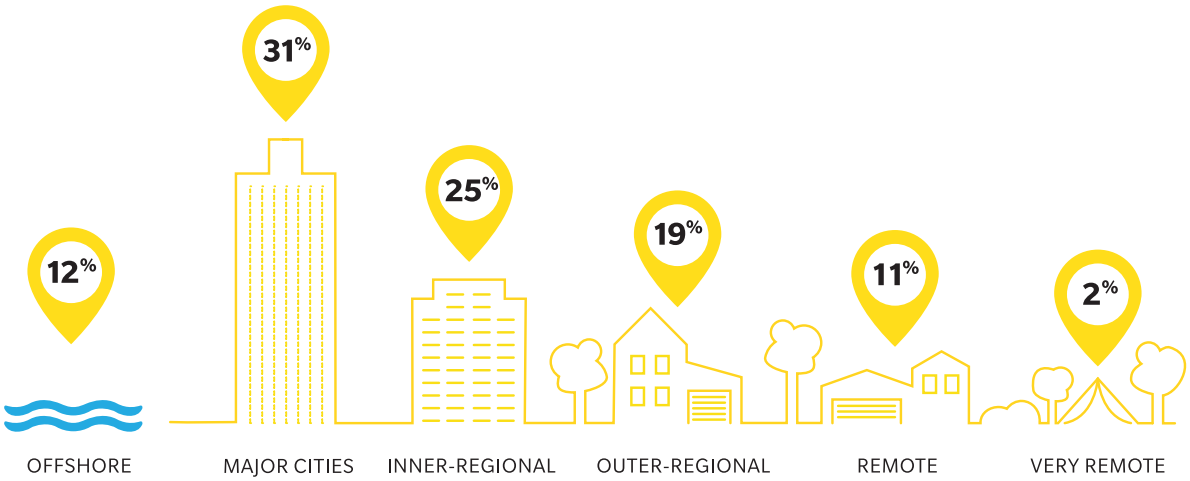


Figure 40

2019–20: REMOTENESS CLASSIFICATION OF DROWNING LOCATIONS (N=125)

One third of drowning deaths occurred in major cities (n=39), followed by inner (n=31) and outer-regional (n=24) locations. The 'remoteness classification' of an incident location was coded to the Australian Statistical Geographic Standard Remoteness Areas.

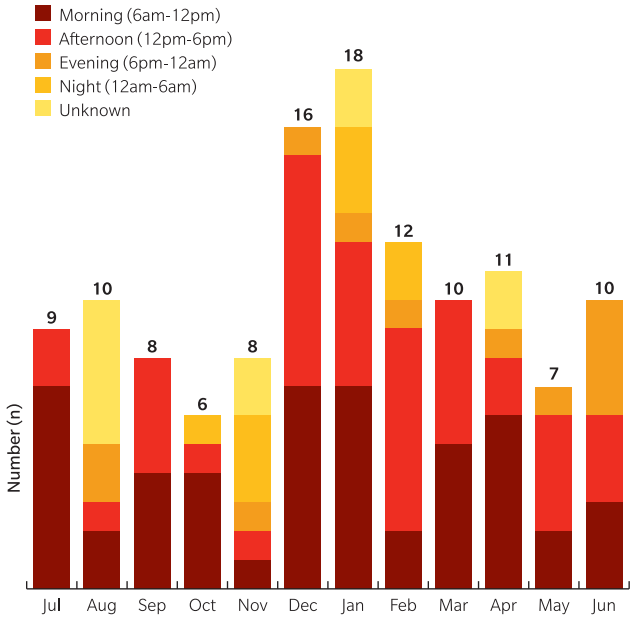


Figure 41

2019-20: COASTAL AND OCEAN DROWNING DEATHS BY MONTH AND TIME OF DAY (N=125)

Most drowning deaths (n=46, 37%) happened over summer (Dec-Feb). Of these summer incidents, most happened in the afternoon (n=20) and the morning (n=16).

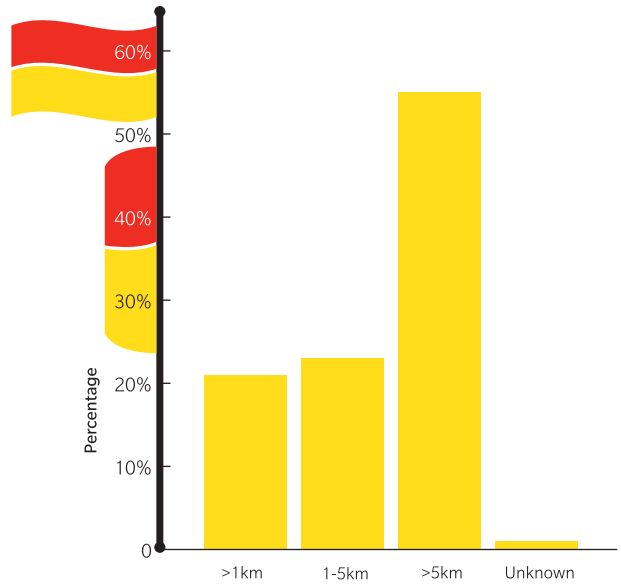


Figure 42

2019-20: DISTANCE FROM DROWNING LOCATION TO A LIFE SAVING SERVICE (N=125)

Over half of 2019-20 drowning deaths occurred greater than 5km from a surf life saving service (n=69, 55%).

NATIONAL DROWNING OVERVIEW

2004–20: 16-YEAR REVIEW

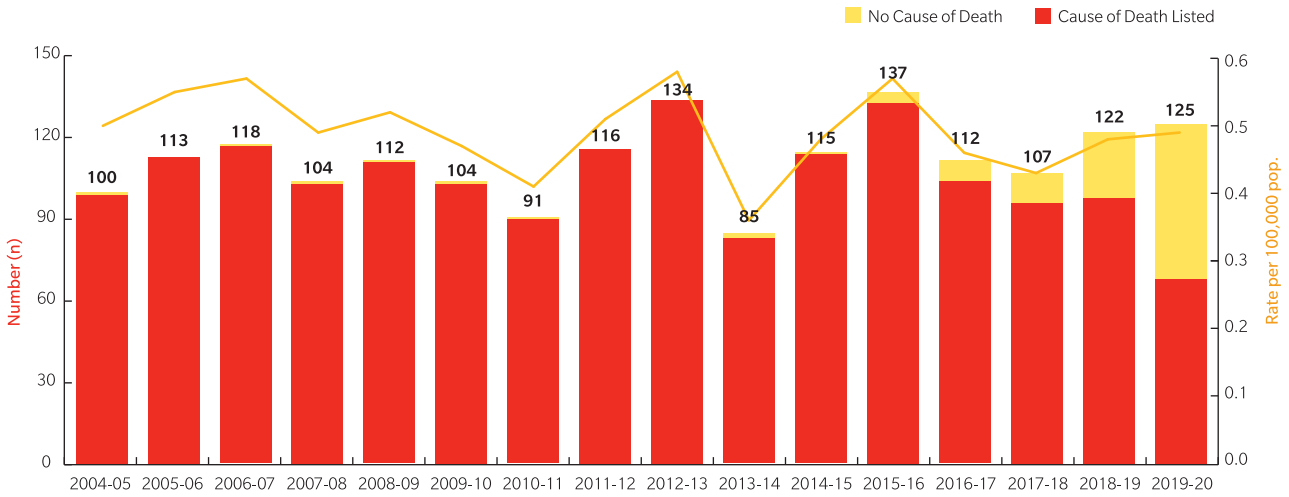


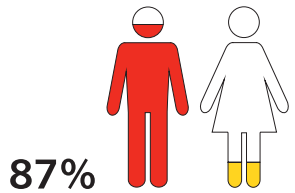
Figure 43

2004-20: NATIONAL COASTAL & OCEAN DROWNING DEATHS (N=1,795)

National coastal and ocean drowning death numbers and crude mortality rates between 2004-20 are illustrated above. 125 drowning deaths were recorded in 2019-20, above the 16-year average of 112. The 2019-20 mortality rate is 0.49 per 100,000 population, equal to the 16-year average.

112
16-YEAR AVERAGE DROWNING DEATHS

0.49
16-YEAR AVERAGE RATE PER 100,000 POPULATION



87% 13%

KEY DEMOGRAPHICS

20-39
YEAR OLDS

45-54
YEAR OLDS

The 20-39 year old age group account for 35% of all coastal drowning deaths, while 45-54 year olds represent 17%.

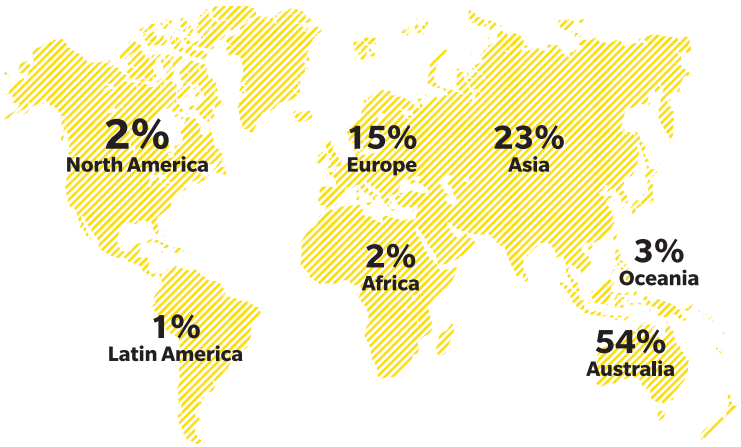


Figure 44

2004-20: COASTAL & OCEAN DROWNING DEATHS BY BIRTH CONTINENT

Continent of birth is known for 75% of coastal and ocean drowning deaths (n=1,351), with 54% Australian born (n=727), 23% born in Asia (n=312) and 15% born in Europe (n=196).

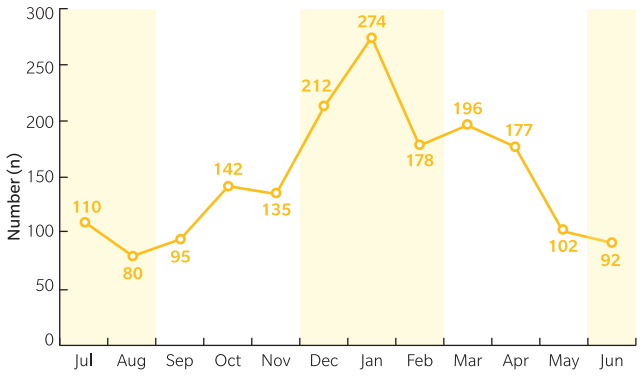


Figure 45

2004-20: COASTAL & OCEAN DROWNING DEATHS BY MONTH

The highest number of coastal and ocean drowning deaths occurred in January (n=274), followed by December (n=212) and March (n=196). Over one-third (37%) of incidents occurred during summer (n=664). Shading denotes seasons.

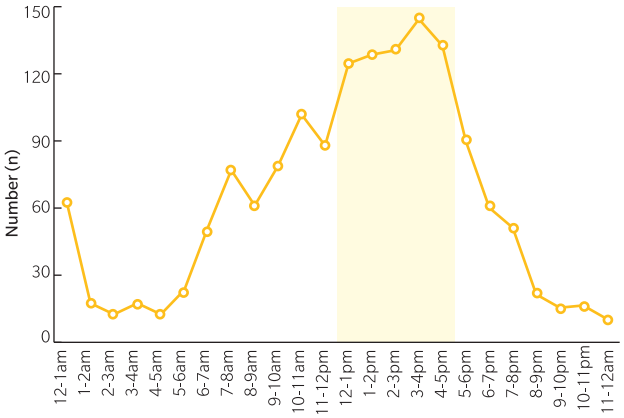


Figure 46

2004-20: COASTAL & OCEAN DROWNING DEATHS BY TIME

Incident time is currently known for 85% of coastal and ocean drowning deaths (n=1,527). Almost half (43%) of all drowning deaths occurred between 12-5pm.

