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The Social, Health and Economic Value of the Australian National Aquatic Industry

July 2021

ROYAL LIFE SAVING AUSTRALIA

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Foreword

For almost every Australian, at regular points in their life, the local pool has played an important role as a place of recreation, learning, fun or fitness. This is not surprising given that 89% of Australians live within 20 minutes' drive of a pool.

There is a risk that such ubiquity means that Australia's aquatic industry - a combination of Council-owned public aquatic facilities, learn-to-swim businesses, fitness club pools, swimming pool sports, and peak associations - could be too easily taken for granted.

That is why this report - commissioned by Royal Life Saving and delivered with the help of our members and industry partners - is so important.

This report, prepared by PwC, provides an assessment of the economic, health and social benefits that accrue to individuals, communities and society as a result of activities undertaken across the Australian aquatic industry.

It reinforces the myriad of ways that the aquatic industry benefits the Australian community. For example:

- as a driver of economic activity throughout Australia, employing the equivalent of 33,600 full time employees and adding $2.8 billion to gross domestic product (GDP)
- as a generator of health benefits of $2.5 billion, ranging across a reduction in the burden of disease, improved mental health outcomes, reduced absenteeism, and fewer childhood drownings
- as a provider of $3.8 billion's worth of social benefits such as: enhancing an individual's leisure time or creating increased life satisfaction; by bringing people together; supporting more vulnerable groups; and supporting early learning.

Clearly, the aquatic industry plays an important role in creating a more prosperous, healthier and more inclusive Australia.

But there is more to do to strengthen the aquatic industry's value and contribution to the Australian community, particularly as the industry rebuilds following the pandemic.

We ask that readers of this report join us in our work of building a water-loving Australia free from drowning, where every Australian can swim for fun, education, fitness and/or wellbeing, facilitated by a vibrant and strong Australian aquatic industry.

Justin Scarr
Chief Executive Officer
Royal Life Saving Society - Australia

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Total annual benefit of the aquatic industry

$9.1 billion

annually in economic, health and social benefits

Economic

The aquatic industry supports $2.8 billion of economic activity

$2.8bn

Annually to gross domestic product

Health

The aquatic industry benefits the health and wellbeing of Australians

$2.5bn

Annually in reduced burden of disease in Australia

Social

The aquatic industry is a key driver of social benefit for Australians

$3.8bn

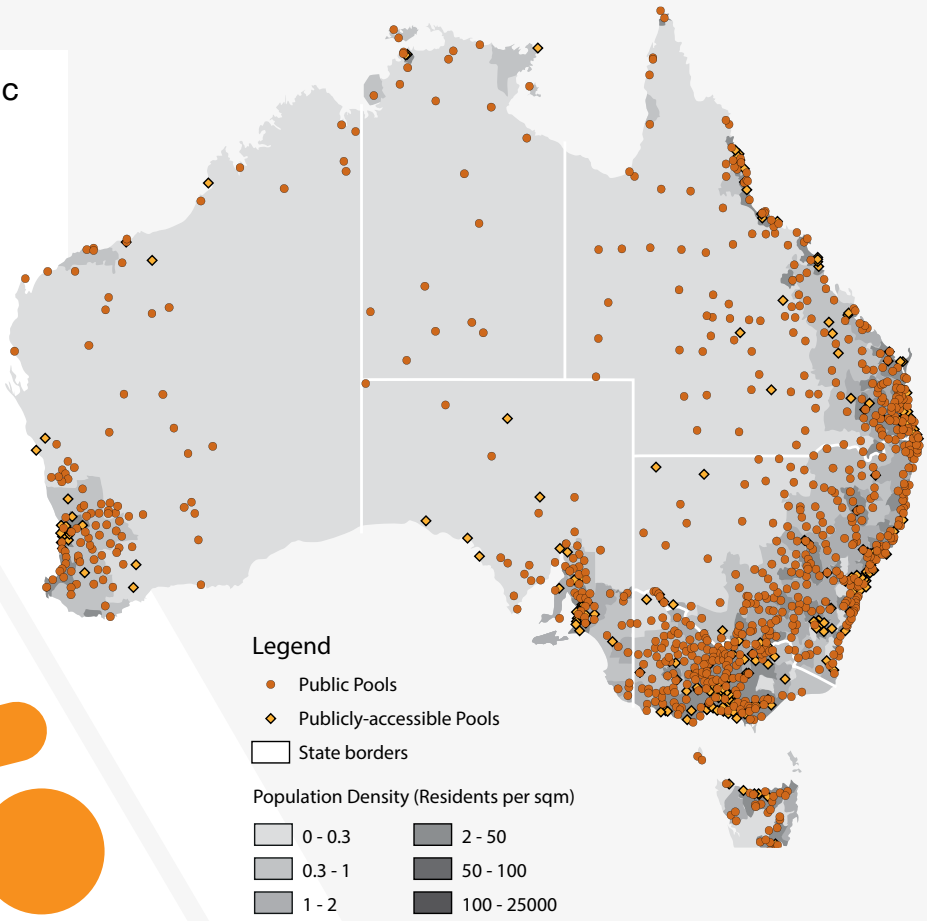
Annually in benefits from increased individual and community surplus

The Australian Aquatic Industry

The Australian aquatic industry has been defined for the purposes of this report as the following places and groups:

- public-owned pools
- public-access privately owned pools (commercial gyms)
- commercial learn to swim public-access pools
- sport of swimming.

The importance of the aquatic industry is not limited by location. Aquatic facilities are spread across Australia, delivering economic, health and social benefits to metropolitan, regional and remote communities.



89% of Australians live within **20 minutes' drive of one of Australia's 2,113 aquatic facilities.**

The aquatic industry supports
33,600
full time equivalent roles across Australia

333 mn
visits to Australian public and publicly-accessible pools per year

7,479
Disability adjusted life years saved each year

$174 mn
saved annually from avoided child drownings

Social return on investment of
$4.87
for every $1 spend on aquatic facility operations in **capital cities**

Social return on investment of
$2.18
for every $1 spend on aquatic facility operations in **regional Australia**

58%
of all aquatic facilities are located **in regional Australia**

$40 bn
total value created for homes located within 1.6km of a council-owned pool.

2

Australian aquatic industry

Introduction

PwC Consulting Australia Pty Ltd (PwC) was engaged by Royal Life Saving Australia to define and estimate the value of the Australian aquatic industry. In this report we have assessed the economic, health and social benefits that accrue to individuals, communities and society as a result of activities undertaken across the aquatic industry.

For the purpose of this study, we have defined activity in the aquatic industry as the following places or groups:

- **Council-owned pools:** aquatic and recreation facilities, public outdoor pools, public hydrotherapy pools & spas, public waterslides, outdoor pools, lap pools, learn to swim program pools.
- **Public-access privately owned pools:** commercial learn-to-swim centres, fitness centres and gyms, clubs with pools, universities and schools.
- **Swimming pool sports:** local, state and national competitions.

The following are not included in the aquatic industry for the purpose of this report:

- **Privately-owned pools that are not available to the wider community:** Households, apartments, caravan parks, resorts and hotels.
- **Aquatic theme parks**

Additionally, the economic impact associated with the construction of aquatic centres has not been included, as this is typically seen as a temporary stimulus to the economy.

Aquatic centre use is at an all time high and growing, whilst infrastructure is aging, leading to a need for assessment of current infrastructure in regions across Australia.[1] Providing a holistic view of the benefits associated with aquatic centres can support future discussion for investment in the industry.

