FINAL REPORT

Economic development in the Snowy SAP

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THE CENTRE FOR INTERNATIONAL ECONOMICS
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Executive summary

The Snowy Mountains Special Activation Precinct has the main objective of driving economic development of the region through increasing tourism activity, and particularly increasing non-winter tourism activity. This report sets out:

- the socio-economic context of the region — the main takeaways are the large seasonal employment, which we estimate to be about the same as permanent employment and the importance of tourism activity as a driver for the regional economy
- the tourism context
  - after 10 years of decline in the 2000s, the 2010s have seen strong growth in tourism in winter and summer, with non-winter growth particularly related to Thredbo. This is likely to continue with a suite of attractions such as the Snowies Iconic Walk, Thredbo Valley Trail extension and Lake Jindabyne trail all occurring or likely to occur
  - the current market remains predominantly winter-based, and that is where businesses make their money. The Snowy Mountains SAP area is the most seasonal tourism location in Australia. It also has a substantially more seasonal pattern than other alpine destinations internationally
  - the main markets currently are domestic overnight visitors from NSW and domestic overnight and day visitors from the ACT
- the economic problems and opportunities, which rests on three propositions:
  - the main tourism and infrastructure assets are publicly controlled (Kosciusko National Park and Lake Jindabyne, transport system) and there is an opportunity to make better use of these assets from a visitation perspective
  - climate change will significantly impact on winter tourism. Our expectation is that effects will be able to be mitigated until 2040, but will then accelerate. There is substantial uncertainty about these impacts and the extent to which resorts can adapt
  - coordination and branding could better manage the tourism spillovers that exist between businesses, and between KNP and the remainder of the Snowy Mountains SAP
- visitor economy opportunities and threats, and the main drivers of increased visitation from the visitation model and the set of activities recommended by Stafford Strategy
- projections of visitation, population and employment under a base case and with the Snowy Mountains SAP scenario
- the market development growth (floor space) that would go alongside these projections.

Drivers of tourism uplift

Using the visitation model developed, we can also track the impacts of other things like improving access, reducing business costs and removing regulatory restrictions (table 1.1).

- In 2040, under the base case we expect 892 000 visits per year, with 459 000 in winter and 433 000 in non-winter
- Improved air connectivity through more flights from Sydney, Brisbane and Melbourne, lower fares and improved connections between airports to Jindabyne and the resorts. This would increase trips by ~90 000 in 2040
- Increasing or removing bed limits and any other capacity constraints would increase trips by 16 000 in 2040.
- Reducing the cost of new developments within the KNP (by around 3.8 per cent in winter and 1.3 per cent in non-winter) would lead to 7 500 new trips in 2040
- Providing a transport solution to overcome car parking constraints would boost visitation by around 37 000 by 2040 during winter months
- New investment in marketing and tourist attractions would lead to over 283 000 extra visitors by 2040, most occurring during non-winter months.
- Doing all of the above leads to an additional 433 000 extra visitors by 2040. This is greater than the sum of the standalone impacts of each activities, due to the unique interaction between multiple initiatives within the Snowy Mountains SAP.

Note that these changes work together. The impacts of new investments would be smaller if transport constraints and regulatory constraints were not first reduced or removed.

1.1 Drivers of tourism impacts

	Winter 2040 000 trips per year	Non-winter 2040 000 trips per year	Year round 2040 000 trips per year
Base case	459 424	432 844	892 268
Change from SAP activities			
Increasing or removing bed limits	15 859	0	15 859
Transport solution	37 219	0	37 219
Reduced cost of new developments	6 280	1 215	7 495
Improved air connectivity to Snowies from Sydney, Melbourne and Brisbane	61 155	28 378	89 533
Investment in new attractions and marketing	54 106	228 946	283 052
Total for SAP scenario (all of the above)	634 044	691 383	1 325 427

Source: The CIE.

This highlights the type of activities likely to impact on demand and the orders of magnitude of the inducement to be expected.

Base case and SAP scenario visitation forecasts

Base case visitor projections have been developed that capture what is expected to occur without the Snowy Mountains SAP. The main drivers include:

- population and income growth in origin markets
- climate change
- existing bed limits in the national parks
- activities such as the Snowies Iconic Walk and Thredbo Valley Trail extension, as well as continued investment in alpine coasters and ziplines in Thredbo

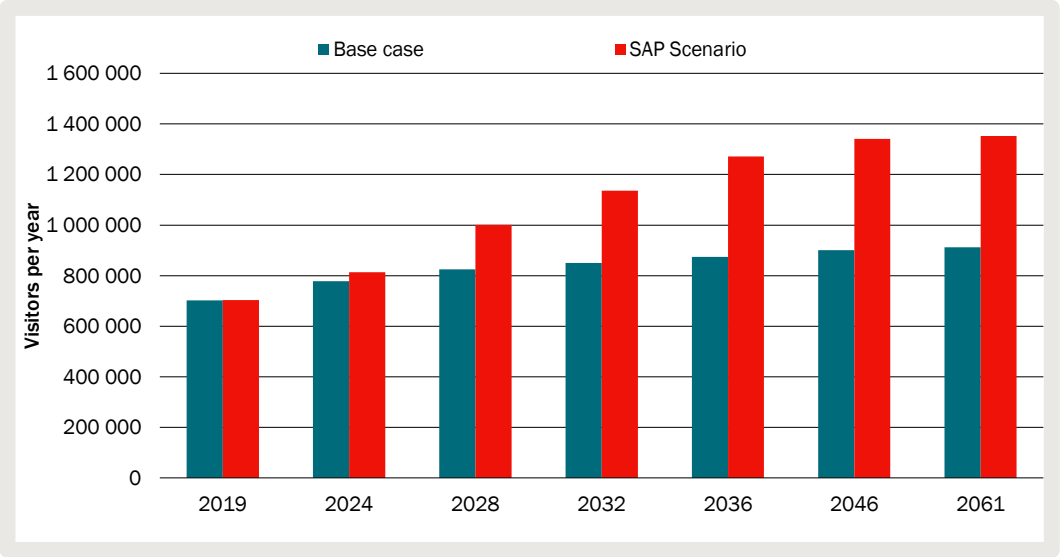
The overall Snowy Mountains SAP scenario involves:

- increasing or removing bed limits and other capacity limits on the mountain resorts
- providing a transport solution within the Snowy Mountains SAP area
- Improved air connectivity through more flights from Sydney, Brisbane and Melbourne, lower fares and improved connections between airports to Jindabyne and the resorts
- reducing the cost for developing new investments inside KNP, which would translate into a reduced cost overall of 2.5 per cent, as capital is about 25 per cent of costs for accommodation and food services. We expect that this would translate into a reduction in peak costs of about 2 per cent per cent and off-peak costs of less than 1 per cent, as non-winter is currently priced to reflect operating costs
- investment in a large range of new tourist attractions and marketing for the region

We have then modelled expected visitors for the Snowy Mountains SAP scenario versus the base case. The base case is driven by population and income growth, including covid-19 impacts, existing projects under development and climate change.

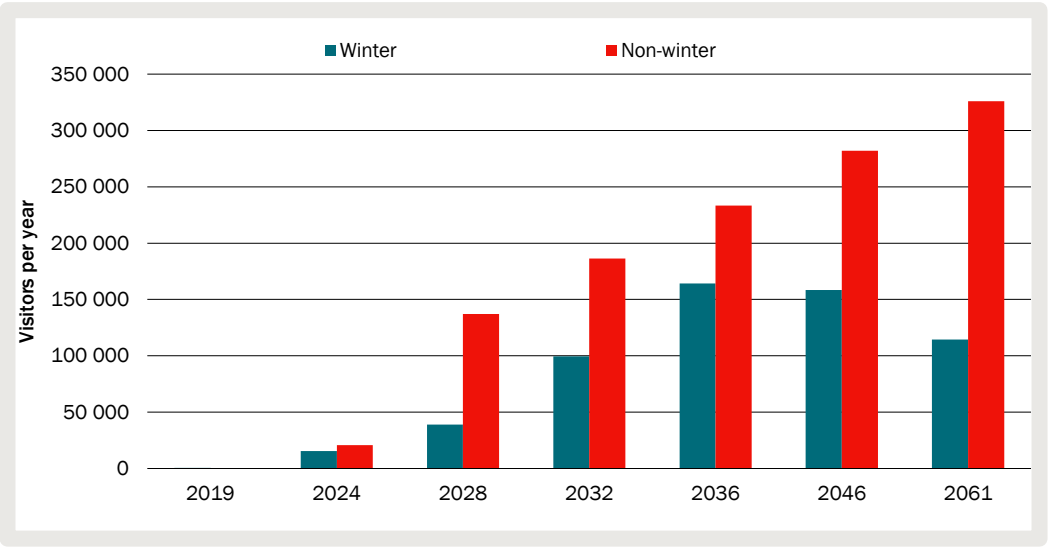
The overall Snowy Mountains SAP scenario versus the base case in terms of year-round visitor numbers is shown in chart 1.2. The uplift in winter and non-winter is shown in chart 1.3 and expenditure is shown in chart 1.4. The Snowy Mountains SAP activities allowed for would drive around 440 000 more visitors at peak and around $470 million more expenditure per year. Note that the winter uplift is driven mostly by improved air connectivity, bed limit changes, provision of a transport solution and planning cost changes, while the summer uplift is driven by new attraction activities.

1.2 Snowy Mountains SAP scenario versus base case



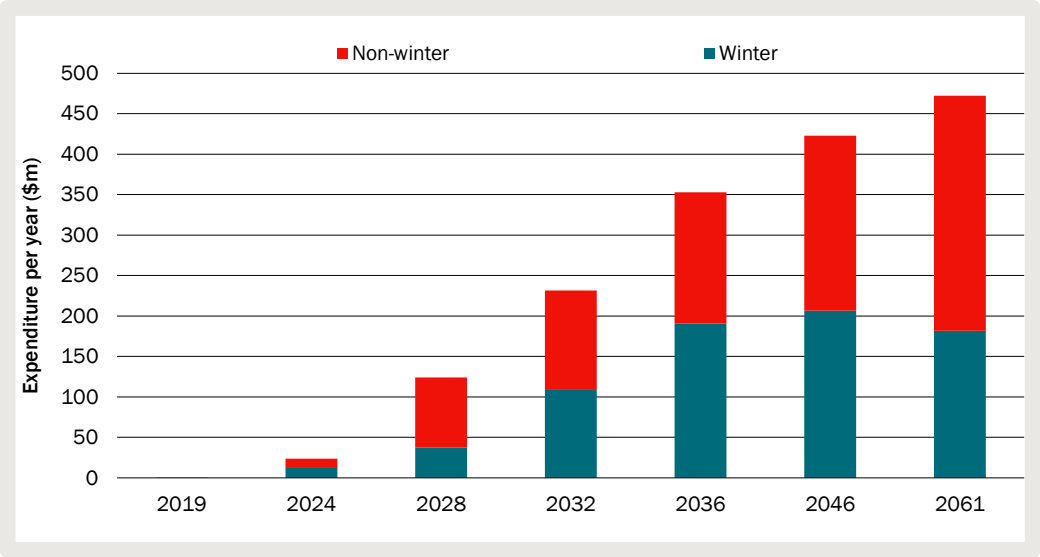
Data source: The CIE.

1.3 Uplift in visitor numbers from Snowy Mountains SAP



Data source: The CIE.

1.4 Uplift in expenditure from Snowy Mountains SAP

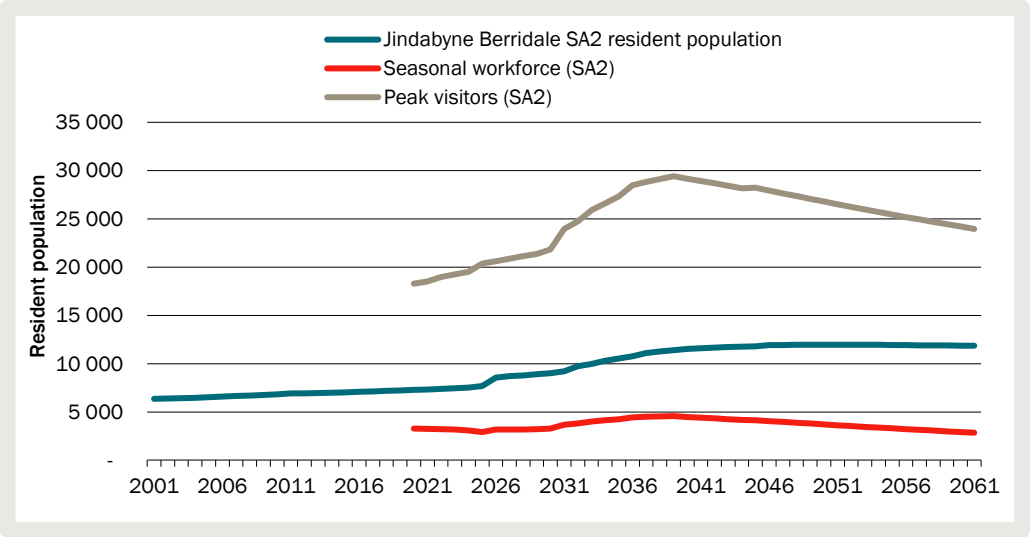


Data source: The CIE.

These projections reflect the set of assumptions about what the Snowy Mountains SAP can achieve. If less activities and investments occur from the Snowy Mountains SAP, then the visitation impacts will be smaller. Masterplanning alone would have limited impacts on visitation, because of the commercial drivers that exist within the region. A stark example of this is the 2001 Perisher Range Resort Masterplan, which aimed to make Perisher a summer destination. Because of a lack of commercial feasibility, the desired changes for Perisher have not occurred.

Higher visitation and visitor expenditure would translate into higher levels of population growth in the region. Under the Snowy Mountains SAP scenario, population would increase to about 11 800 people in the Jindabyne-Berridale region. In terms of the seasonal population component, the seasonal workforce increases to a peak of over 4 500 from an estimated 3265 today (with substantial uncertainty about the true size of the seasonal workforce). The peak winter visitors, as represented by peak overnight visitors staying in the SA2, increases to a peak of 30 000 per night in 2040 and then declines (chart 1.5).

1.5 Forecast population by population type — Snowy Mountains SAP scenario



Data source: The CIE based on data from Go Jindy Housing and Demographics report, ABS Census 2016, DPIE provided data on estimated resident population

1 Socio-economic profile of the Snowy Mountains SAP

Mapping the Snowy Mountains SAP to current ABS identifiers

The Snowy Mountains Special Activation Precinct (SAP) does not map accurately to standard geographical areas reported in the ABS therefore analysis presented in this section is based on the Jindabyne-Berridale SA2. The Snowy Mountains SAP is approximately 72 000 ha within the Jindabyne – Berridale SA2.[1]

Labour force analysis

Industry analysis

There were around 3 200 people employed all-year round in the Jindabyne-Berridale SA2 in 2016 including casual, part-time and full-time employees.[2] In addition, there are 3 300 additional seasonal workers employed during the winter months. The latter estimate is subject to a high degree of error as there are conflicting data sources about seasonal employment.[3]

Seasonal employees in the NSW Alpine industry are typically professional Alpine industry workers (mainly ski instructors who move between the major international resorts following the snow) and casual employees working in accommodation, lifts and food services. There are also local employees who come from the immediate region who may work seasonally across a range of local industries and locals employed full time by the industry.[4]

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1 The Jindabyne – Berridale (SA2) is approximately 394 000 ha in size. See ABS 2018, Jindabyne - Berridale (SA2) (101031016), available at: https://itt.abs.gov.au/itt/r.jsp?RegionSummary&region=101031016&dataset=ABS_REGIONAL_ASGS2016&geoconcept=ASGS_2016&measure=MEASURE&datasetASGS=ABS_REGIONAL_ASGS2016&datasetLGA=ABS_REGIONAL_LGA2018&regionLGA=LGA_2018&regionASGS=ASGS_2016

2 ABS (2016) Census.

3 There is more recent data based on Small Area employment estimates from the ABS Labour Force Survey. These indicate that the Jindabyne-Berridale SA2 had an average employment level of ~4700 people in 2019. It is unlikely that this figure captures overseas and domestic seasonal employees. Department of Education, Skills and Employment, Small Area Labour Market Estimates (unsmoothed), https://docs.employment.gov.au/documents/unsmoothed-sa2-salm-december-quarter-2019

4 National Institute of Economic and Industry Research (2012), *The Economic Significance of the Australian Alpine Resorts*, available at: https://www.arcc.vic.gov.au/uploads/publications-and-research/2011-EconomicSignificanceStudy-FullReport.pdf, p 61.

The Census does not appear to fully capture seasonal employment in the region, as it excludes overseas workers and also appears to understate domestic seasonal workers. To estimate total seasonal employment we reviewed data from Tourism Research Australia (TRA), the National Institute of Economic and Industry Research on Alpine employment[5], the Census and consulted with Thredbo and Perisher.

We estimate that total seasonal employment (from those who live in Australia and overseas) ranges from 2 345 to 4 185 and have adopted a mid-point of 3 265 (table 1.1).

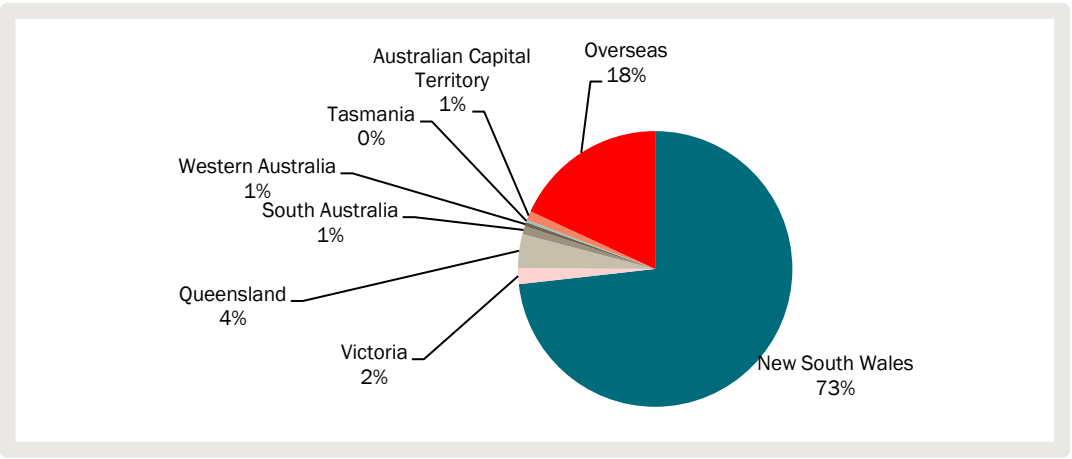
1.1 Baseline and seasonal employment in the Jindabyne-Berridale SA2

	Minimum No.	Mid-point No.	Maximum No.
Baseline year-round employment	3 197	3 197	3 197
Seasonal workforce	2 345	3 265	4 185
Peak workforce	5 542	6 462	7 382

Note: This includes full time, part time and casual employees.
Source: CIE based on ABS 2016 Census, Consultation with Perisher and Thredbo and TRA, 2016-19 Expenditure.

Employment is staffed with people whose permanent residence is in NSW, with a small proportion of employees coming from across the country. At least 18 per cent of employees come from overseas (for the high season).

1.2 Permanent residence of employees in the Jindabyne-Berridale SA2



Data source: CIE based on ABS 2016 Census, Consultation with Perisher and Thredbo and TRA, 2016-19 Expenditure.

5 This analysis was conducted in 2011 and estimates that there are over 16 000 jobs in the NSW alpine region. We consider this estimate to be too high and have not used this figure in this report.

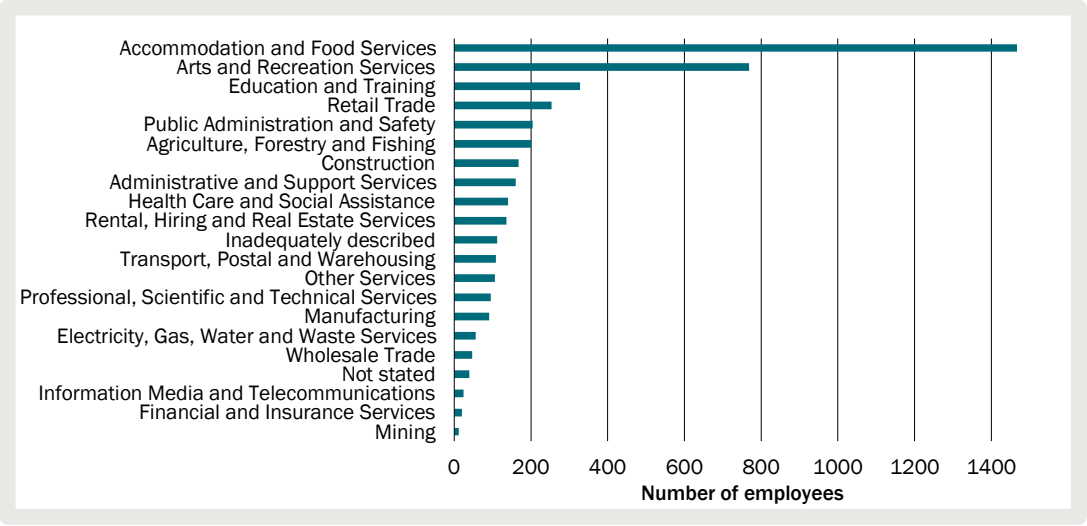
1.3 Industries where employment is provided from outside NSW

Note: Does not include workers whose permanent residence is outside Australia.

Data source: ABS 2016 Census.

Accommodation and Food Services is by large the greatest employment industry in the Jindabyne-Berridale region, making up one third of all employment (chart 1.4). We expect that the majority of additional jobs in the high season are in the Accommodation and Food Services sector, Arts and Recreation Services and Rental, Hiring and Real Estate Services.

1.4 Employment by industry in Jindabyne-Berridale SA2, 2016

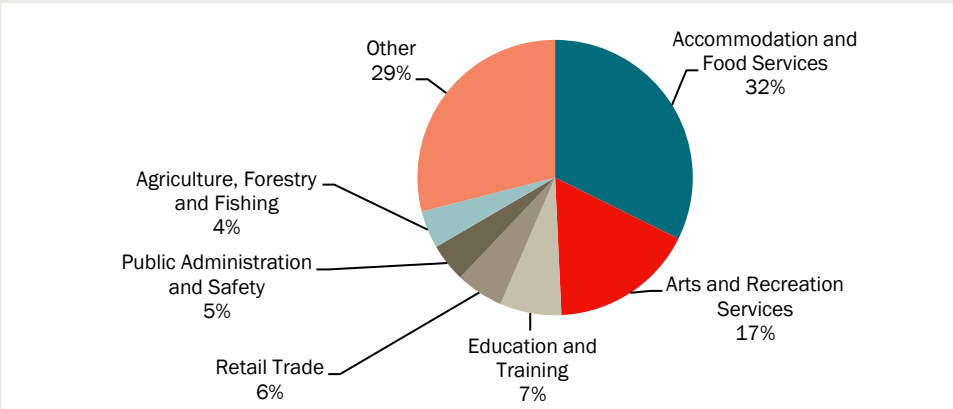


Note: Does not include seasonal employment data from employees whose permanent residence is overseas.

Data source: ABS 2016 Census.

Industry specialisation is heavily concentrated across the SA2 with over 70 per cent of employment in six industries (chart 1.5). Service industries of Accommodation and Food Services, Arts and Recreation, and Retail Trade account for 55 per cent of all employment in the SA2.

1.5 Industry employment is concentrated in the SA2, 2016



Note: Based on the employment figure reported in the Census of approximately 4500 (ie. doesn't include additional high season employment from those whose permanent residence is outside Australia).

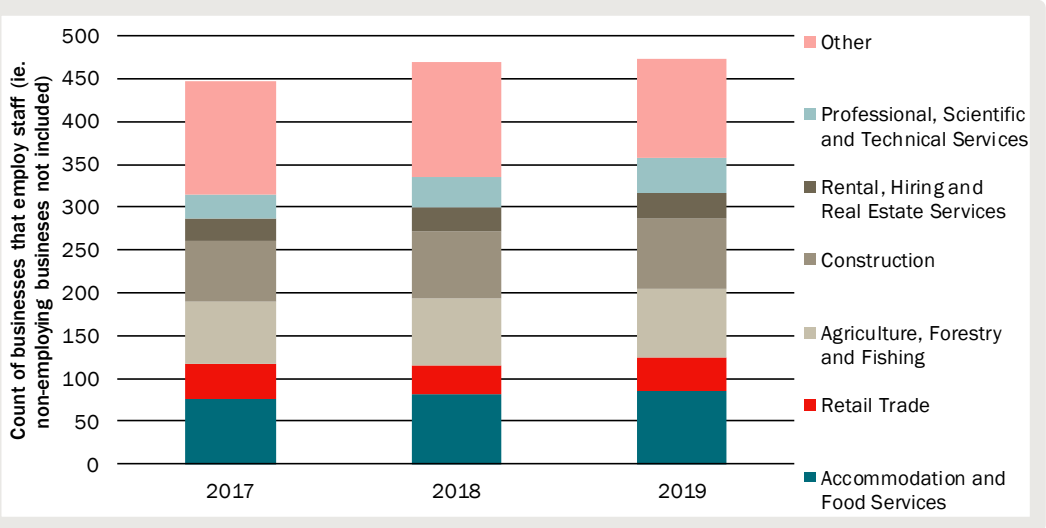
Data source: ABS 2016 Census.

