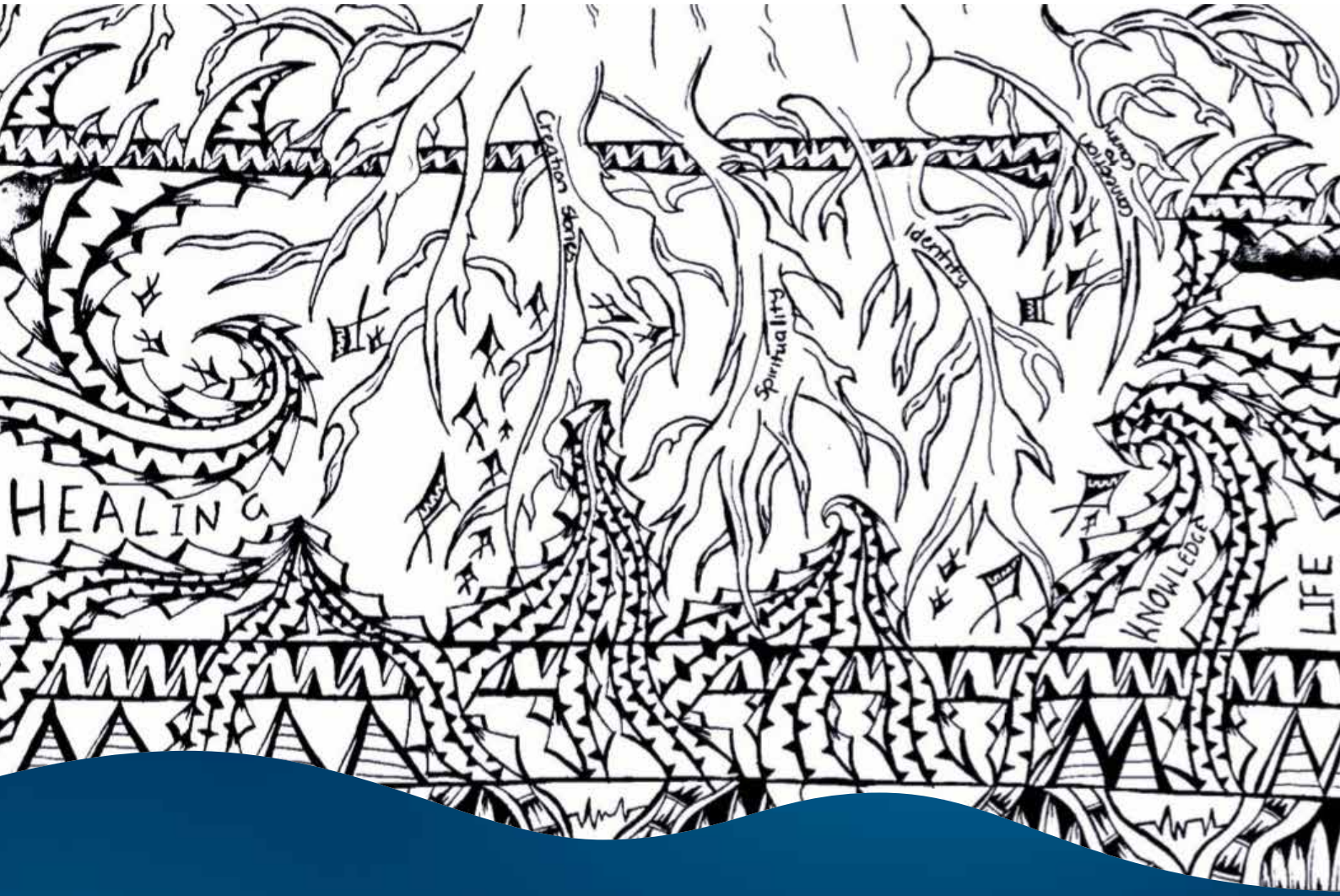

ENHANCING CULTURAL CONNECTION TO WATER

For Aboriginal and Torres Strait Islander peoples Report

PARTNERS

Guunu-maana (Heal)
Aboriginal & Torres Strait Islander Health

The George Institute for Global Health Australia

ROYAL LIFE SAVING AUSTRALIA

ABOUT ROYAL LIFE SAVING

Royal Life Saving is focused on reducing drowning and promoting healthy, active and skilled communities through innovative, reliable, evidence-based advocacy; strong and effective partnerships; quality programs, products and services; underpinned by a cohesive and sustainable national organisation.

Royal Life Saving is a public benevolent institution (PBI) dedicated to reducing drowning and turning everyday people into everyday community lifesavers. We achieve this through: advocacy, education, training, health promotion, aquatic risk management, community development, research, sport, leadership and participation and international networks.

ABOUT GUUNU-MAANA (HEAL)

Guunu-maana (Heal) Aboriginal and Torres Strait Islander Health Program Led through Aboriginal and Torres Strait Islander ways of knowing, being and doing to generate evidence that privileges Indigenous knowledges. Committed to research underpinned by equity, transparency and self-determination and maintains an Aboriginal and Torres Strait Islander holistic paradigm of health and healing.

royallifesaving.com.au

Report prepared by
Guunu-maana (Heal) Aboriginal and Torres Strait Islander health program, The George Institute for Global Health, University of New South Wales

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CONTENTS

EXECUTIVE SUMMARY

Aboriginal and Torres Strait Islander knowledge systems are an integral component in the tapestry of the world's oldest continuing culture. Recognising the intricacies of these systems is a critical process in reversing the colonial narratives, that have deliberately set out to oversimplify Indigenous knowledges and devalue connections to Country.

Although representing only 3.8% of the population of Australia, Aboriginal and Torres Strait Islander peoples account for 5% of all drowning fatalities and are 1.7 times more likely to drown compared to non-Aboriginal people. Most incidences occur in remote and very remote communities (38%) with the leading activities attributed to swimming and recreating (21%) in rivers and lakes. One life lost to preventable circumstances is one too many. Seas and waterways are an inseparable dimension in connection to Country and contributes to a holistic understanding of life. It is critical that this connection be recognised and embedded within programs and initiatives to appropriately enhance water safety knowledge and skills, all while promoting social inclusion and cultural wellbeing. The aim of this report will be to identify what water safety programs are being delivered to Aboriginal and Torres Strait Islander people in Australia; and to highlight the meanings and connections to water. In doing so, this report will provide recommendations for integrating Aboriginal and Torres Strait Islander knowledge systems into water safety and drowning prevention strategies to enhance cultural connections.

This report conducts two scoping reviews in parallel. The first search (Question 1) was a systematic scoping review of Aboriginal and Torres Strait Islander water safety program being delivered across Australia. The second search (Question 2) was a desktop scoping review to understand from the direct voices of Aboriginal and Torres Strait Islander peoples their meanings and connections to water.

Eight articles were included in the first stage, in total reporting on 14 water safety and education programs. Only one article was a peer-reviewed publication and therefore quality appraised. The second stage was a desktop review examining meanings and connections to water. The findings show that water means Knowledge, Healing and Life. It is upon these meanings of water that we draw connections to Creation Stories, Spirituality, Cultural Identity, and Country, all through a symbiotic relationship. These meanings and connections remain resilient, are place-based, interconnected and relational to our people and communities.

In a post-colonial society, promoting culture across generations is crucial. The water safety sector occupies a space of cultural significance. By working to implement the recommendations in this report, we can enhance cultural connections and adopt holistic approaches to water safety and drowning prevention strategies.

KEY RECOMMENDATIONS

1. Reinforce how current programs, initiatives and services can connect to Aboriginal and Torres Strait Islander knowledge systems (meanings and connections).
2. Assess community programs and initiatives for Aboriginal and Torres Strait Islander cultural connection, safety and worldview.
3. Advocate for cultural responsiveness training to be included into the workforce in Australian water safety organisations, including holding a roundtable forum with key stakeholders and partners.
4. Utilise cultural interest to engage children, youth, adults and communities with water safety programs and initiatives.

List of Abbreviations

Guunu-maana (Heal):
Guunu-manna (Heal) Aboriginal and Torres Strait Islander Health Program, The George Institute for Global Health.

RLSSA:
Royal Life Saving Society – Australia.

PREFACE

This report was established by working at the knowledge interface, through a research partnership between Guunu-maana (Heal) Aboriginal and Torres Strait Islander Health Program, The George Institute for Global Health and Royal Life Saving Society – Australia. Therefore, the presenting format will be reflective of Aboriginal and Torres Strait Islander peoples 'ways of doing'.

Guunu-maana (Heal) Aboriginal and Torres Strait Islander Health Program is led through Aboriginal and Torres Strait Islander ways of knowing, being and doing to generate evidence that privileges Indigenous knowledges through actions that empower people and communities.

Our commitment to research integrity is underpinned by equity, transparency and self-determination and maintains an Aboriginal and Torres Strait Islander paradigm of health and healing of physical, emotional, social, cultural, and spiritual elements. This report was led by Aboriginal and Torres Strait Islander researchers with the support of our non-Indigenous team allies and is written from our collective First Nations voices.

ABOUT THE ARTIST:
ANGELA WEBB – GUMBAYNGGIRR NATION

This artwork was developed Angela Webb, from Gumbaynggirr Nation for Guunu-maana (Heal). The meaning is Heal Spirit, Heal Country.

BACKGROUND

Aboriginal and Torres Strait Islander knowledge systems are an integral component in the tapestry of the world's oldest continuing culture (1). Recognising the intricacies of these systems is a critical process in reversing the colonial narratives, that have deliberately set out to oversimplify Indigenous knowledges and devalue connections to culture, land, seas and waterways.

The process of decolonising thinking requires unlearning to relearn and is a necessary and crucial step to address the power dynamics that exits within social discourses, programs, initiatives, services and practices in Australia. Aboriginal and Torres Strait Islander people represent only 3.8% of the population of Australia but account for 5% of all drowning fatalities, and are 1.7 times more likely to drown compared to non-Aboriginal people (2, 3). Most incidences occur in remote and very remote communities (38%) with the leading activities attributed to swimming and recreating (21%) in rivers and lakes (4). One life lost to preventable circumstances is one too many.

Our peoples are deeply connected to Country, which includes seas and waterways such as rivers, waterholes, springs, and lakes (respectfully now will be referred to as water). Water is an inseparable dimension in connection to Country and contributes to our holistic understanding of life where family, kin, land, plants, animals, culture and spirituality are interdependent and intrinsically linked (5). These elements form part of a 65,000 year old continuing multi-dimensional living entity that sustains life and is life itself (6). Although there is a history of a systematic dislocation from Country and memories of segregation from public places such as swimming pools (7), place-based knowledge of water remains resilient. Knowing that water plays a vital role in the culture, lives and wellbeing of our peoples, it is critical that a decolonised approach be taken with programs and initiatives to appropriately enhance water safety knowledge and skills all while promoting social inclusion and cultural wellbeing.

For this to occur in a meaningful way, it is essential that there be an enculturation of other Australians on the meanings and connections that we have to water. The aim of this report will be to identify what water safety programs are being delivered to Aboriginal and Torres Strait Islander people in Australia; and to highlight the meanings and connections to water. In doing so, this report will provide recommendations for integrating Aboriginal and Torres Strait Islander knowledge systems into water safety and drowning prevention strategies to enhance cultural connections.

METHODS

Through a research partnership with Guunu-maana (Heal) Aboriginal and Torres Strait Islander Health Program at The George Institute for Global Health (Guunu-maana) and Royal Life Saving Society – Australia (RLSSA), this report applies Weaving methodology.

Developed by a Nurungga researcher, Weaving methodology is based on Aboriginal traditions of intertwining of fibres in the process of basket weaving, analogous to the intertwining and drawing together of First Nations and Western knowledges (8). At this interface, First Nations and Western knowledges come together to create new knowledges around water safety, for the shared benefit of all Australians.

The review is approached through a 'decolonised lens' as the review was led by Aboriginal and Torres Strait Islander researchers, positioning Indigenous knowledges at each stage of the review process from idea generation, analysis, interpretation, and reporting. The regular process and structures of Western sciences of generating records from primarily English-language databases to explore the existing evidence on a topic was applied. In contextualising and presenting the results in a relevant format, findings will be presented through artwork alongside an integrated narration.

This approach holds consistent to our 'ways of doing' by using customary formats of knowledge exchange. Artwork such as paintings and carvings hold significant cultural and spiritual importance, serving as a medium for storytelling it plays a crucial role in maintaining cultural identity and cohesion within communities.

SCOPE AND AIM

This report conducts two scoping reviews in parallel. It was considered necessary for the systematic scoping review on water safety programs to be complemented by a second parallel desktop scoping review exploring the meanings and connections to water.

This parallel process allows both bodies of evidence to come together to provide an understanding of water safety programs, their key characteristics, and how then programs and initiatives can programmatically integrate the strengths of Aboriginal and Torres Strait Islander people's knowledge systems on water to enhance cultural connections to water safety and drowning prevention strategies.

Question 1:
What water safety programs are being delivered to Aboriginal and Torres Strait Islander people and communities?

Question 2:
What are the meanings and connections to water for Aboriginal and Torres Strait Islander peoples?

SEARCH STRATEGY

Two independent searches were conducted. The first search (Question 1) was a systematic scoping review of Aboriginal and Torres Strait Islander water safety program being delivered across Australia. The second search (Question 2) was a desktop scoping review to understand from the direct voices of Aboriginal and Torres Strait Islander peoples their meanings and connections to water.

Search 1 and search 2 were undertaken in 11 databases and search engines to capture peer-reviewed journal articles, grey literature and water safety programs listed on websites. Searches within databases of published literature were conducted in Embase, ProQuest, CINAHL and Informit. Seven search engines were used to capture relevant water safety programs in grey literature, including Google Scholar, Google (Advanced search), Australian Indigenous HealthInfoNet, the Analysis and Policy Observatory, the Clearinghouse for Sport, the Australian Injury Prevention Network, and the Royal Life Saving Society of Australia. These search engines included Australian water safety and injury prevention websites and the Australian Indigenous HealthInfoNet which stores research papers and reports relevant to Aboriginal and Torres Strait Islander people.

Search 1 (Question 1)

Key terms for search 1 included: *Aboriginal* OR "Torres Strait Island*" OR "Indigenous Australia*" OR "First Nation* Australia*" and "Water safe*" OR "Life Saving" OR Swim* OR Surf*. See Table 1 below* for full list of terms for Search 1.

Inclusion criteria were any peer-reviewed records using qualitative or quantitative methods, mixed methods or evaluations, water safety programs where Aboriginal and Torres Strait Islander peoples were the primary target participants, and programs conducted in Australia. Studies were limited to those published in English.

There was no time limit on publication date. Studies which did not report results specific to Aboriginal and Torres Strait Islander peoples were excluded. Thesis dissertations, conference proceedings, letters to the editor and opinion reports, as well as programs implemented outside of Australia, were also excluded.

Search 2 (Question 2)

Key terms for search 2 included: *Aboriginal* OR "Torres Strait Island*" OR "Indigenous Australia*" OR "First Nation* Australia*" and "Water safe*" OR "Life Saving" OR Swim* OR Surf* and Connection* OR Meaning* OR Belong* OR Importan* OR Significan* and Waterways OR Water* OR Sea OR Seas OR Ocean* OR Saltwater*. See Table 1 below* for full list of terms for Search 2.

