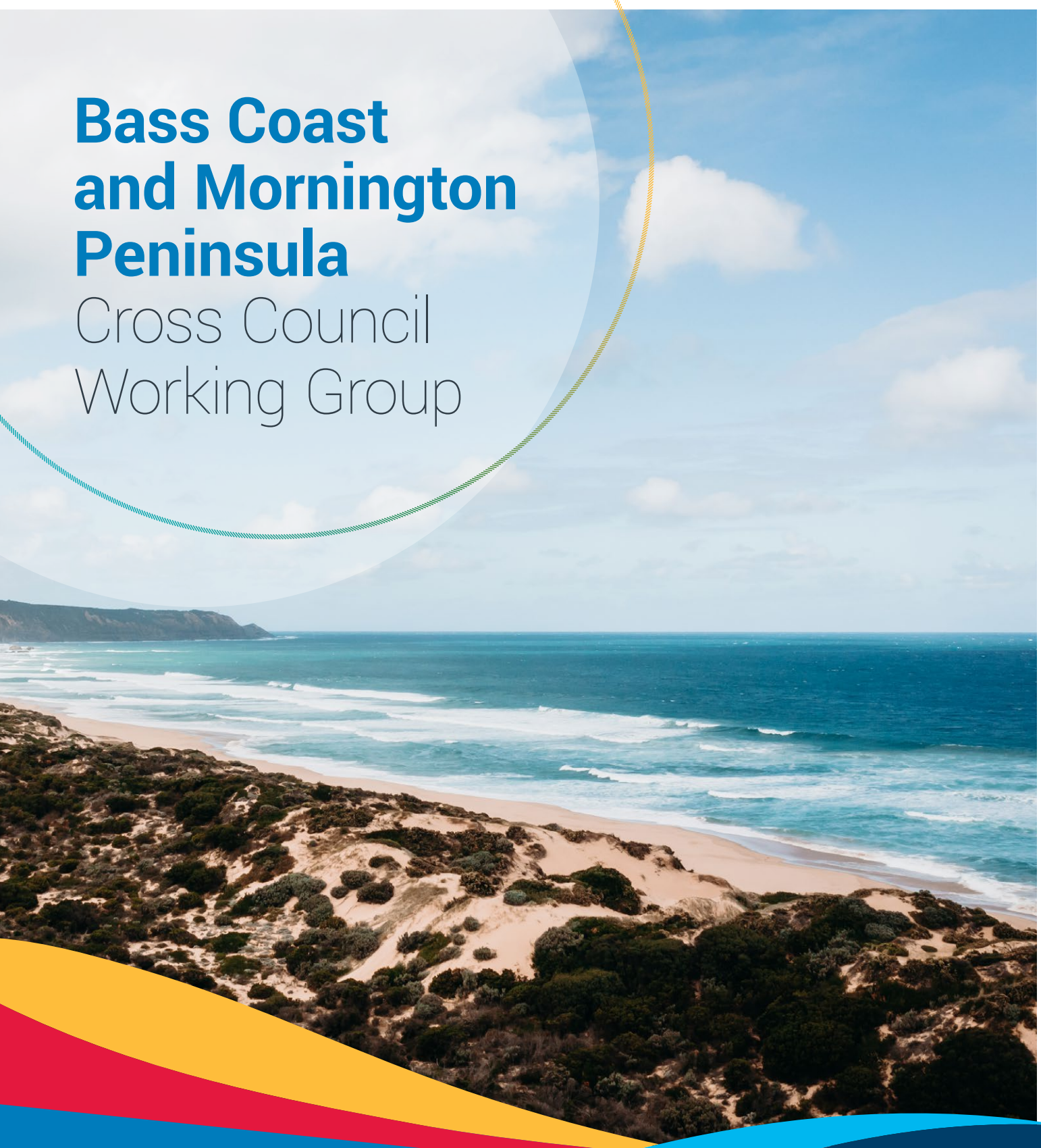
Bass Coast and Mornington Peninsula

Cross Council Working Group



Life Saving Victoria

Water Safety Framework

Life Saving Victoria

March 2025

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Acknowledgements

Acknowledgement of Country

We at Life Saving Victoria acknowledge the Traditional Custodians of the land and waterways where our activities take place. We pay our respects to Elders past and present, and acknowledge that sovereignty has never been ceded.

The authors gratefully acknowledge the volunteer and community members, government entities and aquatic industry agencies that assisted in the development of this document through workshops, feedback and discussions.

Acknowledgement of data source

The information presented in this report is from the Life Saving Victoria Drowning Databases, which rely on data collated from the National Coronial Information System (NCIS), the Coroners Prevention Unit at the Coroners Court of Victoria, the Victorian Injury Surveillance Unit, and year-round media monitoring. Information contained within the NCIS is made available by the Department of Justice and Community Safety Victoria.

Deaths due to natural causes, suicide or homicide were excluded from his report.

Only Dr Hannah Calverley (Life Saving Victoria Manager – Research and Evaluation) had access to the NCIS drowning dataset and raw data in preparation of this report.

Coronial information relates to both open and closed cases. While all care is taken to ensure that the results are as accurate as possible, these figures are provisional only as coronial investigations and findings related to open cases may alter the reported drowning figures. At the time of compilation, all suspected unintentional drowning cases in 2023 – 24 remained open on the NCIS.

Only where five or more drowning incidents have occurred can the frequency information and details be reported, to maintain confidentiality and the anonymity of those involved.

Disclaimer

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Life Saving Victoria provides subject matter expertise, and in consultation with water safety stakeholders and community partners, have exercised care in the compilation and drafting of this document. However, the document and related imagery, graphs, and tables could include technical inaccuracies or typographical errors, and the information may not be appropriate to all situations.

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About Life Saving Victoria

Life Saving Victoria (LSV) is a public company limited by guarantee and was formed in 2002 through the merger of Surf Life Saving Victoria and the Royal Life Saving Society Australia - Victoria Branch.

As the Victorian peak body for water safety, LSV is also:

- A recognised emergency service agency, with responsibilities articulated in the State Emergency Management Plan.
- A registered training organisation with the Australian Skills Quality Authority.
- A state sports association representing extensive affiliated members.
- A registered charity with the Australian Charities and Not-for-profits Commission.
- Endorsed for deductible gift recipient status with the Australian Taxation Office.

LSV's purpose is to save lives and empower communities to safely enjoy water.

Life Saving Victoria has the vision that all Victorians will learn water safety, swimming, and resuscitation, and be provided with safe beaches, waterways, and aquatic venues.

Life Saving Victoria will achieve this through strong and effective partnerships with its members, communities, education providers, governments, and other organisations in the provision of advocacy, education, training, health promotion, aquatic risk management, community development, research, leadership and participation, underpinned by a cohesive and sustainable organisation.

Contents

1. Background

Strategic alignment and Framework development

Background

Life Saving Victoria were engaged by the **Bass Coast and Mornington Peninsula Cross Council working group** as part of their suite of action to address the ongoing high numbers of drowning fatalities recorded within the cross-council region, also including drowning incidents involving local residents. The intention of this **Framework is to provide an overview of the drowning incidents** that have been recorded in these local government areas (LGAs) over the past decade, and guide the water safety and drowning prevention efforts across this combined region to address the trends and risk factors.

The definition of drowning used in this Framework is that adopted at the first World Congress on Drowning in 2002. This definition is consistent with the Australian Resuscitation Council and the definition used in the Victorian Drowning Report and Water Safety Strategy.

> "The process of experiencing respiratory impairment from submersion/immersion in liquid."[1]

A non-fatal drowning incident occurs when a person survives an experience of respiratory impairment from submersion/immersion in liquid. People who experience non-fatal drowning incidents can acquire both physical and psychological injury, and outcomes of fatal and non-fatal drowning can have lifelong impacts on the individual, loved ones, as well as emergency service providers responding to the incident.

Unless otherwise specified, for the purposes of this Framework 'drowning' refers to unintentional, accidental drowning.

Moreover, a comprehensive definition for drowning prevention has been formulated to guide the understanding of the strategies and measures necessary to effectively prevent drowning incidents.

This definition serves as a framework for delineating the responsibilities involved in such efforts and provides the foundation for fostering robust multisectoral collaboration and partnerships in alignment with health and sustainable development agendas.

> "Drowning prevention is defined as a multidisciplinary approach that reduces drowning risk and builds resilience by implementing evidence-informed measures that address hazards, exposures and vulnerabilities to protect an individual, community or population against fatal and non-fatal drowning."[2]

This Framework precedes and supports further development of a Local Water Safety Plan, which requires further consultation, stakeholder and community engagement, risk assessments and endorsement from emergency planning authorities alongside ongoing monitoring and evaluation – see Figure 1.

