



Macedon Ranges Community Profile

2025

This document has been prepared to provide a data profile on the health and wellbeing of the local government area of Loddon Mallee. It contains publicly available data that has been collated and summarised to inform local government, health services, advocacy and community groups.

All effort has been made to report data accurately and represent data available at time of publishing. These estimates may differ from those seen elsewhere due to differences in calculation methodologies and/or source data used.



We acknowledge the First Peoples of Australia who are the Traditional Custodians of the land and water where we live, work and play. We celebrate that this is the oldest living and continuous culture in the world. We are proud to be sharing the land that we work on and recognise that sovereignty was never ceded.



We welcome all cultures, nationalities and religions. Being inclusive and providing equitable healthcare is our commitment.



-  100 Barnard Street. Bendigo VIC 3550
-  lmphu@bendigohealth.org.au
-  1800 959 400
-  www.bendigohealth.org.au/LMPHU/

Produced by Bendigo Health, Loddon Mallee Public Health Unit.
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Data snapshot

The Macedon Ranges local government area (LGA) is located approximately 60 to 90 km northwest of Melbourne, within the Loddon sub-region of the Loddon Mallee region. It is known for its scenic landscapes, including Mount Macedon and Hanging Rock, rolling hills and forests. It is a popular area for tourism, lifestyle properties and commuters travelling to Melbourne.

The 2021 Australian Bureau of Statistics (ABS) Census data indicates that there were 51,458 people in the Macedon Ranges with a median age of 43 years. There was 0.9% of the population that indicated they were Aboriginal and/or Torres Strait Islander. The data show that 91.2% of the population were born in Australia and other top responses for country of birth were England 4.3% and New Zealand 1.4%.

The Macedon Ranges has a Socio-Economic Indexes for Areas (SEIFA) score of 1,063 making it in the top 10 of least disadvantaged LGA in Victoria, however there are pockets of disadvantage. The median income for individuals, families and households were all above that of the state, however housing affordability is poor, being the least affordable LGA in the Loddon Mallee region.

There was a higher proportion of people at risk of alcohol-related harm alcohol consumption in the Macedon Ranges with 16.4%, compared to 12.9% of Victorians, but a lower proportion of people smoking tobacco.

The Macedon Ranges, like much of regional Victoria, has an ageing population and therefore a higher burden of chronic disease (including mental illness, arthritis, cancer and asthma) than the state percentage. However, there were reduced rates of heart disease and diabetes, compared to Victoria.

The Macedon Ranges has 98.6% of its area classified as bushfire prone, with bushfires in 2009, 2015, 2019 and 2024 requiring Government Disaster Assistance. Along with increasing average temperatures, the region is likely to continue to be significantly impacted by climate change.

This snapshot highlights the indicators where the the Macedon Ranges LGA is statistically different to expected levels* or in the absence of statistical analysis, ranks in the top ten of Victoria's 79 LGAs.

 Areas of strength compared to Australian or Victorian measures

 Areas of concern compared to Australian or Victorian measures

Social determinants of health	
Socio-economic disadvantage	
Unemployment	
Health risk factors	
Homelessness	
Avoidable deaths	
Avoidable deaths (M/F)	
Transport accidents	
Circulatory system	
Diabetes	
Premature mortality (M/F)	

*Comparison may be with Victorian or Australian data based on primary data source

Local government area summary:

The Macedon Ranges Shire is located approximately 60 to 90 km northwest of Melbourne, known for its scenic landscapes, including Mount Macedon and Hanging Rock, rolling hills and forests. It is a popular area for tourism, lifestyle properties and commuters travelling to Melbourne.

With a population of 51,458 (2021), the Macedon Ranges is experiencing growth, especially in towns like Gisborne, Kyneton and Woodend. ^[1] The economy is driven by agriculture, tourism and a growing service sector. Vineyards, livestock farming, and artisanal food production also play significant roles, while tourism thrives through nature-based activities and historic sites.

Many residents work in Melbourne, with the shire being home to a high proportion of professionals and service workers. The top two industries of employment is primary education (2.9%) and hospitals (2.9%). ^[1] Land use is a mix of agricultural (56.3%), residential (24.7%) and conservation (12.1%), balancing rural production with nature preservation. ^[2]

According to geographical remoteness classifications within the Modified Monash Model (MMM), 2019, ^[3] the region sits in three MMM categories (2, 3, 4 and 5) which reflects a mixture of the small, medium and large towns and the close proximation to metropolitan Melbourne.

The traditional custodians of the land are the Dja Dja Wurrung, Taungurung, and Wurundjeri peoples, who have long-standing cultural and spiritual ties to the region.



[1] Australian Bureau of Statistics, 2021

[2] Land use and management, Department of Agriculture, Fisheries and Forestry, 2023

[3] Modified Monash Model | Australian Government Department of Health and Aged Care;

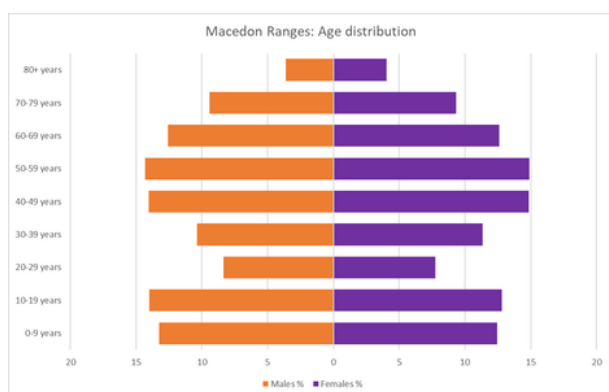
1. Population

The Macedon Ranges' population profile, based on Australian Bureau of Statistics (ABS) data obtained from the 2021 Census reveals an older demographic. The median age of 43 years was higher than the state median of 38 years. The percentage of people aged 70 years and above was higher in the Macedon Ranges (13.2%) compared with the state proportion (11.9%).

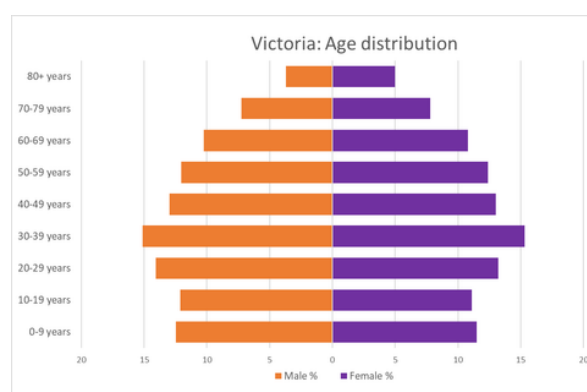


51,458 people reside in the Macedon Ranges, in 2021

43yrs is the median age in the Macedon Ranges (Victoria 38yrs), in 2021



Source: [Australian Bureau of Statistics](#), 2021



Source: [Australian Bureau of Statistics](#), 2021

	Macedon Ranges (n)		Macedon Ranges (%)		Victoria (%)	
Age groups	Male	Female	Male	Female	Male	Female
0-9 years	3,356	3,248	13.2	12.4	12.5	11.5
10-19 years	3,554	3,340	14.0	12.8	12.1	11.1
20-29 years	2,122	2,021	8.4	7.7	14.1	13.2
30-39 years	2,630	2,957	10.4	11.3	15.1	15.3
40-49 years	3,562	3,882	14.0	14.9	13.0	13.0
50-59 years	3,632	3,893	14.3	14.9	12.0	12.4
60-69 years	3,187	3,292	12.6	12.6	10.2	10.8
70-79 years	2,388	2,435	9.4	9.3	7.2	7.8
80+ years	919	1,050	3.6	4.0	3.7	5.0
Total	25,353	26,111	100	100	100	100

Source: [Australian Bureau of Statistics](#), 2021

2. Priority groups

2.1 Indigenous status

The Macedon Ranges had a small Indigenous population of 0.9%. This was slightly lower than the state average of 1%. The median age of the the Macedon Ranges' Indigenous population (25 years) was comparable to the state median of 24 years.

However, the median age of Indigenous population was considerably younger than the average of the total Macedon Ranges' population (43 years of age).

Indigenous status	Macedon Ranges (n)	Macedon Ranges (%)	Victoria (n)	Victoria (%)
Aboriginal and/or Torres Strait Islander	481	0.9	65,646	1
Non-Indigenous	48,565	94.4	6,148,188	94.5
Indigenous status not stated	2,412	4.7	289,665	4.5
Median age of Indigenous Population (years)	25		24	

Source: [Australian Bureau of Statistics](#), 2021

Murray Primary Health Network's First Nations Health and Healing report provides an overview of the current state of First Nations health drawing on data and consultation with First Nations Peoples.



2.2 Multicultural communities

The majority of the Macedon Ranges' residents, accounting for 91.2% of the total population, were Australian citizens, with 81.6% being born in Australia.

Language use patterns reveal that the vast majority (90.4%) of the Macedon Ranges' residents speak English only. However, a small percentage (0.4%) speak other languages and do not speak English well or at all.



Italian was the top non-English language spoken at home in the Macedon Ranges

Country of birth, top responses	Macedon Ranges (n)	Macedon Ranges (%)	Victoria (%)
Australia	42,003	81.6	65.0
England	2,212	4.3	2.7
New Zealand	699	1.4	1.5
Scotland	279	0.5	1.1
Germany	272	0.5	1.0
United States of America	223	0.4	4.1

Source: [Australian Bureau of Statistics](#), 2021



Language used at home other than English, top responses	Macedon Ranges (n)	Macedon Ranges (%)	Victoria (%)
Italian	261	0.5	1.4
Mandarin	185	0.4	3.4
German	163	0.3	0.3
Greek	138	0.3	1.6
Spanish	129	0.3	0.7
English only used at home	46,536	90.4	67.2
Households where a non-English language is used	1,210	6.7	30.2
Uses other languages and speaks English not well/not at all	224	0.4	4.4

Source: [Australian Bureau of Statistics, 2021](#)

Of those who do not speak English well or not at all, the top native languages were (number):

- Mandarin (87)
- Arabic (15)

2.3 LGBTIQ+ population

Unfortunately, there is a lack of local data on LGBTIQ+ (lesbian, gay, bisexual, transgender, intersex, queer, asexual and other sexually or gender diverse people) population including population size and health and wellbeing data. There is data at a state and national level that can be used as an indicator. The Victorian Population Health Survey 2017 estimates 5.7% of Victorian adults identify as LGBTIQ+, however some rural areas have attracted significantly higher proportion of LGBTIQ+ people to their communities.

State and national data indicate poorer mental and physical health for LGBTIQ+ community members. There are also significantly higher rates of drug use, alcohol, smoking, chronic disease, homelessness, and disability along with higher rates of anxiety and depression, psychological stress and low satisfaction with life.

Sources and for more information: [Pride in our future: Victoria's LGBTIQ+ strategy 2022–32 | vic.gov.au \(www.vic.gov.au\)](#)
[The health and wellbeing of the lesbian, gay, bisexual, transgender, intersex and queer population in Victoria - Findings from the Victorian Population Health Survey 2017 | Victorian Agency for Health Information \(vahi.vic.gov.au\)](#)

2.4 People with disabilities

Data on disability show that 5.3% of people in the Macedon Ranges have a profound or severe disability, lower than the Victorian proportion (6.1%). These data indicated most people with a profound or severe disability aged 0 to 64 years were living and being cared for in households (3%) compared to living in long-term accommodation (0.1%).

In the Macedon Ranges there were 1,353 people participating in the National Disability Insurance Scheme (2.5/100 population) in 2022, statistically higher than expected (based on Australian data) and higher than the Victorian rate (2.2/100 population).

Disability indicators	Macedon Ranges (n)	Macedon Ranges	Victoria
People with a profound or severe disability, includes people in long-term accommodation (all ages), 2021	2,588	5.3%	6.1%
People with a profound or severe disability and living in households (all ages), 2021	2173	4.4%	5.4%
People with a profound or severe disability, includes people in long-term accommodation (0 to 64 years), 2021	1239	3.1%	3.3%
People with a profound or severe disability and living in households (0 to 64 years), 2021	1202	3.0%	3.2%
Estimated number of total persons, living in households, with moderate or mild core activity limitation (modelled estimates, 2018)	4335	8.3 ASR [^]	na
National Disability Insurance Scheme participants, 2023	1,353	2.5 ASR [^] ●	2.2 ASR [^]

Source: [PHIDU Torrens University Australia](#)

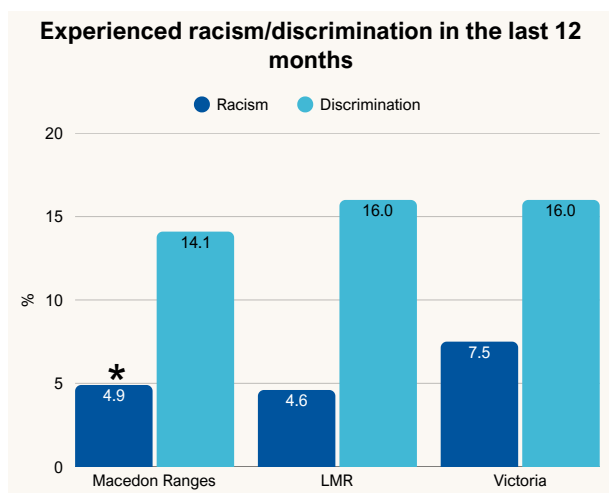
[^]Average annual ASR per 100. Age Standardise Rate (ASR) is used to remove the effect of the differing age distributions that we can make conclusions about the relative decreases or increases in mortality over time.