Records were included if there were direct quotes from Aboriginal and Torres Strait Islander people on their meanings or connections to water, were based in Australia, and in English. No time limits were set for the search. Qualitative studies, mixed methods studies or evaluations reporting on waterways, as well as thesis dissertations, conference proceedings, letters to the editor and opinion reports were included. Quantitative studies were excluded.

Studies which did not include voices through direct quotes of Aboriginal and Torres Strait Islander peoples on water, meanings of water or connections to water were excluded, as well as programs implemented outside of Australia, were also excluded.

Table 1

Search strategy 1:

Field 1	Aboriginal* OR "Torres Strait Island*" OR "Indigenous Australia*" OR "First Nation* Australia*"
Field 2	"Water safe*" OR "Life Saving" OR Swim* OR Surf* OR "Water rescue" OR "drowning prevention" OR Drown* OR "Swim* program*" OR "Aquatic* program*" OR "Learn to swim*" OR "Swim* pool*" OR Pool* OR "Swim* safe*" OR "Surf Life Saving" OR "Surf safe*" OR "Learn to surf*" OR Nipper* OR Boat* OR Marine*

Search strategy 2:

Field 1	Aboriginal* OR "Torres Strait Island*" OR "Indigenous Australia*" OR "First Nation* Australia*"
Field 2	Connection* OR Meaning* OR Belong* OR Importan* OR Significan* OR Value OR Link OR Cultur* OR Spiritual OR Totem* OR Ancest* OR Care OR Caretaker OR Custodian* OR Lore OR connect*
Field 3	Waterways OR Water* OR Sea OR Seas OR Ocean* OR Saltwater* OR Torres Strait OR Tide* OR Current OR River* OR Freshwater* OR Lake* OR Stream* OR Spring* OR Bore* OR Billabong OR Estuar* OR Waterfall* OR Creek* OR Damn* OR Waterhole OR Country* OR Rain* OR Coast* OR Beach* OR Island* OR Surf* OR Flood* OR Wetland* OR Mangrove* OR "Wet season" OR Rainmaker

SELECTION PROCESS

The identified records were from Embase, ProQuest, CINAHL, Informit (and grey literature) were downloaded into Endnote and duplicates removed. The citations were extracted into an excel spreadsheet. Titles and abstract were screened by at least one Aboriginal or Torres Strait Islander reviewer, for Search 1 (BB and AT) and search 2 (JF and AA). Records were assessed for inclusion by at least one Aboriginal or Torres Strait Islander reviewer and reasons for exclusion were recorded. Any discrepancies for inclusion were discussed at both screening stages and given to third reviewer (BP) for final assessment. The search results are presented in according to a PRISMA flowchart (Figure 1 and 2) (9).

DATA EXTRACTION AND CHARTING

Search 1

Information extracted and charted by Aboriginal reviewers (BB, JF and AT) from records included: author, title, year, type of record (e.g., peer-review publication, report) and program name, delivery organisation, location/setting, program aims, characteristics, target population, whether evaluated and outcomes of evaluation, and status (Figure 1). Each included record was screened for each factor documented in the extraction tables and marked in an Excel spreadsheet. Peer-reviewed articles that met the inclusion criteria were critically appraised using the 2018 South Australian Health and Medical Research Institute and the Centre of Research Excellence in Aboriginal Chronic Disease Knowledge Translation and Exchange Aboriginal and Torres Strait Islander Quality Appraisal Tool (10).

As a secondary outcome for Search 1, any water safety program identified within the search but not meeting eligibility criteria for inclusion in the review, were recorded and listed in Appendix 1 to provide an auxiliary snapshot of programs being delivered throughout Australia.

Search 2

Information extracted and charted by Aboriginal reviewers (BB, JF and AT) from records included: author, year, title, type of record (e.g., video, peer-review publication, website) and the direct quotes on meanings and connections to water. Dual data extraction of 10% of records was applied to ensure consistency. All direct quotes from Aboriginal and Torres Strait Islander peoples on water were extracted and imported to NVivo. Quotes were read and re-read by an Aboriginal researcher (JF) and non-Indigenous researcher (JA) for interpretation and quotes were categorised into key themes for meanings and connections to water, and all direct quotes extracted are presented in Table 6.

CRITICAL APPRAISAL

Search 1

The 2018 South Australian Health and Medical Research Institute and the Centre of Research Excellence in Aboriginal Chronic Disease Knowledge Translation and Exchange Aboriginal and Torres Strait Islander Quality Appraisal Tool (QAT) was used to assess the quality of the peer-reviewed articles (10). The tool consists of 14 questions that assess the quality of studies from an Aboriginal and Torres Strait Islander perspective including Aboriginal and Torres Strait Islander governance, respect for cultural and intellectual property, capacity building and beneficial outcomes for Aboriginal and Torres Strait Islander peoples. The two Aboriginal reviewers (BB and AT) used the Aboriginal and Torres Strait Islander Quality Appraisal Tool's Companion Document to guide their responses. Each question was answered as 'Yes', 'Partially', 'No', or 'Unclear' using explicit statements in the text. An example is provided in Table 3.

Search 2

Search 2 was a desktop review, appraisal of the processes of how included articles collected the direct quotes from Aboriginal and Torres Strait Islander people were not applied and thus a quality appraisal tool was not applicable.

Figure 1: Search 1 flowchart

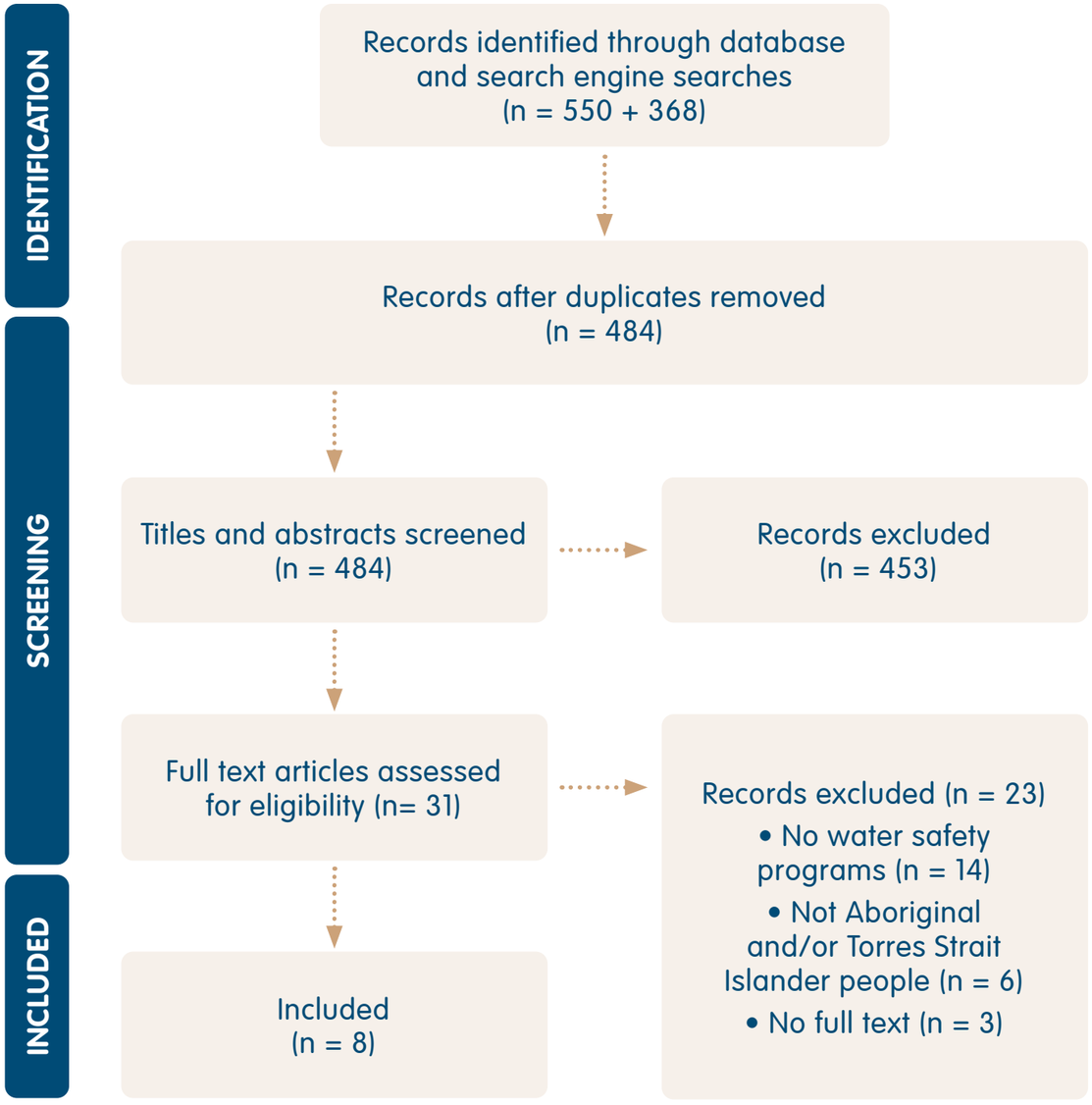
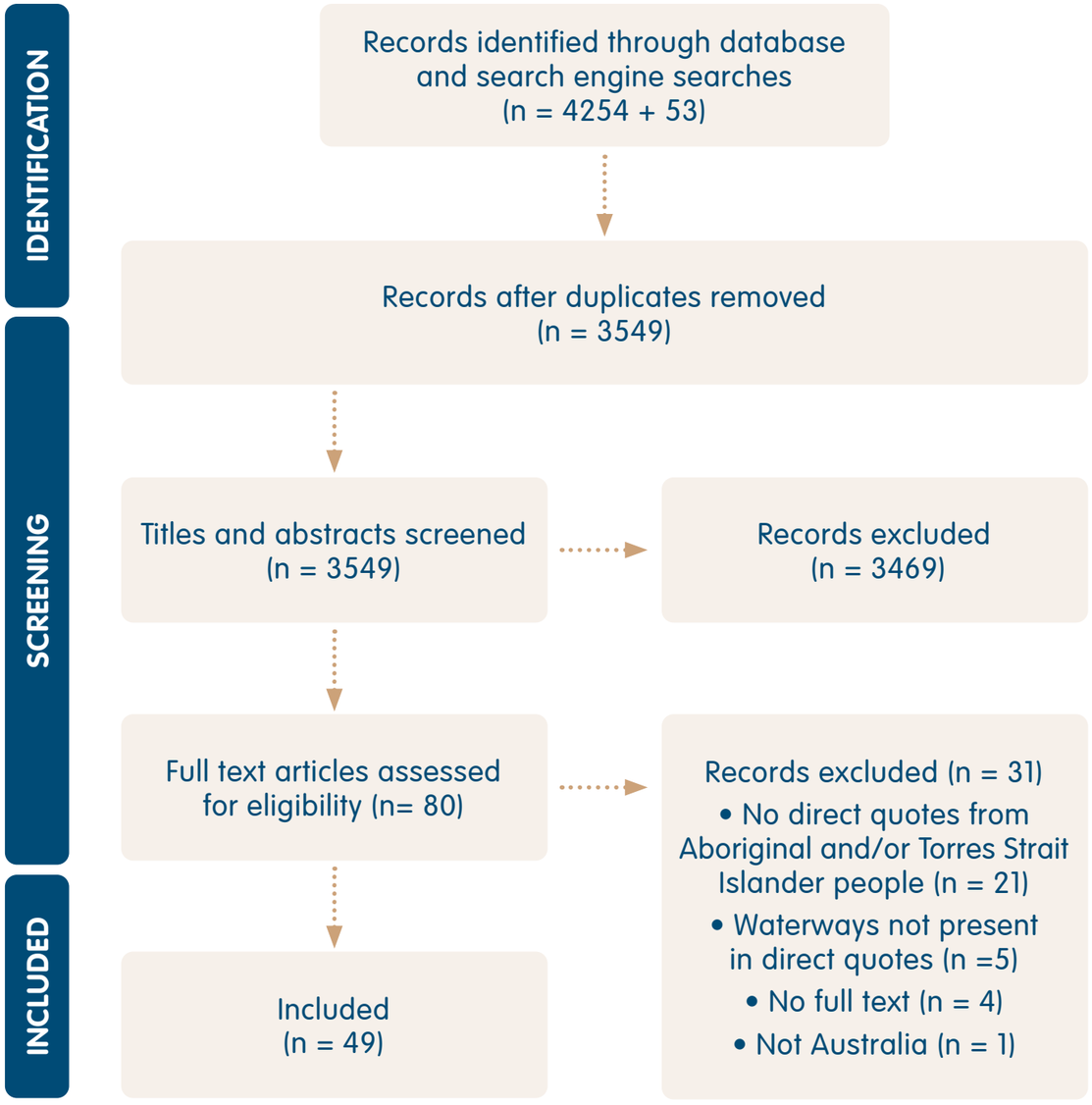


Figure 2: Search 2 flowchart



SEARCH 1 (QUESTION 1) RESULTS

Searches were conducted in January to March 2023. The database searches in Embase, ProQuest, CINAHL and Informit generated 550 results; and 368 generated results in Google Scholar, Google (Advanced search), Australian Indigenous HealthInfoNet, the Analysis and Policy Observatory, the Clearinghouse for Sport, the Australian Injury Prevention Network, and the Royal Life Saving Society of Australia. After removing duplicates, 484 titles remained for title and abstract screening. A total of 31 results remained for full text screening. Eight articles were eligible for final inclusion after full text screening. The search results are presented in a PRISMA flowchart (Figure 1) for Search 1 (9).

Included articles (n=8)

From journal database searching, eight articles were included (11-18) and reported on 14 water safety programs across multiple regions of Australia being delivered for Aboriginal and Torres Strait Islander people (Appendix 1).

Eight programs were located in the Northern Territory (4, 11, 17, 18), three in Western Australia (12-14), one in Queensland (11); one in the Australian Capital Territory (ACT) (13); one spanning four states including New South Wales, Victoria, Queensland and South Australia (16). The majority of programs were in regional or remote locations (n=12)(4, 11, 12, 14, 16-18), one in an urban setting (13) and one not specified (13). The majority of the programs (n=11) were delivered by Royal Life Saving Society (12, 13, 17); two by State and Territory Governments (11), and one by a sports governing body (16). The articles spanned over a period of 22 years (1993 to 2015) (11-18), with seven programs not reporting the program commencement date (12-18). Six programs were active (4, 11-14), one complete (16) and seven unclear (11, 13, 17, 18). The target population for most programs were children, students and young people with specific ages not always reported.

Thirteen programs were specifically tailored to Aboriginal and Torres Strait Islander people, while one program, The Torres Strait Maritime Safety Project (11), was adapted from a mainstream program. The Torres Strait Maritime Safety Project was unique in that it supported Torres Strait Islander seafarers with the safety equipment they need to reduce drownings and promote safety while the Northen Territory Indigenous Maritime Safety Initiative educated and supported boat operators.