Business activity

The number of businesses that have at least one employee has continued to grow over the past three years from 447 to 473 (chart 1.6).

The strongest growth in employing-businesses is observed in the number of businesses in the Professional, Scientific and Technical Services industry, and the Accommodation and Food Services industry, as well as Arts and Recreation businesses and Wholesale Trade – the latter two being captured in the 'Other' category in the chart. Business number declines have occurred in Public Administration and Safety, Mining and Administrative and Support Services (all three categories are collated in the 'Other' category).

1.6 Count of businesses, 2017-2019 by industry sector



Note: Counts businesses employing between 1 and 199 people. Does not include non-employing businesses. There are no businesses at the SA2 level with greater than 199 employees.

Data source: ABS 2020, Counts of Australian Business, (Category. 8165.0), Data cube 8, available at: https://www.abs.gov.au/AUSSTATS/abs@.nsf/DetailsPage/8165.0June%202015%20to%20June%202019?OpenDocument, accessed 24 July 2020.

Labour force status and labour mobility

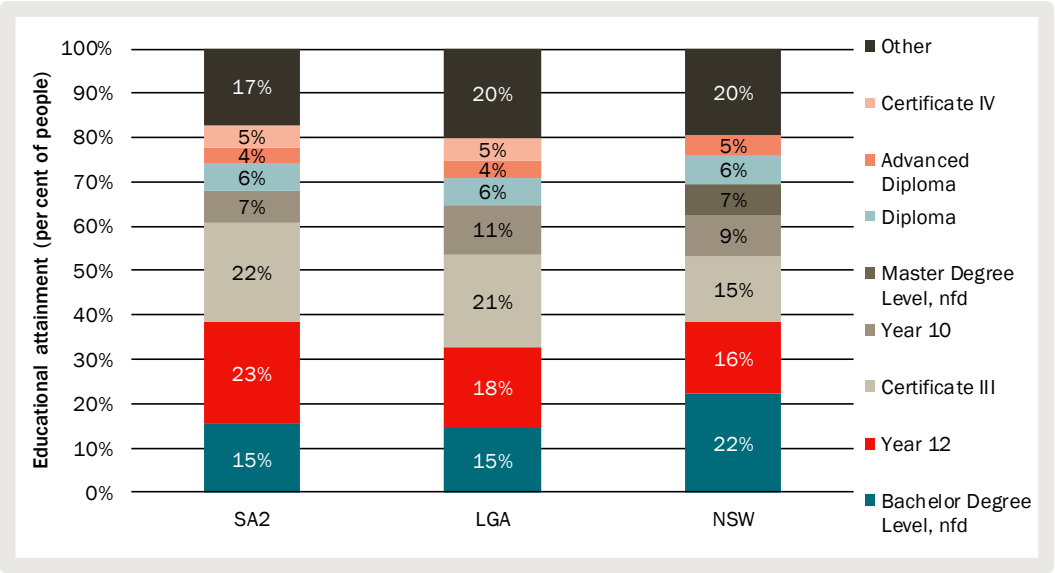
Labour force status for people working in the Jindabyne-Berridale SA2 includes:

- 66.4 per cent were employed full time
- 28.9 per cent were employed on a part time basis, and
- 4.8 per cent were employed, but were currently away from work.

Labour force status is based on total domestic employment (ie. baseline year-round employment plus domestic seasonal workers) but excludes international seasonal workers. There is negligible difference between the labour force status when looking at baseline year-round employment only.

Accommodation and Food Services have the highest proportion of full-time employment (35 per cent of all full-time employment in the SA2).

1.7 Labour force status (full time and part time), for top 5 industries, 2016



Note: Based on employment in the five destination zones within the Jindabyne-Berridale SA2.

Data source: ABS 2016 Census.

Unemployment levels

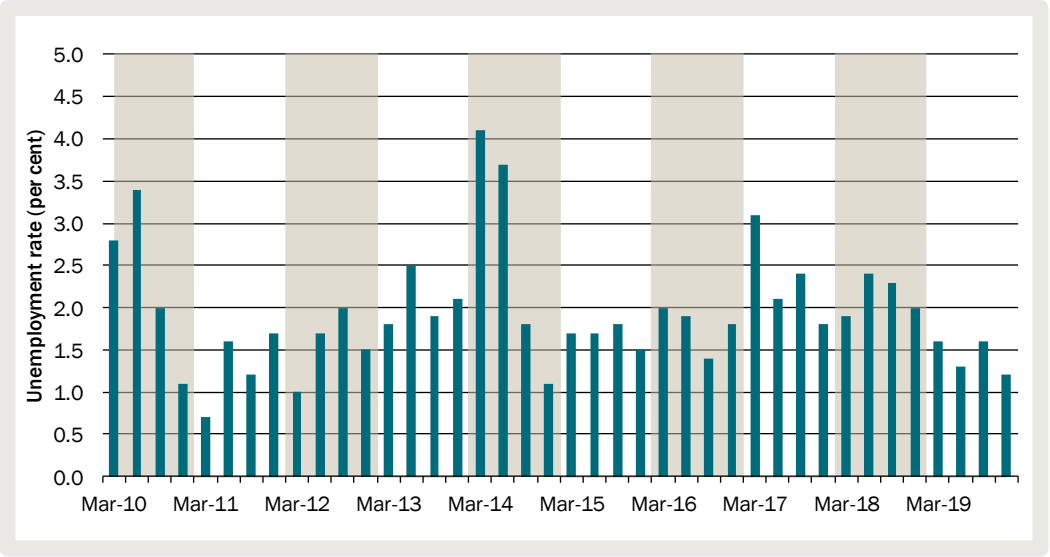
Jindabyne-Berridale SA2 is characterised by very low levels of unemployment, at 1.8 per cent (2016 Census), or 1.9 per cent over the past 10 years.[6] This compares to 5.2 per cent for NSW as a whole, and a generally higher level of unemployment in regional NSW as compared to metropolitan areas. There is no obvious pattern of seasonality impacts on unemployment in the Snowy Mountains, which is surprising. This may be because the snow season workforce requirements are met by people locating to the area *temporarily*. Note that even the labour force estimates do not show any seasonality. The labour force survey would not capture any overseas workers who had not been within Australia for

6 The unemployment figure is based on persons whose usual residence is Jindabyne-Berridale SA2 therefore is likely to include only the baseline year-round workforce.

sufficiently long. The extent to which it is capturing short term seasonal workers is unclear.

The unemployment rate data is more accurate than measures of the labour force because this is based on allocating out ABS Labour Force measures of unemployment at the SA4 level based on administrative data on the number of people claiming unemployment benefits by postcode. This means that the lack of a spike in unemployment within the region during non-winter months is robust. However, it is likely that there is underemployment outside of the snow season due to overall reduced economic activity (meaning people may still hold jobs, but work fewer hours compared to peak season). At this stage we do not have data about what underemployment means within the area.

1.8 Unemployment levels for Jindabyne-Berridale SA2



Note: Shading represents the change of calendar years.
Data source :Department of Education, Skills and Employment, Small Area Labour Market Estimates (unsmoothed), https://docs.employment.gov.au/documents/unsmoothed-sa2-salm-december-quarter-2019

Labour force skills, occupations and income

As expected, the number of occupations are concentrated at the SA2 level, with only 6 occupations making up a quarter of local employment, and 5 of those jobs related to tourism. The "Crane, Hoist and Lift Operators" likely includes jobs related to multiple industries, for example operating ski lifts (tourism) and operating cranes on a construction site (construction).

Occupation concentration at the LGA level is more diverse, with 9 occupations making up the top quarter of employment, compared to a much higher level of diversity again at the State level, where 16 occupations – or more than double the number of occupations at the SA2 level – make up for the top quarter of all employment (table 1.9).

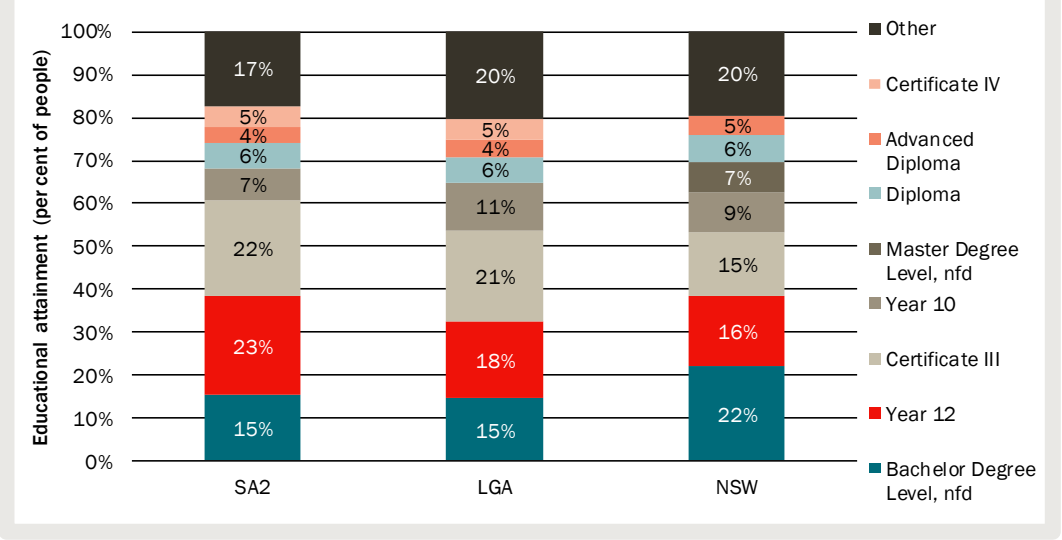
1.9 Concentration of occupations across the Jindabyne-Berridale SA2, Snowy Monaro LGA and NSW

STATE		LGA		SA2	
Occupation	Proportion of workforce	Occupation	Proportion of workforce	Occupation	Proportion of workforce
Sales Assistants (General)	4.8%	Livestock Farmers	5.4%	Sports Coaches, Instructors and Officials	5.8%
General Clerks	2.1%	Sales Assistants (General)	4.8%	Sales Assistants (General)	4.0%
Registered Nurses	2.0%	Sports Coaches, Instructors and Officials	2.8%	Crane, Hoist and Lift Operators	3.9%
Accountants	1.7%	Waiters	2.4%	Waiters	3.7%
Retail Managers	1.7%	Bar Attendants and Baristas	2.1%	Chefs	3.4%
Receptionists	1.4%	Retail Managers	2.1%	Bar Attendants and Baristas	3.2%
Child Carers	1.4%	Chefs	1.9%		
Primary School Teachers	1.4%	General Clerks	1.9%		
Secondary School Teachers	1.4%	Crane, Hoist and Lift Operators	1.8%		
Truck Drivers	1.4%				
Advertising, Public Relations and Sales Managers	1.3%				
Commercial Cleaners	1.1%				
Office Managers	1.1%				
Inadequately described	1.1%				
Aged and Disabled Carers	1.1%				
Store persons	1.0%				
Occupation concentration	**25.7%**		**25.2%**		**24.0%**

Source: CIE based on ABS Census 2016 data.

Most employees (~50 per cent) in the Jindabyne-Berridale SA2 attained either a year 12 Certificate or a Certificate III as the highest level of education (chart 1.10). While the same proportion of employees between the SA2 and LGA obtained a Bachelor Degree, this was smaller than NSW generally.

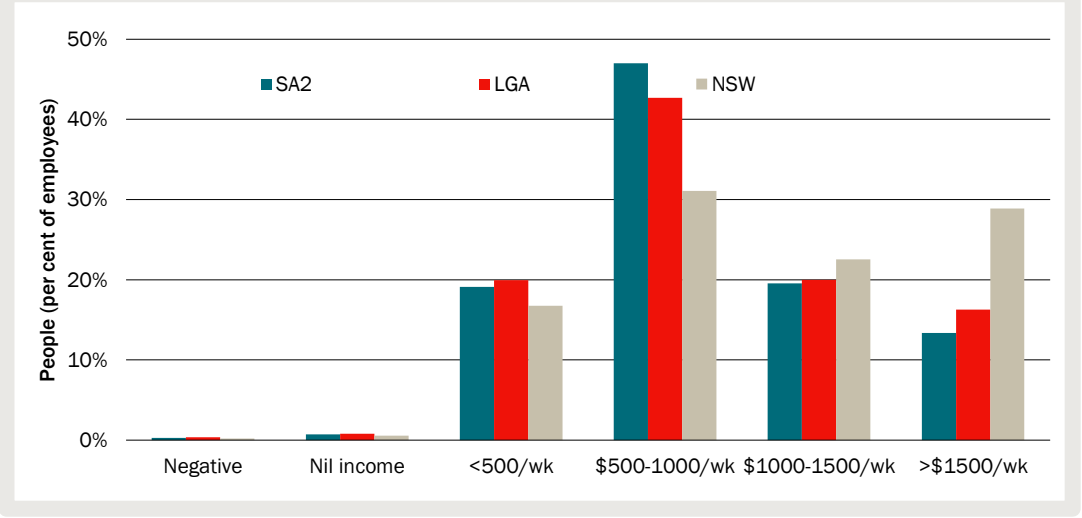
1.10 Highest level of educational attainment of employees in Snowy Mountains SAP, compared to LGA and NSW



Data source: ABS 2016 Census

The majority of employees in the Jindabyne-Berridale SA2 earn between $650-$799 per week (or an annual income of $33,800-$41,599).[7] This is consistent with minimum wage, which was $672.70 a week in 2016/17.[8] Income patterns in the area are very consistent with the broader LGA, which is expected given that educational attainment and occupations are very similar (chart 1.11).

1.11 Weekly income by location, all income earners, 2016



Data source: ABS 2016 Census.

7 Based on the 15 income bands used by the ABS in the Census.

8 Fair Work Commission (2017), *Decision, Annual Wage Review 2016-17,* available at: https://www.fwc.gov.au/documents/sites/wagereview2017/decisions/2017fwcfb3500.pdf

Income earned in the SA2 and LGA are somewhat different to that in NSW. NSW has a higher proportion of income earners receiving more than $1500/week compared to those in the SA2 where over 65 per cent of income earners receive *less than* $1 000/week. Higher incomes across NSW reflect the higher weekly incomes received by the large number of individuals that reside in the Greater Sydney region.[9]

ATO data by postcode[10] shows that this weekly (and annual) figure doesn't factor in those who earn less than the tax-free threshold, and therefore are not taxable. Around 75 per cent of individuals earning income are taxable. Average annual taxable income for the area is $57 000, while the annual non-taxable income is around $12 000 (chart 1.12). The majority of this income is generated from salary and wages (between 80 and 100 per cent).

Income for non-taxable individuals is relatively consistent across postcodes, however individuals in postcode 2627[11] earn around 25 per cent more than individuals in postcode 2624[12]. This may be the result of seasonality – postcode 2624 refers to skiing areas only whereas postcode 2627 includes the township of Jindabyne which is likely to have a greater amount of business activity (including general services to the population who live there, such as education), all year round.

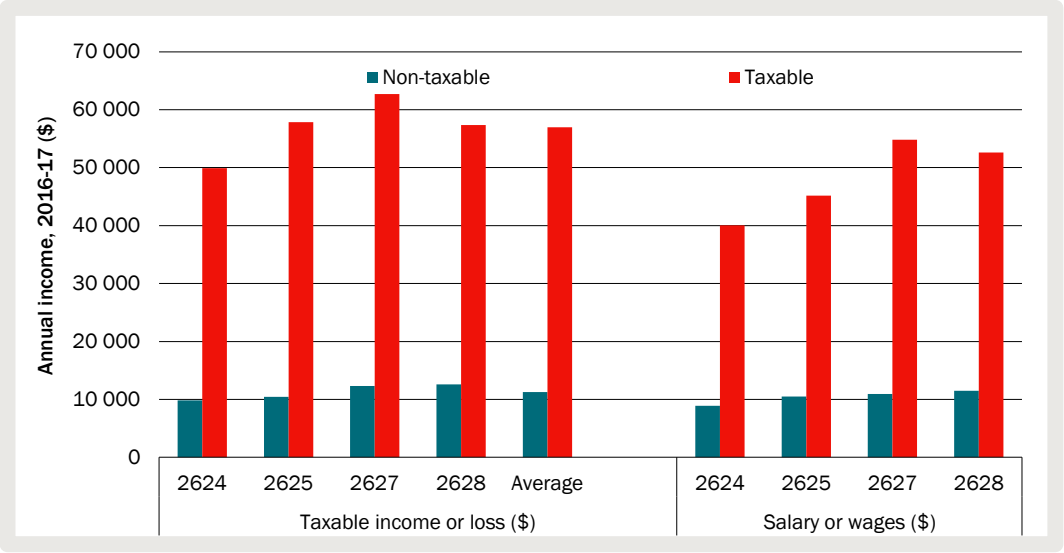
9 ABS website, available at: https://quickstats.censusdata.abs.gov.au/census_services/getproduct/census/2016/quickstat/1GSYD?opendocument, accessed 25 July 2020.

10 All figures that relate to postcodes cover the area of 2625, 2627, and 2628 as these postcodes are part of the SA2. Postcode 2630 (which is part of the Jindabyne-Berridale SA2) has been removed from the analysis as it contains Cooma, Bombala, and the Cooma Region and only a smaller part of the Jindabyne-Berridale SA2. An additional postcode (2624) has been added to the sample as this refers to the suburbs of Perisher Valley, and Charlotte's Pass.

11 Including localities: Moonbah, Kosciuszko National Park, Kalkite, Jindabyne, Bullocks Flat, Crackenback and East Jindabyne.

12 Including localities: Blue Cow, Charlotte Pass, Perisher Valley and Smiggin Holes.

1.12 Average annual income by tax status and postcode, 2016-17



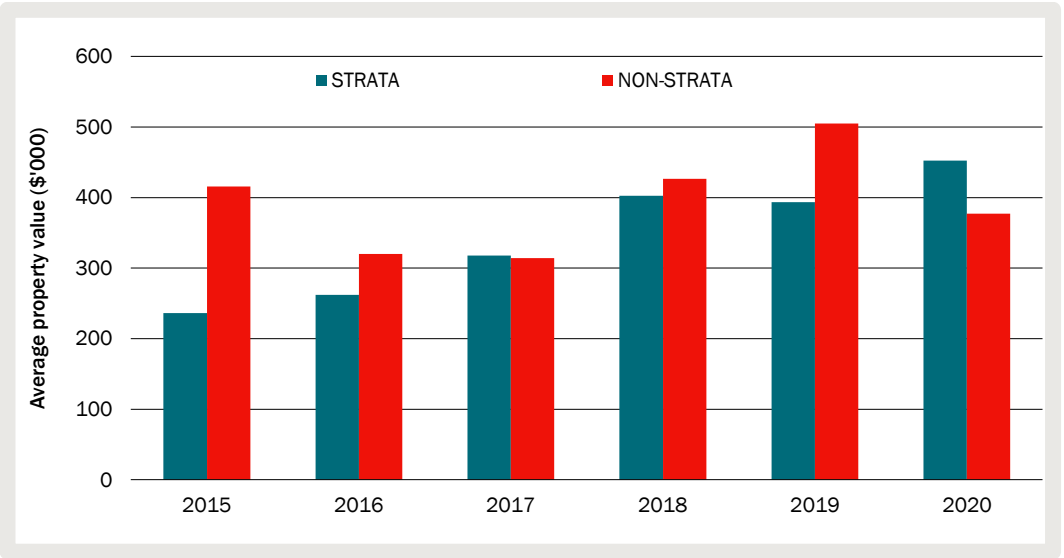
Data source: ATO, Taxation statistics 2016–17 Individuals: Selected items, by taxable status, state/territory1 and postcode, 2016–17 income year, available at: https://search.data.gov.au/dataset/ds-dga-5fa69f19-ec44-4c46-88eb-0f6fd5c2f43b/details?q=income%20by%20postcode, accessed 26 May 2020.

Property sales and local development

Property values

There has been over 2000 property sales in the Jindabyne-Berridale SA2 over the past five years with average trends in sale prices different between strata and non-strata properties. Strata properties have seen a general upward trend in sale price, compared to non-strata properties that experienced an initial decline to 2017, then saw two years of growth, before declining again in 2020 (chart 1.13).

1.13 Average sale prices in Jindabyne-Berridale SA2

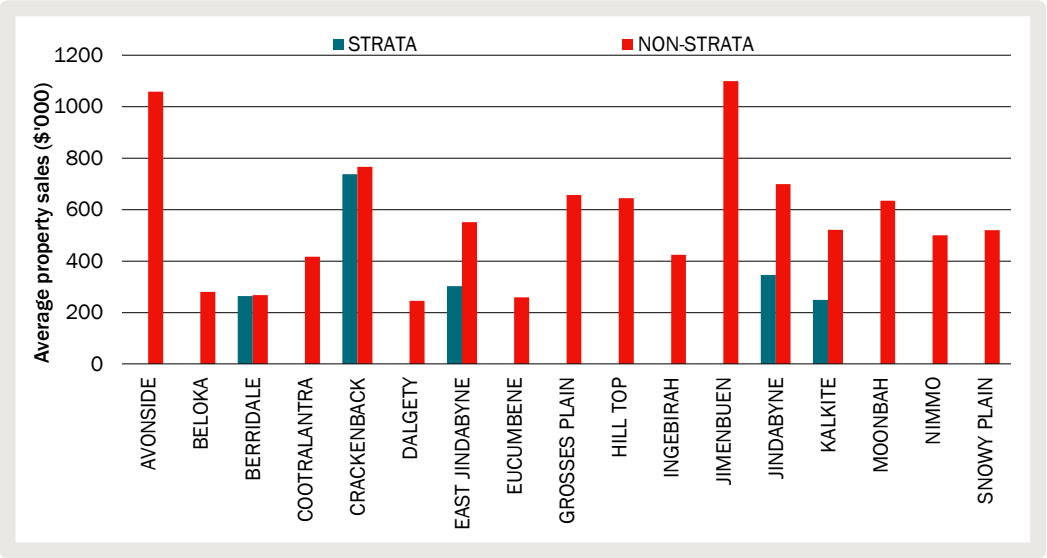


Note: Based on data for postcodes 2625, 2627, 2628. N=2156.

Data source: Valuer General property sales data, downloaded March 2020.

In 2019, the average non-strata property sold for approximately $504 000 (sales price range from $122 000 to $2.3 million). For strata properties, this was around $394 000 (ranging from $100 000 to $1.9 million). This significant fluctuation is observed when property sales are examined on a suburb basis (1.14).

1.14 2019 average property sales, by suburb and strata type



Note: There were no sales recorded in 2019 for the suburbs of Braemar Bay, Kosciuszko National Park, Numbla Vale, Paupong or Rocky Plain. N (strata)=113, N (non strata)=197.

Data source: Valuer General property sales data, downloaded March 2020.

Recent sales data extracted for alpine areas show generally higher property values, although these should be read with caution due to the small sample size (chart 1.15).

1.15 Average sale prices, 2020

	Average sale price			Sample size		
	Houses	Townhouses	Apartments	Houses	Townhouses	Apartments
Thredbo	607 500		525 333	2	0	3
Crackenback	389 000	1 710 000	565 000	1	2	1
Perisher valley	1 075 000			1	0	0
Average	**690 500**	**1 710 000**	**545167**	**4**	**2**	**4**

Source: Property Value website, available at: https://www.propertyvalue.com.au/explore/Snowy%20Monaro%20Regional-NSW#Unit accessed May 2020.