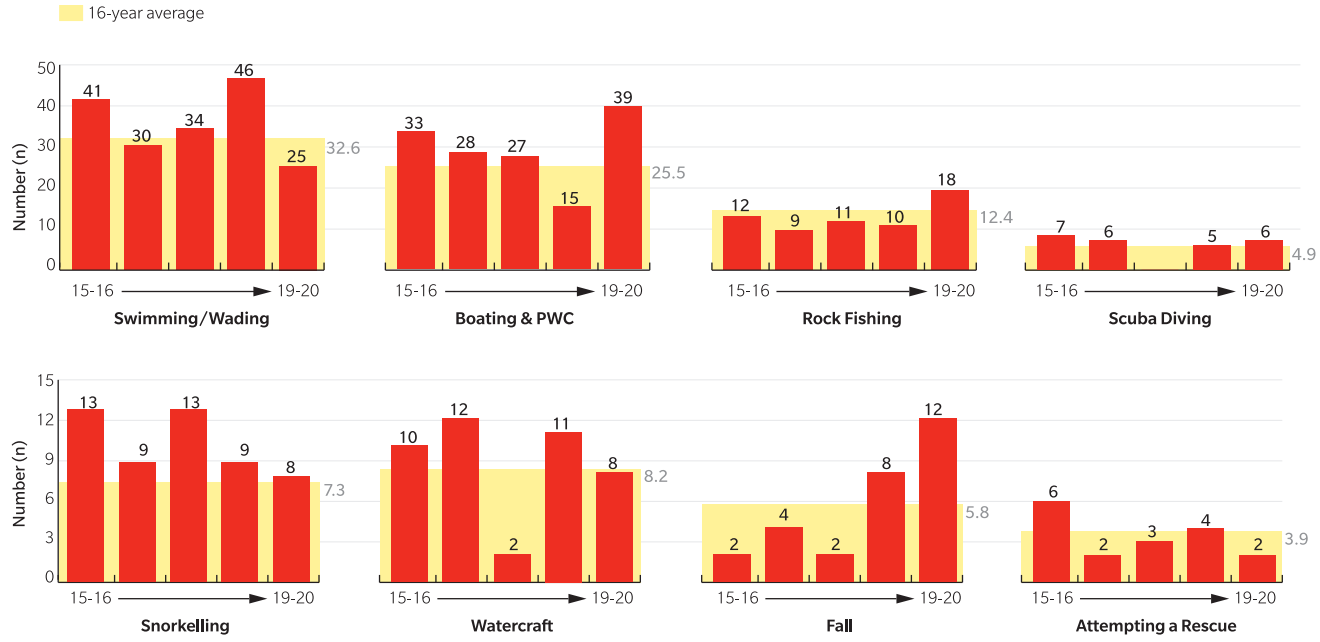


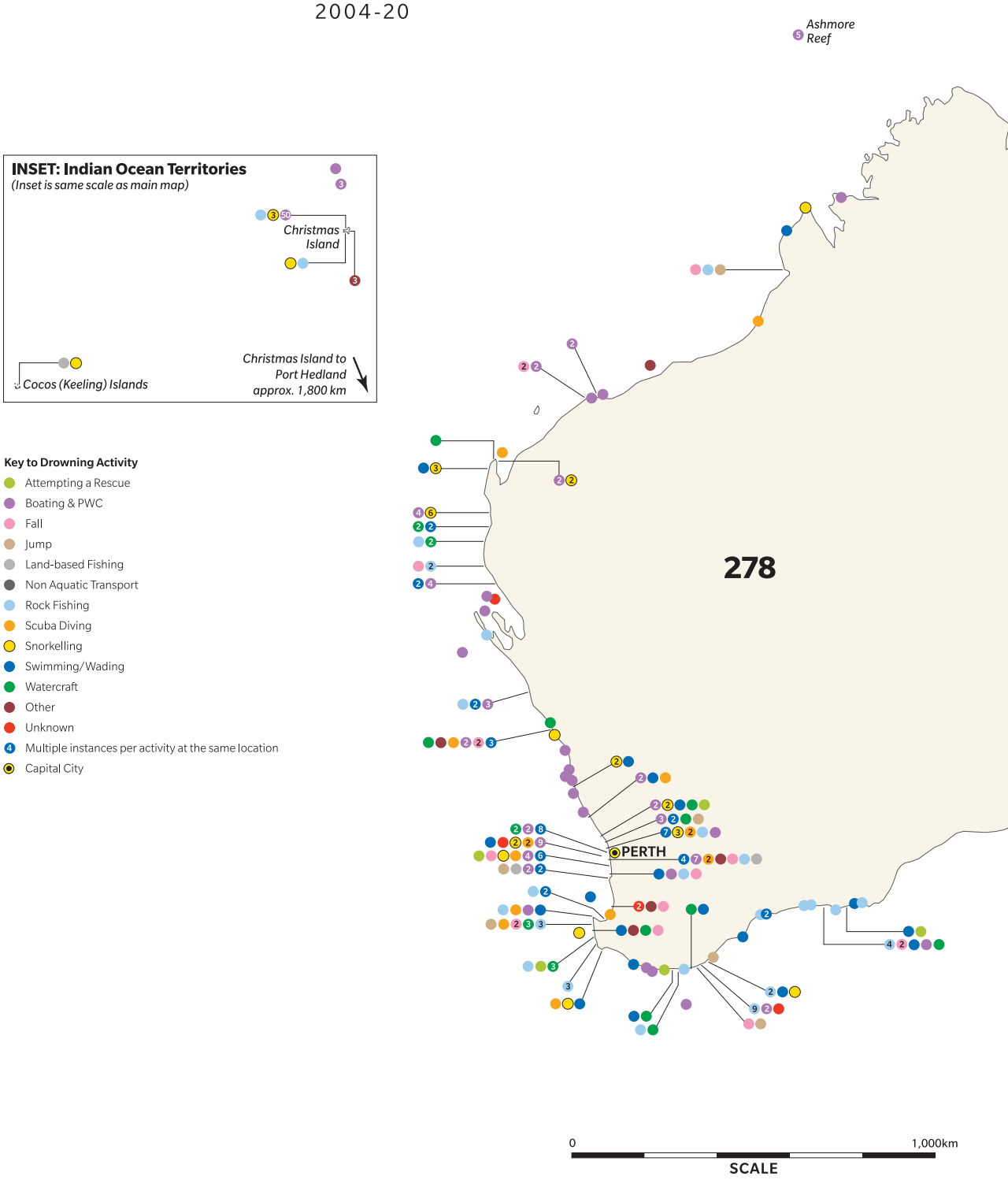
Figure 47

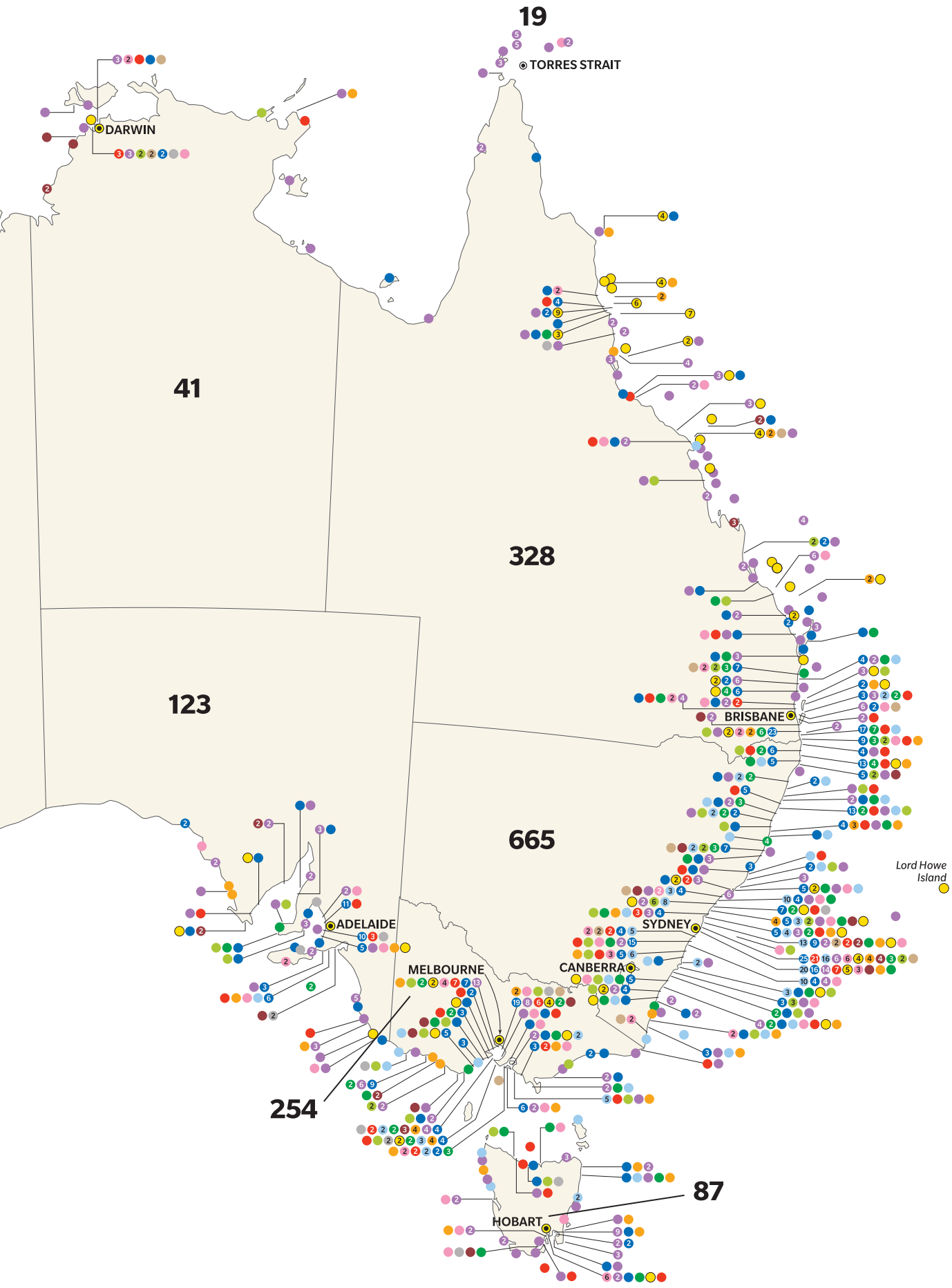
2004-20: TRENDS OF COASTAL & OCEAN DROWNING DEATHS BY ACTIVITY COMPARED WITH 16-YEAR AVERAGE

National drowning numbers vary by activity and over time. In 2019-20, boating, PWC, rock fishing, snorkelling, scuba diving and fall-related incidents were above the 16-year average, while swimming/wading, watercraft and rescues were below.

DROWNING LOCATIONS

2004-20




19
TORRES STRAIT
DARWIN
41
328
123
BRISBANE
665
Lord Howe Island
ADELAIDE
SYDNEY
MELBOURNE
CANBERRA
254
87
HOBART

UNINTENTIONAL COASTAL FATALITIES

2004-20: 16-YEAR REVIEW

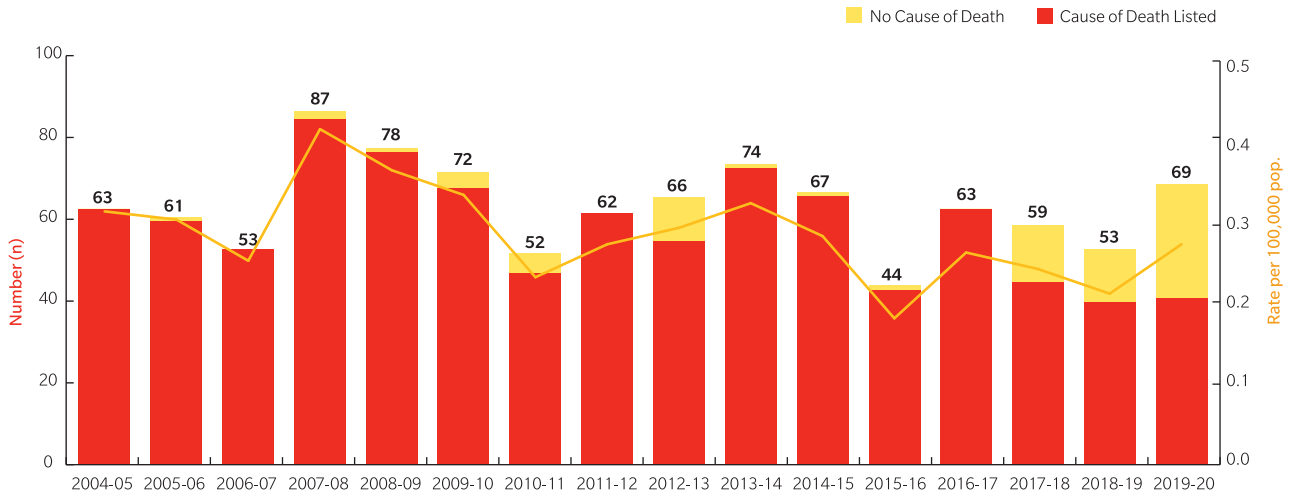


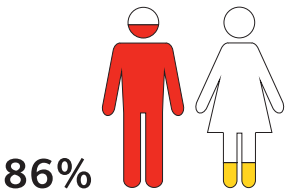
Figure 48

2004-20: NATIONAL UNINTENTIONAL COASTAL FATALITIES (N=1,023)

National unintentional coastal fatality numbers and crude mortality rates between 2004-20 are illustrated above. 69 unintentional coastal fatalities were recorded in 2019-20, above the 16-year average of 64. The 2019-20 mortality rate is 0.27 per 100,000 population, just below the 16-year average.

64
16-YEAR AVERAGE COASTAL FATALITIES

0.28
16-YEAR AVERAGE RATE PER 100,000 POPULATION



86% 14%

KEY DEMOGRAPHICS

20-39 YEAR OLDS

45-69 YEAR OLDS

The 45-69 year old age group account for 50% of all coastal fatalities predominantly due to medical complications, while 20-39 year olds comprise 23% due to injuries. Age was known for 99% of cases (n=1,022).

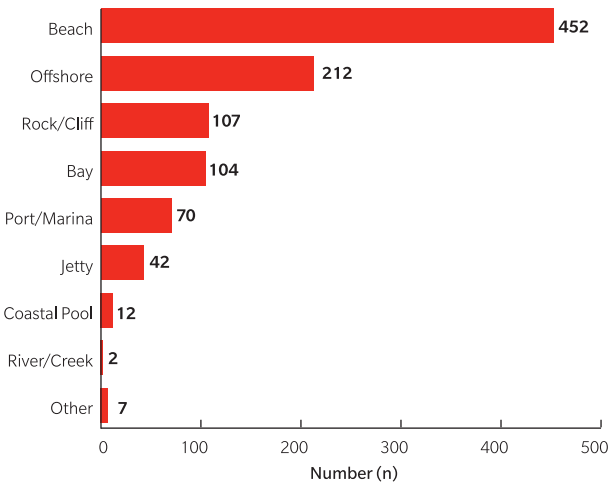


Figure 49

2004-20: UNINTENTIONAL COASTAL FATALITIES BY LOCATION

Coastal fatalities occurred predominantly at the beach (44%, n=452), followed by offshore (21%, n=212) then rock/cliff locations (10%, n=107). Location was known for 99% of cases (n=1,018).

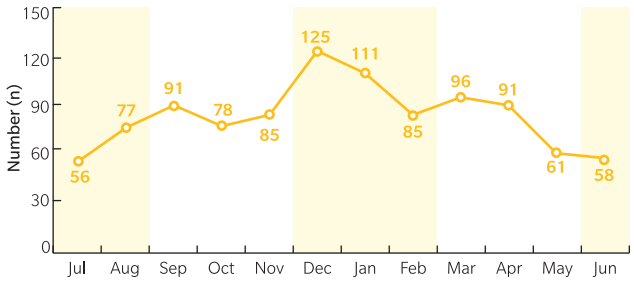


Figure 50

2004-20: UNINTENTIONAL COASTAL FATALITIES BY MONTH

The highest number of coastal fatalities occurred in December (n=125), followed by January (n=111) and March (n=96). 68% of incidents occurred outside summer months (n=697). Incident month was known for 99% of coastal fatalities. Shading denotes seasons.

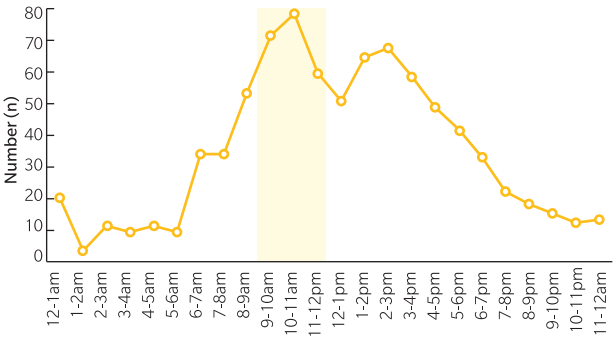


Figure 51

2004-20: UNINTENTIONAL COASTAL FATALITIES BY TIME

Coastal fatalities peak between 9am-12pm (25%, n=211), with 54% between 9am-4pm (n=454). Incident time is currently known for 82% of coastal fatalities (n=843).

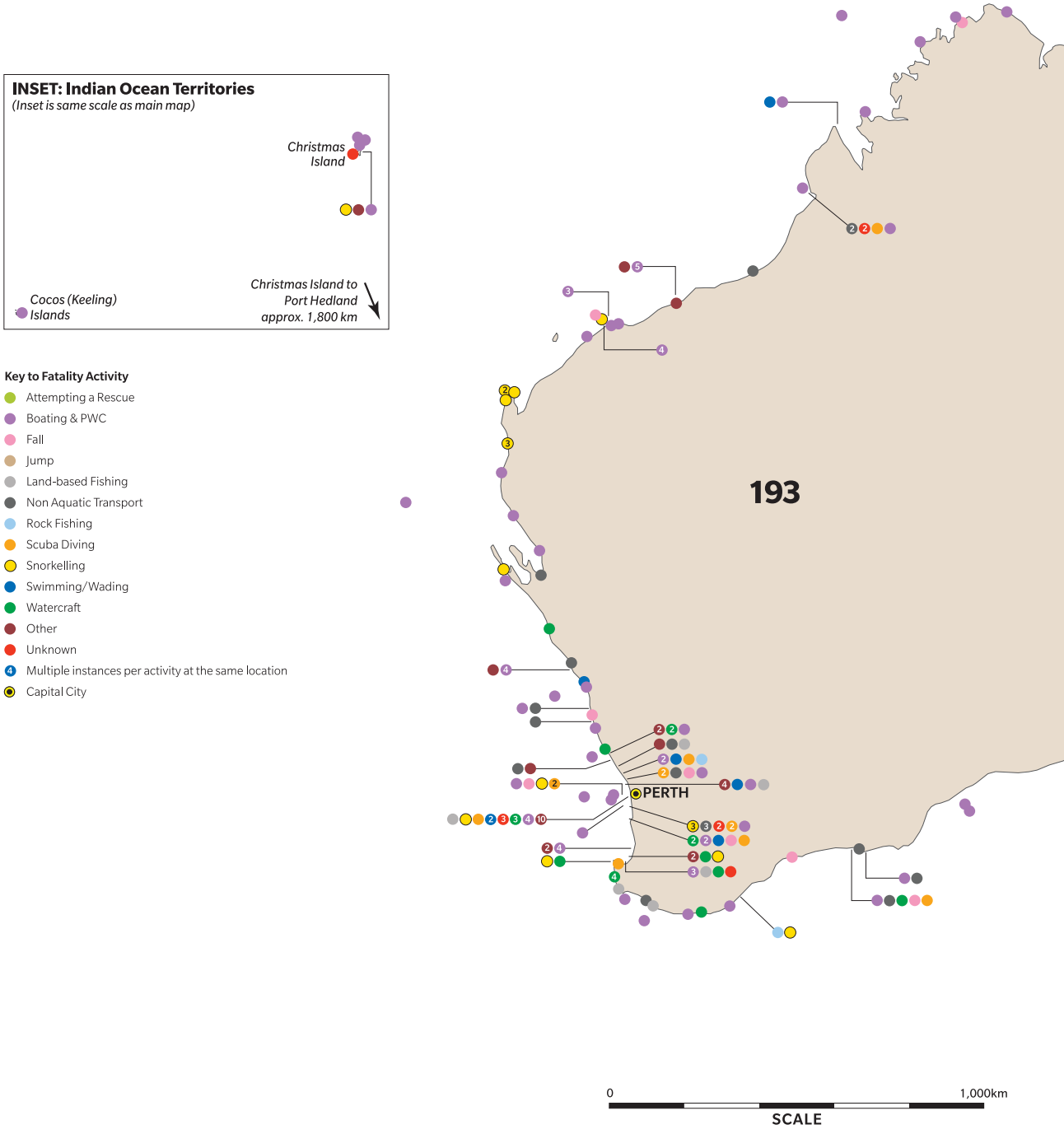
Figure 52

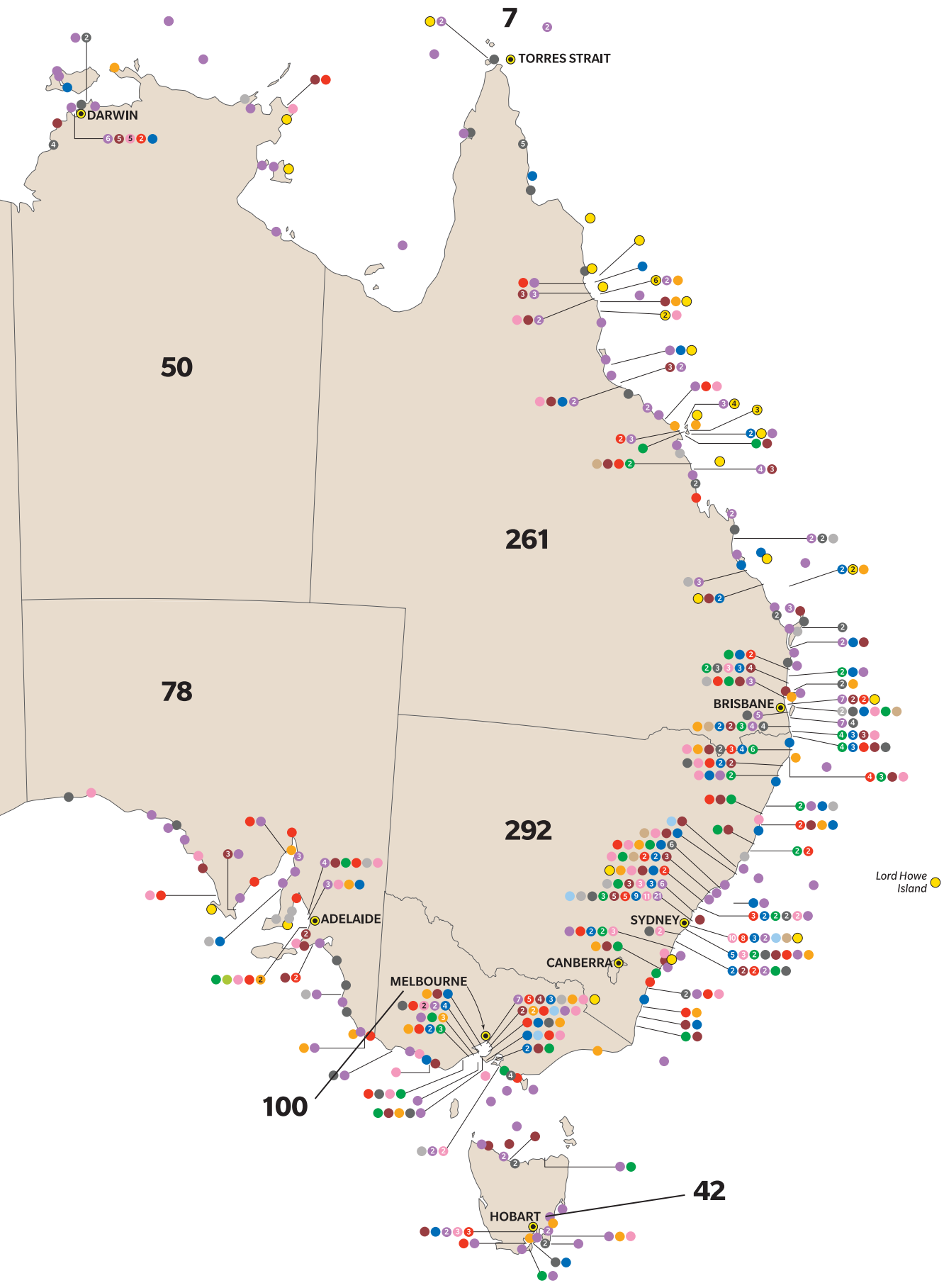
2004-20: TRENDS OF UNINTENTIONAL COASTAL FATALITIES BY ACTIVITY COMPARED WITH 16-YEAR AVERAGE

National coastal fatality numbers vary by activity and over time. In 2019-20, non aquatic transport and fall-related incidents were above the 16-year average, while swimming/wading, watercraft, scuba diving, snorkelling, land-based and rock fishing, boating and PWC were below.