The Remote Aboriginal Swimming Pools project in Western Australia (WA) (12) facilitated two-way learning where Royal Life Saving WA consulted with Aboriginal communities to ensure culturally safe and appropriate aquatic facilities and programs for Aboriginal and Torres Strait Islander children aged 4 to 12 years. The program reported a high attendance rate and improved swimming and water safety skills. Additionally, school attendance improved, and health and social benefits were observed.

The Ngadyung program in ACT (13) provided aquatic sport and recreation activities for Aboriginal and Torres Strait Islander children aged 4 to 12 years. “The Ngadyung program has become such an important part of my children’s lives over the past few years. They look forward to their lessons every week. The program has given my children the confidence to get in the water and participate successfully in school swimming carnivals in which they otherwise wouldn’t have had the opportunity to do. They thoroughly enjoy the program and we are extremely grateful that this program has been implemented in our community, giving our children the knowledge of water safety.” – Parent.

The Remote Swim, Survive and Strive program in the NT (14) provided swimming and water safety lessons to over 23,000 children. Additionally, nationally accredited training in first aid and Bronze Medallion pool lifeguard to community led to employment opportunities for a total of 93 Aboriginal and Torres Strait Islander adults.

The Talent Pool (17) in WA is a training and employment program for encouraging young peoples aspiration, action and achievement. Key outcomes include first-time employment for 62 people.

The Swim for Fruit (16), also in WA, provided swimming lessons to children and a healthy afternoon tea. The program improved swimming skills, safety awareness and increased social interaction, pride and confidence. Additionally, eating habits and fruit consumption improved. “[the impact of the program is] Huge, fruits are not cheap here and there isn’t much fruit at the local shops”. – Pool manager.

The Remote Pools project provided assistance in public pool maintenance “Our community pool is the best place for our kids to swim (especially when it’s hot). It’s safer than the local waterholes around community. The pool brings families together. Kids are happy to see other kids, they don’t fight just play with each other” Eastern Arrernte woman, local artist and staff member at Ltyentye Apurte (Santa Teresa) Pool (17).

The Indigenous sport program (17) was a surfing program for young people aged between 15-25 years. The program involved 98 participants including surfers, program providers and community members. The participants learned to be safe and confident in the surf. Additionally, the program (re)connected youth to 'Country' and allowed for exchange of cultural knowledge. The program also increased school attendance.

"We've had a few issues with the school but, the reality is if you looked at the evidence from the schools, is the kids are going to school more often ... One of the parents said to me, they could never get their kids to go to school on Friday, but if there's surfing on Friday they go to school. So it's a win for the schools."

The Remote Service Delivery and Indigenous Engagement Project (17) provided qualifications in swimming and water safety through courses and customised learning plans. Four Indigenous people completed qualifications and three gained full AUSTSWIM teacher of swimming and water safety qualification.

The Indigenous Sport and Active Recreation Program (17) delivered the Swim & Survive program, AUSTSWIM Mentoring program and training to remote Indigenous communities. A total of 3239 participated in the program, with 35 remote schools accessing the program. The Swim and Survive Program (18) is a swimming and water safety program that provides an opportunity for primary school children to achieve the national benchmark in water safety education. A total of 12,185 primary school aged children and 93 schools participated in the program.

The AUSTSWIM Mentoring program and training allows local members of the community to become AUSTSWIM qualified swimming instructors who can potentially provide quality, ongoing swimming lessons to their community (16).

The Watiyawan School Swim, Survive & Snorkel Program aimed to provide a water safety program to children who are not normally exposed to safe aquatic environments. The program consisted of water safety excursions for 27 Indigenous students (16).

Aboriginal and Torres Strait Islander Quality Appraisal Tool

One included article (11) was peer-reviewed and therefore was critically appraised using the CREATE Aboriginal and Torres Strat Islander Quality Appraisal Tool results of peer-reviewed programs presented as an adapted traffic light plot (Table 3). The remaining seven included articles were reports and therefore not able to be quality appraised, as they were not peer-reviewed articles. According to the QAT, the one appraised article (11) demonstrated a strengths-based approach and a plan to translate findings into sustainable policy. The study did not report First Nations governance, community engagement and consultation, or a First Nations research paradigm guiding the researchers. It also lacked reporting on rights and agreements relating to existing and created cultural and intellectual property, local community protocols were not reported and there was no reporting of capacity strengthening. It was unclear if the study had First Nations leadership. However, it is noted in that this article had "minimal information" (Table 3) and therefore an appraisal was performed on the available information.

Snapshot of water safety programs (n=17)

Through snowball sampling seventeen additional Aboriginal and Torres Strait Islander people water safety programs were identified from simple online advertising reports, website and newspaper articles (Appendix 2).

Table 3: The 2018 SAHMRI CREATE Aboriginal and Torres Strait Islander Quality Appraisal Tool results of peer-reviewed programs presented as an adapted traffic light plot.

First Author, year, reference	Program name	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Overall Rating
Crozier, M (2020). Promising practices for boating safety initiatives that target indigenous peoples in New Zealand, Australia, the United States of America, and Canada.	The Torres Strait Maritime Safety Project (TSMSP)															
	The Northern Territory Indigenous Maritime Safety Initiative (NTIMSI)															

Quality Appraisal Tool Key

Yes		Partially	
Unclear		No	

SAHMRI CREATE Aboriginal and Torres Strait Islander Quality Appraisal Tool Questions

Q1 Did the research respond to a need or priority determined by the community?

Q2 Was community consultation and engagement appropriately inclusive?

Q3 Did the research have Aboriginal and Torres Strait Islander research leadership?

Q4 Did the research have Aboriginal and Torres Strait Islander governance?

Q5 Were local community protocols respected and followed?

Q6 Did the researchers negotiate agreements in regard to rights of access to Aboriginal and Torres Strait Islander peoples existing intellectual and cultural property?

Q7 Did the researchers negotiate agreements to protect Aboriginal and Torres Strait Islander peoples' ownership of intellectual and cultural property created through the research?

Q8 Did Aboriginal and Torres Strait Islander peoples and communities have control over the collection and management of research materials?

Q9 Was the research guided by an Indigenous research paradigm?

Q10 Does the research take a strengths-based approach, acknowledging and moving beyond practices that have harmed Aboriginal and Torres Strait peoples in the past?

Q11 Did the researchers plan to and translate the findings into sustainable changes in policy and/or practice?

Q12 Did the research benefit the participants and Aboriginal and Torres Strait Islander communities?

Q13 Did the research demonstrate capacity strengthening for Aboriginal and Torres Strait Islander individuals?

Q14 Did everyone involved in the research have opportunities to learn from each other?

SEARCH 2 (QUESTION 2) RESULTS

The search was conducted by BB, AT, JF and AA in January to March 2023. The database searches in Embase, ProQuest, CINAHL and Informit generated 4254 results and 53 generated results in Google Scholar, Google (Advanced search), Australian Indigenous HealthInfoNet, the Analysis and Policy Observatory, the Clearinghouse for Sport, the Australian Injury Prevention Network, and the Royal Life Saving Society of Australia.

Duplicates were removed in EndNote, with 3549 titles and abstracts remained for screening against eligibility criteria. A total of 80 results were screened at the full text stage. Of the 80 full texts, 49 results were eligible for inclusion. Search engine results in Google Scholar, Google (Advanced search), Australian Indigenous HealthInfoNet, the Analysis and Policy Observatory, the Clearinghouse for Sport, the Australian Injury Prevention Network, and the Royal Life Saving Society of Australia generated results. Duplicates between the search results from Embase, ProQuest, CINAHL and Informit in EndNote were cross-checked against results from the remaining search engines that were input into an Excel spreadsheet. See Figure 2 for the search flowchart.

A total of 80 results were screened at the full text stage. Of the 80 full texts, 49 results were eligible for inclusion.

Meanings and connections to water

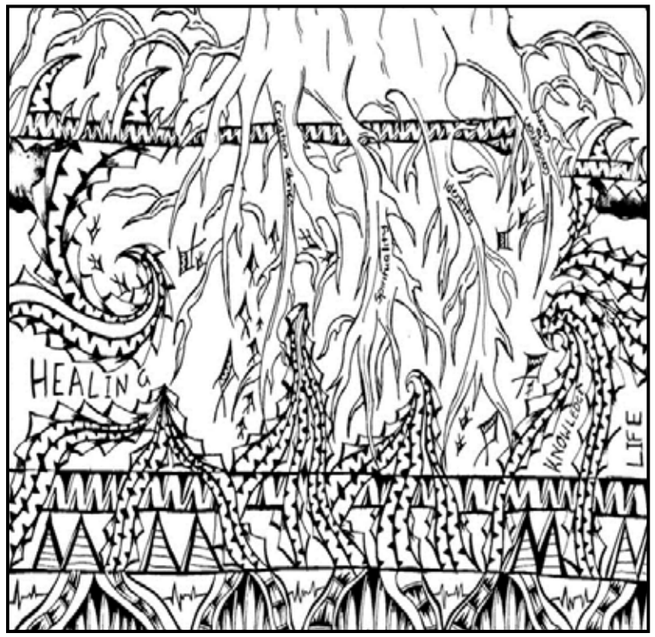
Water was found to mean Knowledge, Healing and Life. It is upon these meanings of water that our peoples draw connections to Creation Stories, Spirituality, Cultural Identity, Country, all through a Symbiotic relationship (Table 4). These meanings and connections remain resilient, are place-based, interconnected and relational to our people and communities. All direct quotes extracted are presented in Table 5: Meanings and connections from the voices of Aboriginal and Torres Strait Islander people.

Table 4: Aboriginal and Torres Strait Islander meanings and connections to water

Meanings	Connections
Knowledge	Creation Stories
Healing	Spirituality
Life	Cultural Identity
	Country
	Symbiotic

In contextualising interconnectedness and relationality, meanings and connection to water are expressed through the artwork of a Mangrove System (Figure 3 and 4) and an integrated narration to report as the 'Mangrove Storyline' – findings as they relate to the mangrove system (Table 5).

Figure 3: Mangrove system.



My name is Xavier Passi, I am a proud Torres Strait Islander, I gather my cultural connections from the Eastern regions of the Torres Strait (Murray Island & Darnley Island) from my father's side and Mainland South Sea Islander (Solomon Islands) from my mother's side.

The following is a visual representation of the cultural connection to water, and what that means to me, which depicts many aspects of the cultural principles and values that lay the foundations and represent my identity, through my expression as an artist. There is a range of different components within the artwork that directly relate to Healing, Knowledge, and Life, which are key pillars within my cultural identity.

These components are represented as a mangrove system which is relevant to the Torres Strait Islands, as mangrove systems can be found across many regions of the Torres Strait Islands, they create ecosystems for marine life, which in return provides food and resources for Torres Strait Islander peoples.

This creates a symbiotic relationship and has allowed sustainability of life for many generations. In relations to the data that have been collected, this translates to the transfer of knowledge, represented by the roots of the mangrove system, the knowledge gives us our creation stories, our spirituality, our identity, and relationality (connections to country – Land, Sea, and Sky).

As the mangrove systems have a deep connection to the water, the water itself represents the flow of life, as the mangrove system receives nourishment from the water the same principle applies to how we use this knowledge that has been passed down through generations and connects us to how we live everyday life.

Figure 4: Mangrove storyline

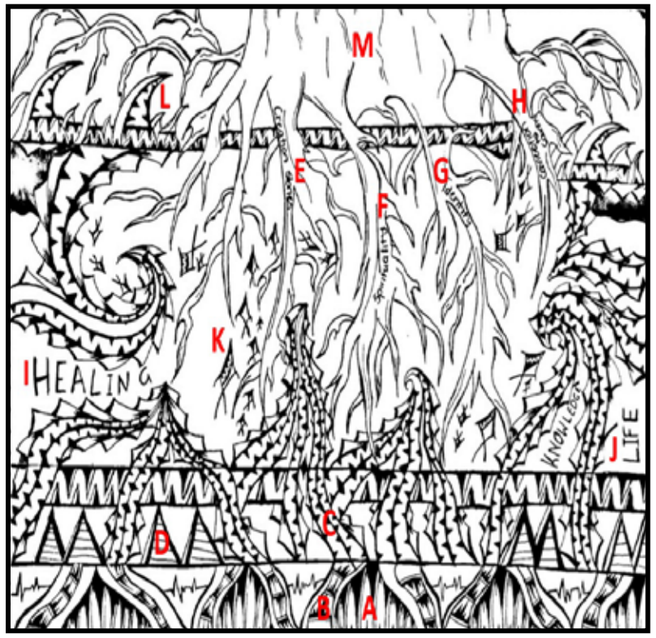


Table 5: Mangrove artwork meanings

A	Represents the Traditional head dress worn in ceremonial dance representing the Shark (Beizam) one of the totems of the Meriam (Eastern Torres Strait) people, specifically from Murray Island (Mer) – Origins of knowledge from ancestors and elders of community.
B	Represents the sounds of the Warup drums. Our song lines, Our stories, Our Giz (bloodlines/lineage) – the knowledge transfer to our people and communities.
C	Represents the peoples, our generations, our communities throughout all 5 regions of the Torres Strait from the Eastern regions to the Western Regions.
D	Represents our shelters, our homes and safe refuge. In contemporary times it is our community facilities of support service providers, health and well-being services, education systems, religious facilities where we seek support, refuge, and guidance. It is our wider Community – Indigenous / non-Indigenous peoples, how we navigate in society today as we are integrated in Western civilisation practices whilst maintaining our cultural origins and identity.
E, F, G, & H	Represents our roots, connecting us to our creation stories, spirituality, identity and connections to country. It is our cultural lore, our principles, values and beliefs that create the framework of our culture – everything underneath feeds up into our lore, principles, values and beliefs. Branches represent identity, our clan groups and family as everything stems from our roots. "Like branches of a tree we may grow in different directions, but our roots remain the same".
I	Is the water itself – many properties and aspects of the water such as healing factors, life, continuation and flow of practices, continuing use of our knowledge to work in our waterways, water gives us knowledge and connects us with other regions of the Torres Strait Islands and the wider surrounding communities.
J	Is the life that water provides, wherever there is water our people and communities will gather.
K	Represents the fish, food and sustenance the water gives – it is our symbiotic relationship with caring for the water and sharing of food with community and family. We take only what we need and care for our waters to ensure sustainable environmental outcomes. "If there were 5 houses in the village and you catch 5 fish, you would give the five fish to those 5 houses and go without if have need be".
L	Represents the crashing waves on the surface against the mangroves. It is the tumultuous wider social and political environment we live in, the influences that we as cultural people face daily, it represents our resilience as people.
M	Represent our people. It is how we represent ourselves and are perceived in the wider population, like the branches and leaves of the mangroves that are visible. It is how we integrate in Western civilisation practices whilst maintaining our cultural origins and identity, that are firmly placed deep within the waters.

Knowledge (creation stories, spirituality, cultural identity, connection to Country)

Water means knowledge, in it lies the intellectual properties of our people which lays the foundations of cultural values and beliefs "…This water is saltwater … and in that water lies our sacred law…". Like the mangrove systems has deep anchor points ("A") grounding it, so it is with water that provides knowledges that grounds us deeply to who we are.