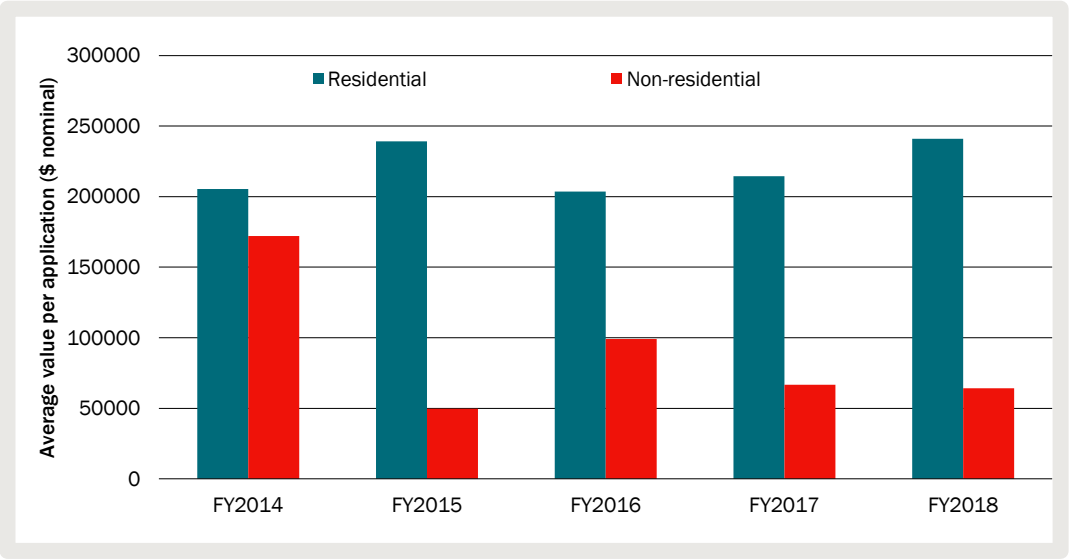
Local development

Over the 5 years prior to financial year 2017-18, there have been 403 approved development applications (DAs) for residential development and an additional 408 for non-residential development (including industrial, tourist, infrastructure and subdivision). The value of DAs over this period is $90.16 million and $36.3 million respectively.

There has been growth in the quantity and value of complying development certificates (CDCs) over the past five years (to financial year 2018) relative to the five years prior to that. This most likely reflects changes to the planning system to make development easier. In the five years prior to 2018, there were 16 CDCs worth $1.3 million for residential development and a further 8 CDCs worth $0.1 million for non-residential customers. Prior to this, there were only 10 CDCs worth $0.1 million for residential and non-residential customers together.

The average value for DAs continues to grow for residential development, however it has been declining for non-residential development (chart 1.16).

1.16 Average value of development applications by customer type



Note: Does not include complying development
Data source: DPE dataset provided to end of FY 2018, CIE analysis.

Economic structure and contribution

The Snowy Monaro Regional Council area's Gross Regional Product (GRP) was $990.7 million in 2015-16, comprising 0.2 per cent of NSW's Gross State Product.[13] Snowy Monaro is a net importer, with exports out of the region estimated at $274 million and imports into the region estimated at $462 million.[14]

13 Using 2015-16 GSP in current prices of $524 184 million. See ABS (5220.0), *Australian National Accounts: State Accounts,* Table 2.

14 Centre for Economic and Regional Development 2015-16 Input Output table, cited in Snowy Monaro Regional Council 2018, *Snowy Monaro 2018-2022 Regional Economic Development Strategy Supporting Analysis*, available at: https://www.snowymonaro.nsw.gov.au/DocumentCenter/View/8118, p 19.

1.17 Gross Regional Product

	Gross Value Added (GVA) $million, $2015-16
Accommodation and Food Services	130.8
Arts and Recreation Services	75.9
Public Administration and Safety	67.9
Electricity, Gas, Water and Waste Services	64.3
Agriculture, Forestry and Fishing	57.4
Retail Trade	54.3
Health Care and Social Assistance	53.8
Education and Training	51.5
Rental, Hiring and Real Estate Services	47.6
Professional, Scientific and Technical Services	35.1
Financial and Insurance Services	33.1
Construction	32.4
Administrative and Support Services	22.9
Transport, Postal and Warehousing	21.8
Wholesale Trade	19.7
Manufacturing	19.1
Other Services	16.6
Information Media and Telecommunications	6.7
Mining	2.5
Ownership of Dwellings	118.7
Total industry GVA	**932.1**
Final Demand	58.6
Gross Regional Product	**990.7**

Note: Gross Value Add (GVA) measures the value of goods and services produced in a region. There are 19 ANZSIC industry classifications. of Dwellings relates to the imputation of rent to owner-occupiers and their associated expenses and does not have any associated direct employment or household income. Final Demand contribution to imports is related to imports purchased to satisfy Household and Government Final Consumption Expenditure and Gross Fixed Capital Formation.

Source: Centre for Economic and Regional Development 2015-16 Input Output table, cited in Snowy Monaro Regional Council 2018, Snowy Monaro 2018-2022 Regional Economic Development Strategy Supporting Analysis, available at: https://www.snowymonaro.nsw.gov.au/DocumentCenter/View/8118, p 19.

In 2018/19, the Snowy Monaro Regional Council area's GRP was estimated at $1.17 billion or 0.2 per cent of the NSW economy.[15]

Note that there are no official statistics on regional economic activity compiled in Australia. Given the importance of and inconsistent estimates of seasonal employment, we consider it likely that there is a wide degree of uncertainty about the economic size of the Snowy Monaro region as a whole and the Snowy Mountains SAP area in particular.

Of most importance for the Snowy Mountains SAP is the large role played by tourism in the regional economy. The Centre for Economic and Regional Development has estimated that the total impact of tourism expenditure on the Snowy Monaro economy is:

15 http://economy.id.com.au/snowy-monaro.

- 40.1 per cent of total wages
- 43.6 per cent of total employment, and
- 44.0 per cent of total output.[16]

Within the Snowy Mountains SAP area, the tourism share is substantially higher than the estimates above, which are for the Snowy Monaro region as a whole.

Tourism Research Australia also reports economic contribution measures for tourism for the Snowy Mountains Tourism region, which is larger than the Snowy Monaro LGA (table 1.18). For this region, there was $981 million in tourism consumption, translating into $283 million of direct gross value added in tourism sectors and $237 million indirectly.

1.18 Tourism contribution for the Snowy Mountains Tourism Region

	2007–08 $m, basic prices	2012–13 $m, basic prices	2017–18 $m, basic prices
Direct Gross Value Added	163	232	283
Indirect Gross Value Added	142	189	237
Total Gross Value Added	305	421	520
Tourism consumption	570	759	981

Note: GVA is using basic prices and consumption is using purchasers prices.

Source: Tourism Research Australia, available at: https://www.tra.gov.au/ArticleDocuments/185/STSA_Data_2017-18_Final.xlsx.aspx, accessed 21 July 2020 and https://www.tra.gov.au/ArticleDocuments/185/Snowy%20Mountains%202017-18.xlsx.aspx.

Tourism consumption[17] in the Snowy Mountains Tourism Region is estimated to be $981.3 million (2017-18), with the greatest contribution being from long distance passenger transportation, food, accommodation and fuel (chart 1.19).

1.19 Tourism consumption, Snowy Mountains, 2017-18

Tourism products	2017–18 $ million
Accommodation services	121.5
Actual and imputed rent on dwellings	11.9
Takeaway and restaurant meals	168.9
Taxi fares	11.6
Local area passenger transportation	6.3
Long distance passenger transportation	173.8

16 https://www.snowymonaro.nsw.gov.au/DocumentCenter/View/8118, p. 21.

17 Tourism consumption is broader in nature than tourism expenditure with the former including imputed consumption by visitors (ie. for which they do not make a payment), such as services provided by one household to the visiting members of another household free of charge, compared to the latter, which refers to actual expenditure by the visitor. See ABS at: https://www.abs.gov.au/AUSSTATS/abs@.nsf/Lookup/5249.0Explanatory%20Notes12015-16?OpenDocument for a detailed description of the differences.

Tourism products	2017–18 $ million
Motor vehicle hire and lease	15.6
Travel agency and tour operator services	74.7
Recreational, cultural and sporting services	50.7
Gambling and betting services	12.9
Shopping (including gifts and souvenirs)	86.7
Food products	70.7
Alcoholic beverages and other beverages	45.4
Motor vehicles, caravans, boats, etc	7.3
Fuel (petrol, diesel)	102.8
Repair and maintenance of motor vehicles	4.4
Education services	8.9
Other tourism goods and services	7.3
Direct tourism consumption	**981.3**

Source: Tourism Research Australia, available at: https://www.tra.gov.au/ArticleDocuments/185/Snowy%20Mountains%202017-18.xlsx.aspx, accessed 28 July 2020.

Seasonality and business activity

The CIE conducted a survey of businesses in the Snowy Mountains SAP. One part of this asked business questions to understand seasonality of operations, employment and demand. Key findings in terms of seasonality were that:

- most businesses surveyed operated all year round (about 70 per cent)
- however, employment was markedly lower outside winter for these businesses, with more than one third of these businesses employing less than one quarter f the people outside winter that they do in winter
- demand was also markedly lower outside of winter, with almost half of businesses indicating non-winter demand was less than one quarter of winter demand.

The full results are detailed in Appendix E.

2 Tourism context

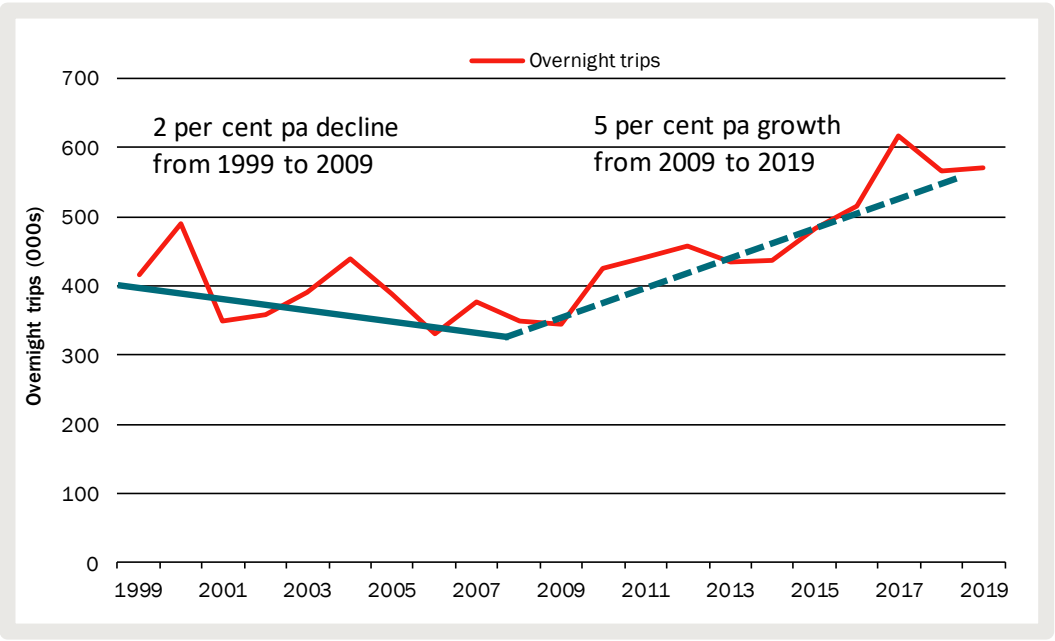
The Snowy Mountains SAP is primarily about driving economic growth in the region through increasing tourism, as well as increasing overall economic development and liveability. This chapter sets out the context for visitation to the region.

The region is growing as a tourism destination

The visitation to the region has grown strongly over the past 10 years, after 10 years previously of zero to negative growth (chart 2.1). The overall tourism data has a wide confidence interval, so only longer-term trends can be reasonably discerned in this data.

- From 1999 to 2009, overnight visitor numbers, day visits and number of nights all declined to the Jindabyne-Berridale SA2
- From 2009 to 2019, there has been rapid growth in visitation, with an average of 5 per cent per annum growth in overnight trips, 4.5 per cent in daytrips and 4 per cent in domestic nights.

2.1 Visitation to the Jindabyne-Berridale SA2



Data source: Tourism Research Australia.

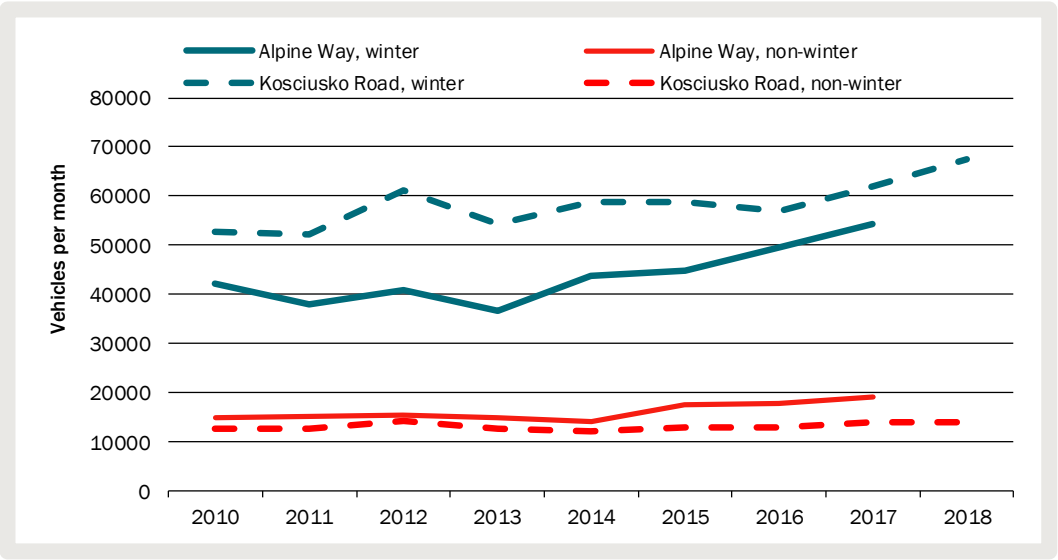
Our view of this pattern is that it is influenced by exchange rate movements. An appreciating Australian dollar from 1999 to 2014 led to domestic tourists increasingly looking overseas. The decline in the Australian dollar post 2014 led to this effect

reversing. Studies of domestic tourism demand indicate that a 10 per cent exchange rate appreciation is associated with a 3 per cent reduction in domestic tourism holiday demand.[18] From 1999 to 2014, the Australian dollar appreciation would be expected to reduce domestic tourism demand by almost 20 per cent. The subsequent depreciation would increase demand by 10 per cent. These are material impacts. The Snowy Mountains may be particularly influenced because the comparator destinations for skiing are international. This could also have been further enabled by new marketing strategies employed by the resorts, such as the introduction of the EPIC pass.

More specific indicators also suggest robust growth over the recent period.

- Vehicle counts show robust growth in winter growth at Perisher (Kosciusko road) and Thredbo (Alpine Way) of 3-4 per cent per year. In summer, there is a similar level of growth for Thredbo, but very little growth at Perisher in vehicle counts.
- Lift data from Thredbo indicates growth of 3 per cent in winter for skiing passes from 2015 to 2019, similar growth in tourist rides and almost 20 per cent annual growth in mountain biking lifts at ~25 000 mountain biking days in 2019.

2.2 Vehicle counts into KNP



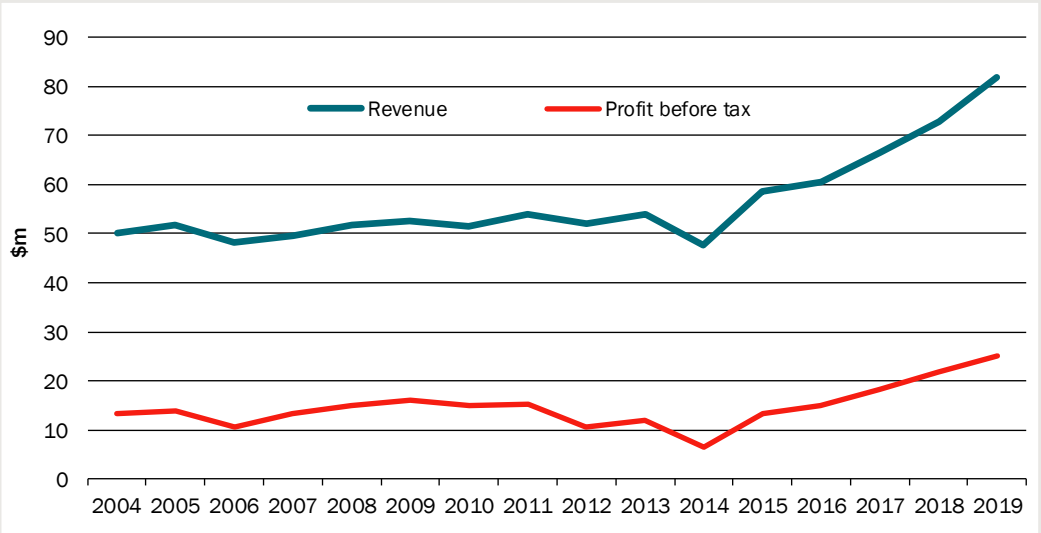
Note: Winter is defined as July, August and September.

Data source: NPWS; CIE calculations.

Thredbo is owned by EVT, which is a public company, so reports on revenues and expenditures are also available. Financially, Thredbo was stagnant from 2004 to 2015, but has had considerable growth in revenue and profit from 2015 to 2019 (chart 2.3).

18 https://pdfs.semanticscholar.org/ae59/5ea605dee24500d8423b9027edc53435f0ec.pdf.

2.3 Thredbo revenue and profitability



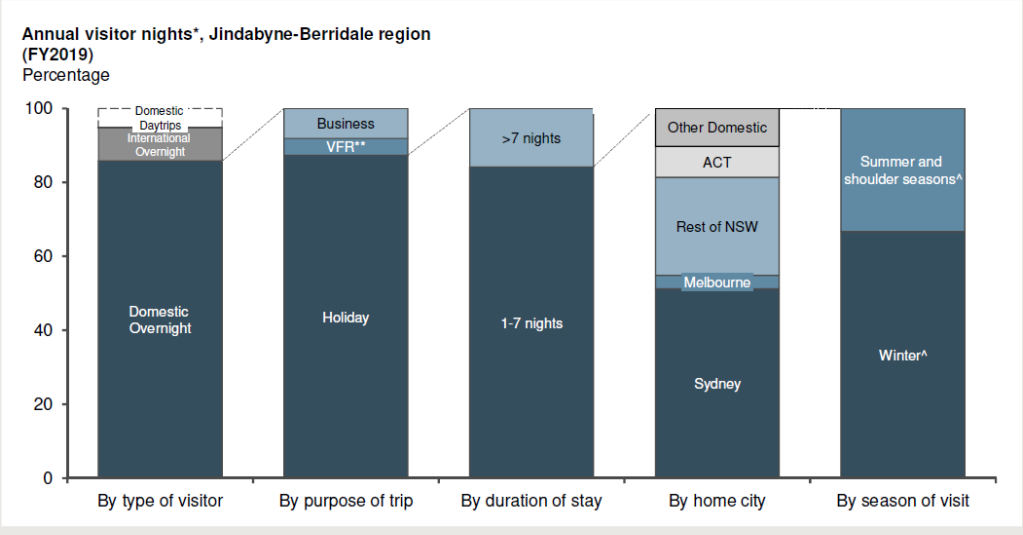
Data source: EVT annual reports.

Patterns of visitation

LEK has summarised the visitation patterns succinctly as shown in chart 2.4.

- The largest current market is domestic overnight holiday tourism from within NSW, largely for skiing/snow sports in winter.
- The number of international and non-NSW visitors is much smaller.
- The number of visitors outside of winter is also much smaller.
- Nearly all access to the region for tourism is currently by private car.

2.4 Overview of visitation patterns



Data source: LEK, based on TRA data.

Visitation is heavily dominated by the snow season

Despite strong tourism outcomes over the past decade, particularly in December and Easter, the region's tourism activity and revenue is heavily dominated by the snow season. It is fairly unique in its level of seasonality:

- the Snowy Mountains **is the most seasonal location in Australia**, by a fairly wide margin, based on ABS small area data on accommodation occupancy
- the Snowy Mountains **has the lowest average occupancy rate of any tourism region in Australia** at less than 30 per cent across the year. This is a result of the extreme seasonality of the visitor profile.

Most of the tourism expenditure in the region occurs during the winter season (table 2.5. In fact, many businesses make losses or do not operate at all outside of winter.

2.5 Seasonality of visitor expenditure

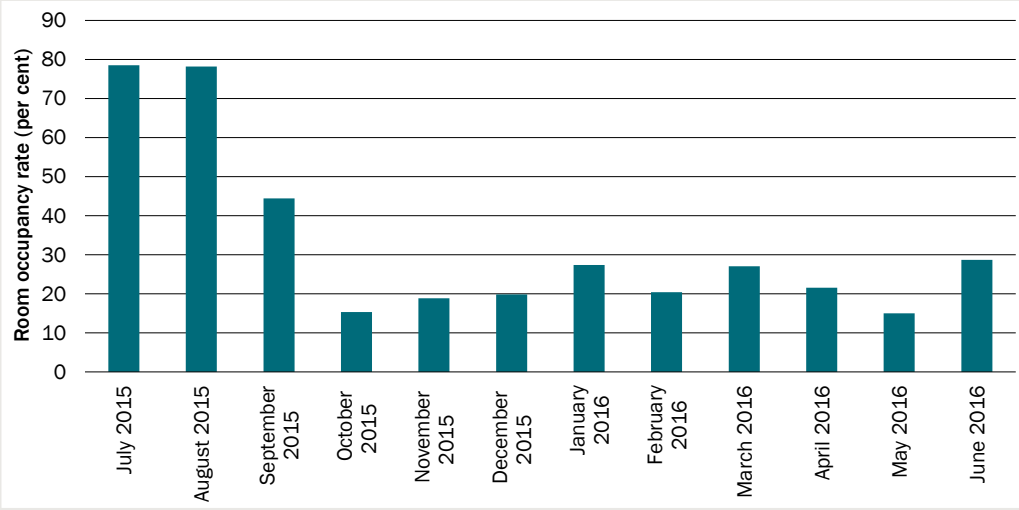
Quarter	Visitors	Visitor nights	Regional expenditure	Expenditure per night
	000	000	$m	$
March	76	268	37	138
June	71	222	37	167
September	302	1143	329	288
December	70	226	39	173

Note: For four years to 2017/2018.

Source: Hill PDA, p. 42.

The seasonality of demand is shown in the occupancy rates across the year (2015/16, chart 2.6). The peak period demand is more than 5 times the lowest month demand. The peak is really only a two-month period (July and August) aligned to the snow season.

2.6 Room occupancy rates in Jindabyne-Berridale SA2, 2015-16



Note: This ABS dataset collects data on hotels, motels, resorts, private hotels, guest houses and serviced apartments with 15 or more rooms/units.

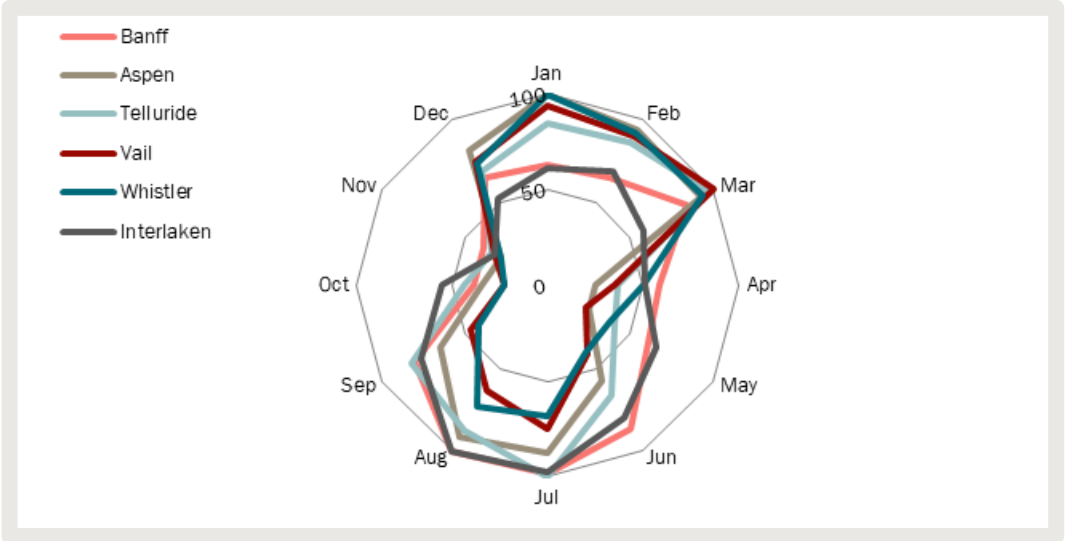
Data source: ABS 2016, Tourist Accommodation Small Data Area, NSW, 2015-16 (Cat. 8635.0), Tables 10-13, available at: https://www.abs.gov.au/AUSSTATS/abs@.nsf/DetailsPage/8635.02015-16?OpenDocument, accessed 14 May 2020.

Comparing the Snowy Mountains to international alpine destinations, the Snowy Mountains is also noticeably more seasonal than any other location examined. Using data from AirDNA, which is based on online accommodation offerings, we have examined a range of international alpine locations to understand occupancy and rates. In chart 2.7 and chart 2.8 we present the findings as radar seasonal plots. A less seasonal location will be closer to a circle. The highest occupancy month is represented by 100, which is on the outer point of the circle.