UNINTENTIONAL FATALITY LOCATIONS

2004-20




7
TORRES STRAIT
DARWIN
50
261
78
BRISBANE
292
Lord Howe Island
ADELAIDE
SYDNEY
CANBERRA
MELBOURNE
100
42
HOBART

DROWNING DEATH VS. FATALITY

2004-20: 16-YEAR REVIEW

Drowning deaths are severe, accidental and largely preventable events that dominate the focus of coastal safety research. Our research has demonstrated that a significant proportion of unintentional coastal fatalities are non-drowning related and occur due to medical incidents, injuries, alcohol, drugs and marine creatures. This research investigates the frequency and nature of these coastal fatalities compared to drowning deaths to provide an overview of all fatalities that occur on the Australian coast.

Between 2004-2020, there were 3,591 fatal coastal incidents recorded on our coast. Fifty per cent were drowning deaths (n=1,795), while the other half were not drowning-related (n=1,796). Fifty-seven per cent of these other coastal fatalities were unintentional (n=1,023). While most drowning deaths (54%) and coastal fatalities (62%) involved Australian-born individuals, a significant proportion remain who were born overseas.

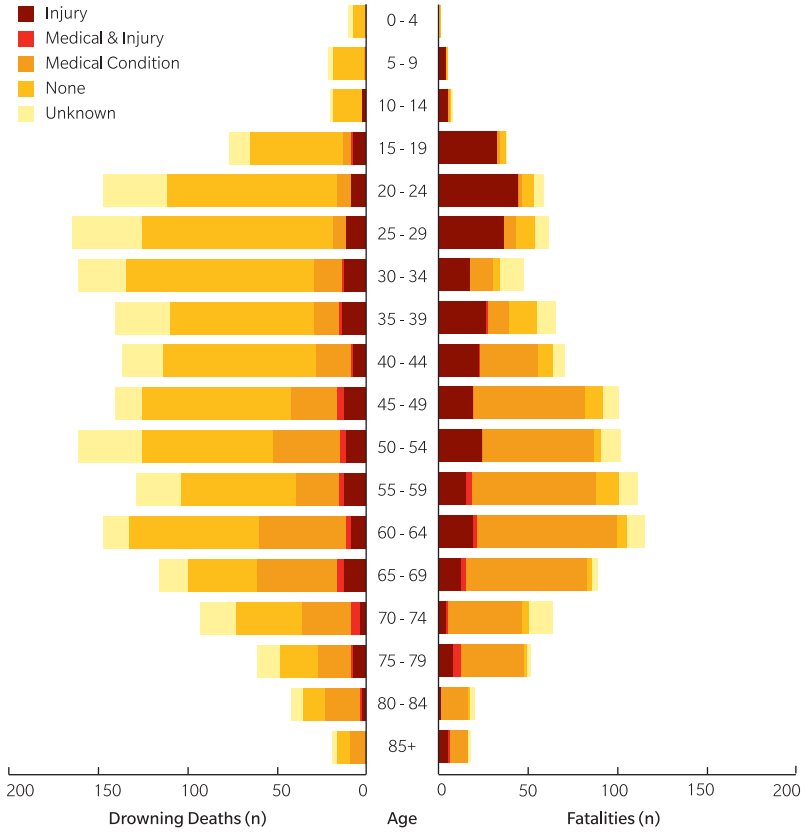


Figure 53

2004-20: MEDICAL AND INJURY-RELATED INCIDENTS BY AGE

Medical conditions and injuries contributed on 33% of drowning deaths and 91% of coastal fatalities. The 45-69 year old age group account for 50% of all coastal fatalities mostly due to medical complications, while 20-39 year olds comprise 23% due to injuries.

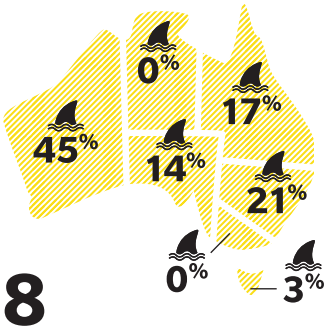
Overseas-born drowning deaths were highest from Asia (23%) while Europeans were highest for fatalities (18%). For overseas-born individuals, most were Australian residents, except for those from the North American region who were mostly short-term visitors for both drowning deaths and unintentional coastal fatalities. Medical episodes and injuries contributed to 91% of unintentional coastal fatalities and 33% of drowning deaths. Alcohol and drugs contributed to 17% coastal fatalities and 24% drowning deaths. Marine creatures were implicated in 4% coastal fatalities and no drowning deaths, while rip currents are known to contribute to 25% of drowning deaths compared to one per cent of coastal fatalities.

From a lifesaving perspective, the response to drowning deaths and coastal fatalities is similar but until now, most research has focused on drowning deaths. This research highlights the extent to which coastal fatalities on top of drowning deaths impact on lifesaving services and the wider community.

Further investigation will align causal factors with potential interventions and safety campaigns in addition to how we can better mitigate and prevent these heart-breaking incidents.

76% **20-24 YEAR OLD**

FATALITIES ARE INJURY-RELATED



1.8

AVERAGE FATAL SHARK ATTACKS PER YEAR ACROSS AUSTRALIA

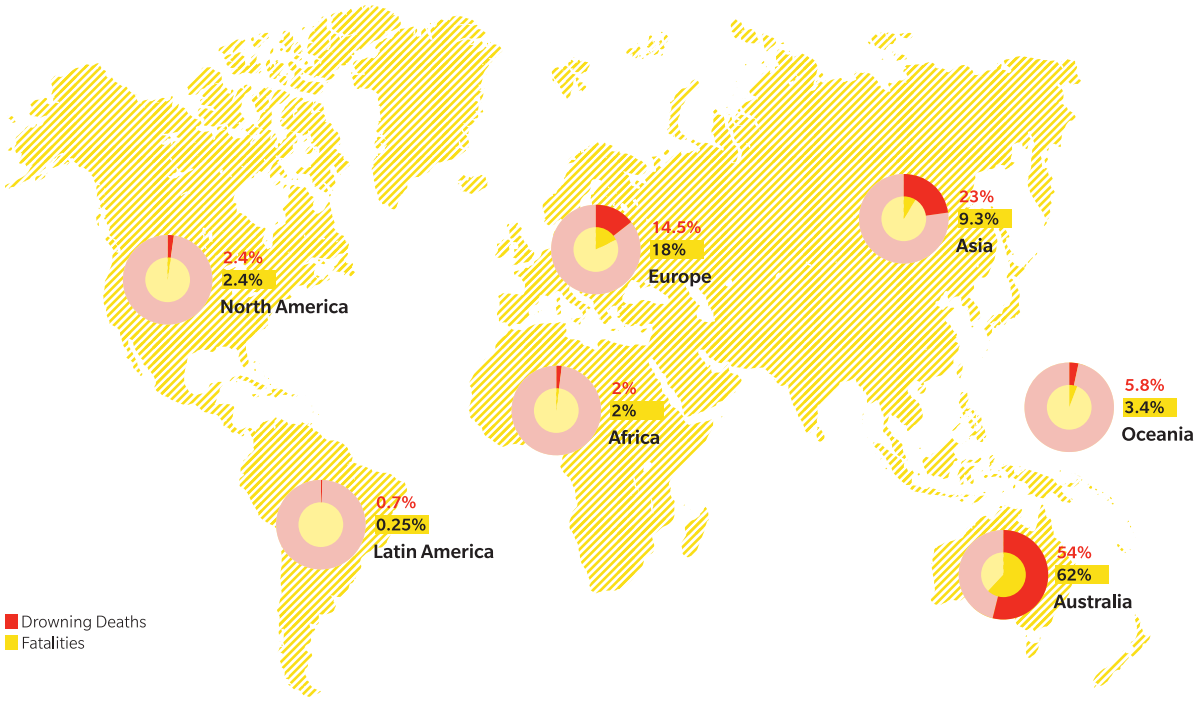


Figure 54

2004-20: DROWNING DEATHS AND FATALITIES BY KNOWN BIRTH CONTINENT

Between 2004-2020, 75% of drowning deaths and 78% of fatalities had a known birth country. Of those, Australian-born residents accounted for 54% drowning deaths and 62% fatalities, and overseas-born accounted for 46% of drowning deaths and 38% fatalities.

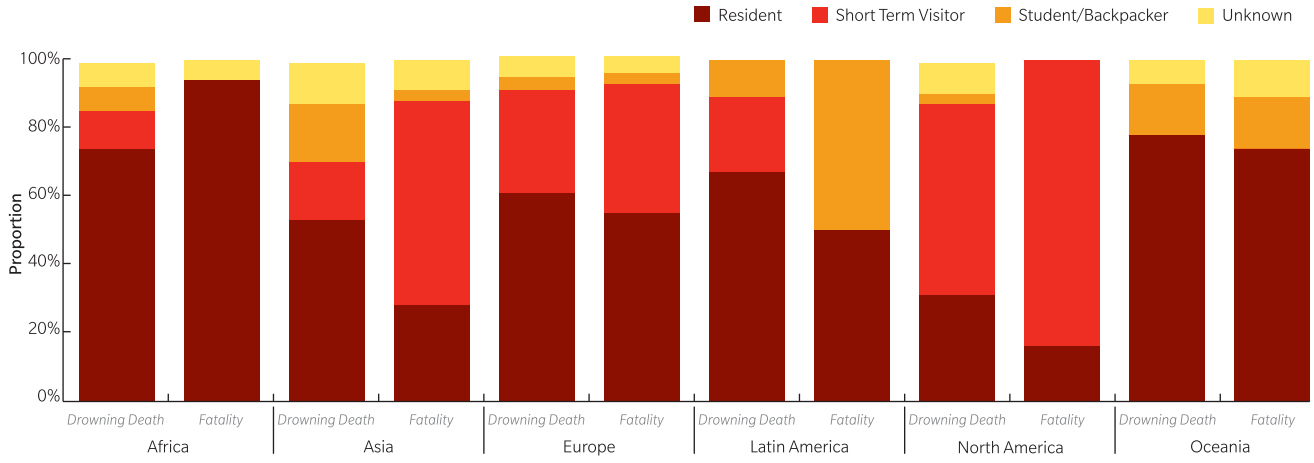


Figure 55

2004-20: PROPORTIONAL VISITOR CATEGORIES FOR COASTAL INCIDENTS OF OVERSEAS-BORN INDIVIDUALS

Most overseas-born individuals involved in coastal incidents were Australian residents, except for those from the North American region for both drowning deaths and unintentional coastal fatalities and Asian coastal fatalities who were mostly short-term visitors.

DROWNING DEATH VS. FATALITY

REVIEW OF TRENDS OVER TIME

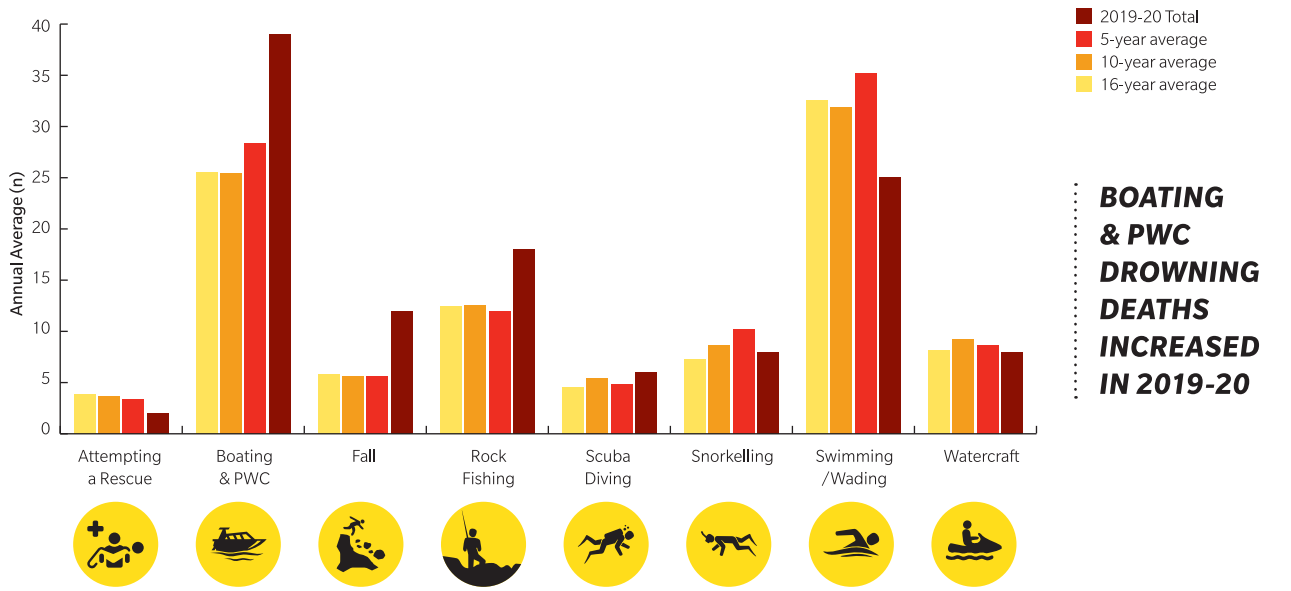


Figure 56

DROWNING DEATHS OVER TIME FOR TOP EIGHT COASTAL ACTIVITIES

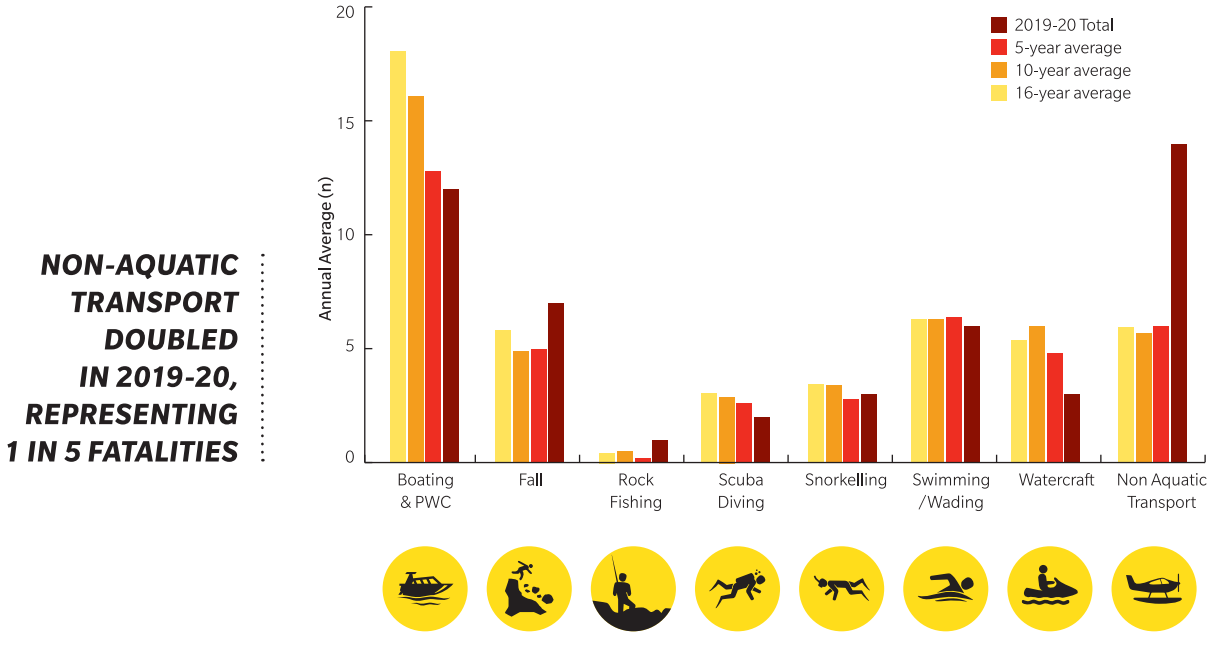


Figure 57

COASTAL FATALITIES OVER TIME FOR TOP EIGHT COASTAL ACTIVITIES

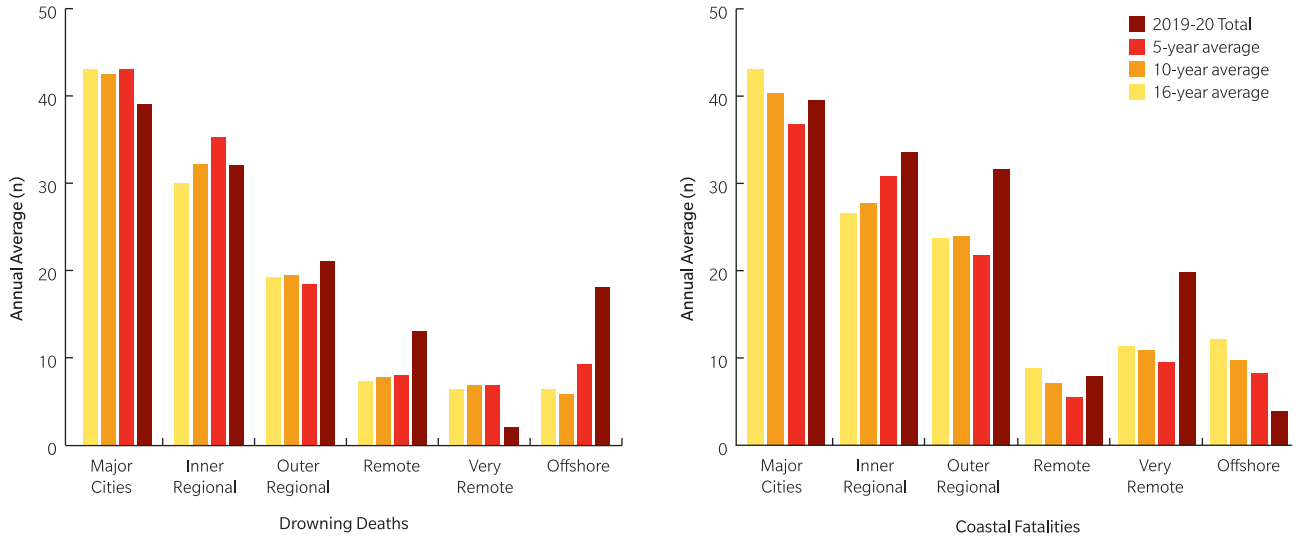


Figure 58

REMOTENESS CLASSIFICATION OF LOCATIONS OF DROWNING DEATHS AND COASTAL FATALITIES

Drowning deaths occurred at outer-regional, remote and offshore locations more than average, while coastal fatalities occurred more at inner-regional, outer-regional and very remote locations.

