
NATIONAL COASTAL SAFETY REPORT 2021

SURF LIFE SAVING AUSTRALIA



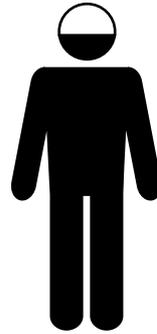
COASTAL DROWNING

SNAPSHOT



136

COASTAL
DROWNING
DEATHS

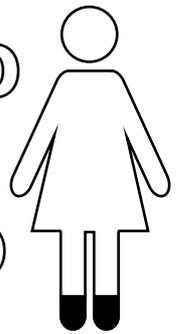


90%

MALE

10%

FEMALE



Location

48%

AT THE BEACH



22%

OFFSHORE



16%

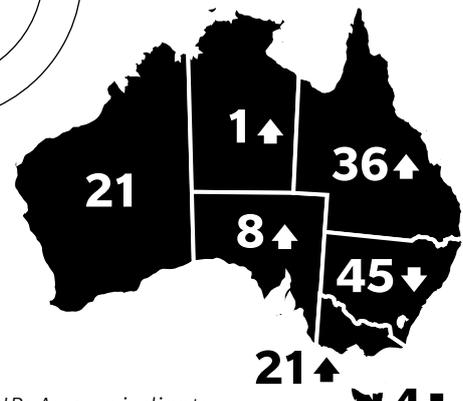
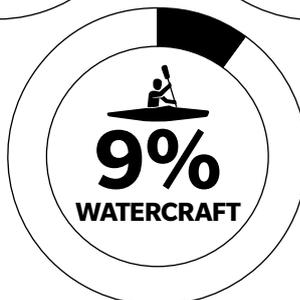
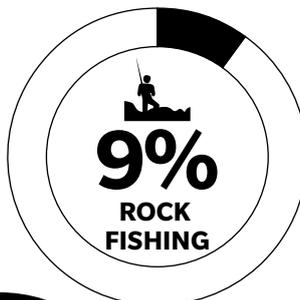
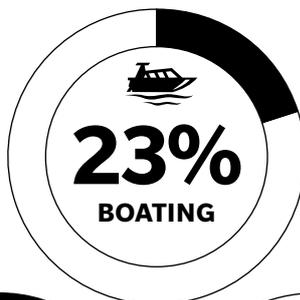
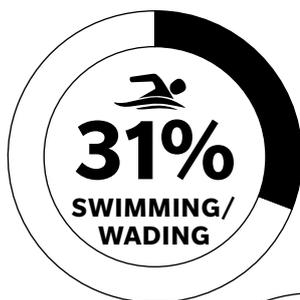
ROCK/CLIFF



AT LEAST 5KM FROM A
LIFESAVING SERVICE

51%

Activity



NB: Arrows indicate
change from previous year



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INTRODUCTION

241 lives have been lost on the Australian coastline over the last year, each one tragic.

This is the reality we are now faced with. During 2020/21 there has been tumultuous change, not only domestically, but globally. COVID has changed the way we live, including where we recreate, take holidays and the activities we engage in.

For many, the way we holiday now looks extremely different, with overseas travel almost non-existent and interstate travel considerably less due to various restrictions. Many of us heeding the advice to visit the country's regional destinations and holiday closer to home, creating an increase in both local and regional coastal visitation.

The National Coastal Safety Survey shows a 2% increase in coastal visitation on the previous financial period with 14.4 million visitors (16 years and older) to the coast, on an average of 3.3 times per month. This calculates to a staggering 500 million individual visitations to the coast during the 2020/21 period.

Swimming and wading continues to be a favourite past time with 48% of visitors taking part in this activity, 18% participating in land based or rock fishing and 15% undertaking boating.

In spite of COVID, surf lifesavers and lifeguards in many areas of the country found that there was an increased desire for people visiting the coast. In some cases, restrictions had meant that exposure to coastal waters had been limited for some time, as had recreating and using aquatic facilities to maintain a healthy lifestyle and confidence in the water. With the inability to travel internationally, interstate local and regional coastal areas experienced influxes of visitors. For many visitors, this meant swimming and recreating at unfamiliar locations.

As a result, surf lifesavers and lifeguards attended to over 8,000 rescues, provided first aid to more than 53,000 people and performed more than 1.75 million preventative actions to stop situations occurring in the first place. I am grateful for the continued efforts of SLS surf lifesavers and lifeguards, without which Deloitte Access Economics (2020) calculated there would be an additional 1,363 lives lost and 818 additional critical injuries around the Australian coastline every year.

However, despite these efforts a total of 241 lives were lost along the Australian coastline. 136 of these were as a result of drowning, an increase (13%, n=16) above the previous year and significantly above the 17-year average of 114. A further 105 fatalities were recorded, 61 which were unintentional. Drowning deaths for swimming, boating, watercraft, falls and rescue-related activities were all above the 17-year average.

Recently the World Health Organisation (WHO), along with International Life Saving Federation (ILS) conducted the first World Drowning Prevention Day (25 July). The focus was on 'Anyone can drown, no one should.' Surf Life Saving Australia (SLSA) took an active part in this event and promoted this throughout Australia. The statement is a foundation principle which all aquatic leaders support. The fact that all drowning deaths are preventable is one of SLSA vision elements in reducing the loss of life and injury along our coastline.

Earlier this year, along with the Australian Water Safety Council, we launched the Australian Water Safety Strategy. We were pleased to be able to provide insights and contribute to the plan around the prevention of drowning on beaches and at coastal locations while also having input into other areas. The strategy embraces evidence-based innovation for the delivery of current and future services.

The loss of 241 lives goes much further than this number. There are many more who have been hospitalised with short term, long term and lifelong impacts as a result. Further to this there are the families, friends and loved ones who are impacted by these events, which goes largely unseen. However, the impacts go further still, and includes first responders and emergency service personnel. It is for these many reasons that SLSA will continue to work towards its goal of zero preventable drowning deaths.

The *National Coastal Safety Report 2021* provides evidence-informed insights into factors relating to drowning deaths and other fatalities. The work undertaken to develop this report is significant and I thank those involved for the efforts taken to bring this together. It will assist in identifying and prioritising innovation and strategy around coastal safety and drowning prevention.

In closing I commend this report to you and encourage you to take the time to read this detailed publication, keeping in mind it is more than numbers, also representing the lives of 241 people who are not with us today. I encourage you to support the objectives of SLSA in reducing injury and loss of life along our coastline.



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.

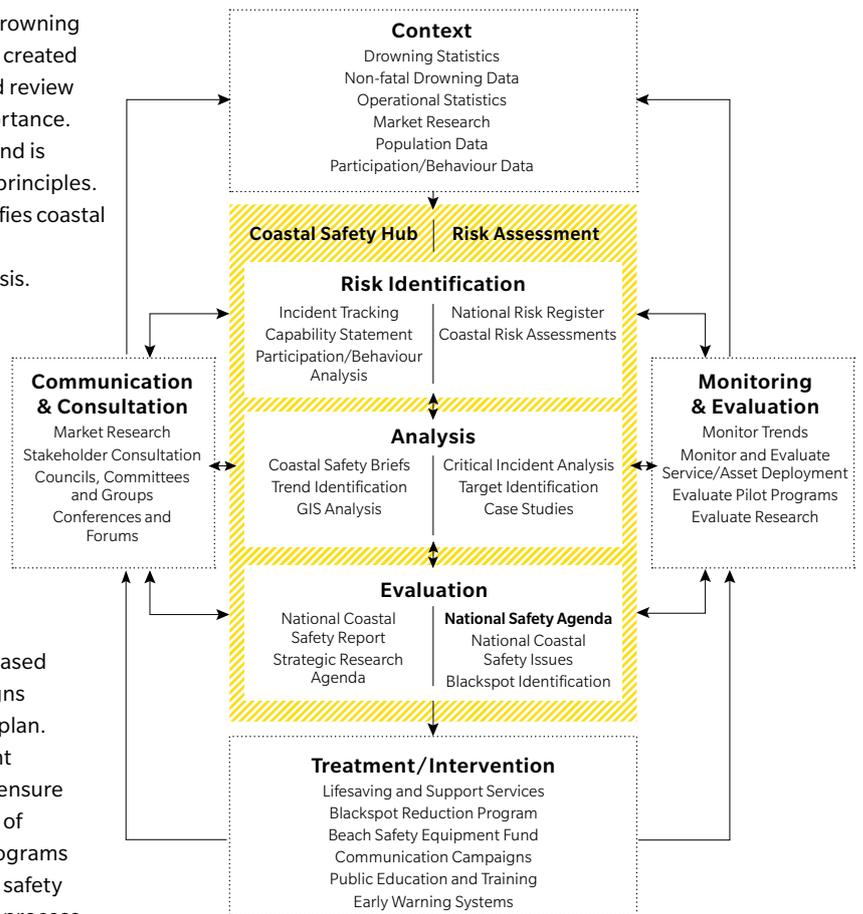
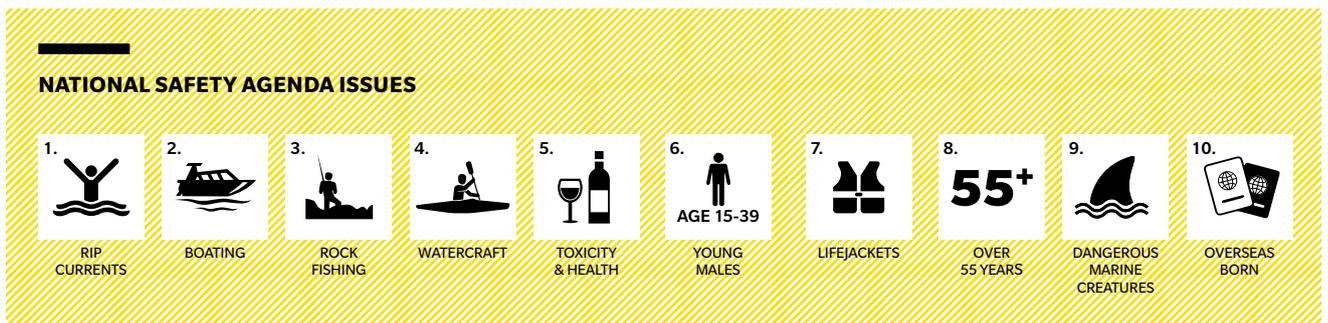


Figure 1
TOTAL SERVICE PLAN PROCESS OVERVIEW

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







COMMUNITY

SECTION ONE



14.4M

Australian adults
visited the coast



10.9M

Coastal activity
participants



500M

Individual coastal
visitations

AUSTRALIAN POPULATION

VISITATION & PARTICIPATION BY STATE

Figure 2

AUSTRALIAN POPULATION DENSITY PER LOCAL GOVERNMENT AREA (LGA)

This heat map shows the estimated Australian population density per LGA at June 2021. The majority of LGAs with a population density greater than 100 persons per square kilometre are located on Australia's extensive coastline.

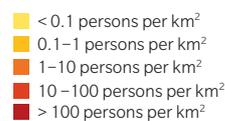
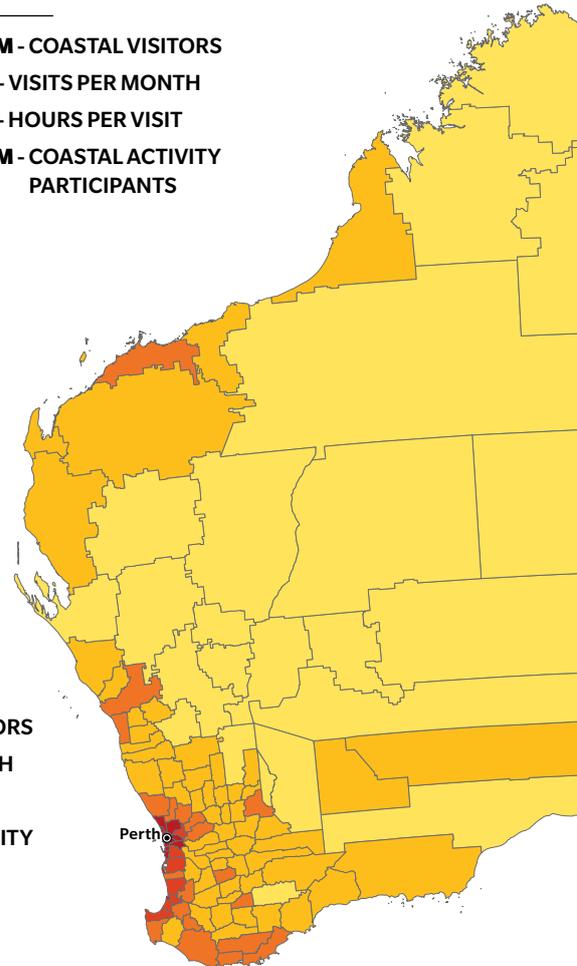
The National Coastal Safety Survey 2021 (NCSS2021) collected data on coastal visitation, frequency and activity participation for each state which are also presented here.

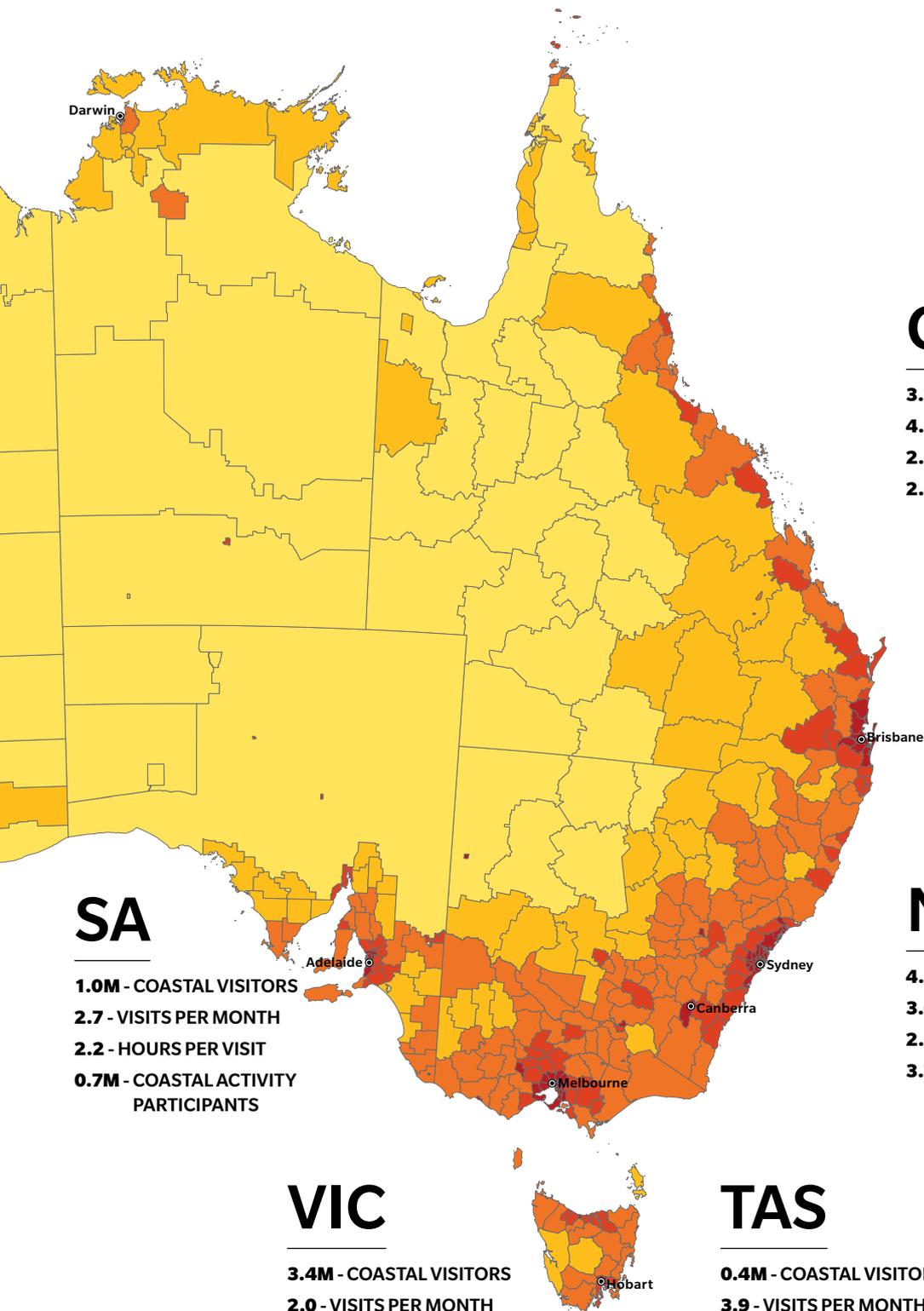
NT

0.2M - COASTAL VISITORS
5.0 - VISITS PER MONTH
1.8 - HOURS PER VISIT
0.2M - COASTAL ACTIVITY PARTICIPANTS

WA

1.6M - COASTAL VISITORS
3.6 - VISITS PER MONTH
2.1 - HOURS PER VISIT
1.2M - COASTAL ACTIVITY PARTICIPANTS





QLD

3.1M - COASTAL VISITORS
4.4 - VISITS PER MONTH
2.4 - HOURS PER VISIT
2.4M - COASTAL ACTIVITY PARTICIPANTS

SA

1.0M - COASTAL VISITORS
2.7 - VISITS PER MONTH
2.2 - HOURS PER VISIT
0.7M - COASTAL ACTIVITY PARTICIPANTS

NSW

4.7M - COASTAL VISITORS
3.6 - VISITS PER MONTH
2.3 - HOURS PER VISIT
3.7M - COASTAL ACTIVITY PARTICIPANTS

VIC

3.4M - COASTAL VISITORS
2.0 - VISITS PER MONTH
2.3 - HOURS PER VISIT
2.5M - COASTAL ACTIVITY PARTICIPANTS

TAS

0.4M - COASTAL VISITORS
3.9 - VISITS PER MONTH
1.9 - HOURS PER VISIT
0.2M - COASTAL ACTIVITY PARTICIPANTS

COASTAL VISITATION

NATIONAL VISITATION & PARTICIPATION


14.4M
 AUSTRALIAN ADULTS
 VISITED THE COAST

2021
3.3
 VISITS/MONTH

2.3
 HOURS/
 VISIT


10.9M
 COASTAL ACTIVITY
 PARTICIPANTS

COASTAL PARTICIPATION SUMMARY

Australians love the coast. To better understand how the coast is used, the annual National Coastal Safety Survey (NCSS) explores coastal participation, behaviours and perceptions. In the last twelve months, 14.4 million Australian adults (16 years and above) visited the coast on average 3.3 times each month. This suggests that there were over 500 million individual visitations to the coast last year with 10.9 million coastal activity participants (Figure 3).

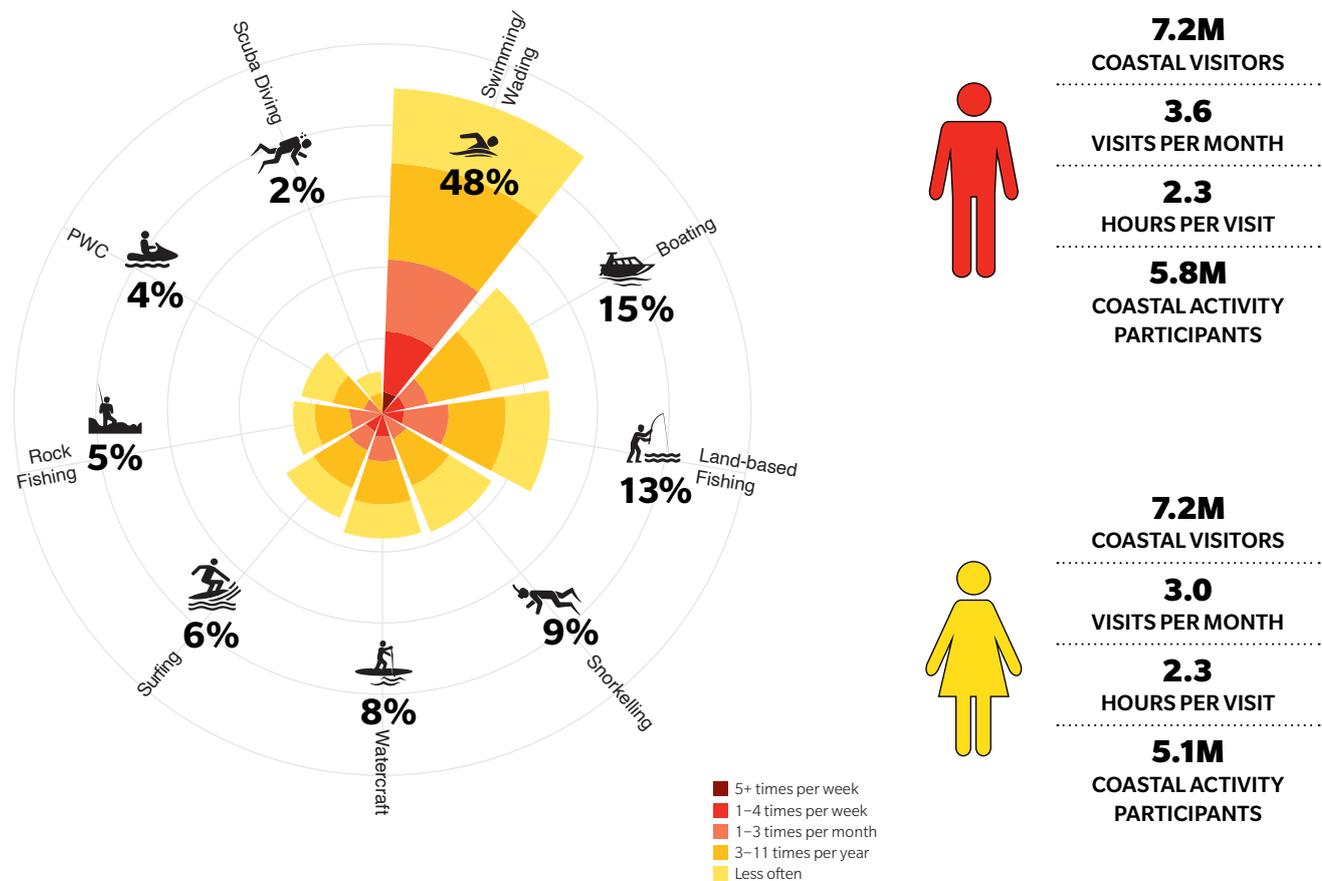


Figure 3

NCSS2021: COASTAL PARTICIPATION BY ACTIVITY AND GENDER

In the last 12 months, males and females visited the coast equally, but females participated in coastal activities less. Swimming and wading was the most popular activity (48%), followed by boating (15%) and land-based fishing (13%).

COVID-19 IMPACTS

CHANGES TO COASTAL VISITATION & PARTICIPATION

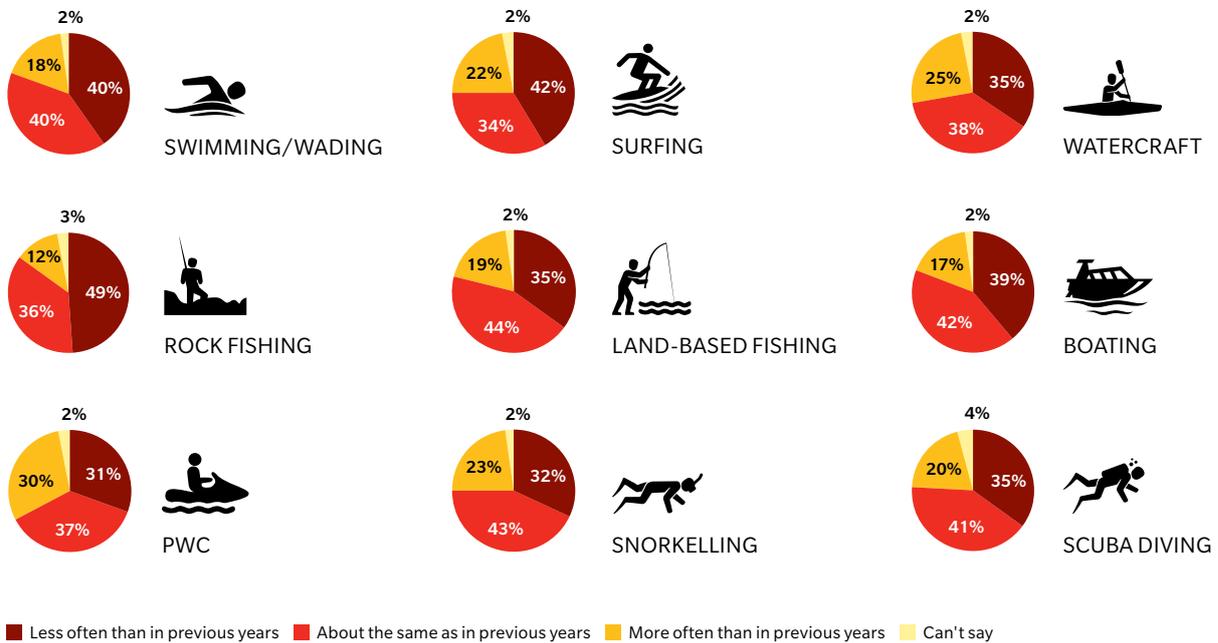
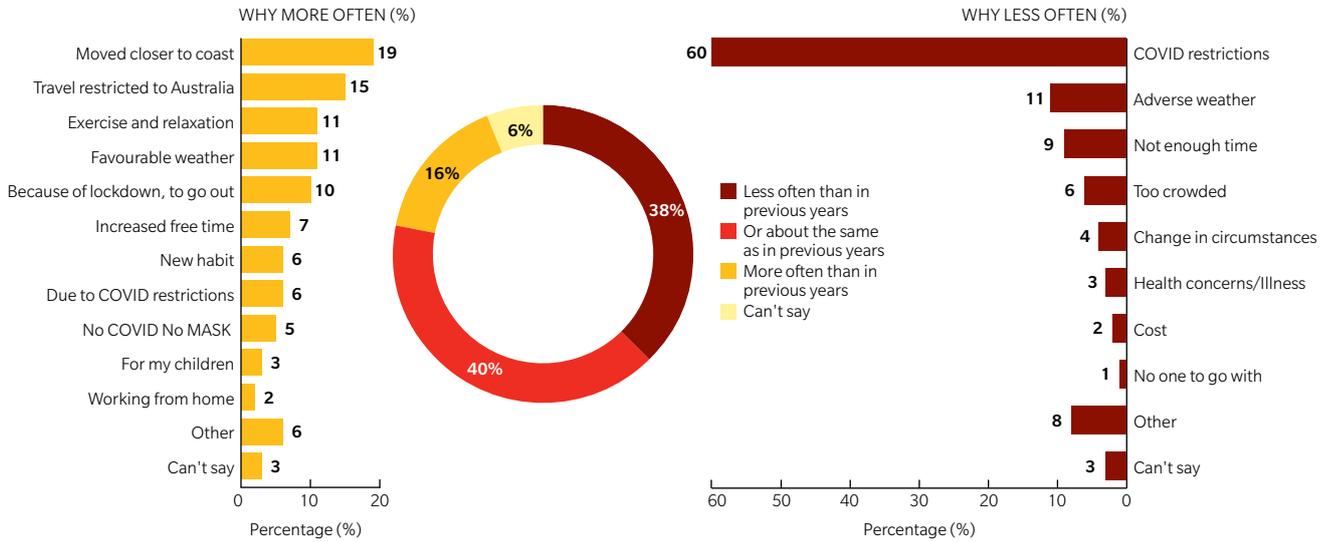


Figure 4

NCSS2021: DID AUSTRALIANS VISIT THE COAST MORE OR LESS IN THE LAST YEAR - WHY & BY ACTIVITY

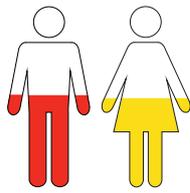
Recent unprecedented challenges have anecdotally affected coastal participation trends. When asked if, how and why coastal visitations had changed in the last year, 38% Australian adults have visited the coast less and 16% more often than in previous years. For those who visited less, 60% attributed this change due to COVID-19 restrictions, while one in five of those who visited more had moved closer to the coast. Coastal activities also observed changes. For example, 25% of watercraft and 30% of PWC users went more often this summer, while 49% of rock fishers fished less than in previous years. Understanding these changes is important to ensure coastal safety services remain relevant and able to support the community.