● Statistically significantly higher than expected (based on Australian data)

2.5 Racism and discrimination

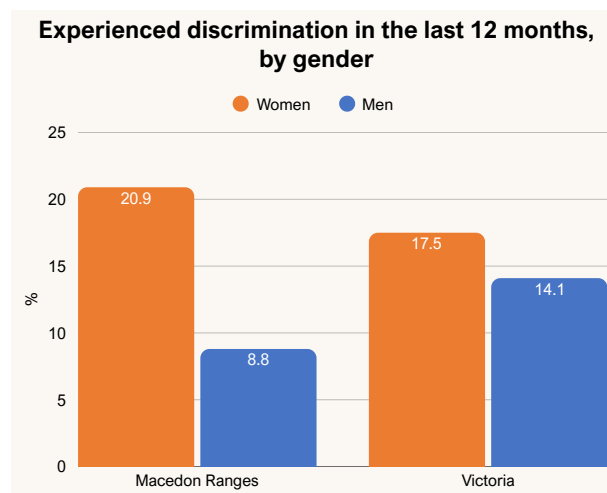
On an individual level, racism refers to the beliefs and attitudes members of certain groups have of their superiority in relation to other groups who are regarded as inferior based on race, ethnicity or cultural background (Sanson et al, 1998).

Racism was defined as experiences of discrimination due to First People's status, skin colour, nationality, race, ethnic group or language spoken at home. Discrimination was defined as experiences of discrimination due to gender identity, sexual orientation or intersex status.



Source: [Victorian Population Health Survey 2023](#), age adjusted

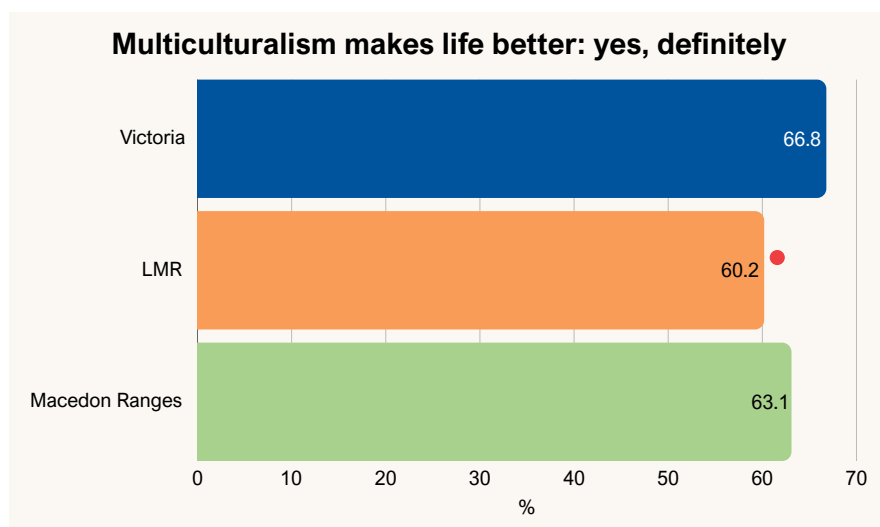
*high relative standard error so interpret with caution



Source: [Victorian Population Health Survey 2023](#), age adjusted

The Macedon Ranges had a lower proportion of racism and discrimination experienced in the last 12 months, compared with Victoria. This may reflect the relatively racially homogenous nature of the Loddon population, with more than 88% of residents born in Australia or another English-speaking countries. A higher proportion of women (20.9%) reported discrimination in the last 12 months, compared to men (8.8%).

To measure tolerance of diversity, adults were asked if multiculturalism makes life better. In the Macedon Ranges there were fewer people who felt that multiculturalism definitely makes life better (63.1%), when compared with Victoria (66.8%).



Source: Victorian Population Health Survey 2023, age adjusted.

● Statistically significantly lower than Victoria

3. Determinants of health

3.1 Areas of disadvantage

The Index of Relative Socio-economic Disadvantage (IRSAD) is a general socio-economic index that summarises a range of information about the economic and social conditions of people and households within an area.

A low score indicates relatively greater disadvantage. For example, an area could have a low score if there are: many households with low income, or many people without qualifications, and many people in low skilled occupations.

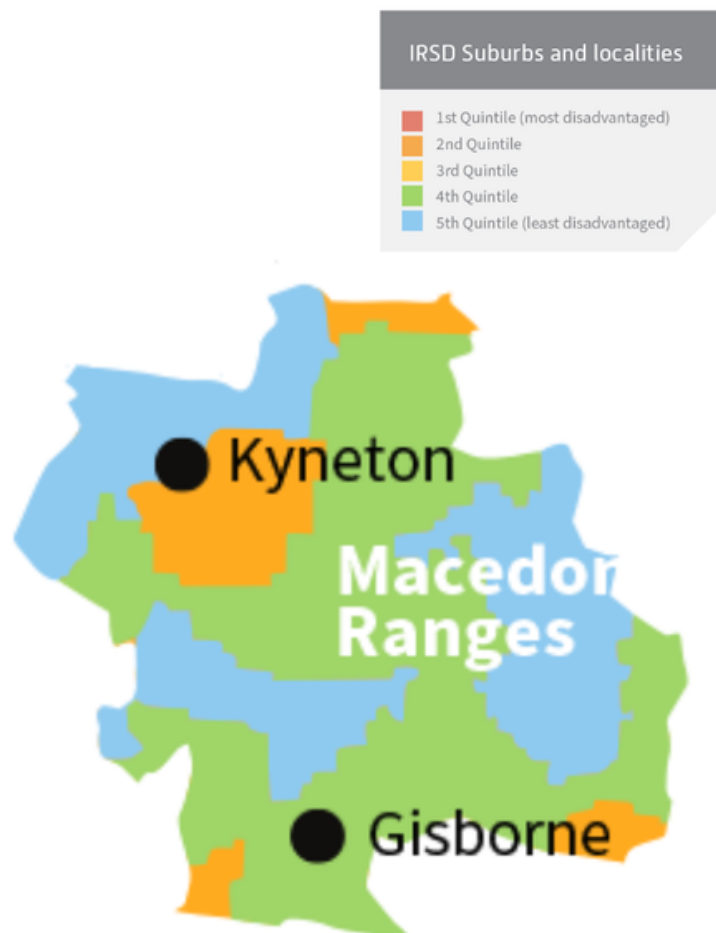
A high score indicates a relative lack of disadvantage. For example, an area may have a high score if there are: few households with low incomes, few people without qualifications, few people in low skilled occupations.

Within the Macedon Ranges there were three Australian quintile areas of disadvantage (3,4,5). The average IRSAD score for the Macedon Ranges was 1,063 (2021), which ranked the Macedon Ranges 73rd in Victoria. This means that the Macedon Ranges was in the top ten LGAs of least disadvantage.

LGA, 2021	IRSAD Score	Victorian LGA ranking^
Mildura	940	5
Swan Hill	941	7
Loddon	948	11
Gannawarra	952	14
Campaspe	965	19
Buloke	972	24
Greater Bendigo	985	27
Mount Alexander	1007	47
Macedon Ranges	1063	73

Source: [ABS: Census of population and Housing: Socio-Economic Indexes from areas \(SEIFA\), 2021](#)

^Rank 1 = most disadvantage, rank 79 = least disadvantage



Source: [Socio-Economic Index for Areas](#), ABS, 2021

3.2 Educational attainment

Type of educational institution attending

The Macedon Ranges had a higher percentage of the population attending preschool, primary and secondary education compared with the state average. However, it had a considerably lower percentage of people attending university or other higher education compared with the state, with the Macedon Ranges at 16.5% and Victoria at 24.5%. This may be a reflection of accessibility to tertiary institutions in rural areas.



In the Macedon Ranges, 26.7% completed bachelor degree and above (Vic. 29.2%)

People attending an educational institution	Macedon Ranges (n)	Macedon Ranges (%)	Victoria (%)
Preschool total	1,223	7.9	7.1
Primary total	4,867	31.5	26.5
Secondary total	3,859	25.0	21
Tertiary: Vocational education (including TAFE and private training providers)	905	5.9	7.9
Tertiary - University or other higher education	1,646	10.6	16.6
Tertiary total	2,548	16.5	24.5

Source: [Australian Bureau of Statistics](#), 2021

Level of highest education attainment

The data on the highest educational attainment in the Macedon Ranges for people aged 15 years and over revealed a diverse educational landscape. The Macedon Ranges showed a slightly lower percentage of individuals with higher education qualifications (bachelor's degree and above) and higher percent of advanced diplomas/diplomas, certificate III & IV qualifications. This could potentially reflect accessibility to different forms of higher education compared to metropolitan areas.

The combined percentage of individuals with Year 11 or below education in the Macedon Ranges (21%) was equal with the Victorian proportion (21%).

Level of highest educational attainment	Macedon Ranges (n)	Macedon Ranges (%)	Victoria (%)
Bachelor degree level and above	11,027	26.7	29.2
Advanced diploma and diploma level	4,451	10.8	9.8
Certificate level IV	1,599	3.9	3.4
Certificate level III	5,815	14.1	10.9
Year 12	5,573	13.5	14.9
Year 11	2,664	6.5	5.7
Year 10	3,021	7.3	7.3
Certificate level 11	22	0.1	0.1
Certificate level 1	0	0.0	0
Year 9 or below	2,929	7.1	7.9
Inadequately described	915	2.2	2.1
No educational attainment	82	0.2	1.1
Not stated	3,120	7.6	7.6

Source: [Australian Bureau of Statistics](#), 2021, people aged 15yrs and over

3.3 Household income

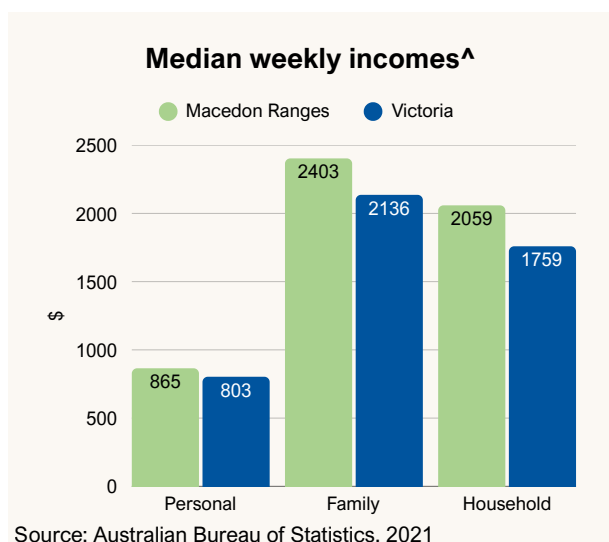
Data on household income for the Macedon Ranges region, compared to the state of Victoria, gives insights into the income distribution within the community. The median weekly incomes for people aged over 15 years, families and households were all above the state median. The percentage of occupied private dwellings in the Macedon Ranges with a weekly income of above \$3,000 was 31.3%, higher compared with Victoria (24.2%).

From 2006 to 2021, the median weekly household income for the Macedon Ranges was continuously higher than the Victorian median.

In the Macedon Ranges, 34.3% of households were low income (households in the bottom 40% of income distribution). This compares with 39.5% of households in Victoria. ^[1]

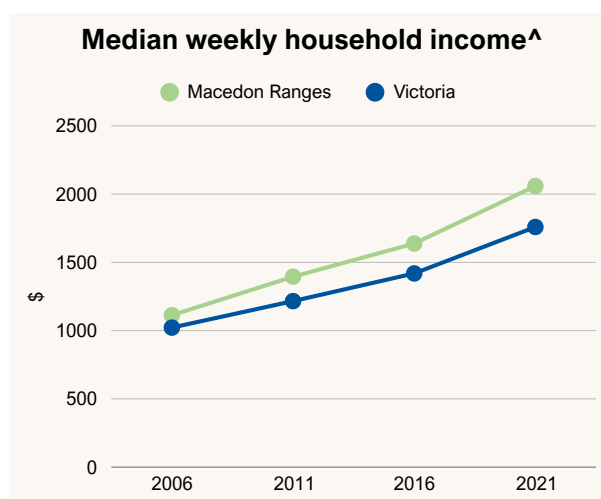
Occupied private dwellings (excl. visitor only and other non-classified households)	Macedon Ranges (%)	Victoria (%)
Less than \$650 total household weekly income	13.4	16.4
More than \$3,000 total household weekly income	31.3	24.2

Source: [Australian Bureau of Statistics](#), 2021, Percentages exclude dwellings with 'Partial income stated' and 'All incomes not stated.'



Source: [Australian Bureau of Statistics](#), 2021

^ Incomes are collected in ranges and exclude people, families and households where at least one member aged 15 years and over did not state their income.



Source: [Australian Bureau of Statistics](#), 2021

^ Incomes are collected in ranges and exclude people, families and households where at least one member aged 15 years and over did not state their income.

[1] Source: [Social Health Atlas](#), 2021

3.4 Unemployment

The psychosocial stress caused by unemployment has a strong impact on physical and mental health and wellbeing. Being employed in quality work helps to protect health, instilling self-esteem and a positive sense of identity, while providing the opportunity for social interaction and personal development.



The data represent people aged 18 years and over who are seeking employment and yet to find it.