The following next steps are recommended to further develop the analysis undertaken as part of this report:

- Gap & needs analysis of pool infrastructure
- Focused analysis of the benefit of remote Australian pools
- Development of a facilities level assessment tool
- Undertake expanded willingness to pay survey

Commercial Learn to Swim Centres

Commercial Learn to Swim Centres (LTS) are an important aspect of the aquatic industry and have been included in this report for their benefit to the economy from operations and their support reducing the drowning rate in Australia. However, their scope of operations is narrower than other aquatic facilities.

LTS focus on swimming lessons for children and generally do not provide broader whole-of-community fitness, leisure, recreation and/or community services and as such they have not been included in the calculations of all benefits within this report. Benefits such as improved physical and mental health, subjective wellbeing, leisure or local amenity only apply to aquatic facilities that provide consistent space for swimming for fitness, leisure and/or recreation.

The swimming pool is part of our national identity

Time spent by the water has played a central role in every Australian's life. The local pool is an important community space where many are first introduced to an experience of weightlessness and are a central location for escaping the heat during summer. As we learn how to swim we are taught the skills that lead to a lifelong appreciation for aquatic activities and the benefits that accompany the aquatic industry.

The Australian aquatic industry has a long and rich history. The first ocean pool was built in Sydney in 1819, and there was a boom in community pools following the 1956 Melbourne Olympics.[2,3] The Australian Crawl, was a modern step in the development of free-style swimming.[4]

Aquatic facilities are visited over 333 million times per year. [5]

Aquatic facilities are unique in their ability to transcend many of the barriers present in other sports or social settings. They are generally safer and more accessible than other forms of physical activity, allowing people of all abilities to participate in active recreation and leisure. As Australia's population ages, the importance of aquatic facilities will continue to grow.

The aquatic industry generates significant social, health and economic benefits for Australia. Aquatic facilities create a safe space where people can learn how to swim, spend their free time relaxing or getting active, and come together as a community. The industry also supports jobs for young Australians and regional communities. The aim of this study is to estimate the benefit of the Australian aquatic industry.

Aquatic facilities are extremely popular across Australia

Aquatic facilities are among the most popular locations in Australia for active recreation, across all age groups. Approximately 5 million Australians either swim or use aquatic facilities for aquarobics, hydrotherapy and other aquatic exercise.[6]

Amongst adults, swimming has the second highest 'sport related' participation rate, largely driven by women for whom it is the most popular sport.[7] Adults primarily swim for health and fitness, however a significant portion go to aquatic facilities for fun, socialising, mental health benefits and/or rehabilitation.[8]

Swimming, excluding school lessons, is the most popular activity for children aged 0-14, as parents put their children into private swimming lessons.[9] Peaking at age 8, participation drops as other sports such as football temporarily become more popular.[10] This drop-off in swimming at age 8 means many Australian children never reach the Royal Life Saving national swimming and water safety benchmark, which would enable Australia to fully realise the drowning prevention benefits of formal structured swimming and lifesaving education.[11]

Swimming is typically a child's first sport, and as such, aquatic facilities are important for early learning development and teaching children water safety skills, providing lifelong increases to safety and unlocking the many benefits and activities brought by swimming, such as boating, surfing and others.

The popularity of swimming is increasing, with **participation at a 20 year high.** In 2020, **17% of all Australians swam**, an increase from its lowest participation rate of 14% in 2010.[12] Moving forward there are no signs of slowing, with 1.4 million people considering starting to swim, more than any other type of physical activity.[13]

Aquatic facilities in Australia

FIG. 1

Key geographic insights

Aquatic facilities are highly distributed across Australia helping to support social, health and economic benefits in capital cities, regional centres as well as rural and remote communities.

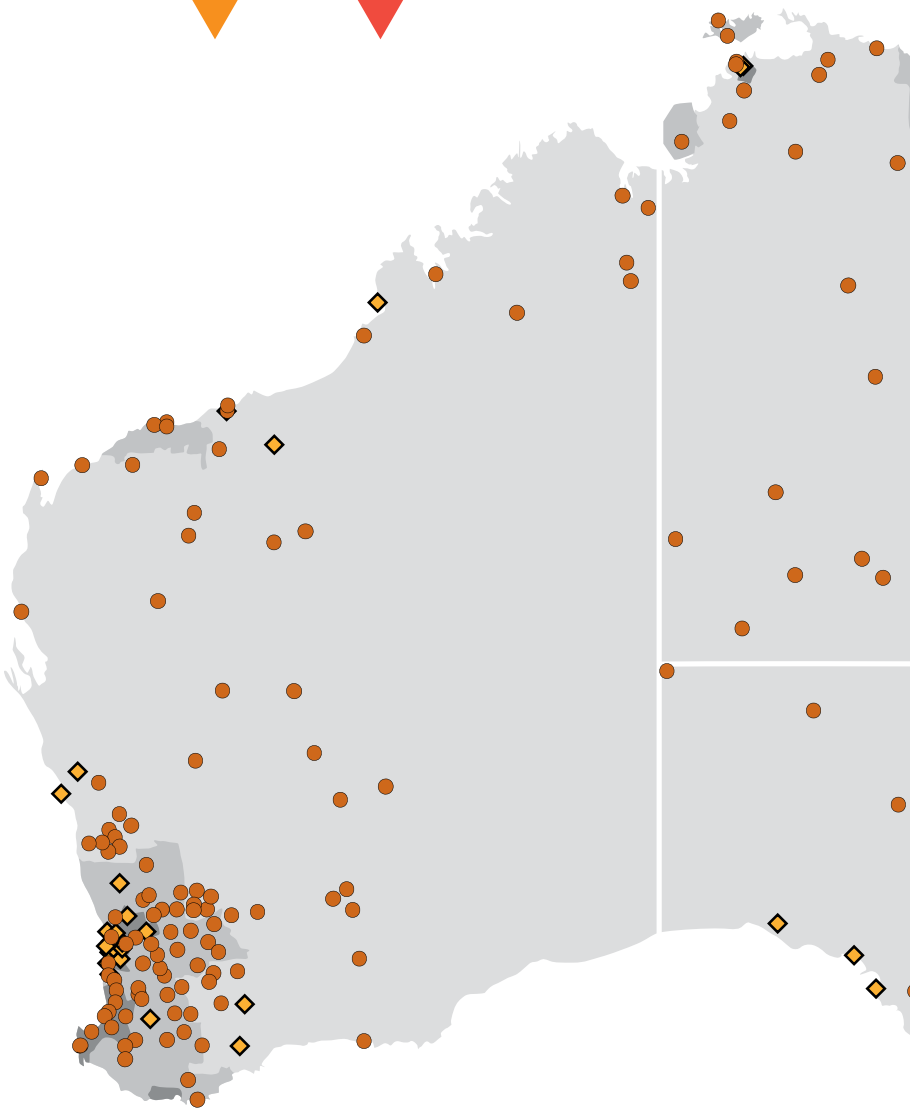
Australia has **2,113** aquatic facilities, equivalent to one aquatic facility per 12,200 people. **89% of Australians live within 20 minutes'** drive of an aquatic facility.