ACTIVITY PARTICIPATION

NCSS2021 PARTICIPATION BY GENDER, FREQUENCY & STATE

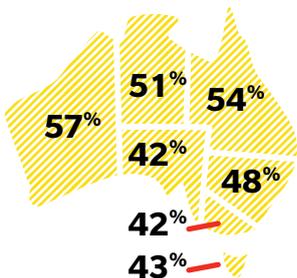
Coastal participation differs by activity, gender, frequency and state. These pages show the proportion of male and female participants, the number of total, frequent and occasional participants, how many hours annually frequent vs. occasional participants spend on an activity, and the percentage of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

SWIMMING/WADING



TOTAL 9M

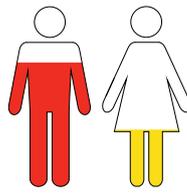
3M FREQUENT SWIMMERS
6M OCCASIONAL SWIMMERS



56%

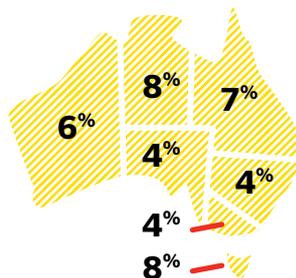
SWIMMERS/WADERS ALWAYS CHOOSE TO SWIM BETWEEN THE FLAGS

ROCK FISHING



TOTAL 0.9M

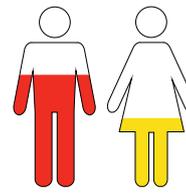
0.4M FREQUENT ROCK FISHERS
0.5M OCCASIONAL ROCK FISHERS



55%

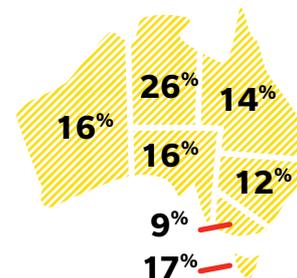
ROCK FISHERS DO NOT USE A LIFEJACKET OR BUOYANCY AID

LAND-BASED FISHING



TOTAL 2.3M

0.8M FREQUENT LAND-BASED FISHERS
1.5M OCCASIONAL LAND-BASED FISHERS



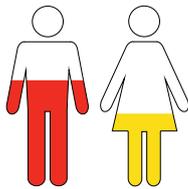
44%

CONSIDER LAND-BASED FISHING NOT VERY HAZARDOUS

BOATING



GENDER



60% | 40%

TOTAL 2.8M

FREQUENCY

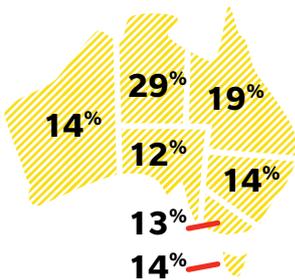
0.7M
FREQUENT
BOATERS



2.1M
OCCASIONAL
BOATERS



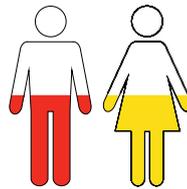
STATE



27%

**OF BOATERS ALWAYS
FISH WHEN BOATING**

PWC



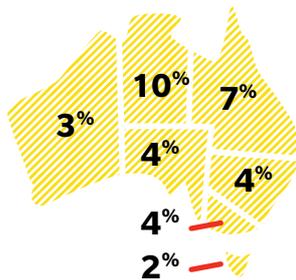
51% | 49%

TOTAL 0.8M

0.2M
FREQUENT
PWC USERS



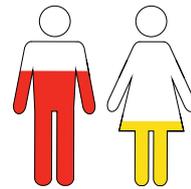
0.6M
OCCASIONAL
PWC USERS



54%

**DO NOT HAVE
A LICENCE**

SURFING



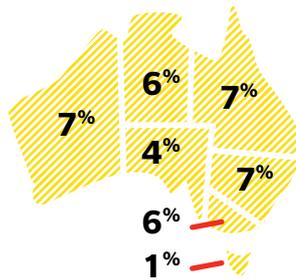
69% | 31%

TOTAL 1.2M

0.5M
FREQUENT
SURFERS



0.7M
OCCASIONAL
SURFERS



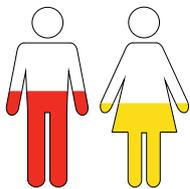
70%

**ALWAYS AVOID SURFING
UNDER THE INFLUENCE OF
ALCOHOL/DRUGS**

ACTIVITY PARTICIPATION

NCSS2021: PARTICIPATION BY GENDER, FREQUENCY & STATE

SNORKELLING

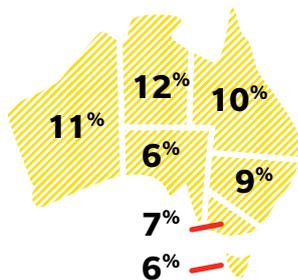


55% | 45%

TOTAL 1.6M

0.4M
FREQUENT
SNORKELLERS

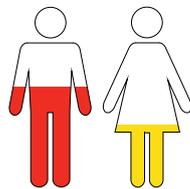
1.2M
OCCASIONAL
SNORKELLERS



29%

**SNORKEL AT UNPATROLLED
LOCATIONS**

SCUBA DIVING

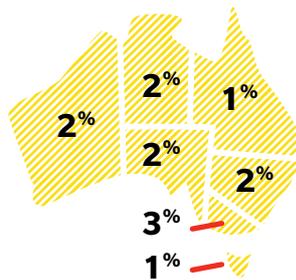


63% | 37%

TOTAL 0.3M

0.1M
FREQUENT
DIVERS

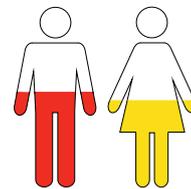
0.2M
OCCASIONAL
DIVERS



61%

**ALWAYS AVOID ALCOHOL/
DRUGS WHEN DIVING**

WATERCRAFT

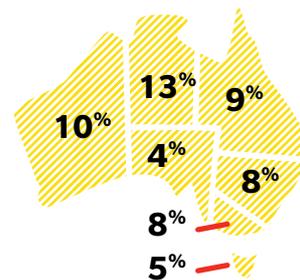


56% | 44%

TOTAL 1.5M

0.5M
FREQUENT
WATERCRAFT USERS

1M
OCCASIONAL
WATERCRAFT USERS



31%

**WATERCRAFT USERS NEVER
CARRY SAFETY EQUIPMENT**

ACTIVITY PARTICIPATION

PROFILES & PRACTICES

	SWIMMERS/ WADERS
52%	35-69 years old
22%	Swim at unpatrolled locations
46%	Always look for rip currents
67%	70 years or older always swim between the flags
52%	Feel experienced enough to take some risks

	SURFERS
58%	16-34 years old
35%	Are beginners
49%	Always surf with others
52%	Females surfers surf at patrolled beaches
70%	Always avoid alcohol/drugs when surfing

	WATERCRAFT
62%	25-49 years old
31%	Always carry safety equipment
85%	Use kayaks and/or SUPs
54%	Choose locations they consider safe
14%	Never wear a lifejacket

	PWC
62%	16-34 years old
54%	Do not have a license
75%	Always wear a lifejacket
50%	Always carry safety equipment
40%	Are beginners

	BOATERS
55%	25-49 years old
87%	Use power boat
10%	Boat further than 2 nautical miles offshore
43%	Do not always wear a lifejacket
81%	Always carry safety equipment

	SCUBA DIVERS
68%	25-49 years old
33%	Dive further than 2 nautical miles offshore
66%	Always dive with others
61%	Always avoid alcohol/drugs
33%	Have rescued someone while diving

	SNORKELLERS
62%	25-49 years old
58%	Choose location for marine wildlife
50%	Always use safety equipment
51%	Feel experienced enough to take some risks
66%	Can swim 50m in ocean without stopping

	LAND-BASED FISHERS
52%	25-49 years old
17%	Always wear a lifejacket or buoyancy aid
36%	Never carry EPIRB/phone
46%	Always wear appropriate clothing/footwear
54%	Consider it reasonable to consume alcohol while fishing

	ROCK FISHERS
54%	25-49 years old
43%	Never wear a lifejacket or buoyancy aid
58%	Always avoid alcohol/drug
35%	50-69 year olds consider rock fishing extremely hazardous
66%	Male rock fishers feel experienced enough to take some risk

SWIMMING ABILITY

CONFIDENCE & ABILITY IN COASTAL WATERS

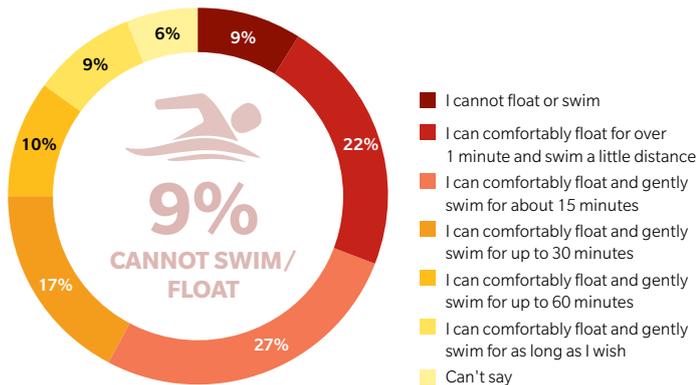


Figure 5
NCSS2021: UNAIDED SWIMMING ABILITY IN COASTAL WATERS
 Three in ten Australians cannot swim or float in the ocean for more than a few minutes.

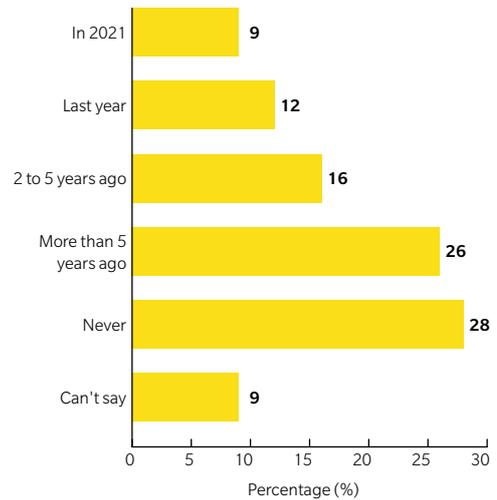


Figure 6
NCSS2021: THE LAST TIME PARTICIPANTS SWAM MORE THAN 50M IN THE OCEAN
 Only 9% of Australian adults swam further than 50m in the ocean in 2021 while almost three in ten have never swum this distance in the ocean.

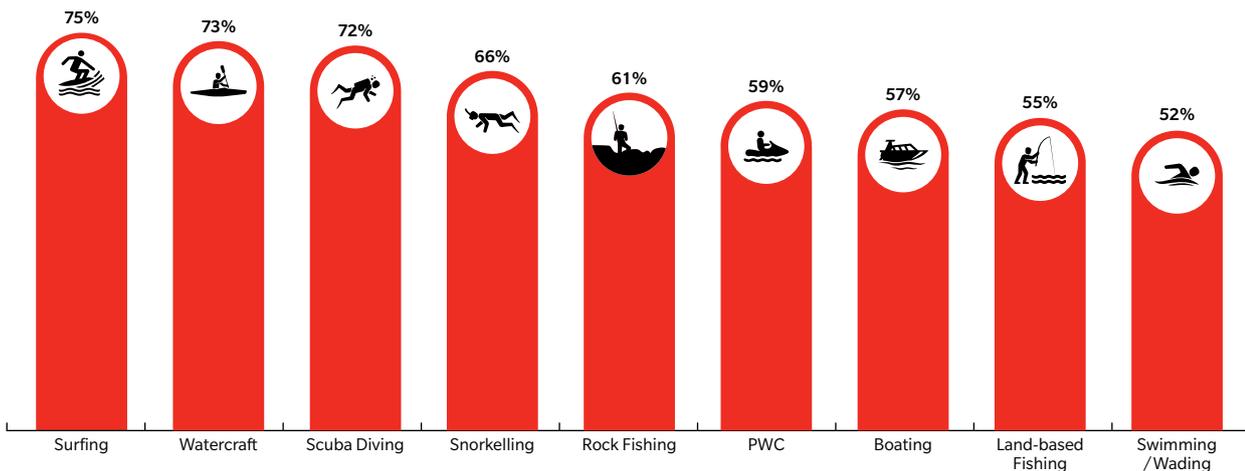


Figure 7
NCSS2021: ABILITY TO SWIM 50M IN THE OCEAN WITHOUT TOUCHING THE BOTTOM
 Swimming ability is not always very high amongst Australian adults. Surfers (75%), followed by watercraft users (73%) and scuba divers (72%) have the highest percentage of participants able to swim 50m in the ocean without touching the bottom.

COASTAL SAFETY

HAZARD PERCEPTION

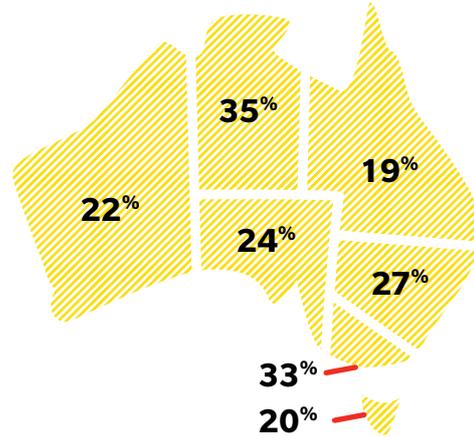
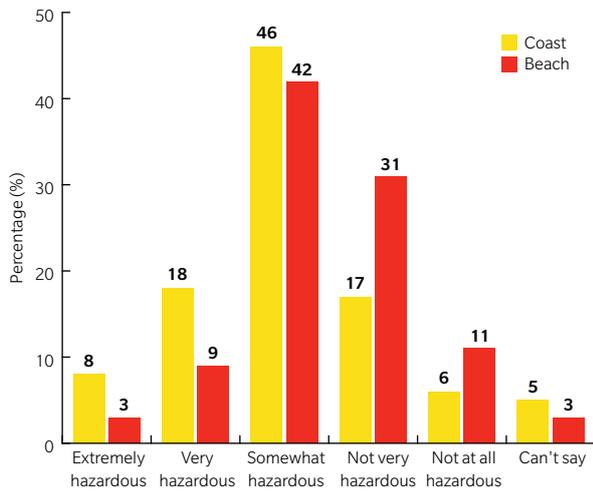


Figure 8
NCSS2021: HAZARD PERCEPTION OF THE COAST VS. THE BEACH

Almost half (42%) of Australian adults believe the beach (ocean, surf zone and adjacent sandy beach) is not hazardous.

Figure 9
NCSS2021: PROPORTION WHO CONSIDER THE COAST TO BE VERY OR EXTREMELY HAZARDOUS BY STATE

A quarter (26%) of Australians consider the coast to be extremely or very hazardous, but this differs by state. One in three Northern Territorians consider the coast to be hazardous compared to one in five in Tasmania.

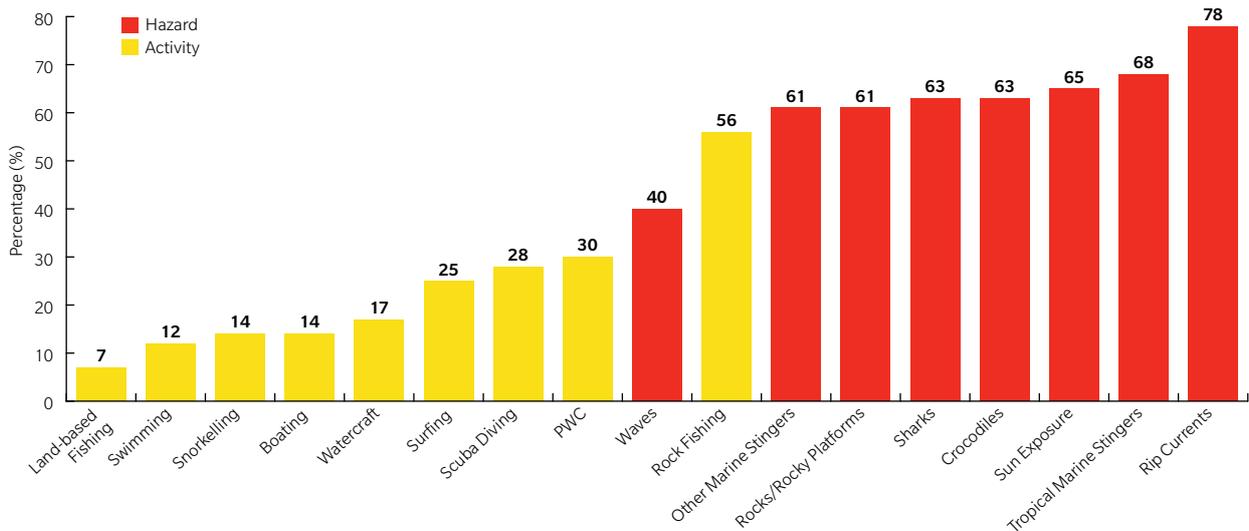


Figure 10
NCSS2021: COASTAL HAZARDS & ACTIVITIES RATED EXTREMELY OR VERY HAZARDOUS

One in four (26%) Australians consider the coast to be extremely or very hazardous. Rip currents remain the highest rated coastal hazard by Australians, while rock fishing is regarded the most hazardous coastal activity.

COASTAL SAFETY

RISK TAKING

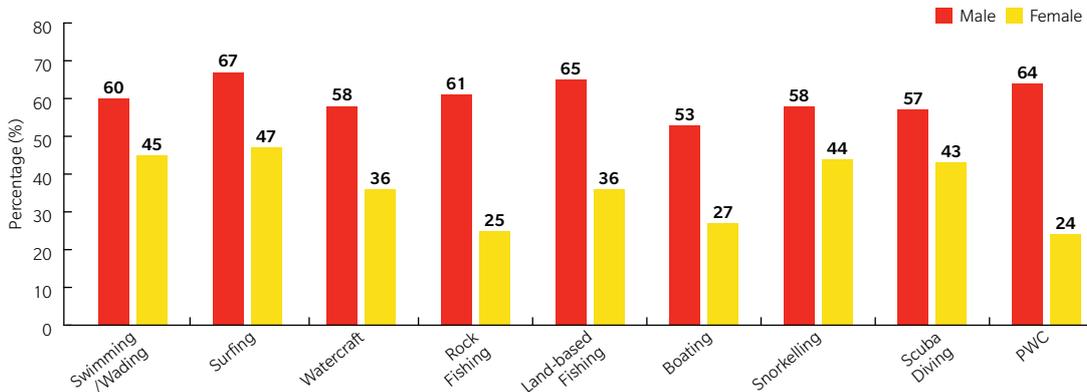


Figure 11

NCSS2021: PARTICIPANTS WHO BELIEVE THEY ARE EXPERIENCED ENOUGH TO TAKE SOME RISKS IN THEIR COASTAL ACTIVITY BY GENDER

Across all coastal activities, males continue to believe they are experienced enough to take some risks compared to females. This is highlighted with a 36% difference in rock fishing and 40% difference in PWC riders.

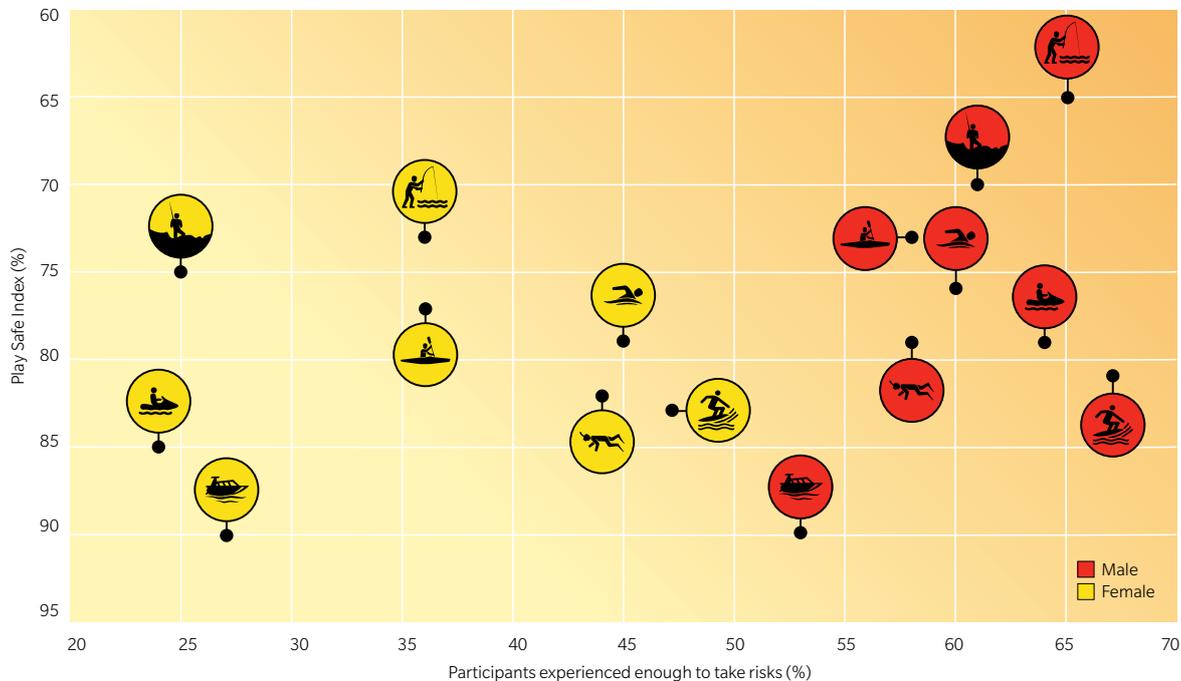


Figure 12

NCSS2021: PLAY SAFE INDEX VS. RISK TAKING BY GENDER

The Play Safe Index has been developed to show how often activity participants follow safety practices. Here we compare this against self-reported belief in whether they are experienced enough to take risk. This revealed a clear separation between genders. Males were more likely to take risks and less likely to follow safety practices, while the opposite was true for female participants.

COASTAL SAFETY

COASTAL RESCUES

The role that bystander rescuers play in preventing drowning incidents cannot be underestimated, often they are the only form of assistance outside patrolled areas or times. Exploring perceptions helps to understand behaviours surrounding rescue incidents. A clear disparity exists between the numbers of rescues from the perspective of the rescuer or the rescuee, with fewer Australians considering themselves as rescuees.

Most rescuers were rescuing a stranger (47%), at a beach (54%), in the afternoon (44%), and away from Surf Life Saving services (63%). Bystander rescue events are often highly emotive events and can also be fatal when the rescuer gets in trouble themselves. Previous research has revealed a major factor in these tragic situations is the lack of flotation devices used or taken when enacting a rescue, here over half reported not using any rescue or flotation equipment (51%). These results support the call for further water safety and rescue training to be made readily available, to build our community of 'everyday' surf lifesavers.

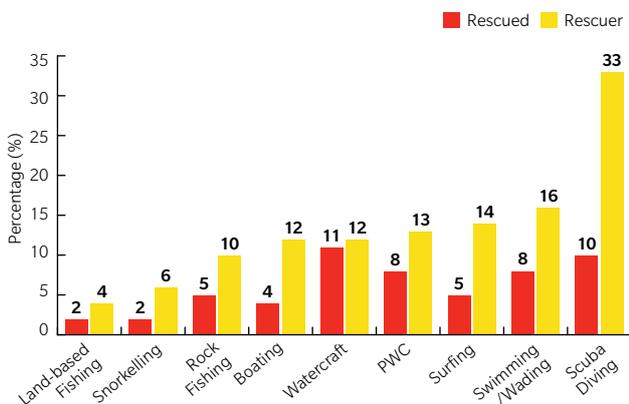
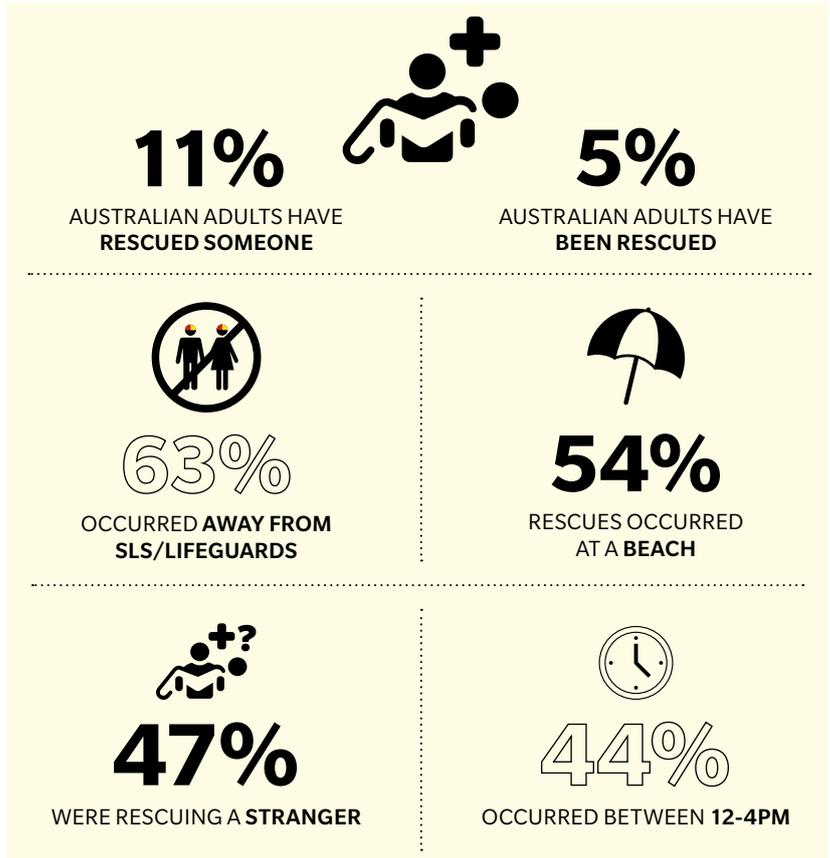


Figure 13
NCSS2021: PARTICIPANTS WHO HAVE BEEN RESCUED OR RESCUED SOMEONE ELSE BY GENDER & ACTIVITY
 A third (33%) of scuba divers have reported rescuing others while diving, but only 10% report having been rescued themselves.

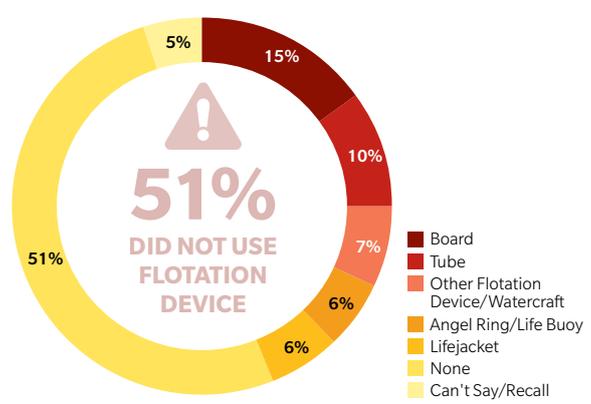


Figure 14
NCSS2021: EQUIPMENT USED BY RESCUERS
 Over half of all rescues were conducted without the use of any rescue or flotation equipment (51%).

FEATURE: THE THINK LINE

A BEHAVIOUR CHANGE SAFETY CAMPAIGN

Rip currents are Australia's number one coastal hazard. On average, 21 people drown in Australia each year due to rip currents¹. Rip currents are strong, narrow, often channelised currents of water that start close to the shoreline of ocean beaches and flow offshore through the surf zone. They are common features on Australian beaches with an estimated 17,000 rips occurring on any given day around the coast. In a typical year, rip currents account for more deaths in Australia than sharks, floods and cyclones combined². Rip currents are known to have contributed to one in five (20%) of coastal drowning deaths since 2004/05, with the relationship between rip currents, beaches, and swimming/wading incidents well-established.

Surf Life Saving Australia implemented a five-year (2016/21) coastal safety campaign to address rip current drowning (Figure 15). Phase 1 (2016/18), 'The Facts About Rips Campaign' was a broad campaign to increase awareness and knowledge. This phase challenged the beliefs of beachgoers when it comes to their understanding of rips, their ability to identify a rip, their knowledge of what to do if caught in a rip and provided guidance on how to swim safely at the beach. Phase 2 was developed after evaluating Phase 1 and was designed to influence beachgoer behaviour and maintain awareness built in Phase 1.

Phase 2 (2018/21) used a more emotive approach and harder hitting messaging to impact on behaviour change. 'The Think

Line Campaign' introduced the concept of a line in the sand to remind swimmers to stop and check for hazards before entering the water. It introduced people impacted by rips including those who had been caught in a rip and had lost family members. The concept is applicable to other safety messages by encouraging coastal visitors to **STOP. LOOK. PLAN.**

STOP. to check for rips
LOOK. for other dangers
PLAN. how to stay safe

Each year the National Coastal Safety Survey (NCSS) evaluated the impact and exposure of the campaign as reported by the Australian public. With 2020/21 being the fifth and final year of the campaign, we present some highlights here.

AWARENESS: RIPS REMAIN THE NUMBER ONE COASTAL HAZARD

Four out of five Australian adults (78%) consider rip currents to be extremely or very dangerous (an increase from 70%, NCSS2015; Figure 16). Australians who think they can spot rips and those who have previously been caught in a rip are most aware of this danger. Figure 17 shows that awareness of rip currents as a coastal hazard has increased.

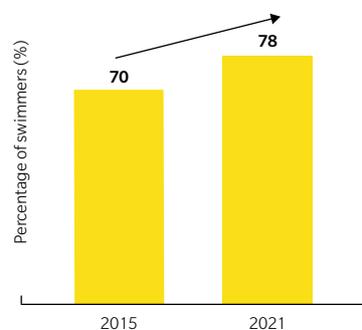


Figure 16
PERCEPTION OF RIP CURRENTS AS VERY OR EXTREMELY HAZARDOUS



Figure 15
SLSA'S FIVE-YEAR NATIONAL RIP CURRENT AWARENESS AND BEHAVIOUR CHANGE CAMPAIGN PLAN

KNOWLEDGE: HOW TO ESCAPE A RIP?

When asked what to do when caught in a rip current, the top five responses were:

- 1) raise your arm to attract attention (91%)
- 2) relax and stay calm (89%)
- 3) regularly assess the situation (87%)
- 4) ask a surfer for help (82%)
- 5) float (65%).

Most Australians considered the rip current options poster (Figure 18) messaging to be clear and easy to understand (90%), felt better informed on how to get out of a rip current (87%), and learned that different options exist to escape a rip current (85%).

IMPACT: POTENTIAL FOR BEHAVIOUR CHANGE

After seeing the components of the Think line campaign (Phase 2), 83% of Australians were more likely to swim between the red and yellow flags in the future. The same proportion (83%) were more likely to **STOP** and **LOOK** for the presence of rip currents prior to entering the water. This proportion was highest among swimmers (96%), of whom only

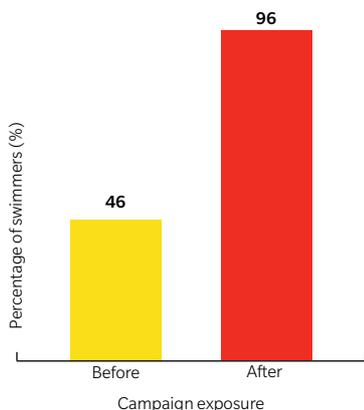


Figure 17
PROPORTION OF SWIMMERS WHO WILL LOOK FOR RIP CURRENTS BEFORE AND AFTER CAMPAIGN EXPOSURE

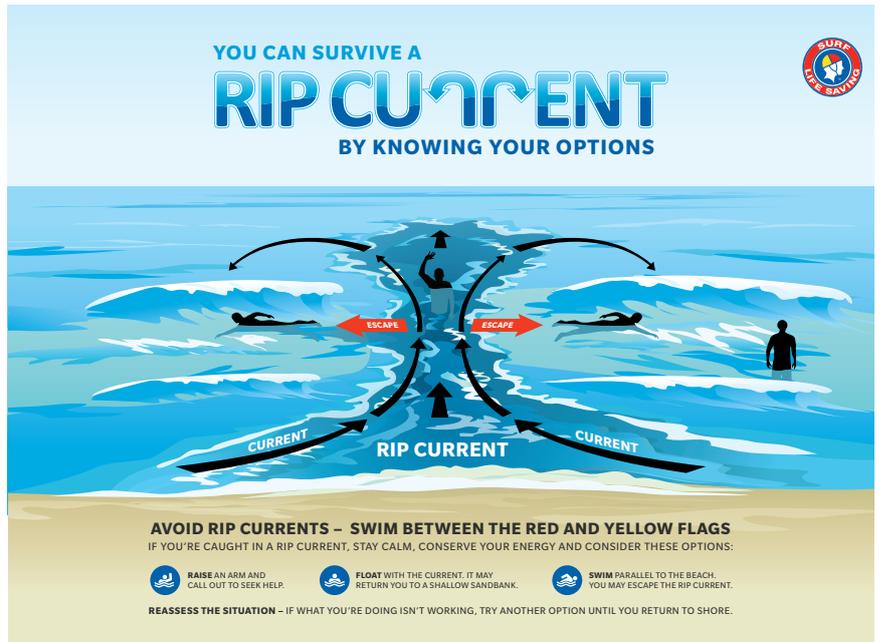


Figure 18
POSTER: YOU CAN SURVIVE A RIP CURRENT BY KNOWING YOUR OPTIONS

46% reported to always look for the presence of rip currents prior to entering the water previously in the survey (Figure 17). This demonstrates the potential for the campaign to change behaviour with adequate campaign exposure.

SUMMARY

The Think Line campaign is clear and resonates with the Australian population. The campaign has intrinsic value with clear messaging that communicates rip currents can be hazardous and dangerous and has

the potential to change behaviour (Figure 18). However, the overall messaging for years 4 and 5 was not visible enough and therefore did not cut through or was diluted due to this lack of exposure. These results show that we have an effective behaviour change tool but suggest that campaign exposure needs to be greater and more consistent to see these changes reflected within the Australian community.



CAPABILITY

SECTION TWO



8,064
RESCUES

47,164
PROFICIENT MEMBERS



1,341,174
VOLUNTEER PATROL HOURS



1,172
IRBs



314
SLS Clubs



211
RWC



CAPABILITY

As Australia's peak authority on coastal safety, Surf Life Saving exists to save lives, create great Australians and build better communities. Central to our ability to achieve this goal is the capacity to provide and deliver core surf lifesaving services along the coast. Core services includes coastal surveillance patrols and aquatic search and rescue (SAR) operations, which are dependent on our Surf Life Saving Clubs, the Australian Lifeguard Service (ALS) and our dedicated members. Emergency services acknowledge the capability of SLS working in partnership to support their public safety efforts in coastal and aquatic environments, after-hours and during natural disasters. The public and emergency services are provided reassurance that these services are delivered to a consistent and high standard based on the diversity of awards held by our 40,713 Bronze Medallion holders and 6,451 Surf Rescue Certificate holders (totalling 47,164 proficient surf lifesavers) through the 314 Surf Life Saving Clubs (Figure 21).