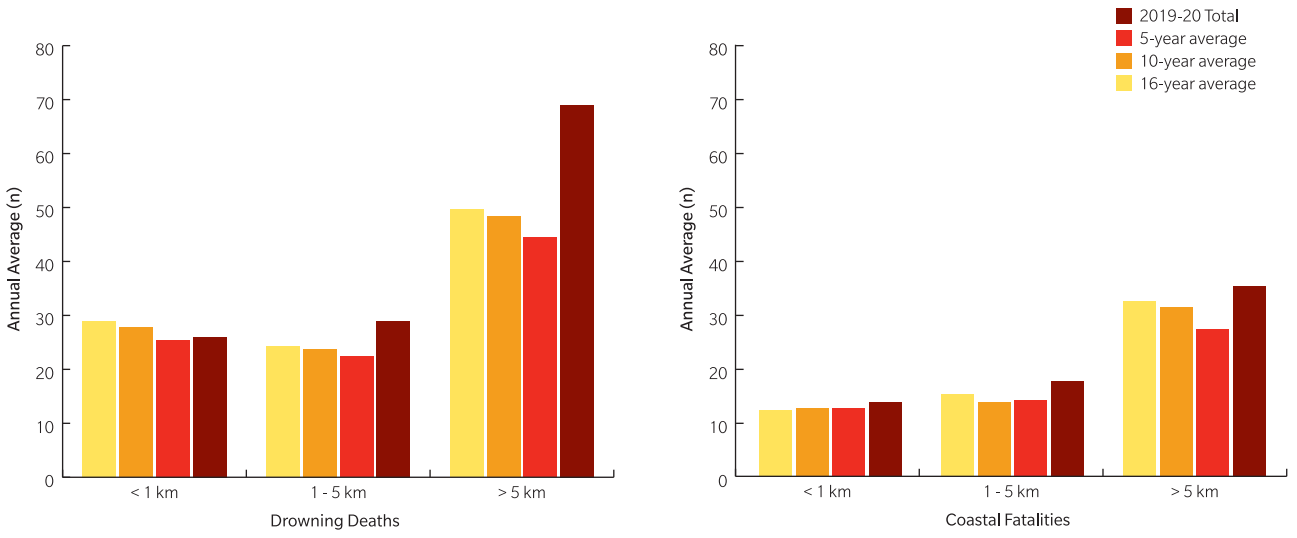


Figure 59

INCIDENT DISTANCE FROM SURF LIFE SAVING CLUB FOR DROWNING DEATHS AND COASTAL FATALITIES

More incidents occurred further than 5km away from a surf life saving club than on average.

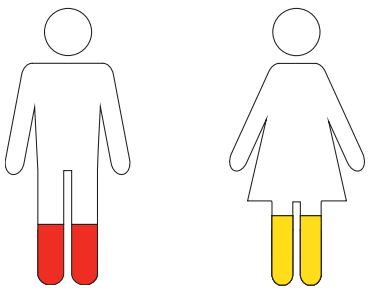
FEATURE: ALCOHOL & DRUGS

DROWNING & FATALITY

Alcohol and drug consumption is common in Australia. Their use increases the risk of unintentional death by impairing judgement and coordination abilities and causing sedation. Attitudes around alcohol and drug consumption and coastal activities were also explored in our National Coastal Survey (Figure 13). Since 2004, alcohol and drug use has contributed to one in five coastal unintentional fatal incidents (22%, n = 503). Alcohol is the most common substance contributing to thirteen per cent of fatal incidents.

Impacts of alcohol on coastal incidents begins and peaks in older teenagers and young adults (Figure 60), reaffirming this group as a high-risk demographic. Drugs also contributed to thirteen per cent of unintentional deaths on the Australian coast, although drug categories varied in prevalence. Cannabis (29%), benzodiazepines (23%), and amphetamines (16%) have contributed to two-thirds of coastal drug-related fatal incidents (Figure 61).

Alcohol and drugs contributed to fifty-seven per cent of recreational jumping, forty-seven per cent of fall-related incidents and thirty-two per cent of PWC incidents (Figure 63). Jetty and port/marina locations were identified as high-risk locations (Figure 62). The impact of alcohol and drug consumption on coastal activities is shown by Figure 63, where the proportion of fatal coastal incidents that are alcohol and drug-related revealed how deadly combining alcohol, drugs and coastal recreation can be, e.g. the risk of fatal accidents while boating or operating a PWC (a.k.a. jet ski) is much higher under the influence with one in three deaths (32%) being alcohol or drug-related. These results emphasise the risk of combining alcohol and drugs with coastal activities, identifying young adults, land-based fishers, boaters and PWC users as high-risk demographics for targeted education and awareness campaigns.



22% MALES

25% FEMALES

PERCENTAGE OF INCIDENTS WHERE ALCOHOL WAS A CONTRIBUTING FACTOR

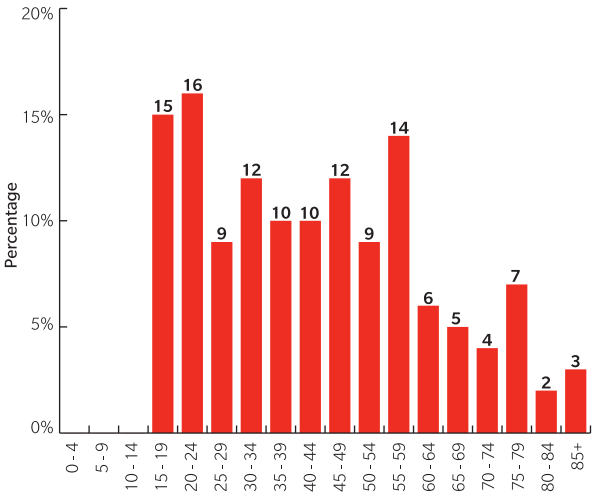


Figure 60

PROPORTION OF ALCOHOL-RELATED COASTAL DEATHS FOR EACH AGE BRACKET

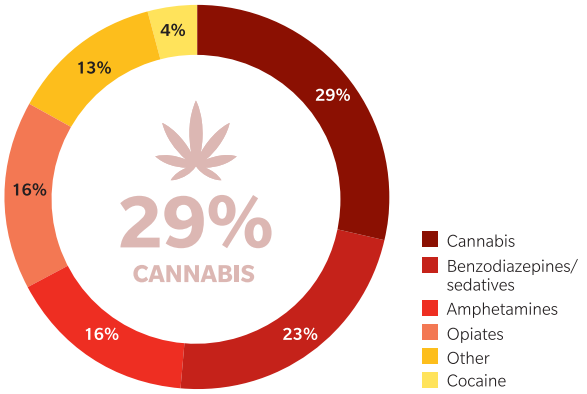


Figure 61

PROPORTION OF DRUG TYPES WITHIN DRUG-RELATED DEATHS

Proportions of contributory drugs in drug-related fatal coastal incidents (totalling 13%).

BAC 0.19

THE AVERAGE BLOOD ALCOHOL CONCENTRATION WAS 0.19, NEARLY *FOUR TIMES* THE LEGAL DRIVING LIMIT

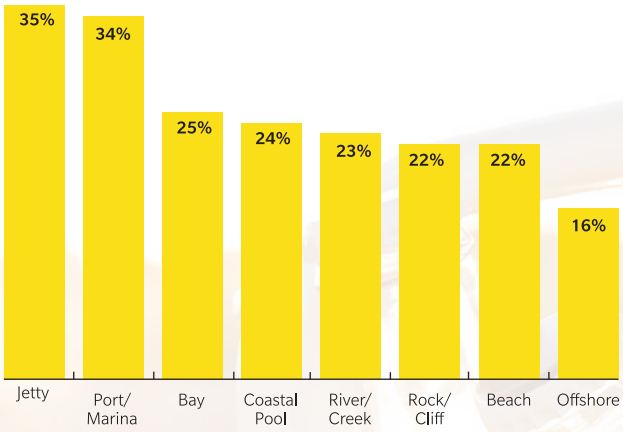


Figure 62

PERCENTAGE OF ALCOHOL AND DRUG-RELATED COASTAL DEATHS FOR EACH LOCATION CATEGORY

Jetty and port/marina locations had the highest proportions of alcohol and drug-related deaths.

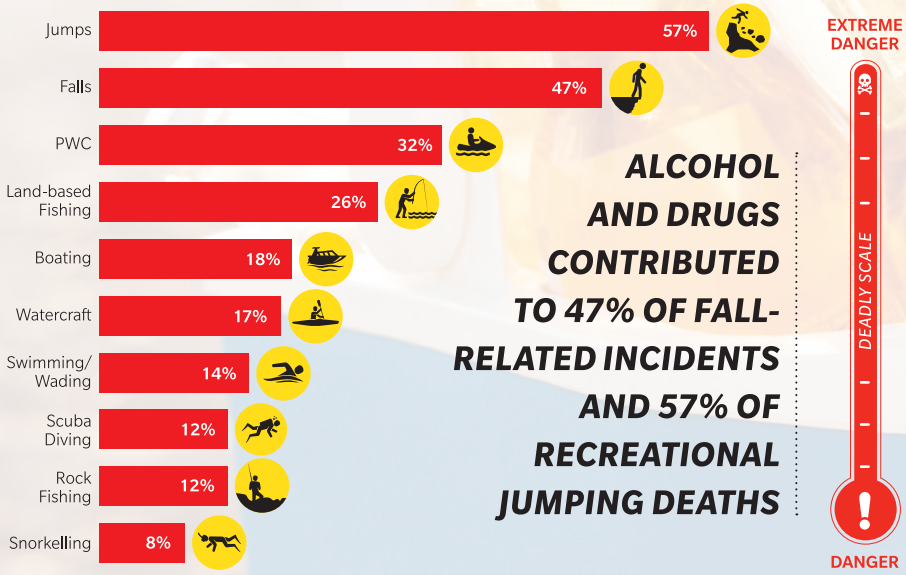


Figure 63

PROPORTION OF ALCOHOL AND DRUG-RELATED FATAL COASTAL INCIDENTS BY ACTIVITY

The contribution of alcohol and drugs to fatal incidents differs by activity. Recreational jumping recorded the highest proportion of incidents, followed by falls then PWC and land-based fishing activities.

NEW SOUTH WALES

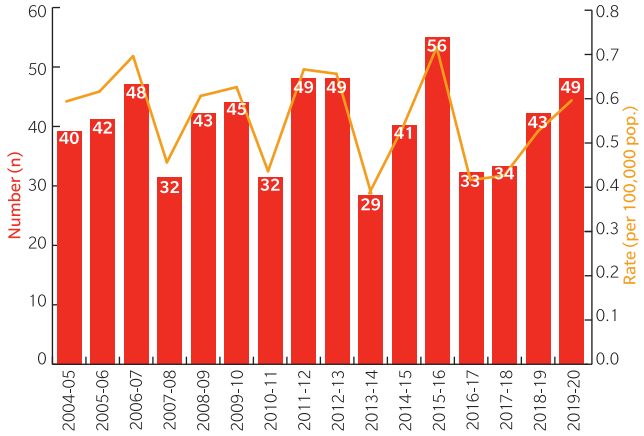


Figure 64

2004-20: 16-YEAR TREND OF COASTAL & OCEAN DROWNING DEATHS (N=665)

In 2019-20, the number and mortality rate of coastal and ocean drowning deaths in New South Wales was higher than the 16-year average of 42 and 0.56 per 100,000 population.

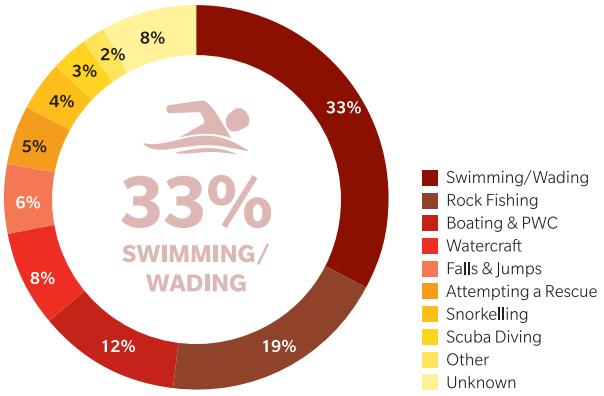


Figure 65

2004-20: COASTAL & OCEAN DROWNING DEATHS BY ACTIVITY (N=665)

Since 2004 in New South Wales, swimming and wading has recorded the most drowning deaths for an activity (n=221), followed by rock fishing (n=128), boating and PWC (n=83), then watercraft (n=52).

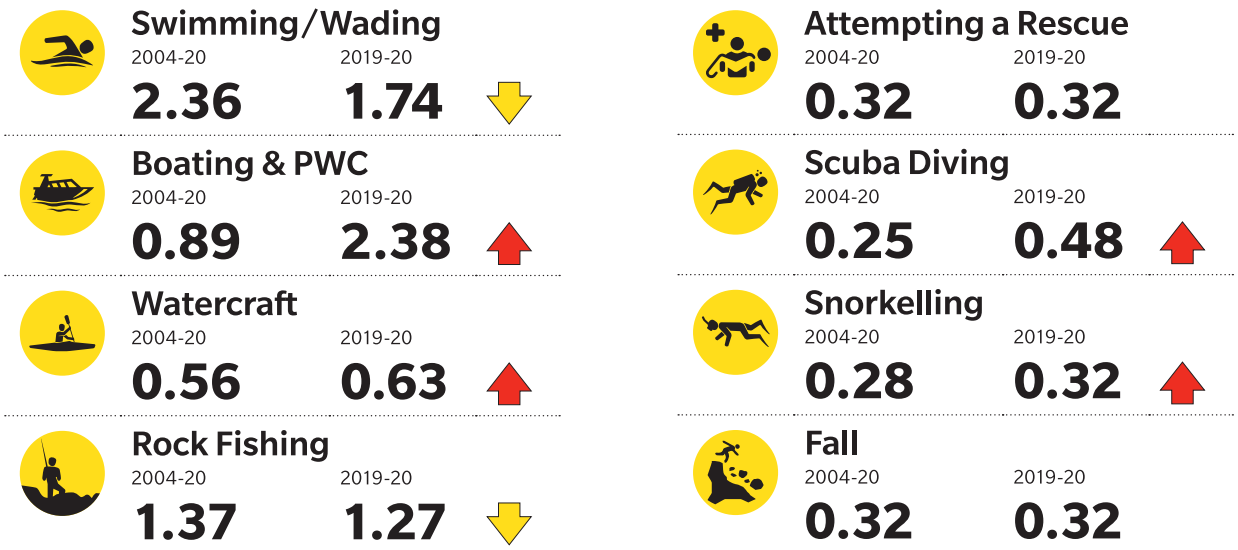


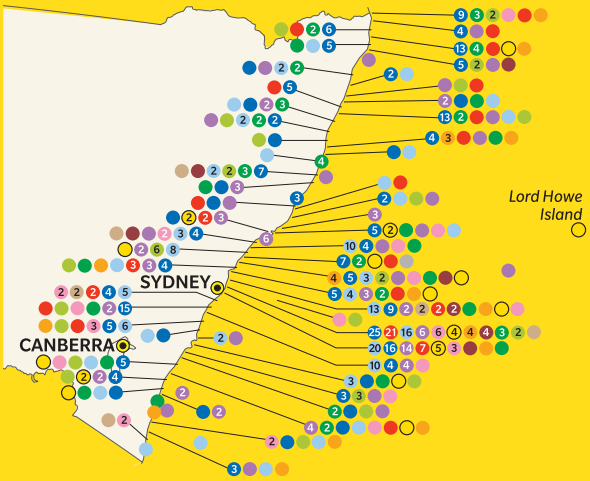
Figure 66

MORTALITY RATE COMPARISON OF 2019-20 DROWNING DEATHS TO 16-YEAR AVERAGE BY ACTIVITY

New South Wales drowning death rates (per 100,000 coastal participants) in 2019-20 were higher than the 16-year average for boating & PWC, watercraft, scuba diving and snorkelling activities. Swimming/wading and rock fishing were lower than average while rescue attempts and fall-related drowning deaths were unchanged. *NB: Arrows indicate change from 16-year average.*