The alpine accommodation in the US, Canada and Switzerland serves dual peak seasons all year round (chart 2.7). More precisely, their first high season starts at December and ends in April each year, spanning the ski season. The second busy season commences from May to October, which is attributable to summer outdoor complements and other cultural events. Accommodation in Banff and Interlaken benefit most from their summer high seasons. In addition to the natural beauty, there are a diverse range of summertime recreation facilities, including but not limited to hiking, rafting, skydiving and paragliding.

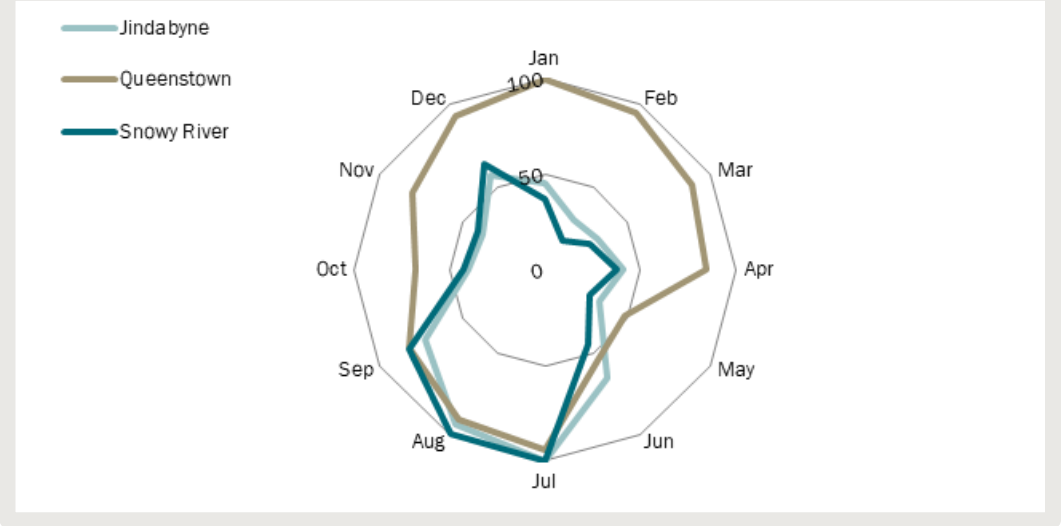
Alpine accommodation in Australia display single peak season throughout the year (chart 2.8). Seasonal changes in room nights of Snowy River (which covers the resorts) resemble those of Jindabyne. In comparison, Queenstown is almost a year-round busy destination, despite a distinct trough in May and a fleeting break in October.

2.7 Seasonality index of room nights in the US, Canada and Switzerland



Data source: Air DNA.

2.8 Seasonality index of room nights in Australia and New Zealand



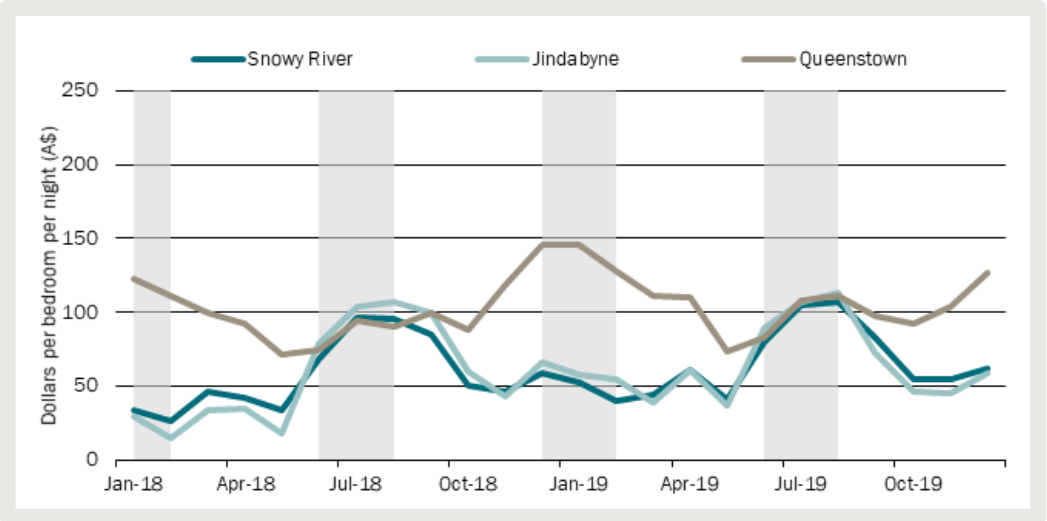
Data source: Air DNA.

Average nightly rates per bedroom

Using Air DNA data, we have compared the rates per room for the Snowy Mountains SAP against other international destinations.

The average nightly rates for Jindabyne and resorts ('Snowy River') are highly seasonal and much higher in winter (chart 2.9). For the set of properties offered on Air DNA, the rates per room were relatively similar for Jindabyne and the resorts — this will not be true as a general proposition for a similar quality room, with the resorts more expensive in winter. In comparison, Queenstown has its highest rates in summer.

2.9 Average nightly rate per bedroom in Australia and New Zealand

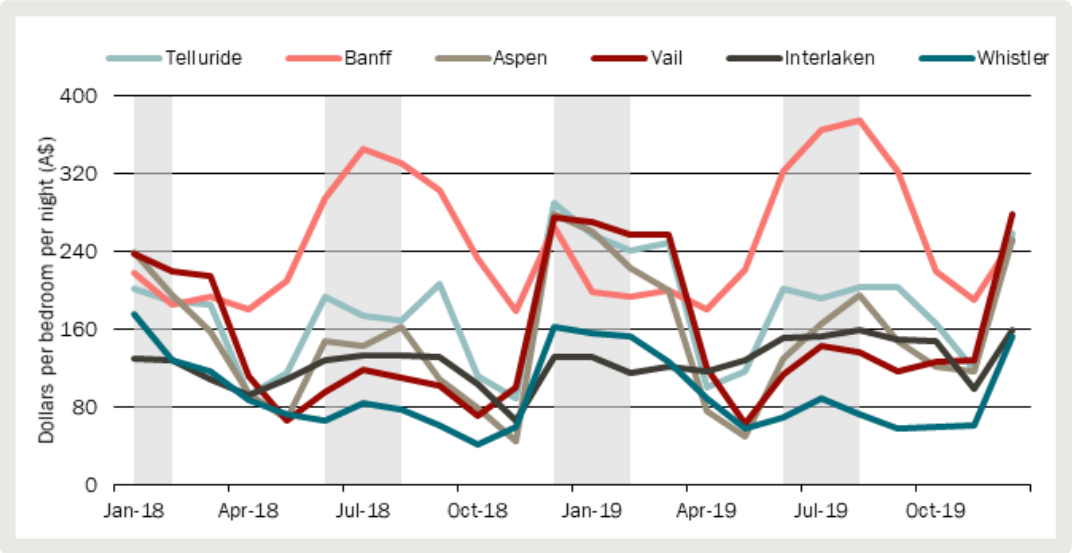


Note: Shaded areas denote Dec – Feb and June – Aug.

Data source: Air DNA.

Looking across international alpine destinations, there are mixed levels of seasonality (chart 2.10). Some have higher annual room rates in summer (particularly Banff), with most others are highest in winter. Note that levels are difficult to compare because of quality differences, while the pattern over time can be meaningfully compared.

2.10 Average nightly rates per bedroom in the US, Canada and Switzerland



Data source: Air DNA.

The implications of having a very short period of demand is that, for tourism operators to be commercially viable, prices have to be very high during snow season. The social implications are that there is a large influx of people into the region for a short period of time — both visitors and seasonal workers. While the data is not perfect on this, during winter our estimates are that the population residing in the area increases by more than 50 per cent because of seasonal workers and employment more than doubles. Visitors make more than an additional 200 per cent of the usual resident population.

Main drivers of visitation in the Snowy Mountains

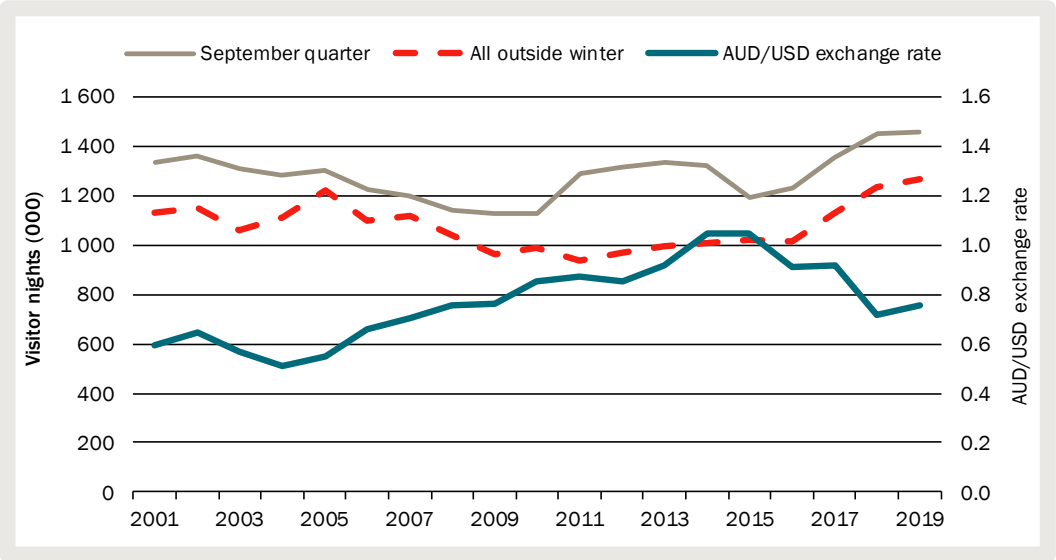
Currently, the main driver of tourism in the Snowy Mountains is straight forward — snow and the activities it allows. We have sought data from the resorts to see if we can tease out this relationship through more granular visitor data than quarterly, particularly to understand the extent to which snow making has mitigated the relationship between natural snow falls and winter demand.

In terms of macroeconomic drivers of change, we expect the following to be significant:

- population growth in origin markets, which would drive a gradual increase in visitor demand
- income growth in origin markets, which would drive a gradual increase in expenditure
- the strength of the Australian dollar — it appears that a strong dollar subdued visitation growth in winter in particular to the Snowy Mountains and Victorian High

Country and that this has effect has reversed since ~2014 (chart 2.11). This indicates that the Snowy Mountains is in competition with overseas destinations for snow sports. There is also some relationship in non-peak seasons, with a lower Australian dollar associated with higher levels of visitation in the Snowy Mountains.

2.11 Winter visitor nights and the AUD/USD exchange rate

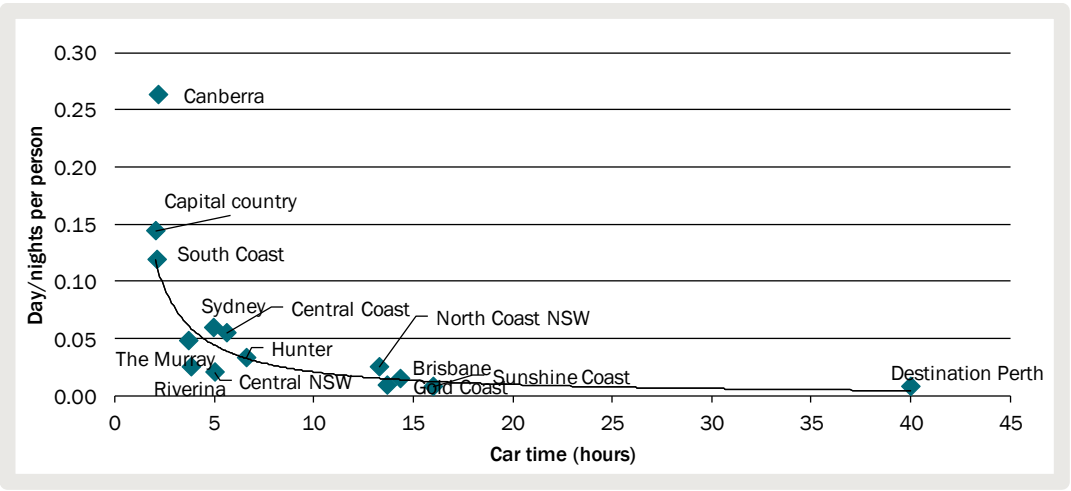


Note: The visitor nights data is a four year rolling average, while exchange rate data is for the particular year.
Data source: The CIE, based on tourism night data from Tourism Research Australia and exchange rate data from the Reserve Bank of Australia.

Visitation by origin

Access is undoubtedly an issue for tourism in the Snowy Mountains region. Using data from the past four years, and car travel times, the visitors per person and hours are shown in chart 2.12. In areas closer to the Snowy Mountains, such as Canberra, Capital Country and the South Coast, visitor nights and days per person are ~0.2 to 0.25 per year. This compares to 0.06 visits per person from Sydney, and close to zero from Queensland.

2.12 Visitor nights and days per person and distance to the region



Data source: The CIE, based on data from TRA and Google Maps.

Comparison to other alpine destinations

The patterns of existing tourism within the region have been examined in detail in past work. While this provides context, it does not illuminate the potential. In terms of the potential market, we want to understand **who is not coming** to the region, and why. To consider this, we think the following are relevant:

- patterns of visitation in the Victorian High Country. This offers a similar natural environment as the Snowy Mountains. The main differences are that:
  - the Snowy Mountains is further removed from Sydney (about 6 hours) than the Victorian High country is from Melbourne (about 4 hours)
  - Sydney has a closer mountain region in the Blue Mountains, which offers an alternative for some activities
- patterns of visitation in other alpine destinations, ranging from Queenstown to Colorado to the Canadian Rockies to Japan and to the Swiss alps
  - these overseas alpine destinations tend to have much more striking natural features than the Snowy Mountains
  - their ability to grow their market and spread it over the year is probably the most relevant, rather than the overall level of visitation
  - Australian visitation of these areas is also relevant, as this is a market that may be instead diverted into the Snowy Mountains.

Victorian High Country

The Victorian High Country has had a markedly better visitation growth and spreading across the year than the Snowy Mountains.

- Since 2002, the Victorian High Country has had a 50 per cent growth in overnight visitors, compared to 23 per cent for the Snowy Mountains

- The difference is even larger looking at visitor nights, because average nights has fallen for the Snowy Mountains, while remaining similar for the Victorian High Country
- The Victorian High Country has only 30 per cent of its visitor nights in Winter, compared to 47 per cent for the Snowy Mountains. This is a similar outcome to 2002, and has not changed much since.
  - The Victorian High Country has achieved similar growth in winter and non-winter tourism
  - The Snowy Mountains has had marginally higher growth in visitor nights outside of winter over the longer term, although more recent (last 10 years) growth has predominantly been in winter.

2.13 Victorian High Country versus Snowy Mountains

Indicator	Snowy Mountains Per cent	Victorian High Country Per cent
Growth in overnight trips since 2002	23	50
Growth in visitor nights since 2002	14	47
Share of visitor nights outside Winter	53	70
Growth in winter nights since 2002	9	47
Growth in non-winter nights since 2002	18	47

Source: CIE calculations based on data provided by Tourism Research Australia.

There is data on the types of activities people are doing in the Snowy Mountains versus the Victorian High Country, which is revealing about what could drive additional tourism in the Snowy Mountains. The category where the Snowy Mountains outperforms the Victorian High Country is snowsports (table 5.5). In every other activity category the Victorian High Country outperforms the Snowy Mountains — there are also many categories where there is insufficient visitation to provide a sample (labelled np). This is also revealing as it indicates very low uptake of these activities. In other words, the Snowy Mountains is currently very focused on one activity — snow sports.

2.14 Activities undertaken by visitors 2016 to 2019 in Snowy Mountains and Victorian High Country

	Snowy Mountains 000 visitors	Victorian High Country 000 visitors
Visit national parks / state parks	331	430
Visit botanical or other public gardens	np	51
Visit farms	np	51
Bushwalking / rainforest walks	**227**	**444**
Fishing	83	116
Golf	np	np
Water activities / sports (Sailing, windsurfing, kayaking)	**49**	**83**
Snow sports	291	240

	Snowy Mountains 000 visitors	Victorian High Country 000 visitors
Cycling	**42**	**124**
Exercise, gym or swimming	**52**	**161**
Play other sports	52	95
Attend theatre, concerts or other performing arts	np	22
Visit museums or art galleries	**29**	**83**
Attend festivals / fairs or cultural events	np	65
Visit history / heritage buildings, sites or monuments	**36**	**100**
Go to markets	**np**	**122**
Visit industrial tourist attractions / mines	np	24
Visit wineries	**np**	**209**
Visit a health spa / sanctuary / well-being centre	np	np
Golf	np	np
Visit food markets	np	34
Visit breweries	np	44
Visit friends & relatives	218	607
Pubs, clubs, discos etc	237	485
Attend an organised sporting event	np	48
Go shopping for pleasure	**108**	**241**
Eat out / dine at a restaurant and/or cafe	559	1074
Sightseeing/looking around	**250**	**547**
Go on a daytrip to another place	31	93
Picnics or BBQs	55	120
Total	**933**	**1 809**

Source: CIE calculations based on data provided by Tourism Research Australia.

The growth in a selection of activities is shown in table 2.15 for the last 10 years. Again, the only category where the Snowy Mountains has had more growth in visits is in Snowsports.

2.15 Growth in activities undertaken in Victorian High Country and Snowy Mountains

	Growth from 2009 to 2019 Snowy Mountains 000 visitors	 Victorian High Country 000 visitors
Visit national parks / state parks	184	274
Visit botanical or other public gardens	np	22
Visit farms	np	28
Bushwalking / rainforest walks	118	241
Fishing	29	40
Golf	np	np
Water activities / sports	-5	23
Snow sports	109	99

	Growth from 2009 to 2019	
	Snowy Mountains	Victorian High Country
	000 visitors	000 visitors
Cycling	np	77
Exercise, gym or swimming	np	114
Other Outdoor/Sports	52	117
Arts/heritage	34	96
Local attractions/tourist activities	53	208
Social activities	295	631
None of these - Not asked	13	29
Total	**312**	**709**

Note: The growth is based on the four year average.

Source: CIE calculations based on data provided by Tourism Research Australia.

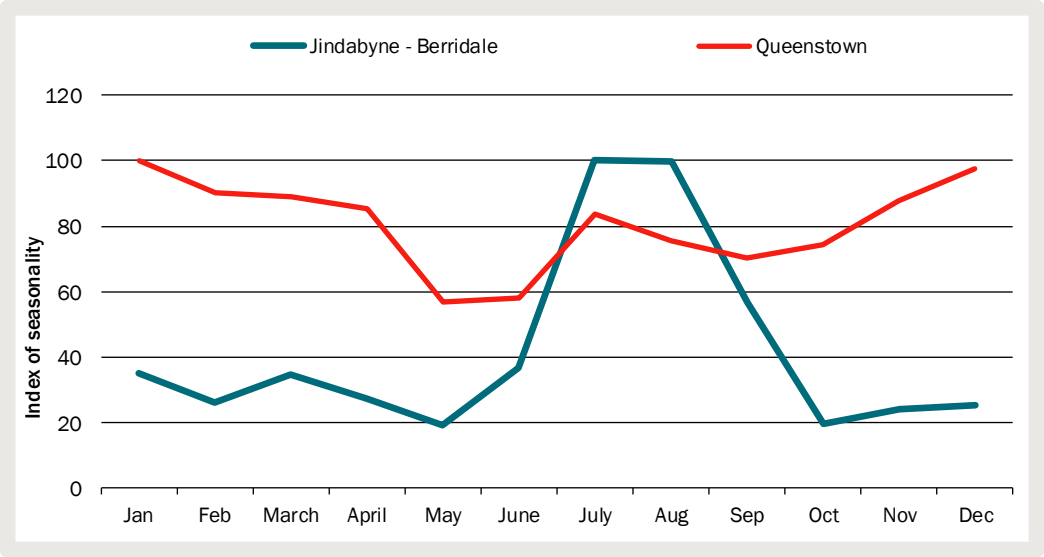
Queenstown

Queenstown is a particular comparator noted for success in alpine tourism. Queenstown has:

- a rapidly growing population, and has a large population relative to most alpine towns
- rapid growth in visitation, and
- a relatively even spread of tourism across the year.

A comparison of the seasonality of the Snowy Mountains and Queenstown is shown in chart 2.16, based on accommodation occupancy.

2.16 Seasonality of the Snowy Mountains and Queenstown



Note: Does not cover air bnb type accommodation. Snowy Mountains data is for 2015/16, Queenstown data is for 2018/19.

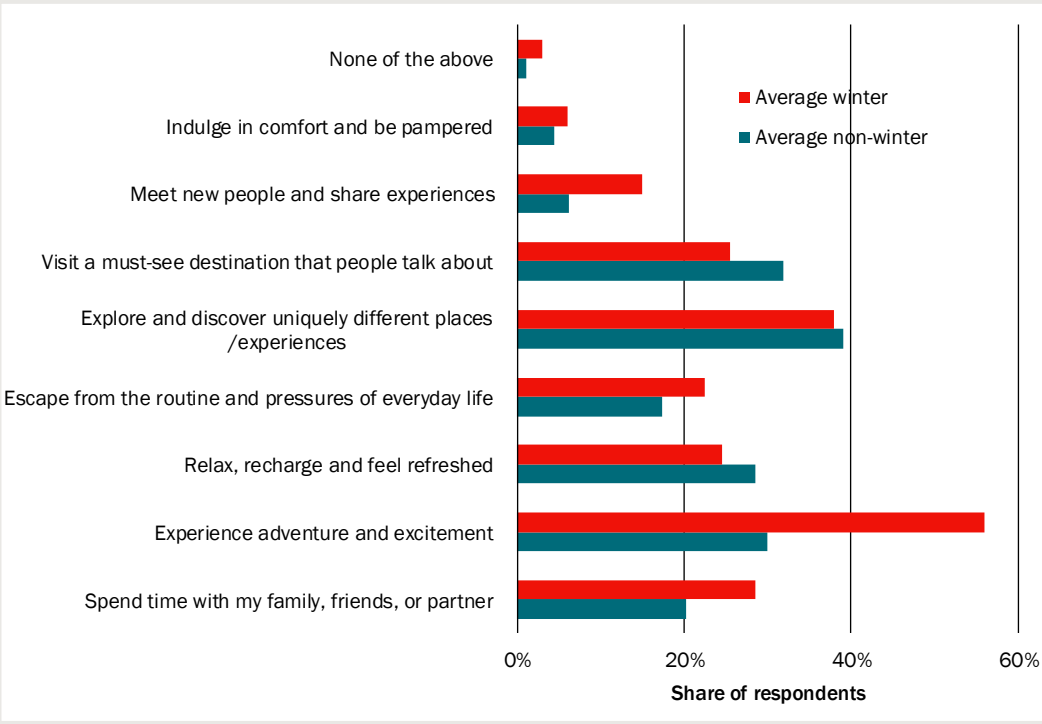
Data source: Queenstown Regional Tourism Organisation Accommodation Survey, https://www.stats.govt.nz/information-releases/accommodation-survey-september-2019; ABS 2016, Tourist Accommodation Small Data Area, NSW, 2015-16 (Cat. 8635.0), Tables 10-13, available at: https://www.abs.gov.au/AUSSTATS/abs@.nsf/DetailsPage/8635.02015-16?OpenDocument, accessed 14 May 2020.

Queenstown receives a very large number of Australian tourists, both in summer and winter, and has conducted surveys of the motivations for travel by Australians to Queenstown and the drivers of choosing Queenstown over other destinations. The New Zealand Government estimates that Australians spent NZ$621 million in the Queenstown-Lakes District in 2019, and this has grown by 7 per cent per year from 2009. In comparison, Tourism Research Australia estimates that in the Snowy Mountains tourism region, the average tourism expenditure per year from 2016 to 2019 was A$744 million. Hence Australian expenditure in Queenstown is only marginally short of Australian expenditure in the Snowy Mountains.

In terms of motivations (chart 2.17):

- Australians travelling to Queenstown in winter are mostly after experiencing adventure and excitement
- Australians travelling to Queenstown in summer have a more diverse set of motivations, including exploring and discovering uniquely different experiences and places experiencing, experiencing adventure and excitement, visiting a must-see destination and relaxing and recharging
- Australians are not generally travelling to Queenstown to indulge in comfort and be pampered, or to meet new people and share experiences.

2.17 Motivations for Australians to travel to Queenstown



Note: Data is from Q3 2016 to Q2 2018, and survey is undertaken quarterly.

Data source: Queenstown visitor experience surveys; CIE calculations.