Our members are able to deliver these services thanks to the standard of gear, equipment, and technology available for use, including the radio communications network linked through coastal radio networks or integrated into government radio networks. Radio networks are monitored and maintained by SLS communication and operations centres within each State/Territory, which provide vital operational support, incident management, data collection and emergency service liaison services.

VOLUNTEER SURF LIFESAVERS

As the largest volunteer movement in Australia, and one of the largest worldwide, the diversity and capabilities of our members is essential to our success. With over 186,000 members, of which 45,205 performed a patrol last year, the collective effort to keep the community safe around the coast is enormous. In the last year, surf lifesavers performed 8,064 rescues (Figure 26), 1,757,518 preventative actions (Figure 27), and provided 53,446 first aid treatments (Figure 28).

To support our volunteer surf lifesavers to perform their role they are provided with fit-for-purpose gear and equipment and trained to use it safely in challenging conditions. Across Australia Surf Life Saving Clubs have thousands of surf rescue boards and rescue tubes mainly utilised around the red and yellow flagged area during patrol. Rescue boards were the most common equipment used in rescues, followed by rescue watercraft (RWCs; Figure 24). Further to this there are 1,172 inflatable rescue boats (IRB), allowing surf lifesavers to quickly navigate through inshore surf conditions, travel further distances for prolonged periods of time.

Roving surveillance patrols are conducted to actively monitor stretches of coastline near primary patrolled areas and play a vital role in the SLS drowning prevention strategy. These roving patrols are possible due to the 485 side-by-side (SSV) and 4WD vehicles. Another strategy to conduct these surveillance patrols is through aerial surveillance which be undertaken through the fleet of 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 211 rescue water craft (RWC) and five jet rescue boats (JRBs) allow surf lifesavers to access white-water areas such as coastal bars and rocky coastlines (Figure 25).

Beyond the surf zone a fleet of nine offshore rescue boats (ORBs) and eight rigid-hull inflatable boats (RIBs) extend the SLS response capability into blue-water rescue areas providing longer range surveillance and SAR operations.

AUSTRALIAN LIFEGUARD SERVICE

The Australian Lifeguard Service (ALS) is the largest supplier of professional lifeguards in Australia. ALS provides lifeguard services to 70 local government councils and land managers across Australia for both beach and pool environments. The ALS employs over 1,000 lifeguards through full-time, part-time and casual contracts providing further capability and coverage of our coastline.

ALS operations are fully integrated and complimentary to SLS patrol services, providing seamless coverage to communities and local government areas for up to 365-days a year. ALS operations and SLS services support each other to provide coverage required in each area including weekdays, weekends, public holidays, and after-hours response. Becoming a lifeguard is a pathway opportunity our volunteer members as qualifications and training standards are consistent between ALS and Surf Life Saving Clubs; some specialised training is undertaken to meet ALS requirements.

Several councils around Australia operate internal lifeguard services. Statistics for those services have not been included in this report.

WESTPAC LIFESAVER RESCUE HELICOPTERS

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

BRONZE MEDALLION HOLDERS

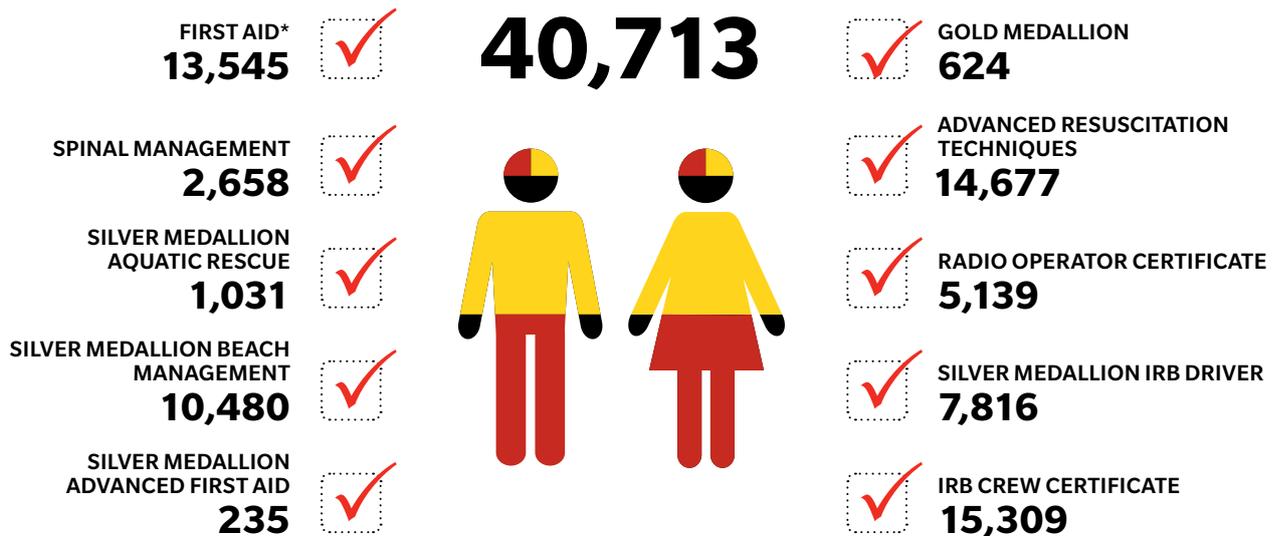


Figure 19

2020/21: QUALIFICATIONS HELD BY BRONZE MEDALLION HOLDERS

There are 40,713 bronze medallion award holders, many of whom also hold a number of other lifesaving awards, equalling over 71,000 additional surf lifesaving qualifications. This highlights the extent of additional training our surf lifesavers undertake to ensure they are highly skilled first responders.

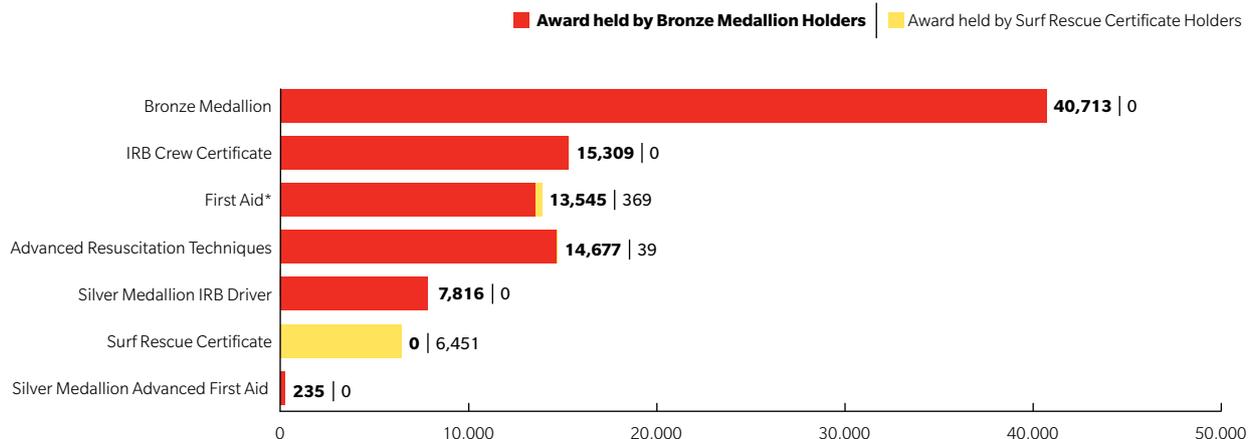


Figure 20

2020/21: TOTAL QUALIFICATIONS HELD BY PROFICIENT SURF LIFESAVERS

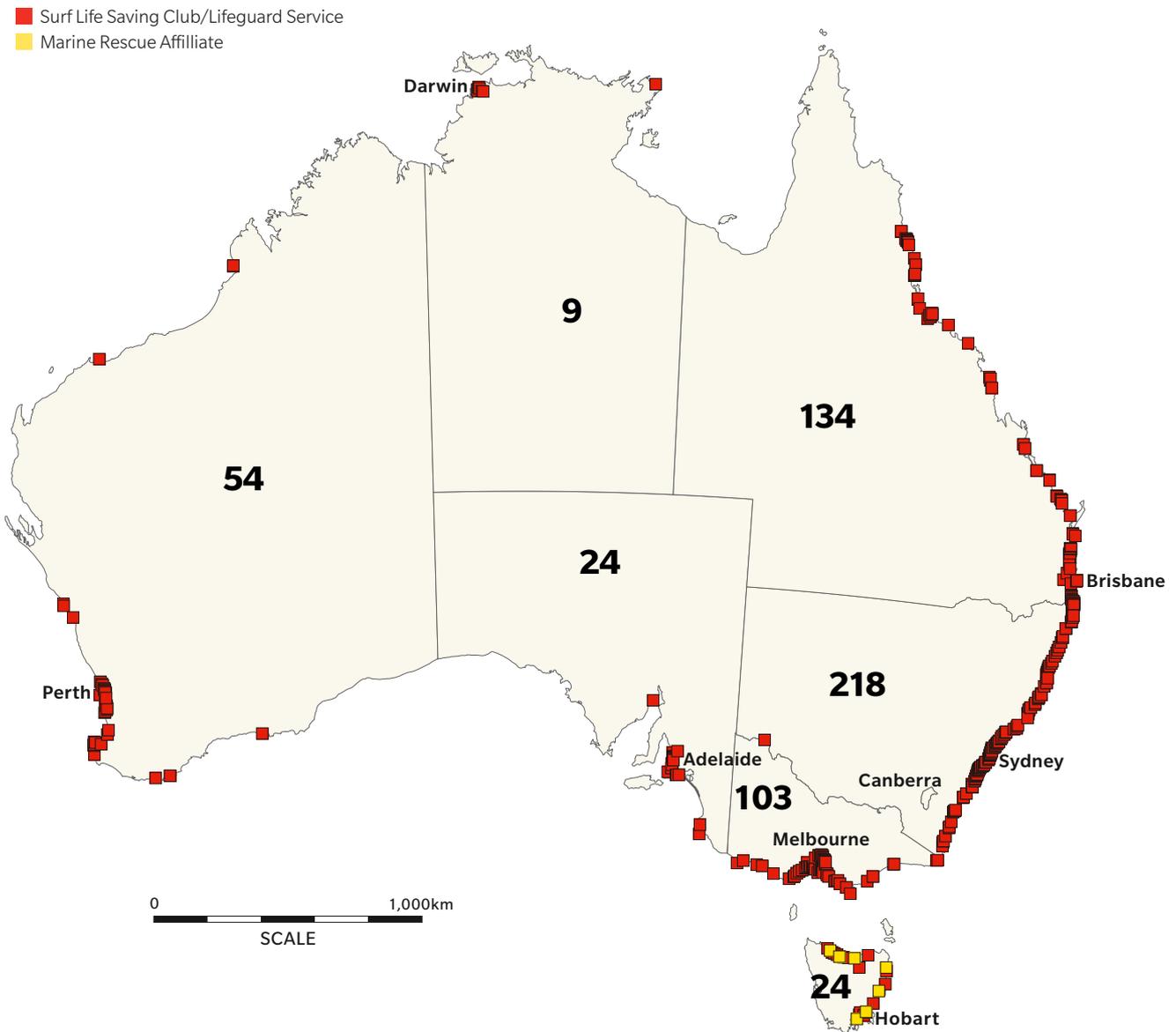
There are 47,164 proficient members, of which 40,713 hold a bronze medallion and 6,451 hold a surf rescue certificate. Many of these members hold a number of other certifications, totalling over 99,000 qualifications. *Total includes First Aid, Apply (Senior) First Aid awards.

SURF LIFE SAVING SERVICES

Figure 21

2020/21 SURF LIFE SAVING SERVICES

There are 314 Surf Life Saving Clubs (SLSCs) and seven affiliated marine rescue around Australia. There are 129 SLSCs in New South Wales, 57 in Queensland, 57 in Victoria, 31 in Western Australia, 22 in South Australia, 15 in Tasmania and three in the Northern Territory. The Australian Lifeguard Service provides 245 lifeguard services around Australia, with 89 in New South Wales, 77 in Queensland, 46 in Victoria, 23 in Western Australia, six in Northern Territory, and two each in South Australia and Tasmania.



MEMBERSHIP CAPACITY

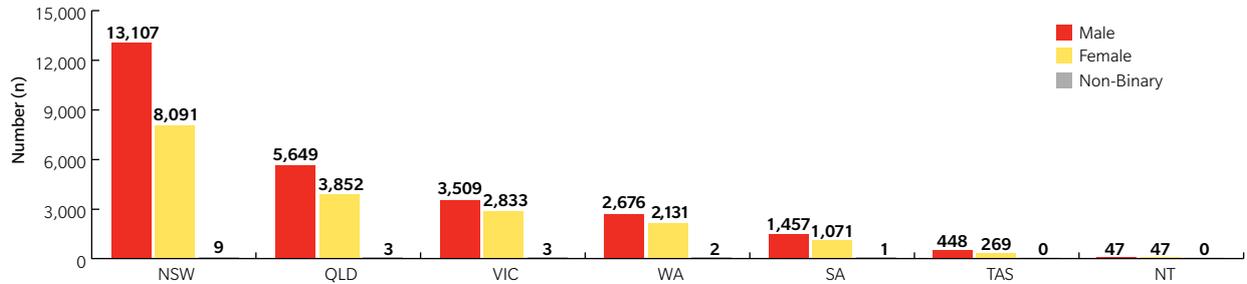


Figure 22

2020/21: PATROLLING MEMBERS

Patrolling members include members who hold one or more of the following awards: Bronze Medallion, Surf Rescue Certificate, Advanced Resuscitation Certificate, First Aid or Radio Operator Certificate. There were a total of 45,205 members who performed a patrol. Of the patrolling members, 59.5% were male and 40% were female. 18 members identified as a non-binary gender.

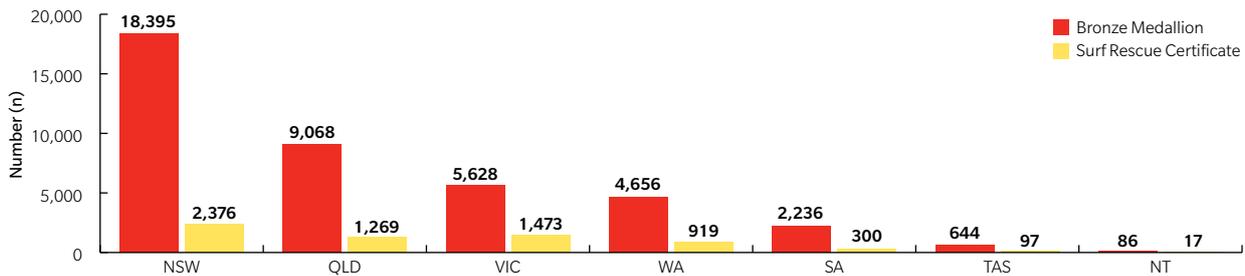


Figure 23

2020/21: PROFICIENT MEMBERS

There were a total of 40,713 proficient Bronze Medallion holders and 6,451 Surf Rescue Certificate holders. New South Wales has 20,771 proficient members followed by Queensland (10,337) and then Victoria (7,101).

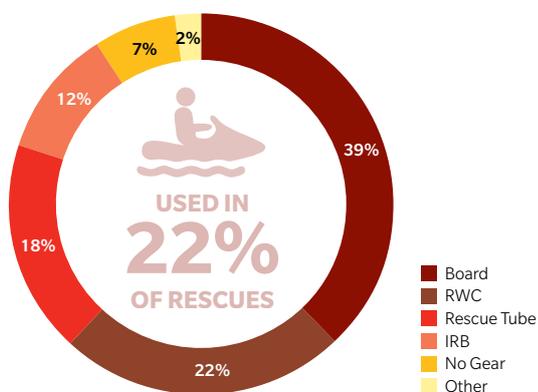


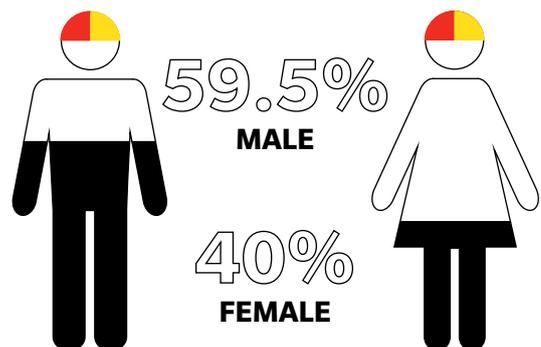
Figure 24

2020/21: EQUIPMENT USE IN RESCUES

Boards were used in 39% of rescues, followed by RWCs (22%) and rescue tubes (18%).

2020/21: PATROLLING SURF LIFESAVERS

NB: <1% were non-binary gender

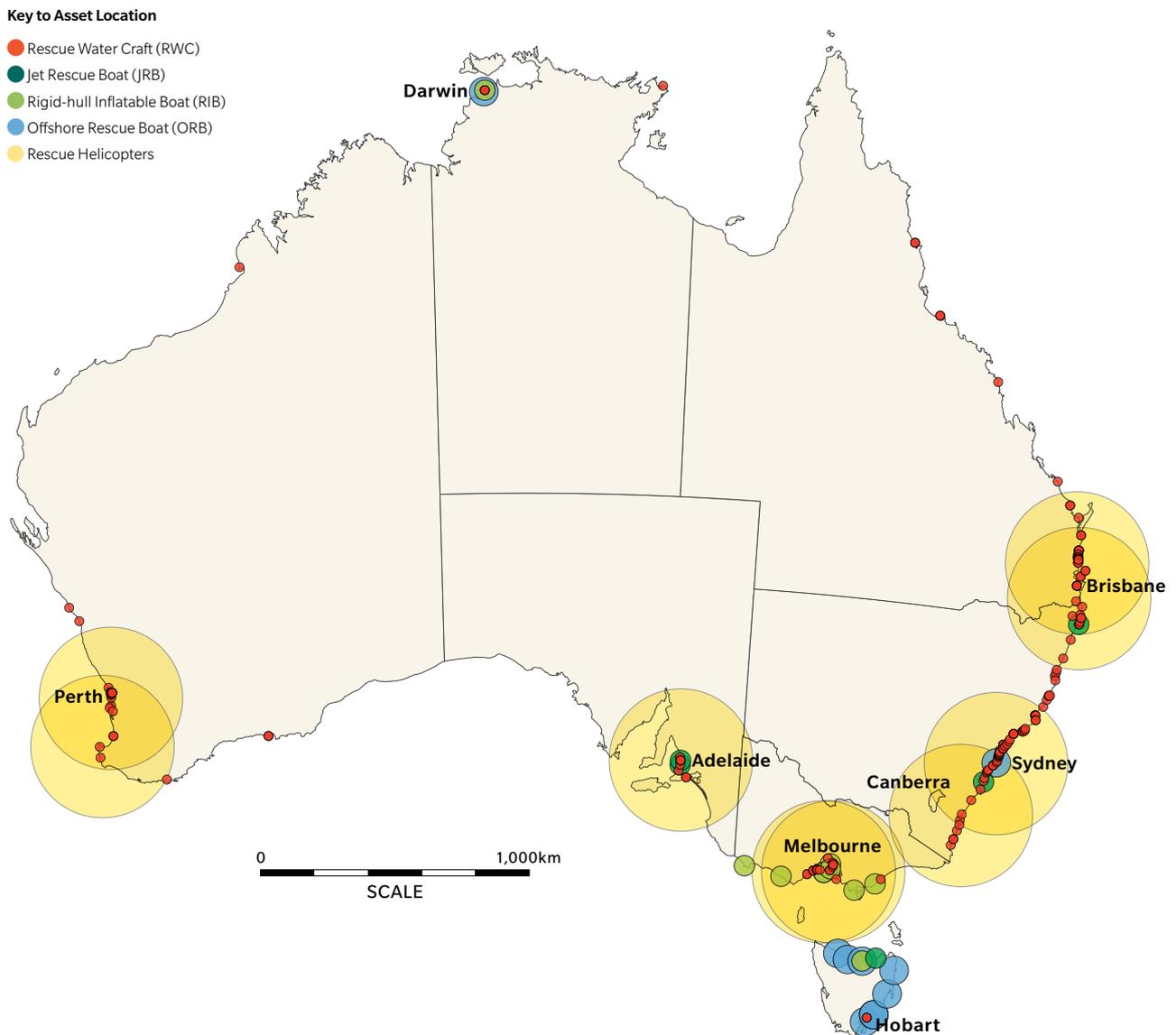


ASSET CAPABILITY

Figure 25

2020/21 SLS MAJOR ASSET LOCATION AND SERVICE RANGE

SLS maintains a fleet of 211 rescue watercraft (RWC), five jet rescue boats (JRB), eight rigid-hull inflatable boats (RIB), nine offshore rescue boats (ORB) and nine rescue helicopters. Their locations and service ranges are depicted on this map.



RESCUES

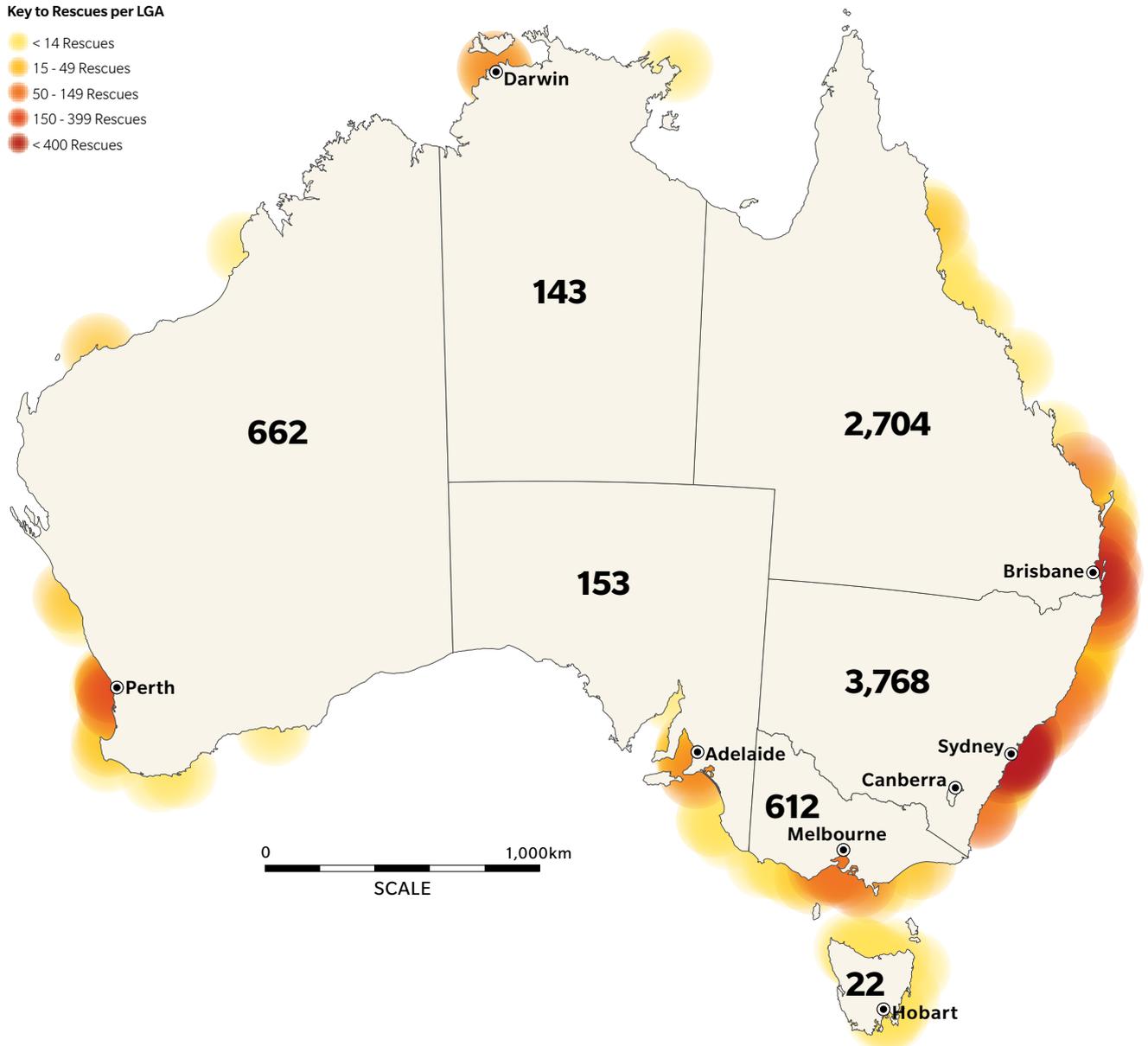
Figure 26

2020/21: RESCUES PER LOCAL GOVERNMENT AREA (LGA)

SLS lifesavers, lifeguards and lifesaving services performed 8,064 rescues across 115 local government areas around Australia.

Key to Rescues per LGA

- < 14 Rescues
- 15 - 49 Rescues
- 50 - 149 Rescues
- 150 - 399 Rescues
- < 400 Rescues



PREVENTATIVE ACTIONS

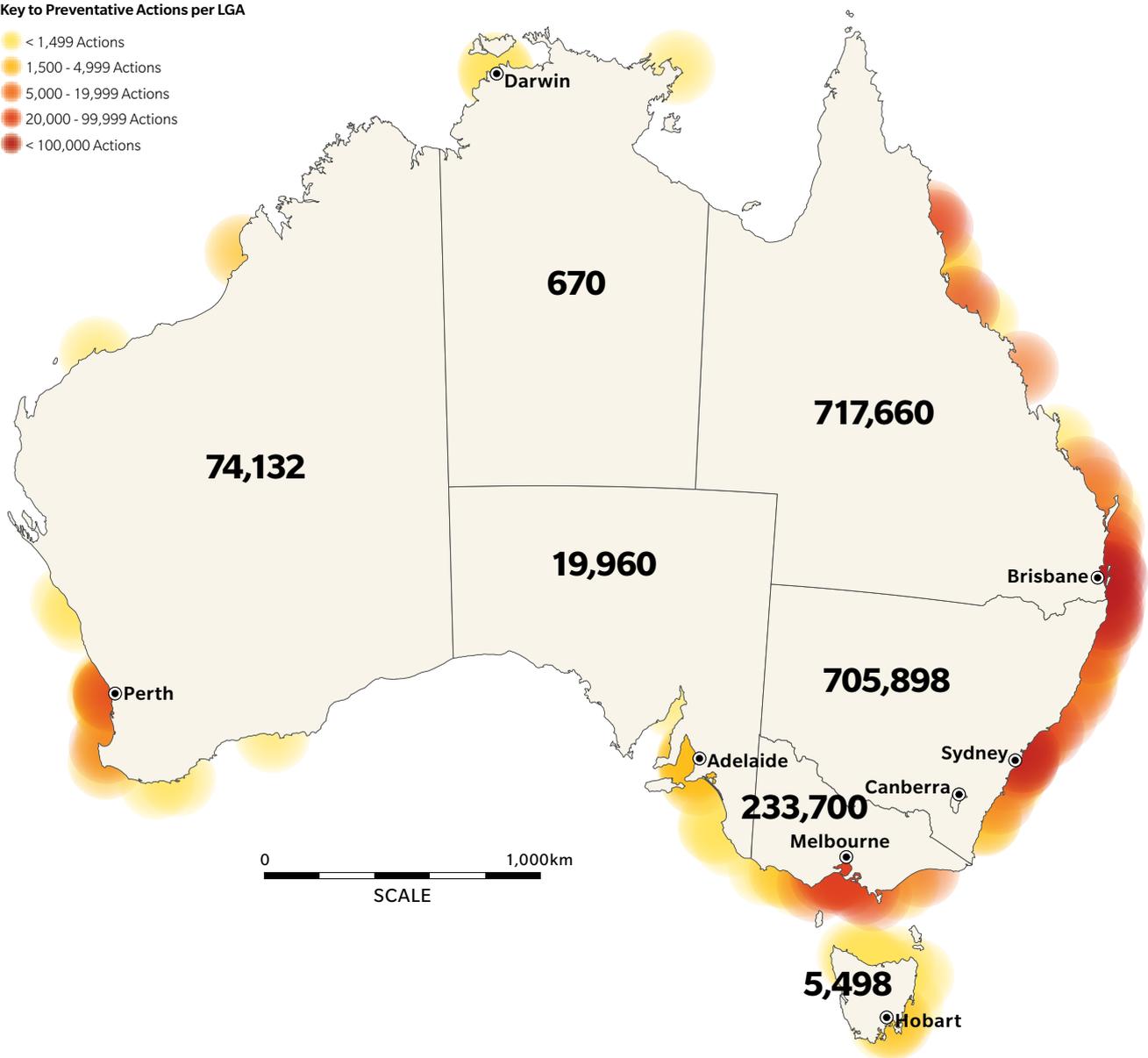
Figure 27

2020/21: PREVENTATIVE ACTIONS PER LOCAL GOVERNMENT AREA (LGA)

SLS lifesavers, lifeguards and lifesaving services performed 1,757,518 preventative actions across 115 local government areas around Australia.

Key to Preventative Actions per LGA

- < 1,499 Actions
- 1,500 - 4,999 Actions
- 5,000 - 19,999 Actions
- 20,000 - 99,999 Actions
- < 100,000 Actions

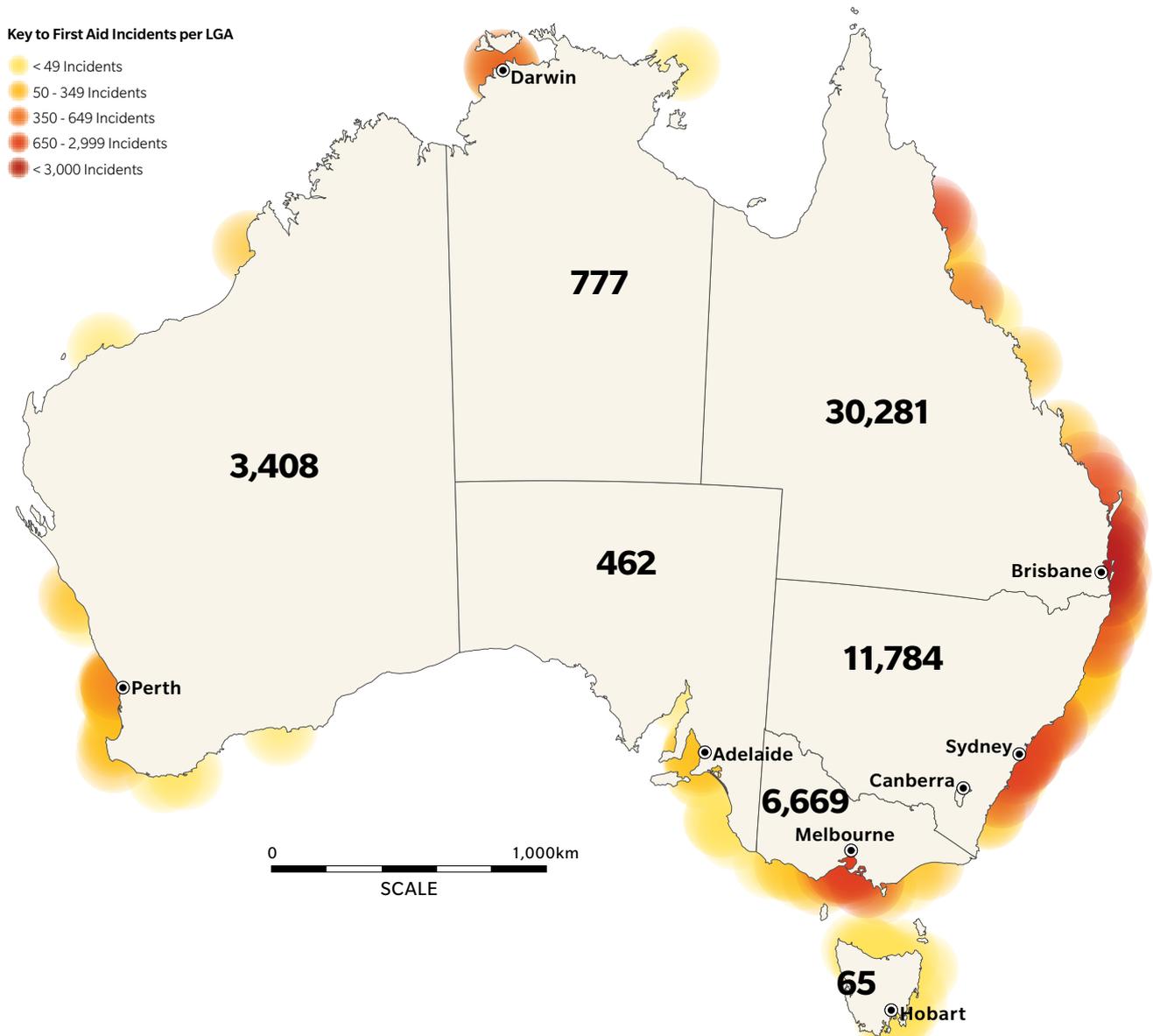


FIRST AID

Figure 28

2020/21: FIRST AID PER LOCAL GOVERNMENT AREA (LGA)

SLS lifesavers, lifeguards and lifesaving services performed 53,446 first aid treatments across 115 local government areas around Australia.