'…Maroota is very, very special … this is like a superhighway almost of knowledge and great spiritual significance as well, but also of practical significance because this is water, this is what you need to survive, this is the most prized possession we have…'

Water is a place where all knowledges are exchanged and transferred through many different formats ("B" and "C") to our people in our communities ("D") and through the generations.

'…I mean, we go up the river, we go up there and camp and do all our cultural things that black fellas do. Whereas out at the mall, you don't do it in front of white fellas. We go out to the beaches, you know, we go and visit our ancestors' places and talk about things and tell stories and music and stuff. So we still practice all that, and we are definitely connected with the land as well – very important…'

Like the many prop roots of the mangrove system ("E, F, G, H") that connects to the multiple anchor points, likewise this exchanging of knowledges are the conduits that connects us all to our:

Creation stories ("E");

'…The Nyungar people, in the South-West talk about the wakarl (spirit water snake) and how, as he travelled across the land, he formed the riverbeds and the mountain ranges. Wave Rock at Hayden forms part of the Nyungar Dreaming stories..."

Spirituality ("F");

"…We believe in the spiritual aspects of water as part of the soul and being of Aboriginal culture, and it [water] should not be disturbed. The Waugalis the serpent that created the waterways. Without the water there wouldn't be any Aboriginal spiritual life…".

Cultural identity ("G");

"…The river [and the water it holds] is the essence, without it we are all dead, spiritually. It plays a crucial part in Aboriginal culture. … The fish traps are about identity. It's who you are, it's about the family, customs, generations before. It connects you to your past; to who you are. Like Muslims have Mecca, the Ngemba have the fish traps….".

To our Country's ("H").

"…Let me tell you something, the sea, the saltwater, the waves, they are my mother, the sea is my mother, it is my mother's ancestor. I know this. I have known this since I was small. Further I will tell you the sea has names, many names, names for the reefs, names for the sea grass beds, names for the sand bars, and the sea has boundaries, we know these boundaries, they did not come here recently. From the time of the ancestral beings and our human ancestors they have been here. Our songs and ceremony are also in the sea, they are running through the sea, both along the bottom of the sea and they also rise and travel on the surface of the sea. White people think the sea is empty that it has no law, but the law and the ceremony is there in the salt water, in the fish, in the sea birds, the dugong and the turtle, it is there and we knowledgeable people are holding it…"

Healing

Water means healing, it provides a holistic healing that flow within and around us like the waters that immerse the mangroves ("I"). It heals us physically, mentally and from our lived experiences:

"…We see it [the ocean] as a healing force, we see a lot of anxiety and depression (in the community) …. And the ocean you know, and surfing, and just sitting at the beach is healing. We're finding a lot of people have told us we're going through anxiety and depressing and going into the ocean is reconnecting them to the country…"

"…I have been through a relationship breakdown … I met up with my friend … the Murray River has a strong connection and I said let's go for a swim. So I go down to the river and was thinking I am never going to get out of this … I put my head in and then got myself back up and it was like everything washed away…".

Water heals country and our spirit:

"…We used to camp here and fish here but we weren't allowed to swim – it's sacred. It's where the Warrajum (Bunyip) comes up to breathe. My father told me about it so we never went into the water. I heard the Warrajum here, I heard the bubbling and it sounded like a whale coming up for a breath when it pushes out the water. The water here has all changed since they put that dam (Wyaralong) upstream. Now there aren't any fish – it's like the water is dead, not healthy. There's been a lot of algae and all the fish have disappeared. If the water isn't healthy then the people get sick. You can't separate the spiritual and physical, everything's connected. If they poison the water, then everyone will be ill as well as the trees and the earth…".

Life (symbiosis)

Water means Life ("J") it is essential in the lives of our people and communities, it ensures we are physically, emotionally, culturally and spiritually healthy and fulfilled.

'…Our Barka means everything to us, it is our mother. It is who we are. We take our name from it, Barkandji means people belonging to the Barka…The Barka gives us healthy food and medicine, it gives us wood to make our artefacts, reeds to weave, it is where we go as families to swim, boat, camp, picnic, fish, go yabbying, and prepare and cook our traditional food. It is where we relax and enjoy our homeland … The river is our memory, we walk along it and remember our history and our ancestors by looking at the marks and places…'.

'…Water is the life for us all. It's the main part. If we are gonna loose that I don't know where we gonna stand. If that water go away, everything will die. That's the power of water. He connect with the land. Pukarrikarra (the dreaming) put 'em all together. One life…'.

Like the mangrove, water protects our lives by providing rich ecosystems with the necessary resources ("K") for us to thrive.

'…Out in the seas like a butcher to use, we got fish, turtle, dugong and crayfish and then we go up in the garden and get all other stuff. That's how our life been, we live from the sea and from the land, you know…'

The lives of our people are connected to water symbiotically. As water provides us with all the resources necessary for life, it is our traditional responsibility as Aboriginal and Torres Strait Islander people to care for our waters in the same way it provides and cares for us.

'…Indigenous peoples are connected to and responsible for our lands and waters and in turn, Indigenous peoples obtain and maintain our spiritual and cultural identity, life and livelihoods from our lands, waters and resources. These cultural and customary rights and responsibilities include: a spiritual connection to lands, waters and natural resources associated with water places, management of significant sites located along river banks, on and in the river beds, and sites and stories associated with the water and natural resources located in the rivers and their tributaries, and the sea, protection of Indigenous cultural heritage and knowledge associated with water and water places, and access to cultural activities such as hunting and fishing, and ceremony…'

'…For Aboriginal peoples, Country is much more than a place. Rock, tree, river, hill, animal, human - all were formed of the same substance by the Ancestors who continue to live in land, water, sky. Country is filled with relations speaking language and following Law, no matter whether the shape of that relation is human, rock, crow, wattle. Country is loved, needed, and cared for, and country loves, needs, and cares for her peoples in turn. Country is family, culture, identity. Country is self…'

Table 6: Meanings and connections from the voices of Aboriginal and Torres Strait Islander people.

#	Author (Year)	Title (Type of Record)	Context	Quote(s) and speaker
1	**Allam R. and Dingo E.** **(2014)**	Talking Language with Ernie Dingo: Vicki Couzens - Ep 3 Of 6; (TV program)	TV Program about language, culture and connection to Country, with Ernie Dingo talking to different people who speak language, and visiting them on their Country	"This one [possum skin cloak] we believe is a representation of Lake Conda one of the main lakes down there... When there's water in there you can see this whole shape. And some of them down here are like a mapping of the eel and fish traps, the aquaculture we have, we have channels where the eels are held, we build weirs and other walls and put the fish nets and other traps there." - Vicki Couzens, a descendant of the Gunditjmara and Kirrae Whurrong clans, located in the western districts of Victoria
2	**Ravens, Tara** **(2008)**	NT: Govts must re-think water policy in north, says leader; (News article)	Water management and policy forum in the Northern Territory	"Aboriginal people have managed Australia's environment and water over countless millennia and continue to denote sacredness and importance to waterholes, springs and rivers" - Donna Jackson, a representative of the Larrakia people
3	**Roberts, Greg** **(2008)**	Vic: Aboriginal group gets second native title claim; (News article)	Context of a native title claim and the restoration of Lake Condah	"Many elders and other people of my age remember Lake Condah before it was drained (by the government in 1954 for agricultural reasons) ... It was full of eels, fish and birdlife. I remember the skies above Lake Condah being black with swans when my father would take me there." - Ken Saunders, Gunditjmara elder
4	**Anonymous** **(2010)**	CSIRO: Valuing and protecting Indigenous wild food resource (News article)	Water management, particularly partnership between CSIRO and the Kowanyama Aboriginal Land and Natural Resource Management Office in the Mitchell River delta	"Our research with CSIRO will increase understanding of the importance of river systems to Kowanyama's economy of 1400 people. This information will also be crucial to our people's effective management of Mitchell delta country" - Rodney Whitfield, Kowanyama Aboriginal Land and Natural Resource Management Office
5	**Bark et al.** **(2015)**	Operationalising the ecosystem services approach in water planning: a case study of indigenous cultural values from the Murray-Darling Basin, Australia (Peer-reviewed journal article)	Environmental management and water planning at a major site of cultural significance for Aboriginal people; Brewarrina Aboriginal fish traps as an example of pre-invasion aquaculture, exploration of Indigenous water values	"All legends, stories are along the river. For example: where the billabong meets the river, it's where the spirits are ... waaways [spirits], still reside in the deep holes in the river." - Indigenous custodians, Ngemba people "The river [and the water it holds] is the essence, without it we are all dead, spiritually. It plays a crucial part in Aboriginal culture. ... The fish traps are about identity. It's who you are, it's about the family, customs, generations before. It connects you to your past; to who you are. Like Muslims have Mecca, the Ngemba have the fish traps" - Indigenous custodians, Ngemba people Further quotes on pages 243 - 245 of Bark et al. 2015
6	**Birrell, L. Carol** **(2006)**	Meeting Country: Deep Engagement with Place and Indigenous Culture (Thesis dissertation)	Raymattja Marika describing Ganma, Saltwater meeting Freshwater, interface methodology, as per Yolngu philosophy	"Ganma is firstly a place; it is an area within the mangrove where saltwater coming in from the sea meets the water coming down from the stream. Ganma is the still lagoon. The water circulates silently underneath... The swelling and retreating of the tides and the wet season floods can be seen in the two bodies of water. Water is often taken to represent knowledge in Yolngu philosophy." - Raymattja Marika, Yolngu Elder Further quotes on page 114 of Birrell et al. 2006
7	**Conroy et al.** **(2019)**	Consequences of changed water management for Aboriginal Australians in the Murrumbidgee catchment, NSW (Peer-reviewed journal article)	Water management, leadership and policy relating to the Murrumbidgee catchment, NSW	"Because you can walk anywhere in the river or down the riverbank and you would see the freshwater mussel shells. But they're not there no more. Again, that goes back to the cows and all of the hard hoofs and the quality of the water" – Yanga focus group participant "Mate, that is the name of the Murrumbidgee River. Murrum means big, bidgee means boss or mate. Okay? If you're my mate, I'm calling you bidge. Now, if my boss was to walk in there, I'd say, 'How are you going, bidga?' There's a different way I've said it. Because you're my mate, but he's my boss. But they're very close. When the Murrumbidgee is in flood, he's your boss. When he's in drought, he's your boss. When there's plenty of water in the system, right now, he's everybody's friend, everybody's mudyi, what they mudj. Right? So he's your mate then, because everything's fine, everybody's happy." - James Ingram Jr (Wiradjuri) Further quotes on pages 174-175 of Conroy et al.
8	**Gay'Wu Group of Women** **(2019)**	Songspirals: Sharing Women's Wisdom of Country Through Songlines (Book)	A book sharing five songlines (milkarri) of Wuymirri, the Whale; Wukun, the Gathering of the Clouds; Guwak, the Messenger Bird; Wititj, the Settling of the Serpent; and Gon-gurtha, the Keeper of the Fire. Bodies of water are present in all five songlines.	"Songspirals are all about knowing Country, where the homelands are, the essence of the land and water and sky. They map the land but in a different way, a deep mapping. In the songspirals, we travel through the land and through the water. We see it, know it, feel it, sing it, come into being with it. Even if a Yolŋu person has never been to that Country, they see it in their spirit. It helps us find our way. We learn the land itself, where those places are, what they mean and how they connect to other places and beings. It is telling a story, singing." - Gay'Wu Group of Women (Indigenous - Yolgnu - and non-Indigenous women) "Ŋarra yukurra nhäma monuk gapu, gäma yukurra ŋarranha bala ŋuylili barrku gulula, Ŋarra yukurra Dhäwulwulyun Yiwarrnha. Ŋupan Marrawulwul Gunbilknha, Ŋilinyu yurru märina rrambaŋina Mirrinyuna Marrawatpatthun. I can see the salt water carrying me, moving together with the current; Carrying me further into the depths of the ocean, where the foundation of my bloodline lies. Here my grandmother and I, together we paddle, following the sea breeze, to finish our journey, across the calm, mercurial waters towards the horizon, our final destination." - Gay'Wu Group of Women (Indigenous - Yolgnu - and non-Indigenous women)
9	**Hawke S.M** **(2012) (28)**	Water literacy: An 'other wise', active and cross-cultural approach to pedagogy, sustainability and human rights: Journal of Media & Cultural Studies (Peer-reviewed journal article)	Water literacy, meanings of water and water values in the context of Aboriginal water management and sustainability, part of cultural and media studies	"Water is life's blood ... all life is reciprocal" - Monica Morgan, Yorta Yorta woman "Water was shared by everyone. Water didn't belong to anyone. Everyone was responsible for that water" - Uncle Roy C. Gordon Widjabul Elder and Linguist
10	**Jackson S and Barber M** **(2013)**	Recognition of indigenous water values in Australia's Northern Territory: current progress and ongoing challenges for social justice in water planning (Peer-reviewed journal article)	Water planning and incorporating Indigenous water values in water planning	"The water goes up and curls back down again, moving through the different countries. We are connected through that water." – Wubaluwun person Further quotes on pages 441 – 444 of Jackson & Barber 2013
11	**Jackson et al.** **(2005)**	Recognition of Aboriginal rights, interests and values in river research and management: Perspectives from northern Australia (Peer-reviewed journal article)	Water management	"These Europeans, they don't know about our area, our sacred sites. These seven (language) groups they know their sacred sites, they can help the catchment management authority. . . . They can learn from us – like two-ways – we can learn from them and they can learn from us" - Don White, a Marranungu man
12	**Kearney et al.** **(2023)**	Sea Country: Plurality and knowledge of saltwater territories in Indigenous Australian contexts (Peer-reviewed journal article)	Article that expands existing knowledge on nature and extent of cultural framings of sea territories for Indigenous maritime peoples in northern Australia	"Let me tell you something, the sea, the saltwater, the waves, they are my mother, the sea is my mother, it is my mother's ancestor. I know this. I have known this since I was small. Further I will tell you the sea has names, many names, names for the reefs, names for the sea grass beds, names for the sand bars, and the sea has boundaries, we know these boundaries, they did not come here recently. From the time of the ancestral beings and our human ancestors they have been here. Our songs and ceremony are also in the sea, they are running through the sea, both along the bottom of the sea and they also rise and travel on the surface of the sea. White people think the sea is empty that it has no law, but the law and the ceremony is there in the salt water, in the fish, in the sea birds, the dugong and the turtle, it is there and we knowledgeable people are holding it" - Dinah Norman Marrngawi, Yanyuwa elder