1 van Beeck, E. F., Branche, C. M., Szpilman, D., Modell, J. H., & Bierens, J. J. L. M. (2005). A new definition of drowning: Towards documentation and prevention of a global public health problem. *Bulletin of The World Health Organization, 83*(11), 853. https://doi.org/10.1590/S0042-96862005001100015

2 Scarr, J.-P., & Jagnoor, J. (2023). Conceptual definition for drowning prevention: a Delphi study. *Injury Prevention*, ip-2023. https://doi.org/10.1136/ip-2023-045085

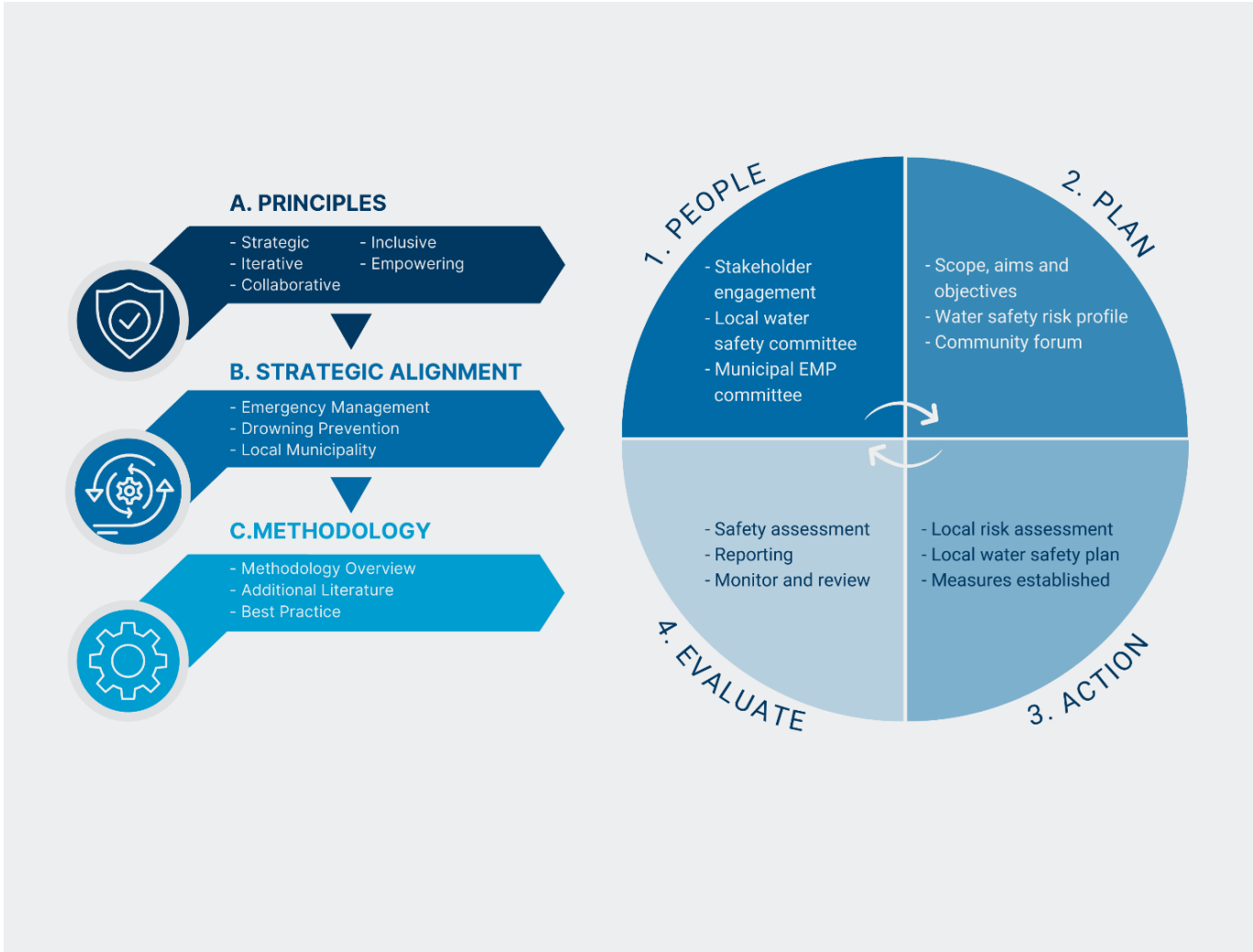
1 Background

For a Regional/Local Water Safety Plan (Plan) to be developed, there first must be an identified need for action to address drowning risk in the community. This is driven by records of fatal and non-fatal drowning incidents, near miss incidents which were prevented from becoming a drowning due to intervention (self or external) and observed behaviours of individuals within the region which enhance drowning risk, such as risk-taking behaviour. A Plan must be owned by a core group of organisations and individuals who take responsibility for the development, execution, implementation and ongoing monitoring and evaluation of the Plan.

Figure 1 is a visual representation of the high-level steps associated with local water safety, with the development of a Plan, being a key outcome in the 'Action' category.

Whilst the representation is not inclusive of each step, consideration or element, it provides a clear and concise overview of the development of a Plan. It emphasises the need for collaboration and alignment across stakeholders and strategies to achieve cohesive outcomes.

FIGURE 1 **Local waterway safety model (Life Saving Victoria).**



1.1 Safer Systems Approach

This Framework adopted the Royal Life Saving's Safer Systems Approach to Drowning Prevention (Figure 2). This approach (adapted from the internationally accepted Safe System approach) is underpinned by the following principles:

- Deaths and serious injuries are unacceptable.
- People are human and sometimes make mistakes.
- People are vulnerable.
- Aquatic environments and activities should be designed to minimise the likelihood and consequence of an aquatic incident if an accident happens.
- Drowning prevention is a shared responsibility.

FIGURE 2 **Safer Systems Approach (Royal Life Saving - New South Wales)**

Initiatives to ensure safer aquatic environments, users and activities need to be implemented together so that the community can enjoy our aquatic environments when recreating or working (Figure 3).

FIGURE 3 **Safer Systems Approach – Elements (Royal Life Saving - New South Wales).**

Safer Aquatic Users

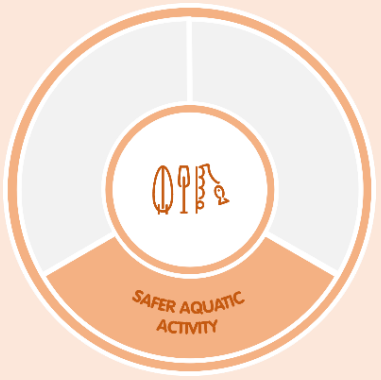
This is achieved through drowning prevention strategies that seek to change behaviour through a combination of context-appropriate information, education, and enforcement activities.

Safer Aquatic Environments

This is achieved through drowning prevention strategies that seek to improve the physical or natural environments in, on and around waterways which individuals participate in recreational or work-related activity.

Safer Aquatic Activity

This is achieved through drowning prevention strategies that seek to change the methods or process in which an activity is being undertaken or performed through such things as policy, funding, planning or procedures.



The development of this Framework is intended to be based on the desires and priorities of the community. It demonstrates leadership by valuing and progressing the safe systems approach to drowning prevention and represents a commitment of working together for improved community outputs and outcomes.

By using the safer systems approach, the Framework describes three key actions areas each with key outputs and outcomes that the community seeks to achieve through the development and implementation of the Framework (Figure 4).

FIGURE 4 **Safer Systems Approach - Action areas (Royal Life Saving - New South Wales).**

The safe systems categories are preferred to the alternative category options used in either the National Emergency Risk Assessment Guidelines (NERAG) and Community Emergency Risk Assessment (CERA) processes. NERAG and CERA consider a much broader emergency hazard context/scope than drowning prevention. As such the safer systems approach is considered more appropriate for this Framework.

1.2 Assumptions

The Framework makes assumptions about matters such as the availability of resources and services, and the execution of prevention measures and responses within estimated timeframes. This may include:

- Accessible and operable emergency and safety equipment.
- Appropriate and current skills, knowledge, and information.
- Working services and/or utilities.
- Appropriate response time of emergency service organisations.

1.3 Limitations

This Framework should not be relied upon nor used exclusively for the purpose of determining whether the local community is safe from drowning. Several aspects of user, activity and/or environmental drivers or conditions may change from moment-to-moment and day-to-day, and this document is a tool, which aims to assist the community in becoming more resilient.

This Framework has been developed using literature, research, standards, guidelines, and several other resources, including open-source resources. Every attempt has been made to ensure procedures follow best practice advice, however, there are inherent resource limitations in providing any consultant-prepared document.

This Framework supports the development of a Regional/Local Water Safety Plan, and assists in the improvement of training and resources for those responsible for implementing any actions arising. Coordination of training and water safety action implementation is not the responsibility of LSV, who have been engaged to prepare this document on behalf of the interested parties. This document should not be read in isolation. It has been developed with consideration to several strategic alignment input drivers and resources which were critical in informing context and decision making, which has led to the direction, content and recommendations contained herein.

Those responsible for actions recommended from this Framework should ensure that adequate resources are available to enable the Framework to be activated to meet regulatory obligations and best practice standards for the mutual benefits of the community and broader stakeholder groups.

1.4 Strategic Alignment

Drowning Prevention Input Drivers

The following list incorporates relevant documents and strategies which should be consulted and reviewed to understand best practice drowning prevention within Victoria, Australia and Globally.

- Aquatic Injury Prevention Agenda (Life Saving Victoria).
- Australian Beach Safety and Management Program (Surf Life Saving Australia).
- Australian Water Safety Strategy 2030
- Drowning Prevention Strategies - Chain of Survival (International Life Saving Federation).
- Drowning Timeline (International Drowning Research Alliance).
- Global Report on Drowning (World Health Organisation).
- Guidelines for Inland Waterway Safety (Royal Life Saving Society Australia).
- Guidelines for Safe Pool Operations (Royal Life Saving Society Australia).
- Review of Victoria's Water Safety Arrangements (Inspector General for Emergency Management).
- Safer Public Pools - Code of Practice (Life Saving Victoria).
- Swimming and Water Activities: Adventure Activity Guidelines (Department of Education).
- Victorian Drowning Report (Life Saving Victoria).
- Victorian Water Safety Strategy 2021-2025

Other Input Drivers

- Australian Adventure Activity Standard/Guides (2019). Outdoor Council of Australia.
- ISO 31000 Risk Management (International Organization for Standardization).

