



COMMUNITY BENEFITS OF GOLF IN AUSTRALIA

FINDINGS REPORT

MESSAGE FROM THE CHAIR

It is with my great pleasure to introduce the Community Benefits of Golf in Australia Report for 2023 on behalf of the Australian Golf Industry Council (AGIC), as its Chair.

As you will see across the following pages, the overwhelming message is that golf is one of the biggest sports in Australia, contributing significant economic, social and environmental benefits to golfers and the Australian community.

This report provides compelling storytelling and support for the game of golf, with benefits based on quantified evidence. The benefits are the flow on effects from the Australian community's spend on golf, golfers leading active and healthy lifestyles and the vital open spaces and environments created by golf courses and facilities. On behalf of the AGIC, I wish to express our sincere gratitude to SGS Economics & Planning for their tireless work on this project and for creating a robust and repeatable methodology that also positions golf as a leader across the sport and recreation industry.

The numbers outlined in this report will perhaps surprise, but they are undeniable. My hope is they will go a long way to change the perception of golf. We now have the evidence to inform decision makers and strengthen partnerships so that together golf can continue to build on the social fabric of a healthy and connected Australia. As well as proof of the community hub culture provided by golf facilities, which like the greater industry, are providing extensive job and business opportunities.

Golf is big, it's different and it's changing, so we hope you share the optimism we have for the sport after reading this report.



Karen Lunn
Chair, AGIC
CEO, WPGA Tour of Australasia



The Australian Golf Industry Council (AGIC) was established in 2006 as a group comprising the key national bodies of the golf industry in Australia, designed to work together for the common good of the game and the industry.

Through the three peak bodies in the PGA of Australia, Golf Australia and WPGA Tour of Australasia, the industry has never been as united as off the back of the inaugural Australian Golf Strategy (2022-2025) and this newly commissioned report.

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SNAPSHOT



THE NUMBERS

<p>\$3.3b</p> <p>total annual benefits of golf</p>	<p>\$1.4b</p> <p>The value of economic benefits of golf each year. These benefits accrue to golf players, golf related businesses (including tourism related), golf workers, and the health sector</p>	<p>\$1.0b</p> <p>The value of social benefits of golf each year. This accrues mainly via physical and mental health benefits (around \$860m of benefits annually), with around \$149m associated with the amenity of golf courses.</p>	<p>\$890m</p> <p>The value of environmental benefits of golf each year through biodiversity, flood and stormwater protection, water filtration and purification, carbon sequestration and urban cooling.</p>
<p>7.23m</p> <p>More than one third of Australian adults (37%) visit a golfing facility for meals, drinks and various social, leisure and business activities every year.</p>	<p>\$10.3b</p> <p>Estimated annual household expenditure associated with golf activities and golf facilities in Australia. \$6.7b of this is associated with expenditure of golf players and community members in their local area, and the remaining \$3.6b is associated with golf tourism.</p>	<p>1,603</p> <p>Number of places to play across Australia. Made up of 431 9-hole courses, 922 18-hole courses, 53 27-54 hole courses, 184 driving ranges, 115 mini golf courses, and growing number of indoor simulators and entertainment venues.</p>	<p>280m</p> <p>The kilometres that Australian golfers collectively walk each year to play golf. This equates to over 7,000 laps of the Earth's equator each year</p>
<p>7.1%</p> <p>Higher score on-course golfers are in subjective health and wellbeing compared to non-round golfers. Club members scored 78.4 (+15.2%) and round players scored 68.4 (+5.2%) compared to average score for adults 63.2 (out of 100).</p>	<p>3.5m</p> <p>Number of Australian adults (aged 18-79) who play various formats of golf. It comprises around 2.2m on-course golfers (golf club members and round players) and 1.3m people who play alternative formats of golf only (driving range, simulator, mini golf).</p>	<p>1.75m</p> <p>Estimated number of overnight trips made per annum for the purpose of playing golf. Of this, 1.6m are domestic overnight trips (driving and flying), and over 150,000 are international visitors.</p>	<p>21.3</p> <p>Average number of on-course golf games played per year for golf members and round players. 2.21m players amass more than 47m rounds of golf every year.</p>

GOLF ACROSS AUSTRALIA

GOLF PLAYERS

Golf is big – golf is one of the largest sports by participation rate in Australia.

Survey findings suggest that around 3.5 million Australians participated in various formats of golf over the previous 12 months.

Golf is different – golf attracts a range of players across diverse demographic cohorts.

As a moderate-intensity form of exercise, and one that can be highly social across the various formats, golf attracts people of all ages and from all backgrounds.

Golf is changing – differences in golf participation across generations suggest a deepening participation base.

HALF OF ALL AUSTRALIAN ADULTS ARE PLAYING OR INTERESTED IN PLAYING GOLF.



MORE THAN HALF OF ON-COURSE GOLFERS HAVE AN ANNUAL INCOME OF BELOW \$100,000.



WOMEN ACCOUNT FOR 53% OF DRIVING RANGE, MINI-GOLF, AND OTHER ALTERNATIVE FORMAT PLAYERS.



MEN ACCOUNT FOR 81% OF GOLF CLUB MEMBERS AND 63% OF ROUND PLAYERS.



GOLF ACROSS AUSTRALIA

GOLF BUSINESSES

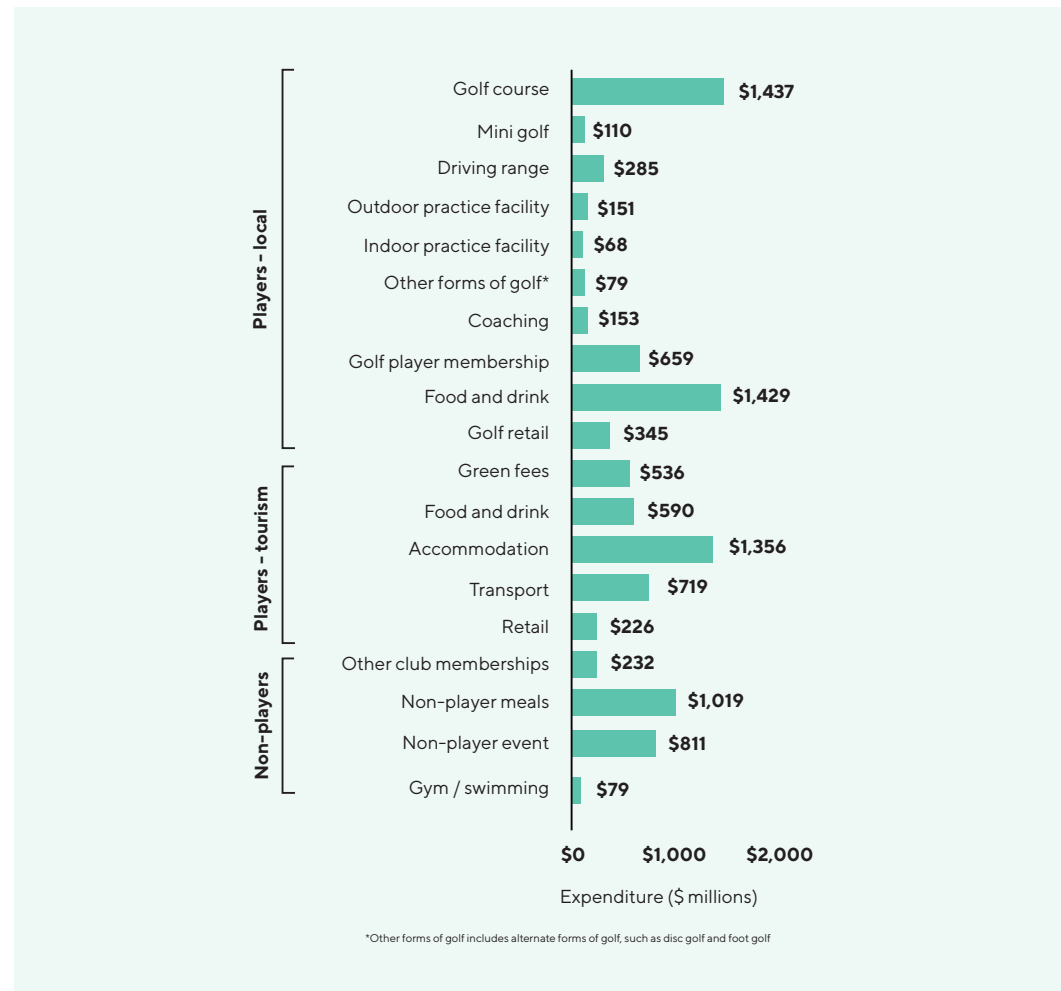
GOLF GENERATES AROUND \$10.3 BILLION PER ANNUM IN HOUSEHOLD EXPENDITURE.