1,306
public aquatic facilities

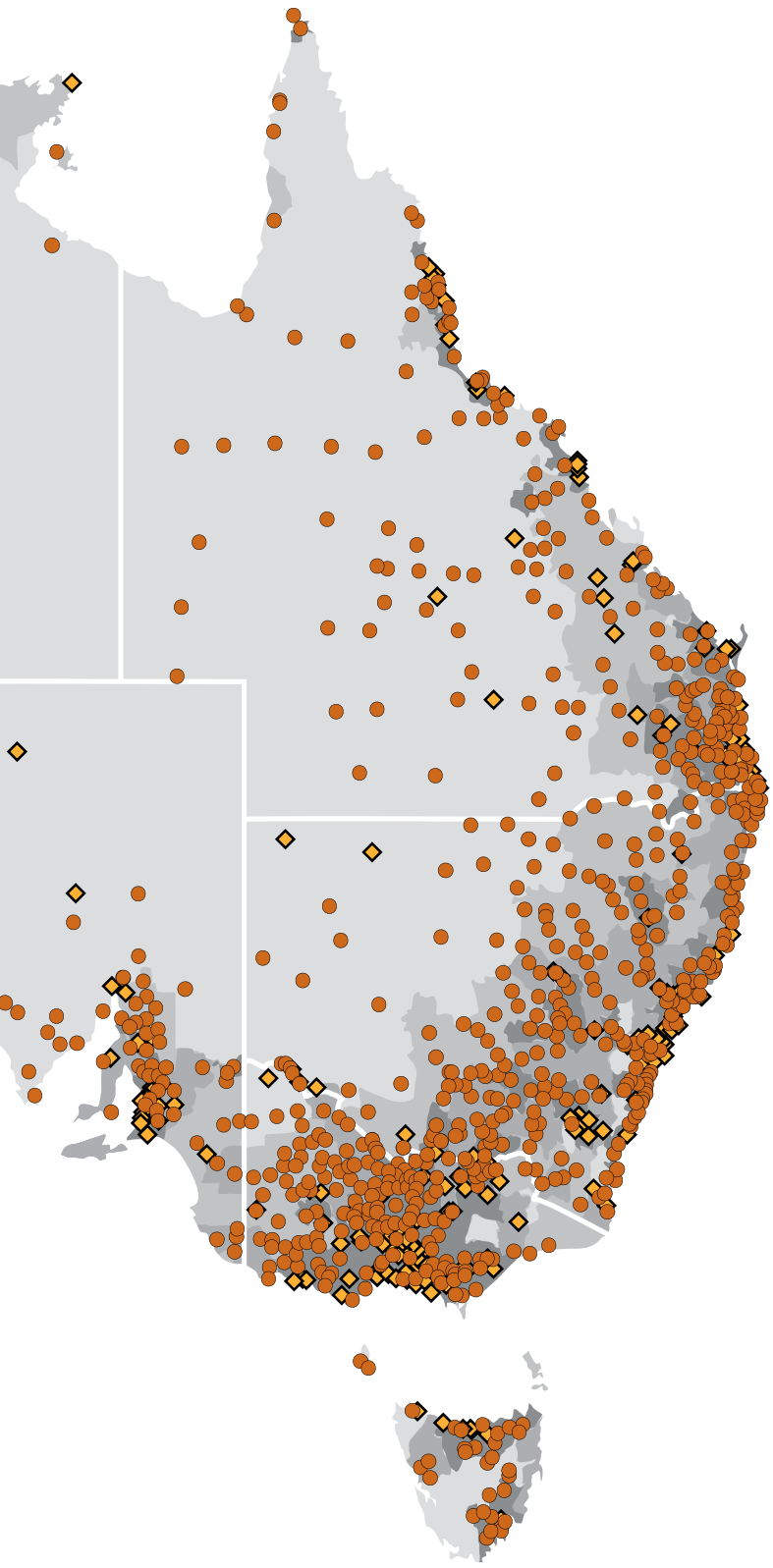
807
publicly-accessible aquatic facilities

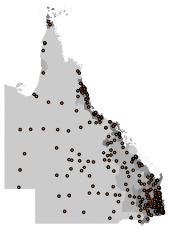
However, the Northern Territory and Tasmania have a relatively unserved population, with only 63% and 67% respectively within 20 minutes drive of an aquatic facility.

The majority of Australia's aquatic facilities are located outside of capital cities, generating valuable economic activity throughout regional Australia. **1,216 facilities are located in regional Australia** and a further **897 are located in capital cities**. Aquatic facilities in rural and remote Australia often provide additional benefits to the community in areas of limited social infrastructure.



Pool locations sourced from Royal Life Saving state and territory members and Royal Life Saving - Australia. Pool locations were cross referenced against public and private databases for accuracy.

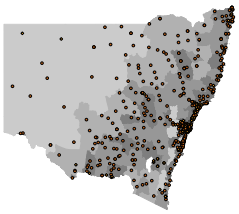




Queensland has 453 aquatic facilities, equivalent to one aquatic facility per 11,400 people. 85% of people live within 20 minutes' drive of an aquatic facility.

285 public aquatic facilities

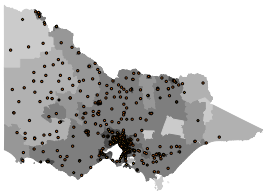
168 publicly-accessible aquatic facilities



New South Wales has 658 aquatic facilities, equivalent to one aquatic facility per 12,400 people. 89% of people live within 20 minutes' drive of an aquatic facility.

445 public aquatic facilities

213 publicly-accessible aquatic facilities



Victoria has 570 aquatic facilities, equivalent to one aquatic facility per 11,750 people. 94% of people live within 20 minutes' drive of an aquatic facility.

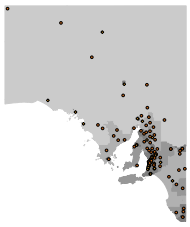
290 public aquatic facilities

280 publicly-accessible aquatic facilities

Western Australia has 208 aquatic facilities, equivalent to one aquatic facility per 12,800 people. 87% of people live within 20 minutes' drive of an aquatic facility.

129 public aquatic facilities

79 publicly-accessible aquatic facilities



South Australia has 120 aquatic facilities, equivalent to one aquatic facility per 14,750 people. 88% of people live within 20 minutes' drive of an aquatic facility.

76 public aquatic facilities

44 publicly-accessible aquatic facilities

The Australian Capital Territory has 23 aquatic facilities, equivalent to one aquatic facility per 18,750 people, 100% of people live within 20 minutes' drive of an aquatic facility.

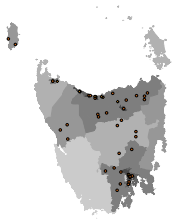
11 public aquatic facilities

12 publicly-accessible aquatic facilities

The Northern Territory has 31 aquatic facilities and the highest number of pools per person, with one aquatic facility per 7,950 people. However, only 63% of the Northern Territory's population live within 20 minutes' drive of an aquatic facility, the lowest of any state or territory.

28 public aquatic facilities

3 publicly-accessible aquatic facilities



Tasmania has 50 aquatic facilities, equivalent to one aquatic facility per 10,800 people. 67% of people live within 20 minutes' drive of an aquatic facility.

42 public aquatic facilities

8 publicly-accessible aquatic facilities

Aquatic industry in regional and remote Australia

In regional communities and remote areas, aquatic facilities can play a crucial role in the community, promoting social interaction and wellbeing. Aquatic facilities built in remote communities provide safe and cool recreation opportunities for community members living in typically hot locations.

Remote aquatic facilities have been found to provide benefit not easily observed in metropolitan locations, including:[14]

- Further enhanced community cohesion by providing a central location in areas with limited social infrastructure
- Promoting good behaviour among youths and increasing school attendance
- Improving health and wellbeing in areas of typically high chronic disease such as high levels of skin and eye conditions.