1.5 Strategic Alignment - Drowning Prevention

Drowning Prevention Chain

The International Life Saving Federation (ILS) developed the Drowning Prevention Strategies resource in 2015, as part of its global leadership role in drowning prevention (Figure 5).

Like other resources, the document identifies the benefits of recreational waterway usages, acknowledges the inherent drowning risks associated with water, highlights the importance of effective preventative management strategies, and states the importance of partnerships between the different stakeholders.

Importantly the document introduces the drowning prevention chain or cycle, which identifies four causal factors contributing to drowning events and four subsequent control measure categories. This document uses the control measure categories as the basis for the identification and selection of the most appropriate drowning prevention strategies.

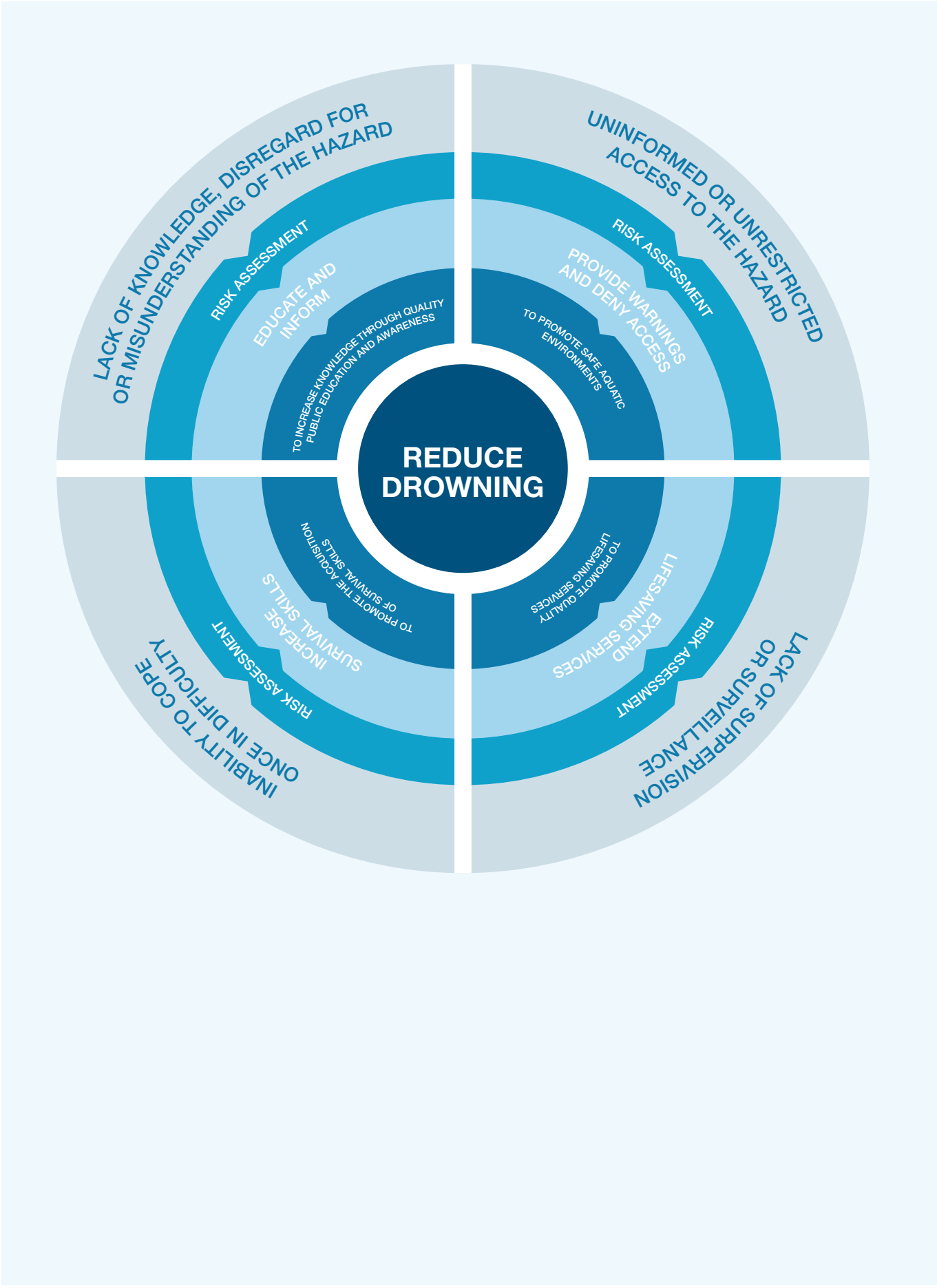
Causal factors in drowning events:

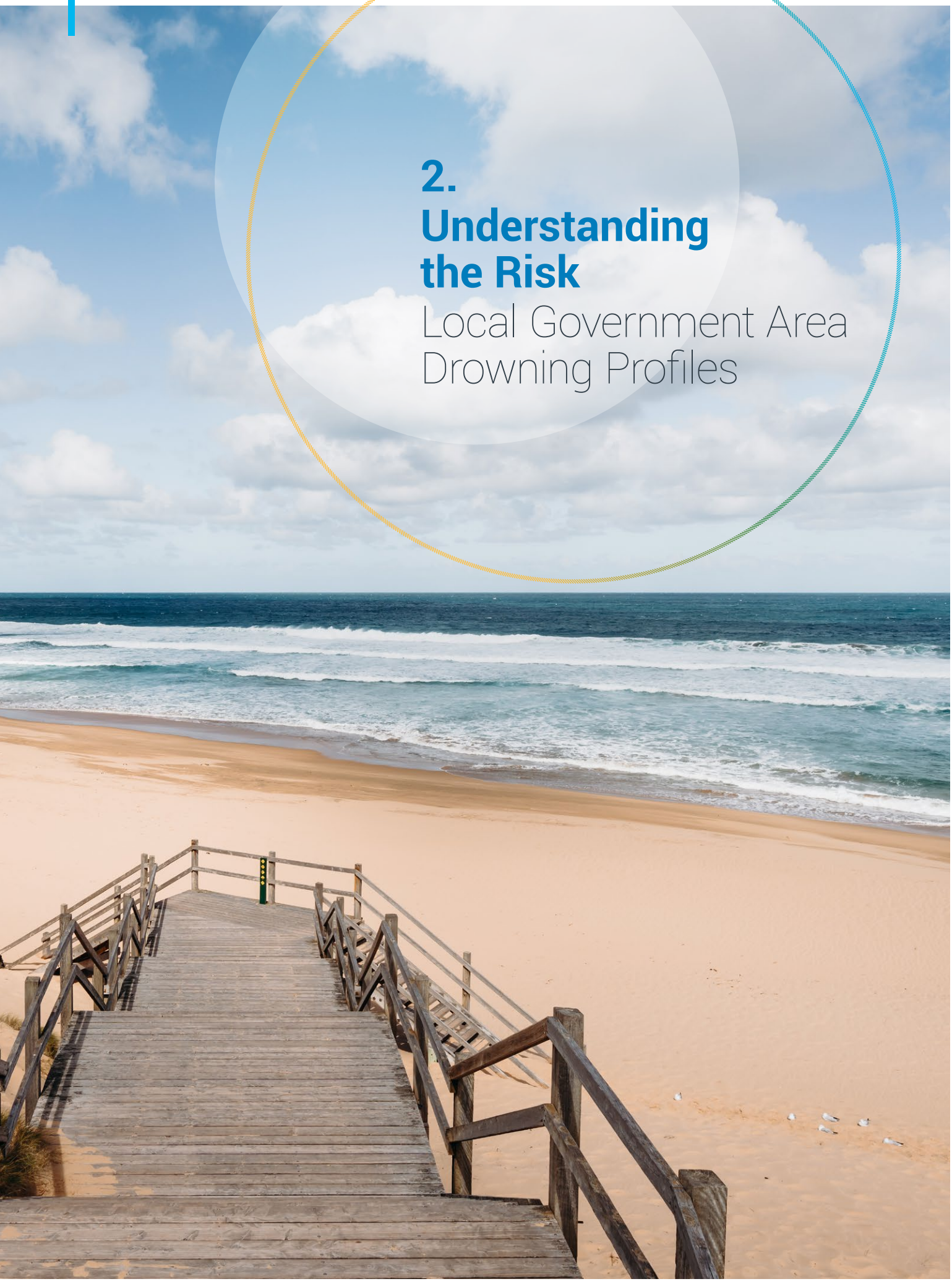
- Lack of knowledge, disregard or misjudgement of the hazard.
- Uninformed, unprotected or unrestricted access to the hazard.
- Lack of supervision or surveillance.
- An inability to cope once in difficulty.

Drowning prevention control measure categories:

- Education and information.
- Denial of access, improvement of infrastructure and/or provision of warnings.
- Provision of supervision.
- Acquisition of survival skills.

FIGURE 5 **Drowning Prevention Chain and strategies to prevent drowning (International Life Saving Federation).**





2. Understanding the Risk

Local Government Area Drowning Profiles

Cross Council Drowning Profiles

This section **outlines the drowning profiles for each of the five LGAs** represented in the Bass Coast and Mornington Peninsula Cross Council working group. The purpose of this section is to demonstrate the **key groups at risk of drowning** in each of the LGAs, including where data allows, summary information of non-fatal drowning incidents.