In terms of why Australians are choosing Queenstown over other destinations, the stand-out reasons are because of (chart 5.9):

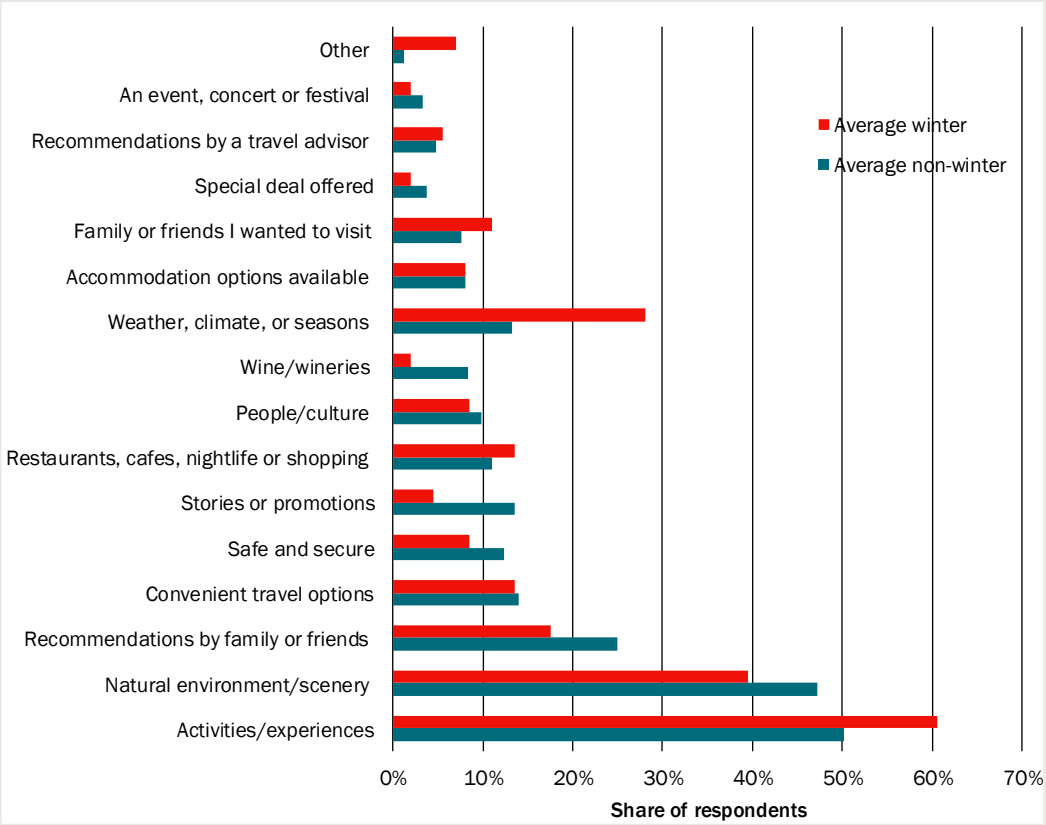
- the activities and experiences on offer, and
- the natural environment/scenery.

The first of these is really a key focus for the Snowy Mountains SAP and the evidence from Queenstown suggests this can be a major driver of tourism.

A much smaller proportion of Australians are choosing Queenstown because of accommodation options, events, convenience of travel options, wineries and restaurants/cafes/nightlife.

Note that the survey did not ask about price as a factor in destination choice.

2.18 Drivers of destination choice for Australians to travel to Queenstown



Note: Data is from Q3 2016 to Q2 2018, and survey is undertaken quarterly.

Data source: Queenstown visitor experience surveys; CIE calculations.

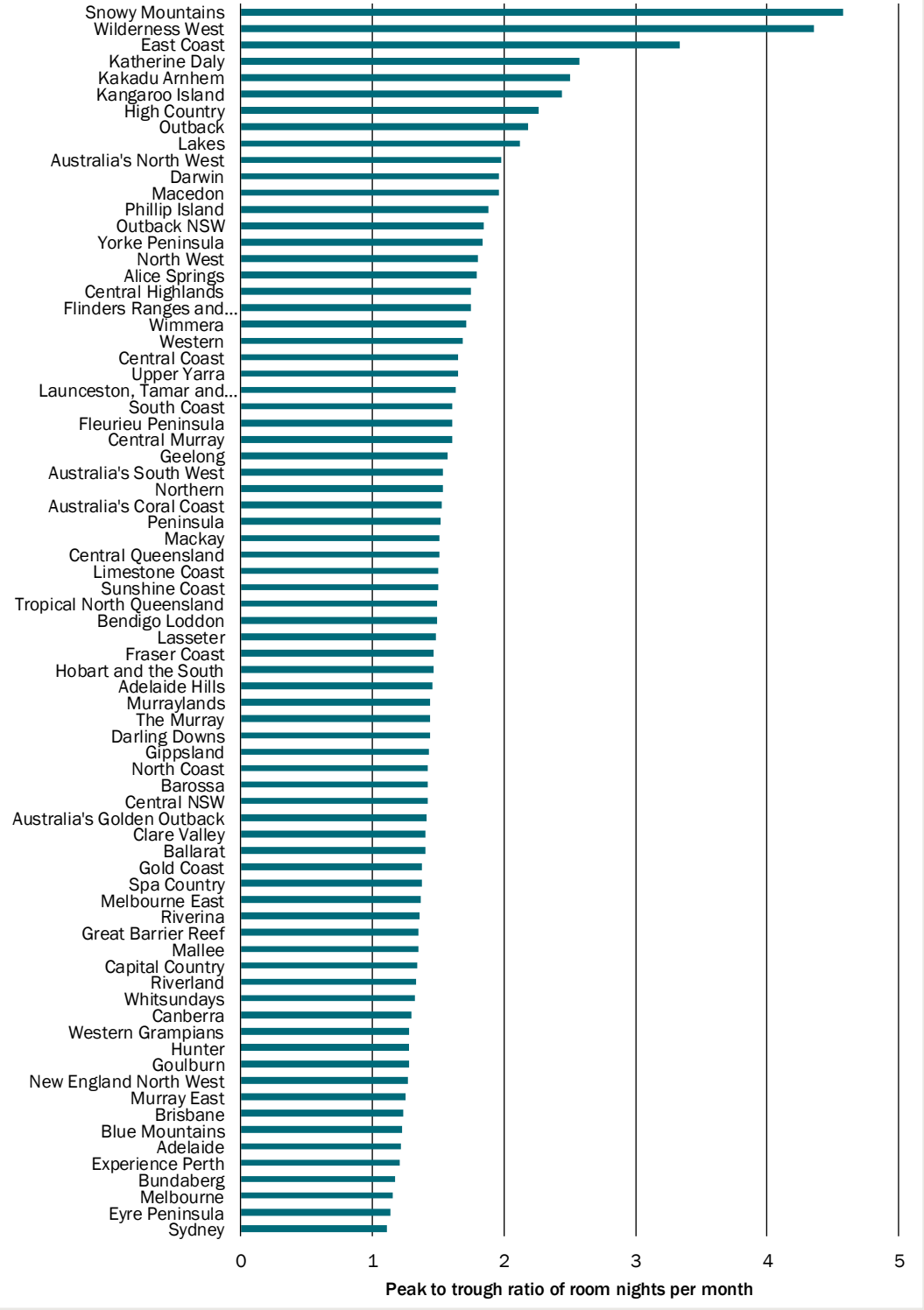
Comparison to other Australian tourism regions

Comparing the Snowy Mountains to other Australian tourism regions there are two defining characteristics:

- the Snowy Mountains is the most seasonal location in Australia, by a fairly wide margin, based on ABS small area data on accommodation occupancy (chart 2.19)

  - the next closest is Wilderness West in Tasmania. Its peakiness reflects a lack of visitors in the two winter months, but higher visitation for the other 10 months. The Snowy's pattern is that the non-peak lasts for 10 months and peak for only two
- the Snowy Mountains has the lowest average occupancy rate of any tourism region in Australia at less than 30 per cent across the year (chart B.13).

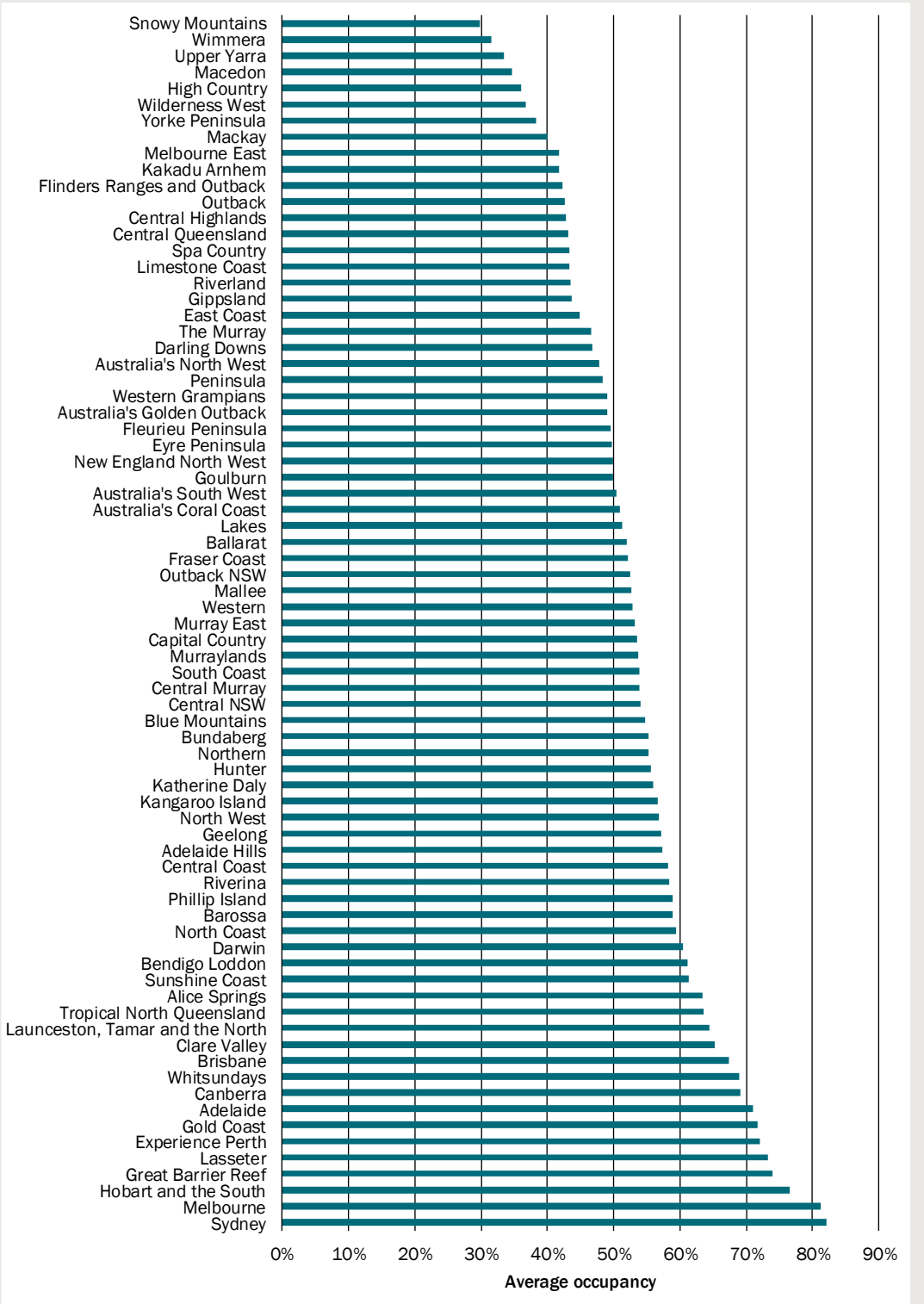
2.19 Seasonality of accommodation use across tourism regions



Note: Based on room nights per month, from 2015/16 ABS Small Area Tourism data. Data is for hotels, motels and serviced apartments.

Data source: ABS 2016, Tourist Accommodation Small Data Area, NSW, 2015-16 (Cat. 8635.0), Tables 10-13, available at: https://www.abs.gov.au/AUSSTATS/abs@.nsf/DetailsPage/8635.02015-16?OpenDocument, accessed 14 May 2020.

2.20 Average occupancy across tourism regions



Note: Occupancy is based on the maximum rooms available per day, regardless of whether or not the room was made available. Data is for hotels, motels and serviced apartments.

Data source: ABS 2016, Tourist Accommodation Small Data Area, NSW, 2015-16 (Cat. 8635.0), Tables 10-13, available at: https://www.abs.gov.au/AUSSTATS/abs@.nsf/DetailsPage/8635.02015-16?OpenDocument, accessed 14 May 2020.

3 NSW Government strategic directions

The NSW Government has a range of strategic documents that detail the aspirations for the state as a whole and for regional areas including the Snowy Mountains.

The NSW Economic Blueprint 2040 has an aspiration that "Our regions should be productive and growing, serviced by world-class infrastructure and transport links".[19] One of the recommendations for achieving this is to help regional businesses diversify and capitalise on growth in tourism.

The State-wide Destination Management Plan has a strategic objective to "maximise yield and dispersal from the visitor economy", among other objectives. The NSW Government has a goal of more than tripling the 2009 overnight visitor expenditure by 2030, aiming to achieve $45 billion by 2025 and $55 billion by 2030, with a focus on growth in regional areas[20]. This implies growth of 5-6 per cent (nominal) per year. This is also echoed by the Visitor Economy Strategy 2030[21].

This is further supported by the South East and Tablelands Regional plan, which has a goal to grow tourism in the region. The plan also specifically aims to "develop the Snowy Mountains into Australia's premier year-round alpine destination" by enhancing opportunities for visitation and investigating opportunities for improving access through new connections and transport options[22].The NSW Government's 20 year vision for regional NSW also has a focus on growth, and supporting engine industries for the regions.[23] For the Snowy Mountains clearly tourism is the engine industry, and it comprises more than half the economy of the Snowy Mountains SAP area. The three core objectives of the 20-year vision are:

- amenity — providing quality services and infrastructure in regional NSW
- growth — aligning effort to support growing regional centres
- potential — identifying and activating economic potential.

The Snowy Mountains SAP is primarily about the third of these — achieving the economic potential of the region through tourism. The Snowy Mountains SAP area and broader Snowy Monaro area is not a regional centre, unlike other SAP areas such as Wagga Wagga. Wagga and Parkes have also been included as lighthouse precincts in

19 https://www.treasury.nsw.gov.au/nsw-economy/nsw-2040-economic-blueprint

20 https://www.destinationnsw.com.au/wp-content/uploads/2019/02/nsw-statewide-destination-management-plan.pdf , p6

21 https://www.destinationnsw.com.au/about-us/strategies-and-plans/visitor-economy-strategy-2030

22 https://www.nsw.gov.au/a-20-year-economic-vision-for-regional-nsw-refresh

23 https://www.nsw.gov.au/a-20-year-economic-vision-for-regional-nsw

Global NSW, and it would be likely that the Snowy Mountains SAP would as well in the future.[24]

The principles for NSW Government investment that sit below these objectives, and that are relevant for the Snowy Mountains SAP are:

- Improved travel between regional centres and from cities and international gateways (Principle 1). Better transport infrastructure and services enable increased business activity, a wider labour market and better lifestyles.
- Recognising each region's strengths and underlying endowments (Principle 6). Each of regional NSW's areas is distinct and claims its own natural, human or built endowments. This requires bespoke government decision-making
- Regulation and planning to promote commercial opportunities (Principle 7). Planning and regulation settings must maximise employment and income-generating opportunities. Better coordination, joined-up governance and clear signals to attract industries to targeted locations will optimise local advantages.

Within the regional vision, the Snowy Monaro area is categorised as an Inland area. The vision notes that inland areas as a whole are characterised by relatively small stable populations, have experienced economic decline and higher levels of unemployment than NSW as a whole, and have agriculture as the key industry. The Snowy Mountains SAP area is relatively unusual in this context being reliant on tourism and having very low levels of unemployment in comparison to other inland areas.

At a more specific level for the Snowy Mountains SAP area, the Snowy Monaro Regional Economic Development Strategy, which covers the local government area, sets out key strategic directions as:[25]

- develop the Region's year-round tourism offering and accessibility from major markets
- cultivate the Region's 'Engines of Growth' specialisations in agriculture, forestry and wood products
- promote skills acquisition and industrial land development to strengthen the Region's employment base
- grow the population to deepen the Region's internal markets for goods, services and labour.

The Snowy Mountains SAP is focused on achieving the first of these, and by doing this would also contribute to the last of these strategic directions.

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24 Global NSW, https://global.nsw.gov.au/sites/default/files/2020-01/GOVT1009_Global%20NSW_Flyer_LR%20%5Baccessible%5D.pdf.

25 https://www.snowymonaro.nsw.gov.au/DocumentCenter/View/8117

4 Economic problems and opportunities

The rationale for government intervention in the Snowy Mountains SAP region reflects a combination of government ownership and control of the key assets in the region, barriers to expand the use of government assets, key external trends likely to impact on the region and coordination failures prevalent in tourism.

- **Government ownership of the key assets.** The key asset in the region is the Kosciusko National Park. The responsibility for this asset resides with the NSW National Park and Wildlife Service. Parts of the Park are leased out to commercial entities, largely related to skiing activities. Lake Jindabyne is a second potential key asset, with activities on and adjoining the Lake appearing to be regulated by TfNSW (formerly RMS) and Snowy Hydro.
- **Barriers to opportunities to expand use of government assets.** There is a view from commercially oriented stakeholders that there has been a lack of government effort to make the most of the National Park in achieving higher visitor use all year-round, as well as barriers to commercial entities doing this. However, stakeholders acknowledged that improvements should occur without worsening environmental outcomes[26]. The range of stakeholder issues raised include:
  - slow and costly processes for obtaining approval for new development. For example, for some types of activities the costs associated with approval could increase the cost of development by 70 per cent. Stakeholders acknowledged the importance of environmental regulation but suggest that there could be more efficient ways to comply with the legislation (for example, in situations where development approval has already been granted for previous works).
  - leasing arrangements creating delays on top of development approval, with a view that obtaining a lease and approval could be a four year process
  - a lack of incentives for commercial entities to invest under the leasing model in Perisher
  - a lack of, or poorly focused, government investment in public attractions that could drive increased visitation. This is changing with significant investment recently with $27 million committed in 2018 (over the next five years) to complete the Thredbo Valley Track (TVT) from Lake Crackenback Resort to Jindabyne, a new Kosciuszko Snowies Iconic Walk from Guthega to Lake Crackenback Resort, and finishing touches to the Mt Kosciuszko Walk (Thredbo to Mt Kosciuszko)
  - Regulatory limitations such as bed limits are influential. It is currently not commercially viable for resorts to deliver additional beds, particularly without a summer market. The 2006 poM includes a process for increasing bed numbers.

26 These views were sourced as part of the Snowy Mountains SAP market sounding process, which included direct consultation of stakeholders

Resorts have chosen not to take this up for themselves, instead waiting to participate in a government process on this issue. Charlotte Pass has had little desire for more accommodation as it is a niche market. Perisher has an approved accommodation master plan that includes a significant number of beds, but which is now out of date. They are also limited by not having a head lease. Thredbo considers the several hundred beds still available to them is too low to make investment in major new accommodation worthwhile. Assistance with associated infrastructure (such as car parks, stormwater and sewerage treatment) and environmental assessment and approval costs is also welcome. public service provision limitations, such as transport infrastructure from Jindabyne to the resorts

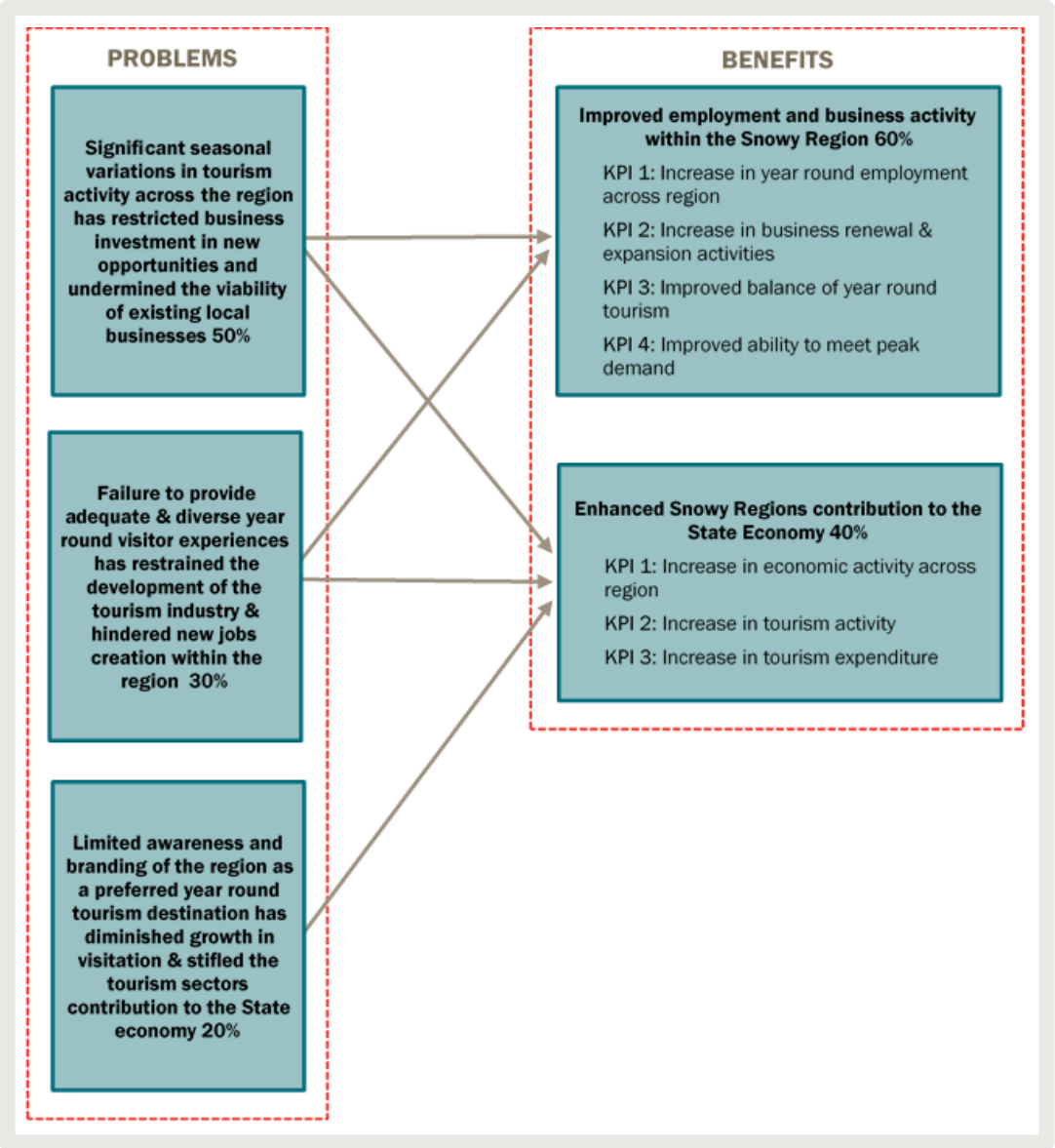
- **External threat of climate change.** The key external trend expected to impact on the region is climate change. This will reduce the natural snow depth and reduce the time period over which snow can be made. This will likely be mitigated to some degree by improvements in the snow making capabilities of ski resorts, although this comes at a cost. Based on available projections, the impact of climate change is likely to be fairly moderate/able to be mitigated for the next 20 years before accelerating into fairly dramatic declines by 2070. With the current seasonality of tourism, in the absence of snow, there would be large reductions in employment within the region and a stranding of assets built up to service winter tourism.
- **Coordination and branding**. The commercial entities consider that there could be an improved (and potentially industry funded) marketing effort for the region as whole from a tourism perspective. A standard tourism problem is that it is often difficult to fully internalise the benefits that flow from attractor activities including marketing. The main expenditure on tourism relates to accommodation and food, rather than the attractions that drive people to visit. This is also the case with public attractors, such as bike paths, hiking trails etc.
  - this is less of an issue for the Snowy Mountains and particularly Thredbo, because it encompasses a range of activities
  - there is also an issue that part of the region is in the Snowy Monaro Council, which would be the natural coordinating body for tourism promotion, but the other part is part of NPWS

Given the above, the NSW Government could consider a different approach to managing its assets that reflects both its environmental and recreational value. These are often aligned, because environmental value is a key reason why people visit the park, however recognising that this may also result in some environmental impacts. The Snowy Mountains SAP seeks to build the economy of the region through increased year-round tourism.

Investment logic mapping

Innox Solutions has run an Investment Logic Mapping (ILM) process with important stakeholders to understand the key problems, their underlying causes, the benefits that the project is trying to achieve and the strategic interventions that are most likely to achieve the benefits.

4.1 ILM problems and benefits



Data source: Innox Solutions.