A summary of annual spending by players locally and when travelling is below, along with annual spending of non-golfers at golf club facilities.

GOLF FACILITIES

Golf is played across Australia in a growing number of diverse outdoor and indoor settings, reflecting the way people want to consume the sport. There are at least 1,603 places to play.

431	9-hole courses
922	18-hole courses
53	27-54-hole courses
115	mini golf courses
184	driving ranges



GOLF'S BENEFITS

Annually, golf generates significantly more expenditure than most other recreational and leisure activities.

Golf activities generate important benefits for golfers and the Australian community. The type and scale of benefits are driven by the unique factors of golf:

- Total expenditure associated with golf is larger than that of other leisure/sport activities. For example, cycling in Australia is associated with \$6.3 billion in annual expenditure, while recreational fishing is associated with \$3.4 billion in annual expenditure. At \$10.3 billion of associated expenditure, golf is similar in size to JB Hi-Fi (by annual revenue), and around half the size of Qantas and Telstra.
- Many golfers base their holidays around golf, which is in high contrast to other leisure/sport activities. Around one-third of total household expenditure on golf is associated with golf tourism.
- As a moderate-intensity, yet long-form type of activity, golf supports good physical and mental health for people of all ages
- With vegetation that is, on average, more complex and diverse than that of public parks, golf provides important amenity and environmental benefits



GOLF'S BENEFITS

GOLF IN AUSTRALIA

DRIVERS OF BENEFITS

Golf generates around \$10.3 billion in expenditure.

Supports people to live active and social lives.

Provides important open space in urban areas.

ANNUAL BENEFITS

Player benefits of \$502 million

Business benefits (profits) of \$394 million

Worker benefits of \$122 million

Tourism benefits of \$336 million

Health system cost savings of \$49 million

Physical health benefits of \$423 million

Mental health benefits of \$439 million

Amenity benefits of \$149 million

Environmental benefits of \$890 million

LEGEND FOR ANNUAL BENEFITS

Economic benefits

Social benefits

Environmental benefits

GOLF'S BENEFITS

ECONOMIC BENEFITS

ECONOMIC BENEFITS TOTAL \$1.4 BILLION PER ANNUM.

There are many nuanced reasons why people choose to engage with golf but ultimately, they do so because they derive value from the sport. Beyond membership fees, green fees and entry fees, it was calculated that Australian golf players derive a collective additional benefit of \$502 million per annum. Across more than 57 million individual participations in golf activities per year, this works out to be a benefit of around \$8.8 per activity.

Additional economic benefits include:

- **\$394 million** in annual benefits for Australian businesses. This benefit is the total estimated profit of businesses from golf-related expenditure

- **\$122 million** in benefits for industry workers each year, which reflects higher levels of employment and higher wages than would be expected in a scenario where the golf sector did not exist
- **\$336 million** in benefits flowing from golf-related tourism.
- **\$49 million** in avoided health system costs due to golf supporting a healthier society, given it is a long-format type of moderate-intensity exercise

SOCIAL BENEFITS

SOCIAL BENEFITS TOTAL \$1.0 BILLION PER ANNUM.

The social benefits of golf include physical and mental health benefits that accrue to golf players, and neighbourhood benefits resulting from the high amenity of golf courses.

Physical health benefits of golf are associated with supporting golf participants to be physically 'active', as opposed to 'inactive'. Mental health benefits are generated by the same outcome, along with social interaction and time spent outdoors which may otherwise not occur. Our analysis finds:

- **166,000** Australians are physically active with golf but would be considered inactive without it. Daily, Australian golfers walk a combined 19.2 laps of Earth's equator
- Annual physical health benefits which accrue to golfers sum to **\$423 million**. This equates to an average annual physical health benefit of around **\$190** per golfer
- Annual mental health benefits which accrue to golfers sum to **\$439 million**. This equates to an average annual benefit of around **\$200** per round golfer
- The neighbourhood amenity benefit of golf courses impacts land prices within around 750 metres of golf courses. The annual amenity benefit was valued at **\$149 million**.

GOLF'S BENEFITS

ENVIRONMENTAL BENEFITS

ENVIRONMENTAL BENEFITS TOTAL \$890 MILLION PER ANNUM.

Golf courses provide important environmental benefits, especially in urban areas where green space is limited.

Academics at the University of Melbourne undertook an assessment of golf course biodiversity, and found:

- The structural complexity of vegetation on golf courses is around 50-100% higher than that of residential gardens and urban parklands.
- Beetle and bug abundance on golf courses is 6-10 times greater than that within other nearby parks.
- Bee species richness on golf courses is around 3-4 times that of remnant heathlands.
- There are around 50% more bird species on golf courses than in urban gardens and parks.

BENEFIT TYPE	ANNUAL BENEFIT
Flora and fauna biodiversity	\$354 million
Urban cooling	\$257 million
Flood & stormwater management	\$159 million
Water filtration and purification	\$114 million
Carbon sequestration	\$6 million

GOLF ACROSS AUSTRALIA



PLAYERS

Golf is one of the largest participation sports in Australia. There are many ways that Australians can engage with golf, whether that be through golf courses, or via formats like mini golf, pitch and putt, simulator golf, or other alternative options (off-course golf).

According to Prescience Research findings, golf club members tend to be older and male-oriented, while round players have a wider age range. Young people, women, and families with children are more likely to engage in social and alternative format golf, such as mini golf. These differences across generations suggest a deepening participation base.

2.2 million Australians played on-course golf during the last 12 months, while a further 1.3 million played off-course formats of golf only.

Men account for **81%** of golf club members and **63%** of round players.

Women account for **53%** of driving range, mini-golf, and other alternative format players.

Half of all Australian adults are currently playing or are interested in playing golf.

60% of on-course golfers are trade, admin, personal services, and sales workers.

The remaining **40%** work as full-time as managers and professionals.

More than half of on-course golfers have an annual income of below **\$100,000**.

The mean age of on-course golfers is **48**, for off course players it is **36**.

Around **45%** of all golfers live with children; **18%** are single and live alone.

The average on-course golfer played **21** rounds of golf in the last year.

CLUB MEMBERS

Club members are golf enthusiasts. Based on Prescience Research survey data, club members are the golf segment who spent the most time playing golf (94 per cent had played a round near their home in the last 12 months, with 74 per cent of these playing 20+ times), are the most likely to travel for golf (over 34 per cent), and are willing to spend the most on golf-related equipment and activities.

Club members tend to be older (56 per cent are aged 60+) and male (81 per cent). Most (43 per cent) club members work full-time; however, many (41 per cent) are retired.

ROUND PLAYERS

Round players participate in golf less regularly than club members but are nonetheless an engaged cohort of players. Around 70 per cent said they'd played a round of golf near their home within the last 12 months, and over 12 per cent had traveled to play golf.

Round players tend to be younger than members (59 per cent are under 40). Male players account for 63 per cent of all round players.

YOUNG PEOPLE

Almost 30 per cent of Australians aged 18-29 had participated in some form of golf in the past 12 months. Just over 15 per cent were round players and nearly 6 per cent hit balls at outdoor driving ranges and entertainment venues. Over 8 per cent were interested but not yet playing golf.

Those aged 18-29 are least likely to be club members (accounting for only 8.4 per cent of club members); however, they are most likely to be engaged in all other formats of golf.

Over 36 per cent of all round players are aged 18-29, and young people are also more likely to engage in alternative formats of the game. Among those who played mini-golf, or who played golf at an indoor or outdoor entertainment venue (as opposed to a golf course), over 45 per cent were aged 18-29.

WOMEN

Off-course players are more likely to be women, accounting for 53 per cent of indoor simulator and driving range golf, mini-golf, and other alternative formats of golf.



BUSINESSES

Golf generates approximately **\$10.3 billion** per annum in household expenditure.

PLAYERS

Golf players spend money at golf courses, including on membership fees, entry fees, and food and drink at the course.

In addition, golf players will make external retail purchases to support their participation in golf, such as at sports stores which sell golf clothing and equipment.

Total player expenditure amounts to roughly \$4.7 billion per annum. Around \$2.9 billion of this is associated with golf activities, and the remaining \$1.8 billion is on golf clothing, equipment, and food and drink purchased at golf venues.