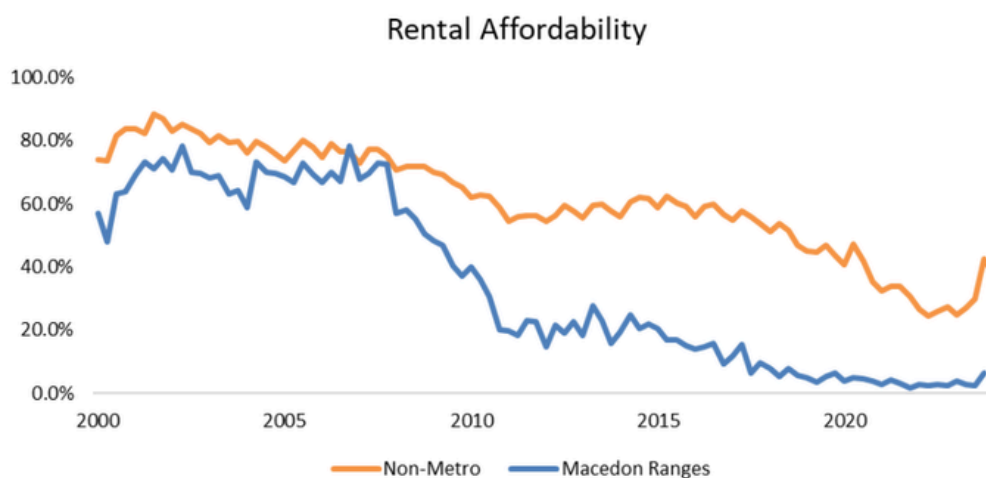
The Macedon Ranges' unemployment rate was 1.9%, ranked 7th lowest LGA in Victoria (4.4%).

Source: [Social Health Atlas of Australia](#), June 2025

● Ranked in the 10 lowest LGAs in Victoria's

3.5 Rental affordability

Median rent prices are continuing to increase and becoming less affordable. The graph below represents affordability of rental homes for lower income households (defined as those receiving Centrelink incomes). The Macedon Ranges had a very low proportion of affordable rental, with only 2.8% in 2023 (17th lowest ranking of LGAs in Victoria). This was lower than the Victorian non-metro areas at 26.9% at the same time point.^[1]



Source: [Rental Report - Quarterly: Affordable Lettings by LGA - Dataset - Victorian Government Data Directory](#).

The affordability benchmark used is that no more than 30% of gross income is spent on rent

Lower income households are defined as those receiving Centrelink incomes

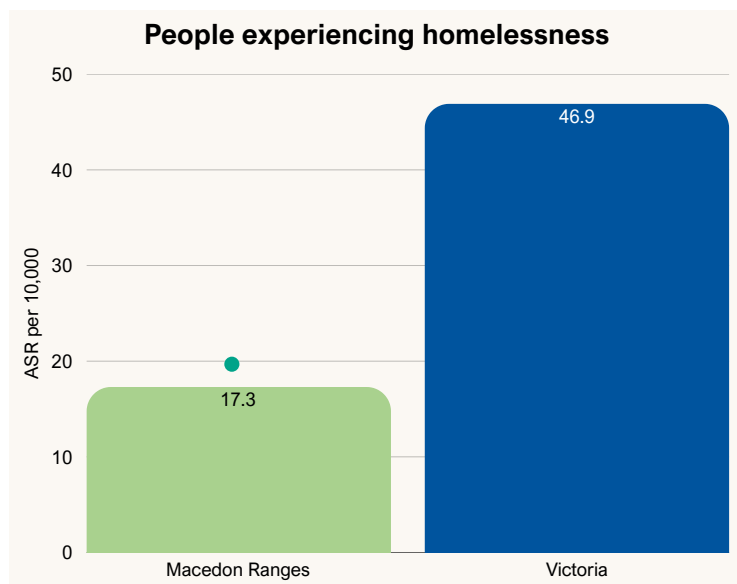
[1] [Social Health Atlas of Australia](#): Victoria, 2021

3.6 Homelessness

Access to safe, adequate housing is central to the health and wellbeing of individuals and families. Secure and affordable housing is the basis for social connectedness and a contributor to the social determinants of health and wellbeing. These data include:

- living in improvised dwellings, tents or sleeping out
- living in supported accommodation for the homeless
- staying temporarily with other households
- living in boarding houses
- living in 'severely' crowded dwellings.

The age standardised rate of homelessness in the Macedon Ranges was 17.3/10,000 population (n=83) which was statistically significantly lower than expected (based on Australian data) and considerably lower than the Victorian rate (46.9/10,000 population). While the overall rate was different between the Macedon Ranges and Victoria, the specific challenges and characteristics of homelessness may vary between regions.



Source: [Social Health Atlas](#), 2021

● Statistically significantly lower than expected (based on Australian data)

3.7 Family composition

Couple families with children constituted the largest proportion in the Macedon Ranges, accounting for 47% of all families, which was higher than the state average of 45.5%. Couple families without children made up 40.3% of all families in the Macedon Ranges, which was higher than the Victorian proportion of 37.6%.

One-parent families represented 12.1% of all families in the Macedon Ranges, which was lower than the state proportion of 15.2%.

Other families, which may include non-traditional family structures, accounted for a small percentage (0.7%) in the Macedon Ranges, lower than the state (1.7%).

All families	Macedon Ranges (n)	Macedon Ranges (%)	Victoria (%)
Couple family without children	5,804	40.3	37.6
Couple family with children	6,774	47	45.5
One parent family	1,739	12.1	15.2
Other family	105	0.7	1.7

Source: [Australian Bureau of Statistics](#), 2021

Single (or lone parents)

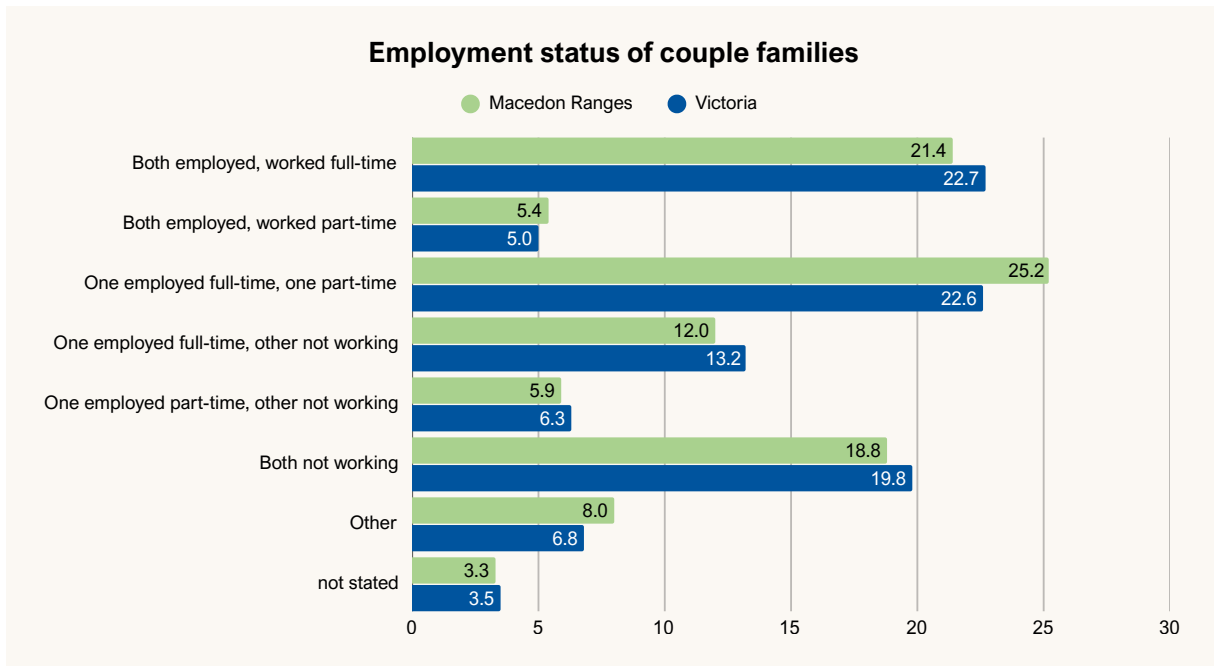
The data indicated that the majority of single (or lone) parents in the Macedon Ranges were female, constituting a substantial 78.1% of the total single parent population. This percentage was slightly lower than the female proportion in Victoria, which was 80.9%.

Proportion of the total single (or lone) parents	Macedon Ranges (%)	Victoria (%)
Male	21.9	19.1
Female	78.1	80.9

Source: [Australian Bureau of Statistics](#), 2021

Employment status of couple families

In the Macedon Ranges, the most common employment status for couple families were one employed full-time and one part-time (25.2%) and both employed full-time (21.4%).



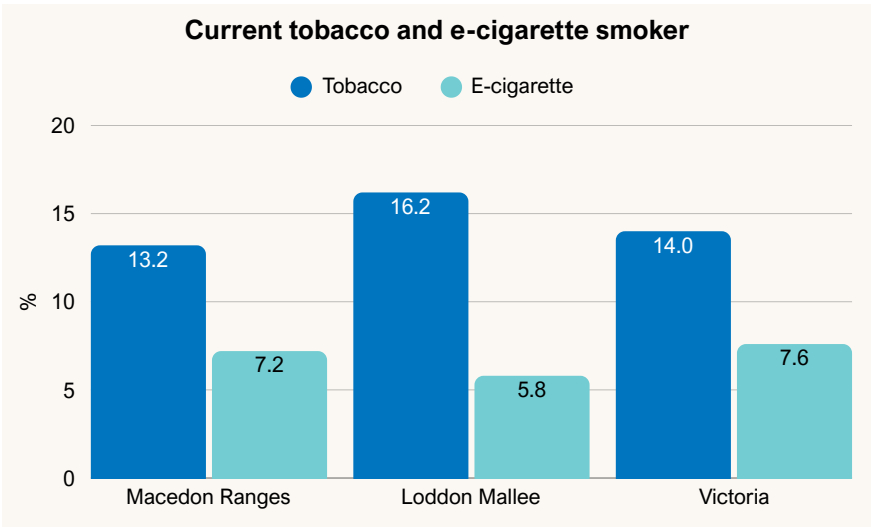
Source: [Australian Bureau of Statistics](#), 2021

4. Health risk factors

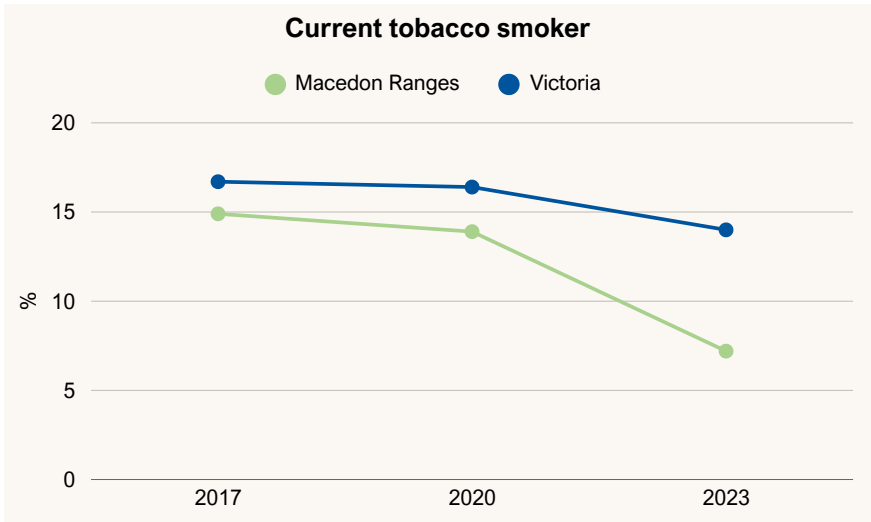
4.1 Smoking and vaping

Smoking increases the risk of chronic diseases such as heart disease, diabetes, kidney disease, eye disease, stroke, dementia, certain cancers (for example, oral cancer), gum disease and respiratory diseases such as asthma, emphysema and bronchitis. Vapes are relatively new compared to cigarettes, so we are yet to see all the long-term effects they may have on the body. What we know now is vaping can damage many parts of the body, including the cardiovascular system, lungs and airways, and the brain and nervous system.^[1]

The proportion of adults who smoked tobacco in the Macedon Ranges was lower, with 13.2% of adults in the Macedon Ranges smoking compared with 14% across Victoria. People smoking in the Macedon Ranges was consistently lower compared with Victoria over time and was outperforming Victoria's progress in reducing smoking.



Source: [Victorian Population Health Survey 2023](#), age adjusted.



Source: [Victorian Population Health Survey, 2023](#), age adjusted.
[Victorian Population Health Survey, 2020](#), age adjusted
[Victorian Population Health Survey, 2017](#), age adjusted

[1] Quit , [effects of vaping on the body](#).

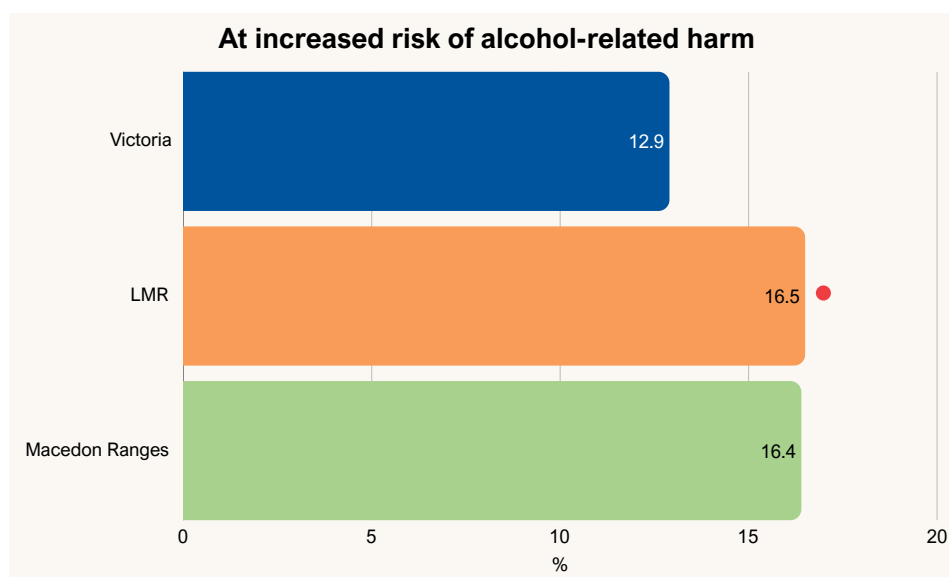
4.2 Alcohol and other drugs

While the impacts of drug use on health and wellbeing can vary, related harms can impact physical health through increased risk of chronic disease, exposure to infectious diseases, and mental health and wellbeing impacts. Adults in the Macedon Ranges drink alcohol at higher rates than the Victorian average, with 16.4% drinking at levels that increase their risk of alcohol-related harm. Increased risk of alcohol-related harm is defined as greater than 10 standard drinks a week and more than four standard drinks in one day.