The ILM also included a discussion of the root causes of the problems in the chart above. Root causes noted include:

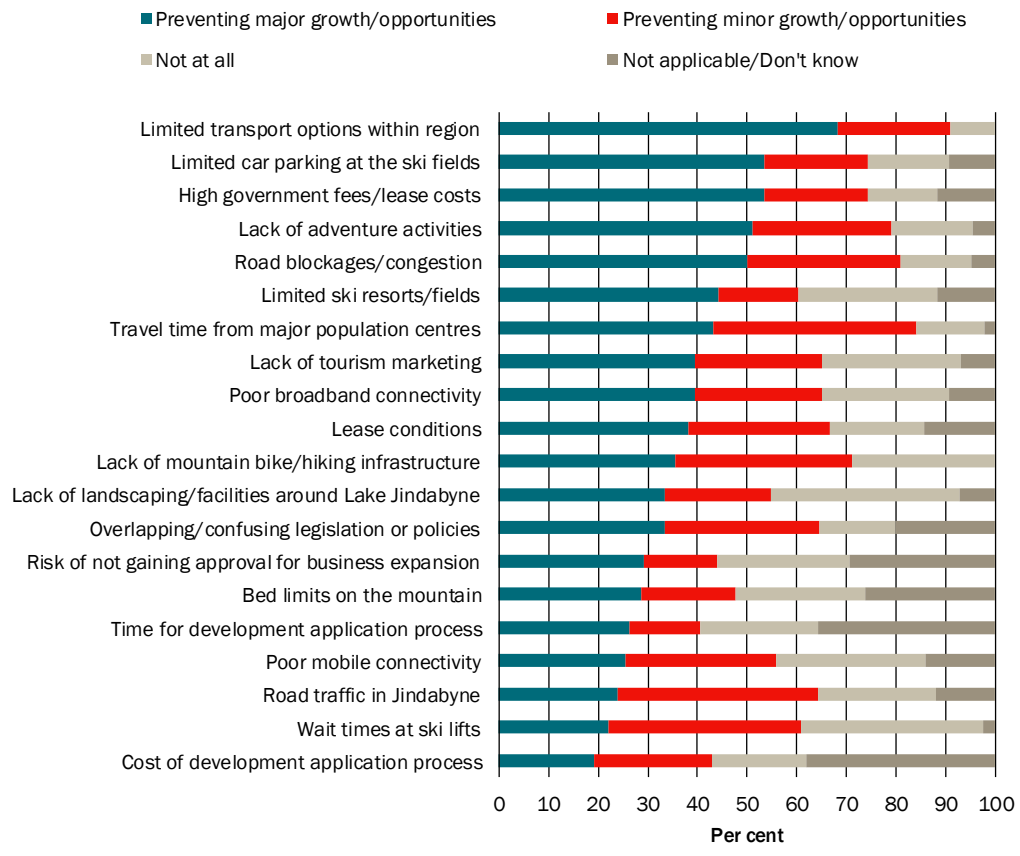
- the unique role of snow in the region
- a lack of collaboration and integrated planning
- conflict between conservation and visitation
- no coordinated revenue raising system to advertise the area
- lack of a commercial framework to develop summer tourism
- a lack of all-year-round festivals and events
- limited exploration of alternative business models

- no consistent approach to planning across government and industry to develop summer tourism
- a lack of coordination in developing new product offerings.

Many other causes noted are really just statements of fact, such as low volumes of visitation, low yield and limited off-peak product offerings, rather than being underlying causes.

The CIE has also conducted a survey of businesses about what they consider are the main barriers to their expanding their business. The results of the survey are summarised in Appendix E. Transport options were identified as the top two issues by businesses (chart 4.2).

4.2 Barriers to Business Expansion and Growth



Note: Based on 46 participant responses to the Snowy Mountain SAP Business Survey 2020.
Data source: The CIE.

To what extent are commercial opportunities being constrained by the management of the park?

Kosciusko National Park is an area of high environmental value, and as such has a range of regulations to protect its value. These include:

- carrying capacity limits — each resort has a maximum number of beds that it is able to have under the regulations (table 4.3). Resorts are not currently at their maximum bed limits. Consultations suggested that developers did not think that approval would not be granted for increases (to the maximum) but noted other constraints in utilising the full capacity of beds such as the associated need for carparks and the trade off with area used for other purposes (i.e. recreation or accommodation) in developing these car parks.[27] Note that there was a concept approval for an 800 bed development at Perisher, and the NSW Government put out an EOI for this development.[28] However, this has not been developed and consultations suggested the way the development was created was not commercially viable
- lease processes — resorts and others have leases over particular assets. Thredbo has a lease over an entire area, with all other leases being a sublease to Thredbo's head lease. In Perisher, the lease arrangement is different, with all leases being directly with NPWS. In Perisher, this means that in order to develop a new chalet, or put in a bike track, a business would have to obtain a lease from NPWS. In Thredbo, a sublease could be created by Thredbo for a new development
- development approval processes — in order to be able to undertake development in KNP, approval is required from the NSW Government. This is undertaken through NSW DPIE's Alpine SEPP team. Because of the geotechnical risk, sensitive flora and fauna in KNP, and bushfire risk, development approval may require a range of studies that would not normally be required for development. The *State Environmental Planning Policy (Kosciuszko National Park—Alpine Resorts) 2007* allows no area within the park development without consent. There may be opportunities to undertake the strategic planning and up-front assessments required to assure the development outcomes, improve efficiency, and protect the fragile ecosystem of the area through the Snowy Mountains SAP process. A challenge is to achieve this while being consistent with state-wide policy and legislation in this unique location.

4.3 Bed limits in KNP

Resort	Actual beds No.	Beds permitted No.
Thredbo	4 356	4 820
Perisher Valley	2 789	3 367
Charlottes Pass	611	611
Guthega	272	330
Smiggin Holes	965	1 016

Source: https://www.environment.nsw.gov.au/-/media/OEH/Corporate-Site/Documents/Parks-reserves-and-protected-areas/Alpine-resorts/schedule-8-accommodation-bed-numbers-kosciuszko-national-park-2019.pdf?la=en&hash=970FAE57726E31398FE0A31E8EE68A280269B9F5.

27 An option proposed was to develop underground car parks however this would be a considerable investment for businesses to make on their own.

28 https://www.tenders.nsw.gov.au/?event=public.rft.showArchived&RFTUUID=EE1B2069-B93A-6EEC-A437D4269A2CD0D3

A difficult and critical question is the extent to which new development **is actually being constrained** by the regulatory arrangements.

- It is clear that not all new development will be commercially feasible —the ILM indicated commercial feasibility was constrained because of a very short period over which profits had to be made
- From a cost perspective, building is more expensive in the mountains because of its distance, particularly for designs with a lot of concrete. Operating costs are dependent on the business model, such as whether the accommodation is open outside peak, and provision of other services such as food — many chalets operate as full-service businesses providing food and accommodation. Costs for heating will be higher in the Snowy Mountains than in other areas
- For the small amounts of accommodation that are on the market, prices are highly variable.
  - Some new 2-3 bedroom chalets are selling in Perisher for around $1 million. This would be substantially above the cost of building and development
  - We can only see one example of a development lot for sale, sold by Thredbo Resorts for $900 000 in 2019. This is well above the development cost and suggests commercial feasibility for at least some level of development
- Consultations with the resorts indicated that they expected to be able to develop new beds into the market if this was simpler from a planning and leasing perspective and in the absence of bed limits.
- We have also examined the outcomes in the Victorian resorts to see whether they have had development and how their bed pattern compares to NSW.
  - It does not appear that there has been substantial development in the Victorian resorts in recent years
  - However, Victorian resorts have substantially more beds than the NSW resorts (about twice as many beds) for a smaller skier market (box 4.4).

Looking across these different indicators, we expect that there would be more beds on the mountain if the regulatory arrangements were less constrained — this would come at the expense of development in Jindabyne. However, a less constrained environment will support some benefits but not others identified in the ILM — it would likely increase the overall economic contribution of the region, but at the expense of also increasing the seasonality of tourism.

4.4 Development outcomes in Victorian resorts

There have been minimal bed expansions in the last 20 years in the resorts in the Victorian Highlands for which information is available. Most increases are largely due to minor renovations and residential development. Mount Buller has seen some growth in the number of public beds available but much of it has been as a result of reassignment of "private" to "public" characterisation of already available bed supply. Mount Hotham has seen a slight increase in the number of beds, but the growth is not substantial.

In total Mount Hotham has ~5000 beds and Mt Buller about 8500 and Falls Creek ~5000. In total, there are almost twice the beds in Victorian alpine resorts compared to NSW alpine resorts — and Victoria has a smaller number of skier days than NSW. Based on relatively dated data on share of the skier market, this indicates Victoria has around 170 per cent more beds per skier day on the mountain as compared to NSW.

Planning time and costs have also been noted as an inhibitor to development by businesses. Anecdotally, one business indicated that it paid a substantial amount of money to planning consultants for a relatively inexpensive development project, causing the total cost of the development project to increase significantly. The business indicated that the costs for planning consultants reiterate the issues they have reported in previous years as the activity relates to incremental upgrades of an existing project, rather than a brand new project. This example is likely to be at the extreme end but does indicate that doing business in KNP will have a substantial cost premium relative to a less environmentally sensitive area, unless the environmental issues can be addressed strategically. The latter is one of the purposes of the Snowy Mountains SAP.

The issues related to planning complexity and time can be cost prohibitive in terms of the documentation requirements. Chart 4.5 sets out the information requirements for different development types within KNP. The local planning system complies with the requirements of the NSW planning system with the type of assessments required for development in KNP involving various agencies given the environmental sensitivities of the area. The more these requirements can be removed or streamlined, while still being consistent with state-wide policy and legislation, the greater the reduction in planning costs for those undertaking development within KNP. This is not to suggest that environmental considerations or other types of assessment should be overlooked to promote fast tracked development, but rather where there have been such reports conducted in the past (that have enabled the area to be zoned for a specific type of development), there may be opportunities to remove the duplicate analysis. Furthermore, businesses acknowledge that maintaining the environmental prestige of the area is in their interest for business, therefore it is likely that there are real gains to be made in simplifying this process for certain types of development.

4.5 Requirements of development within KNP

Information Matrix

	Additions to existing building	External alterations to existing building	Internal alterations to existing building	Demolish a building	Erect a new building	Earthworks including filling	Subdivision	Other develop-ment
1. Locality plan	✓	✓	✓	✓	✓	✓	✓	0
2. Lease survey plan	✓	✓	0	✓	✓	0	✓	0
3. Site analysis plan	✓	✓	0	X	✓	✓	✓	0
4. Shadow analysis plan	0	0	X	X	✓	X	X	0
5. Development plans and elevations	✓	✓	✓	0	✓	✓	✓	0
6. Notification plans	✓	✓	0	0	✓	0	✓	0
7. Landscape concept plan	0	0	0	0	✓	✓	✓	0
8. Stormwater management plan	0	0	X	0	✓	✓	✓	0
9. Site environmental management plan (SEMP)	0	0	0	✓	✓	✓	✓	0
10. Bushfire Assessment Report	✓	✓	X	X	✓	X	✓	0
11. Geotechnical report and/or site classification **	0	0	X	0	0	0	0	0
12. Statement of environmental effects	✓	✓	✓	✓	✓	✓	✓	✓
13. Essential Services location plan	✓	0	✓	X	0	X	X	0
14. Colour and Material Samples	✓	✓	X	X	✓	X	X	0
15. The *Disability (Access to Premises – buildings) Standards 2010*	0	0	0	0	0	0	0	0

Key

✓ Plan required.
0 Plan may be required. Please check with Alpine Resorts Team on 02 6456 1733.
X Plan not required.
* This includes internal alterations that do not involve any increase in overall floor space, bed numbers or structural changes.
** This report and/or classification is/are required if specified in Geotechnical Policy – Kosciuszko alpine resorts.

Data source: Reported in Ramboll 2020, Strategic Context Report for Snowy SAP.

There have been past efforts to masterplan, such as the NPWS 2001 Perisher Range Resort Masterplan. This had a vision of:

> Perisher Range will be the pre-eminent all-year-round destination mountain resort in Australia providing international-class facilities based on ecologically sustainable development.[29]

It is fair to say this vision has not been advanced let-alone achieved, with Perisher largely closed outside of the snow season. A clear lesson is that planning by itself will not resolve the development challenges of the region.

Are there opportunities to better use the park as a tourism asset?

A second key aspect is whether there are opportunities to provide better public tourism attractors throughout KNP, or outside of KNP. The view across consultations conducted to date is that there is considerable scope to improve the offering within KNP, and there has been progress on this already.

- NPWS has developed the Thredbo Valley Trail and is currently extending this further
- NPWS is currently developing the Snowies Iconic Walk and is working through the issues to make this an attractive product
- Thredbo has developed a mountain biking product and has achieved substantial growth in demand for this.

29 https://www.environment.nsw.gov.au/resources/alpineresorts/3PRStrategyPRRMPNov01.pdf

The Snowy Monaro Council is also in the final stages of development of a shared trail around Lake Jindabyne, which would also connect to the Thredbo Valley Trail.

Further discussion of the opportunities and the magnitude of these is set out in chapter 6.

What does success look like?

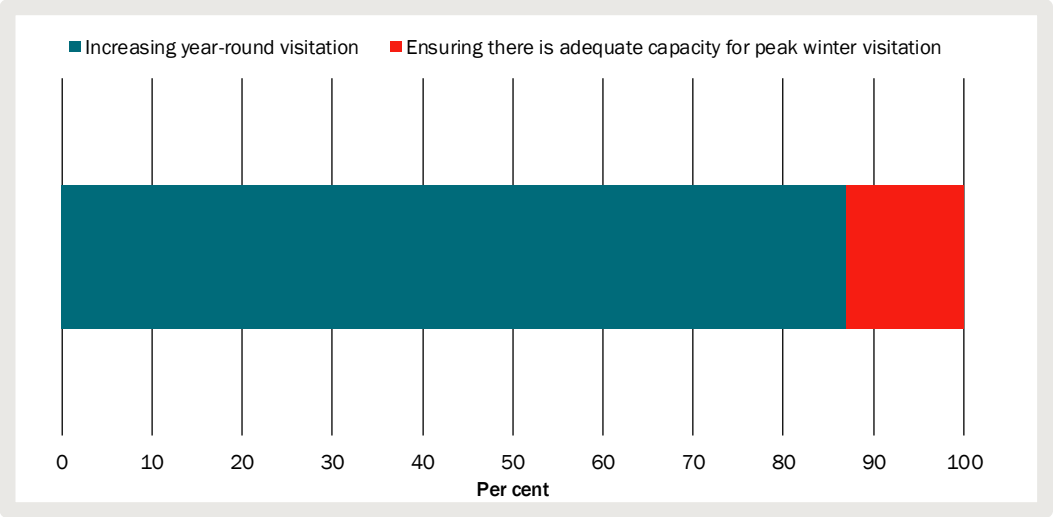
The ILM process has provided a view about what success looks like, by identifying the benefits and key performance indicators (KPIs). Success would involve:

- more visitors and visitor expenditure
- a more even pattern of visitors and expenditure across the year
- a larger share of people living in the community all year round
- a larger regional economy, with higher levels of year-round employment.

There was a relatively strong agreement amongst stakeholders about what success looks like.

The CIE has also conducted a survey of businesses in the Snowy Mountains SAP. One question asked was where businesses believed the focus of government investment should be. Nearly all respondents (86 per cent) considered the focus should be increasing year-round visitation, rather than focusing on ensuring there is adequate capacity for winter (chart 4.6).

4.6 Business view of focus for Government investment



Note: Based on responses of 46 businesses that responded to the question relating to what they considered the most important of increasing year-round visitation and ensuring there is adequate capacity for peak winter visitation.

Data source: The CIE.

5 *Visitor economy opportunities and threats*

Key trends and risks

Tourism in the region is subject to a number of major risks, but there are also opportunities. The most critical risk over the medium to long term is climate change (box 5.1). Under current visitation and economic patterns, the community of the Snowy Mountains SAP would decline precipitously if climate change reduced the quality and length of the snow season. Our expectation is that these impacts will start to accelerate post 2040 but can largely be managed through adaptation until then.

The major opportunity is that there is a large amount of tourism infrastructure for winter that is available for all year-round tourism. That is, little investment is required to provide capacity for more visitors outside of winter. Even with very substantial growth outside of winter, this is likely to be the case for most assets for the foreseeable future.

Covid-19 presents a range of short to medium term risks and opportunities for the region.

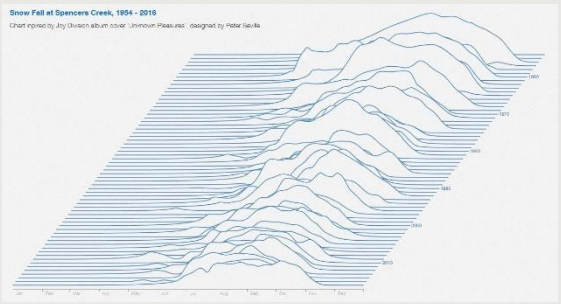
- The economic downturn and likely lower Australian population growth rates will reduce visitation to the region
- However, the closure of international borders is likely to be a benefit for the region, as visitation to the region is primarily domestic, and domestic tourists will now have to look within Australia for tourism opportunities. The Snowy's and many other regional NSW areas could capitalise on this.
  - The Snowy's has little to lose from the closure of international borders as very few visitors are international.
  - Across the board, Australians spend more on tourism overseas than overseas tourists spend in Australia. In 2018/19, Australians spent $64 billion on overseas tourism. In comparison, international visitors spent $31 billion in Australia, although their total trip costs are higher.[30]
- Short term effects will be detrimental, such as lower capacity on lifts and in food areas because of social distancing, and effects from lockdowns. Some businesses are not opening for the current ski season because of covid-19 issues.[31]

30 https://www.tra.gov.au/Economic-analysis/state-of-the-industry; https://www.tra.gov.au/International/international-tourism-trends.

31 Such as SkiRider Hotel and Resort.

5.1 The impact of climate change on NSW alpine areas

A weak decline has been observed in the maximum snow depth across the Alps from 1950s onwards with evidence of minor increases in temperature recorded in New South Wales[32]. The chart below highlights the patterns observed in natural snow depth at Spencer's Creek, as recorded by Snowy Hydro.[33]



Climate projections expect that, due to increases in surface temperature and decrease in snowfall, the natural snowpack will reduce by 15 per cent by 2030 (relative to 1990 to 2009) and 60 per cent by 2070. The snow season is expected to contract by 12 days in 2020-2039 and by 45 days by 2060-2079.[34]

The impacts will be different across resorts, with those at lower elevations such as Thredbo expected to be more impacted.

Ski Resorts, both in Australia and overseas, have been using snowmaking to guarantee snow and adapt to climate change. In Italy 87 per cent of the slopes in 2017 was artificial snow, in Austria it was 70 per cent and in Switzerland 49 per cent.[35] Expectations are that the ability to make snow will decline because of higher temperatures, with the time suitable for snow making projected to decrease by 20-30 per cent for 2020-2039, and by 60-70 per cent for 2060-2070 relative to 1990-2009.[36]

Where are the key competitors?

NSW Regions has undertaken a survey of Australians and international people about visitation to the Snowy's. One part of this asked people about what they thought were the comparator destinations to the Snowy's in winter and summer.

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32 Hennessy, K. et al. (2003), The impact of climate change on snow conditions in mainland Australia, pp1

33 Macleod, K., Now that it's winter snow sports enthusiasts in Australia's southern states will be weighing the perennial dilemma – when to book time off and where to go., [website], available at https://www.sbs.com.au/interactive/2015/kosciuszko-snow-depth/, accessed 24 July 2020.

34 Di Luca, A., Evans, J. P. and Ji, F., (2017) Australian snowpack in the NARCliM ensemble: evaluation, bias correction and future projections, pp20.

35 Statista (2019). Schnee aus der Kanone [website], available at: https://de.statista.com/infografik/7385/beschneite-pisten-alpen/, accessed 24 July 2020

36 NSW Government, Climate Change Impacts in the NSW Alpine Region: Projected changes in snowmaking conditions, pp12

- The main competitor noted to the Snowy Mountains in summer was the Blue Mountains of NSW (table 5.2). Other notable destinations were Tasmania, the NSW South Coast, New Zealand and Bright-Mt Beauty.
- In winter, New Zealand was noted, as well as other overseas and Victorian skiing destinations. Tasmania and the Blue Mountains were also noted (table 5.3).

5.2 Main summer competitors for Snowy Mountains

	Share Per cent
Blue Mountains	19.4
Tasmania	14.8
NSW South Coast	11.8
New Zealand	11.0
Bright-Mt Beauty	10.0

Note: For Australian residents.
Source: CIE calculations based on UTS Best-Worst survey results.

5.3 Main winter competitors for Snowy Mountains

	Share Per cent
New Zealand	13.7
Blue Mountains	11.8
Bright	10.6
Mt Buller	8.5
Tasmania	8.1
Canada	8.1
Japan	7.4

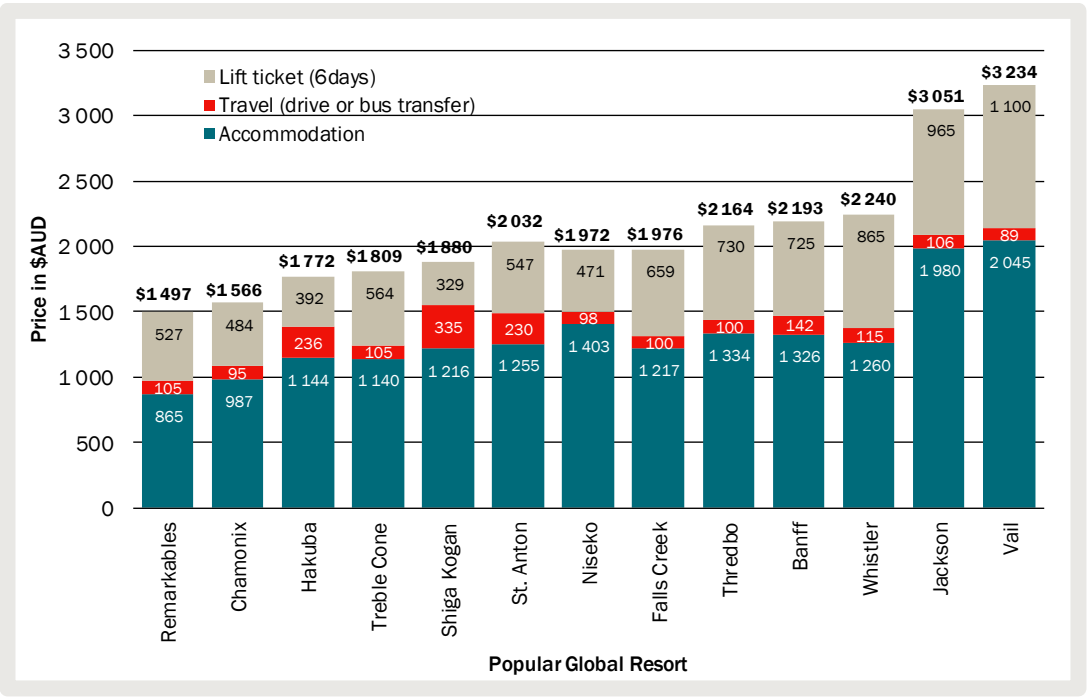
Note: For Australian residents.
Source: CIE calculations based on UTS Best-Worst survey results.

Winter competitors

MountainWatch has undertaken a comparison of the prices of skiing in alternative destinations, not including the price of airfares (chart 5.4).[37] Thredbo has amongst the highest overall price. After considering the quality of the snow, Australian snow resorts offer comparatively poorer value for money than most international resorts. However, it is still likely to be cheaper to ski in the Snowy Mountains for people in NSW once airfares are taken into account. Coming from Brisbane would be a different proposition, if travelling by air from Brisbane to Canberra or Sydney and then transferring.

37 Mountainwatch, https://www.mountainwatch.com/Snow-news/the-cost-of-skiing-a-global-round-up-of-international-ski-resort-prices/

5.4 The cost of skiing — a global comparison



Note: Data concerns the average twin-share price staying in an upper range 3-star property incl. breakfast and less than 1km from chairlifts (NZ resorts not permitting – so centrally located in Wanaka & Queenstown respectively). All accommodation was found through booking.com for greater consistency and additionally showed a rating between 'good' and 'very good' or 7.5-8.5 stars. Dates specified were between August 8, 2019 – August 15, 2019 (southern hemisphere resorts) and between February 8, 2019 – February 15, 2019 (northern hemisphere resorts (excluding Japan, which was set a week later to avoid Chinese New Year prices.)) Transfer price reflective of coach or driving/car rental costs from closest international airport. 6-day lift tickets as per the resort's website.

Data source: Mountainwatch, https://www.mountainwatch.com/Snow-news/the-cost-of-skiing-a-global-round-up-of-international-ski-resort-prices/.