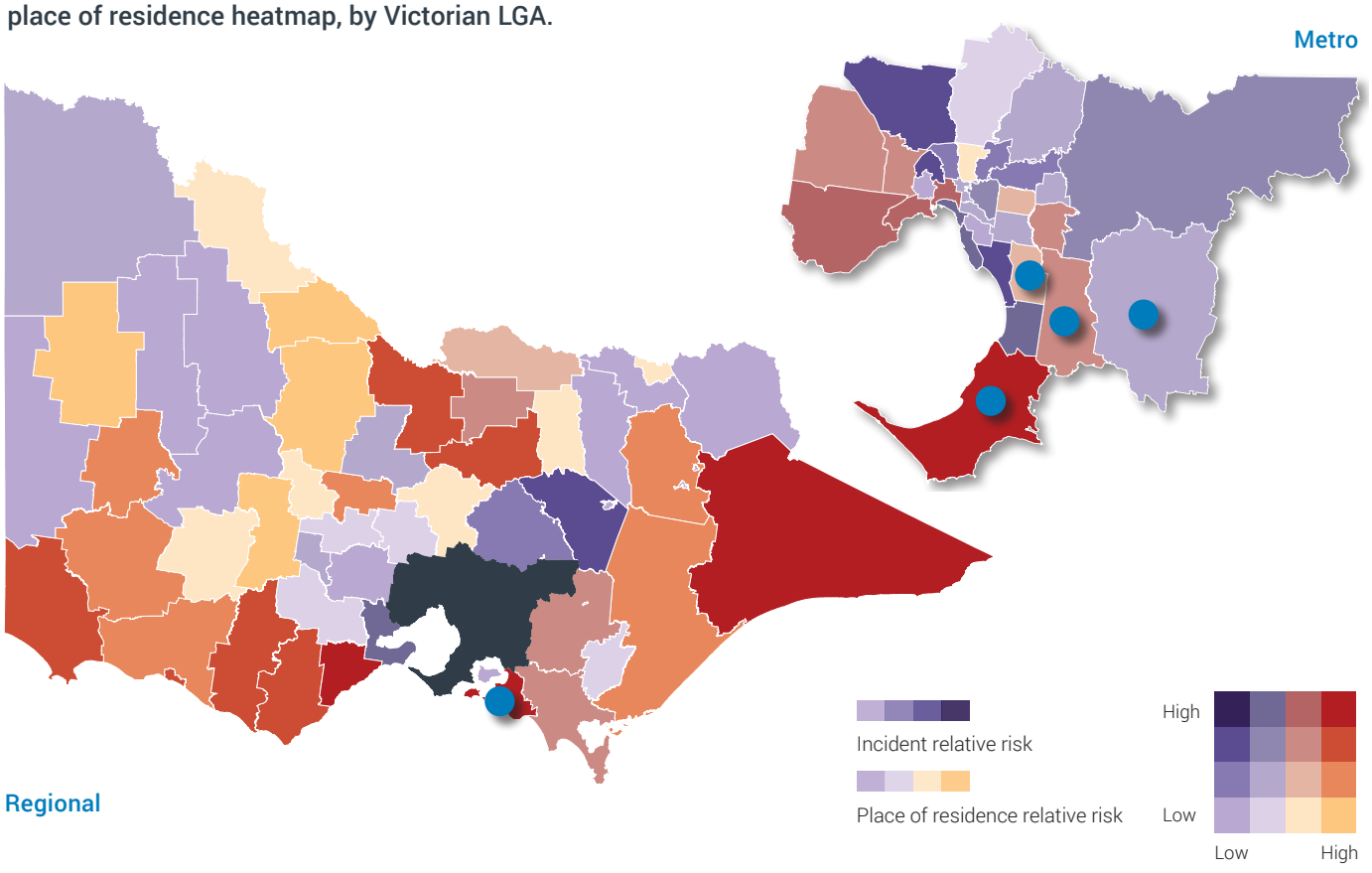
It is acknowledged this data does not capture the full spectrum of drowning in each region: while the unintentional fatal drowning data is complete, the non-fatal drowning numbers only reflect those cases whereby an individual was attended to by paramedics, hospitalised or presented to emergency departments and does not include rescues by lifesavers, lifeguards or bystanders nor where the individual did not seek medical attention.

Figure 6 provides insights into the combined geographical relative risk of fatal drowning across Victorian LGAs. The map provides a dual relative risk perspective by incorporating both incident location and place of residence of the individual involved. The red-shaded areas indicate elevated risk for both incidents and residence. Light purple shows low risk for both. Dark purple highlights high incident risk but low residence risk. Pale orange/yellow colour signifies higher residence risk but lower incident risk.

The five LGAs considered as part of this Cross Council group are identified with ***blue dots*** on the below map. As shown by the colour coding, Mornington Peninsula Shire and Bass Coast Shire LGAs have high risk of drowning within the LGAs, and a high risk of drowning involving residents of that LGA. For City of Greater Dandenong and City of Casey, there is a relatively lower risk of drowning within the LGAs, but a higher risk of drowning among LGA residents. For Cardinia Shire LGA, there is a lower risk of drowning within this LGA and also a lower risk of drowning among residents of this LGA.

Drowning profiles of the combined regions, and the individual LGAs, are presented on the following pages.

FIGURE 6
Relative risk of fatal drowning by place of incidence and place of residence heatmap, by Victorian LGA.



DROWNING PROFILE: Combined LGAs

Mornington Peninsula Shire | Bass Coast Shire | City of Casey | City of Greater Dandenong | Cardinia Shire between 2014 – 15 to 2023 – 24)

100
fatal drownings
in the region

21%
of all Victorian fatal drowning

51%
were residents
of this region

17
region residents
fatally drowned elsewhere in Victoria

Over the past decade, fatal drownings in this region:

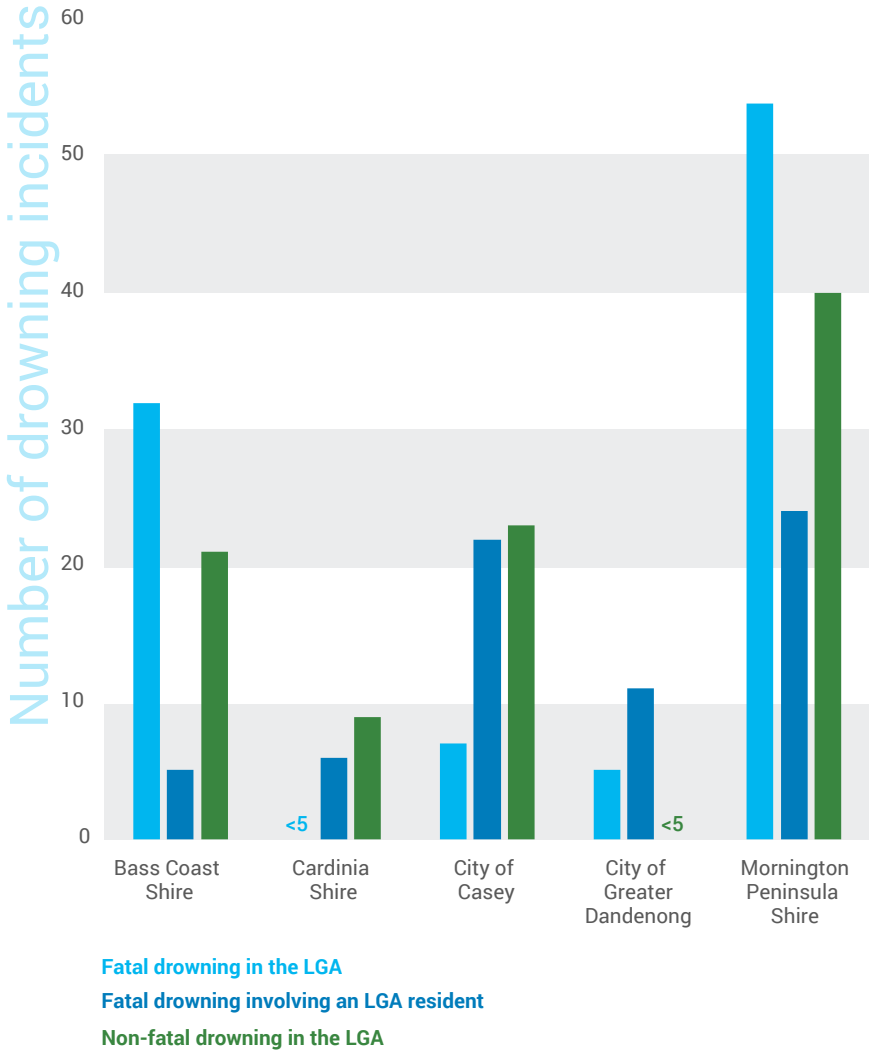
People and populations	Location	Activity	Risk factors
77% MALE	**74%** COASTAL	**34%** SWIMMING, PADDLING, WADING	**29%** RECORDED ALCOHOL/DRUGS
32% 25-44 YEARS OLD	**49%** BEACHES	**24%** FISHING	**50%** IN SUMMERTIME
45% CULTURALLY OR LINGUISTICALLY DIVERSE			

Residents of the following LGAs drowned in this region (order of prominence[3]):

- **Mornington Peninsula (20%)**
- **Casey (18%)**
- Whitehorse (8%)
- **Bass Coast (5%)**
- **Greater Dandenong (5%)**
- Darebin
- Whittlesea
- Knox
- Brimbank
- **Cardinia**
- Campaspe
- Melbourne
- Boroondara
- Bayside
- Frankston
- Greater Geelong
- Monash
- Yarra Ranges
- Melton
- Surf Coast
- Maroondah
- Glen Eira
- Manningham
- Maribyrnong
- Banyule
- Latrobe
- South Gippsland
- Swan Hill

Figure 7 highlights the drowning frequency within each LGAs in this combined region, including number of incidents involving residents, and number of fatal and non-fatal incidents occurring within the LGA.