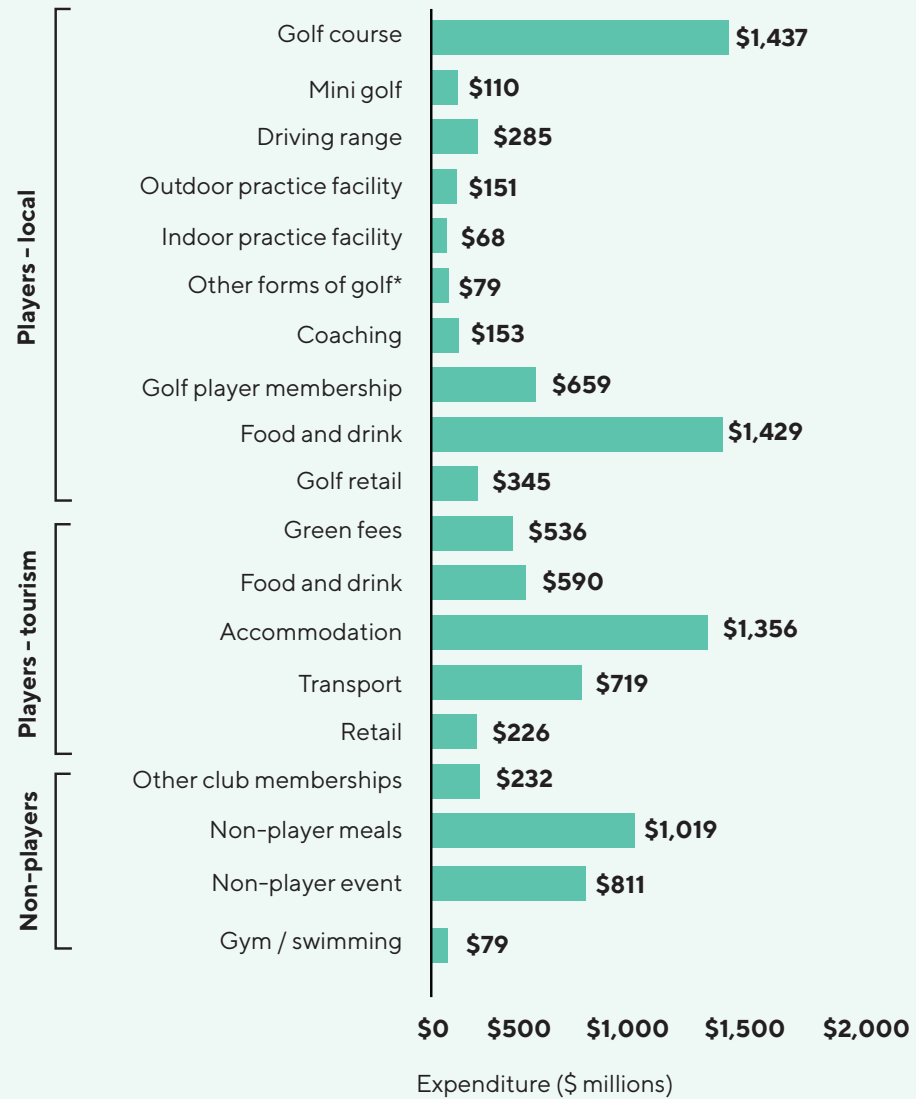


NON-PLAYERS

Non-players will also spend money at golf courses, for example they might eat a meal at a golf course restaurant, visit a golf course for an event like a wedding, or use a golf course gym and swimming pool. Some 37 per cent (or 7.23m) of Australian adults said they visited a golfing facility in the past 12 months. Non player expenditure totals approximately \$2.1 billion per year.

TOURISM

Golf is a key driver of Australia's tourism sector, particularly in some regions of Australia. Many local golfers choose to travel intrastate or interstate to play golf, and many international visitors come to Australia to play golf. Tourists spend money on accommodation, transportation, food and drink, as well as directly at golf facilities on entry fees. Total golf-driven tourism expenditure amounts to approximately \$3.4 billion per annum.



*Other forms of golf includes alternate forms of golf, such as disc golf and foot golf

FACILITIES

There are on-course and off-course golf facilities available across the country.

ON-COURSE FACILITIES

Includes 9 to 54-hole golf courses (and shortened courses i.e., pitch and putt or courses less than 9 holes). Participation includes members and round players.

OFF-COURSE FACILITIES

Includes outdoor driving ranges and entertainment facilities, indoor simulator or practice facilities, indoor or outdoor mini golf courses and putt putt facilities. Participation includes outdoor ball hitters, indoor ball hitters and mini golf players.

431 9-hole courses

922 18-hole courses

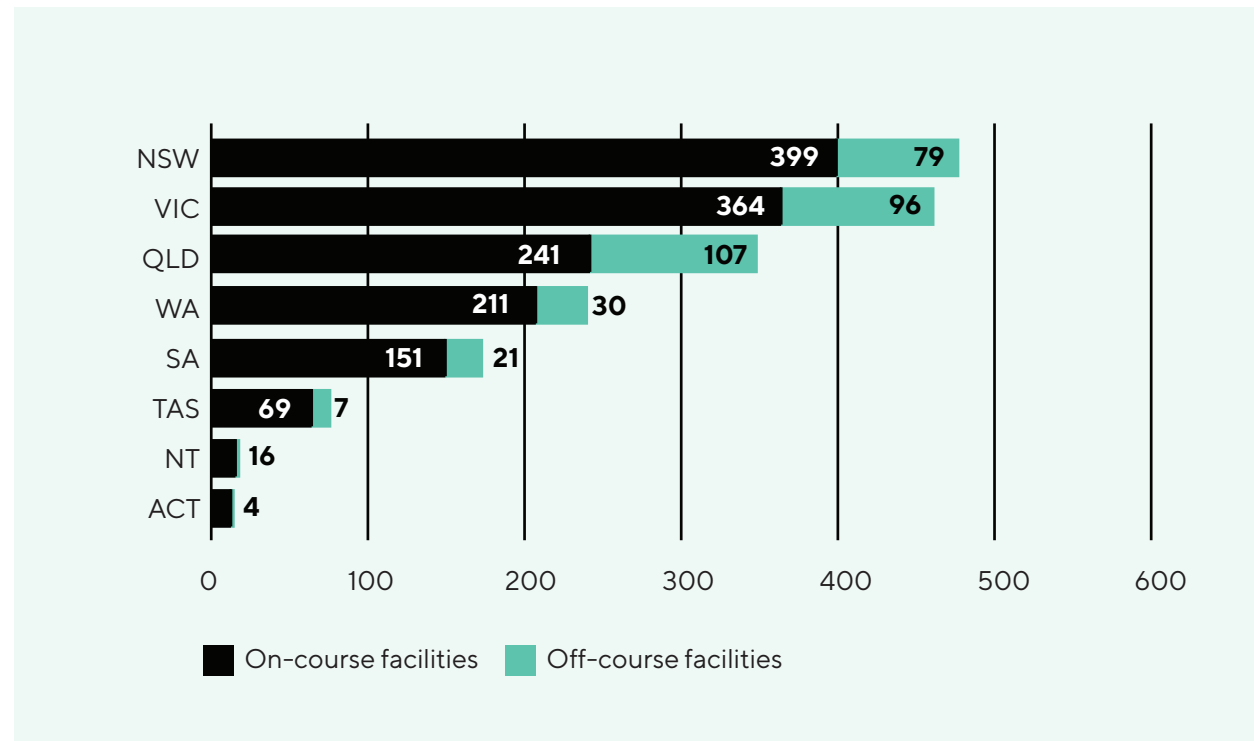
53 27-54-hole courses

115 Mini golf courses

184 Driving ranges

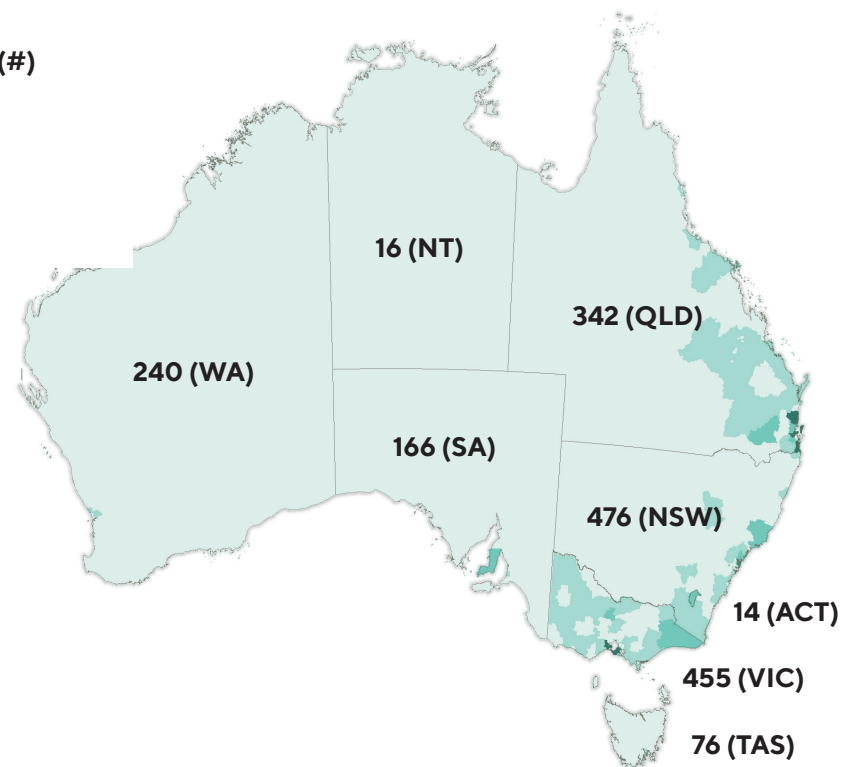
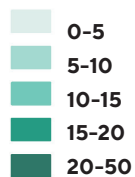
OTHER FACILITY TYPES

Other facility types support alternate forms of golf, such as foot golf and disc golf.