In general, the Macedon Ranges appeared to experience lower rates of alcohol-related incidents, including deaths, ambulance attendances and hospital admissions, compared with Victoria. Rates of illicit drugs incidents, including deaths, ambulance attendances and hospital admissions rates were also lower compared to Victorian rates.

Indicators per 100,000 population	Macedon Ranges	Victoria
Deaths for alcohol-related events, 2021	104.7	141.9
Deaths for illicit drug (any)-related events in, 2021	0	0.6
Ambulance attendances for Alcohol Intoxication (w/wo Other Substance), 2022/23	251.1	393.5
Ambulance attendances for Alcohol Only (Intoxication), 2023	195.5	319.7
Ambulance attendances for Illicit Drugs (Any), FY-2022/23	86.2	204.6
Hospital admissions for Alcohol, 2021	403.3	577.9
Hospital admissions for Illicit Drugs (Any), 2022/23	63.9	242.9

Source: [Alcohol and other drug statistics in Victoria](#) - AODstats

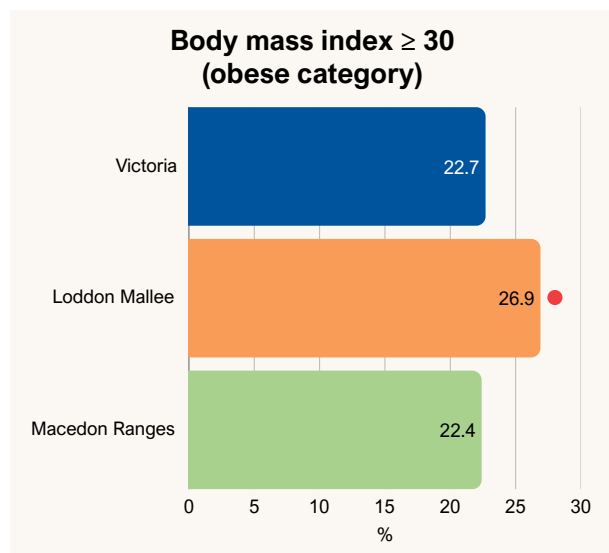


Source: [Victorian Population Health Survey 2023](#), age adjusted.

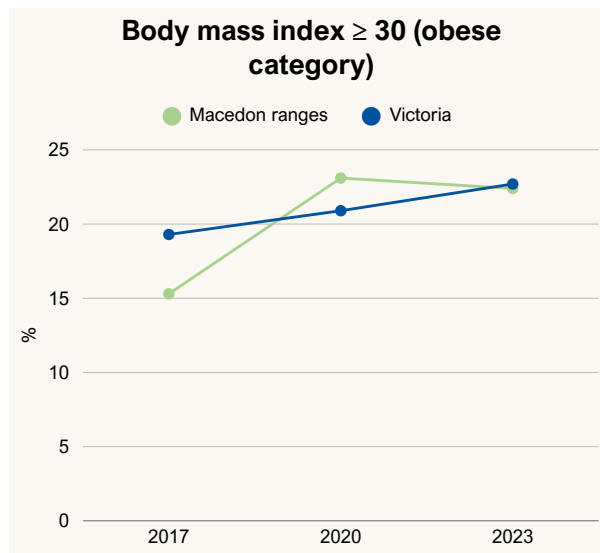
● Statistically significantly higher, compared to Victoria

4.3 Obesity

Obesity contributes to cardiovascular disease, type 2 diabetes, musculoskeletal disorders and some cancers. Recent evidence shows the prevalence of obesity spiked in 2022, when compared to previous five-year trends.^[1] In the Macedon Ranges, 22.4% of adults had a BMI ≥ 30 , comparable to the Victorian percentage of 22.7%. Unlike the increasing Victorian trend, obesity was not increasing in the the Macedon Ranges.



Source: Victorian Population Health Survey, 2023, age adjusted
 ● Statistically significantly higher, compared to Victoria



Source: Victorian Population Health Survey, 2023, age adjusted
Victorian Population Health Survey, 2020, age adjusted
Victorian Population Health Survey, 2017, age adjusted

4.4 Healthy eating and active living

Poor diet and lack of exercise contribute to being overweight and obese, which are leading contributors to chronic disease and premature death in Victoria.^[1] The Macedon Ranges (5.9%) was higher for compliance with vegetable consumption guidelines compared with Victoria (5.5%). The Macedon Ranges had a higher proportion of people consuming sugar-sweetened beverages daily (21.2%) compared with the Victorian average (19.3%).



Recommended daily intake of fruit 2 serves: a serve is one medium piece or two small pieces of fruit or one cup of diced fruit.



Recommended daily intake of vegetables is 5-6 serves for adults: a serve is half a cup of cooked vegetables or one cup of salad leaves.

LGA	Compliance with fruit consumption guidelines (%)	Compliance with vegetable consumption guidelines (%)	Daily consumption of sugar sweetened beverage (%)	Moderate to vigorous physical exercise greater than 150mins/day (%)
Victoria	34.9	5.5	19.3	34.9
LMR	31.3	5.3	24.6	34.2
Macedon Ranges	34.1	5.9	21.2	41.1

Source: Victorian Population Health Survey, 2023, age adjusted
 *high relative standard error so interpret with caution

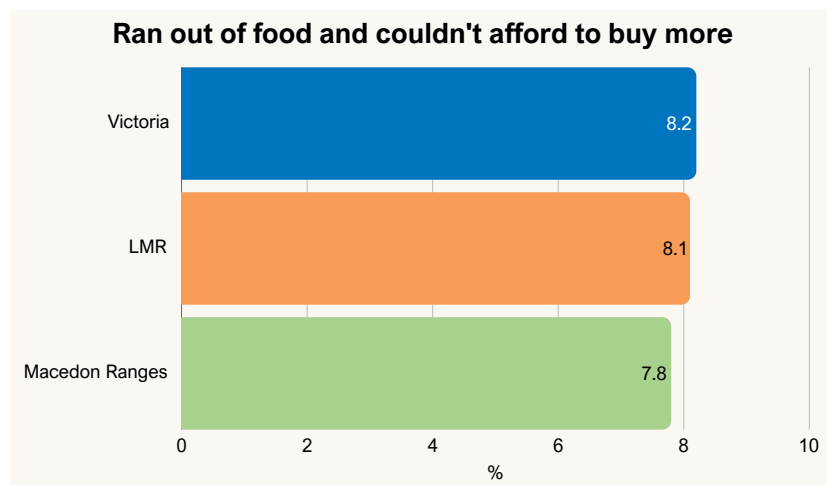
[1] Victorian Population Health and Wellbeing Plan 2023-27

4.5 Food insecurity

Food security is defined as access by all people at all times to enough food for an active, healthy life and includes at a minimum:

- the ready availability of nutritionally adequate and safe foods
- the assured ability to acquire food in socially acceptable ways.^[1]

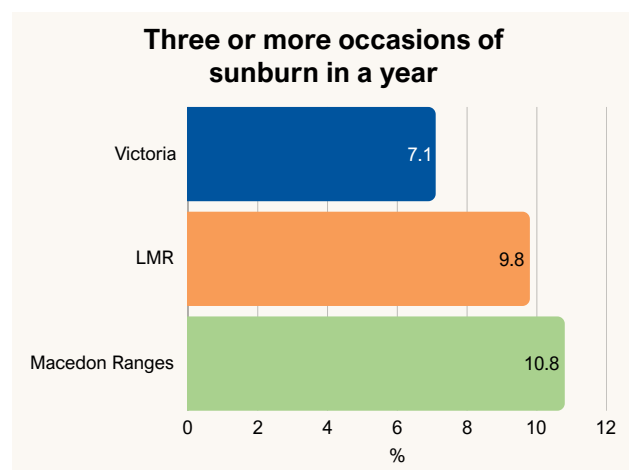
The proportion of people in the Macedon Ranges who ran out of food and couldn't afford to buy more (7.8%) was lower than Victoria (8.2%).



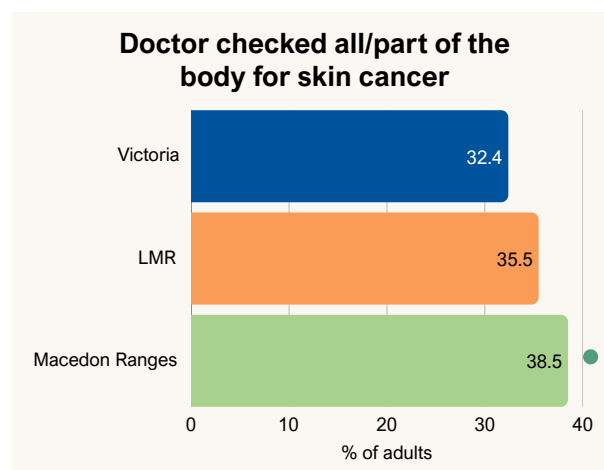
Source: Victorian Population Health Survey, 2023, age standardised

4.6 Sun exposure

Australia has one of the highest rates of skin cancer in the world. Skin cancer occurs when skin cells are damaged, for example by overexposure to ultraviolet radiation from the sun.^[2] The Macedon Ranges had a higher proportion of people reporting three or more occasions of sunburn in a year (10.8%), compared with Victoria (7.1%). It is therefore important that the Macedon Ranges had statistically significantly higher proportion of people seeking skin checks by a doctor for skin cancer.



Source: Victorian Population Health Survey, 2023, age adjusted



Source: Victorian Population Health Survey, 2023, age adjusted

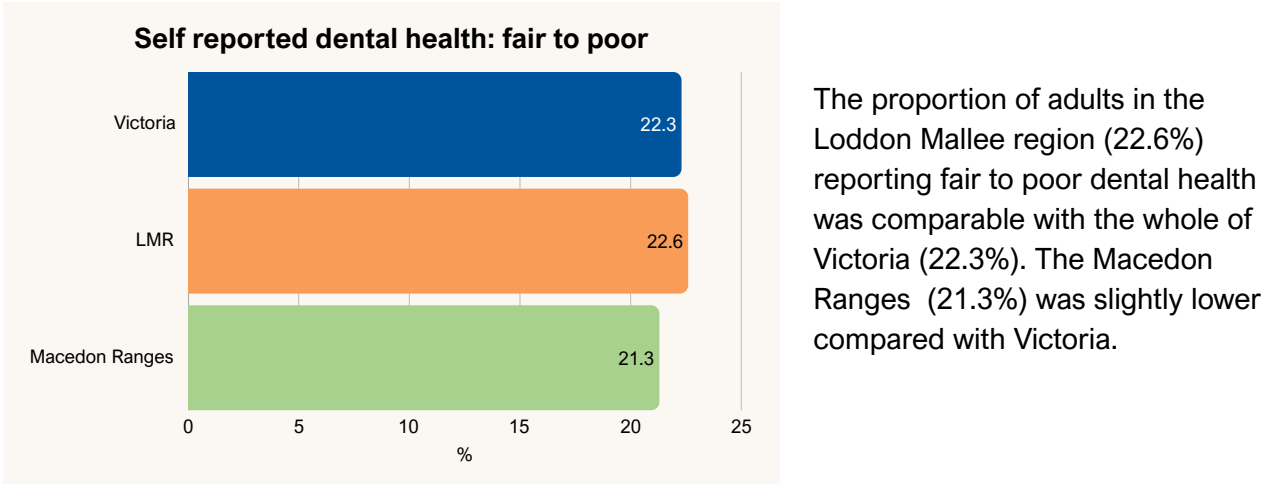
● Statistically significantly higher than Victoria

[1] Australian Institute of Health and Welfare

[2] Cancer Council

4.7 Dental health

Oral disease can destroy the tissues in the mouth, leading to lasting physical and psychological disability. Tooth loss can make chewing and swallowing more challenging, which can then compromise nutrition. Poor oral health is also associated with a number of chronic diseases including stroke and cardiovascular disease. Dental disease can also impair a person’s appearance and speech, impacting their self-esteem, which can lead to restricted participation at school, the workplace and other social settings.



Source: Victorian Population Health Survey, 2023, age adjusted

4.8 Childhood development

The Australian Early Development Census (AEDC) is a nationwide census of early childhood development that shows how young children have developed as they start their first year of full-time school. There are five domains, which are physical, social, emotional, language and communication. In 2024, 565 children in the Macedon Ranges underwent developmental assessment. The Macedon Ranges figures indicated a lower proportion of vulnerable children in all of the measured domains. Overall, 10.1% of children in the Macedon Ranges were vulnerable on one or more domains, compared with 22.3% across Victoria.