DROWNING SNAPSHOT

2004–20 COASTAL & OCEAN DROWNING DEATHS



- Attempting a Rescue
- Boating & PWC
- Fall
- Jump
- Land-based Fishing
- Non Aquatic Transport
- Other
- Rock Fishing
- Scuba Diving
- Snorkelling
- Swimming/Wading
- Unknown
- Watercraft
- Multiple instances per activity at the same location
- Capital city

AVERAGE
42
NUMBER

AVERAGE MORTALITY RATE
0.56
PER 100,000 POPULATION

88%
MALE

12%
FEMALE

KEY DEMOGRAPHICS

60–79 YEAR OLD BOATERS

&

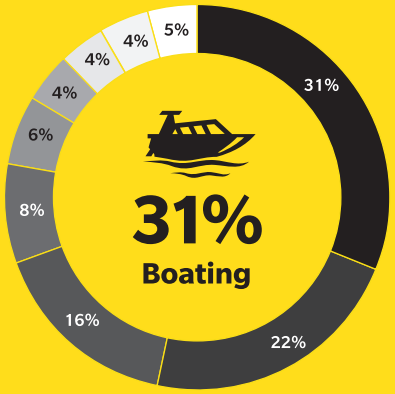
40–64 YEAR OLD ROCK FISHERS, SNORKELLERS & SCUBA DIVERS

2019–20 COASTAL & OCEAN DROWNING DEATHS

49

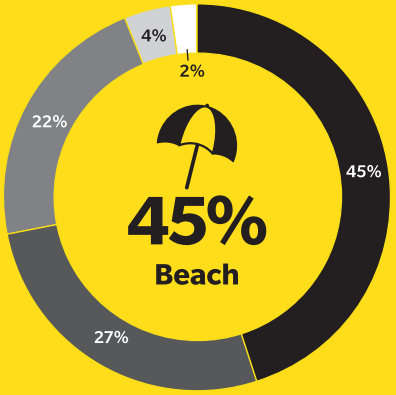
MORTALITY RATE
0.60
PER 100,000 POPULATION

DROWNING DEATHS BY ACTIVITY



- Boating
- Swimming/Wading
- Rock Fishing
- Watercraft
- Scuba Diving
- Attempting a Rescue
- Snorkelling
- Fall
- Unknown

DROWNING DEATHS BY LOCATION



- Beach
- Offshore
- Rock/Cliff
- Bay
- River/Creek

39% BETWEEN 1 AND 5 KM FROM A SURF LIFE SAVING SERVICE

QUEENSLAND

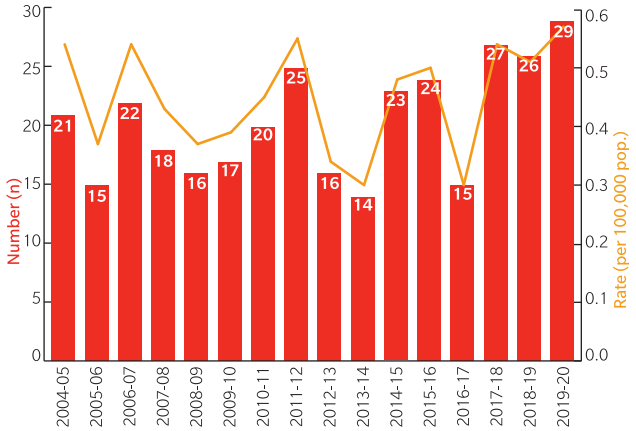


Figure 67

2004-20: 16-YEAR TREND OF COASTAL & OCEAN DROWNING DEATHS (N=328)

In 2019-20, the number and mortality rate of coastal and ocean drowning deaths in Queensland was higher than the 16-year average of 21 and 0.45 per 100,000 population.

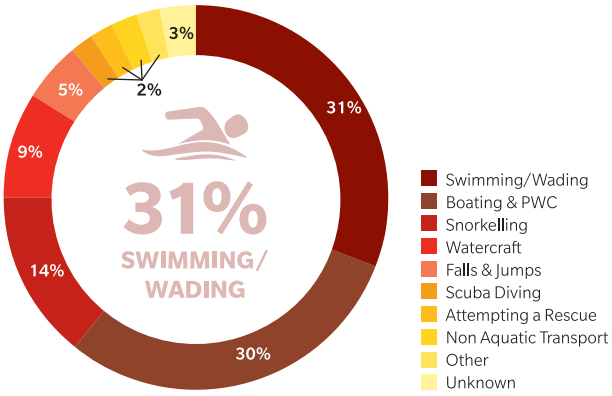


Figure 68

2004-20: COASTAL & OCEAN DROWNING DEATHS BY ACTIVITY (N=328)

Since 2004 in Queensland, swimming and wading has recorded the most drowning deaths for an activity (n=101), followed by boating and PWC (n=98), snorkelling (n=45), then watercraft (n=28).

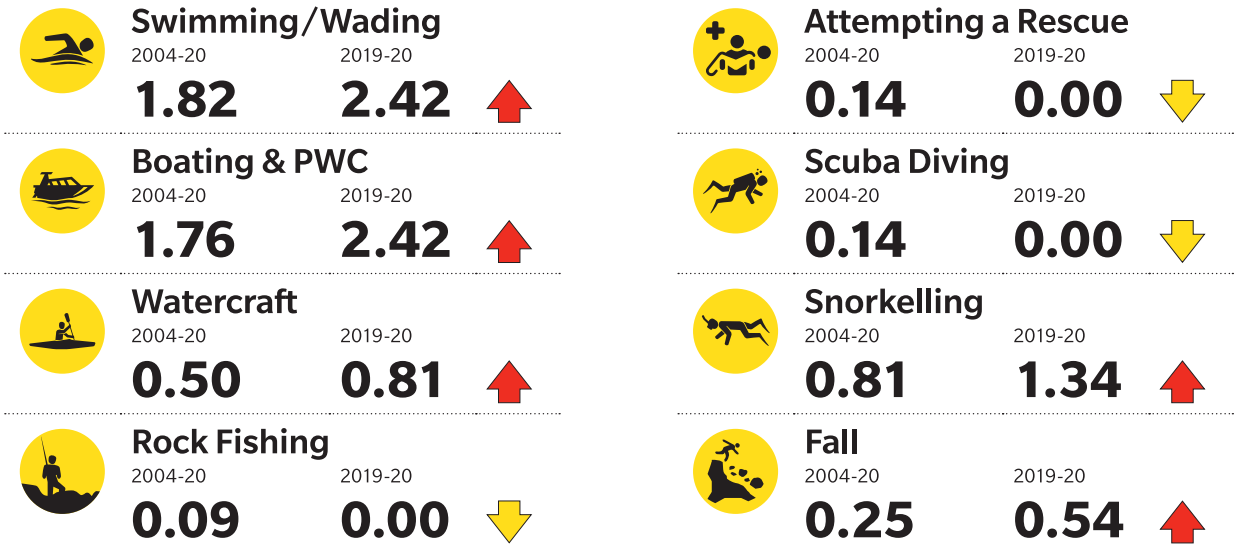


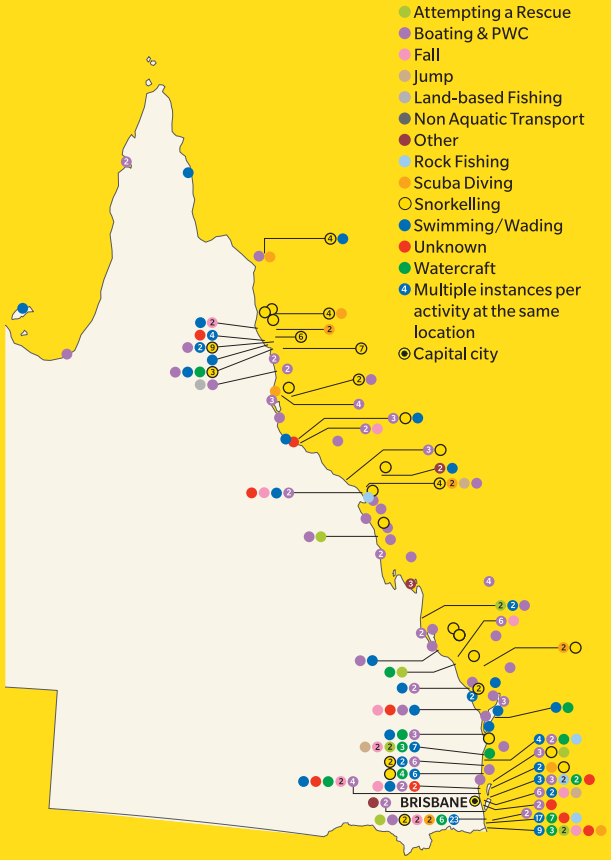
Figure 69

MORTALITY RATE COMPARISON OF 2019-20 DROWNING DEATHS TO 16-YEAR AVERAGE BY ACTIVITY

Queensland drowning death rates (per 100,000 coastal participants) in 2019-20 were higher than the 16-year average for swimming/wading, boating & PWC, watercraft, snorkelling and falls. Rock fishing, rescue attempts and scuba diving were lower than average.
NB: Arrows indicate change from 16-year average.

DROWNING SNAPSHOT

2004–20 COASTAL & OCEAN DROWNING DEATHS



AVERAGE NUMBER
21

AVERAGE MORTALITY RATE
0.45
PER 100,000 POPULATION

MALE
86%

FEMALE
14%

KEY DEMOGRAPHICS

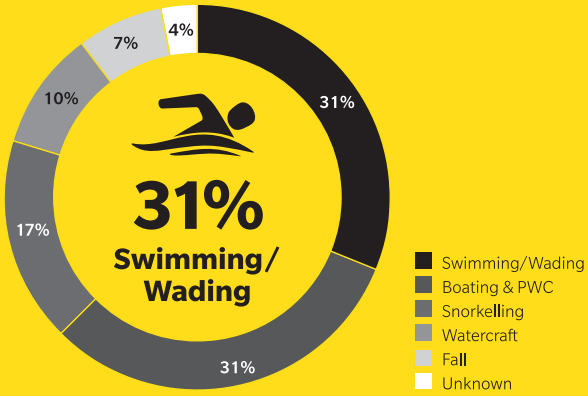
15-34 YEAR OLD SWIMMERS/WADERS & **50-69** YEAR OLD BOATERS

2019–20 COASTAL & OCEAN DROWNING DEATHS

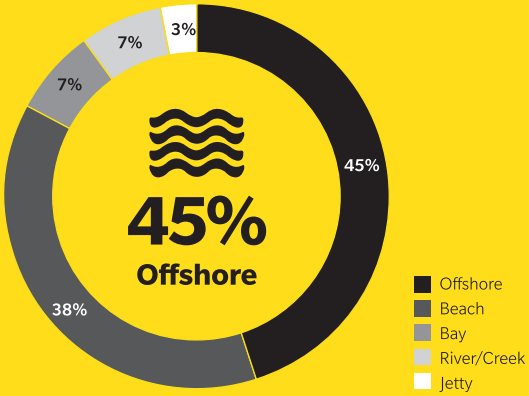
29

MORTALITY RATE
0.57
PER 100,000 POPULATION

DROWNING DEATHS BY ACTIVITY



DROWNING DEATHS BY LOCATION



59% GREATER THAN 5KM FROM A SURF LIFE SAVING SERVICE

VICTORIA

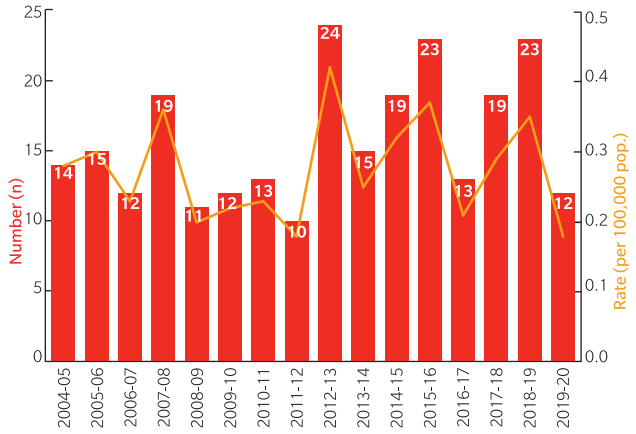


Figure 70

2004-20: 16-YEAR TREND OF COASTAL & OCEAN DROWNING DEATHS (N=254)

In 2019-20, the number and mortality rate of coastal and ocean drowning deaths in Victoria was lower than the 16-year average of 16 and 0.27 per 100,000 population.

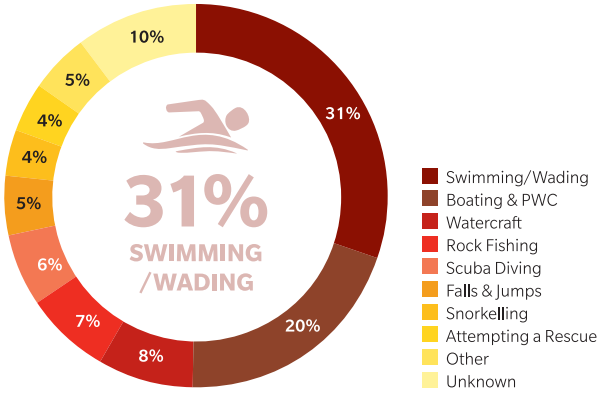


Figure 71

2004-20: COASTAL & OCEAN DROWNING DEATHS BY ACTIVITY (N=254)

Since 2004 in Victoria, swimming and wading has recorded the most drowning deaths for an activity (n=77), followed by boating and PWC (n=50), watercraft (n=20), then rock fishing (n=19).

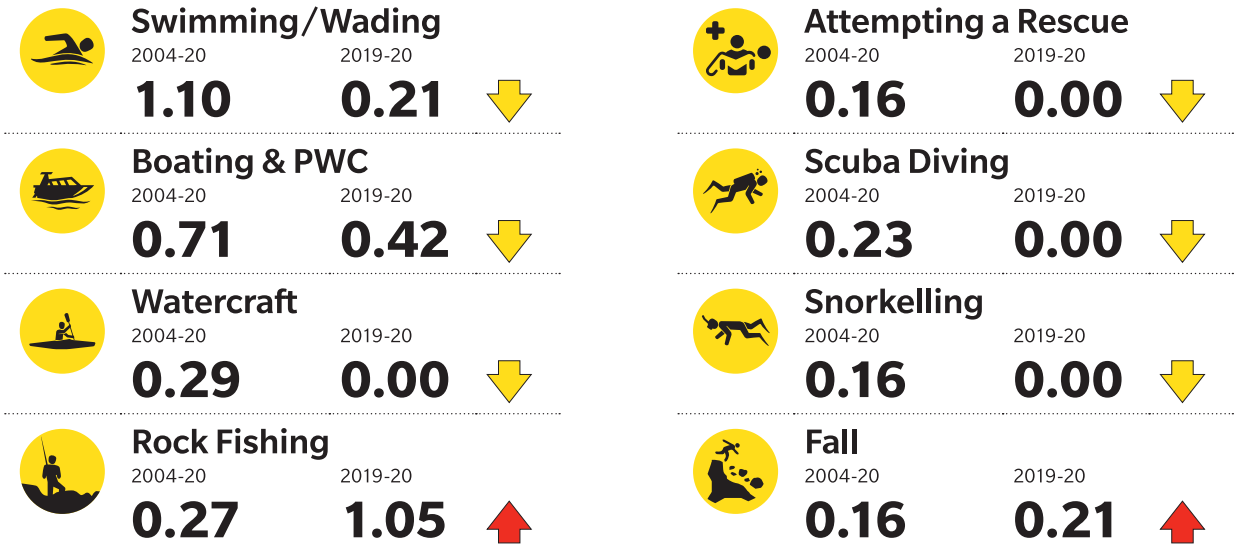


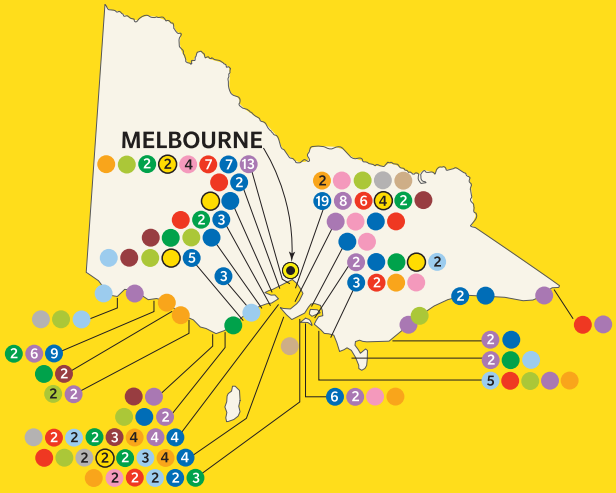
Figure 72

MORTALITY RATE COMPARISON OF 2019-20 DROWNING DEATHS TO 16-YEAR AVERAGE BY ACTIVITY

Victoria's drowning death rates (per 100,000 coastal participants) in 2019-20 were higher than the 16-year average for rock fishing and fall-related incidents. Swimming/wading, boating & PWC, watercraft, rescue attempts, scuba diving and snorkelling incidents were lower than average. *NB: Arrows indicate change from 16-year average.*