Golf is played across Australia in a growing number of diverse outdoor and indoor settings, reflecting the way people want to consume the sport. Growth in off-course facilities is trending globally in line with participation in all formats. The National Golf Foundation reported that there are now more off-course facilities in the USA than on-course to meet player demand.

FACILITIES (#)



COMMUNITY BENEFITS



OVERVIEW

THE BENEFITS OF GOLF

Golf generates numerous economic, social, and environmental benefits.

For this report, the quantified benefits of golf were informed by two key inputs:

- Primary data analysis via a survey of 1,600 golfers and non-golfers across Australia, weighted to be representative of the Australian adult population.
- A desktop review of data and documents provided by AGIC members, as well as industry data and ABS-sourced data.

While the techniques used to quantify benefits are all established and robust, gaps in the available data and the need to use non-market quantification techniques for some benefits means that these results may not perfectly represent the true extent of golf-related benefits. Where exact data was unavailable, estimates were used.

This report is accompanied by a separate technical report, which sets out the rationale, approach and inputs used to profile golf activities and quantify golf community benefits.

ECONOMIC BENEFITS

Economic benefits include benefits to players, businesses, and workers.

Players derive benefits from golf, evidenced by the time and money they choose to spend engaging in the game and travelling to and from the golf course. Player benefits are the value enjoyed above prices paid, and have been estimated using insights from player travel patterns.

Australian **businesses** benefit from the expenditure made at golf courses and on golf equipment. Business benefits have been quantified by multiplying industry revenues by relevant profitability rates.

Australian **workers** also benefit from increased incomes associated with the golf industry. Worker benefits have been estimated by applying relevant unemployment and underemployment rates to the industry workforce.

Golf **tourism** generates additional benefits to Australian businesses and workers, which were quantified using survey data on expenditure associated with golf-purposed trips.

Australia's **health system** benefits from avoided costs due to golf supporting a healthier society.

SOCIAL BENEFITS

Social benefits include improved physical and mental health and increased neighbourhood amenity.

Physical activity is associated with numerous health benefits, including reduced risk factors for several chronic illnesses.

The **physical health benefits** of golf have been quantified by estimating the number of players who would be considered physically 'inactive' without golf and applying a dollar value to the additional healthy years they gain as a result.

Golf has also been shown to deliver mental health benefits to players, evidenced through a greater average health and wellbeing score among golfers. **Mental health benefits** have been quantified by applying a commensurate reduction in the average mental health cost to the portion of Australians who play round golf.

Golf courses improve **neighbourhood amenity**, which has been quantified using the increase in residential land value that is generated by golf courses.

ENVIRONMENTAL BENEFITS

Golf courses are green spaces that generate environmental benefits for neighbouring communities via localised impacts and society more broadly via carbon sequestration.

As open green spaces, golf courses generate environmental benefits through:

- Enhanced preservation of local ecosystems
- Reduced impact of flooding and stormwater
- Carbon reduction as emissions are absorbed by green spaces
- Greater thermal comfort, especially in city areas where golf courses help with urban cooling.

Environmental benefits were quantified based on values from existing studies, adjusted to account for relevant spatial and environmental differences across Australia's regions.



ECONOMIC BENEFITS FOR PLAYERS

An estimated **3.5 million** Australians played some form of golf in the last 12 months.

The total benefit for players sums to around \$502 million per annum. This equates to an average benefit of around \$8.8 per participation in a golf event.

Although there are many reasons why people may choose to engage with golf, they ultimately do so because they derive value from the sport.

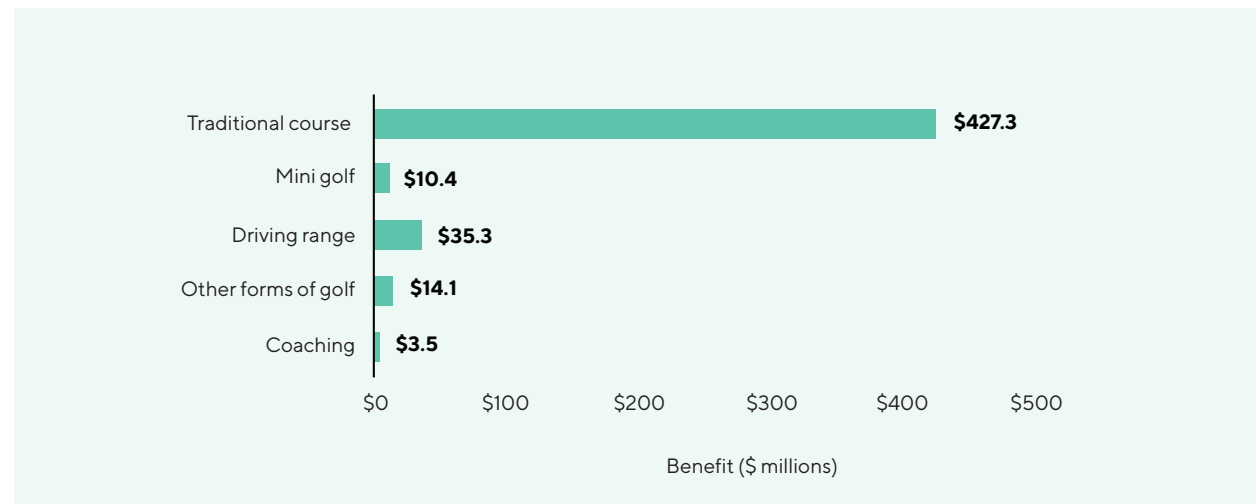
For many, golf represents a personal challenge – a way to develop skills and test themselves against others or by improving their own abilities.

Golf can also be a way to spend time with family and friends. As a long-duration sport that is accessible to people of all ages and abilities, golf allows for conversation and quality time with people we care about.

Golf is a way to spend time outdoors. Golf courses are green spaces, typically spanning several kilometres and containing an abundance of trees, birds, and other natural features for players to enjoy.

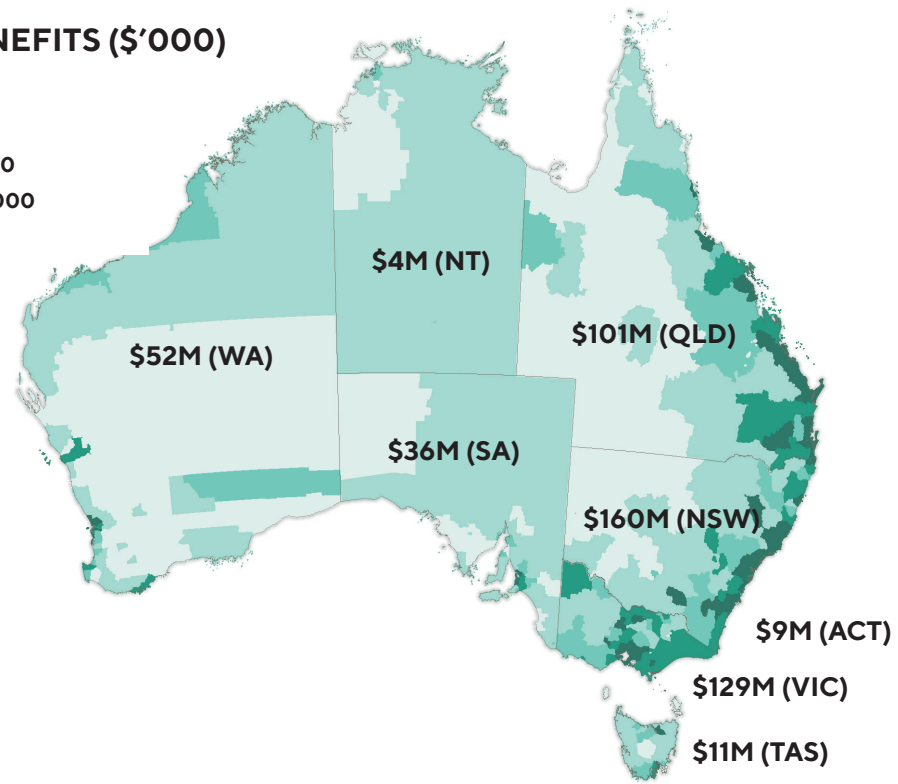
Due to the amount of walking involved, golf is also a popular way to engage in moderate physical exercise. Golf rounds can take place over several hours, with players walking around 10 kilometres over 18 holes of golf.