This report has not exclusively focused on the benefit of regional and remote aquatic facilities. Indeed, the social return on investment of aquatic facilities for regional Australia, presented in the next section, may under-represent the total social and health benefits an aquatic facility provides to rural and remote communities.

In smaller towns where population density is smaller, aquatic facilities often require additional funding from council, government or private industry to operate. As a result, it is important to understand the social and health benefits for the community in order to articulate the importance of investing in aquatic infrastructure in regional Australia.

This report recommends further analysis is undertaken to support additional investment in remote pools.

The aquatic industry workforce

The aquatic industry is one of the largest employers in the sport and recreation sector. There are an estimated **40,000** new employees trained in skills such as pool lifeguard, swimming and water safety teacher, aquatic technical operator and aquatic program instructor every year.[15] Overall, the workforce in the aquatic industry comprises approximately **67,000 workers**, of which

73% are female.[16]

A key reason people join the aquatic industry is to have a positive impact on people's lives.

The aquatic industry is supported by a largely flexible workforce.

63% are either casual or part time employees primarily filling roles such as pool lifeguard, and swimming and water safety teacher.[17]

35% of workers indicate that they joined the industry because it supported their lifestyle, evidenced by nearly half the workforce studying while they work.[18]

A key difficulty for the industry is not being able to offer enough work hours for staff, with a majority of workers indicating that limited hours was a reason for leaving.[19] Over half the workforce earns less than **$30,000** per year and

49% of the workforce indicate they have a second job.[20]

Research has recommended that the aquatic industry consider how they can increase the attractiveness of employment within the industry, as well as increase retention of experienced staff. Key examples provided by the Aquatic Industry Workforce Report include providing more opportunities for diversity, mentoring, development and cross-skilling existing staff. [21]

Impacts of COVID-19 on Australia's aquatic industry

The aquatic industry has been significantly impacted by lockdown closures associated with COVID-19. As one of the first industries to close and last to re-open each time, all 2,113 aquatic facilities were forced into closure at some point throughout 2020 causing an estimated 67,000 frontline workers to be stood-down.[22] Although Victorian aquatic facilities faced the most significant challenges in 2020, aquatic facilities in metropolitan Sydney, Melbourne, Darwin, Brisbane and Perth all experienced mandated closures in the first half of 2021.[23] When able to reopen, the aquatic industry's recovery has been hampered by worker shortages.[24]

Across the country, when swim schools reopened, enrolments in learn to swim classes reported falls of up to

-25% from the previous year.[25]

The impact was largest amongst younger age groups, who are most in need of developing their swimming safety skills. This places a significant burden on Australia to ensure COVID-19 does not result in a generation of non-swimmers.

Despite the adverse effects of the pandemic, the aquatic industry is uniquely positioned to provide an important resource in the nation's recovery.

COVID-19 saw significant increases in mental health conditions and sedentary behaviour.

19% of Australians reported their mental health as either worse or much worse than before COVID-19.[26]

20% of Australians had not returned to their pre-COVID organised sport by March 2021.

On the other hand, there was an estimated increase in swimming participants by 349,000 people during 2020 as people took to open water swimming and aquatic facilities as they re-opened.[27] Aquatic facilities provide enormous value in their role as accessible locations for physical activity and recreation. They can play an important role in helping rebuild the physical and mental wellbeing of Australians.

3 Benefits of the Australian aquatic industry

Total annual benefit of the aquatic industry

$9.1 billion

annually in economic, health and social benefits

Economic

The aquatic industry supports $2.8 billion of economic activity

$2.8bn

Annually to gross domestic product

Health

The aquatic industry benefits the health and wellbeing of Australian's

$2.5bn

Annually in reduced burden of disease in Australia

Social

The aquatic industry is a key driver of social benefit for Australians

$3.8bn

Annually in benefits from increased happiness and connection across society


ARC

Social return on investment for aquatic facilities

The social return on investment (SROI) demonstrates the average additional benefit for society from $1 spent on an aquatic facility in either regional Australia or a capital city location.

These results present the SROI for public-owned and private-owned public access facilities (learn to swim pools are excluded), in regional Australia and capital cities. The SROI has been estimated for two scenarios:

1. The annual average SROI of operating an aquatic facility already built (i.e. does not include construction costs and assumes an average utilised facility in each location).
2. The total SROI of building a new aquatic facility (assumes average construction and operational costs, utilisation, and value creation across an appraisal period of 50 years in each location).

Estimating the SROI has relied on availability of construction and operational cost data across the industry. These costs vary depending on the type of pool constructed, i.e. indoor / outdoor and varying volume. The average cost has been estimated using industry benchmarks, and aquatic facility business cases. Actual costs of individual aquatic facilities may vary, changing an individual aquatic facility's SROI.

The average benefit of an aquatic facility has been estimated by assuming benefits are uniform across aquatic facilities in their location. The total benefit within a location is apportioned based on aquatic activity participation rates. An aquatic facility with higher utilisation would have a higher SROI.

The SROI of remote aquatic facilities has not been assessed, however these are likely to vary when compared to regional pools in higher population areas as a result of additional social and health benefits.

The SROI demonstrates the significant social benefit that pools provide to Australian society.

The benefit is largest in a capital city where utilisation is highest, driving large quantifiable benefits such as wellbeing and health.

The SROI for both regional Australia and capital cities are likely to be conservative due to qualitative benefits, which are significant, not being included.

This report assessed the SROI for the average indoor and outdoor aquatic facility in Australia. Both types of facilities provide significant social return for their communities. However, driven by higher utilisation, an indoor aquatic facility provides a relatively higher social return.

Indoor aquatic facilities receive on average

5 times more

visits annually than an outdoor swimming pool, reflecting their ability to support the recreational needs of people all year round, particularly in colder months.

This analysis does not consider the importance of green and open space for communities provided by outdoor pools. Additionally, results may vary in locations with warmer climates or limited access to the beach such as Northern Australia.

Capital city

$4.87

social return for every $1 spent operating Australia's current aquatic facilities in capital cities.*

$3.70

social return if a new aquatic facility were constructed in a capital city area with unserved demand.*

Indoor aquatic facility

$3.61

social return for every $1 spent operating current indoor aquatic facilities across Australia.*

$3.04

social return if a new indoor aquatic facility were constructed in an area with unserved demand in Australia.*

Regional Australia

$2.18

social return for every $1 spent operating Australia's current aquatic facilities in regional Australia.*

$1.97

social return if a new aquatic facility were constructed in a regional location with unserved demand.*

Outdoor swimming pool

$2.80

social return for every $1 spent operating Australia's current outdoor swimming pools across Australia.*

$2.38

social return if a new outdoor swimming pool were constructed in a location with unserved demand in Australia.*

* this excludes privately-owned commercial learn to swim centres

High level methodology

A four step process was adopted to quantify the economic, social and health benefits of aquatic facilities:

1. Identify the key purposes: What role do aquatic facilities play in society?
2. Identify the activities: What do people do at aquatic facilities?
3. Identify the benefits: What are the benefits associated with the activities undertaken at aquatic facilities?
4. Identify the measure for quantification: Is there data or a financial proxy available?

This methodology was used to capture the broader impacts of the industry without double-counting. Each benefit was carefully assessed in order to not over-claim the benefits of the industry.

Not all benefits identified are quantified. This is due to: availability of data and / or financial proxies; and, careful assessment to ensure benefits do not overlap and / or are not captured within larger benefits. As some qualitative benefits explored are significant to the industry but not estimated, the total benefit can be considered conservative.