DROWNING SNAPSHOT

2004–20 COASTAL & OCEAN DROWNING DEATHS



- Attempting a Rescue
- Boating & PWC
- Fall
- Jump
- Land-based Fishing
- Non Aquatic Transport
- Other
- Rock Fishing
- Scuba Diving
- Snorkelling
- Swimming/Wading
- Unknown
- Watercraft
- Multiple instances per activity at the same location
- Capital city

AVERAGE NUMBER
16

AVERAGE MORTALITY RATE
0.27
PER 100,000 POPULATION

85%
MALE

15%
FEMALE

KEY DEMOGRAPHICS

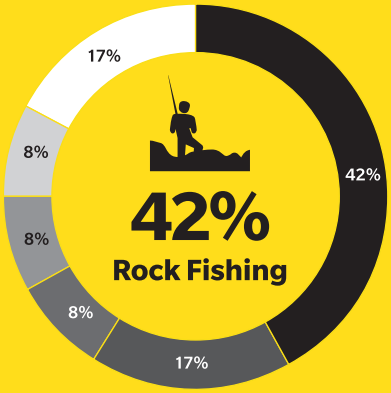
30–44 YEAR OLDS & **60–74** YEAR OLD BOATERS

2019–20 COASTAL & OCEAN DROWNING DEATHS

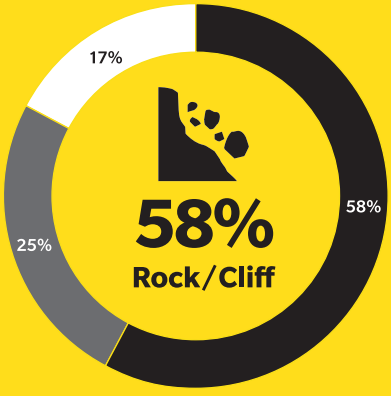
12

MORTALITY RATE
0.18
PER 100,000 POPULATION

DROWNING DEATHS BY ACTIVITY



DROWNING DEATHS BY LOCATION



42% LESS THAN 1KM FROM SURF LIFE SAVING SERVICE

WESTERN AUSTRALIA

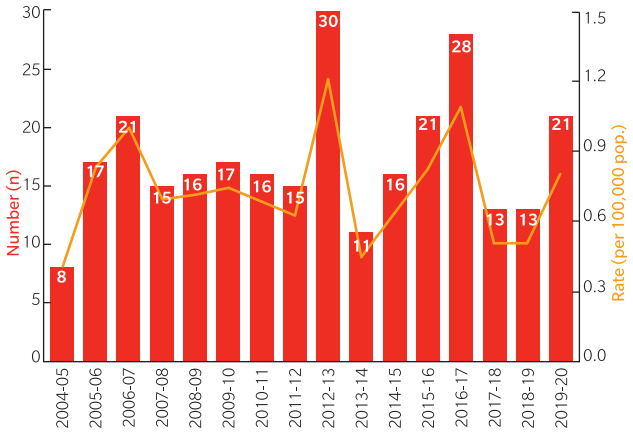


Figure 73

2004-20: 16-YEAR TREND OF COASTAL & OCEAN DROWNING DEATHS (N=278)

In 2019-20, the number and mortality rate of coastal and ocean drowning deaths in Western Australia was higher than the 16-year average of 17 and 0.73 per 100,000 population.

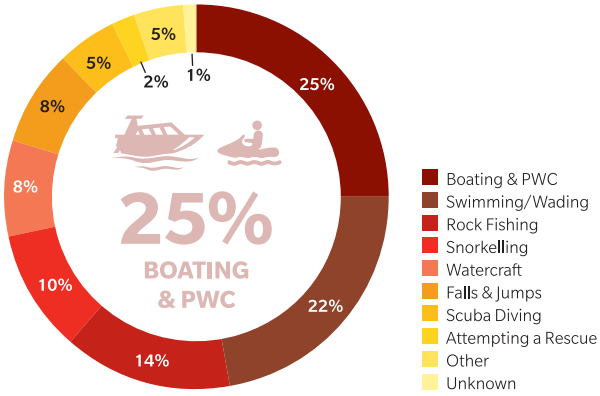


Figure 74

2004-20: COASTAL & OCEAN DROWNING DEATHS BY ACTIVITY (N=278)

Since 2004 in Western Australia, boating and PWC has recorded the most drowning deaths for an activity (n=70), followed by swimming and wading (n=62), rock fishing (n=40), then snorkelling (n=29).

Swimming/Wading

2004-20	2019-20	
2.06	1.53	↓

Boating & PWC

2004-20	2019-20	
2.33	2.55	↑

Watercraft

2004-20	2019-20	
0.73	0.51	↓

Rock Fishing

2004-20	2019-20	
1.33	2.55	↑

Attempting a Rescue

2004-20	2019-20	
0.17	0.00	↓

Scuba Diving

2004-20	2019-20	
0.47	1.02	↑

Snorkelling

2004-20	2019-20	
0.96	0.51	↓

Fall

2004-20	2019-20	
0.53	2.04	↑

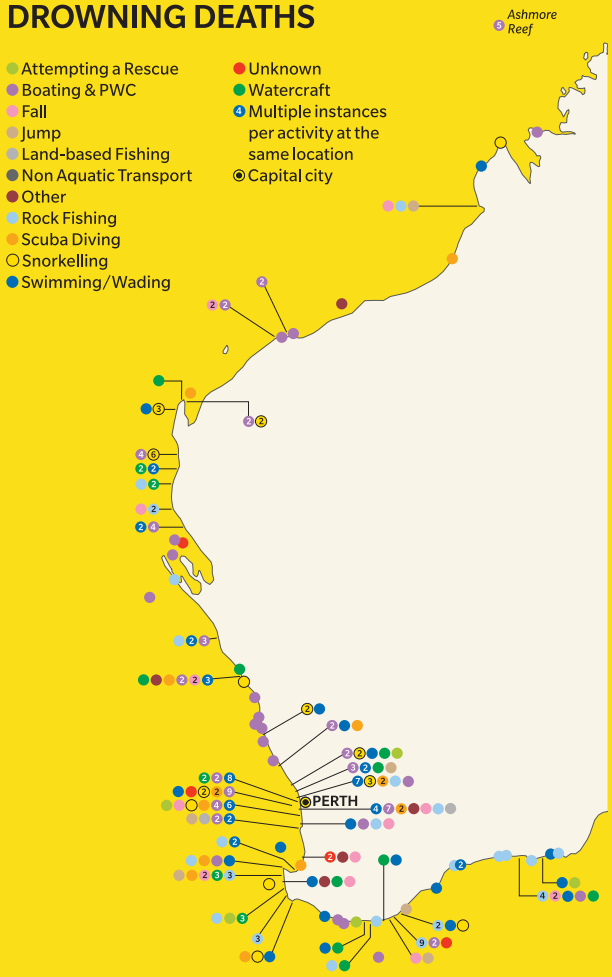
Figure 75

MORTALITY RATE COMPARISON OF 2019-20 DROWNING DEATHS TO 16-YEAR AVERAGE BY ACTIVITY

Western Australian drowning death rates (per 100,000 coastal participants) in 2019-20 were higher than the 16-year average for boating & PWC, rock fishing, scuba diving and fall-related incidents. Swimming/wading, watercraft, rescue attempts and snorkelling incidents were lower than average. *NB: Arrows indicate change from 16-year average.*

DROWNING SNAPSHOT

2004–20 COASTAL & OCEAN DROWNING DEATHS



AVERAGE NUMBER
17

AVERAGE MORTALITY RATE
0.73
PER 100,000 POPULATION

MALE
88%

FEMALE
12%

KEY DEMOGRAPHICS

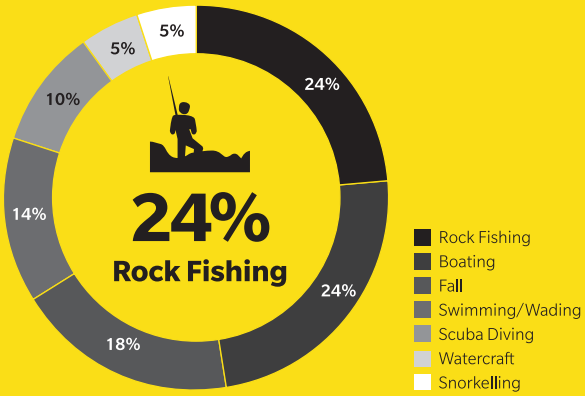
25-34 YEAR OLDS & **50-69** YEAR OLD BOATERS

2019–20 COASTAL & OCEAN DROWNING DEATHS

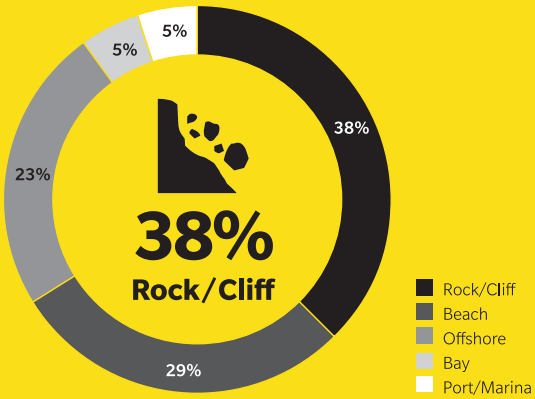
21

MORTALITY RATE
0.80
PER 100,000 POPULATION

DROWNING DEATHS BY ACTIVITY



DROWNING DEATHS BY LOCATION



71% GREATER THAN 5KM FROM A SURF LIFE SAVING SERVICE

SOUTH AUSTRALIA

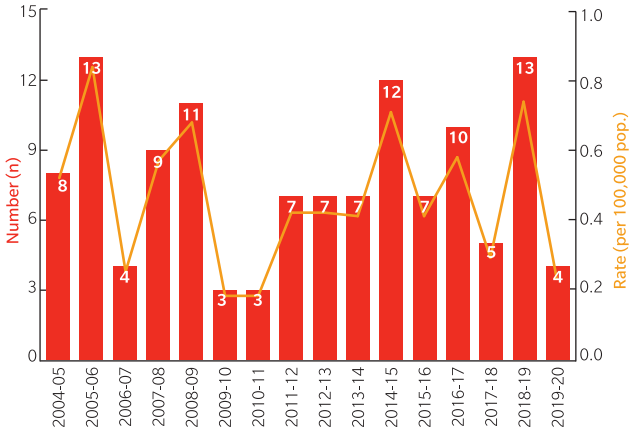


Figure 76

2004-20: 16-YEAR TREND OF COASTAL & OCEAN DROWNING DEATHS (N=123)

In 2019-20, the number and mortality rate of coastal and ocean drowning deaths in South Australia was lower than the 16-year average of 8 and 0.46 per 100,000 population.

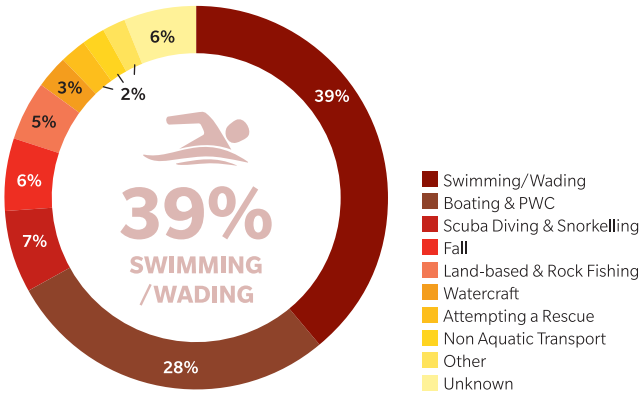


Figure 77

2004-20: COASTAL & OCEAN DROWNING DEATHS BY ACTIVITY (N=123)

Since 2004 in South Australia, swimming and wading has recorded the most drowning deaths for an activity (n=48), followed by boating and PWC (n=34), then scuba diving and snorkelling (n=9).

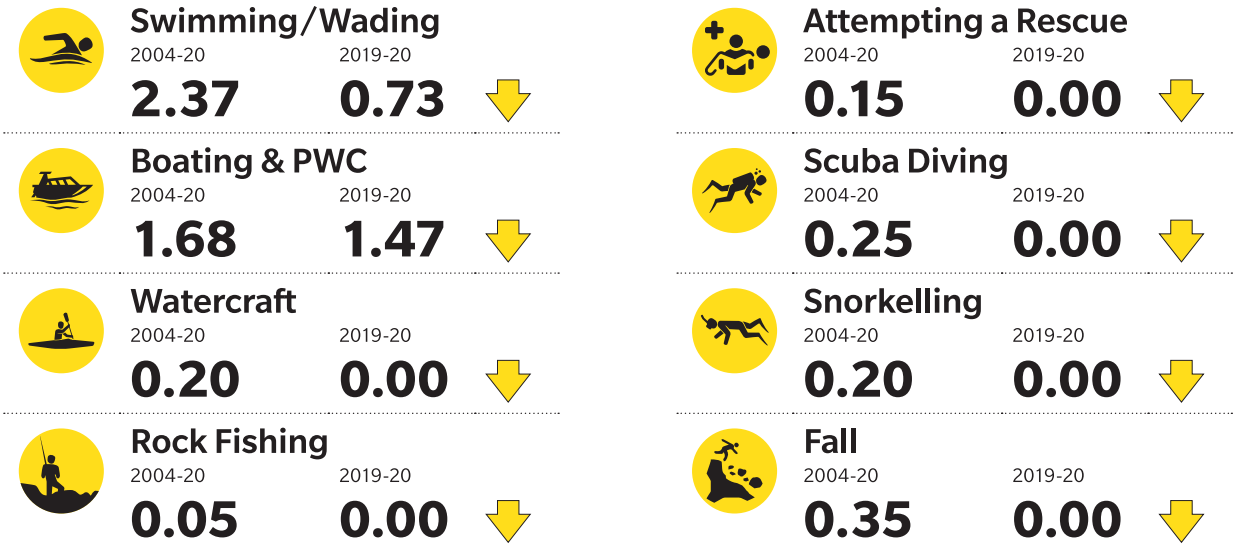


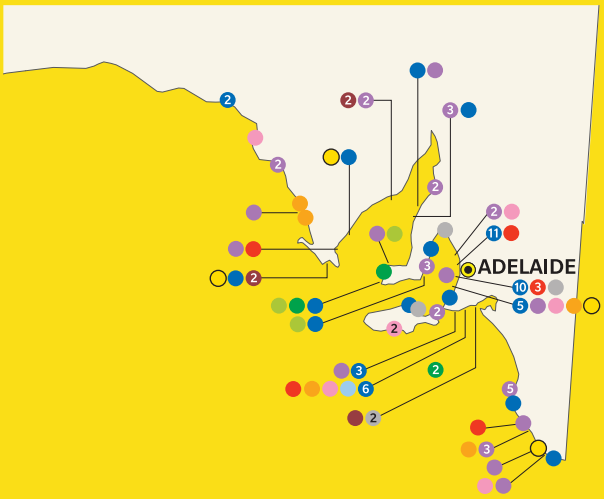
Figure 78

MORTALITY RATE COMPARISON OF 2019-20 DROWNING DEATHS TO 16-YEAR AVERAGE BY ACTIVITY

South Australian drowning death rates (per 100,000 coastal participants) in 2019-20 were lower than the 16-year average for all activities. *NB: Arrows indicate change from 16-year average.*

DROWNING SNAPSHOT

2004–20 COASTAL & OCEAN DROWNING DEATHS



- Attempting a Rescue
- Boating & PWC
- Fall
- Jump
- Land-based Fishing
- Non Aquatic Transport
- Other
- Rock Fishing
- Scuba Diving
- Snorkelling
- Swimming/Wading
- Unknown
- Watercraft
- Multiple instances per activity at the same location
- Capital city

AVERAGE NUMBER
8

AVERAGE MORTALITY RATE
0.46
PER 100,000 POPULATION

82%
MALE

18%
FEMALE

KEY DEMOGRAPHICS

15-29
YEAR OLD SWIMMERS

&

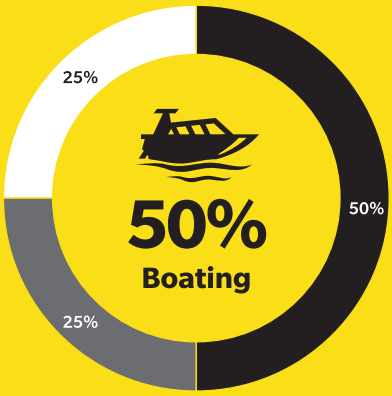
45-74
YEAR OLD BOATERS

2019–20 COASTAL & OCEAN DROWNING DEATHS

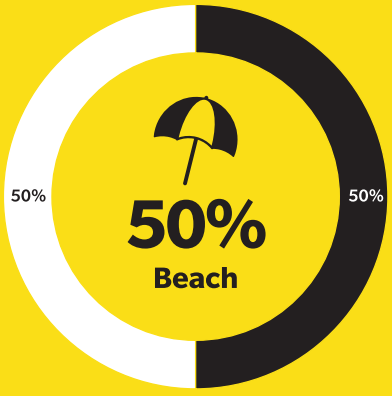
4

MORTALITY RATE
0.23
PER 100,000 POPULATION

DROWNING DEATHS BY ACTIVITY



DROWNING DEATHS BY LOCATION



100%
GREATER THAN 5KM FROM A SURF LIFE SAVING SERVICE

TASMANIA

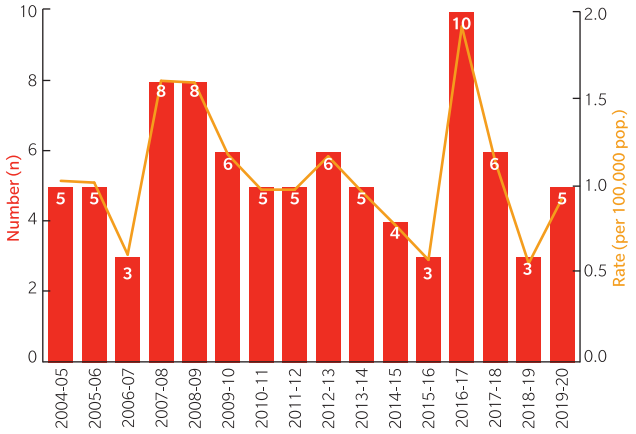


Figure 79

2004-20: 16-YEAR TREND OF COASTAL & OCEAN DROWNING DEATHS (N=87)

In 2019-20, the number of coastal and ocean drowning deaths in Tasmania was equal the 16-year average of 5, while the mortality rate was lower than the average rate of 1.06 per 100,000 population.