FEATURE: SLS UAV CAPACITY

EYES IN THE SKY

With social distancing the new normal, remote surveillance has never been so important to service delivery within Surf Life Saving. Here we present the national integration of unmanned aerial vehicles (UAVs) within SLS, which provide support to current surf lifesaving services by giving surf lifesavers more eyes in the sky at patrolled beaches and allow the boundaries and capability of service delivery to be extended.

UAV integration into SLS operations has successfully enhanced public safety along the coast through risk reduction. Remote identification of dangerous coastal hazards such as rip currents, sharks or crocodiles, allows for a timely response or for alerts to be provided, which can effectively mitigate the risk posed to the public. In the last few years, Surf Life Saving UAVs have conducted 328 beach safety flights (including rip current identification), attended 28 incidents, and performed 2,900 surveillance flights for dangerous marine fauna (predominantly sharks and crocodiles; Figure 31).

The number of clubs with trained operators and UAV craft has grown (Figure 30) with craft now registered nation-wide. Similarly, flight hours, kilometres flown and the number of flights have also grown (Figure 29), in-line with the number of trained operators and craft available to Surf Life Saving, demonstrating the extension of SLS capacity and its potential for the future.

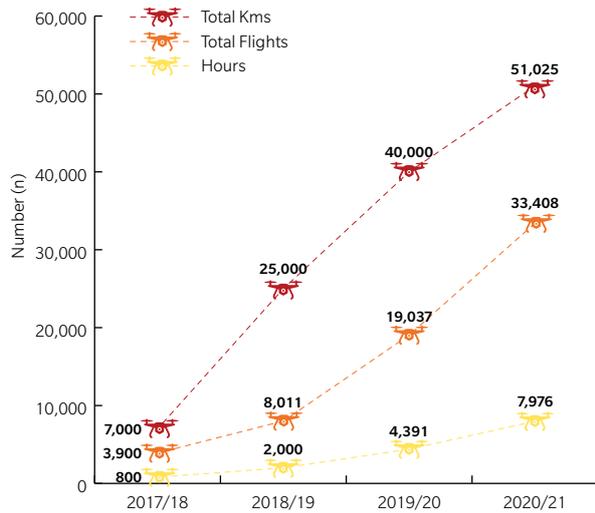


Figure 29

SLS UAV MEASURES OVER TIME

Flight hours, kilometres and the number of flights have increased considerably since 2017/18.

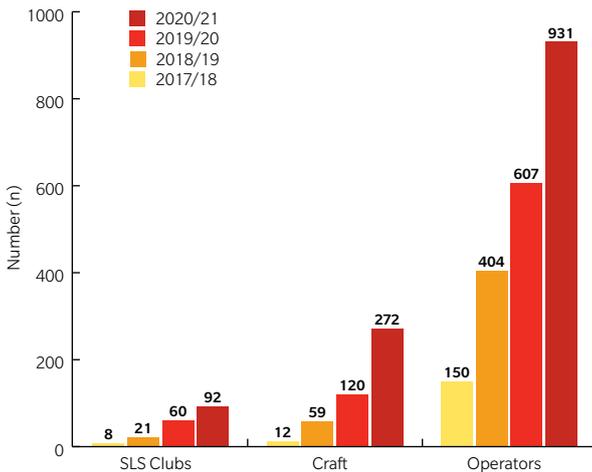


Figure 30

SLS UAV CAPACITY OVER TIME

The number of clubs, UAV craft, and trained operators has increased with craft now registered nation-wide.

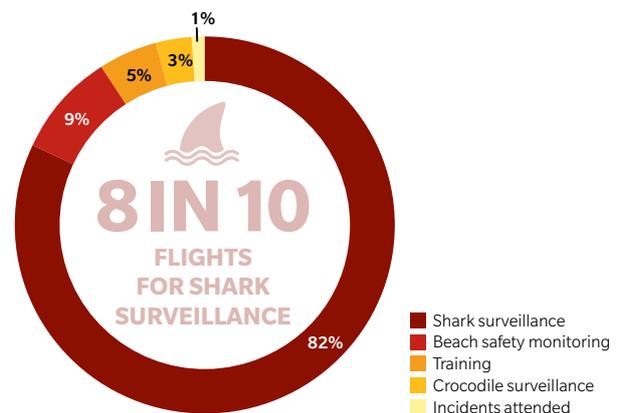


Figure 31

SLS UAV ACTIONS 2020/21

During 2020/21 patrol season, most UAV flights were used for shark surveillance (n=2,887), followed by beach safety monitoring (n=328, including rip current identification), and operator training (n=174).



7,976
FLIGHT HOURS



OVER
51,000KM
FLOWN



272
CRAFT



14 MINS
AVERAGE FLIGHT TIME

92
UAV
READY
SLS CLUBS



103
CROC SURVEILLANCE

AVERAGE FLIGHT LENGTH



1.5KM


33,408
FLIGHTS



174
TRAINING FLIGHTS



2,887
SHARK SURVEILLANCE



328
BEACH SAFETY FLIGHTS



931 UAV
OPERATORS



28
INCIDENTS ATTENDED

DROWNING ANALYSIS

SECTION THREE



**136 COASTAL
DROWNING DEATHS**

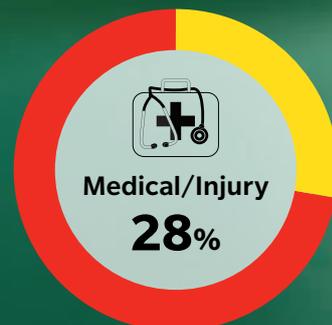
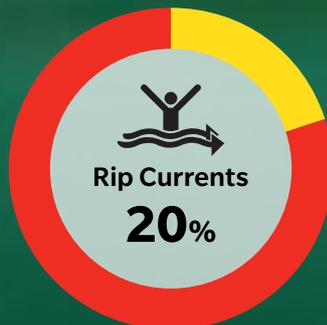
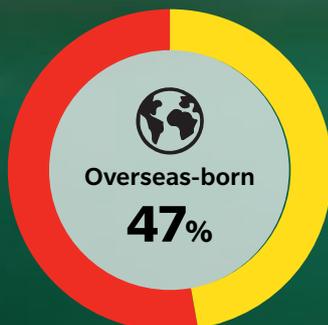


**90%
MALE**



**10%
FEMALE**

DROWNING CAUSAL FACTORS 2004/21





COASTAL DROWNING & FATALITY

2020/21: YEAR IN REVIEW

While the challenges we face are ongoing, our love and affinity with the coast continues – as does the need for ensuring surf lifesaving services are there in times of need. With restrictions and other pressures affecting how we interact with or recreate on the coast, adaptability and resilience are key to maintaining relevant safety practices.

SLSA monitors both drowning and other coastal fatalities to better understand the collective impact on Surf Life Saving services and the wider Australian community. A total of 241 deaths were recorded along the coast in 2020/21. The majority were due to drowning (n=136), with a further 105 coastal fatalities from other causes (61 of these were unintentional). Males continue to be over-represented, accounting for 90% of this year's coastal drowning deaths. Swimming and wading regained its top rank (n=42, 31%), followed by boating, and then rock fishing, falls and watercraft activities equally (Figure 37). Almost all activities were above average this year, with swimming, rescue and rip current-related incidents of note. With half (51%) of drowning deaths occurring more than five kilometres from a Surf Life Saving service, bystander rescuers play an integral role in saving lives, however in too many incidents the rescuer became the victim (n=10, 7%).

Coastal incidents can have devastating impacts on families and communities, including surf lifesaving personnel. Involvement in major rescues, traumatic or fatal events can have long-lasting effects on the health and wellbeing of those involved. Research plays a central role in monitoring changes, identifying new areas or populations of concern, and guides future prevention or mitigation strategies. As Australia's peak coastal safety authority, understanding this informs resource allocation to support Surf Life Saving and the community services they provide.

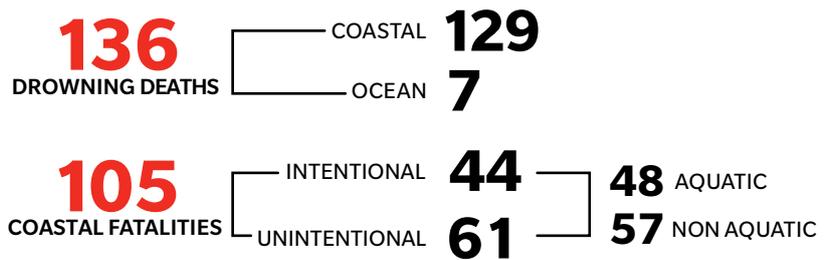
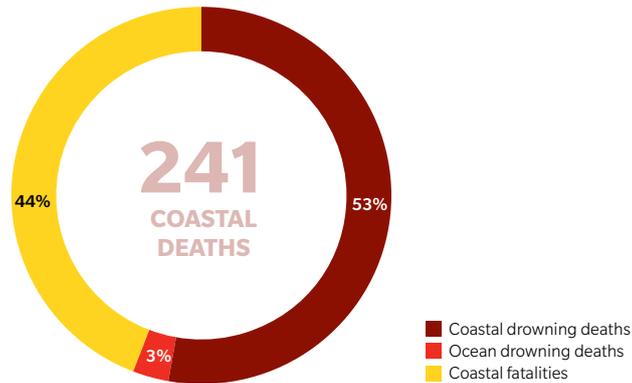


Figure 32
2020/21: FATAL COASTAL INCIDENT OVERVIEW

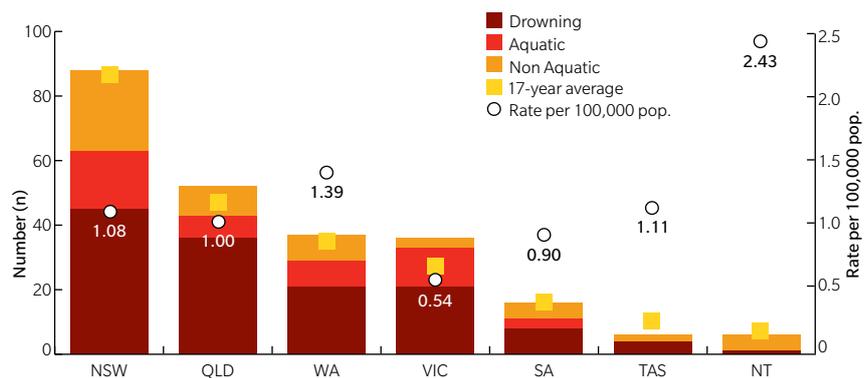


Figure 33
2020/21: COASTAL DEATHS BY STATE COMPARED TO 17-YEAR AVERAGE
New South Wales recorded the highest number of coastal deaths, but were consistent with the average, as was South Australia. Victoria and Queensland recorded more while Tasmania fewer coastal deaths compared to the average. Northern Territory recorded the highest mortality rate (2.43/100,000 pop.) followed by Western Australia (1.39/100,000 pop.) and Tasmania (1.11/100,000 pop.). Drowning deaths were more prevalent in all states except for the Northern Territory.

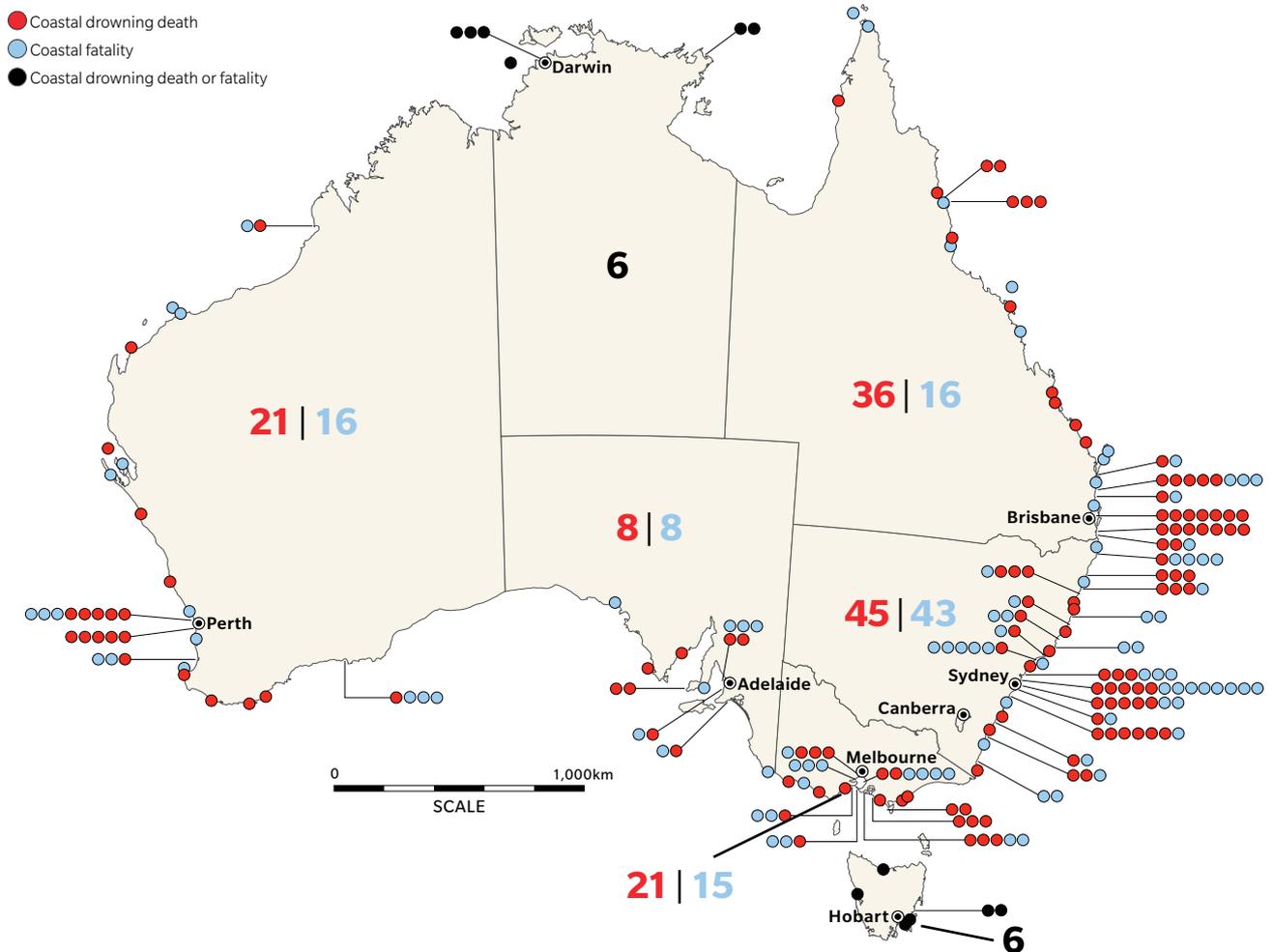


Figure 34

2020/21: COASTAL DROWNING DEATH & FATALITY LOCATIONS

In 2020/21, there were 136 coastal and ocean drowning deaths and 105 other coastal fatalities. Red and blue numbers indicate numbers of drowning deaths and fatalities respectively for each state. For states with small numbers, black numbers indicate combined drowning death and other fatality numbers.

2020/21: COASTAL INCIDENT LOCAL GOVERNMENT BLACKSPOTS

A blackspot is an area where a concentration of incidents are recorded and have a high probability/risk of ongoing re-occurrence. These LGAs recorded the highest numbers of fatal coastal incidents in 2020/21.

NSW: National Parks and Wildlife Services (26), Coffs Harbour (7), Wollongong (7), Northern Beaches (5), Waverley (5), Newcastle (5), Mid-Coast (5) and Ballina (4)

QLD: Queensland Parks and Wildlife Service (13), Gold Coast (10), Sunshine Coast (5), Douglas (4) and Noosa (4)

VIC: Parks Victoria (14), Greater Geelong (6)

WA: Parks and Wildlife Services (8)

NATIONAL COASTAL DROWNING OVERVIEW

2020/21: YEAR IN REVIEW

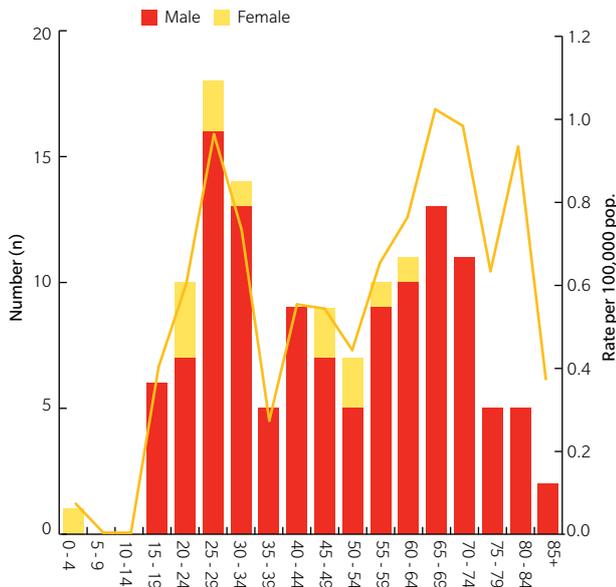


Figure 35
2020/21: DROWNING DEATHS BY AGE & GENDER (N=136)

The highest number of drowning deaths were recorded for individuals aged 25-29 (n=18), followed by 30-34 year olds (n=14). The highest mortality rate was for 65-69 year olds (1.02/100,000 pop.), followed by the 70-74 year old age group (0.98/100,000 pop.). Males accounted for 90% of coastal drowning deaths (n=123), with a mortality rate of 0.97/100,000 men.

KEY DEMOGRAPHICS

136
DROWNING DEATHS

0.53
RATE/100,000 POP.

90%



10%



20-34
YEAR OLDS

60-74
YEAR OLDS

The 20-34 year old age group account for 31% of coastal drowning deaths, while 60-74 year olds represent 26%.

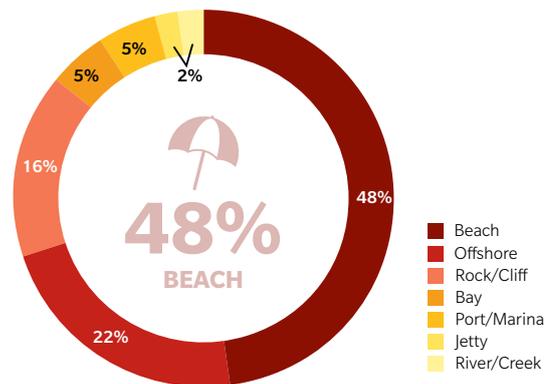


Figure 36
2020/21: DROWNING LOCATION CATEGORY
Almost half of this years drowning deaths occurred at a beach (n=65), followed by offshore (n=31) and rock/cliff (n=22) locations.

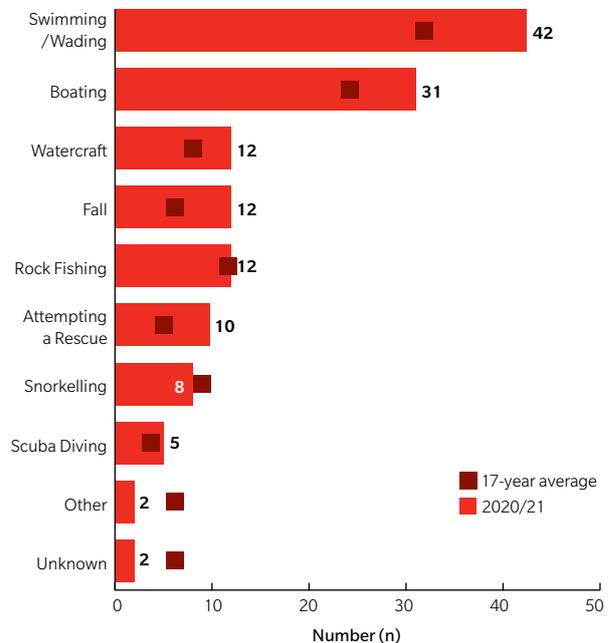


Figure 37
2020/21: DROWNING DEATHS BY ACTIVITY
Swimming/wading recorded the most incidents (n=42) followed by boating (n=31), then watercraft, falls and rock fishing (n=12 each). Swimming/wading, boating, watercraft, fall and rescue-related drowning deaths were all above average.



Figure 38

2020/21: REMOTENESS CLASSIFICATION OF COASTAL DROWNING LOCATIONS

One third of drowning deaths occurred in major cities (n=50), followed by inner (n=36) and outer-regional (n=21) locations. The 'remoteness classification' of an incident location was coded to the Australian Statistical Geographic Standard Remoteness Areas.

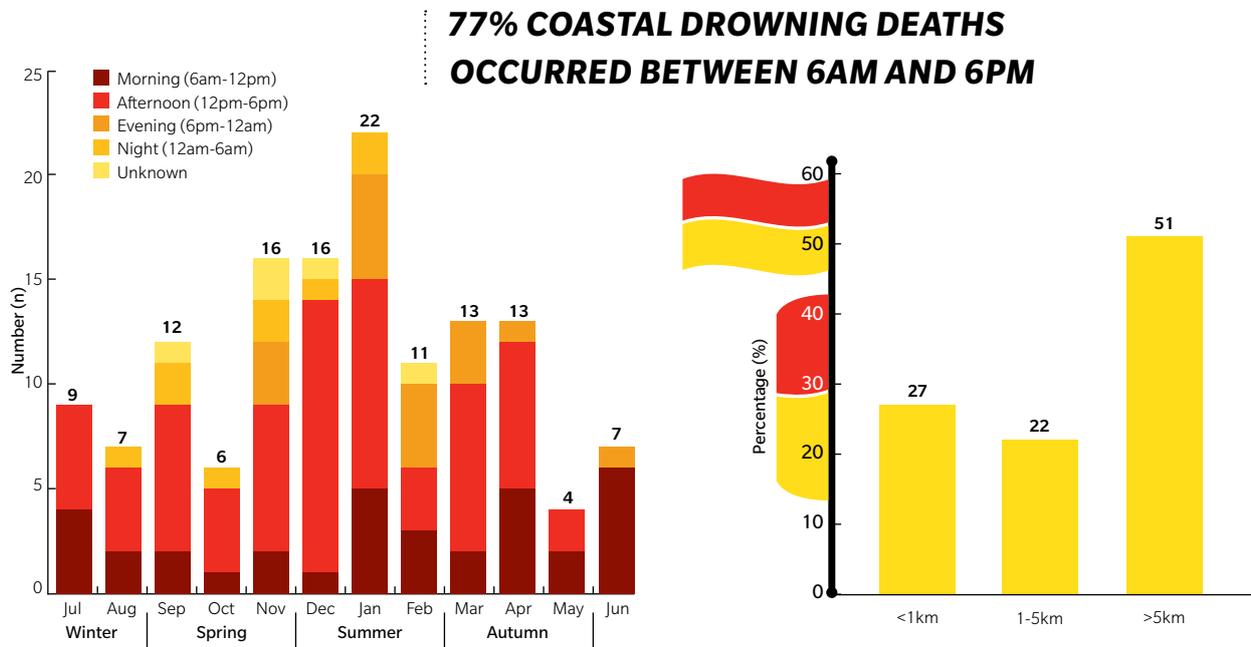


Figure 39

2020/21: DROWNING DEATHS BY MONTH AND TIME OF DAY

Most of this years drowning deaths (36%, n=49) occurred during summer (Dec-Feb) and three-quarters (77%, n=105) occurred during the day (6am-6pm).

Figure 40

2020/21: DROWNING DEATH DISTANCE FROM SURF LIFE SAVING SERVICE

Half of this years coastal drowning deaths (n=69) occurred greater than 5km from a Surf Life Saving service.

NATIONAL COASTAL DROWNING OVERVIEW

2004/21: 17-YEAR ANALYSIS

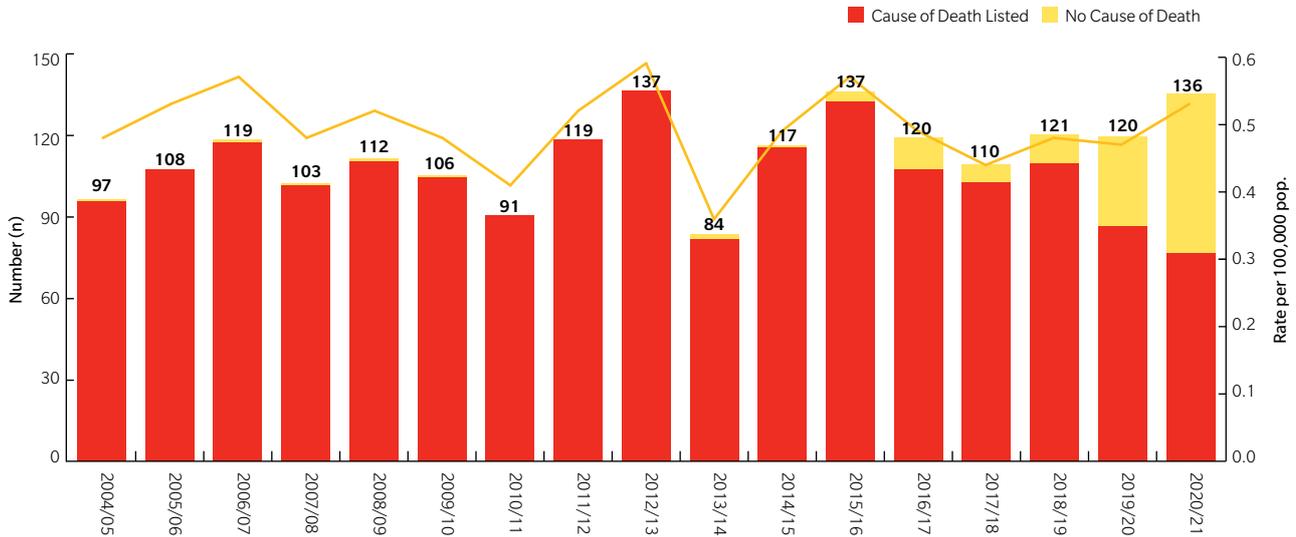


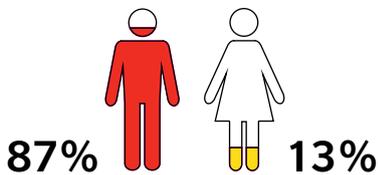
Figure 41

2004/21: NATIONAL COASTAL DROWNING DEATHS (N=1,937)

Annual coastal drowning deaths and mortality rates are illustrated above. There were 136 coastal drowning deaths recorded in 2020/21, above the 17-year average of 114. Similarly, the 2020/21 mortality rate is 0.53/100,000 population, above the 17-year average (0.49/100,000 pop.).

114
AVERAGE
DROWNING
DEATHS

0.49
AVERAGE RATE
PER 100,000
POPULATION



KEY DEMOGRAPHICS

20-34 **50-64**
YEAR OLDS YEAR OLDS

The 20-34 year old age group account for 27% of all coastal drowning deaths, while 50-64 year olds represent 24%.

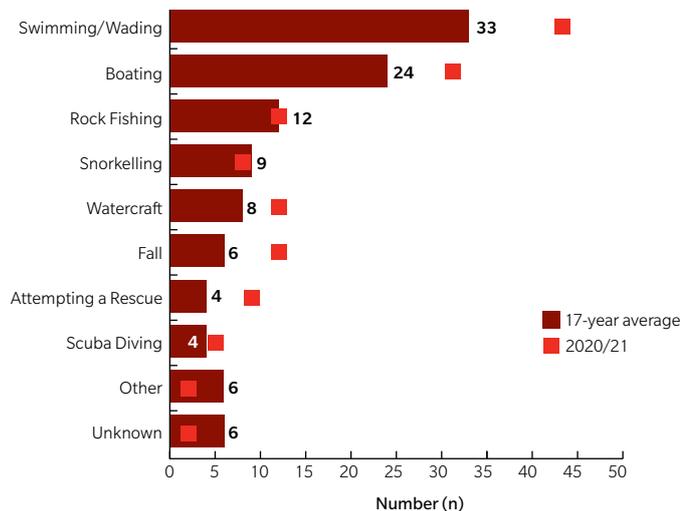


Figure 42

2004/21: AVERAGE DROWNING DEATHS BY ACTIVITY COMPARED TO 2020/21

Drowning numbers vary by activity and over time. Swimming/wading has recorded the most incidents on average (n=565), followed by boating (n=409), and rock fishing (n=212). Swimming/wading, boating, watercraft, scuba diving, fall and rescue-related drowning deaths were all above, while rock fishing was equal and snorkelling was lower than their 17-year average.



Figure 43

2004/21: REMOTENESS CLASSIFICATION OF COASTAL DROWNING LOCATIONS

Over one-third of coastal drowning deaths have occurred in major cities (n=743), followed by inner (n=494) and outer-regional (n=341) locations. The ‘remoteness classification’ of an incident location was coded to the Australian Statistical Geographic Standard Remoteness Areas.

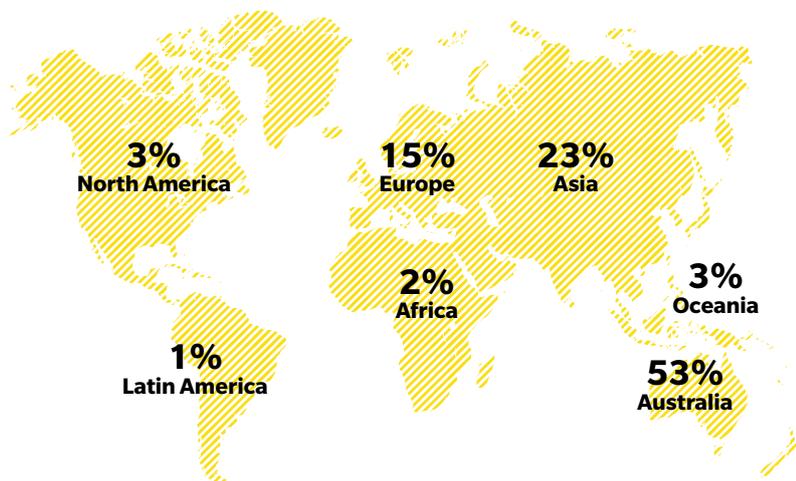


Figure 44

2004/21: BIRTH CONTINENT OF DECEDENT

Birth continent is known for 76% of coastal and ocean drowning deaths (n=1,463). Of these, 53% of decedents were Australian-born (n=775), 23% born in Asia (n=339) and 15% born in Europe (n=219).