Benefits of construction have not been included as part of this report. Construction activity is considered to generate temporary stimulus in the economy and is not unique to the aquatic industry.

Purpose of the aquatic industry	Leisure and fitness activities	Operational activity	Community space	Education
Activities undertaken	• Leisure and recreational activities • Fitness activities • Sport training	• Employment • Increased economic activity	• Increase green space • Meet with friends and others • Hold events	• Learn about water safety knowledge and techniques
Benefits	• Increased consumer surplus from leisure • Ability to escape the heat • Improved mental health • Improved physical health • Reduced reliance on health system • Safe space to exercise • Increased productivity (employment and educational) • Reduced absenteeism (employment and educational) • Improved national performance	• Youth and regional employee surplus • Increased GDP • On job learning and development	• Increased amenity • Value creation in local area • Increased trust and social cohesion • Increased tourism through events • Volunteering	• Long term enjoyment of water • Reduced drowning • Support early learning and development

Economic benefits

The aquatic industry is one of the largest employers in the sport and recreation sector supporting operations at the 2,113 aquatic facilities across Australia. These facilities not only play a key role in facilitating active recreation, water safety skills development, education and community connection across Australia; their operations also generate economic activity, supporting jobs and contributing to Australia's gross domestic product (GDP).

This section of the report looks at: the economic activity associated with aquatic facility operations across the aquatic industry, and tourism generated as swimmers travel for competitions or tourism travel to visit coastal pools and man made lagoons. Benefits that indirectly increase economic activity such as: increased productivity, greater educational outcomes, volunteer hours and employee surplus have been included as either health or social benefits in later sections of the report. Additionally, the economic impact associated with the construction of aquatic facilities has not been included, as this is typically seen as a temporary stimulus to the economy.

The aquatic industry is one of the largest employers in the sport and recreation sector.

$2.8bn

Annually to gross domestic product

33,600

Average annual full-time equivalent jobs are supported by aquatic industry activity

$4.9mn

Average annual tourism spend induced by national swimming events

Economic benefits

Operational impact of

$2.8bn

from direct and indirect gross value add

Employment activity supports

33,600

FTE both directly and indirectly

The operational impact captures industry activity that contributes to Australian GDP, which is captured by estimating the gross value add (GVA)^. Activity occurs both within the aquatic industry from aquatic facility operations and across the wider economy as a result of facilities purchasing intermediate inputs.

As an industry with significant public benefit the major contribution of the aquatic industry is through social and health benefits. However, due to the large workforce employed and the number of users, the aquatic industry also contributes substantially to the Australian economy. The total estimated impact from operations within the aquatic industry is $2.8 billion per year.

The direct economic impact is predominantly generated through compensation paid to employees. The direct economic impact associated with operations is estimated to be $1.4 billion per year.

The purchasing of goods and services from ancillary industries to support the operations of aquatic facilities, such as manufacturing and utilities indirectly contributes to the Australian economy. It is estimated that purchasing of intermediate inputs indirectly supports $1.3 billion per year in economic impact.

The benefit is spread across Australia, with 55% of the pools located in regional and remote Australia, supporting jobs in areas of high unemployment.

We estimated that 33,600 full-time equivalent (FTE) jobs are supported by aquatic facility operations each year. This incudes 21,200 FTE directly employed in the industry and 12,400 FTE indirectly employed across the Australian economy in businesses who support aquatic facility operations.

The total FTEs supported is lower than the 67,000 total jobs reported in the earlier section, this is due to 'jobs' capturing the total number of people employed, of which a large proportion are either casual or part time, working less than a full time amount.

The aquatic industry is one of the largest employers in the sport and recreation sector. It is estimated there are 40,000 new employees trained in skills such as pool lifeguard, swimming and water safety teacher, aquatic technical operators and aquatic exercise instruction every year.[28]

Table 1: Economic impact

	FTE	GVA
Direct	21,200	$1.4 billion
Indirect	12,400	$1.3 billion
Total	33,600	$2.8 billion*

^ GVA is a measure of economic activity defined as the value of output minus the cost of intermediate inputs

* Numbers may not sum due to rounding

Tourism benefit of

$4.9mn

from people travelling for swimming competitions

Swimming competitions are significant events within the aquatic industry. They often draw competitors, coaches, families and spectators from both inter- and intra-state to a host city. Visitor expenditure whilst travelling contributes to the local economy supporting jobs within that economy.

The aquatic industry contributes $4.9 million to local communities annually through national swimming competitions that require people to travel.

This value is conservative as the economic contribution is higher during years where major events such as the Commonwealth Games are hosted in Australia, reflecting the increased spectator attendance and international visitors.

A survey conducted by Swimming Australia found that on average during competitions swimmers stay away for 7.4 nights, and spend on average $2,824 while away, more than most international or domestic travellers.[29]

The aquatic industry also contributes to the Australian tourism sector by attracting tourists to locations. Iconic pools and lagoons are in themselves tourism destinations increasing the attraction of the area they are located in. For example, lagoons in Northern Australia provide a safe location for tourists to swim and relax, and Bondi's Icebergs Pool has featured in travel publications such as the Lonely Planet. Although the value of these tourism benefits have not been included in this report, they are likely significant, as a result, this tourism benefit is conservative.

Health benefits

The aquatic industry generates benefits by reducing an individual's risk of harm or reduced quality of life by facilitating physical activity or the provision of water safety education. The health benefits explored in this report include:

- Improved mental health outcomes.
- Improved physical health outcomes.
- Reduced absenteeism.
- Avoided drownings.

We estimate those health benefits to be worth $2.5 billion per year.

Aquatic facilities are recognised as accessible locations that individuals of all capability and demographics can access in order to get active. Lifeguards are trained to provide cardiopulmonary resuscitation (CPR) and recognise issues rapidly, providing a safe space for people to exercise. Safety and high levels of accessibility provide an environment for demographics with increased risk of sedentary behaviour who are encouraged to participate in activities such as swimming, aquarobics and hydrotherapy as well as other water related exercise.

The health benefits calculated for the purposes of this report have only assessed aquatic-based activities and do not include the activities and spaces within aquatic facilities which include gyms, sports courts, dry group fitness classes and / or yoga studios. As such, this value is conservative.

The aquatic industry makes a significant contribution to the health and wellbeing of Australians

$2.5 billion

$1.65bn
in physical health benefits

$238mn
in mental health benefits

$399mn
in reduced absenteeism benefits

$174mn
in reduced drowning benefit

Health benefits

We assessed the health benefits by comparing the health status of the population of regular swimmers against the risk of disease associated with sedentary behaviour. This assumes swimming is primarily contributing to their lower risk of adverse health outcomes.

Unfortunately, data reveals that a large proportion of the Australian population does not meet the Physical Health Guidelines.[30]

83%

of Australians aged 15+ do not meet the recommended physical activity guidelines.

Not meeting the guidelines leads to an increased risk in developing certain diseases throughout an individual's life.[31] Encouraging increased activity can reduce the risk of disease lowering the burden of disease in Australia. The Physical Health Guidelines for what is considered sufficient activity vary depending on age group. Children and teenagers are expected to be the most active with the amount of activity decreasing once above the age of 24.[32]

For the purposes of the benefits valuation, adult and elderly people who swim at least three times a week are considered to be meeting the guidelines and receiving full health benefits. Adults swimming or involved in aquatic activities two times a week, and who nominate swimming as their primary form of activity are assumed to be receiving a portion of the health benefits.