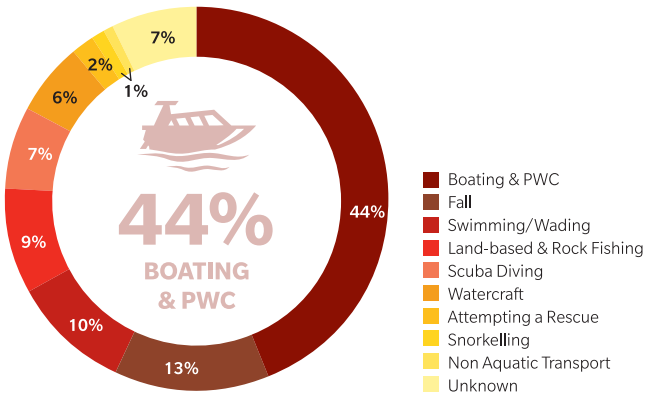


Figure 80

2004-20: COASTAL & OCEAN DROWNING DEATHS BY ACTIVITY (N=87)

Since 2004 in Tasmania, boating and PWC has recorded the most drowning deaths for an activity (n=38), followed by accidental falls (n=11), swimming and wading (n=9) and then land-based and rock fishing (n=8).

Swimming/Wading

2004-20	2019-20	
1.49	0.00	↓

Boating & PWC

2004-20	2019-20	
6.30	2.43	↓

Watercraft

2004-20	2019-20	
0.83	0.00	↓

Rock Fishing

2004-20	2019-20	
0.99	0.00	↓

Attempting a Rescue

2004-20	2019-20	
0.33	0.00	↓

Scuba Diving

2004-20	2019-20	
0.99	2.43	↑

Snorkelling

2004-20	2019-20	
0.17	0.00	↓

Fall

2004-20	2019-20	
1.82	7.28	↑

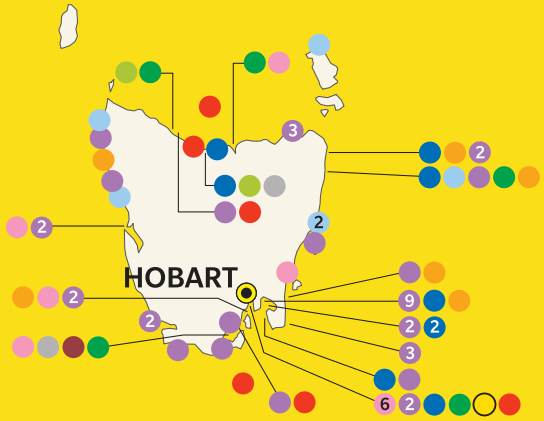
Figure 81

MORTALITY RATE COMPARISON OF 2019-20 DROWNING DEATHS TO 16-YEAR AVERAGE BY ACTIVITY

Tasmanian drowning death rates (per 100,000 coastal participants) in 2019-20 were higher than the 16-year average for scuba diving and fall-related incidents. Swimming/wading, boating & PWC, rock fishing, watercraft, rescue attempts and snorkelling incidents were lower than average. *NB: Arrows indicate change from 16-year average.*

DROWNING SNAPSHOT

2004–20 COASTAL & OCEAN DROWNING DEATHS



- Attempting a Rescue
- Boating & PWC
- Fall
- Jump
- Land-based Fishing
- Non Aquatic Transport
- Other
- Rock Fishing
- Scuba Diving
- Snorkelling
- Swimming/Wading
- Unknown
- Watercraft
- Multiple instances per activity at the same location
- Capital city

AVERAGE NUMBER
5

AVERAGE MORTALITY RATE
1.06
PER 100,000 POPULATION

88%
MALE

12%
FEMALE

KEY DEMOGRAPHICS

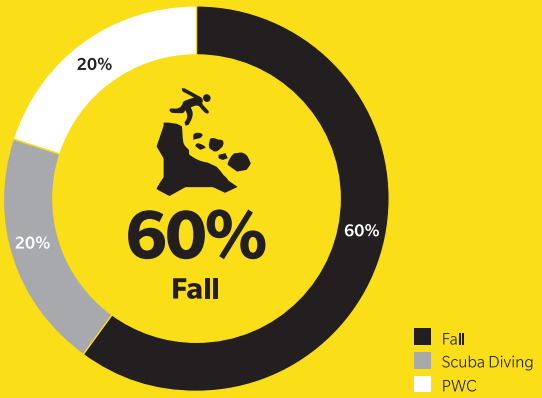
35-44 YEAR OLDS & **55-69** YEAR OLD BOATERS

2019–20 COASTAL & OCEAN DROWNING DEATHS

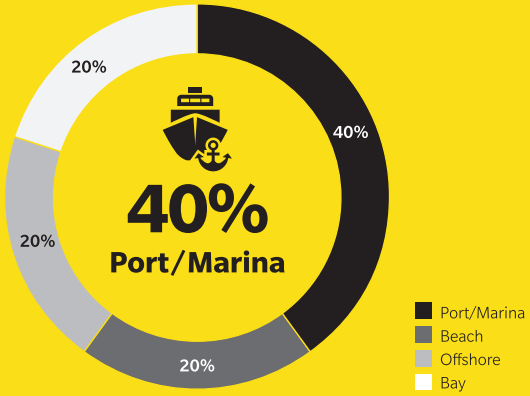
5

MORTALITY RATE
0.93
PER 100,000 POPULATION

DROWNING DEATHS BY ACTIVITY



DROWNING DEATHS BY LOCATION



100% GREATER THAN 5KM FROM A SURF LIFE SAVING SERVICE

NORTHERN TERRITORY

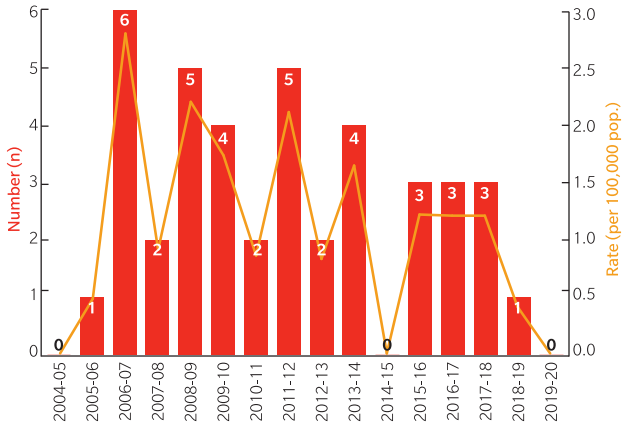


Figure 82

2004-20: 16-YEAR TREND OF COASTAL & OCEAN DROWNING DEATHS (N=41)

In 2019-20, there were no coastal or ocean drowning deaths recorded in the Northern Territory.

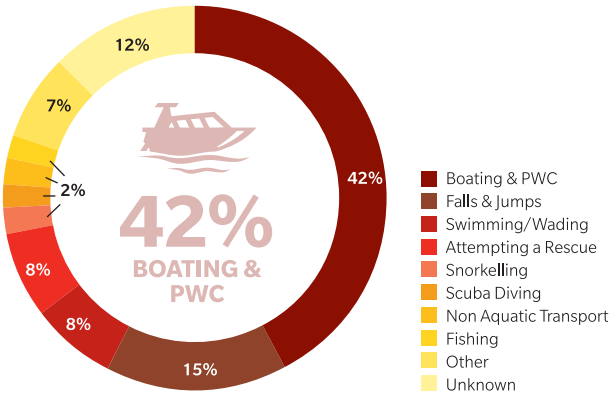


Figure 83

2004-20: COASTAL & OCEAN DROWNING DEATHS BY ACTIVITY (N=41)

Since 2004 in Northern Territory, boating has recorded the most drowning deaths for an activity (n=17), followed by falls and jumps (n=6), then swimming and wading (n=3).

Swimming/Wading
2004-20 **1.16** | 2017-20 **0.00**

Boating & PWC
2004-20 **6.56** | 2017-20 **11.58**

Watercraft
2004-20 **0.00** | 2017-20 **0.00**

Rock Fishing
2004-20 **0.00** | 2017-20 **0.00**

Attempting a Rescue
2004-20 **1.16** | 2017-20 **0.00**

Scuba Diving
2004-20 **0.39** | 2017-20 **0.00**

Snorkelling
2004-20 **0.39** | 2017-20 **0.00**

Fall
2004-20 **1.16** | 2017-20 **0.00**

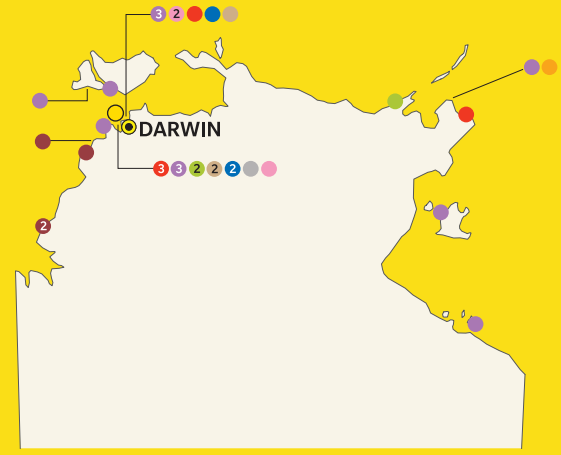
Figure 84

MORTALITY RATE COMPARISON OF 2019-20 DROWNING DEATHS TO 16-YEAR AVERAGE BY ACTIVITY

Northern Territory drowning death rates (per 100,000 coastal participants) between 2017-20 were higher than the 16-year average for boating & PWC incidents, while all other activities were lower than average. *NB: Arrows indicate change from 16-year average.*

DROWNING SNAPSHOT

2004–20 COASTAL & OCEAN DROWNING DEATHS



- Attempting a Rescue
- Boating & PWC
- Fall
- Jump
- Land-based Fishing
- Non Aquatic Transport
- Other
- Rock Fishing
- Scuba Diving
- Snorkelling
- Swimming/Wading
- Unknown
- Watercraft
- Multiple instances per activity at the same location
- Capital city

AVERAGE NUMBER
3

AVERAGE MORTALITY RATE
1.10
PER 100,000 POPULATION

84%
MALE

16%
FEMALE

KEY DEMOGRAPHICS

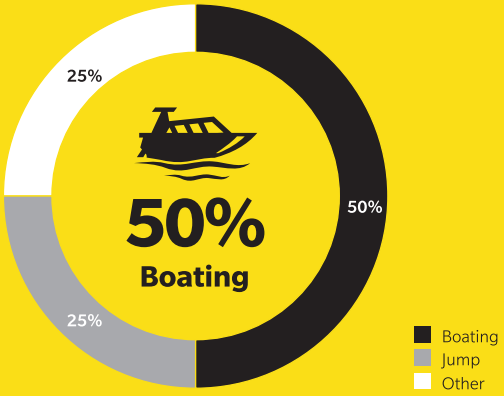
35-54 YEAR OLDS & **45-54** YEAR OLD MALES

2017–20 COASTAL & OCEAN DROWNING DEATHS

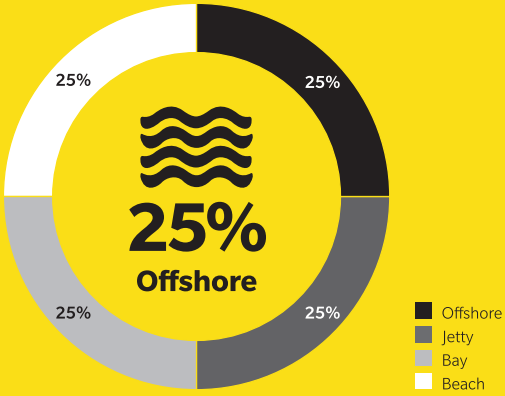
4

MORTALITY RATE
0.54
PER 100,000 POPULATION/YEAR

2017–20 DROWNING DEATHS BY ACTIVITY



2017–20 DROWNING DEATHS BY LOCATION



75% GREATER THAN 5KM FROM A SURF LIFE SAVING SERVICE

TORRES STRAIT

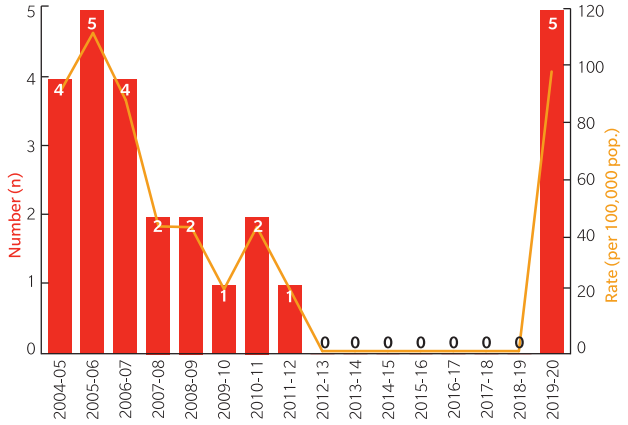


Figure 85

2004–20: 16-YEAR TREND OF COASTAL & OCEAN FATAL INCIDENTS (N=26)

In 2019-20, the Torres strait recorded 5 ocean drowning deaths. This number and mortality rate is above the 16-year average for fatal coastal incidents (including non-drowning related) of 2 and 35.15 per 100,000 population.

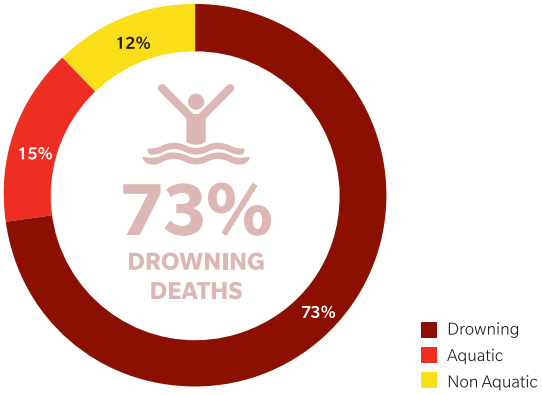


Figure 86

2004–20: COASTAL & OCEAN FATAL INCIDENTS BY INCIDENT TYPE (N=26)

Drowning deaths represent the majority of fatal coastal incidents captured for the Torres Strait (n=19) followed by aquatic fatalities (n=4).

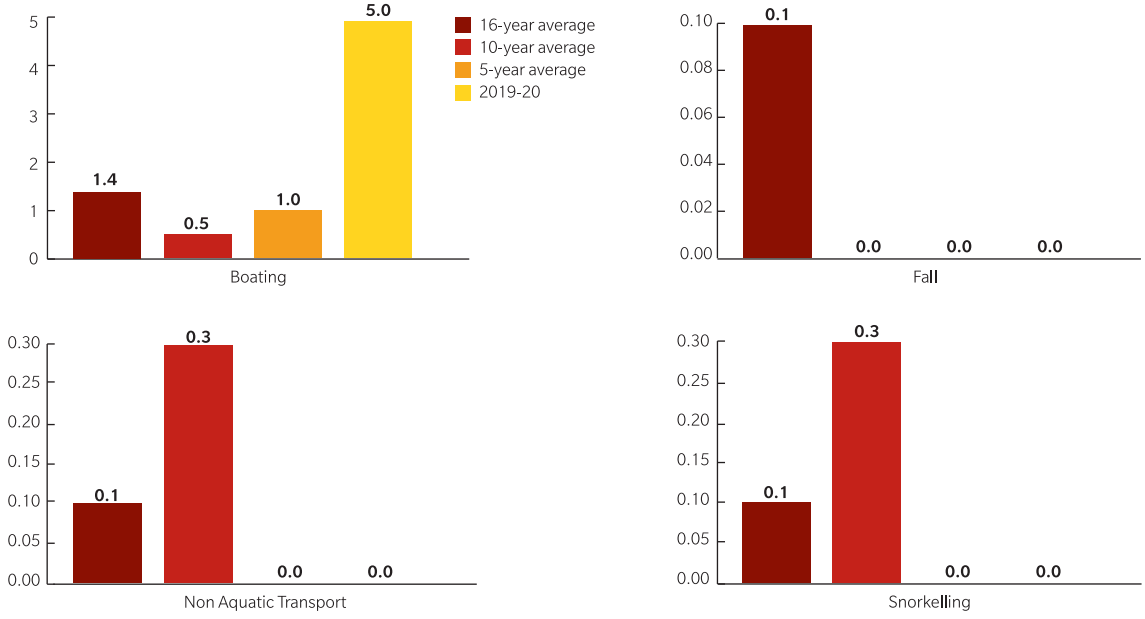


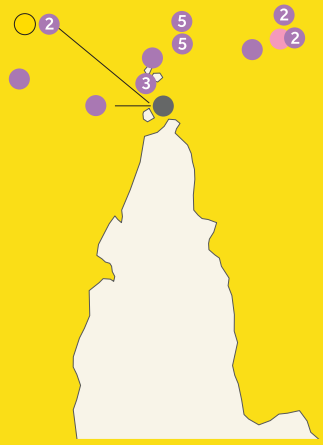
Figure 87

COMPARISON OF FATAL COASTAL INCIDENT TRENDS OVER TIME BY ACTIVITY

Boating-related incidents are most common in the Torres Strait, followed by snorkelling, non aquatic transport and fall-related incidents.