Currently there are very large numbers of Australians that travel overseas for skiing, with Roy Morgan estimating that 46 per cent of Australians skiing do so overseas.[38] Roy Morgan notes that historically this has followed the Australian dollar closely.

Summer competitors

The range of possible summer destinations to compete with the Snowy Mountains is much more diverse and not necessarily offering a similar tourism experience in the same way that winter does. For example, the South Coast offers a low-key beach holiday experience, which is a notably different offering from the Snowy Mountains. The types of destinations mentioned in the best worst survey (table 5.2) are those offering experiences focused on the natural environment.

38 http://www.roymorgan.com/findings/7668-skiing-snowboarding-holidays-march-2018-201807200752

What is unique about the Snowy Mountains?

There are many possible propositions for tourism in the Snowy Mountains, some of which build on its natural strengths and others which could occur in many places. The key unique aspects of the Snowy Mountains for tourism include:

- It holds Australia's highest mountain, and climbing to the top of Mt Kosciusko or other nearby mountains is accessible to most people rather than restricted to mountaineers
- KNP is the largest national park in NSW
- In winter there is snow
- It is a unique alpine environment
- There is substantial specific infrastructure for winter available for other uses, such as chairlifts and gondolas, which would not be commercially feasible in other locations
- It holds the Snowy Hydro system of lakes and tunnels.

While there are many possible tourist offerings for the region, many of these could be offered in a wide range of locations, many closer to major cities than the Snowy Mountains. Offerings which build on unique advantages are likely to have less competitors.

What are opportunities and how big are they?

Alpine tourism growth outside of winter will be likely to reflect a myriad of activities rather than a single concentrated activity as occurs in winter. There are a range of indicators of the potential importance and size of opportunities, including:

- tourism visitation to other comparable areas
- expectations of business cases for tourism infrastructure
- a best worst survey conducted by UTS for NSW Regions, which identifies what people consider to be the most important and least importance activities in terms of inducing them to change their visitation to the region
- NPWS work on the types of visitors and magnitude of interest from new products.

Victorian High Country

The Victorian High Country has a substantially higher visitor number than the Snowy Mountains (comparing tourism regions) and a less winter-focused tourism profile. The types of activities that people undertake more in the Victorian High Country than the Snowy Mountains that could be attractors include:

- Cycling — Victoria has invested in the Victorian rail trails including the Murray to Mountains rail trail[39], Mount Buller mountain biking[40] and promoted the area for

39 https://www.visitbright.com.au/m2m-rail-trail/

40 https://www.mtbuller.com.au/Winter/resort-info/latest-news/details/mt-buller-launches-australian-alpine-epic-trail

cycling in general including road cycling.[41] The TRA data indicates there are ~80 000 more people cycling in the Victorian High Country than the Snowy Mountains. There are also NSW residents travelling to the area for cycling, although this is relatively small and most users are Victorian

- There are more people undertaking active activities outside of cycling such as water activities, attending organised sporting events and exercise, gym and swimming. The latter activities may be more peripheral than a driver of location choice
- There are substantially more people undertaking cultural and passive activities in the Victorian High Country than in the Snowy Mountains.
- There are many more people undertaking markets, food and wine activities in the Victorian High Country than in the Snowy Mountains.

It is not overly clear what activities are core attractors for the Victorian High Country and what are other things that are done, but the larger range of activities would all contribute to an improved visitor experience.

5.5 Activities undertaken by visitors 2016 to 2019 in Snowy Mountains and Victorian High Country

Activities	Snowy Mountains 000 visitors	Victorian High country 000 visitors
Active activities		
Cycling	**42**	**124**
Water activities / sports (Sailing, windsurfing, kayaking)	**49**	**83**
Exercise, gym or swimming	**52**	**161**
Attend an organised sporting event	np	48
Cultural and passive activities		
Visit museums or art galleries	**29**	**83**
Attend festivals / fairs or cultural events	np	65
Visit history / heritage buildings, sites or monuments	**36**	**100**
Sightseeing/looking around	**250**	**547**
Visit farms	np	51
Food and wine activities		
Go to markets	**np**	**122**
Visit wineries	**np**	**209**
Total visitors	**933**	**1 809**

Source: CIE calculations based on data provided by Tourism Research Australia.

The Victorian High Country covers a larger geographical area and number of regional towns compared to the Snowy Mountains which would influence tourist numbers however, it is unclear if this, or the span of activities available in Victoria (compared to KNP) is the key driver of increased tourism activity in Victoria. It is likely a combination

41 https://www.ridehighcountry.com.au/

of both. The access to major population centres (ie .Melbourne and Sydney) to the respective Alpine regions in each state is generally similar, although Sydneysiders need to travel slightly further to reach the ski fields of KNP. Mt Buller (Victoria) however provides Melbournites with the quickest access to the snow at 3.5 hours, compared to Sydneysiders who travel around 5 hours to the snow. Activities specific to Alpine National Park (Victoria), include hiking, horse back riding, bike riding, white water rafting, four-wheel driving and cross country skiing and cultural experiences including the historical huts throughout the Bogong High Plains.

Tasmania

Tasmania has been a growing tourism destination for both domestic and international visitors. It was identified as a competitor location to the Snowy Mountains. Some of the key changes in the Tasmanian tourism market are set out below.

- Tasmanian National Parks developed the Three Capes Walk, which has been fully subscribed pretty much from day one, attracting 12 000 people per year. This is a four-day three-night experience combining a boat trip to the start of the walk and cabin accommodation. Walkers have to bring and carry their own food, clothes etc.
  - there is also luxury option with private lodge accommodation and prepared meals provided[42]
  - this builds on existing extensive National Park offerings ranging from Mount Wellington to Cradle Mountain and the Overland Track
- Derby has invested in mountain bike trails that are considered to be world leading, and is reportedly attracting 30 000 visitors per year from an investment of $3 million.[43] TRA data estimates 18 000 overnight visitors in the SA2 covering Derby undertook cycling activities, going from close to zero in 2015.
- The Museum of Modern Art (MONA) has substantially impacted the tourism scene in Hobart and across Southern Tasmania, through both the facility and a range of events that have been developed alongside the facility (such as Dark MoFo). This was a private facility developed through funding from David Walsh

Best worst survey results

The UTS Centre for Business Intelligence and Data Analytics (BIDA) has conducted a best worst survey to understand what is most likely and least likely to induce people to visit the Snowy Mountains. The findings of this work suggest:

- passive and low key adventure activities rank the highest for inducing additional people in summer (chart 5.6). These tended to be in:
  - outdoor activities (but not adrenalin related)
  - Lake based activities

42 https://www.taswalkingco.com.au/three-capes-lodge-walk/.

43 https://www.abc.net.au/news/2017-12-26/mountain-bike-trails-driving-major-change-in-derby/9276384?nw=0

  - local food and wine
- the adventure/adrenalin activities such as those associated with Queenstown did not rank highly (see table 5.7)
- wellbeing did not rank highly
- indoor activities did not rank highly
- getting there faster and easier to get around once there ranked moderately.

5.6 Summer results for the best worst survey

National			International		
Improvement	Percent	Rank	Improvement	Percent	Rank
More scenic lookouts/viewpoints	100.00%	1	More scenic lookouts/viewpoints	100.00%	1
Treetop walk	94.13%	2	More hiking trails	89.44%	2
Historical/goldmining tours	93.75%	3	Historical/goldmining tours	85.71%	3
Lake Jindabyne sunset cruise	93.51%	4	Sea/float plane scenic flights	85.16%	4
Lake Jindabyne eco cruise	91.22%	5	Wildlife/birdwatching tour	81.56%	5
Wildlife/birdwatching tour	90.54%	6	Lake Jindabyne eco cruise	80.95%	6
Farm-to-table experience	89.86%	7	Lake Jindabyne sunset cruise	80.66%	7
Wilderness experience	89.06%	8	Jet boating	80.12%	8
Secluded eco cabins	86.76%	9	Barbeque facilities and picnic shelters on the islands	77.57%	9
Farmers market	85.36%	10	Lake Jindabyne ferry	76.98%	10
Jindabyne Dam lookout	83.42%	11	Treetop walk	76.18%	11
Food and wine trail	83.00%	12	Farmers market	75.65%	12
Less congested / high quality roads within the region	82.03%	13	Whitewater rafting	75.19%	13
Lake Jindabyne ferry	81.81%	14	New mountain bike park/trails	74.98%	14
Additional upscale accommodation in Jindabyne	81.38%	15	Farm-to-table experience	74.11%	15

Data source: UTS 2020, *Snow Mountains special precinct program: promoting tourism into the Jindabyne precinct.*

The full results are set out in the UTS report.

5.7 Average and best category summer rankings from best worst survey

Category	National		International	
	Average rank	Highest rank	Average rank	Highest rank
Getting there faster	48	13	72	50
Outdoor activities	47	1	36	1
Indoor activities	87	65	96	88
Lake Jindabyne and Lake Jindabyne Foreshore activities	47	4	39	6
Adventure and adrenaline activities	91	71	53	4
Mental + physical wellness activities	88	55	102	93
Local food and wine activities	18	7	33	12
Quality and variety of accommodation	25	9	51	26

Data source: UTS 2020, *Snow Mountains special precinct program: promoting tourism into the Jindabyne precinct.*

The survey also asked people about their likelihood of visiting the Snowy Mountains now and if the improvements shown in the survey were in place. Generally, people will overstate likelihoods because they do not think about competitor locations. However, the degree of change in their likelihood is one indicator of ability to increase visitation.

- Focusing on summer, there was an average likelihood of 37 per cent that people would visit the Snowy Mountains in the next 2 years. 17 per cent of people indicated they were highly likely or almost certain to visit

- If the improvements people had been shown were in place, the average likelihood increased to 46 per cent — a 25 per cent increased. The share of people indicating highly likely or better increased to 25 per cent — a 44 per cent increase.

This suggests the level of gains from increased attractions is in the order of a 25 to 50 per cent increase in visitation.

5.8 Likelihood of visiting

Indicator	Summer now	Winter now	Summer better	Winter better
	Per cent	Per cent	Per cent	Per cent
Average likelihood	37	31	46	42
Proportional increase			25	38
Share highly likely or better	17	13	25	20
Proportional increase			44	58

Source: CIE calculations based on survey data from UTS 2020, *Snow Mountains special precinct program: promoting tourism into the Jindabyne precinct.*

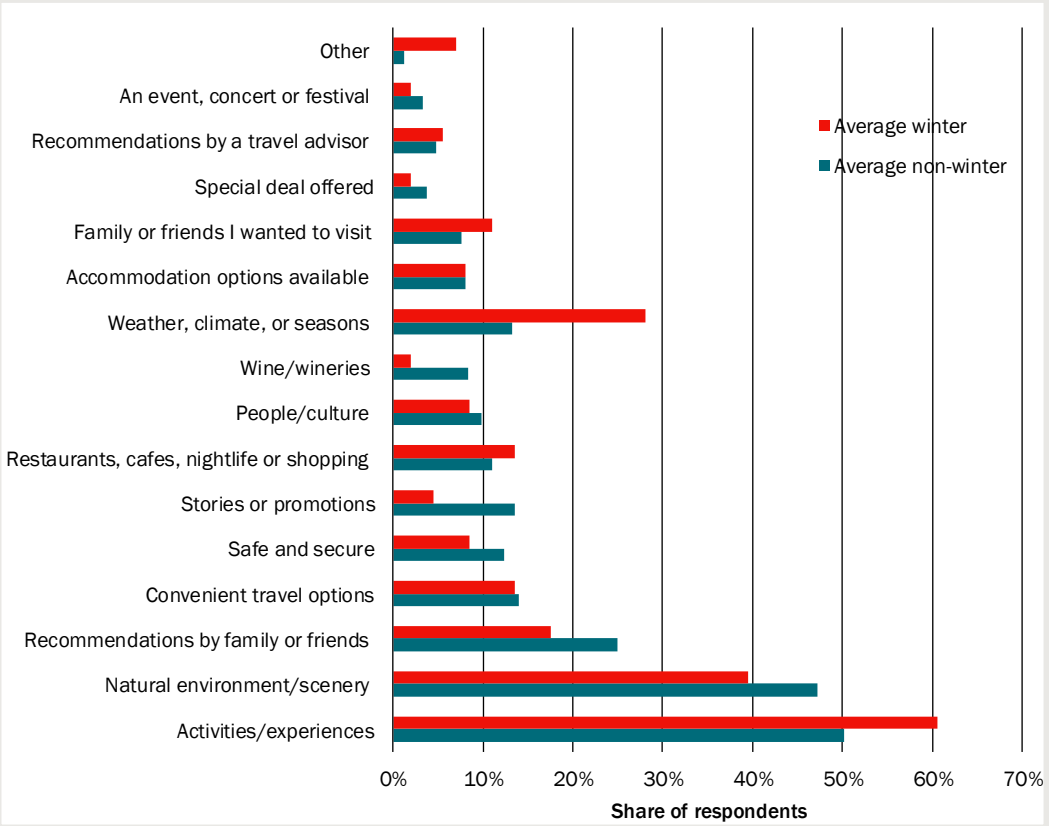
Note that the UTS survey results contrast with results of Australians surveyed about their reason for choosing Queenstown over other destinations (chart 5.9). The main factors were:

- the activities and experiences on offer, and
- the natural environment/scenery.

The first of these is really a key focus for the Snowy Mountains SAP and the evidence from Queenstown suggests this can be a major driver of tourism.

A much smaller proportion of Australians are choosing Queenstown because of accommodation options, events, convenience of travel options, wineries and restaurants/cafes/nightlife.

5.9 Drivers of destination choice for Australians to travel to Queenstown



Note: Data is from Q3 2016 to Q2 2018, and survey is undertaken quarterly.
Data source: Queenstown visitor experience surveys; CIE calculations.

In interpreting the best worst survey results, one conclusion is that this shows the larger activities that people will tend to travel for. However, many of those mentioned are not a specific advantage of the Snowy Mountains.

NPWS market segmentation work

NPWS has undertaken a work program to understand the motivations and levers for increasing use of national parks in NSW.[44] This divides their market into four segments

1 Adventurers
2 Socialisers
3 Explorers
4 Escapers

It then examines the attributes that are most important in driving change for these different market segments. The importance of attributes will differ across parks and segments. A main takeaway is that purchase intention is substantially higher moving from a typical national park experience to a better offer (chart 5.10). For example, for

44 Instinct and Reason 2018, *Understanding the drivers of purchase intention for new NSW NPWS product.*

two nights or more considerers, which will be the main group for the Snowy Mountains, a 17 per cent worst case exploring intention to purchase could increase to 37 per cent with a better offer.

5.10 Results of NPWS work on drivers of choice

Nb: Base is in all cases only the relevant sample (i.e. Socialisers segment were shown the social experience scenarios)	Daytrip preferrers	Overnight considerers	Two nights or more considerers	No, I am not interested
1. Social experience – worst case/ generally the current offer in NSW National Parks	12.22 %	10.47 %	2.07 %	75.25 %
1. Social experience – example offer – Royal National Park at the moment	45.55 %	22.36 %	22.31 %	9.78 %
2. Exploring experience – worst case/ generally the current offer in NSW National Parks	9.40%	6.02 %	16.84 %	67.74 %
2. Exploring experience – example – Eurobodalla National Park at the moment	22.82 %	26.15 %	37.24 %	13.79 %
3. Escaping experience – worst case/ generally the current offer in NSW National Parks	18.77%	7.84 %	8.82 %	64.57 %
3. Escaping experience– example offer – Bouddi National Park at the moment	20.81 %	31.61 %	27.28 %	20.30 %
4. Adventure experience – worst case/ generally the current offer in NSW National Parks	26.65 %	13.50 %	0.44 %	59.41 %
4. Adventure experience – example offer – Bald Rock National Park at the moment	31.86 %	19.78 %	18.56 %	29.80 %
5. Aboriginal experience – worst case/ generally the current offer in NSW National Parks	6.14 %	20.64 %	11.05 %	62.17 %
5. Aboriginal experience – example offer – Mungo/Kinchega National Park at the moment	13.68 %	30.39 %	4.51 %	51.42 %

Data source: Instinct and Reason 2018, *Understanding the drivers of purchase intention for new NSW NPWS product.*

As the Snowy Mountains SAP develops, NPWS should be involved in using its tools to consider the change in purchase intentions for activities proposed in KNP.

Snowy Monaro Council activities

The Snowy Monaro Council is currently finalising a proposal to develop a mountain biking path around Lake Jindabyne. This would add to the offerings of the Thredbo Valley Trail (TVT) and Thredbo mountain biking, as well as connecting the TVT to Jindabyne.

Tourism activities developed by Stafford

Stafford consulting has developed a set of tourism activators that would provide new attractions for the region and increase visitation. These are detailed in their report and set out in brief in table 5.11.

5.11 Specific attractors

Attractors	Timing of investment
New & Expanded Camping Grounds	2025
4-star 250-room Hotel	2031
120 Owner Occupied Apartments	2031
250-room Athlete/Student Accommodation (as part	2030

Attractors	Timing of investment
Destination Holiday Park	2030
Perisher Branded 4-5-star Hotel (120 rooms)	2036
4-star, 200-room Lakefront Spa Hotel (Copper Tom)	2045
E-Bike Cycleways	2025
Iconic Overnight Horse Trek	2024
Outdoor Adventure Hub near Jindy (Zip Lines & Mountain biking)	2025
Lake Jindabyne Water Activities & Experiences	2025
Mountain Biking & Trekking Hub (Masterplanned)	2025
Hot Pools & Wellness Facility	2031
Fly Fishing School	2028
18-Hole Golf Course	2031
Indoor Fun Park	2028
Major Cantilevered Viewing Sky Deck	2024
Aviation Tourism Experiences	2038
Hallmark Winter Alpine Sporting Event	2025

Source: Stafford Consulting.

If all of these activities can be brought to the Snowy Mountains SAP then this would lead to very large tourism increases. We would expect that achieving this would require substantial government support.

To estimate the impact of these attractions on unique new visitors, we have:

- estimated the percentage uplift in visitation expected from the best worst survey results if a range of attractions were developed in the Snowy Mountains SAP, for winter and summer
- estimated the impact for individual items from the best worst survey based on their score for winter and summer
- used the maximum of the usage estimate for each attraction from Stafford and the unique new visitor estimate from the best worst survey, and
- made specific adjustments based on case studies of other alpine locations where available (see Appendix F for details of case studies).

Visitation modelling of impacts

Using the visitation model developed, we can also track the impacts of other things like improving access, reducing business costs and removing regulatory restrictions (tables 5.12 and 5.13).

- In 2040, under the base case we expect 892 000 visits per year, with 459 000 in winter and 433 000 in non-winter
- An airport with direct flights to all Sydney, Melbourne and Brisbane, and a subsidised transfer service to Jindabyne and the resorts would increase trips by ~89 500 in 2040
- Increasing or removing bed limits and any other capacity constraints would increase trips by ~16 000 in 2040.

- Reducing the cost of new developments within the KNP (by around 3.8 per cent in winter and 1.3 per cent in non-winter) would lead to 7 500 new trips in 2040
- Providing a transport solution to overcome car parking constraints would boost visitation by around 37 000 by 2040 during winter months
- New investment in marketing and tourist attractions would lead to over 283 000 extra visitors by 2040, most occurring during non-winter months.
- Doing all of the above leads to an additional 433 000 extra visitors by 2040. This is greater than the sum of the standalone impacts of each activities, due to the unique interaction between multiple initiatives within the Snowy Mountains SAP.

5.12 Drivers of tourism impacts by 2040

	Winter 2040 000 trips per year	Non-winter 2040 000 trips per year	Total – 2040 000 trips per year
Base case	459 424	432 844	892 268
Change from SAP activities			
Increasing or removing bed limits	15 859	0	15 859
Transport solution	37 219	0	37 219
Reduced cost of new developments	6 280	1 215	7 495
Improved air connectivity with improved access and frequent flights from Sydney, Melbourne and Brisbane	61 155	28 378	89 533
Investment in new activities and marketing	54 106	228 946	283 052
SAP scenario (all of the above)	634 044	691 383	1 325 427

Source: The CIE

5.13 Drivers of tourism impacts by 2061

	Winter 2040 000 trips per year	Non-winter 2040 000 trips per year	Total – 2040 000 trips per year
Base case	405 262	506 755	912 018
Change from SAP activities			
Increasing or removing bed limits	198	0	198
Transport solution	0	0	0
Reduced cost of new developments	4 975	1 452	6 427
Improved air connectivity with improved access and frequent flights from Sydney, Melbourne and Brisbane	49 199	35 181	84 380
Investment in new activities and marketing	59 987	289 405	349 392
SAP scenario (all of the above)	519 622	832 793	1 352 415

Source: The CIE.

This highlights the type of activities likely to impact on demand and the orders of magnitude of the inducement to be expected.

Further detail of the visitation modelling is set out in the appendices.

6 Summary of projections

Visitation projections

Base case visitor projections

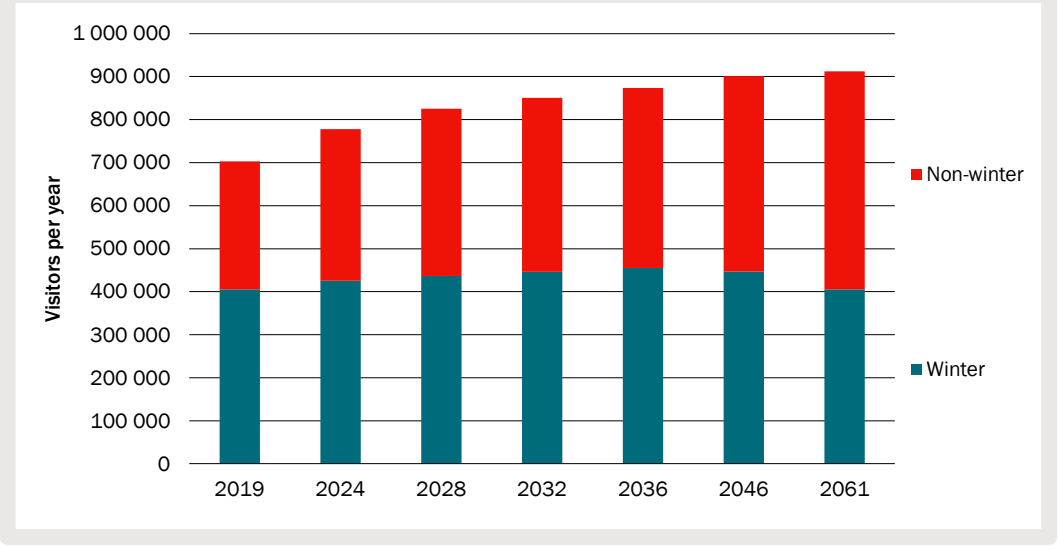
Base case visitor projections have been developed that capture what is expected to occur without the Snowy Mountains SAP. The main drivers are:

- population and income growth in origin markets, particularly Sydney. These have been adjusted to reflect covid-19:
  - population has been adjusted down based on NSW Government work on long term population impacts of covid-19
  - income per capita has been adjusted down from 2020 to 2028 but is assumed to return to its level absent covid-19 by 2028. That is, there are no long-term per capita income effects of vocid-19
  - we do not present the temporary impacts of covid-19 from lockdown and capacity reductions
- climate change, particularly post 2040. Based on climate projections, and the relationship between climate and visitation, we have:
  - assumed that snow making can mitigate any impacts from 2020 to 2040
  - allowed for a 2 per cent per annum reduction in winter demand from 2040 onwards, meaning by 2061 demand is 35 per cent lower in winter than would otherwise have been the case
- constraints on major new bed additionswithin KNP, but no constraints at Jindabyne. Note that we have not received any other quantitative constraints on infrastructure at this stage, so the base case could be somewhat optimistic in terms of the ability to transport people from Jindabyne to Thredbo and Perisher. In 2019 there were significant issues with car parking and transport capacity which would limit visitation if not addressed
- included the impacts of the Snowies Iconic Walk and Thredbo Valley Trail extension.
- included additional investment in alpine coasters and ziplines in Thredbo

The base case visitation projection expects lower growth in the next 20 years than has occurred over the last decade, but similar to outcomes over the past 20 years. Post 2040, the base case has a substantial reduction in winter demand because of climate change. Expenditure grows more rapidly than visitation because of per capita income growth.

The overall pattern of visitors is shown in chart 6.1. This grows from just over 700 000 to 912 000 by 2061. Winter visitation peaks by 2040, before falling back as a result of climate change. Non-winter visitation continues to grow to be more than winter visitation by 2061.

6.1 Base case projections of visitors per year



Note: Winter is three months in duration, and non-winter is the remaining 9 months of the year.
Data source: The CIE.

A summary of projections of visitors, visitor nights and visitor expenditure is set out in table 6.2.