Physical Health Guidelines

15-17 1.9% Met guidelines	60 minutes of moderate to vigorous exercise every day
18-24 24.2% Met guidelines	
25-34 20.4% Met guidelines	2.5 hours of moderate, or 1.25 hours of vigorous exercise per week
35-44 14.7% Met guidelines	
45-54 14.8% Met guidelines	
55-64 12.2% Met guidelines	
65-84 19.3% Met guidelines	30 minutes of moderate exercise on most days
84+ *26.2% Met guidelines	

* Estimate should be used with caution due to a small sample size in this demographic.

Health benefits

Physical health benefit of

$1.65bn

from reduced occurrences of disease

Research shows that physically active people are less likely to develop certain diseases, leading to a lower burden of disease in Australia.[33] The physical health benefit captures the reduced number of Disability Adjusted Life Years (DALYs) and reduced reliance on the health care system.

DALYs measure the cost to an individual and to Australia of disease through the years of life lost due to premature death, and years of life lived with a disability.

In 2015, physical inactivity accounted for 2.5% of the disease burden in Australia, costing the economy over $25 billion.[34] Aquatic facilities help to reduce a large portion of this burden and provide significant health benefits to Australia. They provide a safe and highly accessible location for individuals to undertake physical activity. The aquatic industry provides an annual benefit of $1.59 billion from reduced DALYs, as well as annual relief of $62.7 million to the Australian health care system.

Key populations benefiting from physical activity at aquatic facilities are the elderly and people with disabilities. Over 40% of the disease burden is attributed to adults aged 65 and over, for whom swimming, hydrotherapy and other aquatic activities are a highly popular form of physical activity.[35]

20% of active 65+ year old's get their physical activity at aquatic facilities.[36]

Physical activity at aquatic facilities helps to reduce the number of DALYs for over 65s by 5,037 years, equivalent to 67% of the total savings.

Table 2 illustrates the proportion of the burden attributable to physical inactivity and the number of DALYs prevented by aquatic activities for the diseases considered in these calculations.

Table 2: Proportion of DALYs by disease associated with sedentary behaviour

Disease	Burden	Reduced DALYs
Type 2 Diabetes	19%	1,254
Bowel Cancer	17%	1,021
Uterine Cancer	16%	97
Dementia	14%	1,394
Coronary Heart Disease	12%	2,390
Breast Cancer	11%	506
Stroke	10%	817
TOTAL		7,479

Mental Health benefit of

$238mn

from reduced costs of mental health conditions

One in six Australians are experiencing depression, anxiety or both.[37] As mental health conditions become more common, tools for promoting positive mental health are increasingly important to society.

Regular exercise reduces stress and improves the mental wellbeing of individuals.[38] This helps people to support and maintain positive mental health, increase coping mechanisms and in turn reduces the likelihood of developing mental health conditions. Reducing the instance of mental health illness in society prevents a reduction in the quality of life of those individuals and reduces the burden on the Australian Health System. Physical activity helps to reduce the risk of developing mental health conditions such as anxiety and depression by 26%.[39]

Aquatic activities are a valuable form of physical activity for improving mental health. Beyond its benefits in accessibility, the water provides people with a feeling of weightlessness, helping them to momentarily forget the outside world. “Blue mind” science indicates that contact with water induces a calm state of mind, and an escape from our screen-focused society.[40]

11% of Australian swimmers use swimming as an avenue to help improve their mental health.[41]

The annual benefit from reduced mental health conditions due to swimming and aquatic activities is $227.7 million, as well as a decrease in heath care costs of $10.7 million.

Health benefits

Reduced Absenteeism benefit of

$399mn

from increased work time.

Physical activity is associated with improved general health, leading to a reduction in days taken off due to sickness, this benefits the economy by reducing absenteeism in the workplace.[42] Additionally, reduced stress levels supports reduced presenteeism, which captures the cost of employees not working to their full potential.

The total cost of physical inactivity on Australian labour productivity is $9.3 billion annually.[43]

On average, highly physically active individuals report 28 hours less illness related work absenteeism per year than those that are inactive.[44] Aquatic facilities provide Australian workers the flexibility to fit physical activity into their work schedules - improving the health of millions of Australians and providing an important benefit to the Australian workforce. The aquatic industry produces an annual benefit of $399 million to Australian productivity through the value of decreased absenteeism.

As well as this, student participation in regular physical activity has also been linked to higher academic achievement, higher productivity, and the development of key soft skills including leadership, teamwork and communication skills.[45] This is not quantified as part of this report, yet still produces a valuable benefit to Australian productivity.

Avoided drowning an annual benefit of

$174mn

from avoided child drownings.

Sadly in 2020, 248 people lost their lives to drowning and a further 504 experienced a non-fatal drowning incident, costing the Australian economy $1.24 billion.[46] Without the aquatic industry providing a safe place for people to swim as well as coordinated and formal swimming and water safety education, the number of people losing their lives would have been higher.

Since records began, the drowning rate has steadily declined in Australia, from 20.34 per 100,000 in 1894 to 0.9 in 2020.[47] Many factors have contributed to the reduction over the past 130 years, including:

- Better water safety education and increased awareness of risks by both individuals and parents.
- Improved swimming capability by a larger proportion of the population.
- New regulation and standards for both public and private pools.
- Additional training resources for water rescue and supervision.
- More aquatic facilities where Australians can safely swim.

Aquatic facilities are safer places to swim, with fewer drownings occurring at public pools than any other aquatic location in Australia.[48] Since the implementation of child supervision programs in aquatic facilities such as Keep Watch and Watch Around Water, there have been significantly reduced drowning deaths involving young children at public swimming pools.[49]

The decrease in non-fatal drowning has been slower. Only in the past three years has the non-fatal drowning rate decreased to below the 10 year average of 3.01, it currently sits at 1.99 per 100,000.[50] Since 2016, increased reporting and other factors have seen a temporarily lift in the level of the non-fatal drowning rate which was likely previously under-reported.

In 1998, when the rate of drowning was 1.5 deaths per 100,000 the Australian Water Safety Council (the Council) published the first 'Water Safety Strategy'.[51] The aim of the strategy was to guide activities of the Australian water safety community and work towards a reduction in drowning. The Council has since published updates in 2005, 2008 and 2021, the most recent of which aspires to reduce drowning by a further 50% by 2030.[52]

The Australian aquatic industry plays a key role in implementing the water safety strategy including:

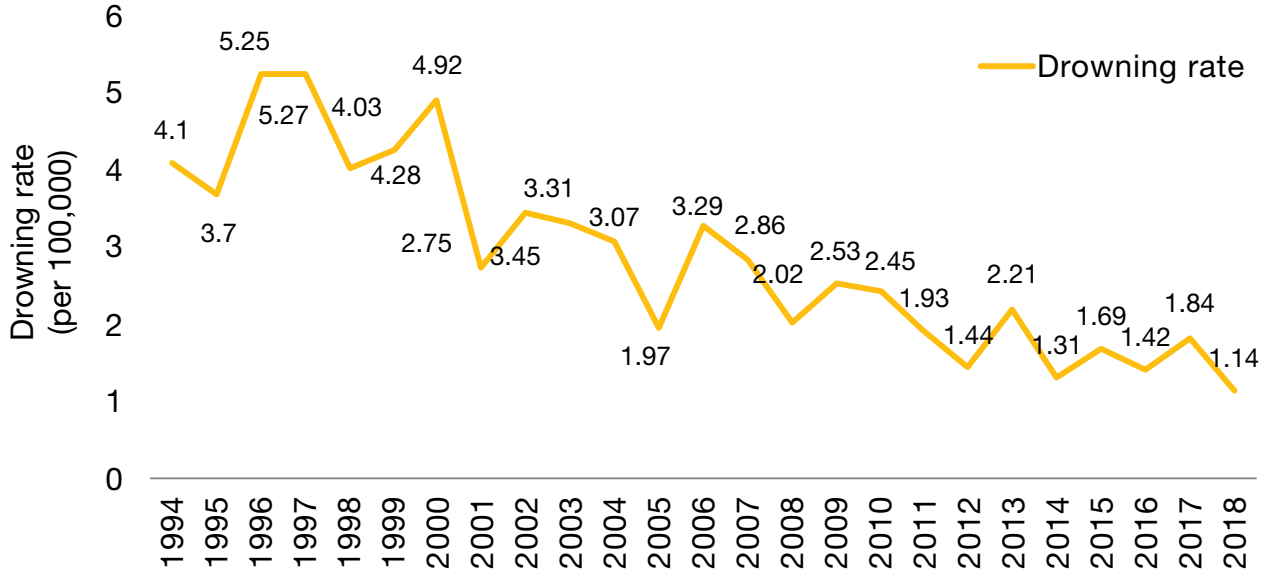
- Providing safe spaces to swim with trained lifeguards supervising.
- Increasing the number of people in the population who have swimming and lifesaving skills.
- Increasing the level of awareness of the dangers of aquatic activities and educating children and adults on how to be safe in and around water.
- Increasing the awareness of parents on the importance of supervising children aged 0-10.

Health benefits

To estimate a value of avoided drowning we have considered the reduction in drowning of children aged 0-14 between 1998, when the first water safety strategy was released and 2020*. The aquatic industry's effort at reducing drowning has had the largest impact on this age group.

Since 1998 the drowning rate of children aged 0-4 has decreased from 4.28 to 0.76 in 2020.[53] This reduction was driven by increased education of adults on supervising children and maintaining proper safety protocol such as a functioning home pool barrier. In NSW alone between 2002 and 2017, 91 children aged 0-4 drowned in private residential pools. 58 of which there was no supervision present. 80 of which either the gate and / or fence was faulty, open or non-existent.[54] The aquatic industry's engagement with and education of adults on the importance of child supervision, suitable barriers and CPR remain vital in reducing the rate of drowning between ages 0-4. Since 2005 the drowning rate of children aged 5-14 has decreased from 0.6 to 0.27 in 2020.[55] This reduction is primarily driven by increased swimming capability and water safety education of children. Swimming participation peaks between ages 5-8 before dropping off as other activities take priority such as football.[56] This means that many Australian children never reach the Royal Life Saving national swimming and water safety benchmarks. Continuing to encourage participation in swimming could further reduce the number of drownings in Australia and should be a priority for governments, the community and the aquatic industry.

Table 3: Drowning rate in children aged 0-4



Source: Peden AE, Mahony A (2018), Trends in Child Drowning Over The Last 25 Years. Royal Life Saving Society – Australia, Sydney Australia
*Due to the availability of data, 2005 was used as a base year for children aged 5-14

We estimated that the social value each year from preventing child drownings is

$174mn

This figure remains conservative as the reduction in drowning rates for children and adults over the age of 15 have not been valued in this report. This is due to drownings in that age group being partly influenced by other factors like alcohol consumption, drug use, boating incidents and pre-existing medical conditions.[57]

Social benefits

Aquatic facilities are important places for individuals and communities across Australia. They provide a safe and central place for people to have fun, meet up with others, exercise and learn. As a result, the social benefits of the aquatic industry are significant with a value of $3.8 billion per year.

The social benefits of the aquatic industry are driven by four primary factors, with each factor creating multiple sub-benefits. These factors are:

- An aquatic facility's ability to enhance an individual's leisure time or create increased life satisfaction when a person attends for leisure or physical activity.
- An aquatic facility's role as a community space providing increased amenity and bringing people together.
- An aquatic facility's role in providing jobs for young people and regional communities.
- The aquatic industry's role in society supporting early learning.

Many social benefits are in their nature intangible and many have limited methods for quantification. As such, some of the benefits in this section have not been quantified, including increased social cohesion, early childhood learning and long term enjoyment of water. Although they have not been quantified, this does not mean they are any less significant than social benefits that have an estimated value. This indicates the $3.8 billion per year social benefit is a conservative figure, and may be under representing the total social benefit of the aquatic industry to Australia.

Additionally, this report does not take into consideration the many benefits induced by the aquatic industry, such as the leisure benefit of visiting the beach following learning to swim.

The aquatic industry makes a significant contribution to social benefits in Australia

$3.8 billion

In social benefits annually

$2.98bn
in wellbeing benefits

$538mn
in leisure benefits

$72mn
in youth employment benefits

$254mn
in volunteering benefits

Social benefits

Wellbeing benefit of

$2.98bn

from regular use of aquatic facilities for exercise

Regular physical activity is not only beneficial for improving a person's physical health or reducing their risk of mental illness, it also improves a person's day-to-day quality of life and wellbeing. Studies show that physically active people are happier, have lower levels of stress, increased self esteem and confidence, and improved psychological wellbeing.[58]

Research has assessed the economic value of the wellbeing brought about by physical exercise. It is estimated that people who swim at least twice per week have on average a subjective wellbeing benefit equivalent to $3,400 over the year, increasing to $4,350 when exercising three or more times per week.[59]

Swimming provides people with a 44% higher increase in subjective wellbeing when compared with the average for other sports.

Due to aquatic activities' popularity in Australia, with over 800,000 Australians participating at least three times per week, and a further 550,000 participating twice a week,[60] the total subjective wellbeing benefit of the aquatic industry is significant at $2.98 billion per year.

Leisure benefit of

$538mn

from using aquatic facilities for daily enjoyment

Visiting an aquatic facility is part of Australian culture, with millions of Australians spending their summers by the local pool - meeting friends, escaping the heat and enjoying themselves. The aquatic industry is an important facilitator of improved leisure time.

Spending personal leisure time doing activities that are enjoyable provides people with the opportunity to recover from the day-to-day stresses of life such as work, study or other commitments. In doing so, people feel benefits such as increased happiness and resilience, lower levels of stress, improved psychological wellbeing and social relationships, boosted energy, as well as many others.

As a result, people typically are willing to pay for leisure activities as they perceive the benefit will be at least as much as the cost - if not greater. A recent survey demonstrated that people were on average willing to pay $14.90 for a leisure visit to an aquatic facility, increasing for facilities with better amenity.[61]

Over 30% of participants indicated that they use aquatic facilities for their own enjoyment, and 10% went for social reasons.[62] We estimate the leisure benefit of going to an aquatic facility is $538 million per year.

The leisure benefit associated with aquatic activity outside of the pool, such as swimming at the beach has not been included in this report. However, this benefit is likely to be induced by activities within the industry, such as learning to swim.

Social benefits

Employment benefit of

$72mn

from increased employee surplus

The aquatic industry provides 14,500 jobs for young people, supporting jobs for a demographic that has high unemployment. Approximately 22% of the aquatic industry workforce are aged between 15-24, a population which across Australia has high unemployment.[63] In 2019 (pre COVID-19), the unemployment rate for this demographic was 11.7%.[64]

Employment is not typically captured as a social benefit, due to the assumption that the value of the wage equals the cost of undertaking the work. However, when providing opportunities to a labour market with sustained high unemployment, this can lead to utility surplus for those individuals. This can be captured by estimating the component of the wage earned above a 'reservation wage' that unemployed individuals would have been willing to work for. In the aquatic industry this benefit is estimated to be $72 million per year.