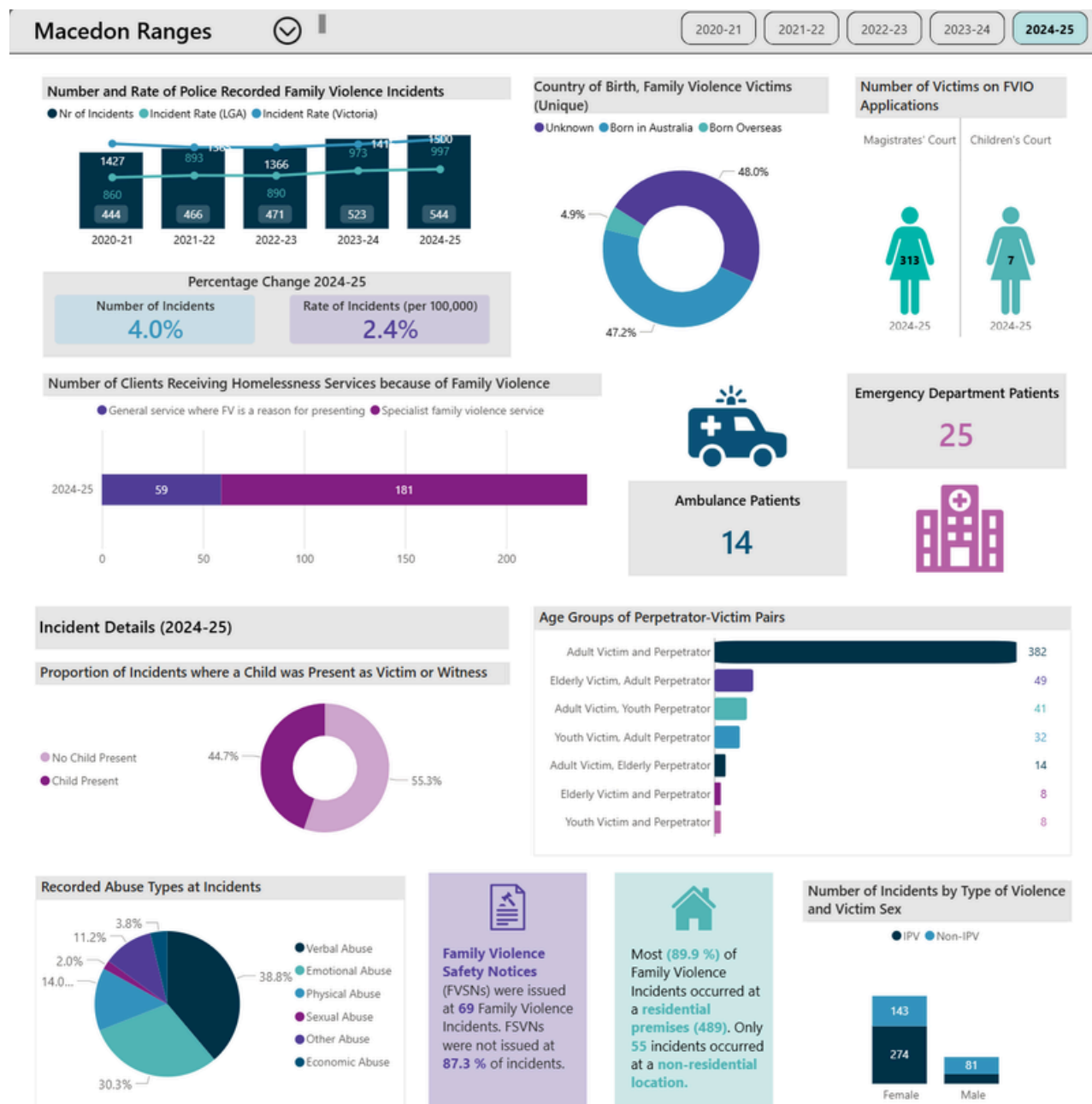
		Vulnerable (565 children assessed)		
Indicator	Indicator description	Macedon Ranges (n)	Macedon Ranges (%)	Victoria (%)
Physical	Child is healthy; independent; excellent gross and fine motor skills	21	4	8.5
Social	Gets along with others; shares; self-confident	28	5.3	10.6
Emotional	Able to concentrate; help others; patient, not angry or aggressive	28	5.4	9.9
Language	Interested in reading or writing; can count; recognises numbers and shapes	21	4	7.3
Communication	Can tell a story; communicate with adults and children; articulate themselves	9	1.7	8.2
Vulnerability 1	Developmentally vulnerable in one or more domains	53	10.1	22.3
Vulnerability 2	Developmentally vulnerable in two or more domains	33	6.3	11.8

Source: Australian Early Development Census, 2024

4.9 Family violence

A family violence incident is an incident attended by Victoria Police and a police report has been completed.

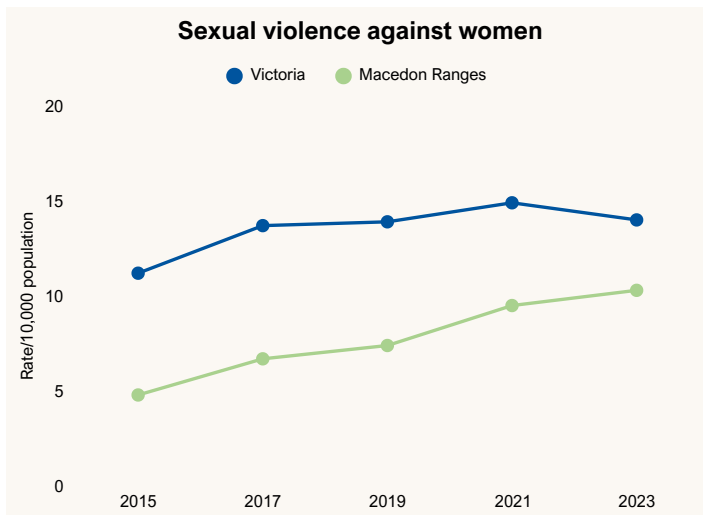
The Macedon Ranges recorded a family violence incident rate of 997/100,000 population, lower than the Victorian rate of 1,500/100,000 population. In 44.7% of reported family violence incidents in the Macedon Ranges, a child was present either as a victim or a witness. Of the recorded abuse types in the Macedon Ranges, verbal abuse was most common (38.8%), followed by emotional abuse (30.3%). There were 25 presentations to emergency departments related to family violence in Mildura



Source: [Latest crime data by area](#) | Crime Statistics Agency Victoria, 2024-25

4.10 Sexual assault

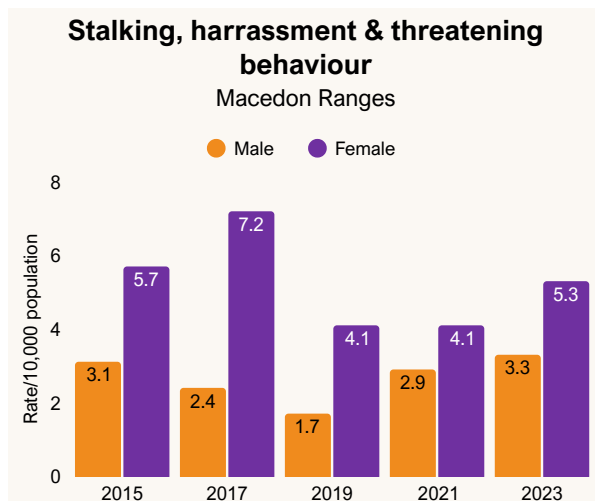
According to Victoria Police, **sexual offences** occur when someone does not or cannot consent to a sexual behaviour, act or acts. These sexual behaviours can include: rape, sexual or inappropriate touching, sexual assault, child sexual abuse, elder sexual abuse, sexual exposure of genitalia, image-based sexual offending, stealthing (non-consensual condom removal), stalking and grooming. The Macedon Ranges' rates have increased steadily from 2015 to 2023 (4.8/10,000 to 10.3/10,000 population), but remains lower than Victorian rate (14/10,000 population) in 2023.



Source: [Womens Health Atlas](#), victim reports received where the woman is the victim

The Victorian Crime Statistics Agency reports on stalking, harassment, and threatening behaviours as a group. This category includes repeated acts of unreasonable conduct intended to: cause physical or mental harm; arouse apprehension or fear; threaten or invade privacy; create nuisance or offend someone based on personal characteristics.

In the Macedon Ranges, the rate of male and female victims of stalking, harassment and threatening behaviour indicates that female victim reports were considerably higher than males. This aligned with Victoria, where female victim reports of stalking, harassment and threatening behaviour outnumber male victim reports by a ratio of almost 2 to 1.



Source: [Womens Health Atlas](#), victim reports received by police



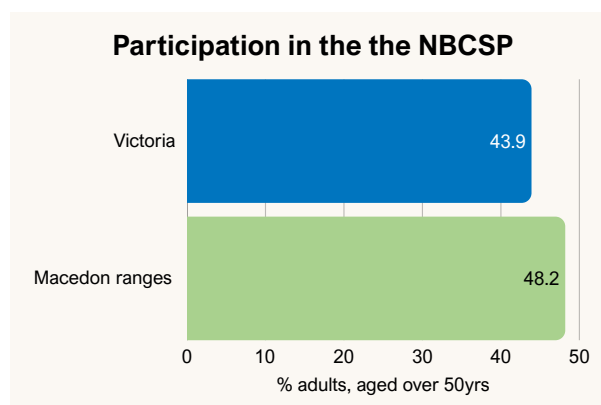
Source: [Womens Health Atlas](#), victim reports received by police

5. Health screening

5.1 Bowel screening

Bowel cancer, is the third most common type of newly diagnosed cancer in Australia. The National Bowel Cancer Screening Program (NBCSP) aims to reduce deaths from bowel cancer by detecting early signs of the disease. If found early, more than 90% of cases can be successfully treated.

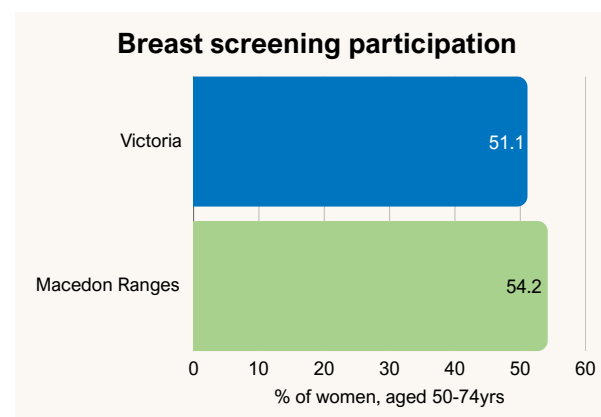
Participation in the NBCSP was higher in the Macedon Ranges (48.2%) compared with Victoria (43.9%).



Source: [Social Health Atlas](#), 2020-21

5.2 Breast screening

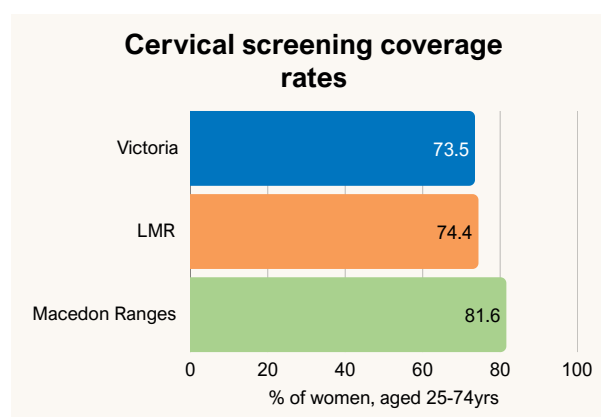
Research has shown that screening mammography is currently the most effective tool for the early detection of breast cancer in asymptomatic women in the target age group of women aged 50 to 74 years; and, that having a screening mammogram every two years, reduces the chance of dying from breast cancer by up to 40%. The Macedon Ranges had slightly more participation in breast screening (54.2%), compared with Victoria (51.1%).



Source: [Social Health Atlas](#), 2021-22

5.3 Cervical screening

The National Cervical Screening Program reduces illness and death from cervical cancer. Women and people with a cervix aged 25 to 74 years are invited to have a cervical screening test every 5 years through their healthcare provider. The Macedon Ranges had a higher coverage of cervical screening (81.6%) compared with LMR (74.4%) and Victoria (73.5%).



Source: [National Cervical Screening Program](#), 2020 -2024

6. Health conditions

6.1 Life expectancy

The median age at death for both males and females in the Macedon Ranges remained stable from 2016 to 2021, showing one year differences. This suggests that, on average, individuals in the Macedon Ranges were experiencing a similar life expectancy as their counterparts in the broader state.

Examining premature mortality (deaths occurring before the age of 75 years), the Macedon Ranges demonstrated positive trends. For males, there was a substantial rate reduction of 298.8/100,000 population to a rate of 227.9/100,000 population, indicating a percentage decrease of 23.7%. Similarly, for females, the rate decreased from 204.2/100,000 population to 149/100,000 population, reflecting a percentage decrease of 27%. These figures signify progress in reducing premature deaths in the Macedon Ranges, outperforming the state's progress.

Avoidable mortality (deaths that could have been prevented) also showed substantial improvement in the Macedon Ranges. For males, there was a decline from 149.3/100,000 population to 111.1/100,000 population, representing a percentage reduction of 25.6%. For females, the rate decreased from 92.6/100,000 population to 67.4/100,000 population, indicating a percentage reduction of 27.2%. Once again, the Macedon Ranges demonstrates positive strides in addressing avoidable causes of death, statistically significantly lower than Victoria.

	2016 - 2020				2018-2022				% Difference between reports			
	Macedon Ranges		Victoria		Macedon Ranges		Victoria		Macedon Ranges		Victoria	
	M	F	M	F	M	F	M	F	M	F	M	F
Median age at death (yrs)	78	85	79	85	79	84	79	85	1.2	-1.2	0.0	0.0
Premature mortality, 0-74yrs of age [^]	298.8	204.2	269.5	171.2	227.9	149	281.8	176.8	-23.7	-27	4.6	3.3
Avoidable mortality, 0 to 74yrs of age [^]	149.3	92.6	138	80.5	111.1	67.4	142.1	80.8	-25.6	-27.2	3.0	0.4

Source: [Social Health Atlas of Australia: Victoria, 2018-2022](#)

[^]Average annual ASR per 100,000. Age Standardise Rate (ASR) is used to remove the effect of the differing age distributions that we can make conclusions about the relative decreases or increases in mortality over time.