The total player value associated with golf in Australia is estimated at around \$502 million. Most of this (88 per cent) comes from golf courses (9–18-hole courses), followed by driving ranges (7 per cent) and mini-golf (2 per cent).



PLAYER BENEFITS (\$'000)

- <\$100
- \$100 - \$500
- \$500 - \$1,000
- \$1,000 - \$2,000
- \$2,000 +



ECONOMIC BENEFITS FOR BUSINESSES

Over **\$6.8 billion** was spent at golf facilities and on golf-related retail in 2023, generating an estimated **\$394 million** in profits for local businesses.

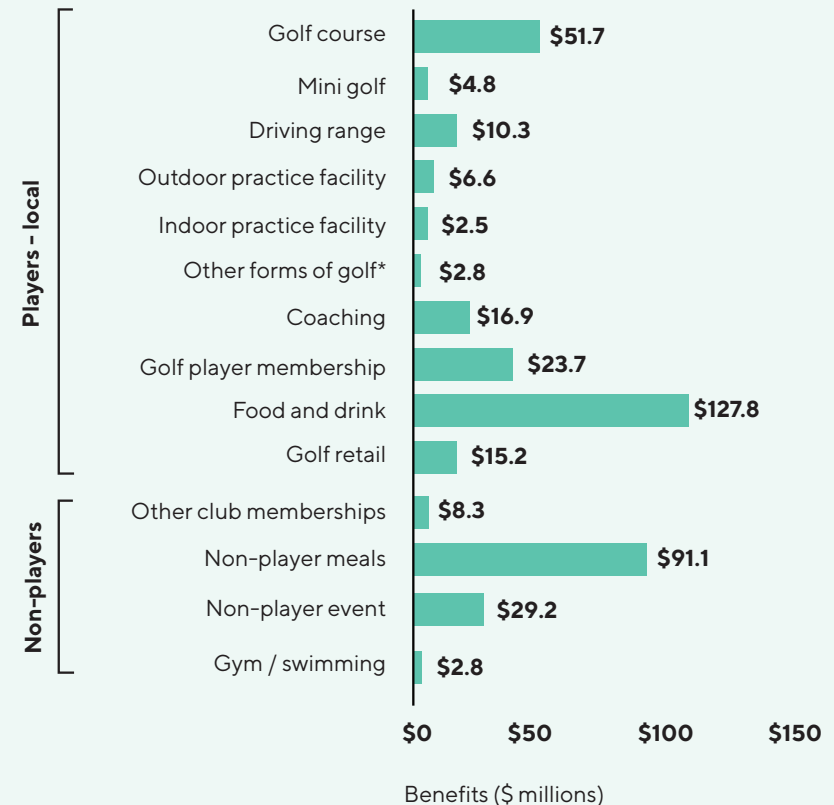
Excluding tourism related spend, over \$6.8 billion was spent at golf facilities and on golf-related activities and items in 2023, generating an estimated \$394 million in profits for local businesses.

Of this, \$127 million came from entry fees and golf club memberships, while \$266 million came from golf-related retail, golf club non-player events, and the purchase of food and drink at golf facilities.

To estimate total profits, revenue associated with golf activities was attributed to ABS Australian and New Zealand Standard Industrial Classification (ANZSIC), and applied to profitability rates published by IBISWorld.

Profitability rates for golf-related industries ranged from 3.6 per cent (for Sports and Physical Recreation Clubs) to 11 per cent (for Sports Instructors). All other industries fell within this range.

Business-to-business (B2B) expenditure ranged from 42 per cent to 79 per cent of golf-related spend, varying by industry. Overall, this amounted to an estimated \$6.4 billion in 2023. B2B expenditure is flow on spending from household expenditure (i.e. it flows after household spend on golf activities), and, therefore, it was not used to calculate business benefits.



*Other forms of golf includes alternate forms of golf, such as disc golf and foot golf

ECONOMIC BENEFITS FOR THE HEALTH SYSTEM

In addition to the \$394 million of annual benefits associated with golf related expenditure, economic benefits of golf participation accrue via health system cost savings stemming from golf supporting a healthier society. Prescience Research findings indicate that, in the absence of golf, an additional **166,000** Australians would be considered inactive (defined as <150 minutes of moderate intensity exercise per week).

This has health system benefits, as the health system burden of the average inactive person is around \$295 per annum. Avoiding this cost for 166,000 Australians annually reflects health system cost savings of nearly **\$49 million**.



ECONOMIC BENEFITS FOR INDUSTRY WORKERS

Across Australia, golf is estimated to generate over 27,800 full time equivalent jobs. This creates an annual benefit of **\$122 million** for industry workers each year.

To support golf across Australia, there must be people working in golf clubs and associations, retail workers selling golf equipment in stores, and hospitality workers servicing golf club restaurants.

Without the existence of golf, these workers may have less employment or work in other jobs or industries. The benefit of golf to industry workers is in the additional income they earn as a result of golf, and which they would not have earned if the sport were less prevalent.

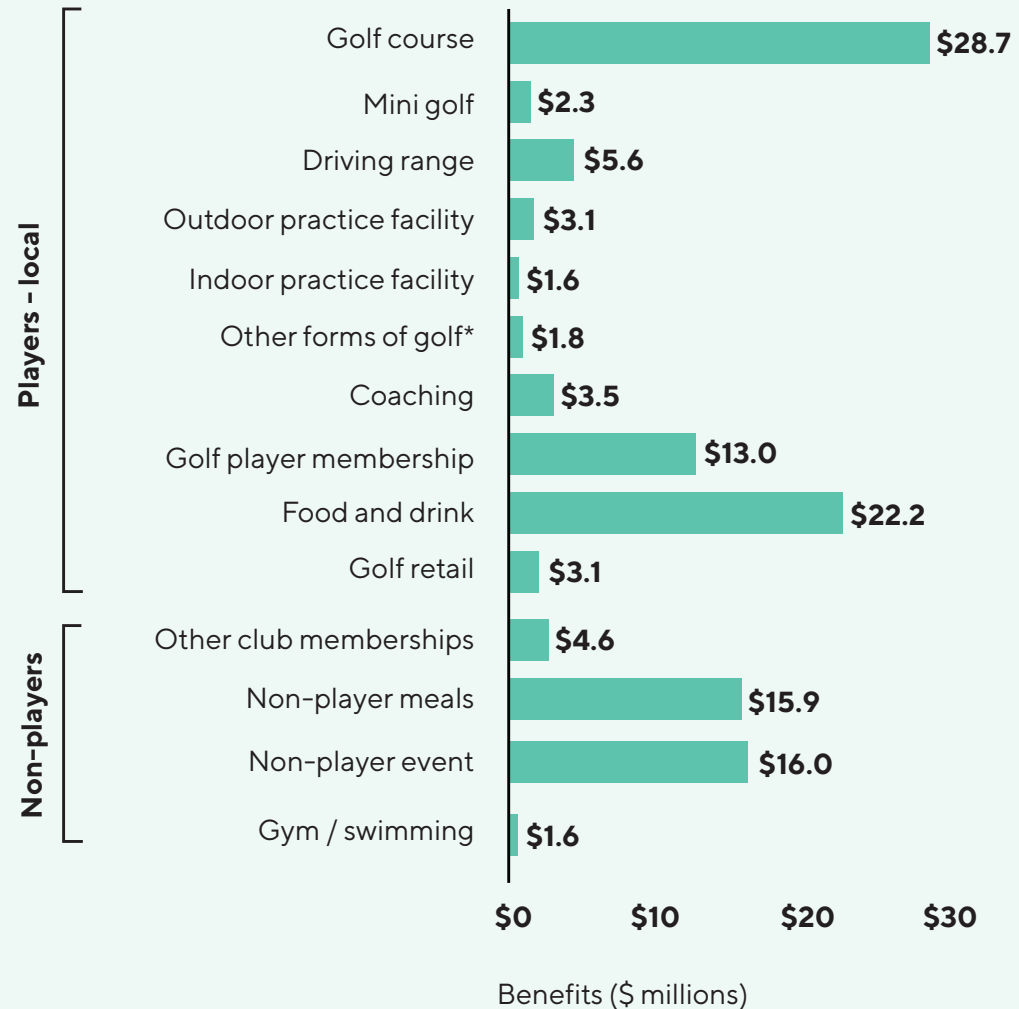
The value of golf in generating income for industry workers is estimated to be **\$122 million** per year. The annual value reflects the higher levels of employment and wages that exist with golf, compared to employment levels and wages that would be expected in a hypothetical scenario where the golf industry does not exist.