TOP 10 DECEDENT BIRTH COUNTRIES %

Australia.....	53.0%	South Korea	2.4%
China	5.7%	United States of America.....	2.0%
United Kingdom.....	5.3%	Germany	1.6%
New Zealand.....	2.6%	Vietnam	1.4%
India.....	2.5%	Japan.....	1.4%

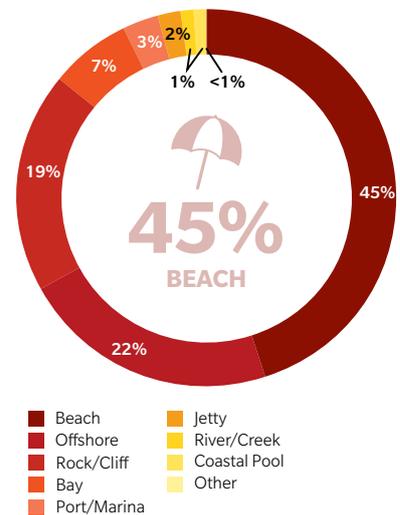


Figure 45

2004/21: DROWNING LOCATION CATEGORY

Nearly half of the coastal drowning deaths have occurred at beaches (n=874), followed by offshore (n=431) and rock/cliff (n=362) locations.

NATIONAL COASTAL DROWNING OVERVIEW

2004/21: 17-YEAR ANALYSIS

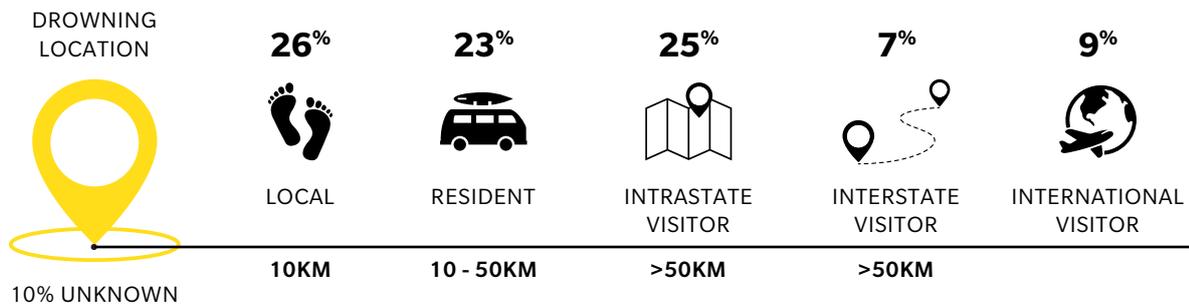


Figure 46

2004/21: DROWNING LOCATION DISTANCE FROM PLACE OF RESIDENCE

Most decedents were local to the drowning location (n=500) followed by intrastate visitors (n=489) and nearby residents (n=445).

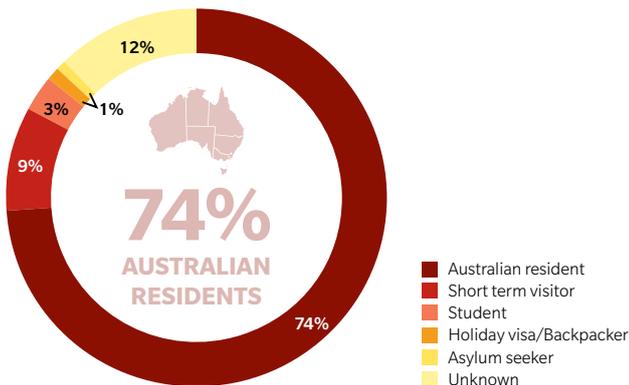


Figure 47

2004/21: VISITOR CATEGORY OF DECEDENT

Most decedents were Australian residents (n=1,442) followed by short term visitors (n=168) and international students (n=61).

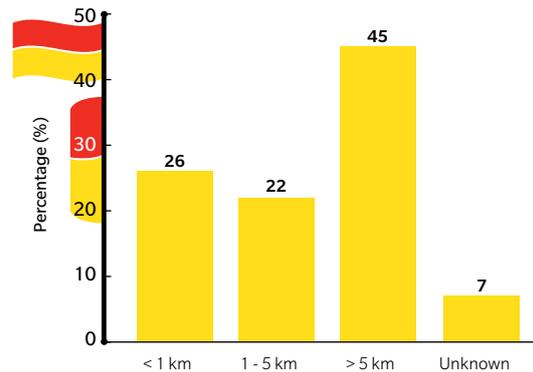


Figure 48

2004/21: DROWNING DEATH DISTANCE FROM A SURF LIFE SAVING SERVICE

Almost half of recorded coastal drowning deaths (n=875) occurred greater than 5km from a Surf Life Saving service.

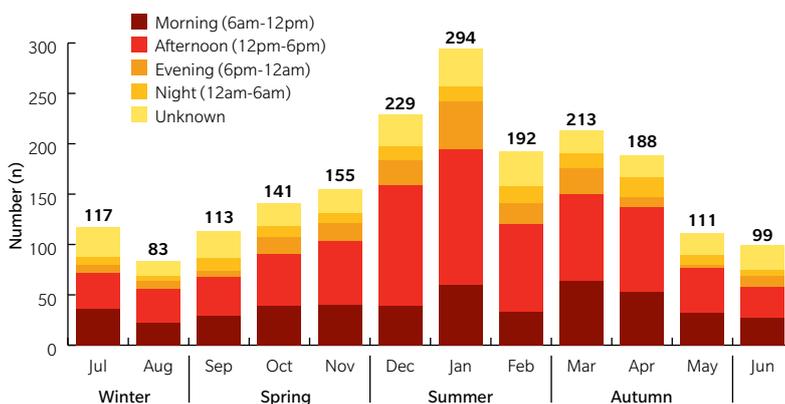


Figure 49

2004/21: DROWNING DEATHS BY MONTH & TIME OF DAY

Most coastal drowning deaths (37%, n=715) have occurred during summer (Dec-Feb) and two-thirds (66%, n=1,282) have occurred during the day (6am-6pm). Month is unknown for two incidents.

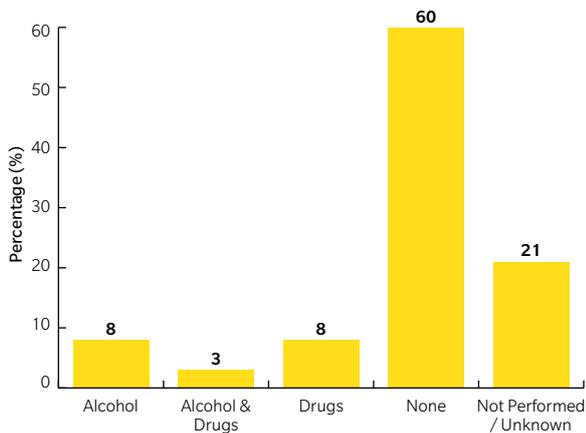


Figure 50
2004/21: COASTAL DROWNING, ALCOHOL & DRUGS
 Alcohol and drugs are known to contribute to one in five coastal drowning deaths (19%), although this could be higher given toxicology is unknown for 21%.

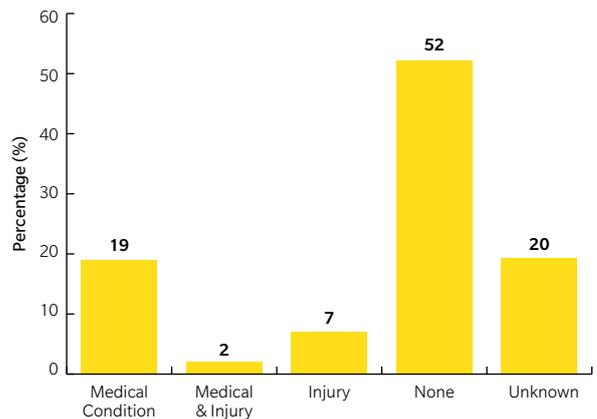


Figure 51
2004/21: MEDICAL CONDITIONS & INJURIES IN COASTAL DROWNING
 Medical conditions and injuries are considered co-morbidities in 28% of coastal drowning deaths, with a further 27% of incidents currently unknown.

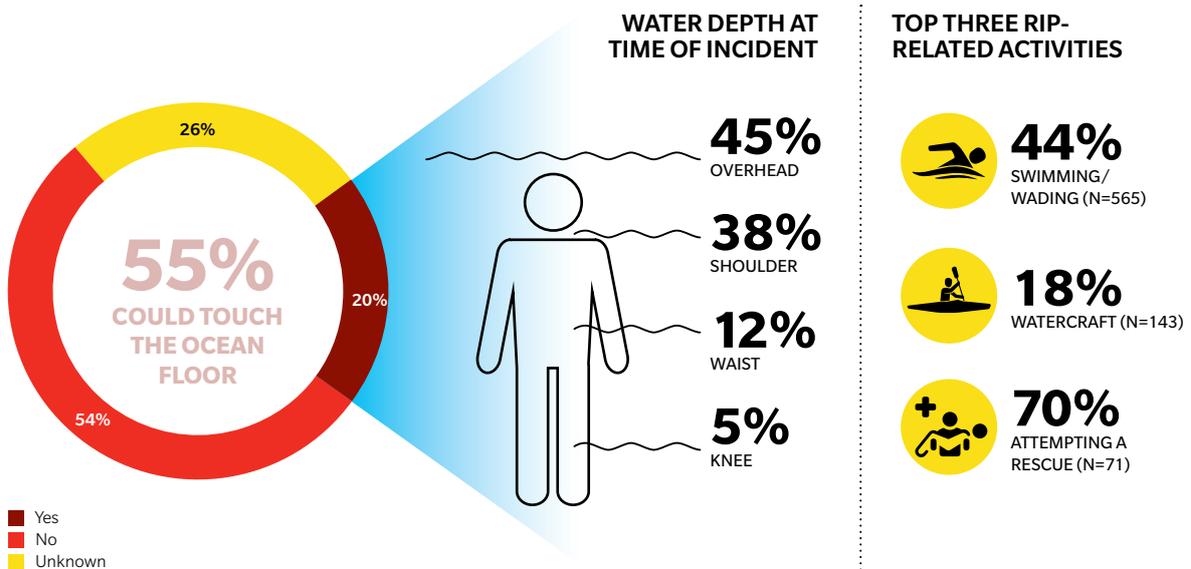
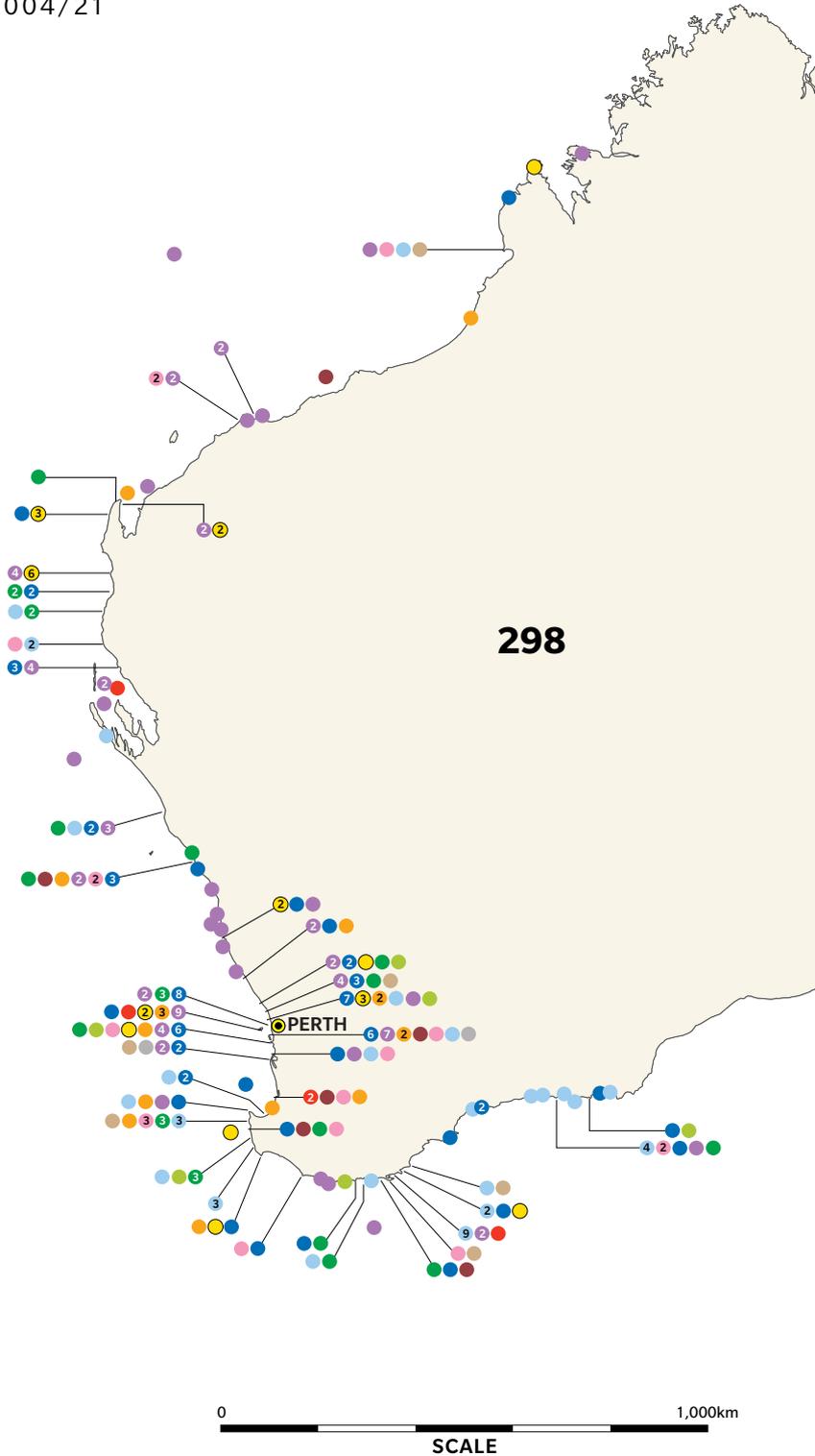
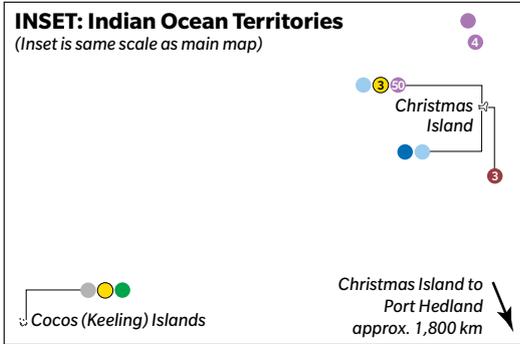


Figure 52
RIP CURRENTS & DROWNING
 Rip currents are known contributors for one in five coastal drowning deaths (20%), but this could be much higher with 26% unknown. For these known cases, 55% of decedents could touch the ocean floor at the time the incident occurred.

DROWNING LOCATIONS

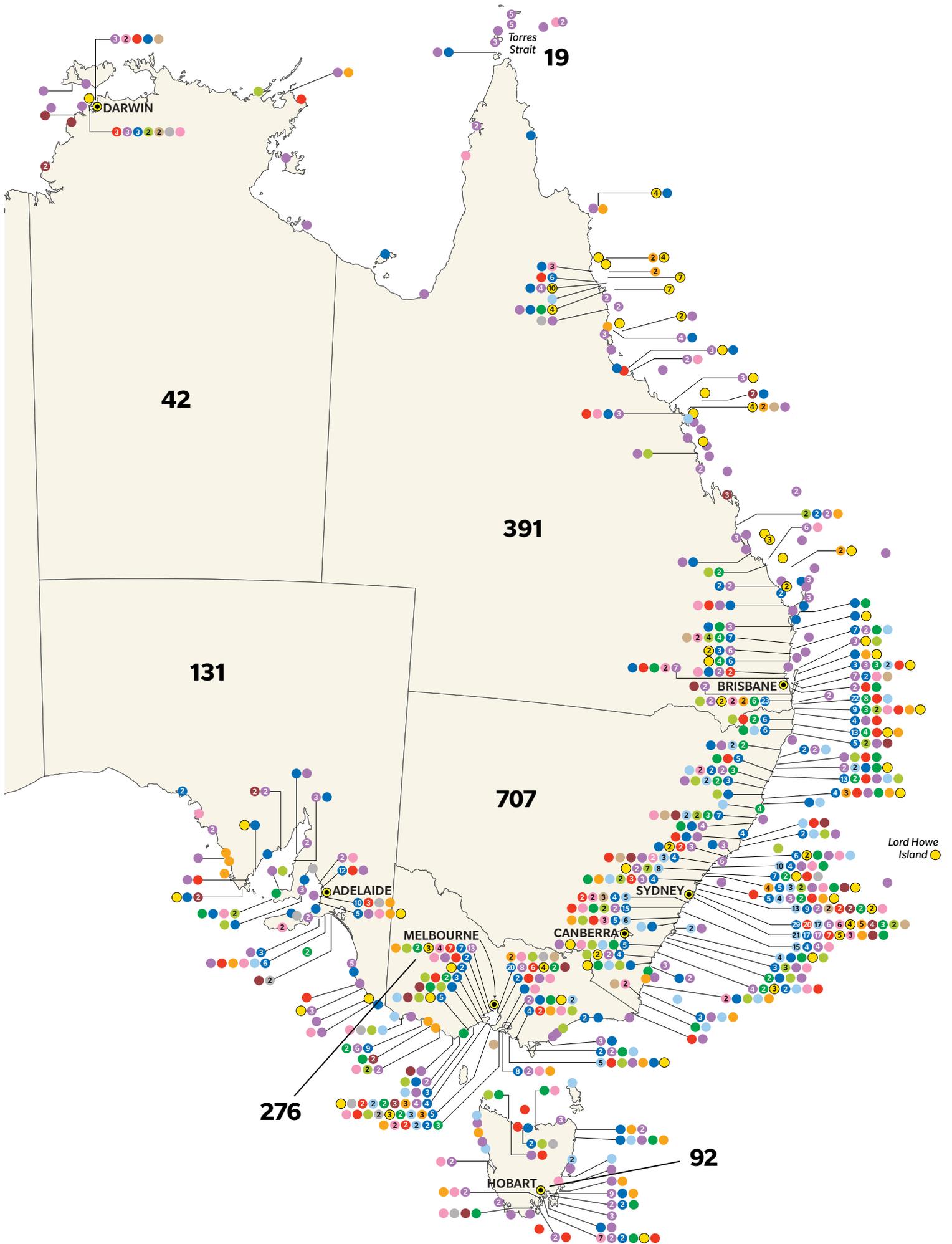
2004/21

Ashmore
5 Reef



Key to Drowning Activity

- Attempting a Rescue
- Boating & PWC
- Fall
- Jump
- Land-based Fishing
- Non Aquatic Transport
- Rock Fishing
- Scuba Diving
- Snorkelling
- Swimming/Wading
- Watercraft
- Other
- Unknown
- ④ Multiple instances per activity at the same location
- Capital City



UNINTENTIONAL COASTAL FATALITIES

2004/21: 17-YEAR ANALYSIS

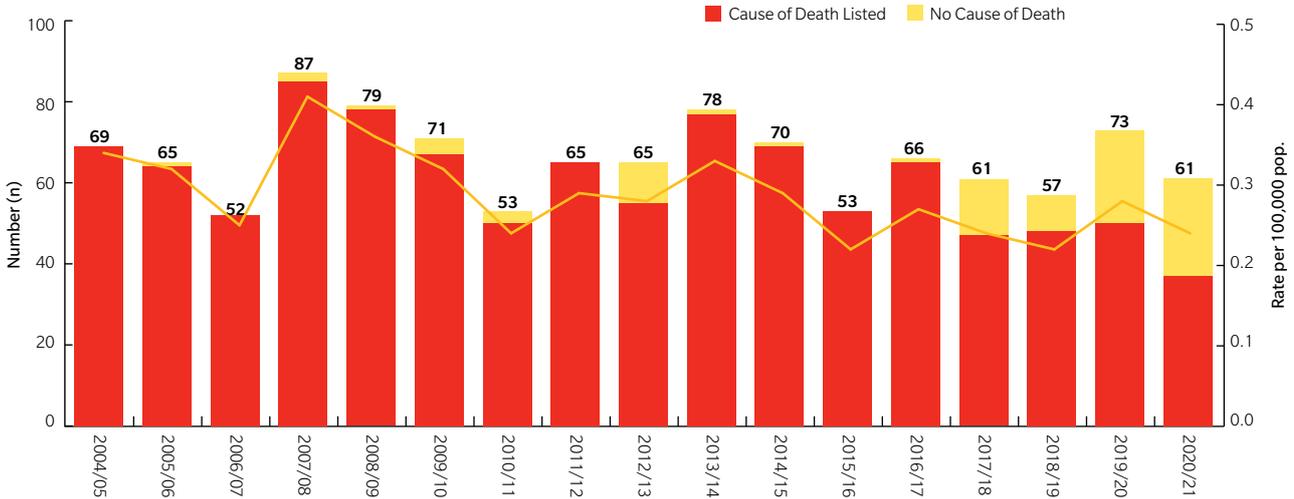


Figure 53
2004/21: UNINTENTIONAL COASTAL FATALITIES (N=1,125)

Annual coastal fatality numbers and mortality rates are illustrated above. There were 61 unintentional coastal fatalities recorded in 2020/21, below the 17-year average of 66. Similarly, the mortality rate (0.24/100,000 pop.) was below the 17-year average (0.29/100,000 pop.).

66
AVERAGE COASTAL FATALITIES

0.29
AVERAGE RATE PER 100,000 POPULATION

86%  14% 

KEY DEMOGRAPHICS

20-39 **45-64**
YEAR OLDS YEAR OLDS

The 20-39 year old age group account for 21% of coastal fatalities, while 45-64 year olds represent 42%.

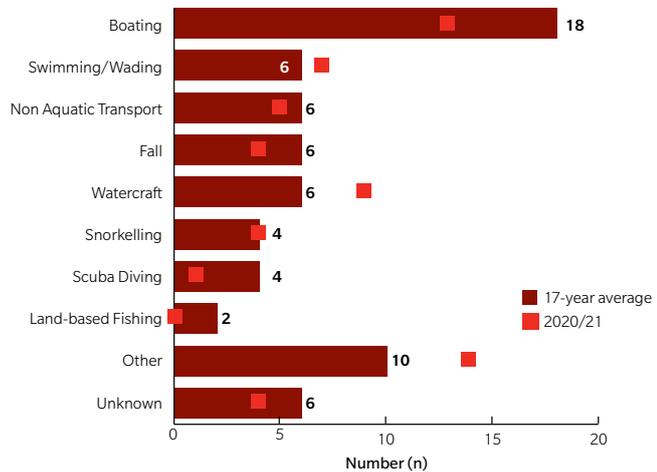


Figure 54
2004/21: ANNUAL AVERAGE OTHER COASTAL FATALITIES BY ACTIVITY COMPARED WITH 2020/21

Fatality numbers vary by activity and over time. Boating has recorded the most incidents since 2004 (n=306), followed by swimming/wading (n=165), and non aquatic transport (n=109). This year, swimming/wading, watercraft, and other activities (e.g. walking) were above, while snorkelling was equal to and boating, non aquatic transport, scuba diving, land-based fishing and fall-related incidents were lower than average.

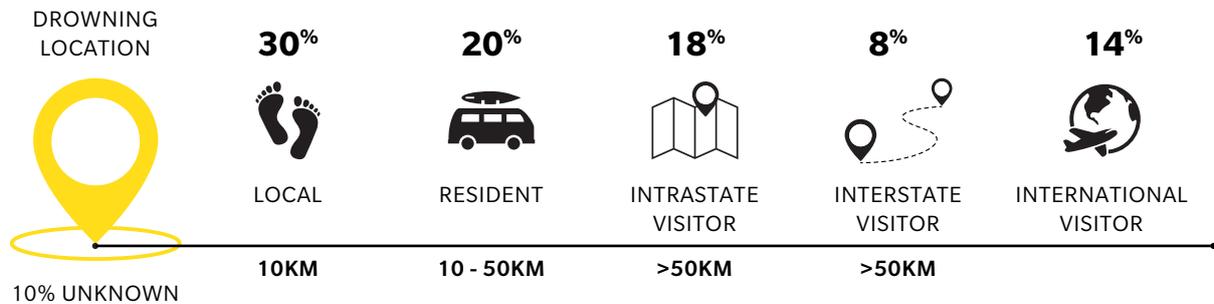


Figure 55
2004/21: COASTAL FATALITY LOCATION DISTANCE FROM PLACE OF RESIDENCE

Most non-drowning decedents were local to the incident location (n=333), followed by nearby residents (n=218) and intrastate visitors (n=207).

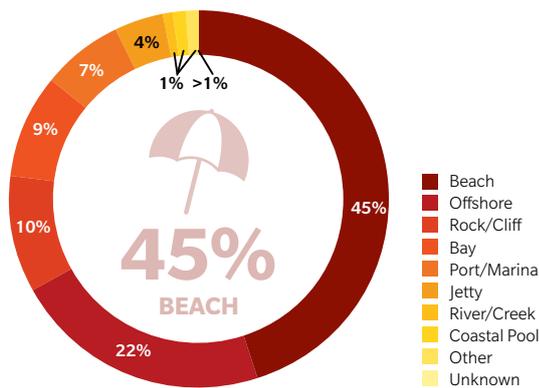


Figure 56
2004/21: COASTAL FATALITY LOCATION CATEGORY

Most coastal fatalities (n=501) occurred at a beach, followed by offshore (n=245) and rock/cliff locations (n=114).

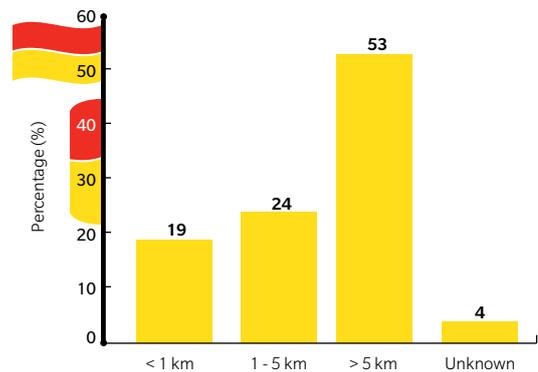


Figure 57
2004/21: COASTAL FATALITY DISTANCE FROM A SURF LIFE SAVING SERVICE

Over half of recorded coastal fatalities (n=597) occurred greater than 5km from a Surf Life Saving service.

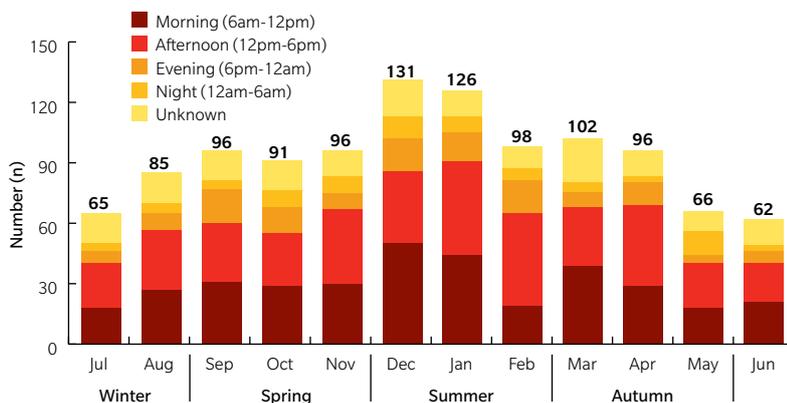
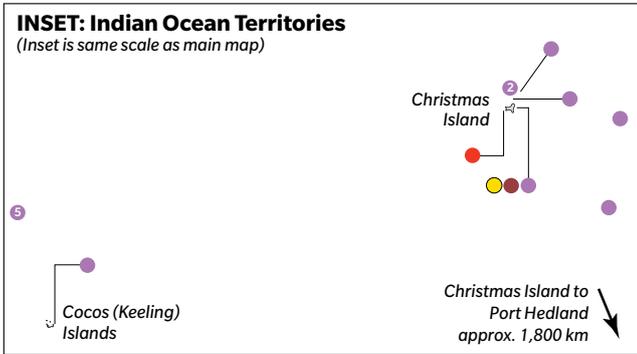


Figure 58
2004/21: COASTAL FATALITIES BY MONTH & TIME OF DAY

Most coastal fatalities (32%, n=355) have occurred during summer (Dec-Feb) and two-thirds (66%, n=738) have occurred during the day (6am-6pm). Month is unknown for 1% (n=11) incidents.