13	**McDonald E., B. Coldrick and W. Christensen** **(2008)**	The Green Frog and Desalination: A Nyungar Metaphor for the (Mis-) Management of Water Resources, Swan Coastal Plain, Western Australia (Peer-reviewed journal article)	Water management	"We believe in the spiritual aspects of water as part of the soul and being of Aboriginal culture, and it [water] should not be disturbed. The Waugalis the serpent that created the waterways. Without the water there wouldn't be any Aboriginal spiritual life" - Nyungar man
14	**McLean et al.** **(2018)**	Shadow waters: Making Australian water cultures visible (Peer-reviewed journal article)	Exploration of the concept of shadow waters, i.e., waters that are given less attention and Indigenous ways of valuing water	"...water is life. Water is woman. It's everything. It's about creation and where the tributaries come from and the flows and their tributaries and the connections between the landscapes from one to the other. It's water and it's life. Meeting places to trade..." - Tara, a Wiradjuri Traditional Owner "And a lot of the women's sites, groundwater is sacred to them as well and even some of the women's business is to do with groundwater as well and caretaking of that." - Tara, a Wiradjuri Traditional Owner
15	**McNamara K. E. and McNamara J. P.** **(2011)**	Using Participatory Action Research to Share Knowledge of the Local Environment and Climate Change: Case Study of Erub Island, Torres Strait (Peer-reviewed journal article)	Explorations of how knowing Sea Country supports turtle hunting	"Turtle the same as everything. Turtle doesn't come any time. They got season for it, when it gets toward Naiger, that's the time for turtle for mating. Before the mating season we always go for the male one. They got more fat and more meat, better. After mating or time of mating they after them female ones ... Out in the seas like a butcher to use, we got fish, turtle, dugong and crayfish and then we go up in thegarden and get all other stuff. That's how our life been, we live from the sea and from the land, you know." - Elder in a personal interview
16	**Morgan S, Mia T, and Kwaymullina B** **(2008)**	Heartsick for Country: Stories of Love, Spirit, and Creation (Book)	Stories relating to Aboriginal and Torres Strait Islander people's relationship to Country and grief around Country not being cared for	"The Nyungar people, in the South-West talk about the wakarl (spirit water snake) and how, as he travelled across the land, he formed the riverbeds and the mountain ranges. Wave Rock at Hayden forms part of the Nyungar Dreaming stories." - Dawn Bessarab, Bardi/Indjarbandi woman "...the Waakal is the Creator, the keeper of sources. He gave us life and our trilogy boodjar— the land— as our mother and Nyungar moort —family and relations— and Law— knowledge so that we could weave tapestry known as the 'web of life'." - Len Collard, descendant of the Whadjuck and Ballardong Nyungar of the South-West of Western Australia.
17	**Strang V.** **(2005)**	Common senses: Water, sensory experience and the generation of meaning (Peer-reviewed journal article)	Exploring how engagements with water are experienced in the context of an Aboriginal community living alongside the Mitchell River in Far North Queensland	"They took the land away from us and gave it to somebody you know, and say 'allright you can graze your cattle there, on that country' . ..As soon as they bincome along, they push 'em out, put a big dozer in there, doze 'em all out, wentright to the bottom of it and just buggered the waterhole up. And that place is a Story Place. That's what I think we worried about – mainly them story groundbla we – they most important thing to Aboriginal people..." - Colin Lawrence, an Elder Further quotes on page 111 of Strang 2005
18	**Kingsley et al.** **(2009)**	"If the land is healthy ... it makes the people healthy": The relationship between caring for Country and health for the Yorta Yorta Nation, Boonwurrung and Bangerang Tribes (Peer-reviewed journal article)	Exploration of the relationship between Country and health and wellbeing	"I can go out into bush tired and sit there and fall asleep with the quietness, serenity and peacefulness of finding my own little niche along the river". - Yorta Yorta man "I have been through a relationship breakdown ... I met up with my friend ... the Murray River has a strong connection and I said let's go for a swim. So I go down to the river and was thinking I am never going to get out of this ... I put my head in and then got myself back up and it was like everything washed away" - A Boonerwrung traditional custodian
20	**Milroy and Revell** **(2013)**	Aboriginal Story Systems: Remapping the West, Knowing Country, Sharing Space (Peer-reviewed journal article)	Explorationg of Aboriginal story systems and songlines	"Every water got a song. . . . People got to tell you story to make you happy and safe. Every place got a story." – Joe Brown, Fitzroy Crossing
21	**Kwaymullina, A** **(2005)**	Seeing the light: Aboriginal law, learning and sustainable living in country (Peer-reviewed journal article)	Indigenous lawyer Ambelin Kwaymullina describes Aboriginal law and the importance of Country in the Indigenous Law Bulletin	For Aboriginal peoples, Country is much more than a place. Rock, tree, river, hill, animal, human - all were formed of the same substance by the Ancestors who continue to live in land, water, sky. Country is filled with relations speaking language and following Law, no matter whether the shape of that relation is human, rock, crow, wattle. Country is loved, needed, and cared for, and country loves, needs, and cares for her peoples in turn. Country is family, culture, identity. Country is self." - Ambelin Kwaymullina, Palyku woman

22	**Langton M** **(2002)**	Freshwater (Briefing paper)	Briefing paper on Indigenous rights to water for the Aboriginal and Torres Strait Islander Commission	"Aboriginal waterscapes are construed not only as physical domains, but also as spiritual, social and jural spaces, according to the same fundamental principles as our affiliations to places in the landscapes. The dialogic relationship in indigenous thought between the ancestral past and its effect on human existence derives from the Aboriginal understanding of the transformative powers of the spiritual beings that inhabit those places. Their legacy to us is both the nature of our being and the nature of our relationship to place, be it a waterscape or a landscape" – Marcia Langton
23	**Smith et al.** **(2010)**	Impacts on Aboriginal spirituality and culture from tourism in the coastal waterways of the Kimberley region, North West Australia (Peer-reviewed journal article)	Ecotourism and the impacts of tourism on Aboriginal spirituality and culture	"We don't put food or rubbish or even dirty fingers into the water otherwise the sea would get angry and rough." - Balanggarra Traditional Owner
24	**The Murray-Darling Basin Authority** **(2015)**	Aboriginal waterways assessment program	Environmental management program	"There's people around that we need to tap into, for our cultural knowledge of our rivers. You know, get back and learn about our river systems, and our area. We need to put it together. You don't know what I know, and I don't know what you know." – Participant of the Aboriginal Waterways Assessment program
25	**Hampshire W J** **(2011)**	Dhangude Dunghutti Burrai. Welcomed to Dunghutti Land: towards a shared understanding of grief and loss (Thesis dissertation)	Ethnographic study of grief and loss of Aboriginal people living on Dunghutti Country	"I mean, we go up the river, we go up there and camp and do all our cultural things that black fellas do. Whereas out at the mall, you don't do it in front of white fellas. We go out to the beaches, you know, we go and visit our ancestors' places and talk about things and tell stories and music and stuff. So we still practice all that, and we are definitely connected with the land as well – very important." - Aboriginal person living on Dunghutti country
26	**Stewart et al.** **(2021)**	"Connection to Culture Is Like a Massive Lifeline": Yarning With Aboriginal Young People About Culture and Social and Emotional Wellbeing (Peer-reviewed journal article)	Study of connection to culture and social and emotional wellbeing of Aboriginal young people in urban Melbourne	"I obviously long for Country and going home for visits and stuff and I know when you kind of feel that real disconnection you just need to go home.", and "where I live, is, industrial area, there's no beautiful nature strips there's no bush area, there's no water to connect to, like running water. So, I find it really difficult." - young urban Aboriginal people living in Narrm (Melbourne), Australia
27	**Brennan C** **(2000)**	Karijini Grace (Travel blog)	Travel blog by an Irish traveller in Karijini National Park	"You must always do it when you come to the waterhole (speaking of the tradition of taking some water into your mouth and gently spraying it out again). People ask me why Aboriginal people do it and I ask them why do people say grace?" - Darren Injie, Yinhawangka Language Group
28	**Kimber G R** **(2001)**	Australian Aboriginals' perceptions of their desert homelands (part 2) (Newsletter)	An account of Aboriginal people's relationship to desert homelands	"Lherre Mpwarntwe, that old Todd River. He is a back-bone, lying there. His head is up in that head-water country. This is his body, right here in Alice Springs. The river is his back-bone, and that good soil on both sides, that is his back muscles, that is his flanks. His legs stretch down past Heavitree Gap [the southern entrance to Alice Springs] to Ooraminna [a rock-hole 35 kilometers south]. Down that way. That is the good country. That is all the Yeperenye Caterpillar Dreaming [totem] country. Everyone can live here now. We can all get along. Be friends, be happy, working together. Lhere Mpwarntwe - that is what we call him, all the Arrernte people. That is the Todd River now, like his back-bone." - Wenten Rubuntja, a senior Arrernte man
29	**Stronach et al.** **(2018)**	Djabooly-djabooly: why don't they swim?': the ebb and flow of water in the lives of Australian Aboriginal women (Peer-reviewed journal article)	Aboriginal women's relationship to water and swimming	"You could never be a swimmer. You could never swim in an Olympic pool because in the 60s, my – you weren't allowed to do that. You just was told that Aboriginal people weren't allowed in there. My dad, he went – he served in the war and, like, he spent three years in a prison camp and then when he come home he still – his kids still weren't allowed to go in the pool." – 72 year old Kamilaroi woman "Mum got me into swimming when I was very, very young for physiotherapy for cerebral palsy ... And then I kept getting better and better so then I thought, 'I could actually do a bit better than this.' And it [the interest in competitive swimming] sort of started from there." – 20 year old Wiradjuri woman

30	**Australian Human Rights Commission** **(2008)**	Indigenous Peoples and Water. In Native Title Report 2008 (Book chapter)	Accounts of the relationship between Indigenous Peoples and water in Australia in the context of native title	"Water is the life for us all. It's the main part. If we are gonna loose that I don't know where we gonna stand. If that water go away, everything will die. That's the power of water. He connect with the land. Pukarrikarra (the dreaming) put 'em all together. One life." - John 'Dudu' Nangkiriyn, Bidyadanga "Indigenous peoples are connected to and responsible for our lands and waters and in turn, Indigenous peoples obtain and maintain our spiritual and cultural identity, life and livelihoods from our lands, waters and resources. These cultural and customary rights and responsibilities include: a spiritual connection to lands, waters and natural resources associated with water places, management of significant sites located along river banks, on and in the river beds, and sites and stories associated with the water and natural resources located in the rivers and their tributaries, and the sea, protection of Indigenous cultural heritage and knowledge associated with water and water places, and access to cultural activities such as hunting and fishing, and ceremony." – Tom Calma Further quotes on page 172
31	**Green and Moggridge** **(2021)**	Inland water: Indigenous water. In: Australia State of the environment	Indigenous water management	"Lack of access to water and Country has been a threat to Indigenous people's cultural obligations and maintaining those cultural places. Indigenous people see water and country as a linkage to the creation stories, language, wellbeing, spirituality. If Indigenous people are unable to access country and water the spirit and wellbeing of the people suffers. If cultural places fall on private property, then that cultural connection or set of values may fall into disrepair and be lost to generations". - Bradley Moggridge, Kamilaroi man
32	**Government of South Australia** **(2019)**	Murray-Darling Basin Royal Commission Report	Government-led water management report relating to the Murray-Darling Basin	"Our Barka means everything to us, it is our mother. It is who we are. We take our name from it, Barkandji means people belonging to the Barka. The Barka was created when Kuluwarra let the Ngatji (Rainbow Serpent) out of his waterbag up near Bourke, and the Ngatji lives in it still. Thirri also shaped the channel, bends and islands of the river after the Ngatji went thru [sic] with the water. The Ngatji looks after us and we have to look after it, it is our traditional job to look after the Ngatji and the river and the other surface and sub-surface waters of the Barka and its floodplains. The Barka gives us healthy food and medicine, it gives us wood to make our artefacts, reeds to weave, it is where we go as families to swim, boat, camp, picnic, fish, go yabbying, and prepare and cook our traditional food. It is where we relax and enjoy our homeland ... The river is our memory, we walk along it and remember our history and our ancestors by looking at the marks and places." - Uncle Badger Bates, Barkandji Elder and knowledge holder
33	**Central Coast Council** **(2020)**	Waterways – the source of life (Video)	Environmental and cultural education	"This area [Darkinjung Country] would have been beautiful and pristine... ...with beautiful freshwater creeks and streams running into this lagoon. So it would have been an amazing place to live at that time. For thousands of years our people had looked after Country by preserving and protecting all species and that was a way of traditional lore and how we practiced looking after Country. We never took more than what we needed from these places and I guess we lived in a paradise as such and some people say we still live in this paradise here. I'm lucky to have what we have here on the Central coast in our waterways, our lagoons, our rivers." - Gavi Duncan, Darkinjung Local Aboriginal Land Council
34	**Constable, Janis & Love, Karen** **(2015)**	Aboriginal Cultural Water Values - Clarence-Moreton (Qld) bioregional Assessment Programme	Environmental management and Aboriginal cultural values in the Clarence-Moreton bioregion in Queensland	"We used to camp here and fish here but we weren't allowed to swim – it's sacred. It's where the Warrajum (Bunyip) comes up to breathe. My father told me about it so we never went into the water. I heard the Warrajum here, I heard the bubbling and it sounded like a whale coming up for a breath when it pushes out the water. The water here has all changed since they put that dam (Wyaralong) upstream. Now there aren't any fish – it's like the water is dead, not healthy. There's been a lot of algae and all the fish have disappeared. If the water isn't healthy then the people get sick. You can't separate the spiritual and physical, everything's connected. If they poison the water, then everyone will be ill as well as the trees and the earth" – John Long, Ugarapal knowledge holder Further quotes pages 16-20
35	**The State of Victoria Department of Environment, Land, Water and Planning** **(2019)**	Chapter 8. Aboriginal water values and uses. In: Victoria's North and Murray Water Resource Plan	Water management and Aboriginal Traditional Owner groups' water values within the Northern Victoria and Murray water resource plan area	"Cultural Heritage cannot survive without water" - Uncle Neville Whyman "Water encompasses Country like a living, breathing thing." - Tati Tati Wadi Wadi Traditional Owner group "The river is our ancestors' bloodstream. Without the river we can't survive, the river without us can't survive" - Weki Weki person Further quotes on pages 212, 241, 258, 303, 305, 312-314