● Statistically significantly lower than expected (based on Australian data)

6.2 Avoidable deaths

Avoidable deaths are deaths from conditions that are potentially preventable through individualised care and/or treatable through existing primary or hospital care. The highest rates of avoidable deaths (0-74yrs) for 2018-2022 in the Macedon Ranges were for circulatory system disease (25/100,000 population) and cancer (22.2/100,000 population), with circulatory system statistically significantly lower than expected based on Australian data.

The Macedon Ranges also had a statistically significantly lower than expected rate (based on Australian data) of Diabetes. However, the Macedon Ranges had a statistically significantly higher than expected avoidable deaths from transport accidents (8.7/100,000 population), and higher compared with Victoria (4.1/100,000 population).

Avoidable deaths by cause	2018-2022		2017-2021		%Difference between the reports	
	Macedon Ranges	Victoria	Macedon Ranges	Victoria	Macedon Ranges	Victoria
Circulatory system	25 ●	33.3	23.1	32.7	8.2	1.8
Cancer	22.2	27.5	23.2	27.8	-4.3	1.9
Ischaemic heart disease	16.3	21	15	20.6	8.6	-1.8
Breast cancer (females)	14.7	15.2	15.6	15.6	-5.8	2.5
External causes (falls, burns, suicide, self-inflicted injuries etc)	10.6	14	11.1	13.5	-4.5	1.1
Suicide and self-inflicted injuries	10	10.9	10.6	10.6	-5.6	2.4
Transport accidents	8.7 ●	4.1	9.7	4	-10.3	1.3
Respiratory system disease	8.6	9.1	8.3	9	3.6	-2.5
Obstructive pulmonary disease	8.2	8.5	7.9	8.3	3.8	5.8
Colorectal cancer	7.3	10.7	7.4	10.1	-1.4	5.9
Cerebrovascular disease	5.4	7.7	5.1	7.6	5.9	3.7
Diabetes	3.3 ●	5.5	2.6	5.2	26.9	2.8

Source: [Social Health Atlas](#), 0-74 years, ASR/100,000 population

- Statistically significantly higher than expected (based on Australian data)
- Statistically significantly lower than expected (based on Australian data)

6.3 Physical health conditions

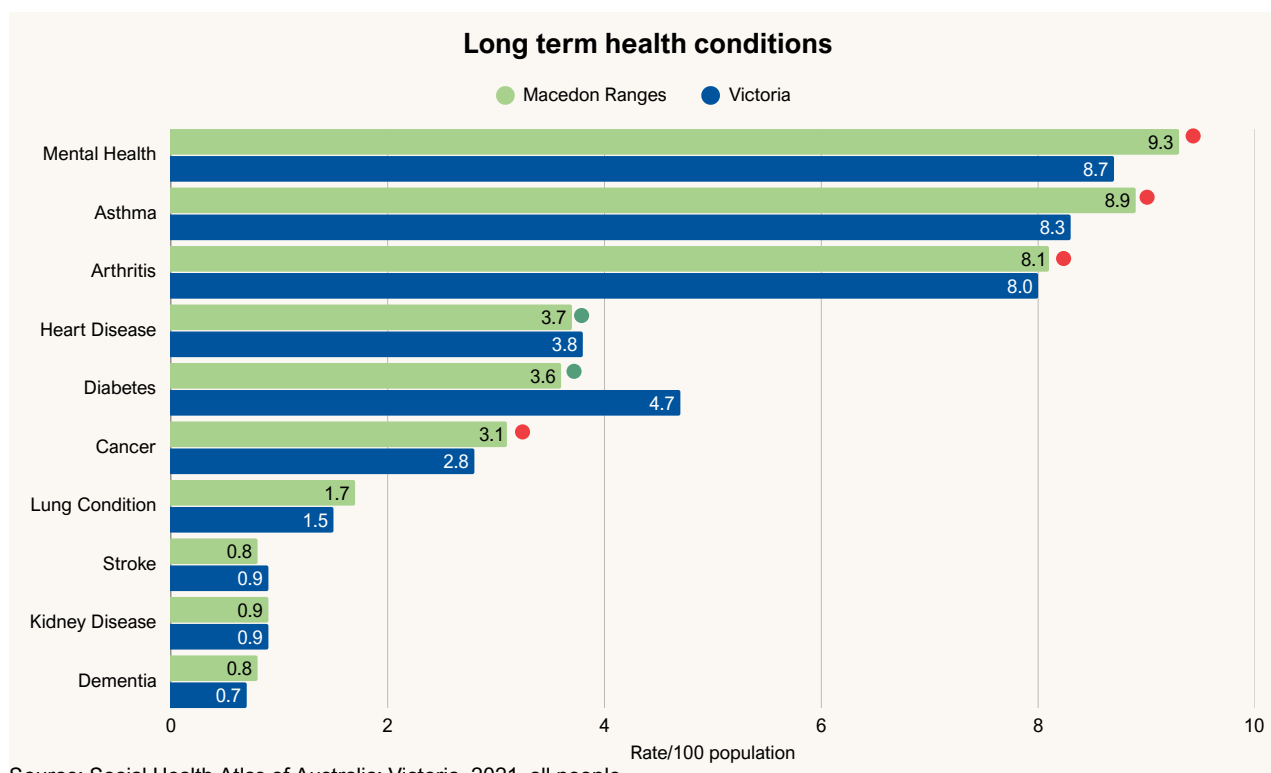
In the census, people were asked to indicate long-term conditions (six months or more) diagnosed by a doctor or nurse. Selected long-term health conditions include arthritis, asthma, cancer (including remission), dementia (including Alzheimer's), diabetes (excluding gestational diabetes), heart disease (including heart attack or angina), kidney disease, lung condition (including COPD or emphysema), mental health condition (including depression or anxiety) and stroke. Other long-term health conditions were not included in this count.

In the Macedon Ranges 2.8% of people reported having three or more long-term conditions, compared with 2.9% across Victoria.

Long-term health conditions	Macedon Ranges (n)	Macedon Ranges (%)	Victoria (%)
None of the selected long term conditions	32,286	62.7	65
One condition	10,566	20.5	18.8
Two conditions	3,246	6.3	5.7
Three or more conditions	1,425	2.8	2.9

Source: [Australian Bureau of Statistics](#), 2021, all people

In the Macedon Ranges, 9.3/100 population reported mental health conditions, compared with 8.7/100 population across Victoria. Asthma was reported by 8.9/100 population in the Macedon Ranges, higher than the state rate of 8.3/100 population. Arthritis and cancer were also statistically significantly higher than expected (based on Australian data). Heart disease and diabetes were statistically significantly lower than expected (based on Australian data).



Source: [Social Health Atlas of Australia: Victoria](#), 2021, all people

- Statistically significantly higher than expected (based on Australian data)
- Statistically significantly lower than expected (based on Australian data)

More recent data, using a different collection methodology and smaller cohort show the proportion of adults reporting cancer in the Macedon Ranges (10.8%) was higher than the Victorian percentage (8.3%). Similarly, the prevalence of heart disease was also higher in the Macedon Ranges (9.5%) compared with the state percentage (8.3%).

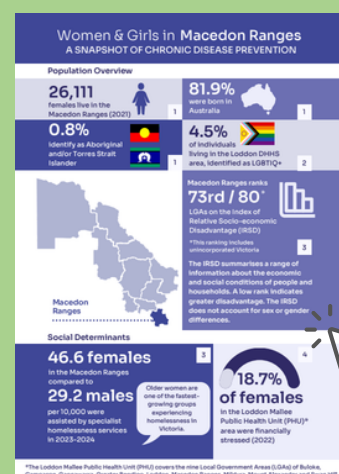
LGA	COPD*	Asthma	Osteoarthritis	Diabetes (type 2)	Heart disease	Cancer
Victoria (%)	3.6	20.1	13.8	6.2	8.3	8.3
LMR (%)	4.6	23.5	15.5	6.2	8.6	11.3
Macedon Ranges (%)	3.1	20.1	14.8	5.1	9.5	10.8

Source: [Victorian Population Health Survey](#), 2023, age adjusted

*COPD: Chronic Obstructive Pulmonary Disease

Women's Health Loddon Mallee has developed a series of chronic disease infographic data snapshots for each LGA in the Loddon Mallee region using local sex-disaggregated data, where available.

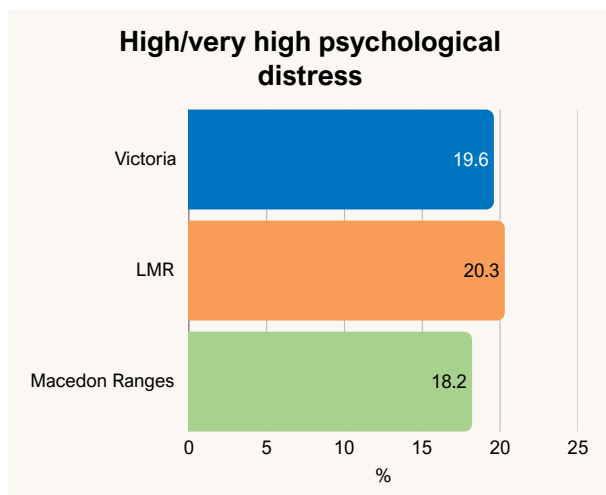
These infographics highlight conditions more common among women and girls in the Loddon Mallee, such as osteoporosis and dementia, and snapshots of the individual, economic, social and structural factors which interact to influence the development and management of chronic conditions.



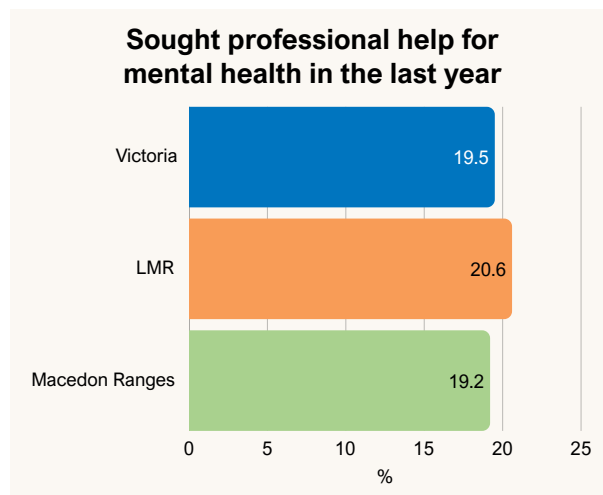
Source: [Women's Health Loddon Mallee](#), 2025

6.4 Mental wellbeing

By prioritising good mental health and wellbeing, we reduce stigma, increase social connection, improve physical health, promote productivity and create safer environments. Our mental health and our physical health are linked. The Macedon Ranges had a lower proportion of people experiencing high/very high psychological distress (18.2%), compared with Victoria (19.6%). The Macedon Ranges also had a lower proportion of people seeking professional help for mental health.

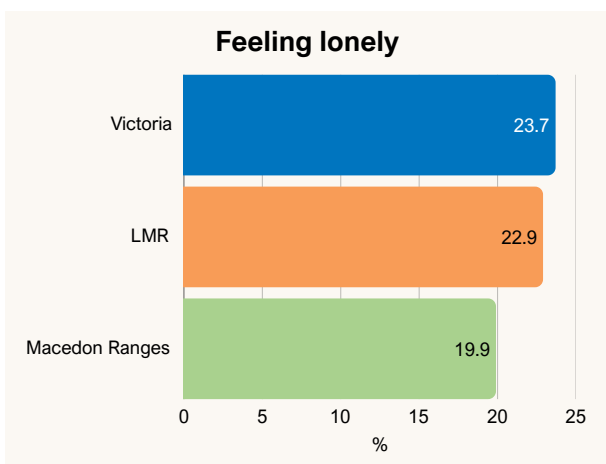


Source: [Victorian Population Health Survey, 2023, age adjusted](#)

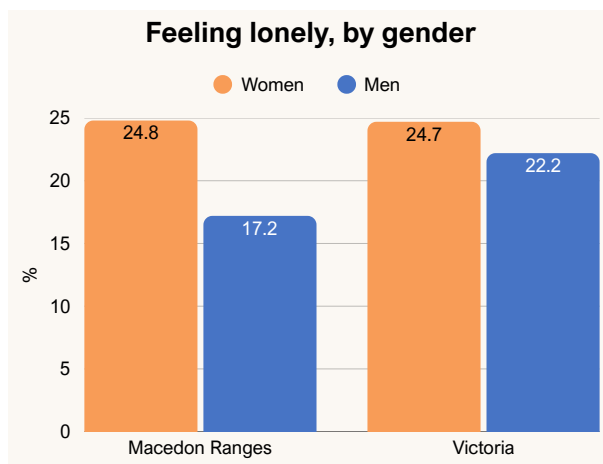


Source: [Victorian Population Health Survey, 2023, age adjusted](#)

Social connection is essential for our health and wellbeing. **Loneliness** is a subjective measure of low social connection and is defined as an 'unpleasant or distressing feeling of a lack of connection to other people, along with a desire for more, or satisfying, social relationships' (Badcock et al, 2022). Loneliness was measured in the Victorian Population Health Survey using the 3-item UCLA Loneliness Scale. The Macedon Ranges had a lower proportion of people feeling lonely (19.9%), compared with Victoria (23.7%), with more women reporting loneliness.