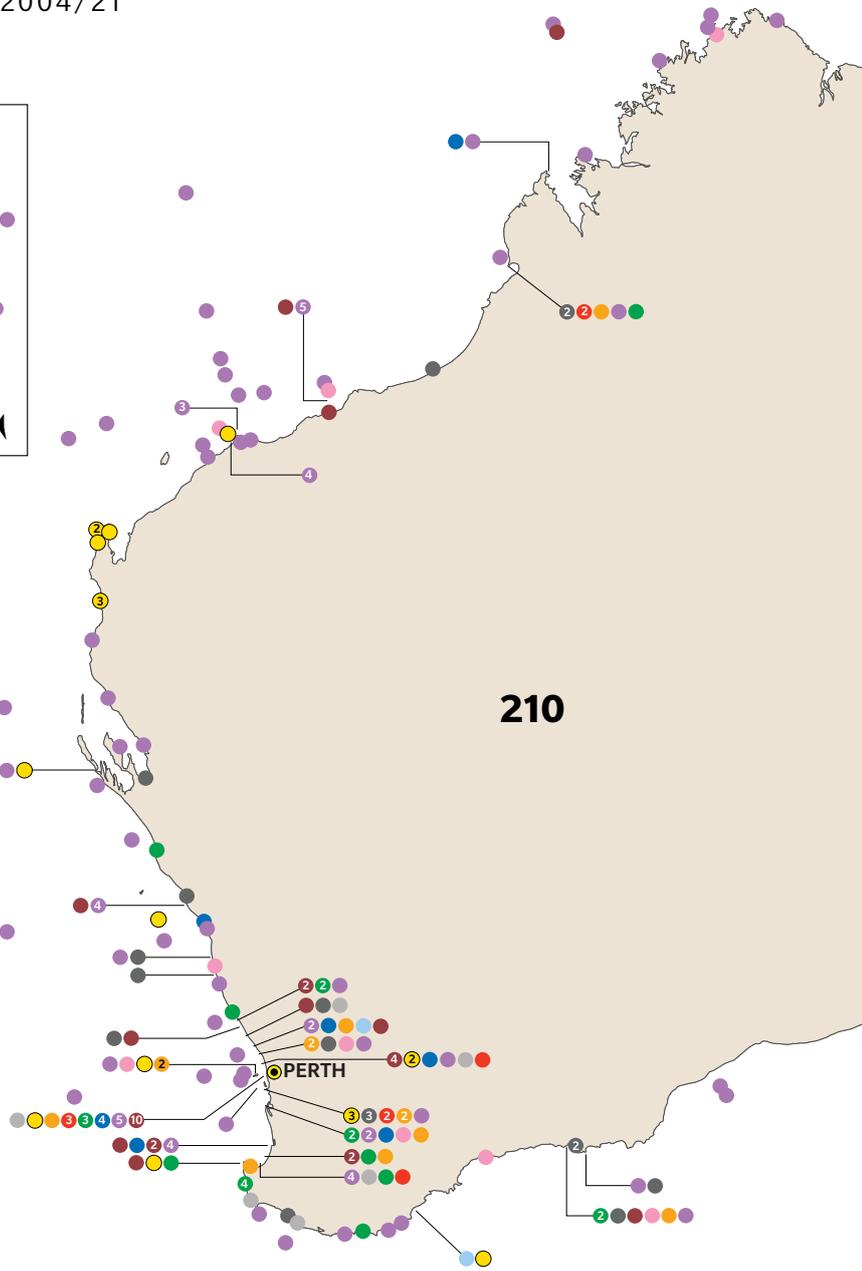
COASTAL FATALITY LOCATIONS

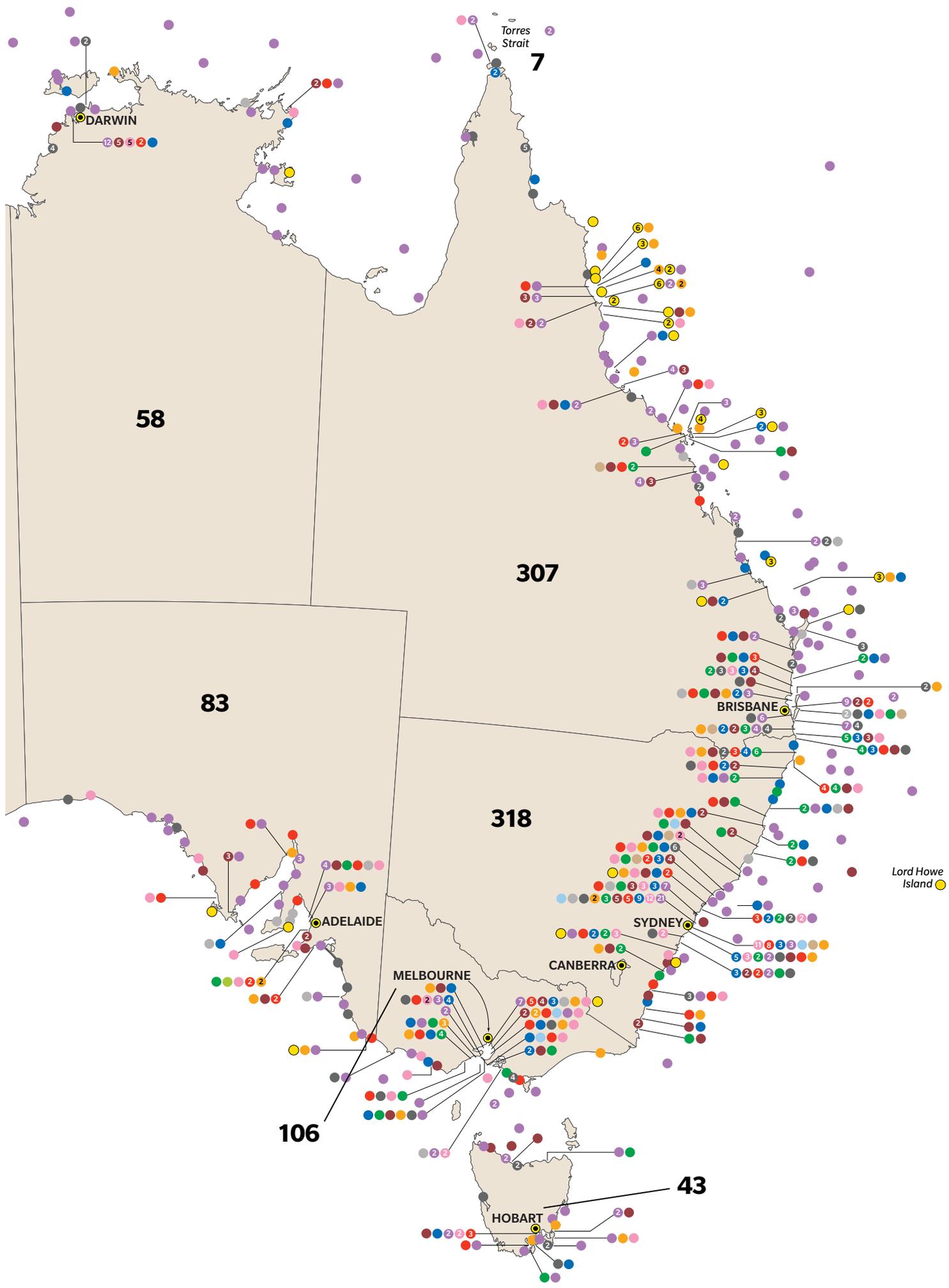
2004/21



Key to Fatality Activity

- Attempting a Rescue
- Boating & PWC
- Fall
- Jump
- Land-based Fishing
- Non Aquatic Transport
- Rock Fishing
- Scuba Diving
- Snorkelling
- Swimming/Wading
- Watercraft
- Other
- Unknown
- ④ Multiple instances per activity at the same location
- Capital City





58

307

83

318

106

43

DARWIN

ADELAIDE

MELBOURNE

CANBERRA

SYDNEY

BRISBANE

HOBART

Torres Strait

Lord Howe Island

DROWNING VS. FATALITY

2004/21: OVERVIEW

Drowning deaths represent the majority of unintentional coastal deaths, with almost two drowning deaths recorded for every coastal fatality since 2004/05. This ratio differs by state, for example in Victoria, New South Wales and Tasmania more than two drowning deaths occur for each coastal fatality recorded, while in the Northern Territory more coastal fatalities are recorded than coastal drowning deaths. Similarly, there are differences observed for particular coastal activities, with drowning more prevalent for swimmers and waders, while for coastal fatalities more occur while boating.

Alcohol and drugs are known risk factors for coastal deaths, known to contribute to 19% of coastal drowning deaths and 15% of other coastal fatalities. Mixing alcohol and drugs with coastal activities is dangerous, with some activities riskier than others (Figure 60). Swimming/wading, boating & PWC and falls & jumps can be especially deadly when combined with alcohol and drug consumption.

Fatal incidents can be influenced by multiple factors, but some may be more common in one incident type compared to another. Rip currents are prominent contributing factors in 20% of coastal drowning deaths, but only 1% of coastal fatalities. On the other hand, precipitating medical factors and injuries dominate unintentional coastal fatalities (80%) compared to only 28% of coastal drowning deaths.

Since SLSA extended its research to include all coastal fatalities, we are able to better understand the challenges facing our membership and to develop a holistic approach to managing coastal safety and resource allocation for surf lifesaving services across Australia.

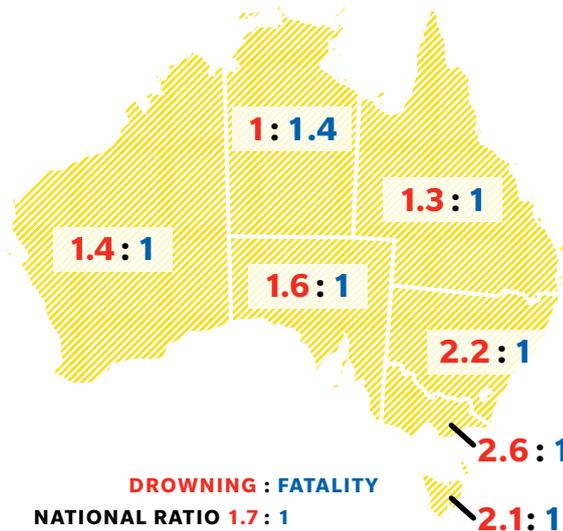


Figure 59

2004/21: COASTAL DROWNING & FATALITY RATIOS

For each coastal fatality, Australia records 1.7 coastal drowning deaths. Victoria has the largest ratio with 2.6 coastal drowning deaths per fatality, while the Northern Territory has 1.4 coastal fatalities per drowning death.

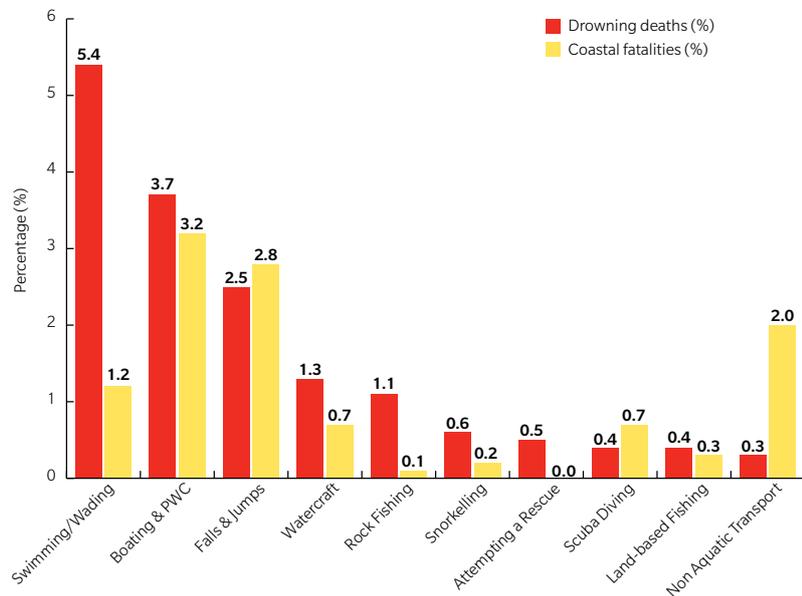


Figure 60

2004/21: ALCOHOL & DRUGS IN COASTAL DEATHS

Alcohol and drugs are known to contribute to 19% of drowning deaths and 15% of coastal fatalities. However, they are more prevalent in some activities compared to others. Swimming/wading, boating & PWC and falls & jumps can be especially deadly when mixed with alcohol and drugs.

DROWNING VS. FATALITY

2004/21: CAUSAL ANALYSIS

DROWNING

HOW



20%
RIP-RELATED

54%
NOT RIP-RELATED

WHY



28%
DUE TO MEDICAL/INJURY



20%
DUE TO MEDICAL FACTOR



9%
DUE TO INJURY

37%
MEDICAL-RELATED
AGED 60-74 YEARS OLD

30%
INJURY-RELATED
AGED 45-59 YEARS OLD

WHO



53%
AUSTRALIAN-BORN



13%
NON-RESIDENTS

74%
AUSTRALIAN RESIDENTS

23%
ASIAN-BORN

26%
LOCALS (LIVE <10KM
FROM INCIDENT)

29%
SWIMMERS/WADERS

FATALITY

HOW



1%
RIP-RELATED

80%
NOT RIP-RELATED

WHY



80%
DUE TO MEDICAL/INJURY



52%
DUE TO MEDICAL FACTOR



29%
DUE TO INJURY

43%
MEDICAL-RELATED
AGED 55-69 YEARS OLD

34%
INJURY-RELATED
AGED 15-29 YEARS OLD

WHO



77%
AUSTRALIAN-BORN



14%
NON-RESIDENTS

61%
AUSTRALIAN RESIDENTS

19%
ASIAN-BORN

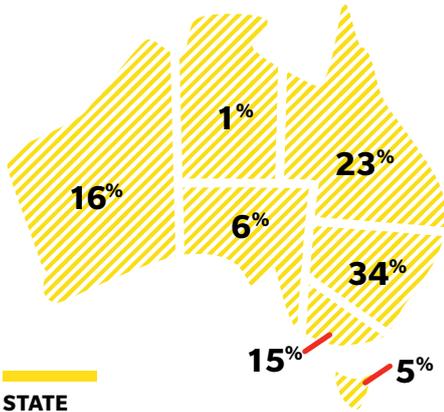
30%
LOCALS (LIVE <10KM
FROM INCIDENT)

27%
BOATERS

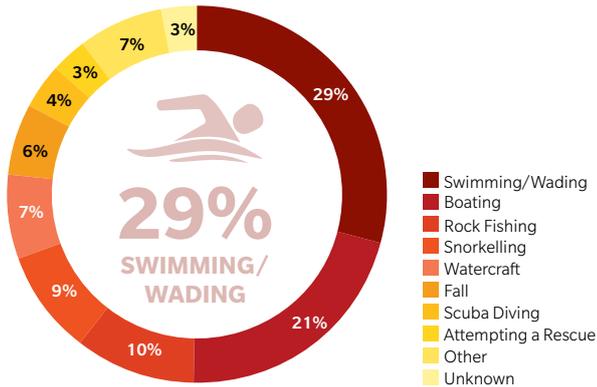
NB: May not total 100% due to unknown cases

COASTAL DROWNING SNAPSHOT

2016/21: FIVE-YEAR REVIEW



STATE



ACTIVITY

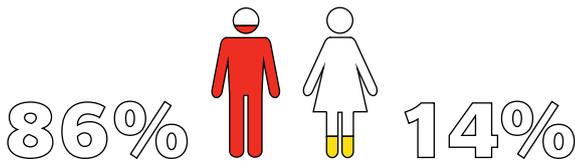
<p>54% AUSTRALIAN-BORN</p>	<p>46% OVERSEAS-BORN</p>
<p>61% AUSTRALIAN RESIDENT</p>	<p>11% NON-RESIDENT</p>
<p>20% RIP-RELATED</p>	<p>24% MEDICAL/INJURY</p>
<p>14% ALCOHOL & DRUGS</p>	<p>46% >5KM DISTANCE TO SLS SERVICE</p>

NB: May not total 100% due to unknown cases

KEY DEMOGRAPHICS

121
AVERAGE DROWNING DEATHS

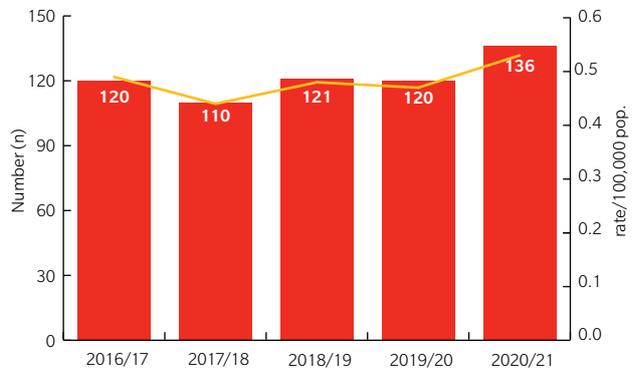
0.48
AVERAGE RATE/100,000 POP.



26% 20-34 YEAR OLDS

32% 50-69 YEAR OLDS

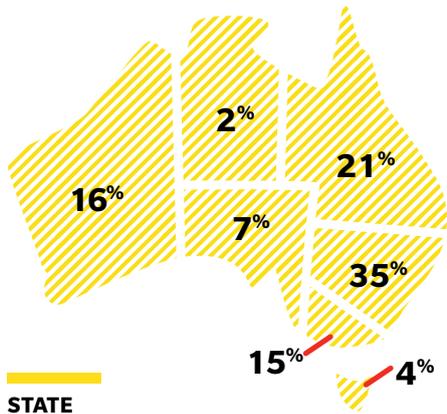
48 AVERAGE DROWNING AGE



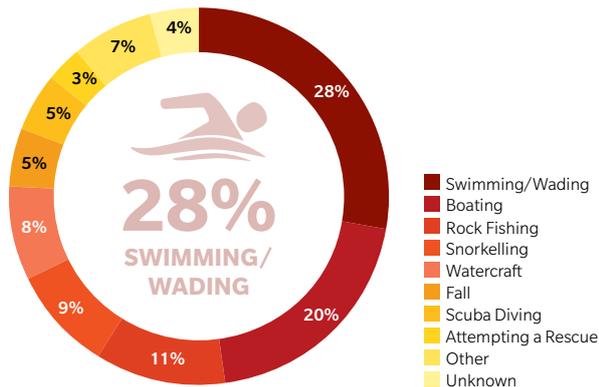
TREND

COASTAL DROWNING SNAPSHOT

2011/21: TEN-YEAR REVIEW



STATE



ACTIVITY

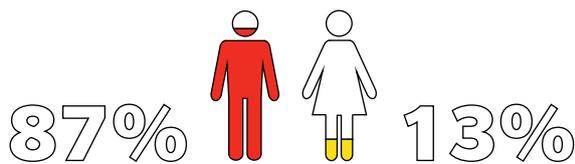
<p>52% AUSTRALIAN-BORN</p>	<p>48% OVERSEAS-BORN</p>
<p>71% AUSTRALIAN RESIDENT</p>	<p>13% NON-RESIDENT</p>
<p>19% RIP-RELATED</p>	<p>26% MEDICAL/INJURY</p>
<p>18% ALCOHOL & DRUGS</p>	<p>43% >5KM DISTANCE TO SLS SERVICE</p>

NB: May not total 100% due to unknown cases

KEY DEMOGRAPHICS

120
AVERAGE DROWNING DEATHS

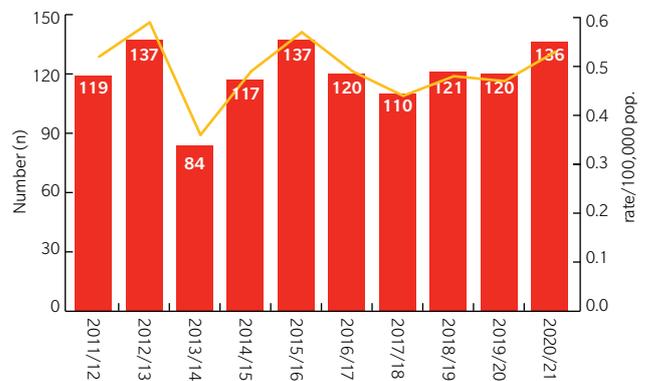
0.49
AVERAGE RATE/100,000 POP.



26%
20-34 YEAR OLDS

24%
50-64 YEAR OLDS

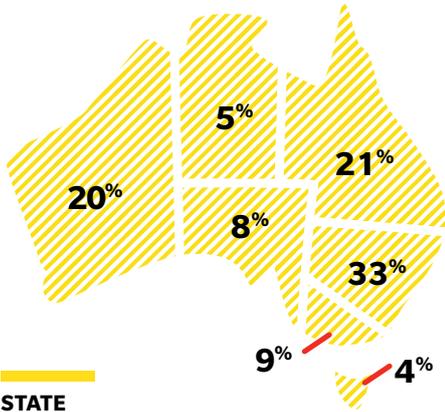
46
AVERAGE DROWNING AGE



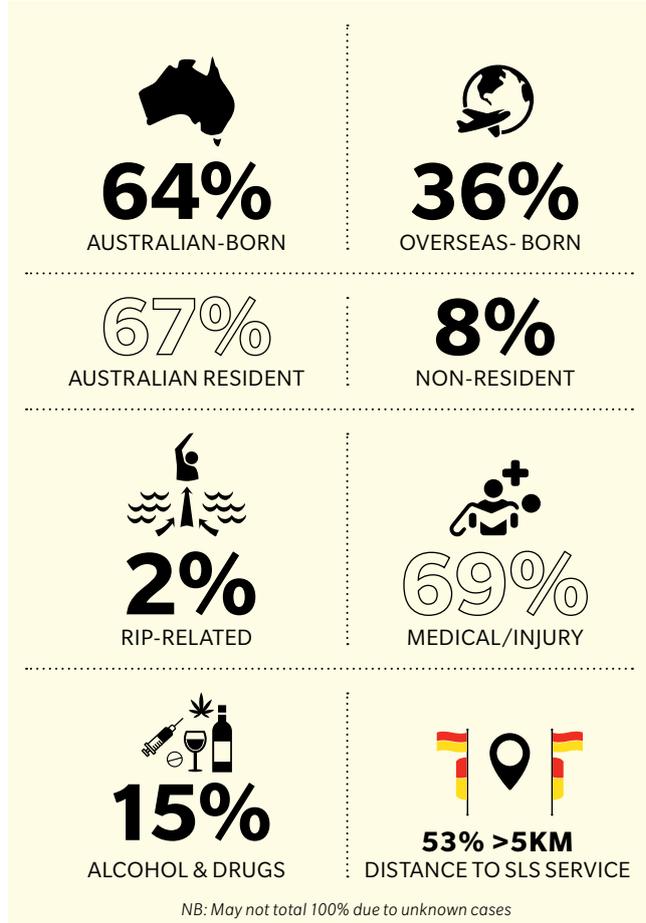
TREND

COASTAL FATALITY SNAPSHOT

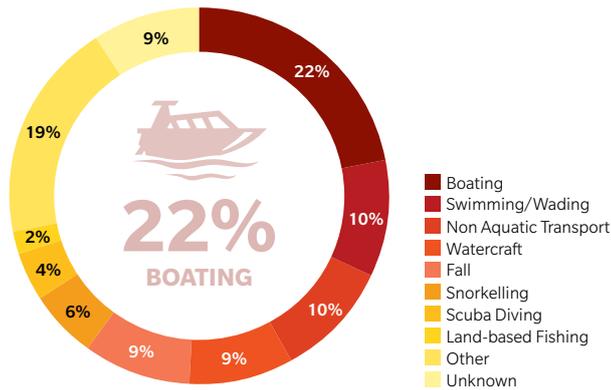
2016/21: FIVE-YEAR REVIEW



STATE



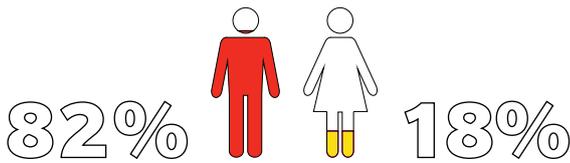
ACTIVITY



KEY DEMOGRAPHICS

64 AVERAGE COASTAL FATALITIES

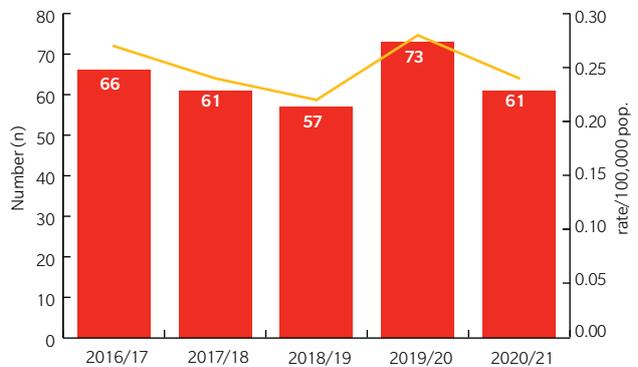
0.25 AVERAGE RATE/100,000 POP.



19% 30-44 YEAR OLDS

31% 55-69 YEAR OLDS

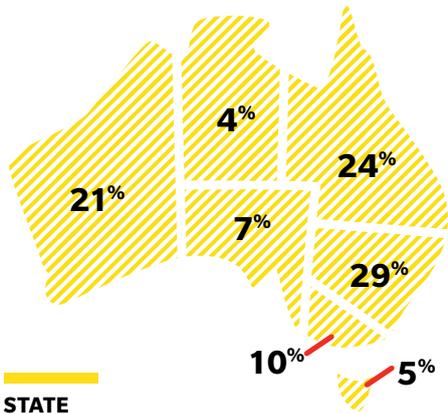
53 AVERAGE AGE OF DEATH



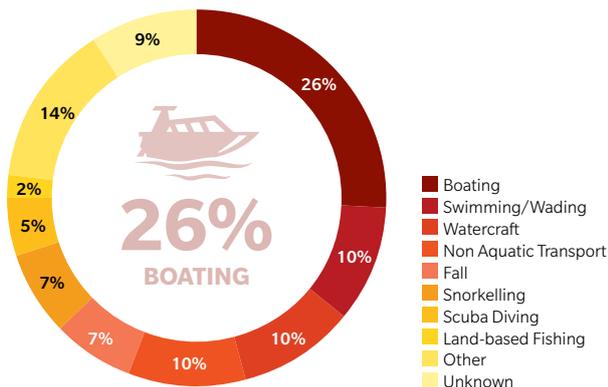
TREND

COASTAL FATALITY SNAPSHOT

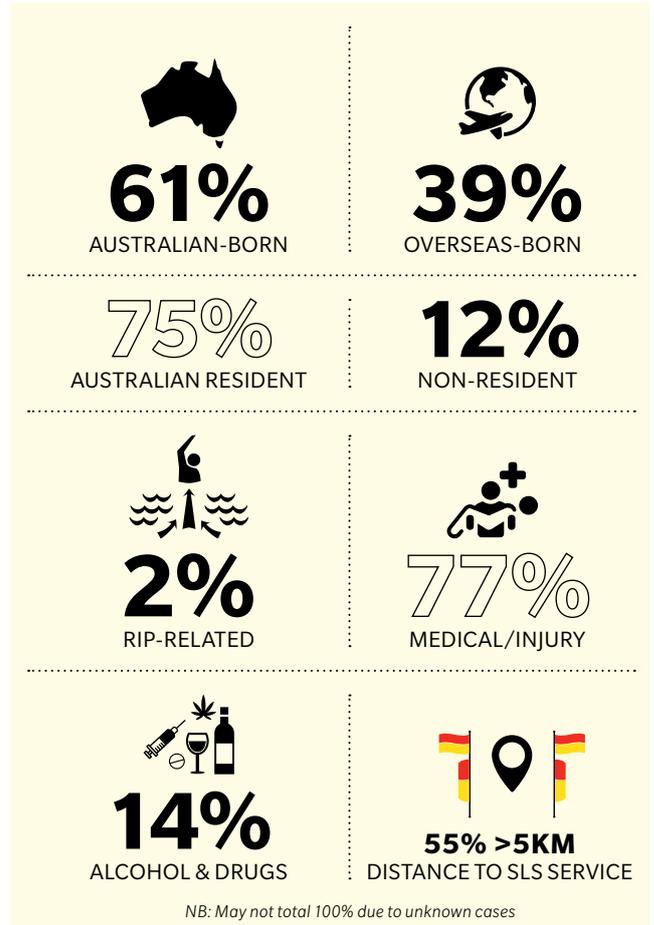
2011/21: TEN-YEAR REVIEW



STATE



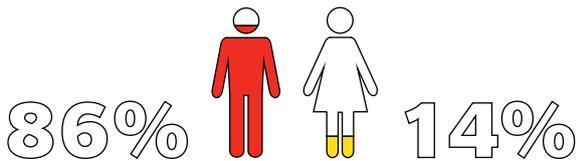
ACTIVITY



KEY DEMOGRAPHICS

65
AVERAGE
COASTAL FATALITIES

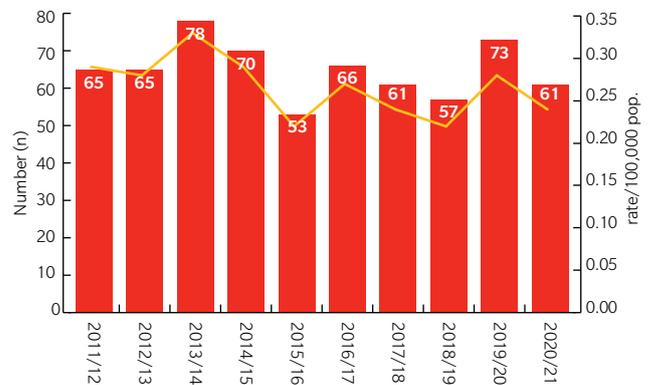
0.27
AVERAGE
RATE/100,000 POP.



23%
40-54
YEAR OLDS

33%
55-69
YEAR OLDS

52
AVERAGE
AGE OF DEATH



TREND

FEATURE: MARINE FAUNA DEATHS

Since the production of Jaws, humans have been fascinated with marine fauna, especially elite apex predators such as sharks and crocodiles. The more we interact with their environment the more likely we are to encounter some of these magnificent creatures – this is, however, not without risk. Media reporting of animal attacks could be described as sensational – with recent calls to change terminology to be less inflammatory (e.g. use ‘bite’ instead of ‘attack’). This last year recorded more marine fauna deaths than in previous years (Figure 63), with a total of 59 being recorded since 2004/05. While a diversity of species have been responsible for these deaths (Figure 62), the vast majority (70%) were due to shark bites (Figure 62), occurred to men (90%) and were more prevalent in 15-29 year old age groups. Certain activities were more prone to marine fauna incidents compared to others. Watercraft (predominantly surfing) was the most common activity, followed by swimming/wading and then snorkelling (Figure 64). Each of

these activities presenting slightly different user groups who may be a greater risk than others (Figure 65). While these tragic and traumatic events are accidental and often unprovoked, their occurrence remains rare – especially in comparison to drowning or other fatalities that occur around our coast.

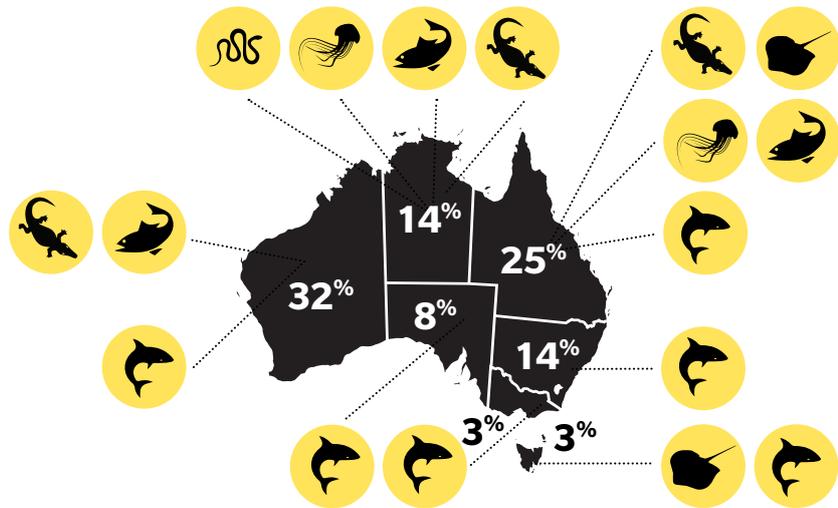


Figure 61
2004/21: MARINE FAUNA DEATHS BY STATE
 Marine fauna inhabit different environments so the risk they pose differs by location. Here we illustrate the type of animal that has caused a coastal death, and the proportion of marine fauna deaths by state.

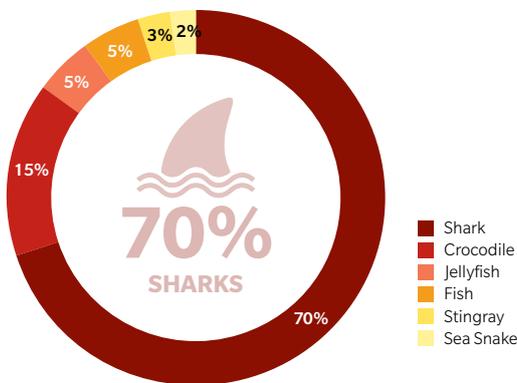


Figure 62
2004/21: TYPE OF MARINE FAUNA
 Sharks have been responsible for most marine fauna deaths (70%), followed by crocodiles (15%), and jellyfish (5%).

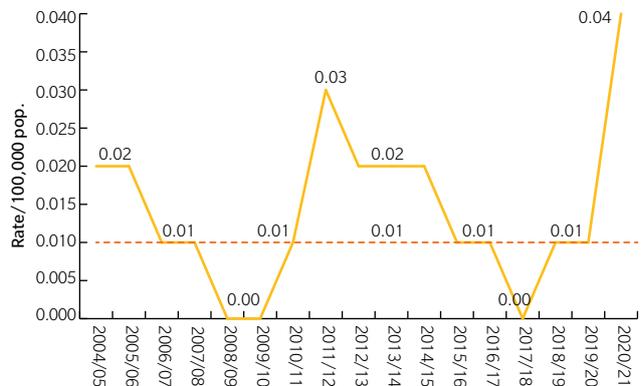
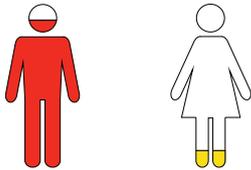


Figure 63
2004/21: MARINE FAUNA MORTALITY RATES OVER TIME
 This last year recorded the highest rate (0.04/100,000 pop.) of marine fauna deaths since our records began, the previous being in 2011/12.