36	**Murray-Darling Basin Authority** **(2016)**	Our water, our life - An Aboriginal study in the northern basin	Importance of water to Aboriginal people in the northern basin	"Our people are drawn to the water. When it rains and the flows are good, we gather at the waterways to fish, the children play and swim, and we enjoy being together. We hear laughter and we are happy which is good for the wellbeing of our people. We are happy because Country is happy; when Country is happy our spirits are happy. ... When our rivers and waterways are dying we are dying with our Country. Our science dies, our culture dies, and our ceremony dies." - Northern Basin Aboriginal Nations Board Further quotes on pages 28, 44, 46, 57-60
37	**CSIRO** **(2013)**	Aboriginal water values and management in Northern Australia (Video)	Aboriginal water values and management in Northern Australia	"This [the Mabo decision] means that our use of land and water is protected. But when decisions about water are being made we are often not included. Those rivers, creeks and billabongs are important to us. We rely on those places for food and medicines. Other people say they need water for their businesses such as farming and cattle but no one has really talked to us about how important those water places are for hunting and fishing practices" - Traditional owner, Patricia Marrfurra McTaggart
38	**National Oceans Office** **(2002)**	Sea Country an Indigenous perspective - The South-East Regional Marine Plan Assessment Reports	Marine planning and Indigenous people's perspectives on Sea Country as part of the South-East Regional Marine Plan	"Our cultural links with the coast and sea are vital to us. To be able to come here and use them to swim and fish is part of our cultural heritage. Mersey Bluff is a known cultural site. Our sense of ownership is continuous" - Mr Merv Gower, Mersey Leven Aboriginal Corporation, Devonport Further quotes on pages 25-28
39	**Yu, Sarah** **(1999)**	Ngapa Kunangkul: Living water. Report on the Aboriginal cultural values of groundwater in the La Grange Sub	Exploration of Aboriginal cultural values of groundwater in the La Grange Sub-Basin, Fitzroy Valley, WA. Traditional Owners of the area were asked about the significance of groundwater, as part of the Allocation Plan for the use of groundwater in the area	"Water is the life for us all. It's the main part. If we are gonna lose that I don't know where we gonna stand. If that water go away, everything will die. That's the power of water. He connect with the land. Pukarrikarra (the dreaming) put 'em all together. One life." - John 'Dudu' Nangkiriyn "There are inside stories for living waters, known all over the country. They've all got connections. The Law is big. It is not passive, it's active. We can't speak about this. It's not public. Water, culture and land. That's our ngurrara [country]. You can't divide them, doesn't matter which language you speak" – Harry Watson "without our living water our country has no meaning" - Donald Grey, Bidyadanga "We have to look after this water. If the water go, everything will be finished. Life gone. Spirit gone. People gone. The country will have no meaning" - John 'Dudu' Nangkiriyn
40	**Constable, Janis & Love, Karen** **(2015)**	Aboriginal water values Galilee subregion (Qld), a report for the Bioregional Assessment Programme	Environmental management and Aboriginal cultural values in the Galilee subregion in Queensland	"One example of water and dreamtime is the story of Moonda Nurra. This story comes from the female rainbow serpent aka Moonda Nurra who created the Yirendali landscape. Moonda Nurra used her breath to blow the winds, the Barrookka, which spewed up the fish, animals, insects, plants and everything that belong to country. Her tongue is the lightning that we see, flashing in anger as her tears, flow down her face and onto country, and her tear drops are the rain water or Kooma, and her colours are seen in the Woggurree rainbow" - Jim Hill, Yirendali Elder Further quotes on pages 14, 25-30, 34-41
41	**Donaldson, Susan Dale** **(2021)**	Singleton Water Licence Aboriginal Cultural Values Assessment	Public report to the Central Land Council	"Aboriginal law is strong. If I do the wrong thing and my trees dies, I'll be gone. If Dreaming trees get lost, we be gone too. We got to tell them this. Someone will be in trouble, the bloke not listening to us, he will get sick. That's our law. Our law is in the ground and will not change. When I'm gone my family got him (The Law). Our main word to them is "please take it easy on the water all around the world"." - Frankie Holmes Akemarre "I came to this place as a child with my father. This is a water dreaming place. The Aylpele (River Red Gum) and soak is the main place in the creek. The Murphy family are related in here too. If this tree dies the owners will go with it but another tree might grow. The story stays the same." - Brian Jakarra Further quotes on pages 10, 12-13, 25-28, 33, 37-38, 40-41, 44-45, 47-49, 52, 57-64, 67-68, 71-73, 75, 78-83
42	**Chaffer, Lorraine**	Aboriginal cultural connections and the Hawksbury river (Peer-reviewed journal article)	Geography Bulletin	"Maroota is very, very special ... this is like a superhighway almost of knowledge and great spiritual significance as well, but also of practical significance because this is water, this is what you need to survive, this is the most prized possession we have ..." - Jasmine Seymour, Darug woman

43	**McElroy, Nicholas (2016)**	Fingal surf program revives story of the Gold Coast's first lifeguard (News story)	News story about Juraki Surf Culture program	"We see it [the ocean] as a healing force, we see a lot of anxiety and depression (in the community)," she said. And the ocean you know, and surfing, and just sitting at the beach is healing. We're finding a lot of people have told us we're going through anxiety and depressing and going into the ocean is reconnecting them to the country." – Mary Slabb
44	**Somerville, Margaret (2008)**	Bubbles on the Surface: a methodology of water (Conference paper)	A methodology for researching place	"I don't remember a time without the lake. There were times when it dried back but they were quite rare it was always full and in season there'd be thousands and thousands of birds so you'd wake up in the morning to birds getting a fright and taking off making a terrible clatter, and then going to sleep of a night time listening to all the birds that lulled chatter that you hear of an evening" – Chrissiejoy Marshall
45	**Victorian Aboriginal Heritage Council (2021)**	'Taking Care of Culture': State of Victoria's Aboriginal Cultural Heritage Report (Report and Discussion Paper)	Cultural heritage management	"Water effects the dreaming places, environmental flooding impacts Aboriginal Cultural Heritage." - Sissy Pettit, Deputy Chairperson, Victorian Aboriginal Heritage Council "Cultural Heritage is our lifeblood. As Traditional Owners, our Heritage is our relationship to Country – land and waters, the rocks, soil, plants, animals and all the things on it. Our Heritage connects us with each other. We look after Country, and it looks after us – body, heart and spirit. We want to make sure that the Culture is living, vital and continuing for many generations to come. We have that responsibility. It is our inherited and fundamental right, as custodians of the oldest living Culture on earth, to practice Culture and to set a vision for a strong future for our Cultural Heritage." - Legislative Review and Regulatory Functions Committee, Victorian Aboriginal Heritage Council
46	**Maclean, Kirsten and Robinson, Cathy (2011)**	Aboriginal knowledge partnerships for water planning and assessment in the Wet Tropics region (Research report)	Aboriginal water values in the Girringun region, from the perspective of the Girringun Aboriginal Corporation	"Water is sacred. It is tied to language, to peoples' story places and their name places [...] Water connects people to their country, to their sites, to their culture, to their kinship, to their people [...] Culture wouldn't work if that river wasn't there. [just as] the human body, wouldn't work without that blood" - Girringun Aboriginal Corporation "Water is a main resource for people, as in the old days people used to walk across the country carrying water in a little bucket (dilly bag) made from local vegetation. Water brings life to us and was essential when they used to walk across the country. They used to camp by creeks. It's good to have water, we bring our grannies to these places, the kids love to be on the creek side and to swim around (even more than they like to be in the town)" - Girramay Elder Further quotes on pages 24 and 29
47	**National Oceans Office (2004)**	Living on Saltwater Country: Review of literature about Aboriginal rights, use, management and interests in northern Australian marine environments (Background paper)	Marine environment management from perspective of Aboriginal people as part of the Northern regional marine planning process	"We live on the sea, dugong, turtle, fish. That's always been the way. We have to look after that sea to make sure we can still survive and can feed our families." - Lardil Traditional Owner in the Wellesley Islands "This water is saltwater ... and in that water lies our sacred law." - Yolngu Traditional Owner, north-east Arnhem Land Further quotes on pages 12-13, 19, 21, 52, 54
48	**Barber, Marcus (2005)**	Where the Clouds Stand: Australian Aboriginal Relationships to Water, Place, and the Marine Environment in Blue Mud Bay, Northern Territory (Thesis)	An exploration of the relationship between people, water, and places in the everyday life of the Yolngu people of Yilpara in northeast Arnhem Land	"Bininydjirri: the Madarrpa and the Dhalwangu are the two clans and they sing all those songs from the top (river) to the sea. As we sing along, we see the importance of those words and where people identify themselves. What they are and their link to the particular song, the land, and the water. The saltwater" – Yolngu person
49	**Money, Jazz (2022)**	Bila, a river cycle (Video)	Poet Jazz Money describes her poem, 'Bila a river cycle', before she performs it at TedX, Sydney	"Bila is the Wirdjuri word for river. Wirdajuri are known as the people of the three rivers... The second word is 'billabang'. Billabang has been anglicised to billabong and it means a pool of water cut off from the main river system, same as it does in the anglicised version. But Billabang in Wiradjuri also means the milky way. It means the universe. And there is something in that pairing in that dual meanings of a pool of water and our home in the vastest sense..." – Jazz Money, Wiradjuri woman

DISCUSSION

This report was conducted in two stages. The first was a systematic scoping review examining water safety programs delivered across Australia for Aboriginal and Torres Strait Islander people and communities.

This included eight articles, in total reporting on 14 water safety and education programs. Only one article was a peer-reviewed publication (11) and therefore quality appraised (Table 3). The articles reported taking a strengths-based approach (a way of working that focuses on abilities, knowledge, and capacities rather than deficits, or things that are lacking) with plans for the translation of findings into sustainable policy. The second stage was a desktop review examining meanings and connections to water. The findings show that water means Knowledge, Healing and Life. It is upon these meanings of water that we draw connections to Creation Stories, Spirituality, Cultural Identity, and Country, all through a symbiotic relationship. These meanings and connections remain resilient, are place-based, interconnected and relational to our people and communities.

This review show that comprehensive reports on water safety programs are publicly available, however few programs or evaluations are published through the rigour of peer-review or through an Indigenous worldview. The available information suggests that water safety programs with high success in terms of engagement, reach and access are programs that are framed on social and economic interests whilst embedding within, core elements of water safety. Examples of social interest programs include an 'Indigenous Sport Program' which successfully engaged in water safety through preference of a community-chosen surfing program (17). As part of program, participants learned how to be safe and confident in the surf and (re)connected to 'Country'.

Further, economic interests were closely linked to water safety programs, as broad community reach was achieved through employment opportunities for participants who completed the program (19). Moreover, water is highlighted to mean 'Life', providing a rich ecosystem of resources necessary for the sustenance of self, family and community. In a contemporary context, the water safety sector can reinforce this meaning by supporting employment opportunities that provide Aboriginal and Torres Strait Islander people and communities with the modern resources needed for success. Emphasizing how programs can connect to the meanings and connections of water will enhance promotion and advocacy within communities by applying an Indigenous worldview.

It could not be determined how water safety programs were framed around cultural interests (activities that support meanings and connections to water), due to the inability to appropriately quality appraise all included articles and lack of available evaluations. While such evaluations may not be available in the peer-reviewed literature, they are often done as part of an organisation's internal documentation processes. Therefore, the absence of evaluation noted in this report should be interpreted with this in mind. In this context, this is one focus area for Aboriginal and Torres Strait Islander water safety strategy to 'evaluate the effectiveness of relevant campaigns, program and services' (4). Evaluations of programs are essential for gaining an in-depth understanding of how well programs achieve goals, what works well, and which areas could be improved. The availability and sharing of such information are critical to enhancing water safety strategies and should be encouraged. Developing tools to facilitate pragmatic assessment of water safety programs and services could provide a mechanism to address the absence of evaluations, ultimately improving engagement and participation.

Considerations for enhancing cultural connections to water safety programs should focus on targeting the framing of programs around the cultural interests of communities and building the cultural capabilities of staff at all levels within the water safety sector. The success of such culturally framed approaches to water safety has been demonstrated in Māori communities of Aotearoa (New Zealand) through 'Kaimoana'. In this approach, cultural practices such as free diving to gather 'Kina' (Sea urchin) have been integrated into school and Marae (traditional meeting place) programs for teenagers (20). Before engaging in free diving, participants needed to demonstrate increased water safety, competence and practical skills.

The benefit of such approaches in an Australian context would have a far-reaching impact, extending not only to improving water safety skills but beyond to also prioritising important social, emotional, cultural and spiritual wellbeing (21). Furthermore, in Aotearoa, waka (ancestral canoes) and water are central to Māori culture. Educating Pākehā (New Zealand European) aquatic educators the role of waka was fundamental to learning Indigenous Māori water safety within the Aotearoa context (22). Ensuring that staff at all levels within the Australian water safety sector are enculturated in Aboriginal and Torres Strait Islander meanings and connection to water is also a necessary measure. Doing so will promote non-Indigenous people's understanding of Aboriginal and Torres Strait Islander water safety, while enhancing the capability of aquatic educators to navigate social and cross-cultural interactions. Furthermore, these considerations will foster culturally respectful environments and contribute to the recruitment and retention of Aboriginal and Torres Strait Islander water safety staff.

The Australian Water Safety Council in its 2030 strategy has an aspirational goal of reducing drowning by 50% by 2030 (4). The strategy is grounded by inclusion, safe participation, targeted advocacy, empowering communities, and taking action as guiding principles; with research, policy, advocacy, collaboration, education, safe environments, and workforce participation as important enablers (Figure 5). In the Strategy, Aboriginal and Torres Strait Islander peoples are identified as a priority population, the key activity focus areas for 2021-2025 are set out with 7 thematic areas (Figure 6).

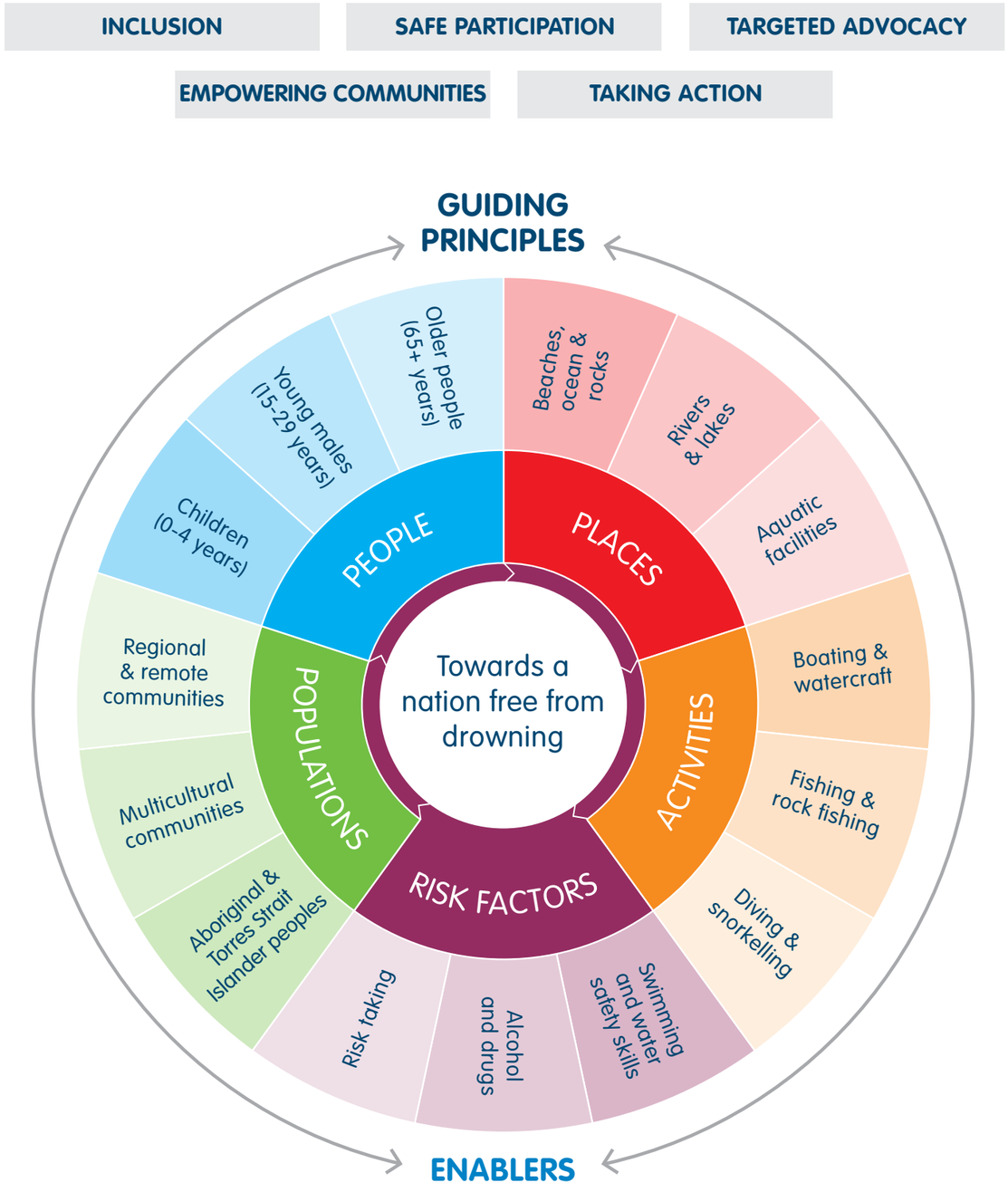
In addition to the work that is being done, ensuring Aboriginal and Torres Strait Islander peoples and communities are connected culturally to water safety programs is important to further engage communities, foster ownership of initiatives, build trust and develop long-term sustainable partnerships.