The AGIC members and in particular the PGA Learning Hub provide education, training and support for workers and a thriving industry. With PGA Professionals making up approximately 9 per cent of the 27,800 jobs across the entire industry.

Most of the industry worker benefits (\$66 million) come from those employed directly at golf courses (inclusive of player and non-player activities), while \$18 million comes from coaching or alternative formats of golf. Significant benefits also flow to those not directly employed in the golf industry, for example, retail and hospitality workers. An estimated \$38 million in worker benefits will be generated as a result of food and drink consumed while playing golf or at a golf facility.

Golf has one of largest number and wide-ranging jobs of any sport, including:

- Sport Administration
- Director of Golf, Head Professional
- General Manager, CEO, Golf Operations
- Retail, Equipment, Facility Development
- Superintendent and Turf Management
- Coaching, Game Development
- Media and Marketing
- Events, Tourism, Hospitality



*Other forms of golf includes alternate forms of golf, such as disc golf and foot golf

ECONOMIC BENEFITS FROM GOLF TOURISM

Each year, 1.6 million domestic trips are made to play golf and 150,000 international tourists visit Australia to play golf. The value of golf tourism to the Australian economy each year has been estimated at **\$336 million**.

When people travel for golf, they spend money on green fees, food, accommodation, and transportation, among other things. These expenditures contribute to business profits and generate employment across the economy.

Most of this (\$140 million) comes from international tourism, with accommodation and food accounting for most international tourist expenditure.

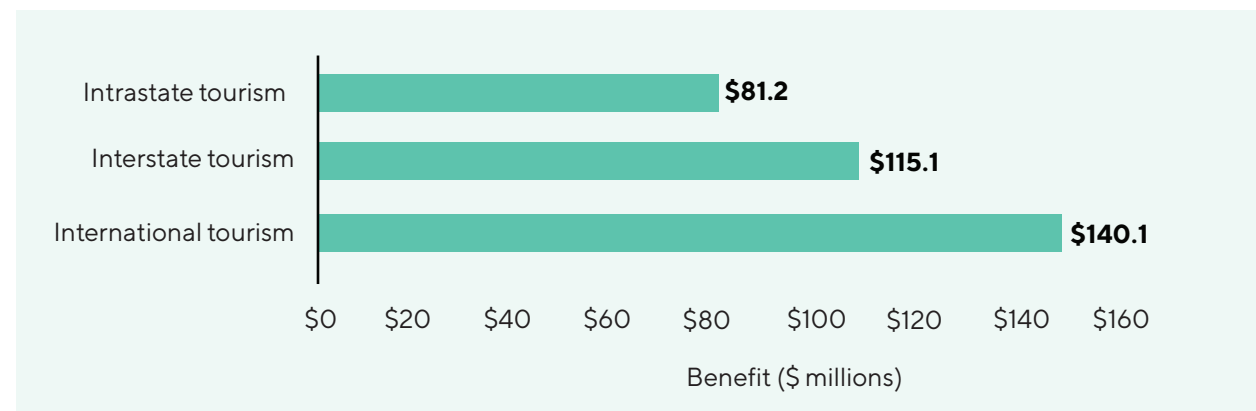
Intrastate and interstate tourism generates \$115 million and \$81 million in benefits, respectively. Most benefits come from accommodation expenditure, followed by food and drink.

According to Tourism Research Australia, most domestic golf tourism is based around short trips of four nights or less. By volume, a majority of golf tourists visit New South Wales, followed by Queensland, and Victoria.

The largest inbound markets include the United Kingdom, New Zealand, and China. The Chinese market has grown considerably over the past decade and represents the highest spending international tourist market.

In addition to players, golf also attracts spectators. An estimated 250,000 golf participants will attend at least one golf event as a spectator throughout the year.

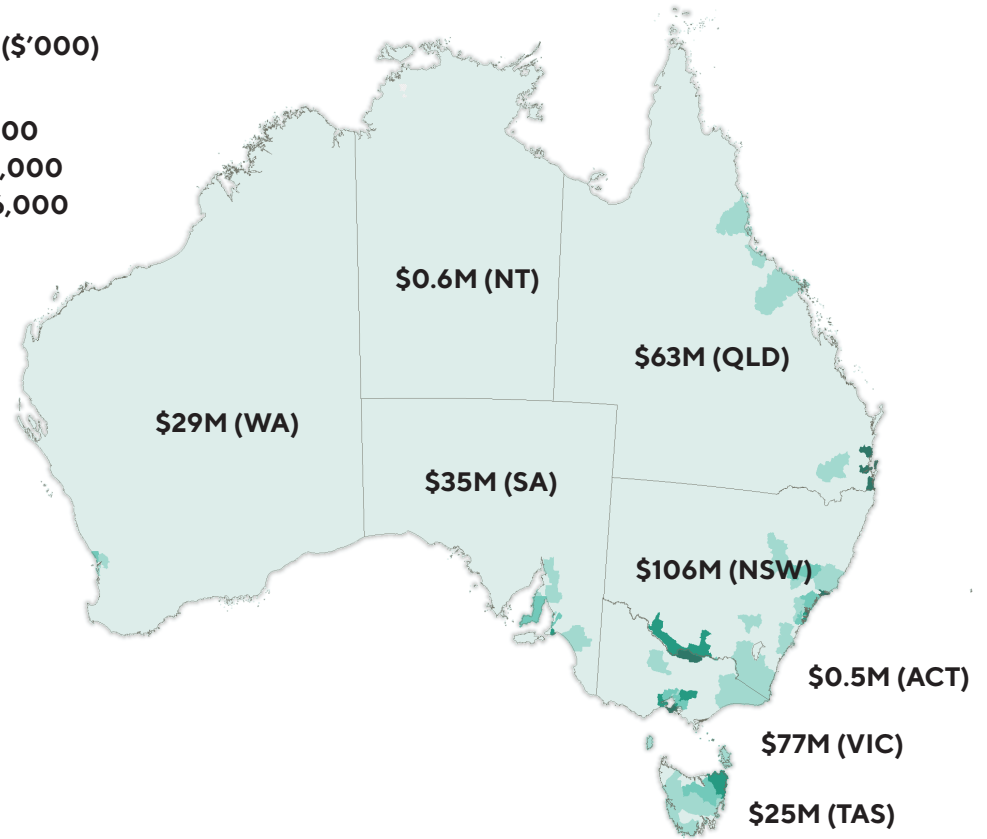
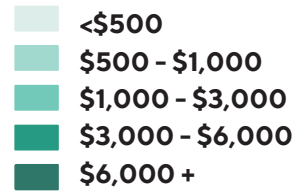
This figure likely understates the total number of golf spectators as it excludes non-players and alternative format players, who also may spectate golf events throughout the year. This figure also does not account for spectators who attended multiple events.



Golf tourism also includes attendance at world-class professional golf events. The Victorian Government undertook an economic impact assessment of the 2023 Vic Open Golf event. They found:

- Total unique attendance was around 10,000 visitors, nearly 600 of which were from interstate and more than 200 of which were from international locations.
- Direct in scope expenditure was \$1.2 million, and the unconstrained economic impact (including flow-on impacts) was \$2.2 million.

GOLF TOURISM (\$'000)



PHYSICAL HEALTH BENEFITS

Golf generates health benefits to **2.2 million** Australians due to the distance walked during a round of golf and the swinging, twisting and bending motions that maintain or improve joint mobility. The annual physical health benefit for all golf players is **\$423 million**.

Being physically active improves the immune system and reduces risk factors such as high blood pressure and high blood cholesterol. Golf is a moderate-intensity form of exercise that can be played by people of all ages and abilities.