FIGURE 7 **Drowning frequency in each of the five Cross Council LGAs and involving residents of each LGA.**



3 Only where 5 or more drowning cases have occurred is data able to be provided

2.1 DROWNING PROFILE: Mornington Peninsula Shire
(between 2014 – 15 to 2023 – 24)

54 **fatal drownings** (9 times Victorian LGA average)

24 **residents fatally drowned** in Victoria, within and outside Mornington Peninsula Shire

99% likely a fatal drowning will occur in this LGA in any year

39% likely a drowning will involve a resident of this LGA in any year

40 **non-fatal** drownings attended by paramedics (2018 - 19 to 2022 - 23)

75 hospitalisations and 92 emergency department presentations from non-fatal drowning among residents

Over the past decade, fatal drownings in this region:

People and populations	Location	Activity	Risk factors
83% MALE	81% COASTAL	25% SWIMMING, PADDLING, WADING	39% RECORDED ALCOHOL/DRUGS
41% 25-44 YEARS OLD	50% BEACHES	19% WALKING/PLAYING NEAR WATER	44% IN SUMMERTIME
41% CULTURALLY OR LINGUISTICALLY DIVERSE (CALD)	17% ROCKY OUTCROPS		48% WEEKEND

Residents of the following LGAs drowned in this LGA (order of prominence[4]):

- **Mornington Peninsula (37%)**
- **Casey**
- Darebin
- Whitehorse
- Whittlesea
- Brimbank
- **Greater Dandenong**
- Bayside
- Frankston
- Knox
- **Cardinia**
- Campaspe
- Melbourne
- Greater Geelong
- Monash
- Surf Coast
- Maroondah
- Glen Eira
- Banyule

Figure 8 details the breakdown of drowning fatalities by age group in the Mornington Peninsula Shire compared to the average for the remaining 78 Victorian LGAs. As seen, the Mornington Peninsula Shire recorded a greater proportion of drownings among 15 — 24 and 25 — 44 year olds compared to the average for other Victorian LGAs.

Figure 9 below shows details of fatal drownings within the Mornington Peninsula Shire over the past decade compared to the average for the remaining 78 Victorian LGAs.

FIGURE 8 **Proportion of fatal drownings 2014 - 15 to 2023 - 24 by age group in the Mornington Peninsula Shire compared to all other Victorian LGAs (average)**

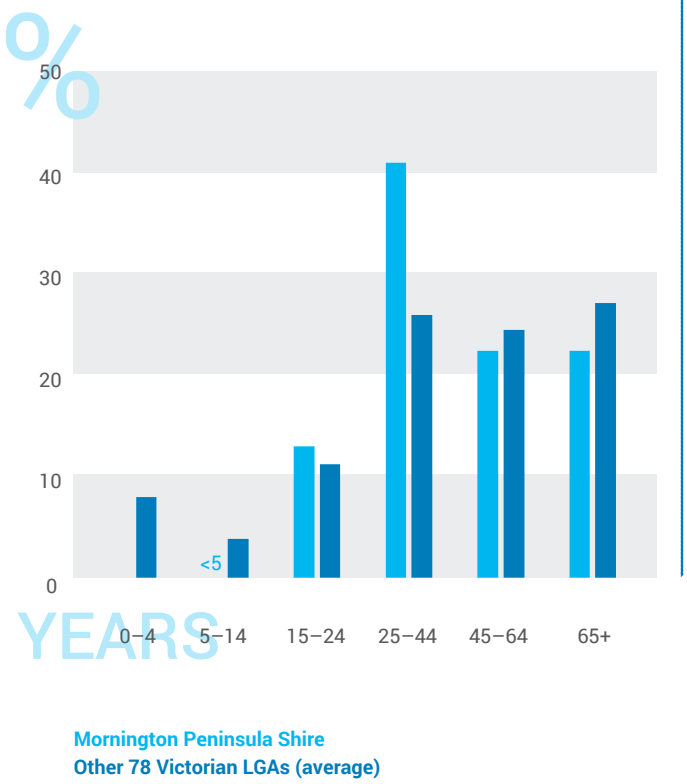
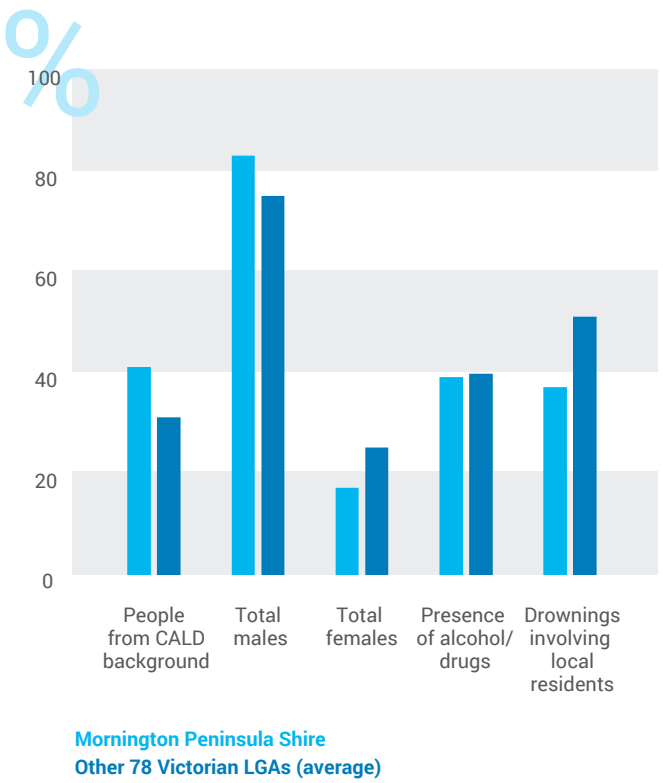


FIGURE 9 **Mornington Peninsula Shire fatal drownings 2014-15 to 2023-24 compared to all other Victorian LGAs (average)**



4 Only where 5 or more drowning cases have occurred is data able to be provided

2.2 DROWNING PROFILE: Bass Coast Shire

(between 2014 – 15 to 2023 – 24)

32
fatal drownings (5 times Victorian LGA average)

5
residents fatally drowned in Victoria, within and outside Bass Coast Shire

96% likely a fatal drowning will occur in this LGA in any year

19% likely a drowning will involve a resident of this LGA in any year

21
non-fatal drownings attended by paramedics (2018 - 19 to 2022 - 23)

67 hospitalisations and 67 emergency department presentations from non-fatal drowning among Latrobe Gippsland SA4 region residents

Over the past decade, fatal drownings in this region:

People and populations	Location	Activity	Risk factors
66% MALE	93% COASTAL	59% SWIMMING, PADDLING, WADING	35% RECORDED ALCOHOL/DRUGS
50% 25-64 YEARS OLD	69% BEACHES	13% FISHING	66% IN SUMMERTIME
59% CULTURALLY OR LINGUISTICALLY DIVERSE			69% WEEKDAY

Residents of the following LGAs drowned in this LGA (order of prominence[5]):

- **Casey (25%)**
- Whitehorse (16%)
- **Bass Coast (16%)**
- Boroondara
- Whittlesea
- Knox
- **Cardinia**
- Campaspe
- Melbourne
- Yarra Ranges
- Melton
- Manningham
- Maribyrnong
- Latrobe
- South Gippsland

Figure 10 below details the breakdown of drowning fatalities by age group in the Bass Coast Shire compared to the average for the remaining 78 Victorian LGAs. As seen, the Bass Coast Shire recorded a greater proportion of drownings among 15 — 24 and 45 — 65+ year olds compared to the average for other Victorian LGAs.

Figure 11 below shows details of the fatal drownings within the Bass Coast Shire over the past decade compared to the average for the remaining 78 Victorian LGAs.

FIGURE 10 **Proportion of fatal drownings 2014 - 15 to 2023 - 24 by age group in the Bass Coast Shire compared to all other Victorian LGAs (average)**

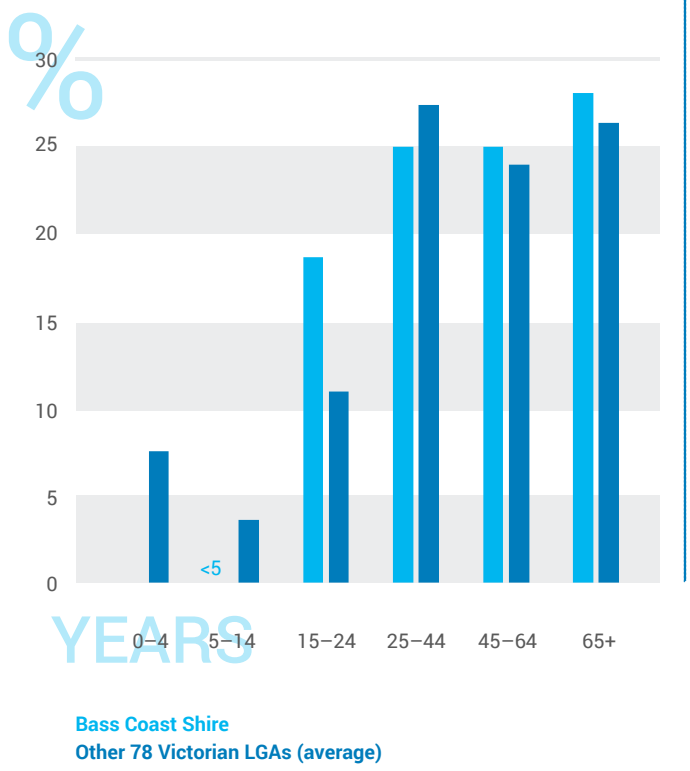
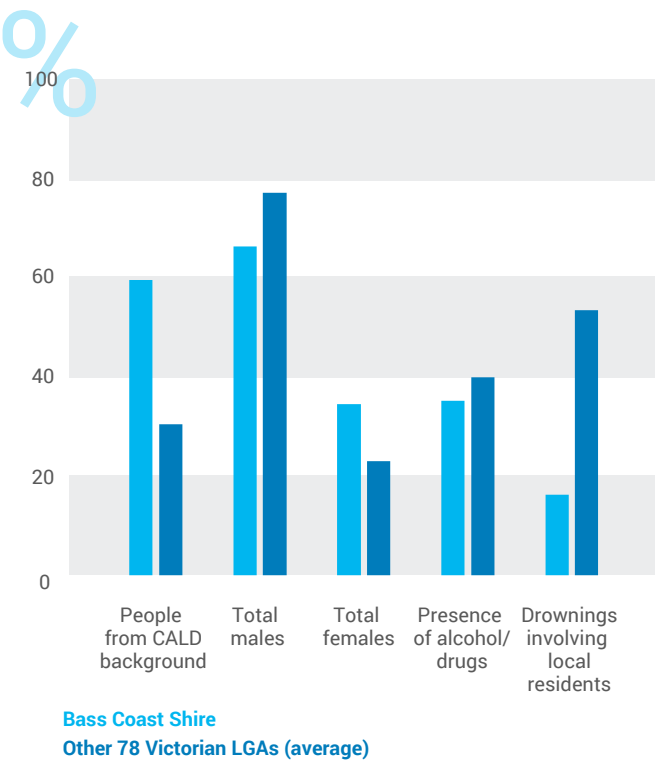