This report identified many programs (both reported and unreported in the peer-reviewed literature) being delivered. A final but important aspect for reflection is that Aboriginal and Torres Strait Islander peoples are amongst the most researched peoples in the world (23).

Conducting processes of inquiry for enhancing water safety and drowning prevention programs requires building on established community resources and leveraging existing programs, services and knowledges. Recently, opportunities have been proposed to identify multisectoral approaches for leveraging resources, programs, and services in drowning prevention (24).

Modelling these approaches through context-specific frameworks can provide solutions to help reduce the burdens faced within communities.

Figure 5: Australian Water Safety Strategy 2030



RECOMMENDATIONS

It is important that programs are framed around the social, economic, and cultural interests of the community. Additionally, promoting Aboriginal and Torres Strait Islander peoples understanding of water among all levels in the water safety sector is crucial to enhancing water safety skills and drowning prevention strategies in communities. Strategies should adopt a framework approach that includes short-, medium-, and long-term goals, along with a multi-tiered prioritisation at the Community, State, and National levels.

This report outlines recommendations based on the findings and in line with the 2030 Australian Water Safety Council key activities 2021-2025 for Aboriginal and Torres Strait Islander peoples.

RECOMMENDATION 1

Key Activity Area	What should I be doing now?	Why should I be doing this?	What does it mean going forward?
Collaboration	Reinforce how current programs, initiatives and services can connect to Aboriginal and Torres Strait Islander knowledge systems (meanings and connections).	Emphasizing this link will enhance promotion and advocacy of programs and initiatives (such as messaging) within communities by applying an Indigenous worldview. It will also provide a platform to foster greater community ownership of initiatives, participation, build trust and develop partnerships.	Effective partnership with Aboriginal and Torres Strait Islander researchers and communities (e.g., water safety cultural advisory group) to understand placed-based meanings and connections to water and reinforce this in the messaging of programs for promotion and advocacy.

RECOMMENDATION 2

Key Activity Area	What should I be doing now?	Why should I be doing this?	What does it mean going forward?
Research	Assess community programs and initiatives for Aboriginal and Torres Strait Islander cultural connection, safety and worldview.	Undertaking this task will address an evidence gap caused by the lack of available evaluations. Providing an outlay of existing and future programs and services strengths (what's working well?) and opportunities (how can value be added?) to guide culturally appropriate practice. This will provide measures to enhance community participation in water safety and drowning prevention programs.	Co-creating a pragmatic water safety assessment tool. This will enable the assessment of current and future programs, initiatives and work environments for Aboriginal and Torres Strait Islander cultural connection, safety and worldview.

RECOMMENDATION 3

Key Activity Area	What should I be doing now?	Why should I be doing this?	What does it mean going forward?
Advocacy	Advocate for cultural responsiveness training to be included into the workforce in Australian water safety organisations, including holding a roundtable forum with key stakeholders and partners.	To enhance connection to water safety program we need to create a culturally capable workforce and environment. Strengthening cultural capabilities will promote non-Indigenous peoples' learnings in Aboriginal and Torres Strait Islander water safety, increase capability to navigate social and cross-cultural interactions. This will also: • enhance community participation in programs, initiatives and services. • promote workforce inclusion and retention across the water safety sector	There is a collaboration between stakeholders and organisations to develop a water safety cultural responsiveness training program and agree on ensuring it is delivered to all levels of staff within water safety.

RECOMMENDATION 4

Key Activity Area	What should I be doing now?	Why should I be doing this?	What does it mean going forward?
Education / Safe Environments	Utilise cultural interest to engage children, youth, adults and communities with water safety programs and initiatives.	Rivers, seas and waterways are a central part of culture and are the preferred location for recreational swimming over pools. Teaching water safety should be reflective of the holistic knowledges that Aboriginal and Torres Strait Islander people have had for thousands of years. Framing programs on cultural interests ensures learning water safety skills can be through Indigenous processes so that communities can safely enjoy water and connect to culture.	Effective partnership with Aboriginal and Torres Strait Islander with community Elders (e.g., water safety cultural advisory group) to understand their placed-based cultural interest connected to water.

Figure 6: The Australian Water Safety Strategy 2030"Key activities 2021-2025" for Aboriginal and Torres Strait Islander peoples

Key activities 2021-2025

Research
- Support Aboriginal and Torres Islander-led and community engaged research, including qualitative research
- Investigate contributing factors to drowning in Aboriginal and Torres Strait Islander communities
- Evaluate the effectiveness of relevant campaigns, programs and services

Policy
- Strengthen availability and sustainability of swimming pools in remote Aboriginal communities
- Align water safety to health, education and employment policies and programs, including Closing the Gap targets

Advocacy
- Campaign for improved access to culturally appropriate programs and services
- Advocate for increased investments in water safety for Aboriginal and Torres Strait Islander communities
- Encourage organisations to develop a Reconciliation Action Plan

Collaboration
- Establish a National Aboriginal and Torres Strait Islander Water Safety Reference Group
- Reinforce local partnerships with community members and organisations
- Develop drowning prevention strategies and programs that are led by Aboriginal and Torres Strait Islander peoples and supported by the water safety sector

Education
- Increase accessibility and availability of culturally appropriate water safety, swimming and lifesaving programs
- Deliver culturally safe and responsive swimming and water safety programs that are co-designed with, and delivered by communities
- Deliver community education with a focus on adults aged 45+ years, alcohol and river safety

Safe environments
- Advocate for increased access to a range of safe swimming environments
- Acknowledge and recognise the deep connection Aboriginal and Torres Strait Islander peoples have with the land and water when planning and implementing strategies and programs

Workforce
- Strengthen pathways to education, training and employment across the aquatic workforce
- Create a more culturally competent and diverse workforce

CONCLUSION

In a post-colonial society, promoting culture across generations is crucial (26). The water safety sector occupies a space of cultural significance.

By working to implement the recommendations in this report, we can enhance cultural connections and adopt holistic approaches.

This will support the goal of reducing drowning within Aboriginal and Torres Strait Islander communities. Additionally, these approaches can link the impact of water safety programs to cultural determinants of health and well-being.

Appendix 1: Aboriginal and Torres Strait Islander water safety programs – Included articles.

Reference(s)(Study type)	**Program name;** (delivered by)	**Location (setting); duration**	**Program aim**	**Program characteristics**	**Target population** (number of people)	**Evaluated?** (Yes/No) Outcome if available	**Status** (Active Complete/ Unclear)
Crozier M & Giles, AR (2020). Promising practices for boating safety initiatives that target indigenous peoples in New Zealand, Australia, the United States of America, and Canada. **Additional Information from:** **Australian Indigenous HealthInfoNet** **QLD Government** **(Peer-reviewed)**	The Torres Strait Maritime Safety Project (TSMSP); (Maritime Safety Queensland, Queensland Government Collaboration between the Australian Maritime Safety Authority and the Torres Strait Regional Authority)	QLD (regional, remote); since 2006	Integrated and culturally adapted boating safety campaign to: -Reduce number of seafarers lost in the Torres Strait, -Increase the chance of survival for lost seafarers; -Promote community and industry commitment to safety; Increase boating safety knowledge and awareness; Increase accessibility of boating safety equipment.	Culturally adapted TSMSP for Torres Strait Islander seafarers: -Attendance at BoatSafe, recreational marine driver license course for Torres Strait Islanders. -Components of Boatsafe integrated into the community's school curriculum; -Provision of boating safety equipment including safety bags, a personal flotation device, ropes and a bailing bucket; -An increase in the supply of safety equipment in local island stores; -An emergency position indicating radio beacon exchange program (EPIRB), offering new EPIRBs to Torres Strait Islander seafarers for a reduced cost.	Seafarers in the Torres Strait and Torres Strait Islander seafarers (not provided). Australian Maritime Safety Authority used a census for information gathering	Yes Minimal information provided	Active
	The Northern Territory Indigenous Maritime Safety Initiative (NTIMSI); (Northern Territory Government)	NT (remote); since 2015	Educate and support small boat operators in several remote communities	Magazine and radio advertising, community posters, safety checklists, and stickers; -Provision of "grab bags" of safety equipment (e.g., emergency beacons and flares) free of charge to Indigenous boat owners	Indigenous boat owners in remote communities	Yes Minimal information provided	Unclear (ongoing initiative)
Juniper A, Nimmo L & Enkel, S (2015). The Photovoice Project: REMOTE ABORIGINAL **SWIMMING POOL RESEARCH**	The Remote Aboriginal Swimming Pools Project (RASP) (Royal Life Saving WA)	Eight communities in WA (Balgo, Bidyadang, Burringurrah, Fitzroy Crossing, Jigalong, Kalumburu, Warmun, Yandeyarra). (remote); since 2000	"To work in consultation with remote Aboriginal communities to run safe, efficient, and effective aquatic facilities and to meet the needs and expectations of the communities" Royal Life Saving WA To develop strong foundation swimming skills for all ages before introducing more technical swimming and survival skills and sequences	Delivery of safe, efficient and effective aquatic facilities and programs	People in Aboriginal remote communities in WA Aboriginal and Torres Strait Islander children aged 4 to 12 years (over 500 school aged children completed the program)	No formal evaluation. Positive impact in remote Aboriginal communities; Swimming pools were a valued asset to communities, High rates of attendance, health benefits, social benefits, improved swimming and water safety skills and improved school attendance.	Active
Pidgeon S & Nimmo L (2020). Drowning deaths among Aboriginal and Torres Strait Islander people: a 10-year analysis 2008/09 to 2017/18. Royal Life Saving Society – Australia: Sydney.	Ngadyung; (Royal Life Saving ACT)	Canberra, ACT; since 2007	To develop strong foundation swimming skills for all ages before introducing more technical swimming and survival skills and sequences	Provision of aquatic sport and recreation activities	Aboriginal and Torres Strait Islander children aged 4 to 12 years (over 500 school aged children completed the program)	No formal evaluation "The Ngadyung program has become such an important part of my children's lives over the past few years. They look forward to their lessons every week. The program has given my children the confidence to get in the water and participate successfully in school swimming carnivals in which they otherwise wouldn't have had the opportunity to do. They thoroughly enjoy the program and we are extremely grateful that this program has been implemented in our community, giving our children the knowledge of water safety." Parent	Active
	Remote Swim, Survive and Strive Program (RSSSP); (Royal Life Saving NT)	NT (remote); 2008-2020	Improve quality of life for Aboriginal and Torres Strait Islander people living in remote communities in the NT	Provision of swimming and water safety lessons for children, community lifesaving carnivals and nationally accredited training in first aid, Bronze Medallion, pool lifeguard and pool plant operator's awards. -Establishment of a network of community pools in remote communities throughout the NT.	Aboriginal and Torres Strait Islander children and adults	No formal evaluation. Key achievements from 2008-2020: Aboriginal and Torres Strait Islander children and adults in remote communities (>23,000 children taught swimming and water, safety skills, >2,000 children have participated in a Pool Lifesaving Carnival, ~2,000 nationally accredited awards gained by Aboriginal and Torres Strait Islander adults in remote communities, 93 Aboriginal and Torres Strait Islander adults gained or retained employment due to training)	Unclear
	Talent Pool; (Royal Life Saving WA)	WA	To support employment outcomes in the aquatic sector	Provision of accredited training and skills development in the aquatic industry	Aboriginal young people, age not specified	No formal evaluation. 215 training positions provided, 62 people supported into employment, 28 community trainers	Active

Ridge A & Nimmo L. (2018). Swim for Fruit Evaluation. Western Australia: Royal Life Saving Society of Western Australia	Swim for Fruit; (Royal Life Saving WA)	Six remote and twelve regional swimming pools withing Pilbara and Kimberly regions of WA (remote and regional); since 2009	To encourage children (particularly Aboriginal children) to participate in regular physical activity at the pool by providing a healthy afternoon tea following each pool session	Swim training and providing healthy food	Children (particularly Aboriginal children), age not specified; Pools had between 4 – 25 regular participants in the program, and 90-100% were Aboriginal Children.	Yes Qualitative approach (structured phone interview and semi structured face to face yarning) Improved fruit consumption and eating habits, physical activity levels, swimming skills and improved fitness. Other benefits included and social engagement, pride and confidence, and safety awareness.	Active
Australian Water Safety Council (2010). Australian Rural and Remote Water Safety Plan 2010 to 2015. **AWSC, Sydney**	Remote Pools ; (Royal Life Saving Society NT)	NT (remote)	To provide assistance in public pool maintenance. Secondary aims: build community solutions, provide pool operations support, foster community networks	Provision of safety and management audits, telephone support for pool managers, facilitation of conferences for remote pool managers and other network development activities and support to all levels of government including site visits	Not specified	No formal evaluation "Our community pool is the best place for our kids to swim (especially when it's hot). It's safer than the local waterholes around community. The pool brings families together. Kids are happy to see other kids, they don't fight just play with each other" Eastern Arrernte woman, local artist and staff member at Ltyentye Apurte (Santa Teresa) Pool	Active