Source: [Victorian Population Health Survey, 2023, age adjusted](#)

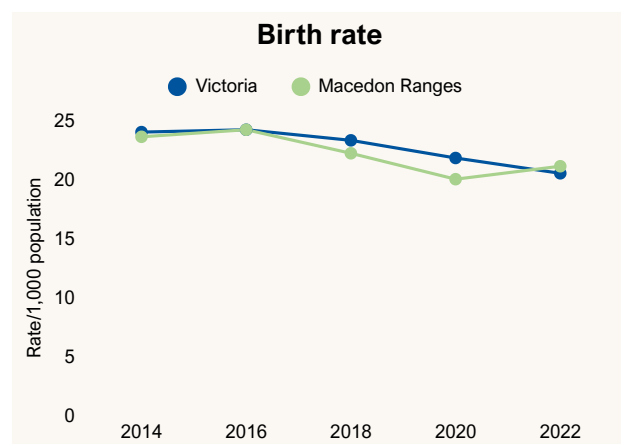


Source: [Victorian Population Health Survey, 2023, age adjusted](#)

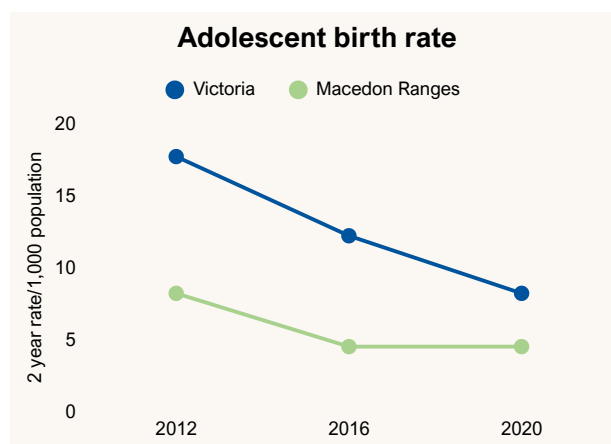
6.5 Sexual and reproductive health

The Macedon Ranges shows comparable birth rates compared with the Victorian rate. In 2022, total fertility rate (average number of babies born to a women in her lifetime) was higher in the Macedon Ranges (1.9) compared with the Victorian rate (1.7).

However, the adolescent birth rate (younger than 20 years of age) in the Macedon Ranges (4.5/1,000 population) was lower than the Victorian rate (8.2/1,000 population).



Source: [Womens Health Atlas](#)



Source: [Womens Health Atlas](#)

Sexually transmitted infections in the Macedon Ranges were lower than the Victorian rate. As these rates are whole of population it is not unexpected that STIs are lower due to an older population.

Newly acquired	Chlamydia [^]		Gonorrhoea [^]		Hepatitis B [^]		Infectious Syphilis [^]	
	Female	Male	Female	Male	Female	Male	Female	Male
Victoria	291.1	361.57	54.1	281.1	^^	0.21	7.43	32.2
Macedon Ranges	170.4	151.3	26.5	124.1	^^	^^	^^	^^

Source: Victorian sexual and reproductive health and viral hepatitis strategy 2022-30: Monitoring indicators [dashboard](#).

[^]Rate/100,000 population, 2025

^^ less than five cases

Womens' Health Loddon Mallee (WHLM) have developed a snapshot of sexual and reproductive health in the Macedon Ranges - click on image to view the snapshot.

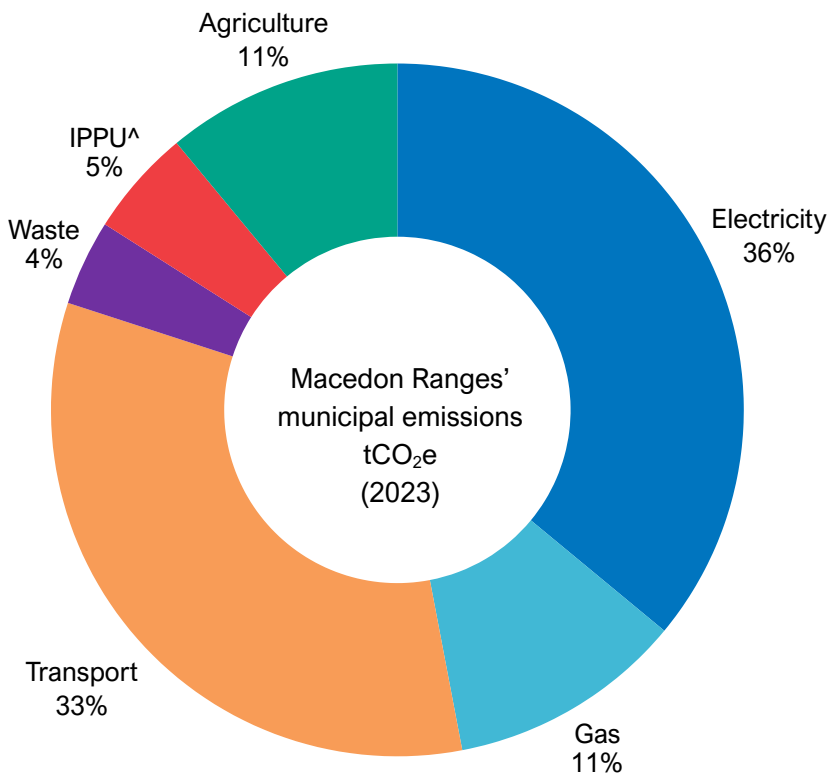
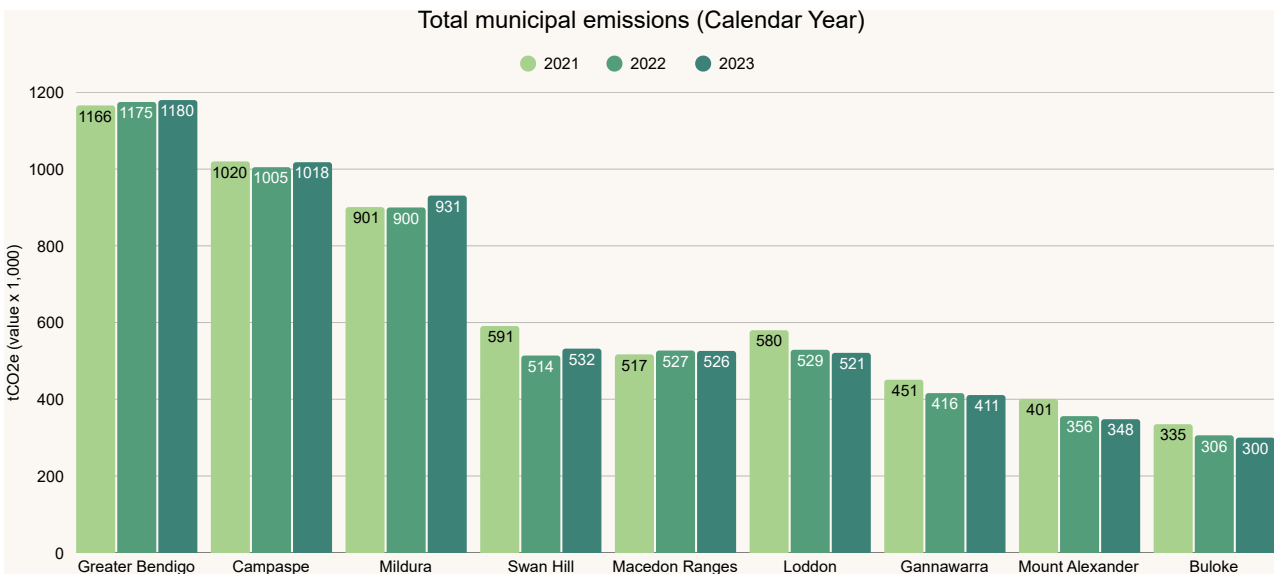
WHLM have also compiled a comprehensive list of sexual and reproductive health [services](#) in the Loddon Mallee region

Source: [Womens Health Loddon Mallee](#), 2025

7. Environment

7.1 Municipal emissions

The LMPHU's climate change and health work is guided by the Loddon Mallee Climate Change and Health Framework. Some of the considerations in comparing carbon emissions across local government areas are population, industry mix, geographical area, transport patterns and land use. The Macedon Ranges' total emissions have increased from 2021 (517,000 tCO₂e) to 2023 (526,000 tCO₂e). The top causes of emissions in the Macedon Ranges were electricity (36%) and transport (33%).



Source: Snapshot Climate - Australian Emissions Profiles
 tCO₂e: Tonnes of Carbon Dioxide Equivalent
 ^Industrial Processes and product use

7.2 Average temperature

Temperatures in the Loddon Mallee region differ significantly from north to south. The northern part of the region sees hotter summers. Conversely, the more southern part of the region experiences cool and rainy winters and warm and arid summers. The Macedon Ranges area experience an average maximum temperature of 24.1°C in summer. Winters are cooler, with the maximum temperature around 10.3°C on average, with frequent frosts.

LGA (1961-1990)	Summer (Ave °C)		Winter (Ave °C)	
	Maximum	Minimum	Maximum	Minimum
LMR	28.9	13.5	13.7	4.1
Swan Hill	31.2	15	15.6	4.6
Mildura	31	14.8	15.9	5.2
Gannawarra	30.5	14.7	14.8	4.5
Buloke	30	14	14.6	4.4
Loddon	29.4	13.9	13.9	4.2
Campaspe	29.3	14.1	13.9	3.9
Greater Bendigo	28.2	13.4	13.1	3.9
Mount Alexander	27	12	12	3.1
Macedon Ranges	24.1	11.2	10.3	3.2

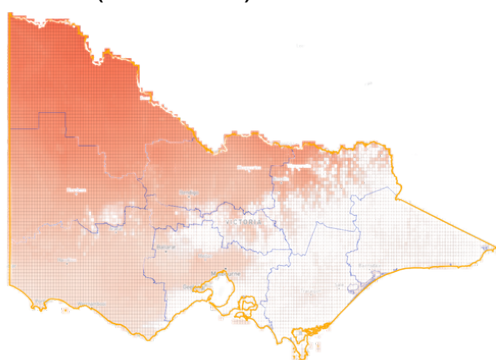
Source: Loddon Mallee Environmental Scan | Emergency Management Victoria (emv.vic.gov.au), 1961-1990

Projected number of days above 35°C in 2030s and 2090s by Bureau of Meteorology Forecast Districts.

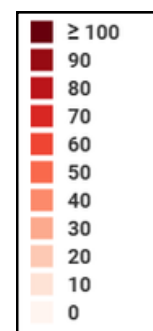
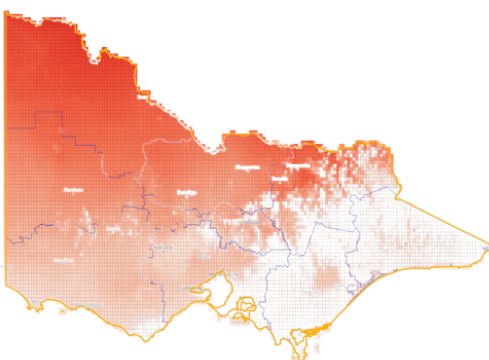
These data demonstrate that the Mallee and Murray areas are projected to experience increasing days above 35°C, which will impact health and wellbeing. Heat kills more Australians than any other natural disaster.

Heat can cause serious and potentially fatal health problems such as heat exhaustion and heatstroke, trigger sudden events like heart attack or stroke, or worsen existing medical conditions like kidney or lung disease.^[1]

2030s (2015-2044)



2090s (2075-2104)



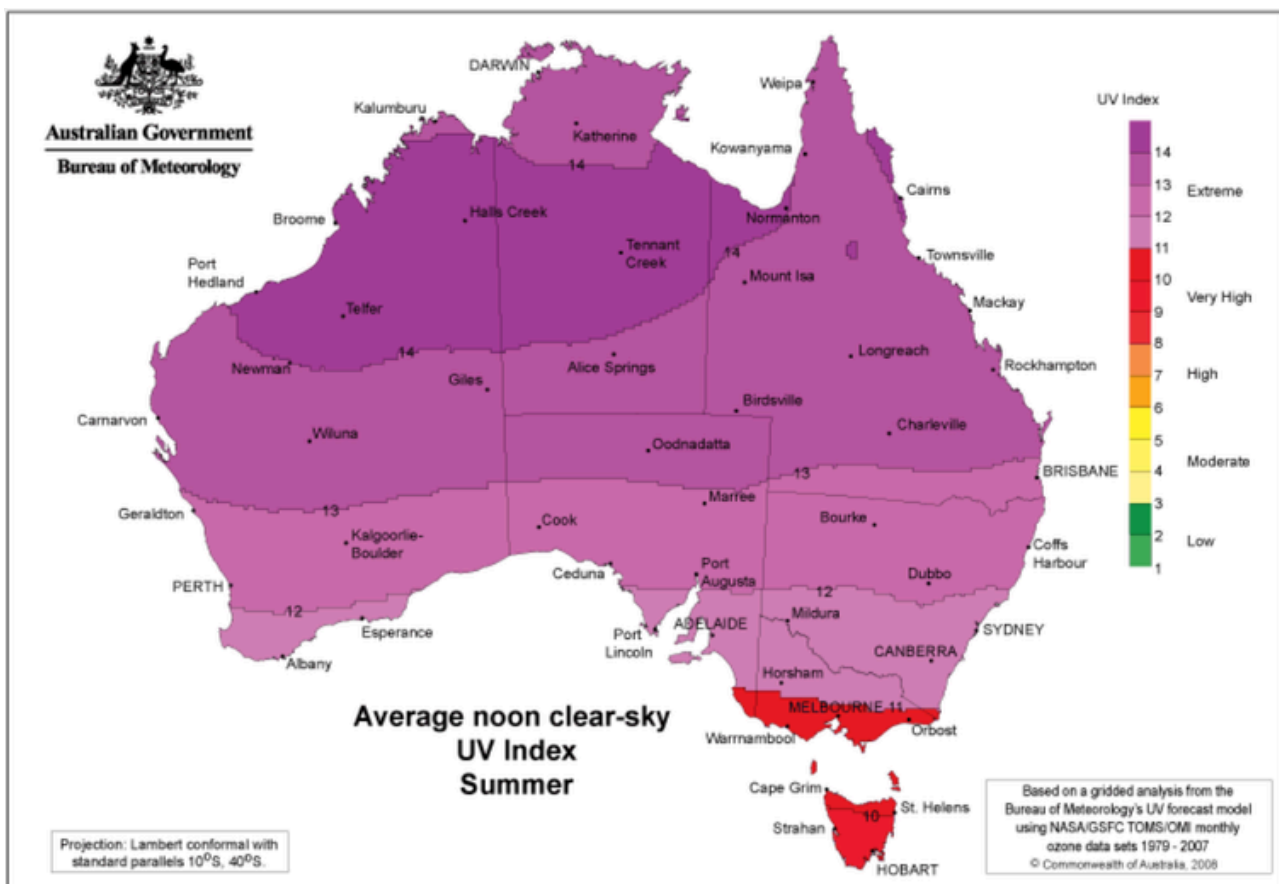
Source: Victorian Government, Energy, Environment and Climate Action

[1] [Better Health Channel](#), Extreme Heat, Victorian Department of Health

7.3 Ultraviolet radiation

Exposure to UV radiation from the sun and other sources, such as solariums, is the major cause of skin cancer. Australia has some of the highest levels of UV radiation in the world. Sun exposure has been estimated to cause around 95% of melanoma cases in areas of high exposure, such as Australia and around 99% of non-melanoma skin cancers in Australia. ^[1]

The map below show the average summer (noon clear sky) solar ultraviolet values over Australia. The LMR experiences extreme Ultraviolet index.