KEY DEMOGRAPHICS

59
MARINE FAUNA DEATHS

0.01
RATE/100,000 POP.



90% **10%**
15-29
YEAR OLDS

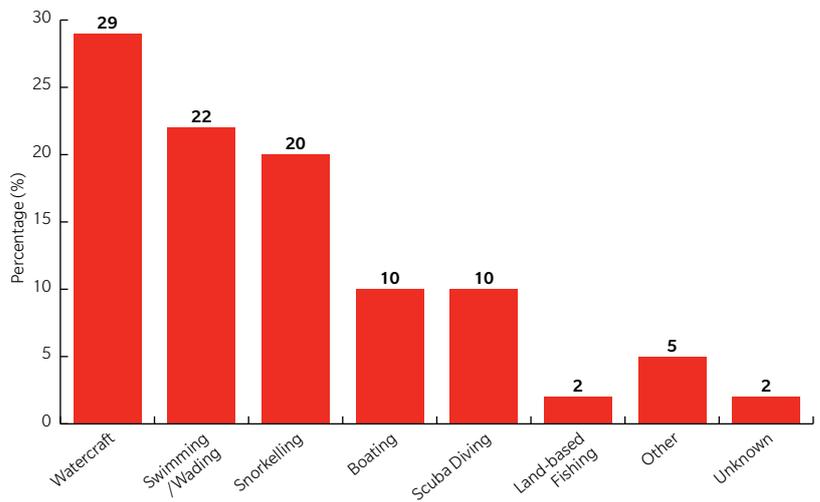


Figure 64

MARINE FAUNA DEATHS BY ACTIVITY

Certain activities have recorded more marine fauna incidents compared to others. Watercraft (predominantly surfing) was the most common activity (29%), followed by swimming/wading (22%) and then snorkelling (20%).

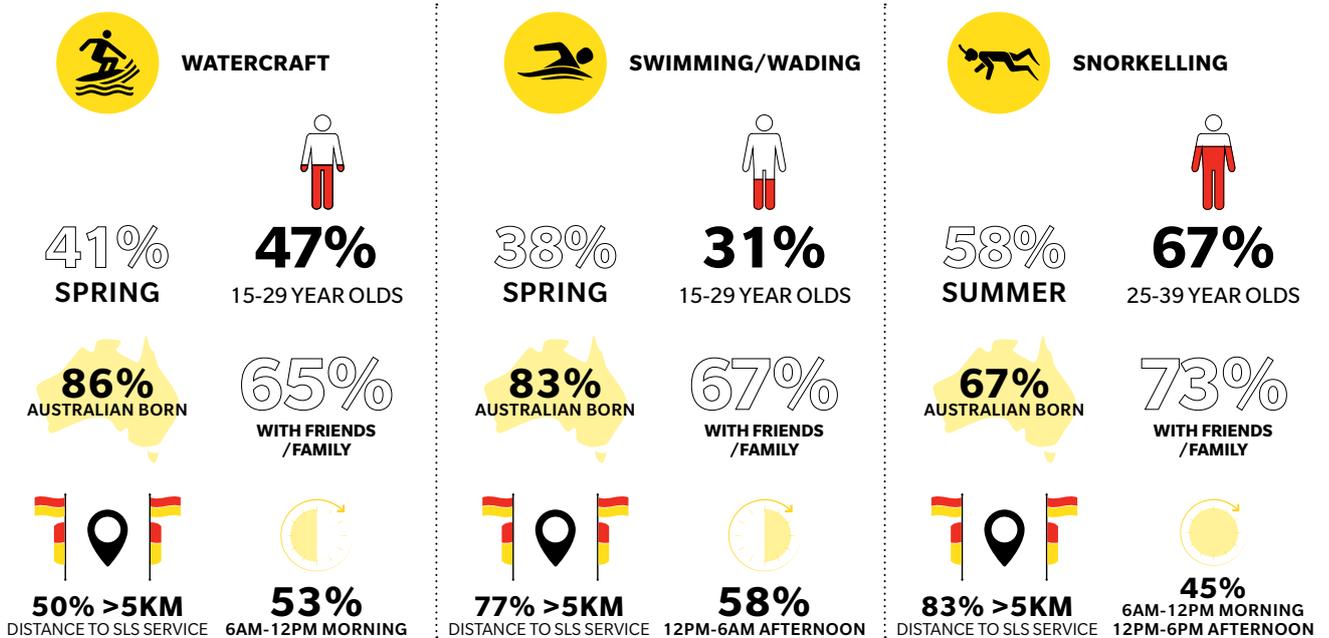


Figure 65

TOP THREE ACTIVITY PROFILES

Profiling fatalities helps to identify user groups that may be of greater risk. Here we illustrate the key demographic profiles of decedents for the top three activities in marine fauna incidents.

NEW SOUTH WALES

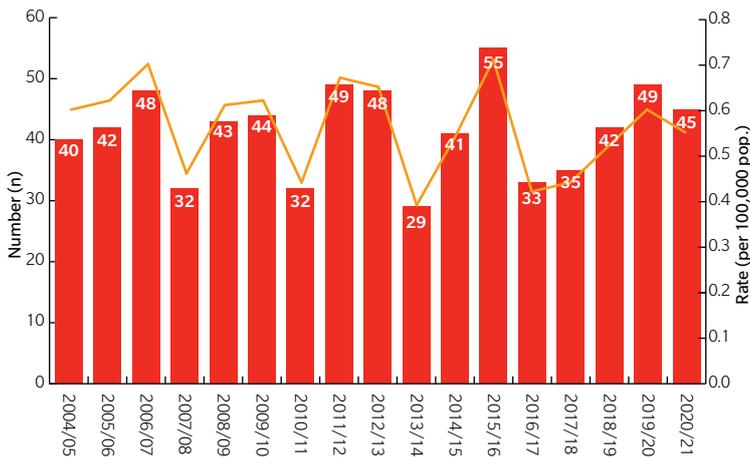


Figure 66
2004/21: COASTAL DROWNING DEATH TRENDS (N=707)
 The number of coastal drowning deaths in 2020/21 for New South Wales (n=45) was higher than the 17-year average of 42, but the mortality rate (0.55/100,000 pop.) was lower than average (0.56/100,000 pop.).

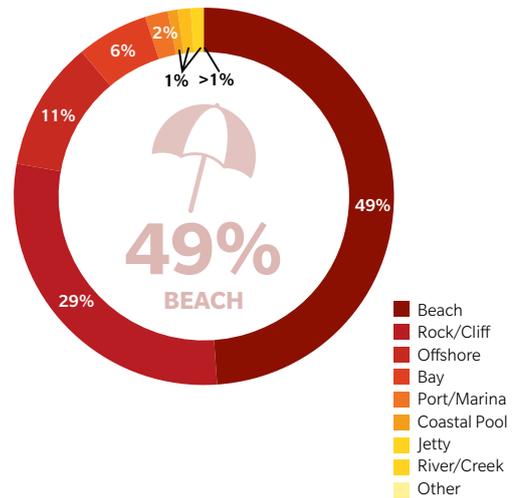


Figure 67
2004/21: DROWNING LOCATION CATEGORY
 Since 2004/05, New South Wales beaches have recorded the most drowning deaths (n=348), followed by rock/cliff (n=207) and offshore locations (n=74).

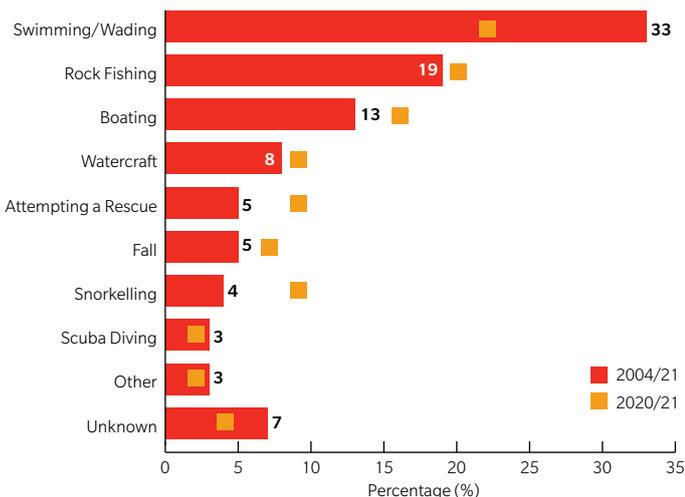
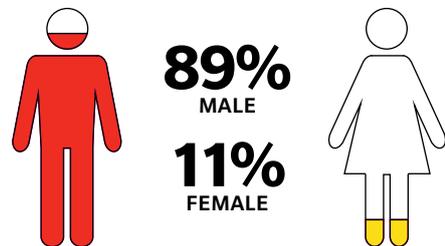
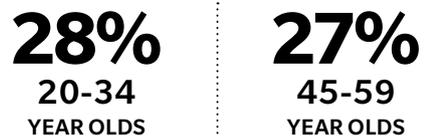


Figure 68
2004/21: PROPORTION OF DROWNING DEATHS BY ACTIVITY COMPARED TO 2020/21
 Since 2004/05, swimming/wading has recorded the most drowning deaths (33%), followed by rock fishing (19%) and boating (13%). This year swimming/wading was below average, while rock fishing and boating incidents were above average.

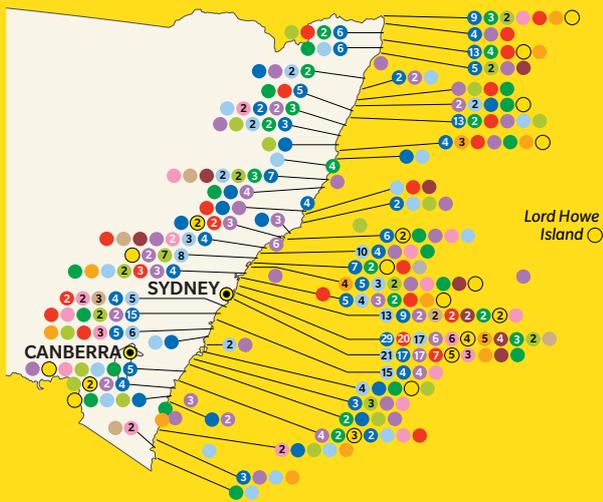


KEY DEMOGRAPHICS



DROWNING SNAPSHOT

2004/21 COASTAL DROWNING LOCATIONS



- 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

2020/21 COASTAL DROWNING DEATHS

NUMBER

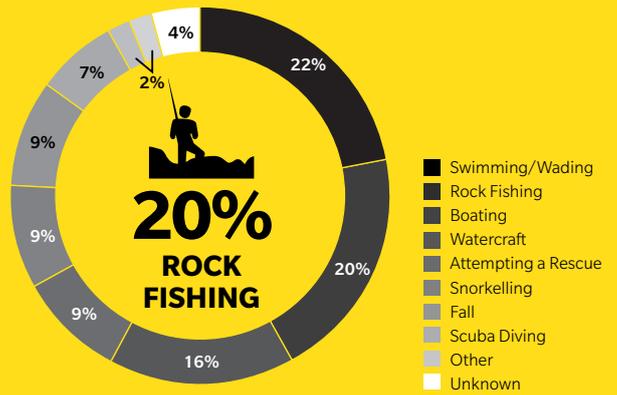
45

MORTALITY RATE

0.55

PER 100,000 POPULATION

ACTIVITY



78%
AUSTRALIAN RESIDENT

48%
OVERSEAS-BORN

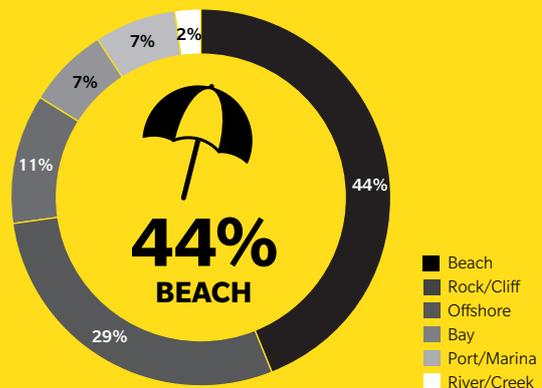
25%
RIP-RELATED

25%
MEDICAL/INJURY

16%
ALCOHOL & DRUGS

28% >5KM
DISTANCE TO SLS SERVICE

LOCATION



42%
BETWEEN 1-5KM
FROM A SURF LIFE
SAVING SERVICE

QUEENSLAND

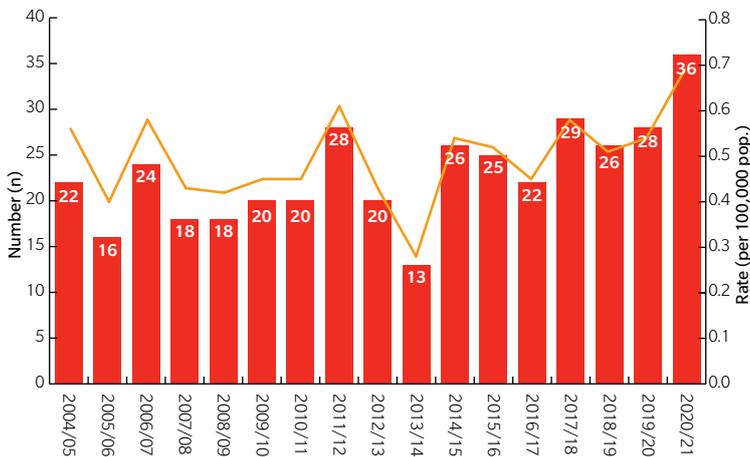


Figure 69

2004/21: COASTAL DROWNING DEATH TRENDS (N=391)

The number of coastal drowning deaths in 2020/21 for Queensland (n=36) and the mortality rate (0.69/100,000 pop.) were considerably higher than the 17-year averages of 23 deaths and 0.50/100,000 pop.

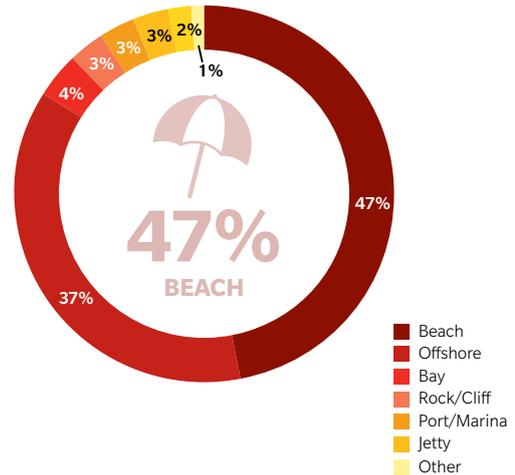


Figure 70

2004/21: DROWNING LOCATION CATEGORY

Since 2004/05, Queensland beaches have recorded the most drowning deaths (n=184), followed by offshore (n=146) and bay waters (n=15).

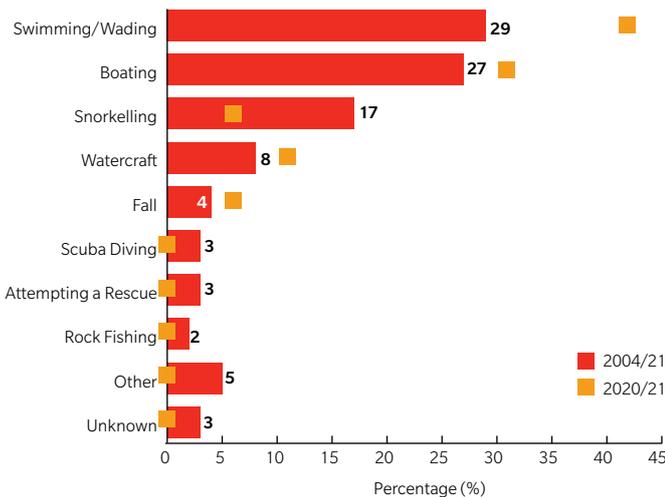
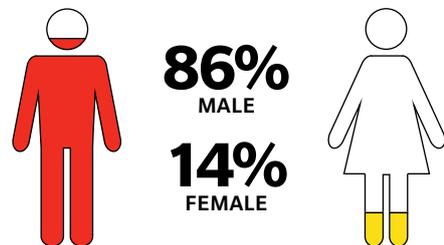


Figure 71

2004/21: PROPORTION OF DROWNING DEATHS BY ACTIVITY COMPARED TO 2020/21

Since 2004/05, swimming/wading has recorded the most drowning deaths (29%), followed by boating (27%) and snorkelling (17%). This year swimming/wading, boating and watercraft were above average, while snorkelling incidents were below average.

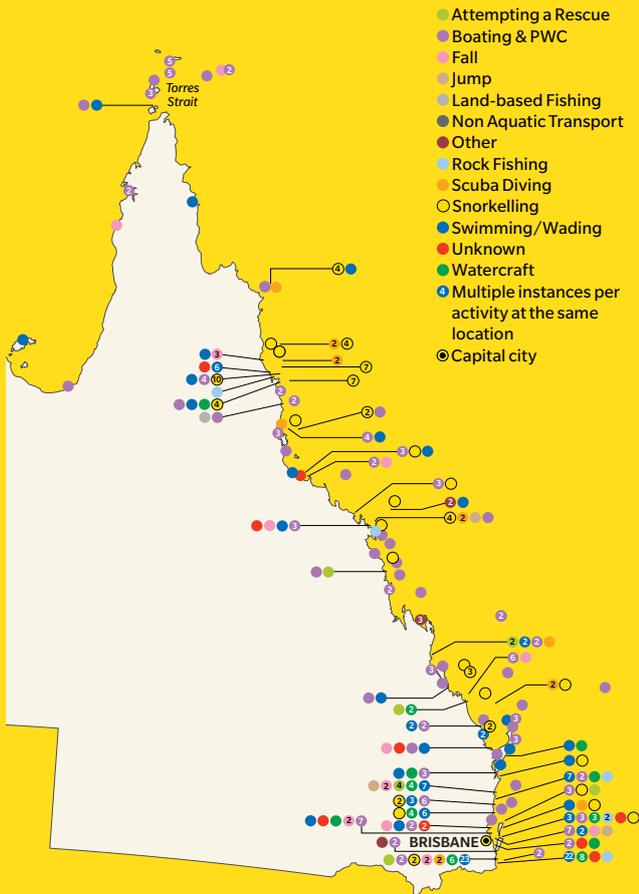


KEY DEMOGRAPHICS



DROWNING SNAPSHOT

2004/21 COASTAL DROWNING LOCATIONS

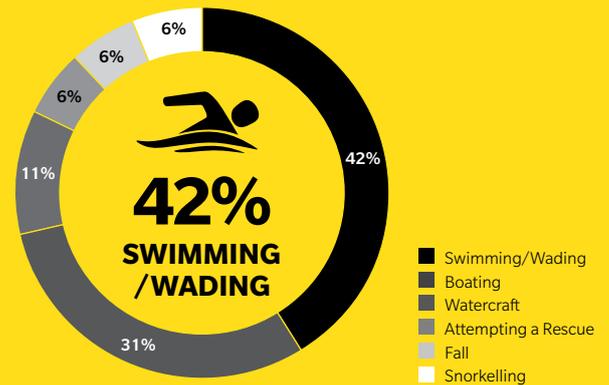


2020/21 COASTAL DROWNING DEATHS

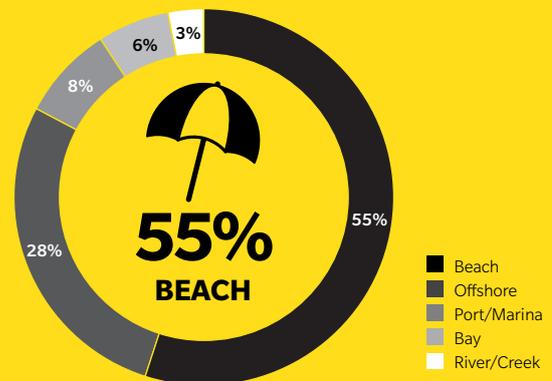
NUMBER
36

MORTALITY RATE
0.69
PER 100,000 POPULATION

ACTIVITY



LOCATION



51%
OVERSEAS-BORN

29%
MEDICAL/INJURY

17%
ALCOHOL & DRUGS

55% >5KM
DISTANCE TO SLS SERVICE

56% GREATER THAN 5KM
FROM A SURF LIFE
SAVING SERVICE

VICTORIA



Figure 72

2004/21: COASTAL DROWNING DEATH TRENDS (N=276)

The number of coastal drowning deaths in 2020/21 for Victoria (n=21) and the mortality rate (0.32/100,000 pop.) were considerably higher than the 17-year averages of 16 deaths and 0.28/100,000 pop.

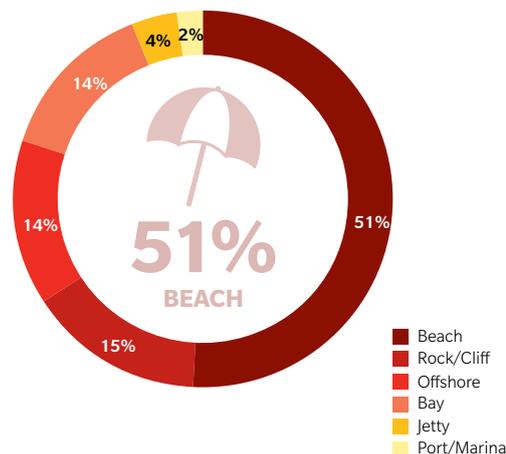


Figure 73

2004/21: DROWNING LOCATION CATEGORY

Since 2004/05, Victorian beaches have recorded the most drowning deaths (n=141), followed by rock/cliff (n=41) and offshore locations (n=39).

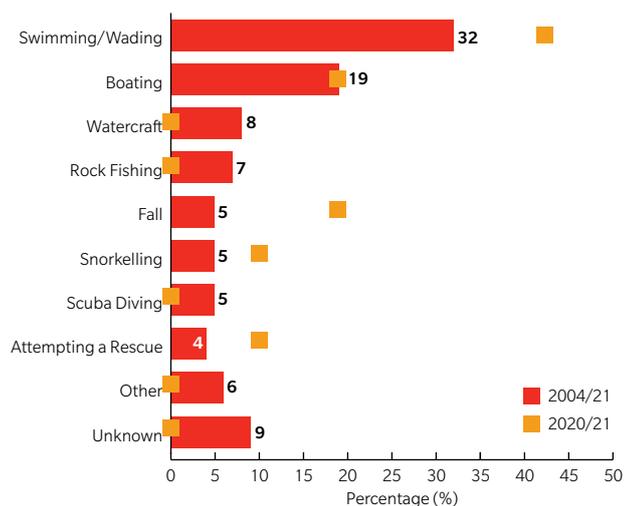


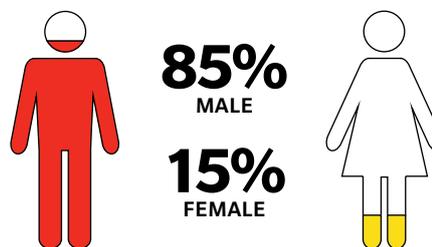
Figure 74

2004/21: PROPORTION OF DROWNING DEATHS BY ACTIVITY COMPARED TO 2020/21

Since 2004/05, swimming/wading has recorded the most drowning deaths (32%), followed by boating (19%) and watercraft (8%). This year watercraft were below average, boating was equal to, and swimming/wading and rescue incidents were above average.

AVERAGE NUMBER
16

AVERAGE RATE
0.28
PER 100,000 POPULATION



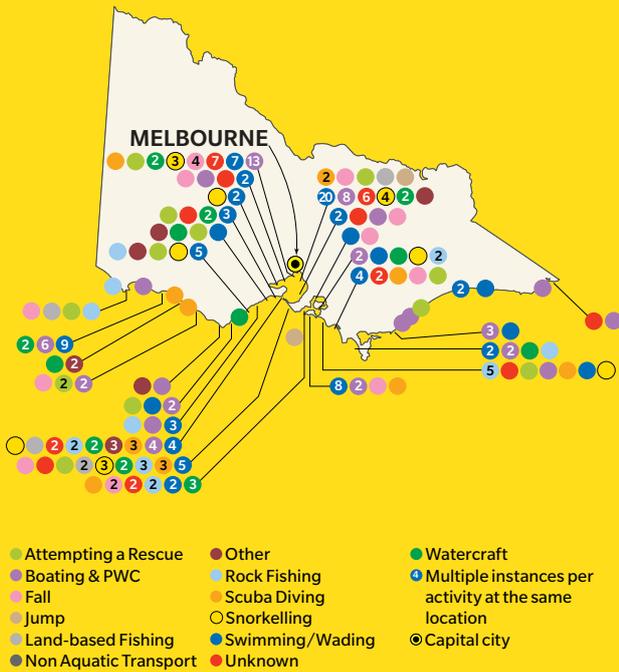
KEY DEMOGRAPHICS

37%
25-44
YEAR OLDS

22%
55-69
YEAR OLDS

DROWNING SNAPSHOT

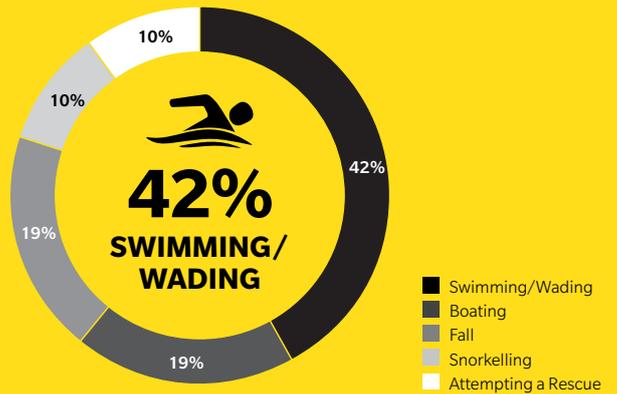
2004/21 COASTAL DROWNING LOCATIONS



2020/21 COASTAL DROWNING DEATHS

NUMBER **21** MORTALITY RATE **0.32**
PER 100,000 POPULATION

ACTIVITY



74%
AUSTRALIAN RESIDENT

64%
OVERSEAS-BORN

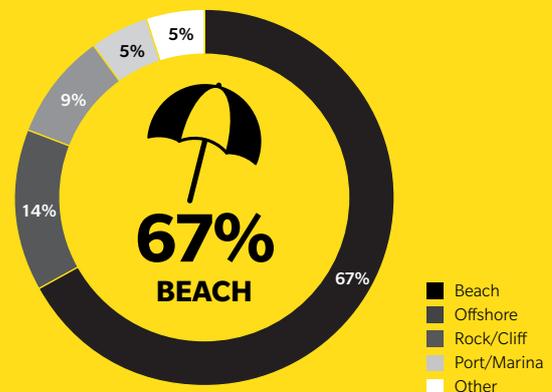
18%
RIP-RELATED

21%
MEDICAL/INJURY

22%
ALCOHOL & DRUGS

37% >5KM
DISTANCE TO SLS SERVICE

LOCATION



62%
GREATER THAN 5KM
FROM SURF LIFE
SAVING SERVICE

WESTERN AUSTRALIA

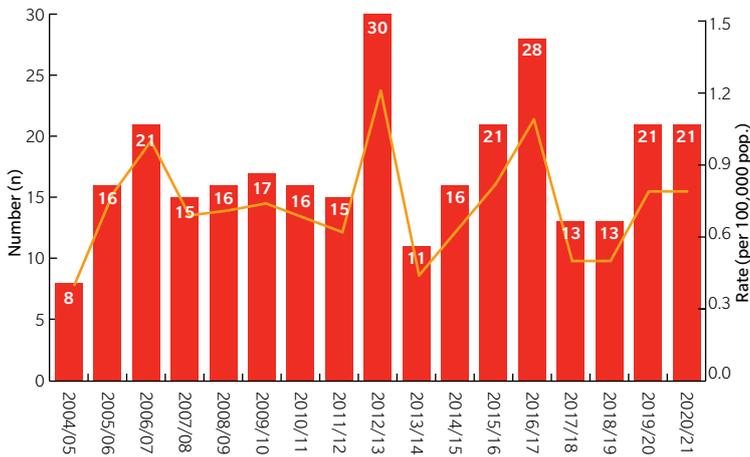


Figure 75

2004/21: COASTAL DROWNING DEATH TRENDS (N=298)

The number of coastal drowning deaths in 2020/21 for Western Australia (n=21) and the mortality rate (0.79/100,000 pop.) were higher than the 17-year averages of 18 deaths and 0.73/100,000 pop.

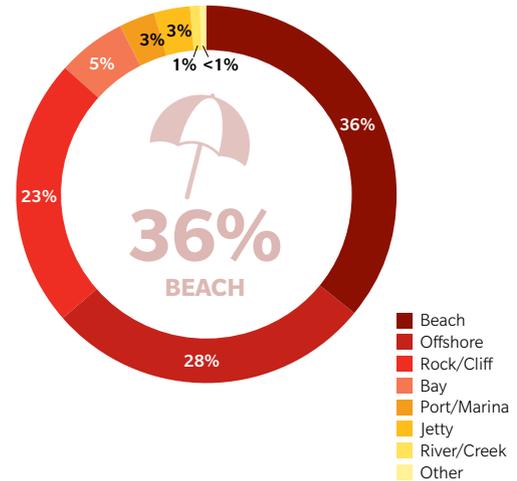


Figure 76

2004/21: DROWNING LOCATION CATEGORY

Since 2004/05, Western Australian beaches have recorded the most drowning deaths (n=106), followed by offshore (n=84) and rock/cliff locations (n=69).

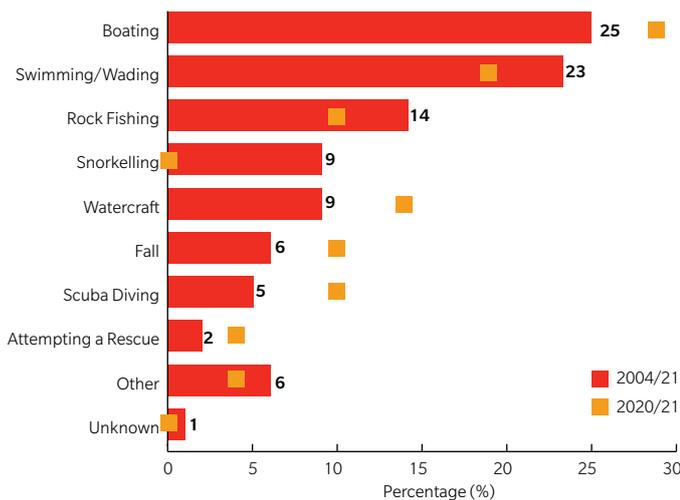
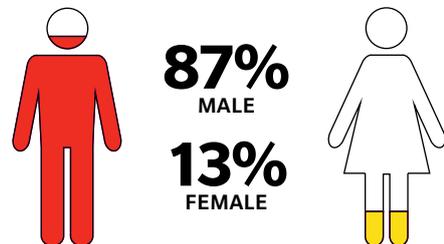


Figure 77

2004/21: PROPORTION OF DROWNING DEATHS BY ACTIVITY COMPARED TO 2020/21

Since 2004/05, boating has recorded the most drowning deaths (25%), followed by swimming/wading (23%) and rock fishing (14%). This year swimming/wading and rock fishing were below average, while boating and watercraft were above average.