FIGURE 11 **Bass Coast Shire fatal drownings 2014-15 to 2023-24 compared to all other Victorian LGAs (average)**



5 Only where 5 or more drowning cases have occurred is data able to be provided

2.3 DROWNING PROFILE: City of Casey

(between 2014 – 15 to 2023 – 24)

7
fatal drownings

22
residents fatally drowned in Victoria, within and outside City of Casey

50% likely
a fatal drowning will occur in this LGA in any year

71% likely
a drowning will involve a resident of this LGA in any year

23
non-fatal drownings attended by paramedics (2018 - 19 to 2022 - 23)

133
hospitalisations and 156 emergency department presentations from non-fatal drowning among Melbourne - South East SA4 region residents

Fatal drowning over the past decade:

	In this LGA	Involving residents of this LGA
People and populations	• MOST MALE • MOST AGED 65+ YEARS • SOME CULTURALLY OR LINGUISTICALLY DIVERSE • ALL RESIDENTS OF CASEY OR KNOX LGAS	68% MALE 36% 15-24 YEARS OLD 73% CULTURALLY OR LINGUISTICALLY DIVERSE
Location	• MOST IN HOME ENVIRONMENTS (PRIVATE POOLS AND BATHTUBS	46% BEACHES
Activity	• WALKING/PLAYING NEAR WATER	41% SWIMMING, PADDLING, WADING
Risk Factors	• SOME RECORDED ALCOHOL/DRUGS • WINTER MOST COMMON SEASON • MOST ON A WEEKDAY	23% RECORDED ALCOHOL/DRUGS 59% SUMMER 59% WEEKDAY

2.4 DROWNING PROFILE: City of Greater Dandenong

(between 2014 – 15 to 2023 – 24)

5
fatal drownings

11
residents fatally drowned in Victoria, within and outside City of Greater Dandenong

39% likely
a fatal drowning will occur in this LGA in any year

60% likely
a drowning will involve a resident of this LGA in any year

<5
non-fatal
drownings attended by paramedics (2018 - 19 to 2022 - 23)

133
hospitalisations and 156 emergency department presentations from non-fatal drowning among Melbourne - South East SA4 region residents

Fatal drowning over the past decade:

	In this LGA	Involving residents of this LGA
People and populations	• MOST MALE • MOST AGED 25-64 YEARS OLD • MANY CULTURALLY OR LINGUISTICALLY DIVERSE	• MOST MALE 64% 25-44 YEARS OLD
Location	• RIVERS, CREEKS AND STREAMS	• BEACHES AND ROCKS • RIVERS AND LAKES
Activity	• SWIMMING, PADDLING, WADING • WALKING/PLAYING NEAR WATER	• SWIMMING • SNORKELLING
Risk Factors	• SPRING AND SUMMER MOST COMMON SEASON • MOST ON A WEEKDAY	• SPRING AND SUMMER MOST COMMON SEASON • MOST ON A WEEKDAY

2.5 DROWNING PROFILE: Cardinia Shire residents

(between 2014 – 15 to 2023 – 24)

<5
fatal drownings

6
residents fatally drowned in Victoria, within and outside Cardinia Shire

26% likely
a fatal drowning will occur in this LGA in any year

45% likely
a drowning will involve a resident of this LGA in any year

9
non-fatal
drownings attended by paramedics (2018 - 19 to 2022 - 23)

133
hospitalisations and 156 emergency department presentations from non-fatal drowning among Latrobe Gippsland SA4 region residents

Fatal drowning over the past decade involving residents of this LGA:

People and populations	Location	Activity	Risk factors
• MOST MALE • MOST AGED 25-44 YEARS OLD • MANY CULTURALLY OR LINGUISTICALLY DIVERSE	• MOST IN COASTAL WATERWAYS, BEACHES, ROCKS, HARBOURS • INCIDENTS OCCURRED IN THE FOLLOWING LGAS: BASS COAST, CARDINIA, HORSHAM, KINGSTON AND MORNINGTON PENINSULA	• COMMONLY SWIMMING, PADDLING, WADING	• FEW RECORDED ALCOHOL/ DRUGS • MOST IN SUMMER • MOST ON A WEEKDAY

3.
Drowning Prevention Needs
Workshop Outcomes

Workshop Outcomes

Life Saving Victoria were engaged by the Cross Council Working Group to facilitate a drowning prevention workshop in Cowes, Phillip Island on 22 November 2024 to explore the drowning issues facing the region and appropriate prevention strategies to be employed.

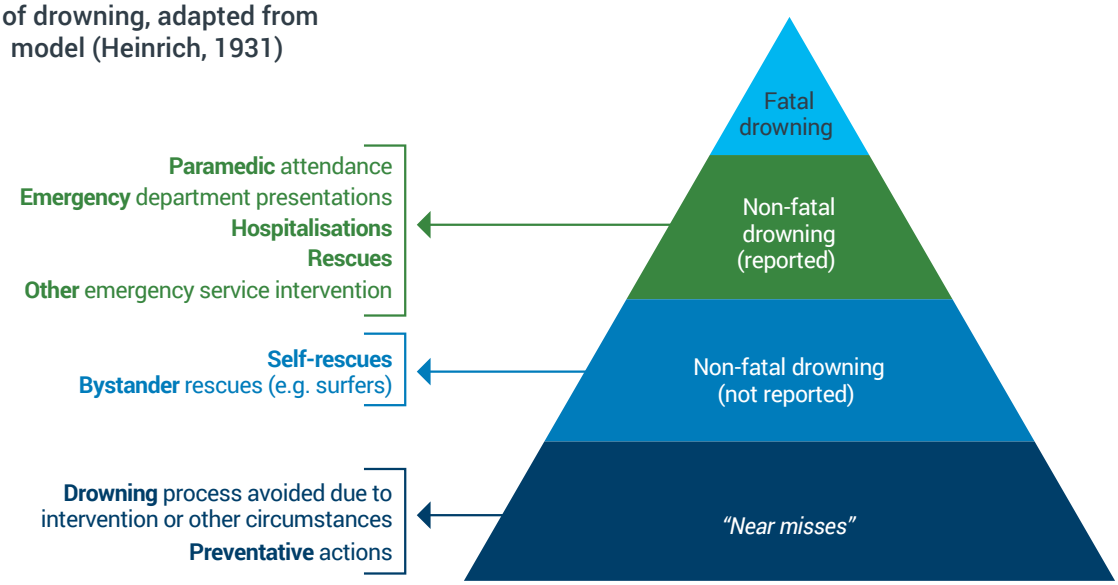
Twenty-two representatives from the following organisations and agencies were in attendance, including members of the Bass Coast and Mornington Peninsula Cross Council group:

- Ambulance Victoria
- Bass Coast Shire Council
- Bass Coast Beach Safety Working Group
- Belgravia Leisure
- Cardinia Shire Council
- City of Casey Council
- City of Greater Dandenong Council
- Enliven Victoria
- Mornington Peninsula Back Beach Collective
- Mornington Peninsula Shire Council
- Parks Victoria
- Philip Island Nature Parks
- Woolamai Beach Surf Life Saving Club
- Victoria Police

The workshop agenda encompassed the presentation of drowning statistics for the region and progressed into understanding the broader drowning issues considering fatal drowning statistics but also relating to non-fatal drowning and near misses from the perspective of the attendees, as per the 'pyramid of drowning' below (Figure 12).

IMAGE 1
Workgroup members identifying prominent drowning risks (November 2024).