Source: [Australian Bureau of Meteorology](http://www.bom.gov.au/uv/)

[1] [Australian Government, Cancer Australia](http://www.cancer.gov.au/)

7.4 Bushfire prone areas

Most of the Loddon Mallee region is classified as a bushfire prone area (97.8%). This means high bushfire hazards in the Loddon Mallee region, many of which intersect with settlements and areas that are experiencing growth in rural residential zones and tourism. The Macedon Ranges has 98.6% of its area classified as bushfire prone, with bushfires in 2009, 2015, 2019 and 2024 requiring Government Disaster Assistance.^[1]

The Fire Danger Period in Victoria has become lengthier, indicating a trend towards extended fire seasons. The seasonal fire restriction dates are determined by the municipality and are dependent on factors such as amounts of rain, grassland curing, and other local conditions.

Smoke from fires, including planned burns, can also pose a hazard to people's health. The individuals most at risk from smoke exposure include young children, adults over 65 years of age, people with asthma or existing heart or lung conditions, pregnant women, outdoor workers, and smokers. Bushfire-prone areas are either subject to or likely to be subject to bushfires, and require specific bushfire construction standards.

	Bushfire prone area (%)	Bushfire prone area (km ²)	Total area (km ²)
Campaspe	97.7	4,415	4,519
Buloke	97.6	7,807	8,000
Gannawarra	98.7	3,701	3,750
Greater Bendigo	97.6	2,930	3,000
Loddon	100	6,694	6,696
Macedon Ranges	98.6	1,723	1,748
Mildura	98.3	21,710	22,083
Mount Alexander	99.8	1,527	1,530
Swan Hill	92.0	5,625	6,115
Victoria	97.8	5,625	6,115

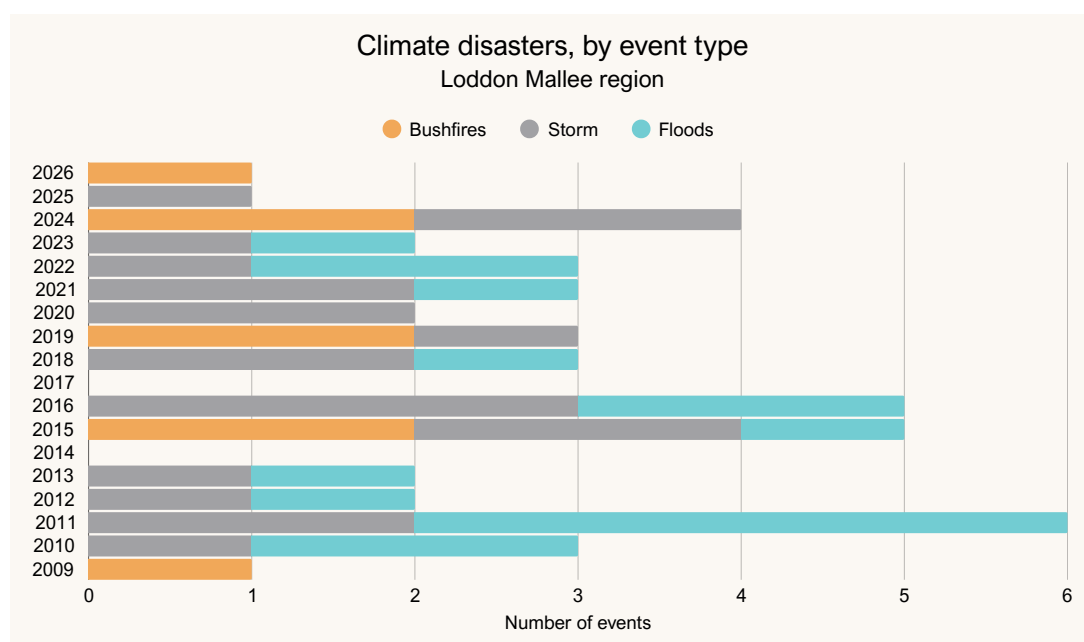
Source: Loddon Mallee Environmental Scan | Emergency Management Victoria (emv.vic.gov.au)

[1] [Government Disaster Assistance](#), Australian Government, Department of home Affairs

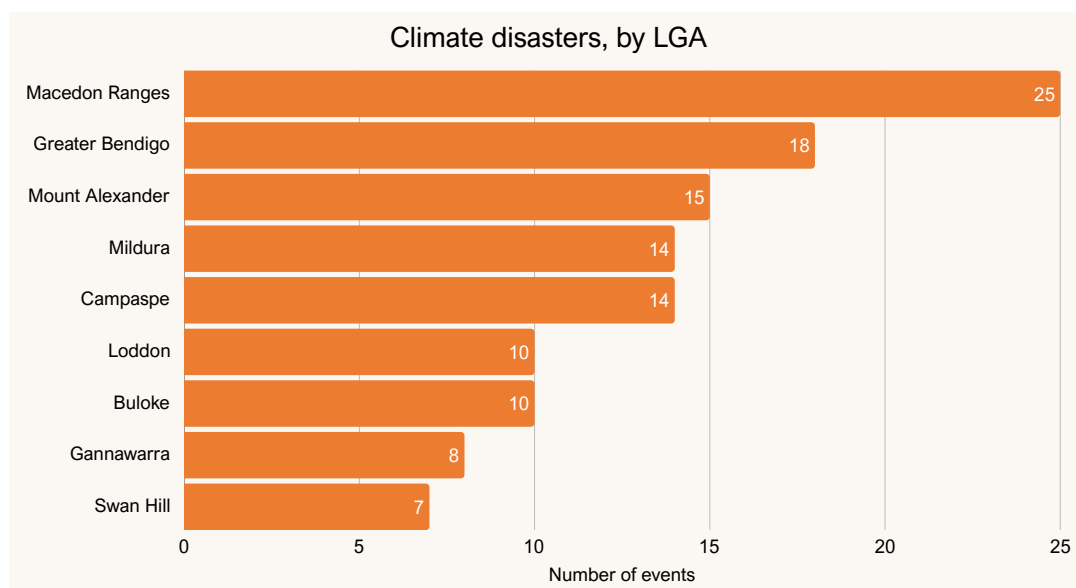
7.5 Climate emergencies

Climate change is increasingly affecting the frequency, intensity, and duration of extreme weather events in our region. Rising temperatures, shifting rainfall patterns, and more severe storm systems are contributing to a greater incidence of natural hazards such as bushfires, floods, and heatwaves. Acting as a risk multiplier, climate change not only amplifies the severity of these disasters, threatening lives, livelihoods, health and property, but also places significant pressure on disaster management systems.

The Disaster Recovery Funding Arrangements (DRFA) provide a framework for joint federal and state cost-sharing of disaster relief and recovery measures. These arrangements are triggered by state government when a natural disaster requires a coordinated multi-agency response and exceeds the small disaster financial threshold. Between 2019 and February 2026, 35 climate-related disaster events (storms, floods, bushfires) in the Loddon Mallee region have activated the DRFA, with multiple climate disaster events most years. The Macedon Ranges was the most frequently affected LGA impacted by climate disasters (25 events) in the Loddon Mallee region.



Source: [Australian Government Department of Home Affairs, Disaster assist, 2009 -2026](#)



Source: [Australian Government Department of Home Affairs, Disaster assist, 2009 -2026](#)

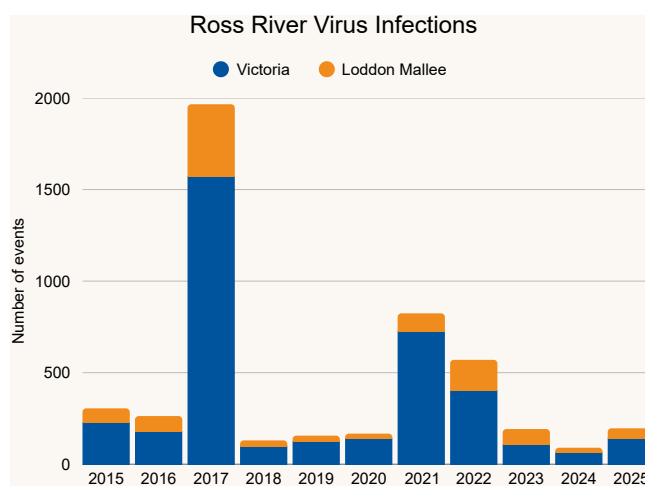
7.6 Mosquito borne disease

In 2025, there were five mosquito-borne viruses identified across Victoria with the potential for local transmission. These were Japanese encephalitis virus, Murray Valley encephalitis virus, Ross River virus, Barmah Forest virus and West Nile virus Kunjin strain (otherwise known as Kunjin virus).^[1]

Mosquito surveillance is conducted throughout the Victorian mosquito breeding season by the Department of Health each year. In inland areas, the mosquito season typically starts from early November through to late April the following year, while in coastal areas it typically starts earlier and ends later. The mosquito trapping sites within the Loddon Mallee are in Campaspe, Gannawarra, Mildura and Swan Hill.

Ross River virus

Ross River virus is a mosquito transmitted disease that occurs throughout most regions of Australia including regional Victoria, particularly around inland waterways and coastal regions. All 9 LGAs within the Loddon Mallee are considered endemic. Epidemics occur from time to time and are related to environmental conditions that encourage mosquito breeding such as heavy rainfall, floods, high tides and temperature. The number of notifications of Ross River Virus from Loddon Mallee ranges from 25 to 397 in a year. In 2025 29% of all Victorian notifications were from the Loddon Mallee.



Source: Victorian Department of Health, surveillance summary report

[1] Victorian Department of Health, [Mosquito surveillance report](#)

8. Data resources

LMPHU	https://www.bendigohealth.org.au/LMPHU/
ABS Quick Stats	https://abs.gov.au/census/find-census-data/quickstats/2021/POA3523
AECD	https://www.aedc.gov.au/data-explorer/
AIHW	https://www.aihw.gov.au/about-our-data/aihw-data-by-geography
Crimes Statistics Agency	https://www.crimestatistics.vic.gov.au/
PHN Exchange	https://www.phnexchange.com.au/
Social Health Atlas	https://phidu.torrens.edu.au/social-health-atlases
Victorian Population Health Survey	https://vahi.vic.gov.au/reports/victorian-population-health-survey-2023
Womens Health Atlas	https://victorianwomenshealthatlas.net.au/#/

9. Notes on statistical significance

Public Health Information Development Unit/Social Atlas

Statistical significance was assessed using indirect age standardisation and standardised ratios (SRs). Expected numbers were calculated by applying age-specific Australian standard rates to the local population age structure. Observed numbers were compared with expected numbers and statistical significance was evaluated using a Z-score calculation, with 95% confidence intervals around the SR to indicate reliability. More information on this calculation is available at the [Public Health Information Development Unit](#).

Victorian Population Health Survey

Statistical significance differences between estimates were deemed to exist where the 95% confidence intervals for percentages did not overlap. More information is available in the Methodology section of the [Victorian Population Health Survey](#).

10. Abbreviations

Abbreviation table	
AEDC	Australian Early Development Census
AIHW	Australian Institute of Health and Welbeing
ARI	Average recurrence interval
COPD	Chronic Obstructive Pulmonary Disease
Greater Bendigo	City of Greater Bendigo
IRSD	Index of Relative Socio-economic Disadvantage
LGA	Local government area
LMPHU	Loddon Mallee Public Health Unit
LMR	Loddon Mallee region
LGBTIQA+	Lesbian, gay, bisexual, transgender, intersex, queer, asexual and other sexually or gender diverse people
MMM	Modified Monash Model
NBCSP	National Bowel Cancer Screening Program
NDIS	National Disability Insurance Scheme
PHN	Primary Health Network
STI	Sexually Transmitted Infection



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