SNAPSHOT

2004–20 COASTAL & OCEAN FATAL INCIDENTS



- Attempting a Rescue
- Boating & PWC
- Fall
- Jump
- Land-based Fishing
- Non Aquatic Transport
- Other
- Rock Fishing
- Scuba Diving
- Snorkelling
- Swimming/Wading
- Unknown
- Watercraft
- Multiple instances per activity at the same location
- Capital city

AVERAGE NUMBER
2
COASTAL INCIDENTS

AVERAGE MORTALITY RATE
35.15
PER 100,000 POPULATION

KEY DEMOGRAPHICS

77% | 23%

20-34
YEAR OLD BOATERS
&
50-54
YEAR OLDS

100% GREATER THAN 5KM FROM A SURF LIFE SAVING SERVICE

2019–20 OCEAN DROWNING DEATHS

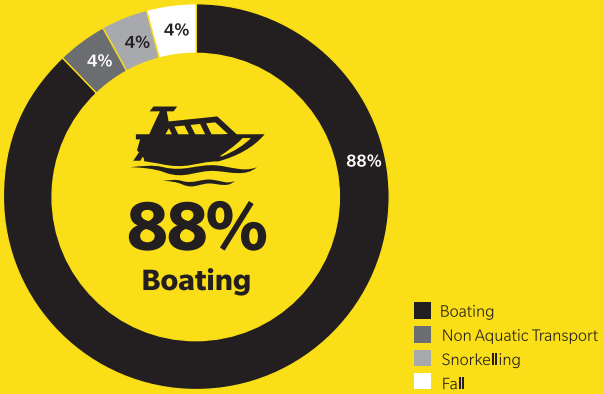
5

MORTALITY RATE
97.96
PER 100,000 POPULATION

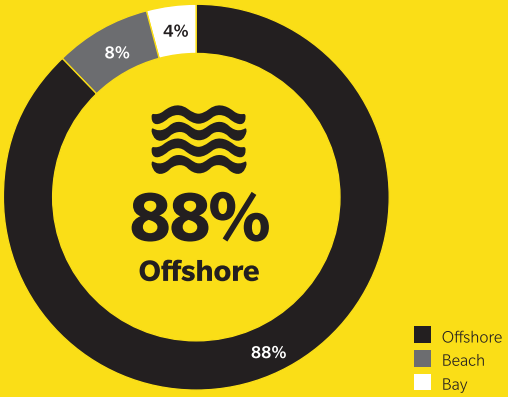
BOATING 100%

OFFSHORE 100%

2004–20 COASTAL INCIDENTS BY ACTIVITY



2004–20 COASTAL INCIDENTS BY LOCATION



GLOSSARY

Adult For the purpose of this report, adults refer to a person 16-years of age and over.

Advanced Resuscitation Techniques A certification providing the skills and knowledge required to use specialised equipment in the provision of resuscitation in line with the Australian Resuscitation Council (ARC) guidelines.

ALS Australian Lifeguard Service.

Apply First Aid A certification providing the skills and knowledge required to provide a first aid response to a casualty.

Aquatic Fatality Aquatic fatalities refer to non-drowning related incidents which have occurred at a coastal location and in the water.

Attempting a rescue Trying to retrieve a person in distress and deliver them to a place of safety.

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 A wave-deposited accumulation of sediment – usually sand but ranging in size up to boulders deposited between the upper swash limit and wave base.

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

Boating Using either a powered vessel or sailing boat for pleasure and/or fishing.

Bystander A person who is present at an incident but not part of it initially.

Coastal Describes the foreshore, seabed, coastal water and air space above a large body of water (harbour/bay/inlet), including areas up to 3nm offshore and of which the landward boundary is the line of mean high water, except 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 five (adopted from the Resource Management Amendment Act 1993 New Zealand).

COD Cause of death.

Crude fatality rate A comparative rate of mortality to the size of the population of participants for a given area or activity.

Dangerous surf warning An alert issued by the Bureau of Meteorology indicating that surf conditions in an area are unsafe for coastal activities. The warnings are calculated based on wave height, swell direction and swell period and must exceed the predetermined limitations to be in effect.

Drowning The process of experiencing respiratory impairment from submersion/immersion in liquid; outcomes are classified as death, morbidity and no morbidity.

Drowning death A fatal drowning incident arising from the process of respiratory impairment as a result of submersion/immersion in liquid.

Drugs A medicine or other substance which has a physiological effect when ingested or otherwise introduced to the body. The category includes therapeutic, over-the-counter and illicit drugs.

Emergency response An action taken by an SLS entity in response to a call for assistance from an emergency management organisation.

Falls (trips/slips) Events that result in a person coming to rest inadvertently on the ground or other lower level.

Fatality A fatal incident arising from circumstances other than drowning (e.g. medical condition, injury, self-harm, marine creature).

First Aid Assessments and interventions that can be performed by a bystander (or by the victim) with minimal to no equipment.

Fishing The act of attempting to catch fish from anywhere except coastal rock platforms.

Foreign ethnicity Describes an individual who identifies 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.

Hazard A source of potential harm.

ILS International Life Saving Federation.

Incident Any unplanned event requiring lifesaving services intervention.

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

Inshore The coastal water area within 500m of the low tide area of the foreshore.

Intentional fatality Any intentional incident, including homicide and self- harm related incidents.

International Describes an individual who is confirmed to reside overseas and/or is a temporary visitor to Australia.

IRB Inflatable rescue boat.

IRD Incident report database. A web-based portal used by SLS services to electronically record incident reports.

Jetty An artificial structure that projects out into the water from land.

JRB Jet rescue boat.

Jump(ing) The activity of launching off a cliff, rock platform, pier, jetty. Aka tombstoning (UK/Europe/North America).

Lake An inland body of water surrounded by land.

Lifeguard An individual who undertakes patrols at a beach or another aquatic environment. He/she is typically a salaried member, qualified in public safety and aquatic rescue.

Lifejacket A buoyant or inflatable garment or device designed to keep a person afloat in water and increase their likelihood of survival.

Lifesaving Service A coordinated group that exists to provide aquatic safety services to the public. This includes Surf Life Saving Clubs, Lifeguards, Surfcom, RWCs, RIBs, JRBs, ORBs, Rescue Helicopters and 4WD units.

Local Government Area (LGA) Also known as local councils, LGAs include cities, town, shires, municipalities or boroughs.

Marina A man-made boat basin having sea walls or breakwaters and offering dockage and other services for water vessels.

Medical For the purpose of this report, medical refers to an incident that was caused by a medical episode, e.g. a heart attack or epileptic seizure.

NCIS National Coronial Information System.

NCSS The National Coastal Safety Survey conducted annually to gather information about Australian coastal participation swimming ability, risk perception, behaviours and attitudes to coastal safety.

Non aquatic fatality Non-aquatic fatalities refer to non-drowning related incidents which have occurred at a coastal location but not in the water.

Non aquatic transport Any form of transport that is not meant for the water such as airplanes, bicycles, and motor vehicles.

Offshore Describes the coastal water area beyond the surf zone and inshore area from 500m to 200nm.

Ocean The seabed, water and air space above the water between 3nm and 12nm (the Australian Territorial Sea) offshore.

ORB Offshore rescue boat.

Other An uncommon known activity not otherwise listed (e.g., paragliding, jogging).

Patrol Service undertaken to monitor activities in/around an aquatic environment and respond accordingly through either preventative actions or rescue operations.

Patrol flags Red and yellow horizontally divided flags which are set after performing a risk assessment to determine the most suitable area for swimming. The flags identify a zone for swimming and bodyboarding within a patrolled location.

Patrolled location A location supervised by a lifesaving service.

Preventative action Direct action taken to reduce or eliminate the probability of a specific rescue, first aid or other reportable incident from happening in the future.

PWC Personal water craft, also known as a jet ski.

Rescue The retrieval of a person in distress, delivering them to a place of safety and the application of first aid and basic life support as may be required.

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

RIB Rigid-hull inflatable boat.

Rip current A seaward flowing current of water moving through a surf zone.

River A natural stream of water flowing into an ocean, lake or other body of water.

Rock/Cliff A rock platform that may or may not have a high steep face.

Rock fishing The act of attempting to catch fish from a coastal rock platform.

Rock shelf A section of rock above or below the water level that projects out from the coast.

RWC Rescue water craft.

Scuba diving Swimming underwater with the aid of scuba equipment for recreational or commercial purposes.

Service season and hours Vary between states due to climatic factors, but in the context of this report, the season is for the period July 2019 to June 2020.

Snorkelling Swimming with a snorkel and face mask. Includes freediving and spearfishing.

Sovereign waters The seabed, water and air space above the water between 12nm and 200nm (the Australian Contiguous, Exclusive Economic and Fishing Zones) offshore.

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

Surf lifesaver An individual who undertakes patrols at a beach or other aquatic environment. They are typically a nonsalaried member qualified in public safety and aquatic rescue.

Surf Life Saving Club A SLS affiliated not-for-profit organisation that has volunteer members who provide coastal safety services to the community.

Swimming Moving through water by moving the body or parts of the body.

Territorial seas The seaward limits of Australia's maritime zones, from the coastline to 12nm from the low tide line.

Total Service Plan An assessment of current and future lifesaving resources, trends, national blackspots and coastal safety issues combined with evidence-based mitigation strategies to address these issues.

Toxicity The degree to which a chemical substance or combination of substances is toxic or poisonous to an organism. In the context of this report, toxicity refers to alcohol or drug used by a victim.

Unintentional fatality Deaths other than drowning deaths (such as medical incidents, injury, accidents, or marine creature), excluding homicide and self- harm related incidents.

Wading Walking through water while partially immersed.

Watercraft A piece of non-powered recreational equipment used in water. Examples include surfboards, stand-up paddle boards, bodyboards, windsurfers or kayaks.

REFERENCE

METHODOLOGY

The National Coastal Safety Report 2020 contains information on Australian community behaviours and attitudes to the coast; SLS capability and membership capacity; rescues and emergency response; and coastal drowning deaths and other fatalities that occurred in Australia's waters for the period of 1 July 2004 to 30 June 2020. This information is correct as of 12 August 2020. All care is taken to ensure the statistical information included within this report is correct. However, pending the outcome of ongoing coronial investigations and as SLS state/territory entities update their operational information, this data may be amended. Data in figures may not always add up to 100% due to rounding. Total mortality rates were calculated using the number of deaths divided by the population (per 100,000) from Australian Bureau of Statistics , while comparative activity mortality rates used the number of coastal participants (per 100,000 participants) identified in the National Coastal Safety Surveys for a given state.

THE AUSTRALIAN COMMUNITY ANALYSIS

Information about community swimming ability, behaviours and attitudes to coastal safety, risk perceptions, safety strategies and rescues was gathered from the SLSA National Coastal Safety Survey (NCSS). Conducted by Omnipoll Market Research, the latest survey was run online over the period 9 - 21 April 2020 among a national sample of 1,587 respondents aged 16 and above. The study was carried out in compliance with AS-ISO 20252 - Market, Social and Opinion Research. To reflect the population distribution, results were post-weighted (on age, gender, geographic strata and education) and projected to Australian Bureau of Statistics data. The Australian population aged 16 and above (the reference population for this survey) is 18,712,000.

CAPABILITY AND RESCUE ANALYSIS

SurfGuard, the Incident Report Database (IRD) and Surfcom management system (Surfcom) are web-based applications and part of a suite of applications that enable members, clubs, branches, state offices and SLSA to enter and access SLS operational (including rescues and first aids), capability (including assets and services), educational and administrative data. Information was extracted from SurfGuard to identify how many rescues were performed by volunteers, lifeguards and lifesaving services during 2019-20; and how many active surf lifesavers and award holders there were during 2019-20. The data was verified by SLS state/territory entities. Information about assets and services were gathered from each SLS state/territory entity.

DROWNING AND FATALITY DATA ANALYSIS

SLSA collects incident data from SurfGuard, the IRD, Surfcom, the National Coronial Information System (NCIS) and by monitoring media reports for coastal and ocean incidents. The information is verified with the assistance of each state/territory SLS entity and compiled for analysis by SLSA's Coastal Safety Department. The following variables are used to match fatal incidents 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. Incidents are excluded as a drowning death if they are reported as 'intentional deaths', they occur at inland locations, or drowning/immersion' is not a contributory factor as noted by the coroner. Coastal incidents that are deemed intentional or not due to drowning/immersion are logged as coastal fatalities instead. The authors are responsible for the use made of the data in this report.

DROWNING DATA 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 80% of 2019-20 coastal drowning deaths and 61% of 2019-20 coastal fatalities recorded remain open cases and 41% of 2019-20 cases do not have a cause of death (COD) listed. Once NCIS closes a case, SLSA modifies those with unknown intent and those where the cause of death is not drowning, from 'coastal drowning' to 'coastal fatality'. Bars of two different colours are used to illustrate the incidents where a COD has not been listed on NCIS in Figure 43 and 48. The incidents are included in our annual totals and analysis, and they will remain so until a COD is listed other than drowning/immersion.

CHANGES FROM PREVIOUS REPORTS

As part of the NCIS investigation process, some cases are amended prior to their closure and have resulted in changes to our datasets. This year SLSA has commenced a thorough review of its coastal and ocean fatality database to update all cases to the same inclusion standards. See Table 1.

Table 1

CHANGES IN THE NUMBER OF COASTAL AND OCEAN DROWNING DEATHS AS PREVIOUSLY REPORTED

	2016 NCSR	2017 NCSR	2018 NCSR	2019 NCSR	2020 NCSR
2004–05	89	89	89	96	100
2005–06	96	96	95	107	113
2006–07	102	102	102	115	118
2007–08	89	89	89	104	104
2008–09	88	88	85	106	112
2009–10	85	85	80	105	104
2010–11	69	69	69	91	91
2011–12	113	114	114	117	116
2012–13	118	118	118	134	134
2013–14	84	82	80	85	85
2014–15	105	105	108	114	115
2015–16	130	128	128	136	137
2016–17		116	119	110	112
2017-18			110	107	107
2018-19				122	122
2019-20					125

SUGGESTED CITATION: Surf Life Saving Australia, 2020. National Coastal Safety Report 2020. SLSA: Sydney.

REFERENCES

- Australian Bureau of Statistics, 2020, Australian Demographic Population Statistics, accessed 18 August 2020, https://www.abs.gov.au/Population
- SLSA National Coastal Safety Survey (NCSS2014, 2015, 2016, 2017, 2018, 2019, 2020).
- Newspoll/Omnipoll Online Omnibus April 2014, 2015, 2016, 2017, 2018, 2019, 2020.
- SLSA Annual Reports (2009-2019).

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This report was compiled by Shane Daw, General Manager - Coastal Safety, Jasmin Lawes, Researcher, Nicole Cooney, Project Coordinator - Coastal Safety, Annabel Ellis, Research Assistant and Luke Strasiotto, Lifesaving Officer. Maps were commissioned from Flat Earth Mapping.
Cover Image: Shane Daw. Design: Melissa Conchar.

Australian Government
Australian Institute of Health and Welfare

NCIS

CONTACT INFORMATION

SLS receives 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:

Surf Life Saving Foundation— slsfoundation.com.au

For more information:

Surf Life Saving Australia—sls.com.au
Surf Life Saving New South Wales—surflifesaving.com.au
Surf Life Saving Northern Territory—lifesavingnt.com.au
Surf Life Saving Queensland—lifesaving.com.au
Surf Life Saving South Australia—surflifesavingsa.com.au
Surf Life Saving Tasmania—slst.asn.au
Life Saving Victoria—lsv.com.au
Surf Life Saving Western Australia—mybeach.com.au

COASTAL DROWNING & FATALITY

SNAPSHOT

235
FATAL COASTAL INCIDENTS

80% MALE
20% FEMALE

Location

40%
AT THE BEACH

26%
OFFSHORE

23%
ROCK/CLIFF

AT LEAST 5KM FROM A LIFESAVING SERVICE
50%

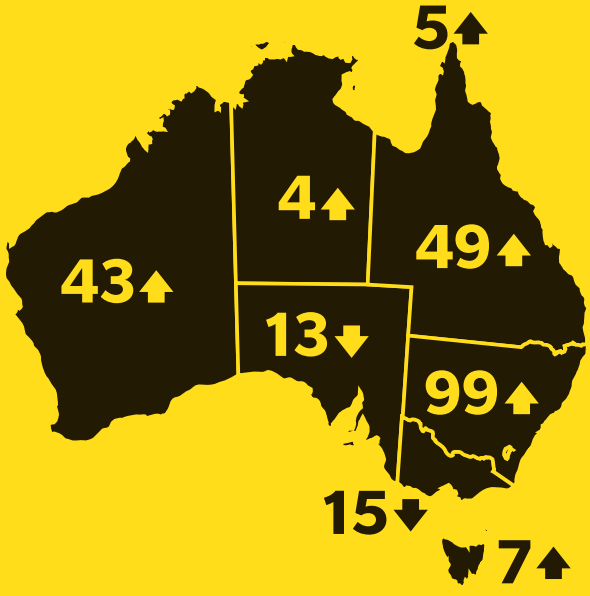
Activity

22% BOATING & PWC

13% SWIMMING/ WADING

8% ROCK FISHING

8% FALLS



INTENTIONAL FATALITIES ACCOUNT FOR 17%

Australian Government