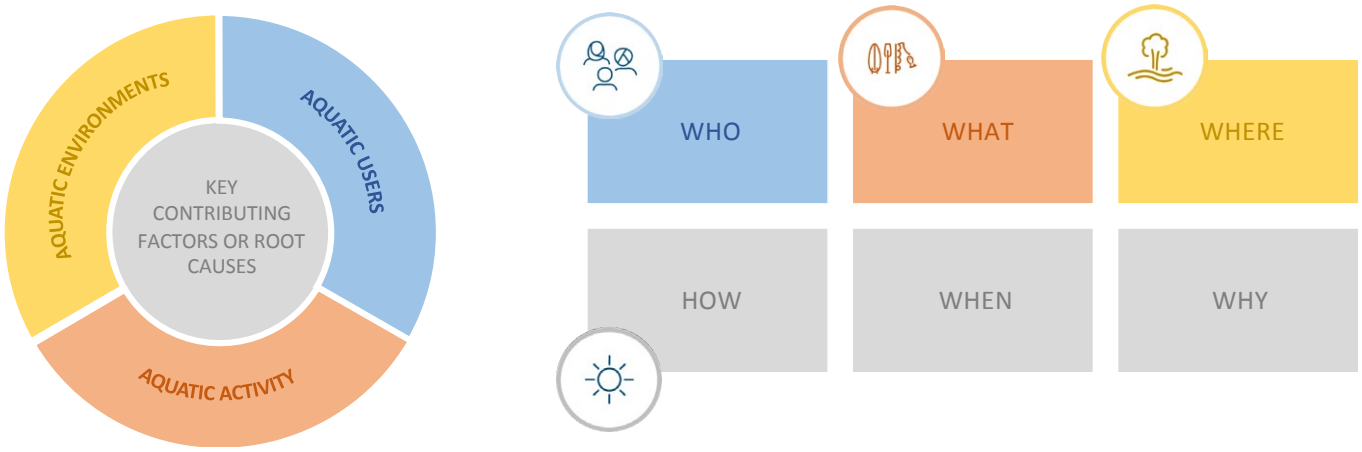
FIGURE 12 **Pyramid of drowning, adapted from Heinrich's 300–29-1 model (Heinrich, 1931)**



3 Drowning Prevention Needs

The Safe Systems Framework was used to identify and prioritise drowning risks across the region.

FIGURE 13 **Safer Systems Approach (Royal Life Saving - New South Wales).**



Consensus was reached by the Workshop Attendees that the following are prominent drowning risks in this region (not in particular order):

Key Issue	Users	Activities	Environment	Other factors
1. **Families and couples from culturally and linguistically diverse (CALD) communities wading in water at surf beaches.**	Families and couples from CALD communities	Wading in water	Surf beaches	Unfamiliarity with surf conditions; lack of swimming skills
2. **Males aged 25+ years from CALD communities rock fishing at rocky platforms.**	Males aged 25+ from CALD communities	Rock fishing	Rocky platforms	Lack of awareness of tidal changes; no personal flotation devices
3. **Local resident males jumping into water from cliffs, jetties, and piers.**	Local resident males	Jumping into water	Cliffs, jetties, and piers	Risk-taking behaviours; underestimation of depth and hazards

As per the safer systems approach, identifying the key drowning issues was the first step in understanding drowning in this region. Developing appropriate mitigation strategies required deeper analysis of the trends. This process aimed to identify broader risks associated with specific users, activities and environments.

Accordingly, workshop attendees worked through each component of the key issues outlined above, specifically each user, environment, and activity, to outline broader drowning risk and associated prevention opportunities in alignment with the best-practice drowning prevention strategies and models.

3 Drowning Prevention Needs

The Drowning Prevention Chain, developed by the International Life Saving Federation (ILS) in 2015, serves as a globally recognised framework for identifying and mitigating drowning risks.

At the core of the Drowning Prevention Chain are four causal factors contributing to drowning events and four corresponding categories of control measures.

These categories provide a structured approach for selecting and implementing appropriate prevention strategies:

Causal Factors in Drowning Events:

1. Lack of knowledge, disregard, or misjudgement of hazards.
2. Uninformed, unprotected, or unrestricted access to hazards.
3. Lack of supervision or surveillance.
4. An inability to cope once in difficulty.

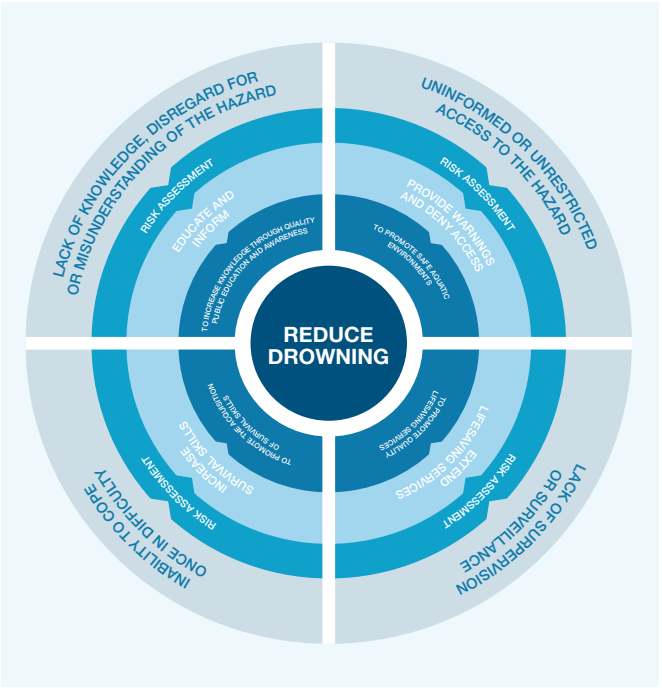
Control Measure Categories:

1. **Education and information.**
2. **Denial of access,** improvement of infrastructure, and/or provision of warnings.
3. Provision of **supervision**.
4. Acquisition of **Rescue and Survival skills**.

During the workshop, the Drowning Prevention Chain provided a foundational framework for analysing drowning risks and identifying tailored strategies. Participants applied these causal factors and control measures to assess specific high-risk users, environments, and activities within the region.

By using this structured approach, attendees were able to systematically develop prevention strategies that align with the four control measure categories, ensuring comprehensive coverage of risk mitigation across various contexts.

FIGURE 14 **Drowning Prevention Chain and strategies to prevent drowning (International Life Saving Federation).**



1 Safer Aquatic Users

The following represents the summary perspective of workshop attendees on drowning risk factors for the region, alongside prevention opportunities using the ILS Drowning Prevention Chain.

Drowning Prevention Strategies that seek to motivate individuals to change their behaviour through a combination of context-appropriate information, training, education and enforcement activities.

Users	Other factors	Identified Prevention Opportunities (categorised by ILS Drowning Prevention Chain)	
Families and couples from CALD communities	Unfamiliarity with surf conditions; lack of swimming skills Lack of awareness of tidal changes; no personal flotation devices Lack of awareness of signage; inability to interpret signage.	**Education and Information:** • School-based programs, culturally appropriate swimming lessons, multilingual signage, Beach Safe App, QR codes with translations, visitor surveys. • Social media advocacy	**Supervision:** • Community leader engagement. • Engaging board rider groups
		Denial of Access: • Signage with QR codes, long-term programs addressing root issues, Beach Safe App dissemination.	**Rescue and Survival skills:** • Surfer first aid training (e.g., CPR), practical safety training.
Males aged 25+ from CALD communities	Risk-taking behaviours; underestimation of depth and hazards Unfamiliarity with surf conditions; lack of swimming skills	**Education and Information:** • Education campaigns, social media targeting specific cohorts, campaigning programs to influence behavioural change. • Promotion via suppliers of products (e.g., safety equipment or guidance).	**Supervision:** • Increased patrols
		Denial of Access: • Legislation, VMS boards at strategic locations.	**Rescue and Survival skills:** • Increased patrols by lifesavers
Local resident males	Lack of awareness of tidal changes; no personal flotation devices Alcohol/drugs Social media	**Education and Information:** · In-school education, behaviour-targeting campaigns (TAC style), community-level values campaigns (e.g., footy clubs), data sharing and collection.	**Supervision:** · Generalist youth services, engaging younger staff (e.g., SLSA volunteer workforce), engaging influencers.
		Denial of Access: · Signage, fines, blocking access to unsafe locations, preventing access to high-risk areas.	**Rescue and Survival skills:** · Increased patrols by lifesavers.

2 Safer Aquatic Activities

The following represents the summary perspective of workshop attendees on drowning risk factors for the region, alongside prevention opportunities using the ILS Drowning Prevention Chain

Drowning Prevention Strategies that seek to change the methods or process in which an activity is being undertaken or performed.

Activities	Other factors	Identified Strategies by ILS Drowning Prevention Chain	
Wading in water 	Unfamiliarity with surf conditions; lack of swimming skills Inappropriate swimwear; not dressed for accidental entry into water.	**Education and Information:** • Water safety lessons, tourist information, responsible media campaigns.	**Supervision:** • Increased patrols, engaging lifesaving clubs
		Denial of Access: • Activity restrictions / warnings • Increased / targeted signage, barriers where appropriate.	**Rescue and Survival skills:** • Surfer first aid training (e.g., CPR), practical safety training. • Emergency planning
Rock fishing 	Lack of awareness of tidal changes; no personal flotation devices	**Education and Information:** • Tailored campaigns, CALD-specific messaging, safety promotion via suppliers. • Better engagement strategies.	**Supervision:** • Patrols, community liaison officers.
		Denial of Access: • Legislation (PFDs), restricted access.	**Rescue and Survival skills:** • Public rescue equipment,
Jumping into water 	Risk-taking behaviours; underestimation of depth and hazards	**Education and Information:** • Behavioural campaigns (e.g., TAC style), in-school education.	**Supervision:** • Increased patrols, community engagement.
		Denial of Access: • Signage, enforcement, restricted access to unsafe locations.	**Rescue and Survival skills:** • Video surveillance, emergency response readiness.

3 Safer Aquatic Environments

The following represents the summary perspective of workshop attendees on drowning risk factors for the region, alongside prevention opportunities using the ILS Drowning Prevention Chain.