The health benefits of playing golf are well established, and clearly outlined in [The R&A's Health Benefits of Golf 2016 - 2020 report](#) that outlines a number of key benefits to both physical and mental well-being and falls into line with the World Health Organisation's (WHO) call for action by sports.

The R&A's report, findings of which were published in the British Journal of Sports Medicine, states that, on average, golfers live five years longer than non-golfers, and that golf can help prevent and treat 40 major chronic diseases and improve balance and muscle endurance in older people.

Each day, Australian adults play an average of around 128,000 rounds of golf (9 or 18 holes) and, through that, walk a combined 770,000 kilometres. This equates to around 19.2 laps of Earth's equator each day, or just over 7,000 laps of Earth's equator each year. Put another way, the distance walked on Australian golf courses each year is the same as the distance travelled for around 730 round trips between the Earth and our moon.



For some people, golf is the main way they engage in physical exercise. Survey analysis undertaken by Prescience Research found that golf is a key reason that 166,000 Australians are considered 'active'. This is significant, as being 'inactive' is linked with a higher prevalence of disease and ill health.

In particular, the Australian Institute of Health and Welfare (AIHW) states that physical inactivity is linked with an increased likelihood of people being affected by heart disease, type 2 diabetes, dementia, bowel cancer, breast cancer, and stroke.

The health cost to individuals of being 'inactive' is measured by the AIHW through a concept of disability-adjusted life years (DALYs). Put simply, DALYs is a measure of the healthy years of life lost because of a health condition or disability.

Based on estimates from the AIHW and population data from the Australian Bureau of Statistics (ABS), the average physically inactive Australian loses 0.011 DALYs each year due to the associated effects of disease and ill health.

Monetising the lost DALYs using the value of a statistical life year (VSLY) concept derives an average 'inactive' health cost of around \$2,547 per inactive person, per annum.

Avoiding this cost by meeting the definition of 'physically active' because of golf participation is the basis for our monetised benefit.

ALL ELSE EQUAL, AN ADDITIONAL **166,000** AUSTRALIANS WOULD BE CONSIDERED PHYSICALLY INACTIVE WITHOUT GOLF.

THE ANNUAL PHYSICAL HEALTH BENEFIT FOR ALL GOLF PLAYERS IS **\$423 MILLION**.

THIS EQUATES TO AN AVERAGE ANNUAL PHYSICAL HEALTH BENEFIT OF AROUND **\$192** PER GOLFER.



MENTAL HEALTH BENEFITS

Golf contributes to good mental health via three key outcomes. The annual mental health benefit for all golf players is **\$439 million**.

- The **physical exercise** associated with golf releases endorphins and serotonin that improve mood, and regular exercise has been evidenced to reduce stress, depression and anxiety.
- Golf facilitates **social interaction** between friends and community members, thereby reducing feelings of loneliness and isolation that may otherwise occur.
- Golf is undertaken in **natural landscapes** – such environments are linked with reduced stress, improved mood and enhanced cognitive function. Exposure to Vitamin D via time spent outdoors has also been linked with a reduced risk of depression.

Beyond benefits for golfers, golf clubs and their facilities are often community meeting hubs which help to generate a sense of belonging, especially in regional and rural areas where such facilities are lacking. Notably, around **one-third of non-golfing Australians** visited a golf facility in the previous year for social or leisure reasons.

As with the physical health benefits, the mental health benefits of golf can be measured by avoiding DALYs through golf participation.

Across Australia, the average DALYs associated with depressive and anxiety disorders is 0.012. Multiplying this by the VSLY derives an average depressive and anxiety disorder cost of around \$2,800 per adult, per annum.

In addition to academic literature evidencing mental health benefits of physical exercise, social interaction and time spent in natural landscapes, survey analysis undertaken by Prescience Research found that, once controlling for demographic factors such as age, gender and income, **round golfers have a subjective health and wellbeing score that is 7.1 per cent higher than that of non-round golfers** – the average score for adults was 63.2 (out of 100), while for golf club members it was 78.4 (+15.2) and for round players it was 68.4 (+5.2).

The mental health benefit was valued by applying a 7.1 per cent reduction in the average mental health cost for the portion of Australians who play round golf.

Survey analysis found that, over the previous year, Australian golf club members and round golfers performed around **6.6 million** hours of volunteer work at a golf club. This equates to an average of around 13 hours of volunteer time at each golf club per day of the year.

In addition, Australian golfers participated in an average of 0.8 charity golf days over the last year. Such events contribute to broader investment in the health and wellbeing of Australians; for example, over the last three years, The Longest Day golf event has raised over **\$8 million** to support the Cancer Council's research and support programs.

The annual mental health benefit for all golf players is **\$439 million**.

This equates to an average annual mental health benefit of around **\$200** per round golfer.



NEIGHBOURHOOD AMENITY BENEFITS

Across Australia, golf courses generate an annual neighbourhood amenity benefit of **\$149 million**.

In economic terms, neighbourhood amenity is the value provided to a location by the pleasantness and freedom from the nuisance that exists there. For this project, amenity was measured by the relative increase in land value (not property value) that is proximate to golf courses, controlling for other variables that affect land value.

The modelling was informed by a review of available literature, noting that golf-specific literature is limited.

On average, land adjacent to golf courses was found to have a 7.6 per cent premium, and the land value decreases by 0.1 per cent per 10 metres from golf courses.

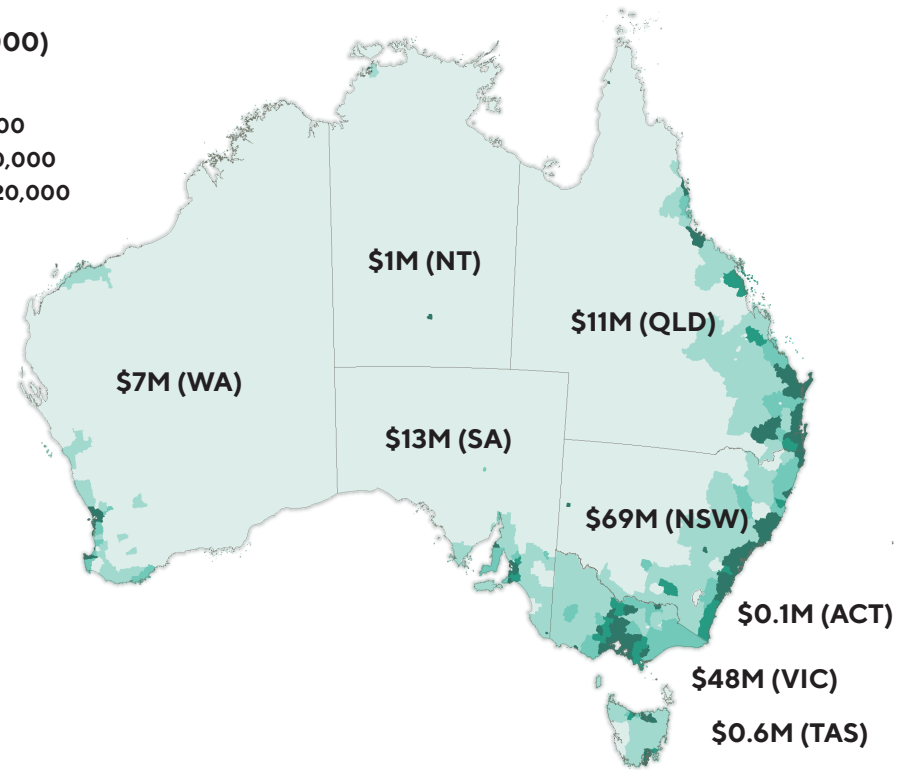
The annual value of \$149 million removes double counting (proximity to multiple courses) and reflects benefits in urban areas only.



Across Australia, 801 golf courses operate in urban areas and provide neighbourhood amenity uplift.

AMENITY (\$'000)

- <\$500
- \$500 - \$5,000
- \$5,000 - \$10,000
- \$10,000 - \$20,000
- \$20,000 +



ENVIRONMENTAL BENEFITS

Conservation and management of our natural resources is becoming increasingly important.

Golf courses generate important environmental benefits, especially in urban areas where green space is limited and built space is high. In total, there is an estimated 45,000 hectares (450 square kilometres) of golf facilities in urban areas in Australia.

The environmental benefits quantified and explained in this section are:

- Water filtration and purification
- Flood and stormwater protection
- Carbon sequestration
- Urban cooling
- Biodiversity

WATER FILTRATION AND PURIFICATION

Across Australia, water filtration and purification benefits total around **\$114 million** per annum.

Water filtration and purification occur naturally via soil and vegetation. It helps to remove contaminants from water, including bacteria, chemicals or other impurities.