Rynne S & Rossi T (2012). The Impact of Indigenous Community Sports Programs: The Case of Surfing: Research Report.	Indigenous sport program; (Developed by the Australian Sports Commission (ASC). Surfing Australia was chosen as the contextual partner for the research)	Five surfing programs from the geographical regions of; Foster and Gosford (New South Wales); Geelong (Victoria); Stradbroke Island (Queensland)I Yorke Peninsula (South Australia); since 1993	Promote the many benefits of participating in sport	Involved 98 participants including surfers, program providers and community members.	Surfing participants were youths who identified as Aboriginal. Surfing participants 39 in total; aged 15–25 years; 70% male. Most novices. Approx six to 30 participants in each surfing session. Program providers Adults and some were youth workers. Some but not all identified as Aboriginal. Total of 24 aged 22-50 participated in the research project, six female. Community members Designated leaders, Elders and members of Indigenous Councils as well as parents, friends and health and education personnel. All identified as Aboriginal. 35 aged 25–80 years, and 70% male.	Yes. Interviews and face-to-face questionnaires. "Surf programs provided a way for Indigenous people to (re)connect with country, foster connections between participants and program providers, form bonds with other Indigenous children and unite community members to reinforce and pass on aspects of culture" Surfing programs were also found to generate other outcomes including (but not limited to): 1) learn to be safe and confident in the surf; 2) develop psycho-social skills related to confidence, self-esteem, empathy, maturity and independence and; 3) foster an understanding of first aid and surf etiquette As above	Complete
	Indigenous sport program – Site 1; (Not specified)	Rural location not reported for anonymity	Surf program. Development of surf skills, learning to be safe and save others	A weekend camp 2-4 times/year that included daily 2 hour surf lessons operated by private surf coaches. All equipment, food and accommodation provided	Open to all ages, most participants aged 8–16 years, adults also participated	As above	
	Indigenous sport; program – Site 2; (Not specified)	Rural location not reported for anonymity	School-based surf program. Development of surf skills, learning to be safe and save others, and positive risk taking and building confidence in participants	School students driven by bus to beach to surf for 2 hours. Provided by teachers, including an experienced and qualified surf life coach. Operated weekly during school term.	School children (11–17 years), predominantly Aboriginal students	As above	
	Indigenous sport program – Site 3; (Local council in partnership with aquatic leisure centre and local Aboriginal Corporation)	Rural location not reported for anonymity	Surf program. Development of surf skills, learning to be safe and save others	Paid surf coaches delivered a series of 1.5-hour surf lessons on Saturdays, culminating in an informal surf competition in February each year of the program. Operated 3-4 times/year. Provision of food and drink for participants.	Aboriginal children (10–17 years)	As above	

	Indigenous sport program – Site 4; (Local Indigenous Sport Development Officer)	Rural location not reported for anonymity	Surf program. Development of surf skills, learning to be safe and save others	Paid, private surf coaches provided one-off 2-hour surf coaching to Aboriginal youth. Provision of food and drink.	Aboriginal youth	As above	
	Indigenous sport program – Site 5; (Local Aboriginal Cooperative and state surfing body)	Rural location not reported for anonymity	Surf program. Improvement and development of surf skills and water safety skills	Large-scale Indigenous state surf titles (attracting >200 surfers); presentation ceremony and entry provided for overall winners into other surfing events. Small camps and programs for youth to learn surfing, supported by paid local Indigenous surf coaches	People of all ages, however youth-focused	As above	
Royal Life Saving Society Australia – NT Branch. ANNUAL REPORT **2013/2014**	The Remote Service Delivery and Indigenous Engagement Project; (AUSTSWIM and Royal Life Saving NT)	NT (regional and remote)	To provide qualifications in swimming and water safety through courses and a customised learning plans	Provision of AUSTSWIM courses to small numbers in rural locations, and a customised learning plan implemented to assist Aboriginal people to become AUTSWIM qualified teachers of swimming and water safety	Aboriginal people	No formal evaluation. Four completed qualifications and three gained full AUSTSWIM teacher of swimming and water safety qualification.	Unclear
	Indigenous Sport and Active Recreation Program (ISARP); (Royal Life Saving NT)	NT (remote)	To deliver the Swim & Survive program, AUSTSWIM Mentoring program and training to remote Indigenous communities	Provision of water safety training for people who do not have access to qualified swimming instructors	School students; 2474 participants in 32 remote communities in 21 locations	No formal evaluation Key facts include (but not limited to): 309 students achieved the national swimming and water safety benchmark of a level four and above; 277 people were trained and are now qualified in a range of qualifications such as bronze medallion, CPR, Pool lifeguard and First Aid.	Unclear
	Swim and Survive Program; (Royal Life Saving NT)	NT (remote)	Enabled children to learn to swim and participate in a Pool Lifesaving carnival. The project has implemented a training and AUSTSWIM mentoring program to assist local people in obtaining employment or volunteer services at their community swimming pool.	A team consisting of two Royal Life Saving Society Northern Territory staff visit the communities for an intensive five day stay.	2938 students	No formal evaluation Overall increase in the swimming abilities of children in remote areas.	Unclear
	AUSTSWIM Mentoring Program and Training; (Royal Life Saving NT)	Tennant Creek, NT (remote)	To develop and maintain the community's swimming pool and take ownership of the Swim and Survive Program	This training allows local members of the community to become AUSTSWIM qualified swimming instructors who can provide quality, ongoing swimming lessons to their community. Provision of AUSTSWIM Teacher of Swimming & Water Safety award for those in the training who qualify	Local Indigenous people	No formal evaluation. Indigenous people (35 gained employment through the program, 3 people completed AUSTSWIM Teacher of Swimming and Water Safety Award, 5 continued to work towards completion of qualification)	Unclear
Royal Life Saving Society – Australia – NT Branch. ANNUAL REPORT **2020 – 2021**	The Watiyawanu School – Swim, Survive & Snorkel Program; (Royal Life Saving NT)	Watiyawanu and Alice Springs, NT (remote)	For students to learn about water safety, particularly those not normally exposed to safe aquatic environments	Two water safety excursions held for students to prepare them for attendance at a snorkelling camp at the Great Barrier Reef. All students attended the three-day intensive excursions including eight sessions of the Swim & Survive Program, a Pool Lifesaving Carnival, snorkelling skills and the delivery of CPR awareness to all students.	Indigenous students from Watiyawanu (27 students)	No formal evaluation	Unclear

Appendix 2: A snapshot of Aboriginal and Torres Strait Islander water safety program

Program name (#)	#	Location (setting); duration (Delivered by)	Delivered by	Program aim	Program characteristics	Target population (number of people)	Status (Active/ Complete/ Unclear)	Data source(s)	Link(s)
NSW Swimming Indigenous Swim Program	15	NSW (regional), 5 regions; 2004; (NSW Swimming and State Department of Sport and Recreation office)		Swimming skills development, training of culturally safe swim teachers	Swim clinics (including swim skills through to coaching), green license coaching courses, Indigenous swim meets, training sessions and training camps for those selected to be part of the NSW North Coast Indigenous Development Squad, formation of an Indigenous swimming club that will compete in district or state meets	Indigenous school students, no age specified (100 students)	Unclear	Report	Trove
Bambigi Swimming Program	16	Griffith, QLD (regional);	Bambigi, self-funded charity	Swimming lessons and water safety skills development	Provision of 6-month swimming lessons	Aboriginal and Torres Strait Islander children (300 children)	Unclear	Website	Australian Indigenous Health InfoNet
Learn to swim NCIE Sydney	17	Sydney, NSW	National Centre of Indigenous Excellence	Provides swim lessons, squad training and aqua aerobics	General swimming lessons in the form of intensives	Indigenous and non-Indigenous children	Active	Website	National Centre of Indigenous Excellence
Bush to Beach Program	18	NSW (urban and remote), since 2006	Northern Beach Surf Life Saving Club	To introduce Aboriginal children from the country to the ocean and teach water safety	Connecting Aboriginal children from Brewarrina with the ocean by taking them to Narrabeen	Aboriginal children (600)	Active	Website	SBS News
First Nations swim teacher program	19	Darebin, VIC	City of Darebin	Provide swim teacher training and first aid training to aspiring swim teachers	Swim teacher training sessions. Using storytelling to teach vital lifesaving skills.	First Nations people	Unclear	Website	City of Darebin
Waybarra Surf Camp	20	Northern NSW (regional)	JURAKI, Indigenous not-for-profit organisation	To promote and provide developmental opportunities for Emerging Indigenous surfers. To promote local Indigenous culture within the Australian and international surfing communities	Bring together Indigenous surfers for Waybarra Surf Camp	Indigenous surfers	Unclear	Website	Juraki Surf + Culture
Parnggi Yarluwar Porlar (Water Ocean Kids) program	21	SA	Surf life Saving SA and Tjindu Foundation	Beach water safety skills including wading, running, swimming, board paddling, lifesaving, resuscitation and first aid.	20 weeks of swimming lessons, followed by 20 weeks of participation in the Surf Life Saving Nippers Program at no cost	First Nations students aged 7-12 years	Active	Website	Tjindu
Deadly Dads	22	Victoria	Wathaurong Aboriginal Co-operation	In Home Swimming Program offered Aboriginal fathers the opportunity to get in the water with their children, and to teach them how to swim.	The program not only promoted health and safety in the water for children and caregivers, but also encouraged a bond between fathers or male caregivers and young children, and between other fathers or male caregivers. It was also an opportunity for men to improve their own fitness through exercise, and to encourage young children to be fit from an early age.	Aboriginal fathers and their children	Complete	Website	Indigenous Health InfoNet
Swimming NSW Indigenous participation program	23	ACT, NSW (urban, rural); 2012-2015	Not reported	Drive swimming participation among babies and children, implement pathways for the development of talented swimmers and coaches	Not reported	1500 young people	Complete	Peer-reviewed	Macniven R, Elwell M, Ride K, Bauman A, Richards J. A snapshot of physical activity programs targeting Aboriginal and Torres Strait Islander people in Australia. Health Promotion Journal of Australia. 2017 Dec;28(3): 185-206.

Wirraka Maya's Leap Leadership swim for life program	24	WA (rural); 2013-2014	Not reported	Develop youth leadership skills and achievement in a structured environment. Enhance problem-solving and decision-making skills while improving self-esteem through swimming. Provide an opportunity to gain valuable water safety and lifesaving skills	Not reported		Complete		
Indigenous Surfing Program	25	NSW, QLD, VIC, SA (rural)	Not reported	Attract large numbers of young people beaches. Promote health, enjoyment and well being through surfing and ocean safety awareness, bringing positive education to remote and local communities.	Not reported		Unclear		
Remote Aboriginal swimming pools program	26	WA; 2000-present	Not reported	Work in consultation with communities to run safe, efficient and effective aquatic facilities and to meet the needs and expectations of the communities	Not reported		Active		
Deadly Sista Girlz Program	27	(urban and rural); 2009- present	Not reported	Provide health, fitness and well being programs to target and assist women, girls and their families who may not be able to access mainstream programs	Not reported		Active		

Deadly Sista Girlz	28	Yilkari WA, 2018	Royal Life Saving WA and Wirrpanda Foundation	Teach swimming & water safety skills	six week period from February through to mid-March.	School aged Aboriginal and Torres Strait Islander girls	Unclear	Website	Royal Life Saving WA
Walgett Pool Day; 2019	29	Walgett, NSW	Local Aboriginal community-controlled organisatins	Focus on water safety and a fun positive day for families to be together and safely enjoy the pool	Free entry to the pool for a day of yarning, talking about what Walgett Aboriginal Medical Service and Goonimoo Mobile Children's Services.	400 people attended	Unclear	Website	The Australian Prevention Partnership Centre
Parents and Bubs	30	Not reported	Kari Foundation	To increase water safety, confidence and to teach water wise skills, setting the foundations for early stages of safe swimming skills for both parents and their children.	Free swimming lessons	Aboriginal children from 4 months to 3 years of age.	Active	Website	Kari
Learn to swim	31	Not reported	Kari Foundation	To increase water safety, confidence and to teach water wise skills. Children who participate in this program have the opportunity to learn, enhance and build on their current swimming capabilities.	Free swimming lessons	Aboriginal children from ages 4 to 16 years old.	Active	Website	Kari

Reference(s)(Study type)	**Program name;** (delivered by)	**Location (setting); duration**	**Program aim**	**Program characteristics**	**Target population** (number of people)	**Evaluated?** (Yes/No) Outcome if available	**Status** (Active Complete/ Unclear)
Crozier M & Giles, AR (2020). Promising practices for boating safety initiatives that target indigenous peoples in New Zealand, Australia, the United States of America, and Canada. **Additional Information from:** **Australian Indigenous HealthInfoNet** **QLD Government** **(Peer-reviewed)**	The Torres Strait Maritime Safety Project (TSMSP); (Maritime Safety Queensland, Queensland Government Collaboration between the Australian Maritime Safety Authority and the Torres Strait Regional Authority)	QLD (regional, remote); since 2006	Integrated and culturally adapted boating safety campaign to: -Reduce number of seafarers lost in the Torres Strait, -Increase the chance of survival for lost seafarers; -Promote community and industry commitment to safety; Increase boating safety knowledge and awareness; Increase accessibility of boating safety equipment.	Culturally adapted TSMSP for Torres Strait Islander seafarers: -Attendance at BoatSafe, recreational marine driver license course for Torres Strait Islanders. -Components of Boatsafe integrated into the community's school curriculum; -Provision of boating safety equipment including safety bags, a personal flotation device, ropes and a bailing bucket; -An increase in the supply of safety equipment in local island stores; -An emergency position indicating radio beacon exchange program (EPIRB), offering new EPIRBs to Torres Strait Islander seafarers for a reduced cost.	Seafarers in the Torres Strait and Torres Strait Islander seafarers (not provided). Australian Maritime Safety Authority used a census for information gathering	Yes Minimal information provided	Active
	The Northern Territory Indigenous Maritime Safety Initiative (NTIMSI); (Northern Territory Government)	NT (remote); since 2015	Educate and support small boat operators in several remote communities	Magazine and radio advertising, community posters, safety checklists, and stickers; -Provision of "grab bags" of safety equipment (e.g., emergency beacons and flares) free of charge to Indigenous boat owners	Indigenous boat owners in remote communities	Yes Minimal information provided	Unclear (ongoing initiative)
Juniper A, Nimmo L & Enkel, S (2015). The Photovoice Project: REMOTE ABORIGINAL **SWIMMING POOL RESEARCH**	The Remote Aboriginal Swimming Pools Project (RASP) (Royal Life Saving WA)	Eight communities in WA (Balgo, Bidyadang, Burringurrah, Fitzroy Crossing, Jigalong, Kalumburu, Warmun, Yandeyarra). (remote); since 2000	"To work in consultation with remote Aboriginal communities to run safe, efficient, and effective aquatic facilities and to meet the needs and expectations of the communities" Royal Life Saving WA To develop strong foundation swimming skills for all ages before introducing more technical swimming and survival skills and sequences	Delivery of safe, efficient and effective aquatic facilities and programs	People in Aboriginal remote communities in WA Aboriginal and Torres Strait Islander children aged 4 to 12 years (over 500 school aged children completed the program)	No formal evaluation. Positive impact in remote Aboriginal communities; Swimming pools were a valued asset to communities, High rates of attendance, health benefits, social benefits, improved swimming and water safety skills and improved school attendance.	Active
Pidgeon S & Nimmo L (2020). Drowning deaths among Aboriginal and Torres Strait Islander people: a 10-year analysis 2008/09 to 2017/18. Royal Life Saving Society – Australia: Sydney.	Ngadyung; (Royal Life Saving ACT)	Canberra, ACT; since 2007	To develop strong foundation swimming skills for all ages before introducing more technical swimming and survival skills and sequences	Provision of aquatic sport and recreation activities	Aboriginal and Torres Strait Islander children aged 4 to 12 years (over 500 school aged children completed the program)	No formal evaluation "The Ngadyung program has become such an important part of my children's lives over the past few years. They look forward to their lessons every week. The program has given my children the confidence to get in the water and participate successfully in school swimming carnivals in which they otherwise wouldn't have had the opportunity to do. They thoroughly enjoy the program and we are extremely grateful that this program has been implemented in our community, giving our children the knowledge of water safety." Parent	Active

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