Drowning Prevention Strategies that seek to improve the physical or natural environments in, on and around waterways which individuals participate in recreational or work-related activity.

Environment	Other factors	Identified Strategies by ILS Drowning Prevention Chain	
Surf beaches 	Unfamiliarity with surf conditions; lack of swimming skills	**Education and Information:** • Water safety education, promotion of the Beach Safe App, multilingual QR codes.	**Supervision:** • Increased lifeguard patrols, engagement with lifesaving clubs.
		Denial of Access: • Signage, barriers at unsafe areas.	**Rescue and Survival skills:** • Public rescue equipment, first aid facilities, Surfing Victoria Rescue 24/7.
Rocky platforms 	Lack of awareness of tidal changes; no personal flotation devices	**Education and Information:** • Safety campaigns targeting CALD groups, tailored messaging.	**Supervision:** • Community liaison officers, targeted patrols.
		Denial of Access: • Legislation mandating PFDs, restricted access during high-risk periods.	**Rescue and Survival skills:** • Provision of public rescue equipment, enhanced signage with tidal warnings.
Cliffs, jetties, and piers 	Risk-taking behaviours; underestimation of depth and hazards	**Education and Information:** • Campaigns promoting safe behaviours (e.g., TAC style), community awareness programs.	**Supervision:** • Engagement with local community groups and patrols.
		Denial of Access: • Review of appropriate barriers, signage, blocking access to high-risk locations.	**Rescue and Survival skills:** • Public lifesaving equipment, video surveillance.

4.
Next Steps
Drowning prevention for the region

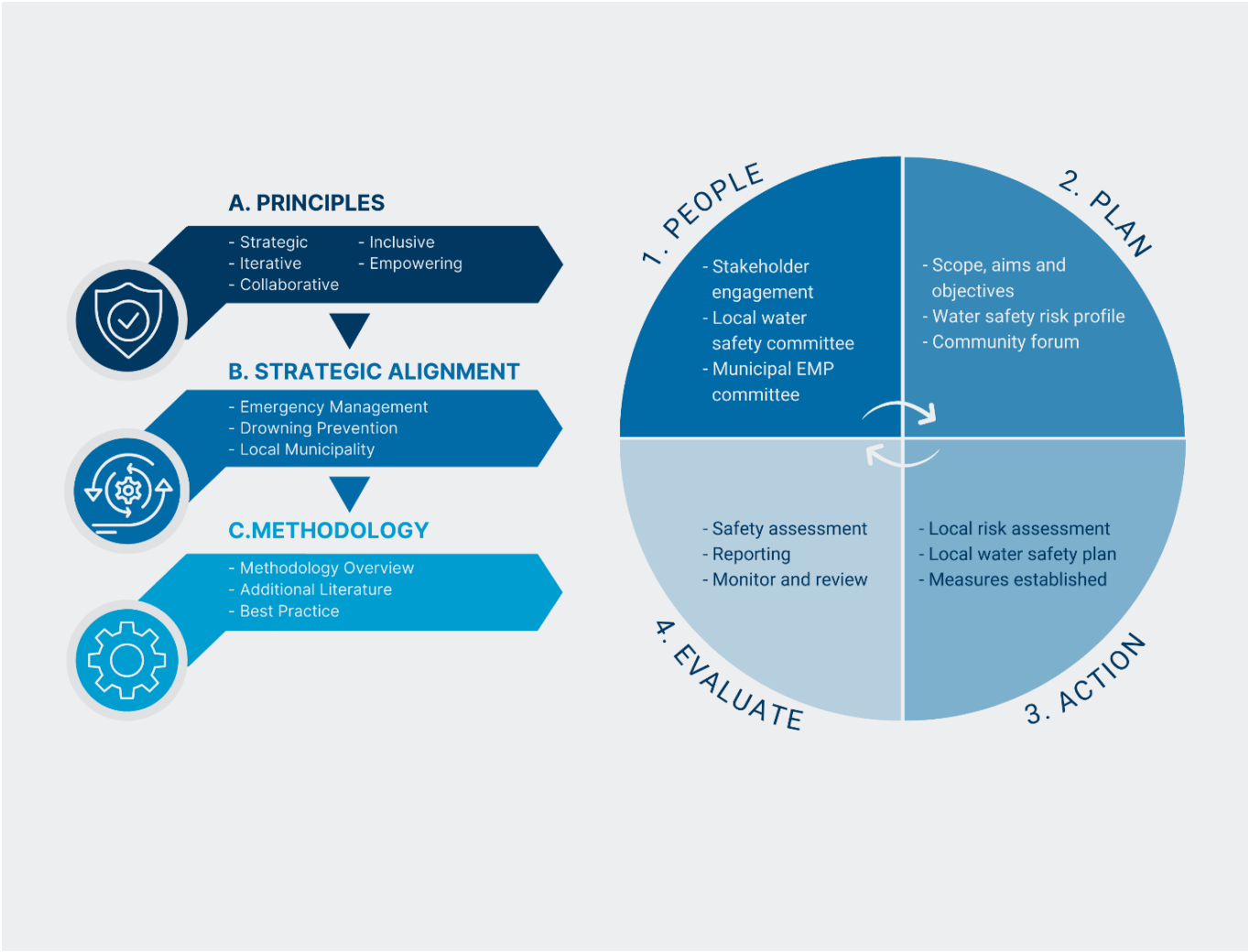
Next steps for regional drowning prevention by time frame and focus area

In consideration of the workshop outcomes and the ILS chain, LSV makes the following recommendations for drowning prevention opportunities for this region to address the key issues identified in the workshop.

These recommendations have been made following the workshop outcomes, but also from consulting the drowning data for this region and international and national best practice guidance for water safety and drowning prevention.

Recommendations herein are general for this region. These recommendations should be contextualised and enacted in Regional/Local Water Safety Plans and Strategies, in accordance with the example local water safety planning model below (Figure 15) or equivalent.

FIGURE 15 **Local waterway safety model (Life Saving Victoria).**



Summary of regional scale opportunities for drowning prevention by time frame.

Time Frame	ILS Intervention Category	Intervention Strategies	Safe Systems Alignment to intervention strategies
Short Term (1 year)	1 Education and Information	1. Community and school education, including consultation with community leaders among culturally and linguistically diverse cohorts, delivering localised water safety messaging specific to drowning risks. Includes messaging on resisting peer pressure, effects of alcohol/ drugs, lifejacket use, and environmental hazards (e.g., sandbars and rip currents). 2. Connect and train tourism providers (e.g., Airbnb, event organisers) to educate visitors about water safety. 3. Engage young volunteers and sport participants to promote water safety messages as ambassadors or champions. 4. Use forums, such as the Multicultural Engagement Network, and websites to promote water safety, legislative requirements, and warnings for high-risk locations to CALD community groups.	Safer Aquatic Users
	3 Supervision	5. Connect lifesaving clubs with CALD community groups, such as the Multicultural Engagement Network and others, in popular areas (Bass Coast Shire, Mornington Peninsula Shire) to promote beach and water safety. 6. Lifesavers and lifeguards to provide on-site beach safety education to visitors both at beaches and in townships away from patrolled locations.	Safer Aquatic Activities
Medium Term (1-4 years)	1 Education and Information	7. Review beach safety signage at high-risk locations for compliance with national standards, adding QR codes linked to the BeachSafe App with in-language information. 8. Develop local education programs teaching residents about local waterway risks and how to discuss water safety. 9. Implement a social media campaign targeting high-risk cohorts, complementing other campaigns for message recall and recognition, and underpinned by evidence-based practices.	Safer Aquatic Users
	2 Denial of Access	10. Install barriers at key high-risk activity areas (e.g., pier jumping, rock fishing) to deter dangerous behaviours.	Safer Aquatic Environments
	4 Rescue and Survival Skills	11. Install public rescue equipment at high-risk drowning locations (patrolled/unpatrolled), with education on usage and adherence to best practice guidelines. 12. Consider alternative lifesaving patrol models to cover more beaches. 13. Seek funding for more paid lifeguard services in peak visitor periods, providing outposts from main club locations. 14. Convene a local water safety planning committee and develop plans for each local government area with input from emergency services and drowning prevention experts. 15. Install mobile phone antenna boosters and emergency markers in high-risk regions for better connectivity and emergency response.	Safer Aquatic Activities

Time Frame	ILS Intervention Category	Intervention Strategies	Safe Systems Alignment to intervention strategies
Long Term (5+ years)	1 Education and Information	**16.** Offer grant funding to local groups to develop water safety initiatives aligned with water safety plans. **17.** Develop a drowning data collection tool for incident recording by all agencies. **18.** Partner with aquatic equipment suppliers to provide safety information at point of purchase (e.g., boats, kayaks, fishing rods). **19.** Implement geofencing to push notifications to mobile phones about high-risk drowning locations. **20.** Partner with the VicEmergency App to share warnings about dangerous surf conditions.	Safer Aquatic Users
	2 Denial of Access	**21.** Introduce legislation to deny access and prosecute trespassers at key drowning blackspot locations. **22.** Restrict parking at high-risk locations (e.g., Punchbowl) by reducing parking spaces and removing entryway parking options.	Safer Aquatic Environments
	3 Supervision	**23.** Increase patrolled waterway locations with supporting infrastructure, including temporary structures or permanent installations.	Safer Aquatic Activities
	4 Rescue and Survival Skills	**24.** Install ladders and infrastructure for safe water exits at high-risk drowning locations. **25.** Engage accredited providers to lead in-water experiences for children and caregivers to understand swimming abilities in various aquatic environments. **26.** Implement widespread public rescue equipment with community education about usage.	

FOR MORE INFORMATION
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