A study undertaken by Parks Victoria calculated that water filtration and purification of metropolitan greenspaces is around \$2,500 per hectare per year in FY24 values. The Australian wide value was calculated by multiplying this unit value by the hectares of golf courses in metropolitan areas.

FLOOD AND STORMWATER PROTECTION

Flood and stormwater protection provide important benefits in urban areas, which total roughly **\$159 million** in Australia each year.

The contoured design and water features of golf courses help to retain or direct excess water. In 2015, Parks Victoria modelled that green space is about double as effective as urban infrastructure in capturing water runoff. In addition, many golf courses will store and re-use rain water.

Golf courses trap and absorb flood and stormwater, assisting to mitigate or alleviate the high costs that increasing climate events are anticipated to cause. This is important, as around 1 in 10 homes in Australia are at risk of flood (Insurance Council of Australia).

CARBON SEQUESTRATION

Each year, carbon sequestration services generated by golf courses total around **\$6 million**.

Carbon sequestration is the absorption of carbon dioxide by vegetation. It reduces greenhouse gases within our atmosphere and improves our air and water quality.

An 18-hole golf course produces enough oxygen annually to sustain around 85,000 people (Golf Benefits to the Environment, AGIC).

Australia's golf courses and driving ranges produce enough oxygen to sustain around 80 million people.



URBAN COOLING

The urban cooling impact of golf courses provides annual energy cost savings and greenhouse gas emission reduction benefits of **\$12 million**, and annual health benefits of **\$245 million**. These benefits are solely within urban areas, and it is largest in densely populated areas and hot climates.

Construction materials such as steel, brick, concrete and bitumen absorb and retain heat at a higher rate than the organic materials found in natural areas and parklands. This leads to a phenomenon called the urban heat island (UHI) effect, where urban environments can be several degrees higher than that of nearby natural landscapes or parklands.

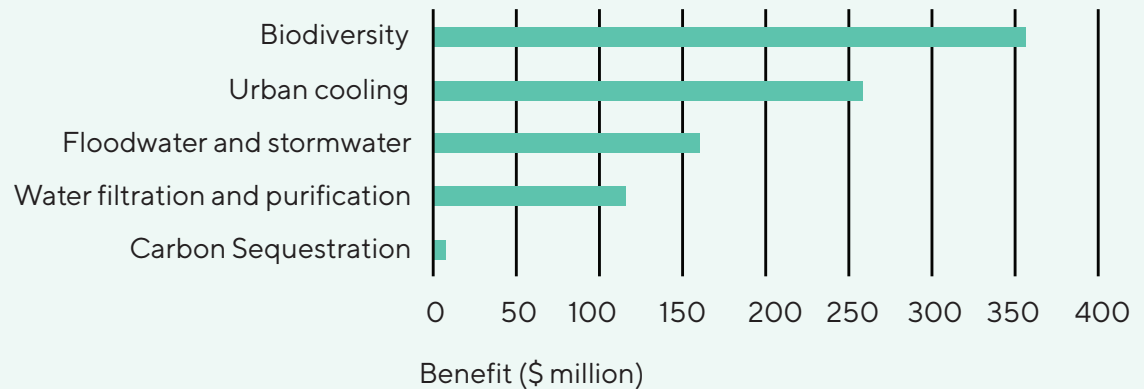
The UHI leads to increased energy consumption and greenhouse gas emissions, and has health implications associated with reduced air quality and an increased prevalence of heat-related diseases.

Breaking the built environment with greenspaces such as golf courses provides benefits to urban residents.

BIODIVERSITY

The biodiversity benefit of golf courses sums to an annual benefit of **\$354 million**. This equates to around \$370,000 per urban golf course.

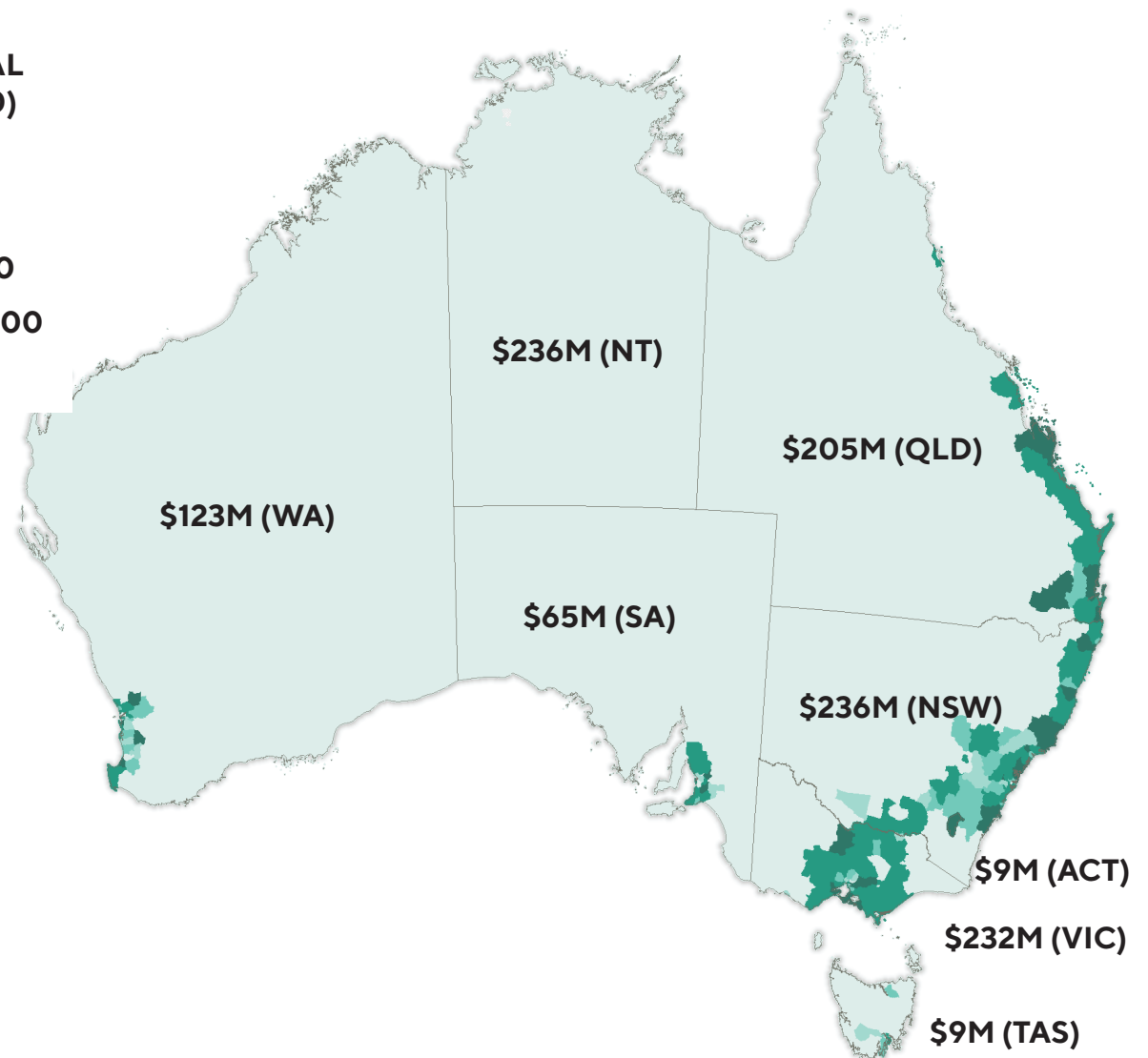
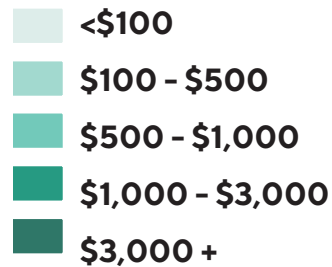
Golf courses can act as wildlife sanctuaries for indigenous flora and fauna. The vast size of golf courses (relative to most urban parks) supports relatively high biodiversity and more resilient ecosystems.



Across a study of 13 golf courses, the University of Melbourne found:

- The structural complexity of vegetation on golf courses is around 50-100% higher than that of residential gardens and urban parklands. This promotes higher soil invertebrate biodiversity and better soil ecosystem services
- Beetle and bug abundance on golf courses is roughly 6-10 times greater than that within urban gardens and parks
- Bee species richness on golf courses is around 3-4 times that of remnant heathlands. This brings higher levels of pollination
- There are around 50% more bird species on golf courses than in urban gardens and parks, with similarly high levels of bird breeding

ENVIRONMENTAL BENEFITS (\$'000)





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