Working in the aquatic industry may present many young people the opportunity to enter the workforce for the first time. As a result, young people place value on having the ability to learn skills that may lead to increased future earning capacity, becoming financially independent and increasing their pride and self-esteem.

Additionally, due to the geographic spread of pools across Australia, the aquatic industry provides significant employment in regional and remote towns that may have limited employment opportunities. For example, Royal Life Saving provide training programs in remote Aboriginal and Torres Straight Islander communities for training to become lifeguards.

Volunteer benefit of

$254mn

from the community supporting the aquatic industry

The aquatic industry is heavily supported by volunteers to run sporting, school and fundraising events, which can often require up to 40 volunteers. The value of volunteer time can be considered an economic output.

Although volunteers do not receive payment for their time, they do have an opportunity cost, which is the value they could receive from undertaking another activity. As a result, it is assumed that the value a volunteer places on their time is at least equal to potential lost income. This benefit has been estimated conservatively - assuming the value of volunteer time is equal to the Australian minimum wage.

A survey conducted by Swimming Australia found that 78% of swimmers volunteered within their community.[65] This time is distributed across a range of organisations both in and out of the sport and recreation sector. The proportion of volunteer time that occurs in the aquatic industry is estimated to be valued at $254 million per year.

Community benefits from increased community connection

The local pool is a focal point in many communities. It is a place that brings people together, supporting social cohesion and increased community pride. A pool provides increased opportunities for peer-to-peer integration across multiple demographics and cultures.

Providing a safe place in the community for people to connect can result in multiple benefits for individuals and the community as a whole. This is particularly relevant in regional communities where they provide children with an avenue to connect with others across the community and form relationships.

Participating in sport is shown to help individuals develop critical social skills and understanding of cultures and demographics, helping communities to be more inclusive and socially driven.[66] As a result, a community pool is able to facilitate increased trust and social cohesion within community groups which in turn may lead to benefits such as reduced crime rates for communities.

Although these social connection benefits are not quantified, the wealth that a pool brings to a community is substantial and no less important than other benefits outlined in this report.

Social benefits

Elite sport benefit from increased performance and community pride

Australia's exceptional track-record of international sporting success enhances our international reputation, fosters community engagement and builds national pride.

Government funding for elite sport training indicates the national value placed on winning medals at international events such as the Olympics, Commonwealth games and World Championships. Funding elite sport typically leads to improved performance at international swimming events, such as the Olympics. Although there is significant personal benefit to the individuals involved, the flow on impact to the community is also significant.

Community members have increased national pride when watching elite sport.[67] In turn this can increase the motivation for community members to participate in sports such as swimming. Increased sports participation is a desirable outcome for governments due to benefits outlined throughout this report. Although these benefits are not quantified, they are significant.

Local Amenity Benefit of

$40bn

from increased property value

Investment into the redevelopment and construction of new aquatic leisure facilities can improve local amenity, increasing the spaces within the community that can be actively used by locals. Due to the many benefits associated with an aquatic facility as discussed through this report, it is desirable to be located within walking distance of a pool.

Choice modelling conducted by PwC Australia assessed the effects of various types of amenity on property prices. Statistical analysis of stated preference and utility was used to indicate an individual's willingness to pay to be located nearby an aquatic facility.

This modelling found that individuals were willing to pay an additional 2.1%-3.5% of the property price to be located close to the pool

To date, this has led to an uplift of property price of $40 billion across Australia, 0.5% of Australia's $8.3 trillion residential property value.

This benefit has not been included in the total annual benefit as an individual's increased willingness to pay will likely take into consideration benefits described earlier in the report. However, when a new pool is constructed in an area that currently is under-serviced, the uplift in property price leads to value creation within the community. This value creation would be a net new benefit, as the individuals located close by have not paid a higher price to be located close to the new amenity.

Social benefits

Educational outcomes benefit for early learning and school students

Swimming impacts the educational outcomes of children through increased activity and is often the first structured learning that most Australian children do. The impact of activity and education has been investigated across a range of educational outcomes, including exam results, university entrance scores, retention and educational aspirations in students.[68] Improved educational outcomes associated with increased activity could drive increased lifetime earnings for young Australians.

Increased activity has been linked with a myriad of benefits including; improving on task behaviour, improving cognition and neural function, increasing engagement in learning, encouraging young people to stay in school longer, improving relationships with teachers and improving confidence.[69]

As the most popular sport undertaken by children aged 0-14, swimming plays an important role in facilitating educational outcomes as well as improving a child's relation to physical activity, increasing the likelihood of future active recreation, which could impact their employability later in life. Additionally, early association with water can lead to increased comfort undertaking aquatic activities later in life, unlocking the benefits discussed earlier in this report such as health benefits, enhanced leisure and reduced risk of drowning.

Finally, swimming lessons are typically the first structured and/or formal educational experience for the majority of Australians.

Although educational benefits are likely to be significant, they have not been quantified in this report.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Conclusion

The aquatic industry is important for Australia, facilitating over $9 billion in quantifiable benefits for Australians, the communities they live in as well as society as a whole. The economic benefit is primarily driven by activity occurring at aquatic facilities, which provide comparatively safe locations for community members to spend their leisure time, get active and improve their wellbeing. These facilities also provide increased job opportunities for youths and in regional Australia, as well as increased social cohesion.

This report has captured a holistic view of benefits across the industry and can be used to support and inform policy makers when making decisions on future infrastructure. With a strong SROI on aquatic facilities, we recommend policy makers give strong consideration to the maintenance and development of new and existing aquatic facilities, particularly when looking to improve health, social and economic outcomes for the whole-of-community.

Additionally, in order to understand the benefits of the aquatic industry at a more granular level, for individuals and communities, additional analysis that could enhance the findings of this report include:

- **Focused analysis of the benefit of remote and rural Australian pools:** Analysis in this report has relied on high level data for capital cities and regional Australia. Further targeted analysis could determine the additional social benefits of the aquatic facilities in remote and rural locations.
- **Needs analysis of aquatic facility infrastructure:** This report does not include analysis on current state of aquatic infrastructure. Future analysis on age, utilisation, operating cost and location could be used to determine the locations that may be suitable for redevelopment or a new aquatic facility. Combined with analysis in this report, this could inform decision makers on the costs and benefits of redeveloping or replacing existing infrastructure.
- **Gap analysis of aquatic infrastructure:** Geospatial analysis of current infrastructure and population demographics could be used to determine areas that are under-serviced by the current aquatic infrastructure. Using analysis in this report combined with targeted regional modelling could inform decision makers on the costs and benefits of building new infrastructure.
- **Expanded willingness to pay survey:** Increased granularity of communities' willingness to pay for activities in the aquatic industry could help policy makers to make informed decisions about future investment. Undertaking further study in various locations, including capital cities, and regional and remote communities could determine the benefits provided by aquatic facilities with increased granularity.
- **Facility-level SROI assessment tool:** Quantitative benefits provide valuable evidence when informing decisions for funding. However, for most local aquatic facilities, quantitative benefit assessments are too expensive. RLSSA can reduce this cost to operators, and improve advocacy across the industry.
- **Focussed assessment of industry sections:** Increased granularity of assessment on sections of the industry such as private learn-to-swim and council-owned pools can provide critical insight into sections of the industry.

5

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