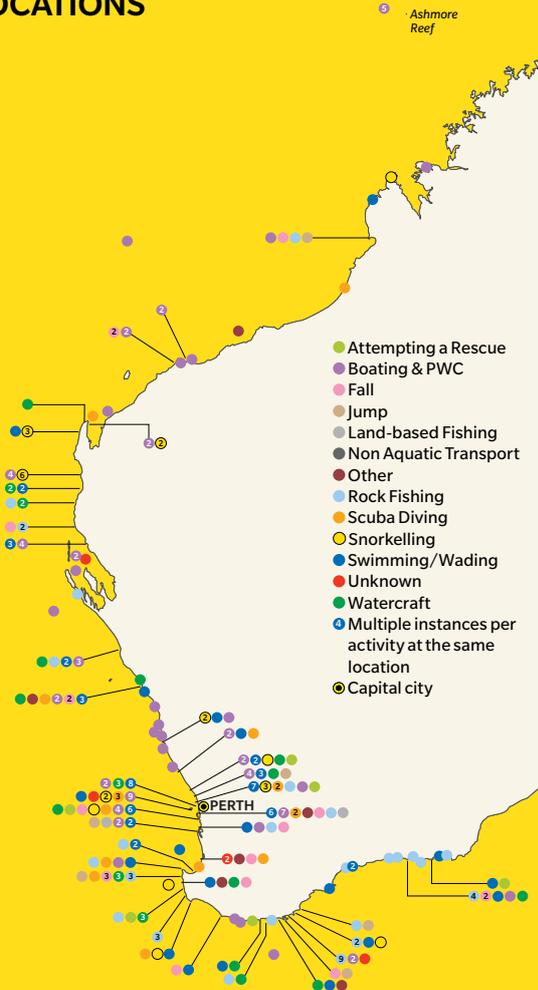


KEY DEMOGRAPHICS



DROWNING SNAPSHOT

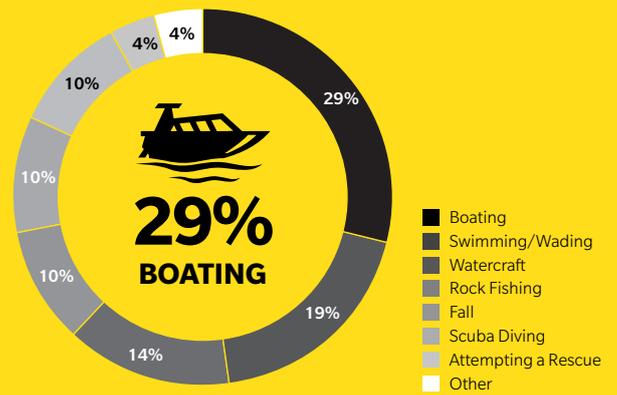
2004/21 COASTAL DROWNING LOCATIONS



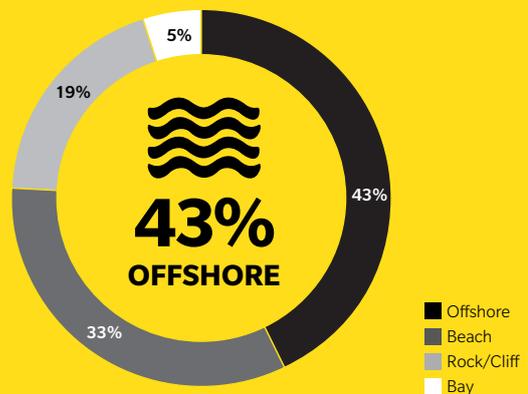
2020/21 COASTAL DROWNING DEATHS

NUMBER: **21** MORTALITY RATE: **0.79**
PER 100,000 POPULATION

ACTIVITY



LOCATION



12%
RIP-RELATED

34%
MEDICAL/INJURY

22%
ALCOHOL & DRUGS

62% >5KM
DISTANCE TO SLS SERVICE

67% GREATER THAN 5KM
FROM A SURF LIFE
SAVING SERVICE

SOUTH AUSTRALIA

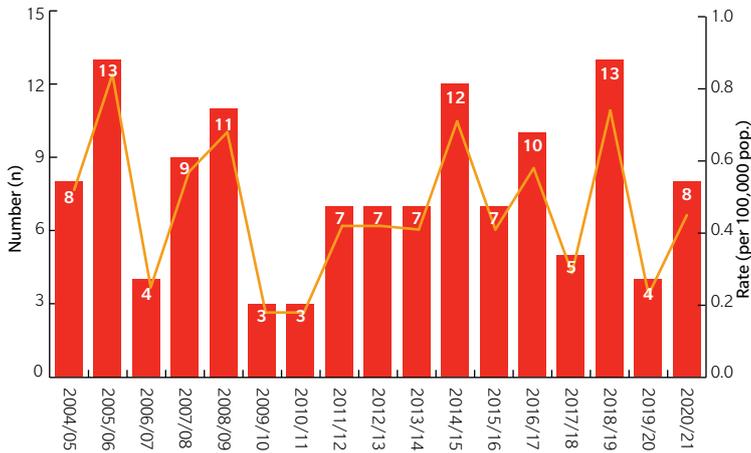


Figure 78
2004/21: COASTAL DROWNING DEATH TRENDS (N=131)
 The number of coastal drowning deaths in 2020/21 for South Australia (n=8) was equal to the 17-year average, while the mortality rate (0.45/100,000 pop.) was slightly lower than average (0.46/100,000 pop.).

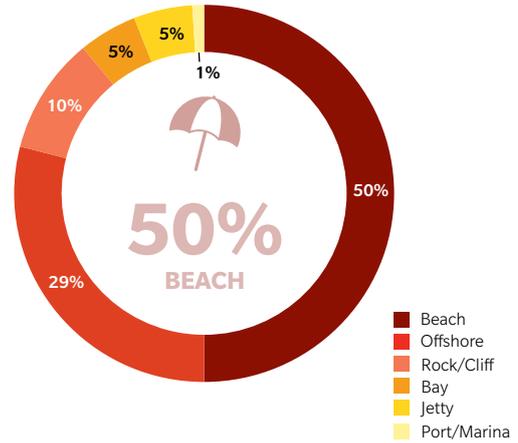


Figure 79
2004/21: DROWNING LOCATION CATEGORY
 Since 2004/05, South Australian beaches have recorded the most drowning deaths (n=66), followed by offshore (n=39) and rock/cliff locations (n=13).

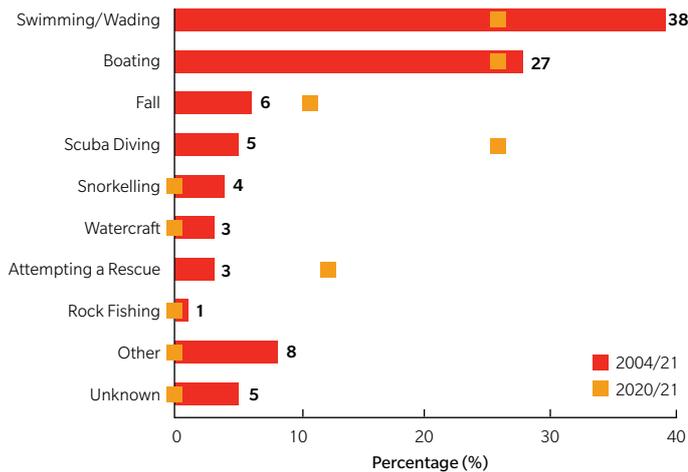


Figure 80
2004/21: PROPORTION OF DROWNING DEATHS BY ACTIVITY COMPARED TO 2020/21
 Since 2004/05, swimming/wading has recorded the most drowning deaths (38%), followed by boating (27%) and fall-related incidents (8%). This year swimming/wading and boating were below average, while fall and scuba diving incidents were above average.

AVERAGE NUMBER
8

AVERAGE RATE
0.46
 PER 100,000 POPULATION

82%
 MALE

18%
 FEMALE

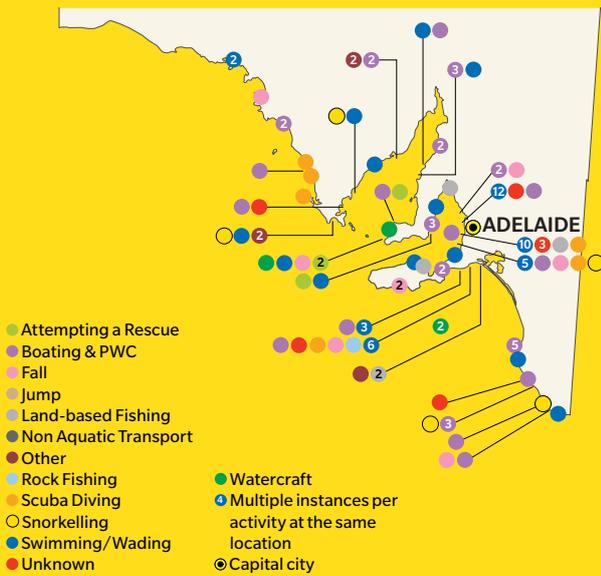
KEY DEMOGRAPHICS

21%
 15-29
 YEAR OLDS

26%
 45-59
 YEAR OLDS

DROWNING SNAPSHOT

2004/21 COASTAL DROWNING LOCATIONS



56%
AUSTRALIAN-BORN

44%
OVERSEAS-BORN

76%
AUSTRALIAN RESIDENT

5%
NON-RESIDENT

18%
RIP-RELATED

21%
MEDICAL/INJURY

15%
ALCOHOL & DRUGS

56% >5KM
DISTANCE TO SLS SERVICE

2020/21 COASTAL DROWNING DEATHS

NUMBER

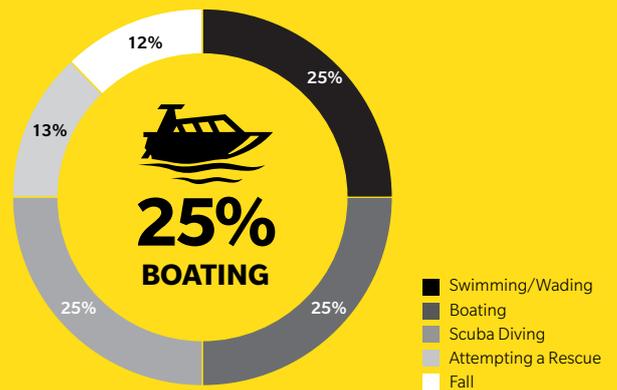
8

MORTALITY RATE

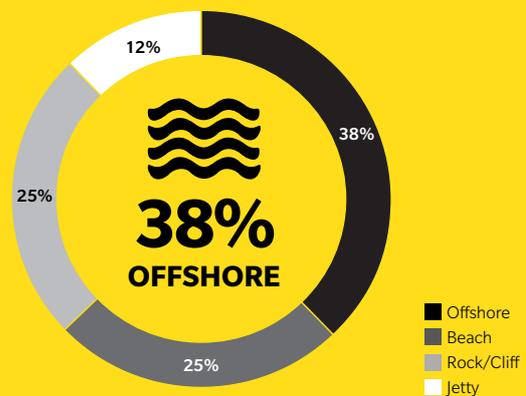
0.45

PER 100,000 POPULATION

ACTIVITY



LOCATION



50% GREATER THAN 5KM
FROM A SURF LIFE
SAVING SERVICE

TASMANIA

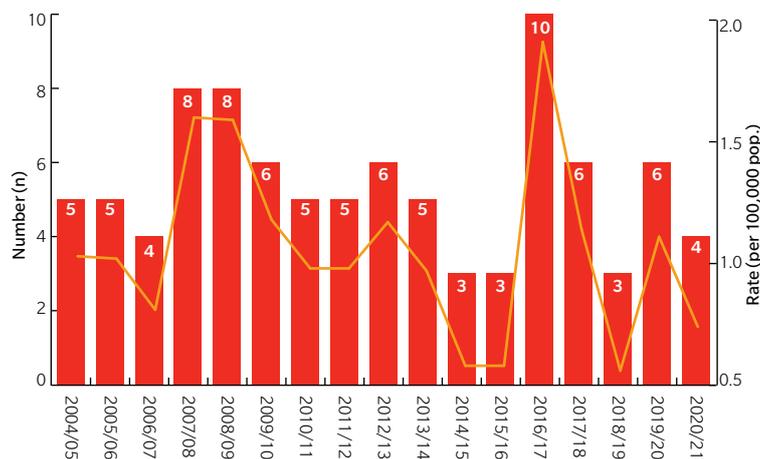


Figure 81

2004/21: COASTAL DROWNING DEATH TRENDS (N=92)

The number of coastal drowning deaths in 2020/21 for Tasmania (n=4) and the mortality rate (0.74/100,000 pop.) were lower than the 17-year average of five deaths and 1.06/100,000 pop.

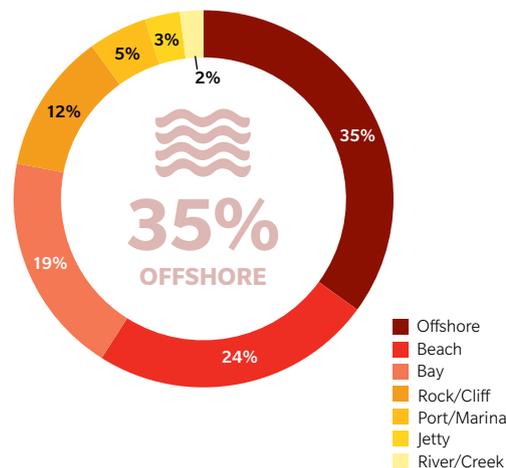


Figure 82

2004/21: DROWNING LOCATION CATEGORY

Since 2004/05, Tasmanian offshore waters have recorded the most drowning deaths (n=32), followed by beaches (n=22) and bay locations (n=17).

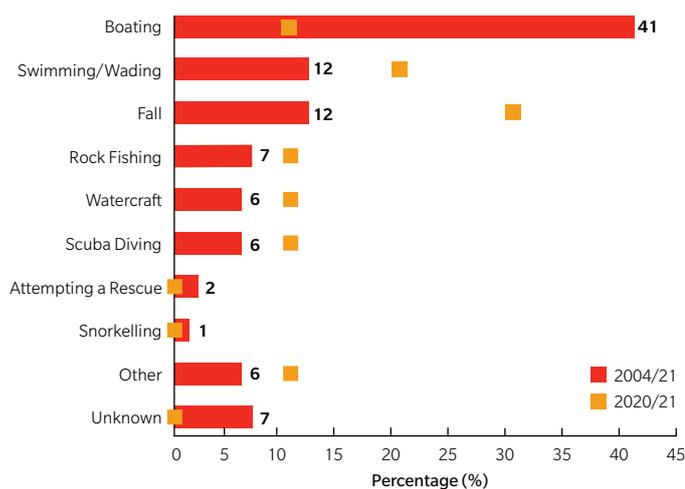
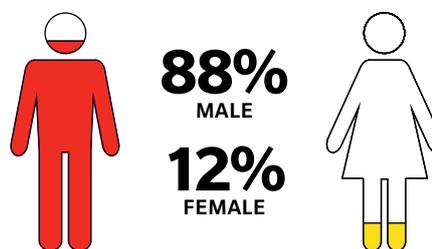


Figure 83

2004/21: PROPORTION OF DROWNING DEATHS BY ACTIVITY COMPARED TO 2019/21

Since 2004/05, boating has recorded the most drowning deaths (41%), followed equally by swimming/wading and fall-related incidents (12% each). Over the last two years, boating was below average, while fall and swimming/wading incidents were above average.

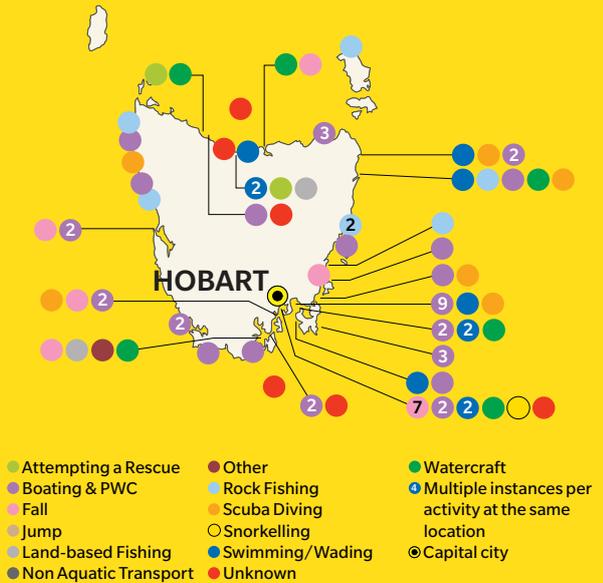


KEY DEMOGRAPHICS



DROWNING SNAPSHOT

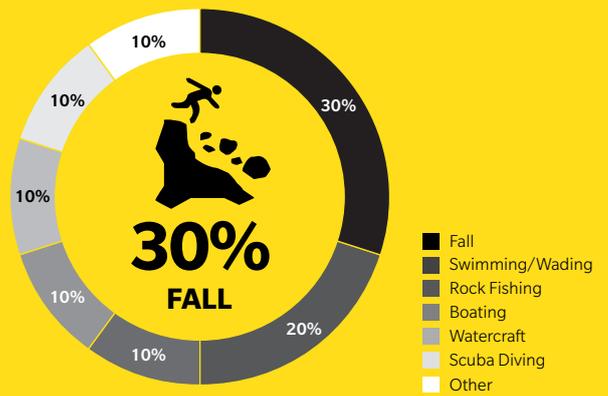
2004/21 COASTAL DROWNING DEATHS



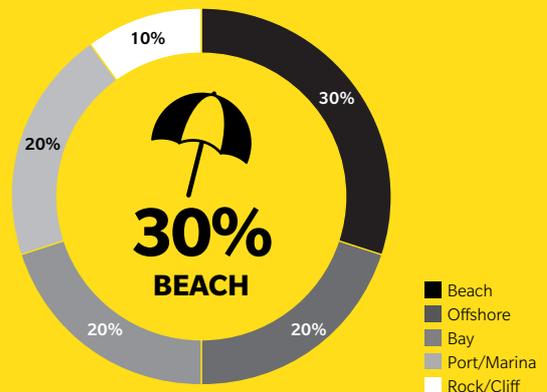
2020/21 COASTAL DROWNING DEATHS

NUMBER: **4** MORTALITY RATE: **0.74**
PER 100,000 POPULATION

2019/21 ACTIVITY



2019/21 LOCATION



84%
AUSTRALIAN-BORN

16%
OVERSEAS-BORN

91%
AUSTRALIAN RESIDENT

3%
NON-RESIDENT

13%
RIP-RELATED

38%
MEDICAL/INJURY

34%
ALCOHOL & DRUGS

78% >5KM
DISTANCE TO SLS SERVICE

90% GREATER THAN 5KM FROM A SURF LIFE SAVING SERVICE

NORTHERN TERRITORY

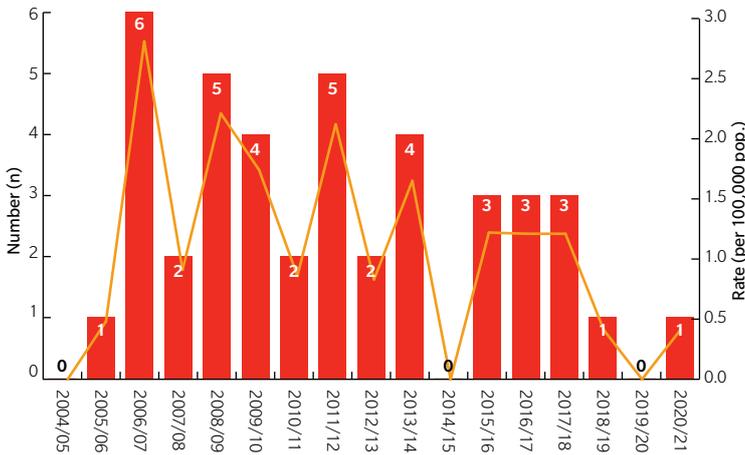


Figure 84
2004/21: COASTAL DROWNING DEATH TRENDS (N=42)
 The number of coastal drowning deaths in 2020/21 for Northern Territory (n=1) and the mortality rate (0.41/100,000 pop.) were lower than the 17-year average of two deaths and 1.06/100,000 pop.

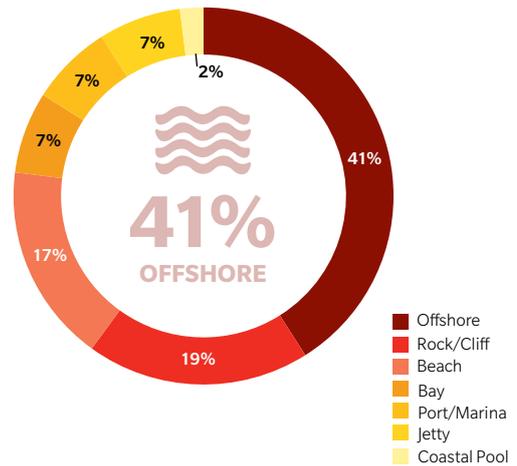


Figure 85
2004/21: DROWNING LOCATION CATEGORY
 Since 2004/05, Northern Territory offshore waters have recorded the most drowning deaths (n=17), followed by rock/cliff (n=8) and beach locations (n=7).

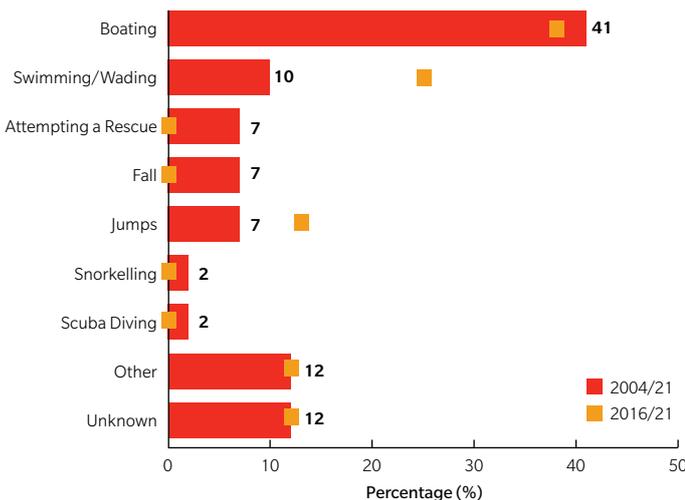
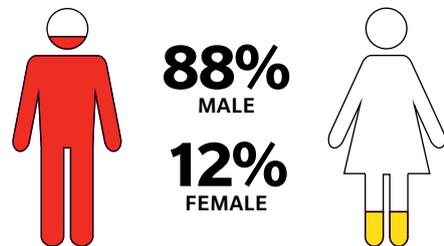


Figure 86
2004/21: PROPORTION OF DROWNING DEATHS BY ACTIVITY COMPARED TO 2016/21
 Since 2004/05, boating has recorded the most drowning deaths (41%), followed by swimming/wading (10%). Over the last five years, boating was below average, while swimming/wading incidents were above average.

AVERAGE NUMBER
2

AVERAGE RATE
1.06
 PER 100,000 POPULATION



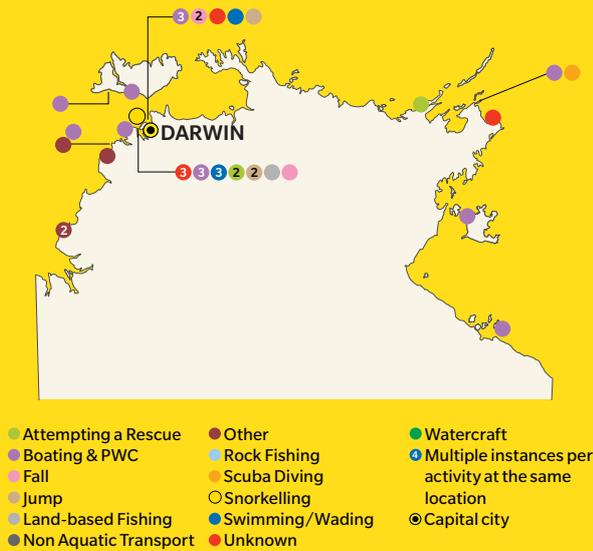
KEY DEMOGRAPHICS

38%
 30-44
 YEAR OLDS

28%
 50-64
 YEAR OLDS

DROWNING SNAPSHOT

2004/21 COASTAL DROWNING LOCATIONS

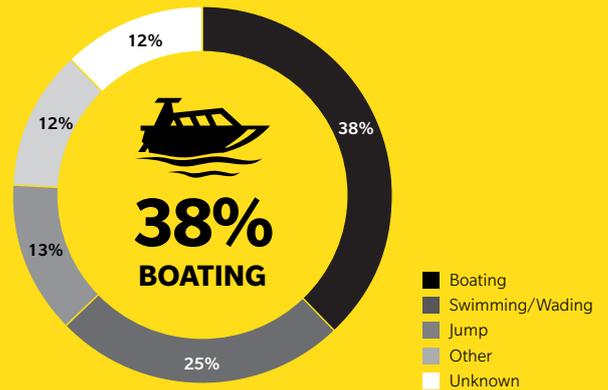


2020/21 COASTAL DROWNING DEATHS

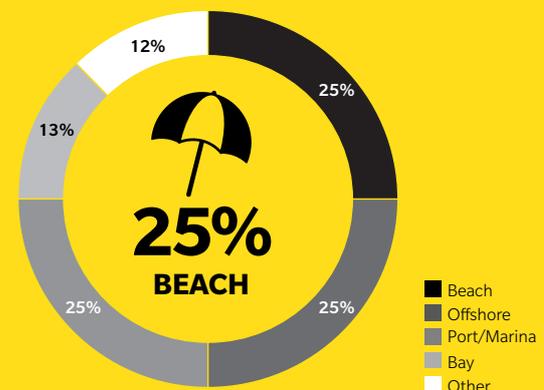
NUMBER: **1**

MORTALITY RATE: **0.41**
PER 100,000 POPULATION

2016/21 ACTIVITY



2016/21 LOCATION



79%
AUSTRALIAN-BORN

21%
OVERSEAS-BORN

88%
AUSTRALIAN RESIDENT

12%
NON-RESIDENT

10%
RIP-RELATED

38%
MEDICAL/INJURY

40%
ALCOHOL & DRUGS

64% >5KM
DISTANCE TO SLS SERVICE

50%
GREATER THAN 5KM
FROM A SURF LIFE
SAVING SERVICE

GLOSSARY

- Adult** For the purpose of this report, adult refers 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.
- 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 where incidents are concentrated and a high probability/risk of ongoing recurrence.
- Boating** Using either a powered vessel or sailing boat for recreation 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).
- Coastal drowning death** A fatality arising from the process of respiratory impairment as a result of submersion/immersion in liquid where the location of the drowning is considered coastal.
- Coastal fatality** A fatality arising from circumstances other than drowning (e.g. medical condition, injury, suicide, marine creature) where the location of the death is considered coastal.
- COD** Cause of death.
- Crude drowning rate** A comparative rate of mortality to the size of the population 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 (eg. 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, towns, shires, municipalities or boroughs.
- Marina** A man-made boat basin having sea walls or breakwaters and offering dockage and other services for water vessels.
- Marine fauna** Macro-organisms (mostly animals) that live within marine systems (e.g., fish species including sharks and rays, estuarine crocodiles, blue-ringed octopus, jellyfish species, sea snakes, etc.).
- Medical** For the purpose of this report, medical refers to an aquatic 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.
- Ocean drowning death** A fatality arising from the process of respiratory impairment as a result of submersion/immersion in liquid where the location of the drowning is considered ocean.
- Ocean fatality** A fatality arising from various circumstances occurring (e.g. medical condition, injury, suicide, marine creature) where the location of the death is considered ocean.
- 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 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 2020 to June 2021.
- 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.
- Sovereign waters drowning death** A fatality arising from the process of respiratory impairment as a result of submersion/immersion in liquid where the location of the drowning is considered within sovereign waters.
- Sovereign waters fatality** A fatality arising from various circumstances occurring (e.g. medical condition, injury, suicide, marine creature) where the location of the death is considered within sovereign waters.
- 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 non-salaried 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 a particular mixture of substances is toxic or poisonous to an organism. In the context of this report, toxicity refers to alcohol or drug use 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 2021 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 2020 to 30 June 2021. This information is correct as of 2 August 2021. 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 Survey 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. Conducted by Omnipoll Market Research, the latest survey was run online over the period 8 - 25 April 2021 among a national sample of 3,050 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 2020/21; and how many active surf lifesavers and award holders there were during 2020/21. The data was verified by SLS state/territory entities. Information about assets and services were gathered from each SLS state/territory entity.

DROWNING & 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. Deaths are excluded as a coastal drowning 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. To produce a timely report on the 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 86% of 2020/21 coastal drowning deaths and 69% of 2020/21 coastal fatalities recorded remain open cases and 81% of 2021/21 cases do not yet 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 Figures 41 and 53. The incidents are included in our annual totals and analysis, and they will provisionally remain there 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 on next page.

CHANGES IN THE NUMBER OF COASTAL DROWNING DEATHS AS PREVIOUSLY REPORTED

	2017 NCSR	2018 NCSR	2019 NCSR	2020 NCSR	2021 NCSR
2004/05	96	89	89	89	97
2005/06	107	95	96	96	108
2006/07	115	102	102	102	119
2007/08	104	89	89	89	103
2008/09	106	85	88	88	112
2009/10	105	80	85	85	106
2010/11	91	69	69	69	91
2011/12	117	114	114	113	119
2012/13	134	118	118	118	137
2013/14	85	80	82	84	84
2014/15	114	108	105	105	117
2015/16	136	128	128	130	137
2016/17	112	110	119	116	120
2017/18		107	107	110	110
2018/19			122	122	121
2019/20				125	120
2020/21					136

SUGGESTED CITATION: Surf Life Saving Australia (2021). National Coastal Safety Report 2021. SLSA: Sydney.

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- SLSA Annual Reports (2009-2020).

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This report was compiled by Shane Daw, General Manager - Coastal Safety; Dr Jasmin Lawes, Researcher; Belinda Cooper, Project Coordinator Coastal Safety; Jessica Ledger, Research Assistant; Jamie Findlay, Lifesaving Operations Manager; Luke Strasiotto, Lifesaving Officer; Kirk Patton, Coastal Safety Support Officer. Cover Image: Shane Daw. Design: Melissa Conchar. Maps: John Frith, Flat Earth Mapping.



Australian Government
Australian Institute of
Health and Welfare



CONTACT INFORMATION

SLS receives Australian 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

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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



241

FATAL
COASTAL
INCIDENTS



88%
MALE

12%
FEMALE



Location

51%

AT THE BEACH



17%

OFFSHORE

21%

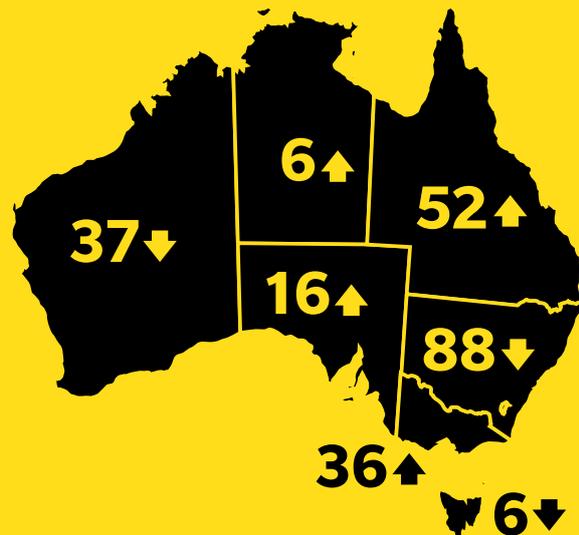
ROCK/CLIFF



AT LEAST 5KM FROM A
LIFESAVING SERVICE

46%

Activity



INTENTIONAL FATALITIES ACCOUNT FOR 18%

NB: Arrows indicate change from previous year

GOVERNMENT PARTNER



MAJOR NATIONAL PARTNERS