6.2 Base case visitation forecasts

	2019	2024	2028	2032	2036	2046	2061
Whole year							
Visitors	702 825	777 866	825 115	850 303	873 842	901 073	912 018
Annual growth		2.0	1.5	0.8	0.7	0.3	0.1
Visitor nights	2 073 839	2 324 866	2 482 275	2 558 018	2 628 772	2 703 878	2 724 633
Annual growth		2.3	1.7	0.8	0.7	0.3	0.1
Visitor expenditure	504	526	618	662	706	790	895
Annual growth		0.8	4.1	1.7	1.6	1.1	0.8
Winter							
Visitors	405 548	425 508	436 584	446 463	455 267	447 319	405 262
Annual growth		1.0	0.6	0.6	0.5	-0.2	-0.7
Visitor nights	1 216 257	1 276 894	1 310 969	1 341 372	1 368 399	1 338 897	1 201 913
Annual growth		1.0	0.7	0.6	0.5	-0.2	-0.7
Visitor expenditure	365	365	418	445	472	510	532
Annual growth		0.0	3.5	1.6	1.5	0.8	0.3
Non-winter							
Visitors	297 276	352 358	388 531	403 840	418 575	453 754	506 755

	2019	2024	2028	2032	2036	2046	2061
Annual growth		3.5	2.5	1.0	0.9	0.8	0.7
Visitor nights	857 582	1 047 972	1 171 306	1 216 646	1 260 374	1 364 982	1 522 720
Annual growth		4.1	2.8	1.0	0.9	0.8	0.7
Visitor expenditure	139	161	201	217	234	280	363
Annual growth		3.0	5.6	2.0	1.9	1.8	1.7

Note: Winter is three months in duration, and non-winter is the remaining 9 months of the year.
Source: The CIE.

Snowy Mountains SAP visitor projections scenario

The Snowy Mountains SAP scenario has been constructed to represent some of the key activities that could occur under the Snowy Mountains SAP. It is a hypothetical scenario for planning purposes and is no reflective of any commitments. The key elements of the Snowy Mountains SAP scenario are set out in box 6.3.

6.3 The Snowy Mountains SAP scenario

The Snowy Mountains SAP Scenario involves:

- Increasing or removing bed limits and other capacity limits on the mountain resorts
- providing a transport solution within the KNP
- Improved air connectivity through more flights from Sydney, Brisbane and Melbourne, lower fares and improved connections between airports to Jindabyne and the resorts.
- reducing the cost for developing new investments inside KNP, which would translate into a reduced cost overall of 2.5 per cent, as capital is about 25 per cent of costs for accommodation and food services. We expect that this would translate into a reduction in peak costs of 2 per cent and off-peak costs of less than 1 per cent, as non-winter is currently priced to reflect operating costs
- investment in in new tourist attractions and marketing for the region

A summary of the outcomes under the Snowy Mountains SAP scenario in terms of visitation, and the differences to the base case, is set out in table 6.4.

6.4 Snowy Mountains SAP scenario visitation forecasts

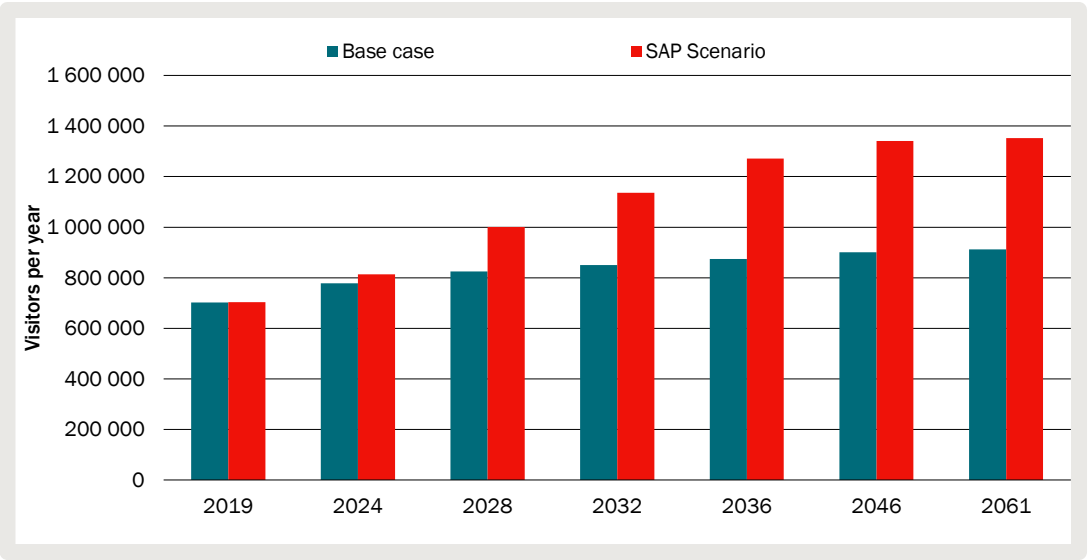
	2019	2024	2028	2032	2036	2046	2061
Whole year							
Visitors	703 313	813 971	1 001 145	1 135 943	1 271 406	1 341 571	1 352 415
Annual growth		3.0	5.3	3.2	2.9	0.5	0.1
Visitor nights	2 075 587	2 443 196	3 114 898	3 592 598	4 079 050	4 329 798	4 388 095
Annual growth		3.3	6.3	3.6	3.2	0.6	0.1

	2019	2024	2028	2032	2036	2046	2061
Visitor expenditure	505	549	742	893	1059	1213	1367
Annual growth		1.7	7.8	4.7	4.3	1.4	0.8
Winter							
Visitors	406 037	441 019	475 465	545 872	619 436	605 699	519 622
Annual growth		1.7	1.9	3.5	3.2	-0.2	-1.0
Visitor nights	1 218 005	1 318 954	1 428 885	1 672 705	1 927 348	1 888 188	1 620 459
Annual growth		1.6	2.0	4.0	3.6	-0.2	-1.0
Visitor expenditure	366	377	455	553	663	717	714
Annual growth		0.6	4.8	5.0	4.6	0.8	0.0
Non-winter							
Visitors	297 276	372 952	525 679	590 070	651 971	735 872	832 793
Annual growth		4.6	9.0	2.9	2.5	1.2	0.8
Visitor nights	857 582	1 124 242	1 686 014	1 919 892	2 151 702	2 441 610	2 767 636
Annual growth		5.6	10.7	3.3	2.9	1.3	0.8
Visitor expenditure	139	173	287	340	396	496	653
Annual growth		4.4	13.6	4.3	3.9	2.3	1.8

Source: The CIE.

The overall Snowy Mountains SAP scenario versus the base case in terms of year-round visitor numbers is shown in chart 6.5. The uplift in winter and non-winter is shown in chart 6.6. Note that the winter uplift is driven mostly by the air connectivity improvements and reducing existing constraints, while the summer uplift is driven by attraction investment activities.

6.5 Snowy Mountains SAP scenario versus base case

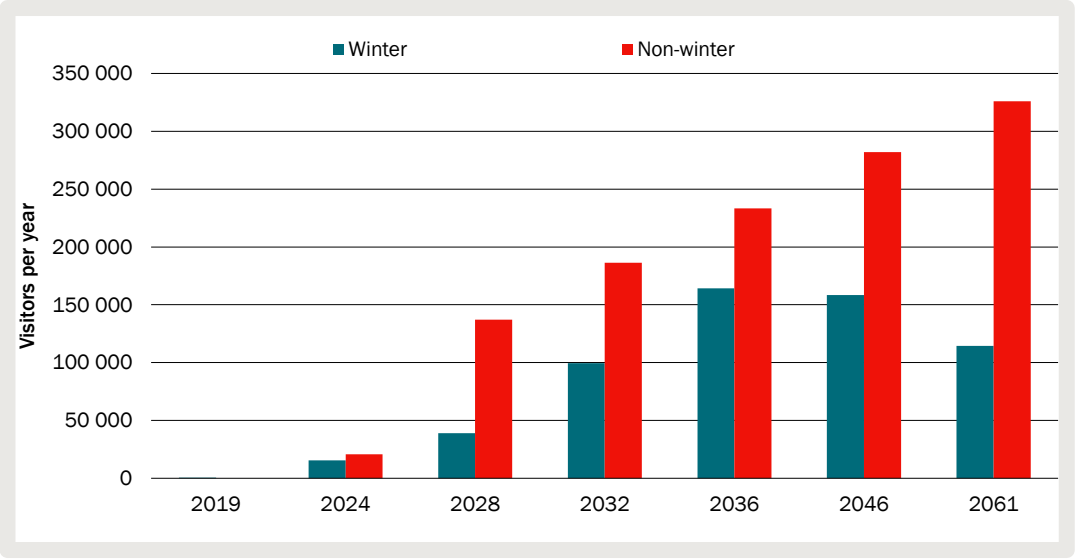


Data source: The CIE.

The uplift in visitors from the Snowy Mountains SAP scenario is an additional ~326 000 visitors per year in non-winter and ~114 000 visitors per year in winter by 2061. The uplift in expenditure peaks at ~$470 million per year by 2061 (charts 6.6 and 6.7).

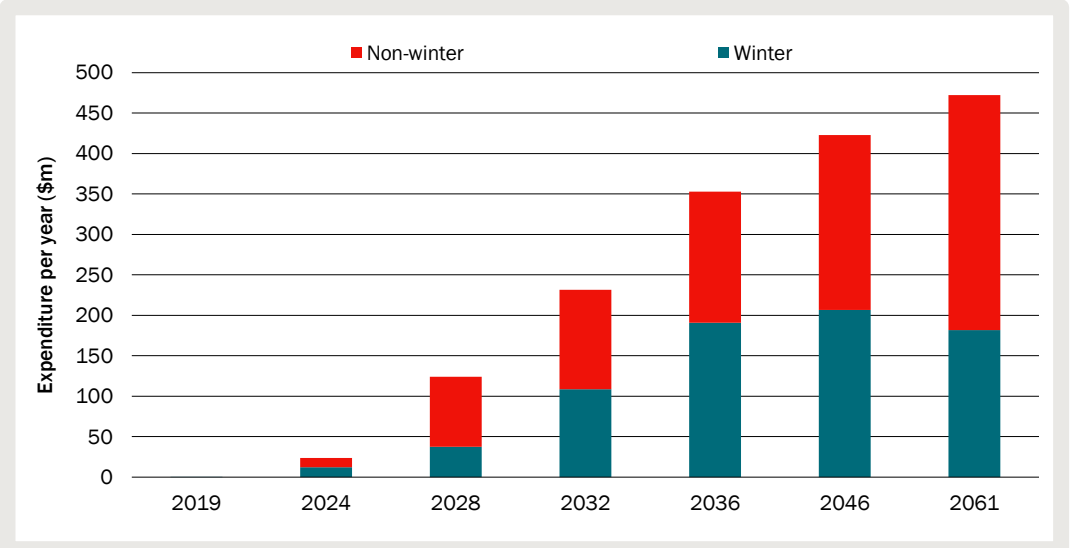
These projections reflect the set of assumptions about what the Snowy Mountains SAP can achieve. If less activities and investments occur from the Snowy Mountains SAP, then the visitation impacts will be smaller. The nature of both government and private investment as a result of the Snowy Mountains SAP is still to be determined.

6.6 Uplift in visitor numbers from Snowy Mountains SAP



Data source: The CIE.

6.7 Uplift in expenditure from Snowy Mountains SAP



Data source: The CIE.

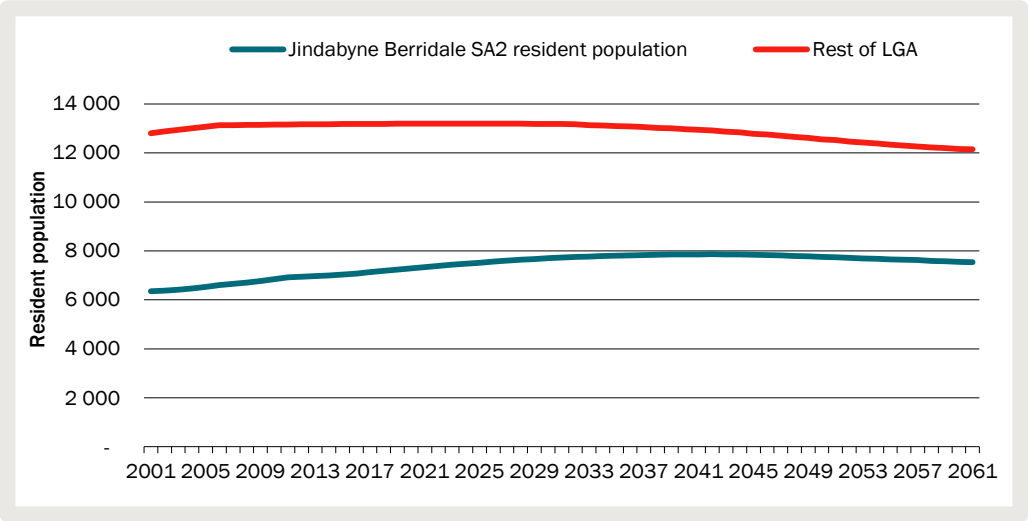
Population projections

Baseline scenario

The baseline scenario assumes a continuation of the recent growth rate for the region as observed from recent census data. The average annual growth rate of the resident population in the Jindabyne-Berridale SA2 between 2011 and 2016 is around 0.86 per cent. In this scenario, we assume a net migration level that achieves this rate of growth for the first year of the forecast. The average annual growth rate between 2016 and 2061, after taking into account the demographic impacts (births and deaths) is ~0.20 per cent.

In the baseline scenario, the Jindabyne-Berridale SA2 follow a similar growth trajectory as the rest of the Snowy-Monaro LGA, although the decline is not quite as rapid within the Jindabyne-Berridale SA2.

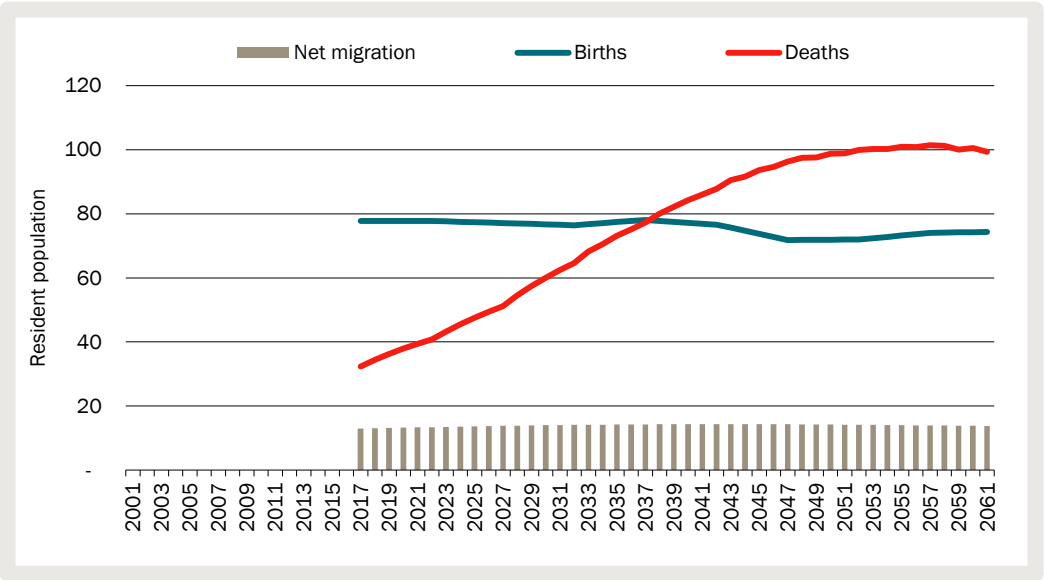
6.8 Forecast population under baseline scenario



Data source: The CIE.

Under the baseline scenario, net migration remains steady, while differences between births and deaths in the later years begin to drive population down (chart 6.9).

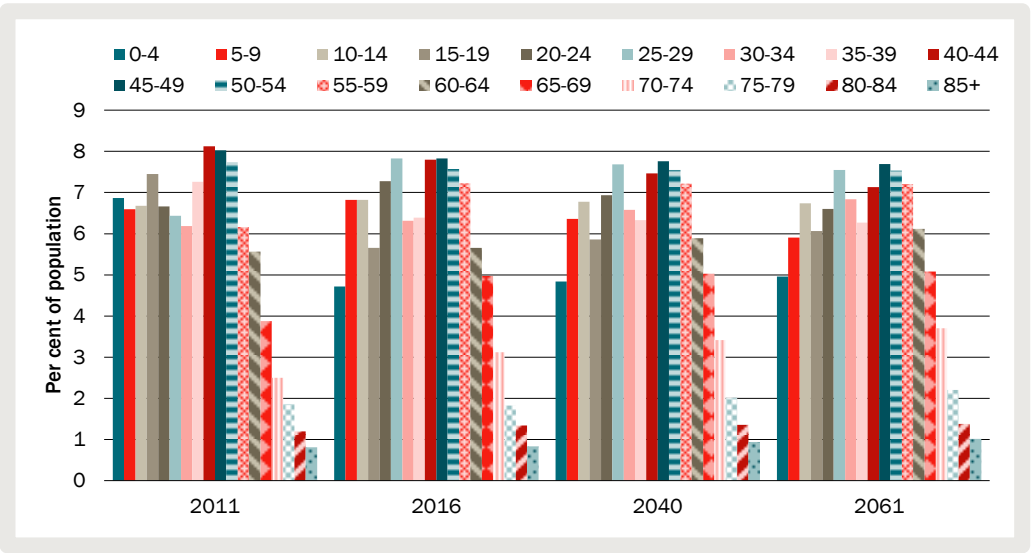
6.9 Components of population change for Snowy Mountains SAP region — Baseline scenario



Data source: The CIE.

The demographic profile of the Snowy Mountains SAP region under the baseline scenario is characterised by an ageing population, which is driving the above trends (chart 6.10). The proportion of younger age cohorts such as 15-29 decreases over time and is replaced by an increase in the proportion of older cohorts such as those above the age of 70.

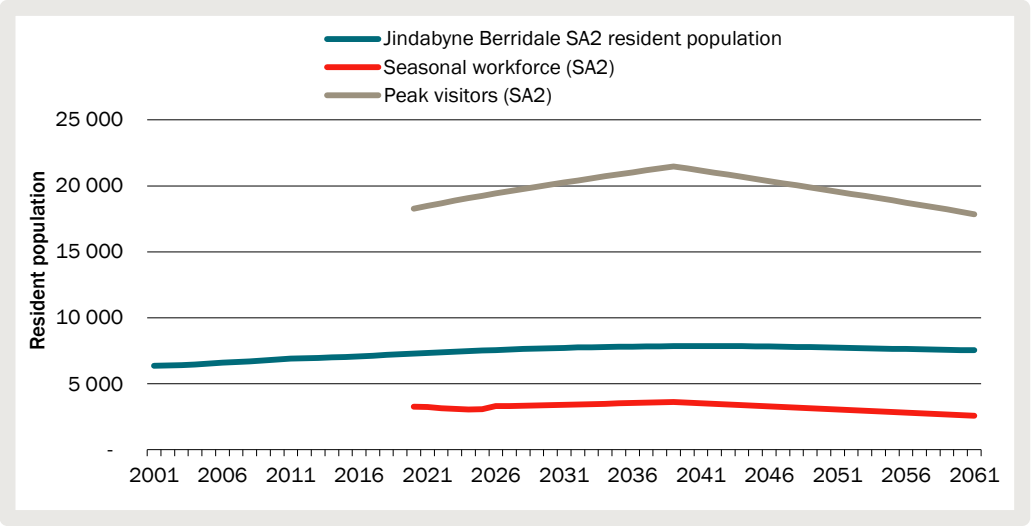
6.10 Age profile of the Snowy Mountains SAP population — Baseline scenario



Data source: The CIE.

In terms of the seasonal population component, the seasonal workforce is flat to ~2040 and then declines as the winter visitation is impacted by climate change. The peak winter visitors, as represented by peak overnight visitors staying in the SA2, increases to 2040 and then declines (chart 6.11).

6.11 Forecast population by population type — Baseline

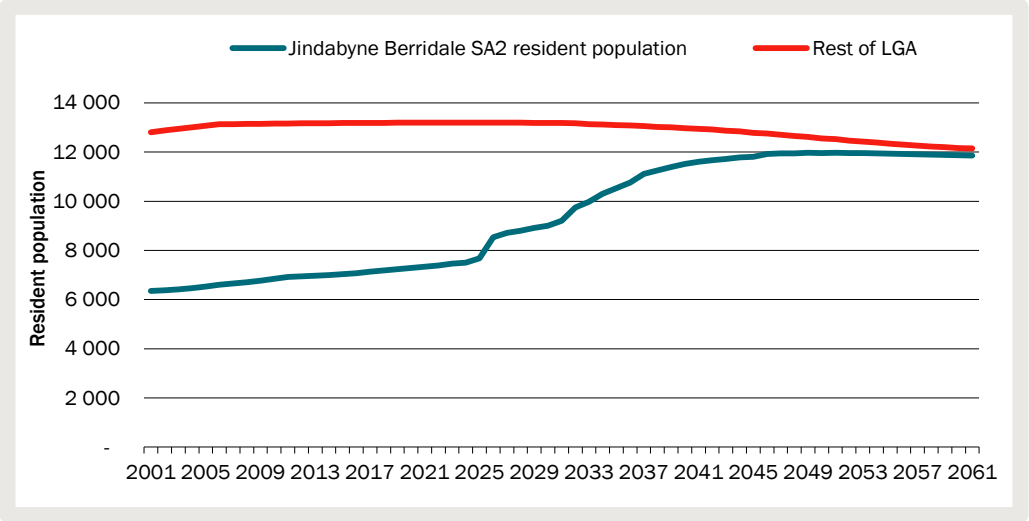


Data source: The CIE based on data from Go Jindy Housing and Demographics report, ABS Census 2016, DPIE provided data on estimated resident population.

Snowy Mountains SAP scenario

The Snowy Mountains SAP scenario assumes the visitation projections set out in the SAP scenario we have modelled. Under this scenario, the population grows to a peak of around 11 800, driven by visitation increases above baseline from the Snowy Mountains SAP activities (chart 6.12. It then stabilises and falls as visitor expenditure is impacted by climate change. Note that we have assumed that the resident population is mainly driven by all-year round employment opportunities, which increase because of constant increases in non-winter visitation. However, there is still some impact from winter visitation reductions, which are quite severe and impact more on expenditure. There is also the impact of an ageing population.

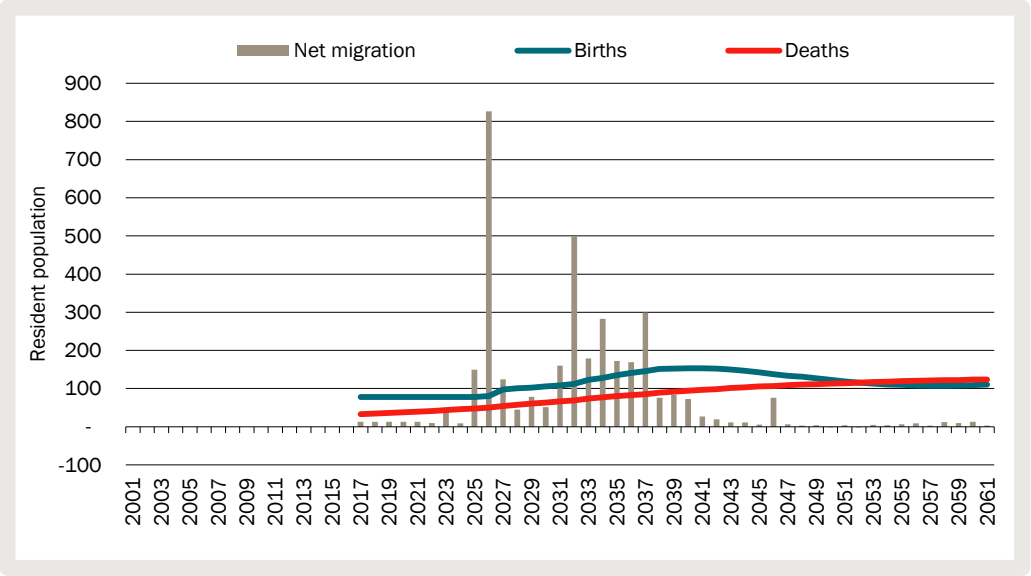
6.12 Forecast population under Snowy Mountains SAP scenario



Data source: The CIE.

Under the Snowy Mountains SAP scenario, there is large net inward migration in the early years where we have assumed the Snowy Mountains SAP activities take effect, and these are somewhat reversed in later years as a result of declining winter visitation. Births increases for part of the period driven by the younger age of inward migrants. By around 2040 the ageing of the population starts to take effect and deaths exceeds births (chart 6.13).

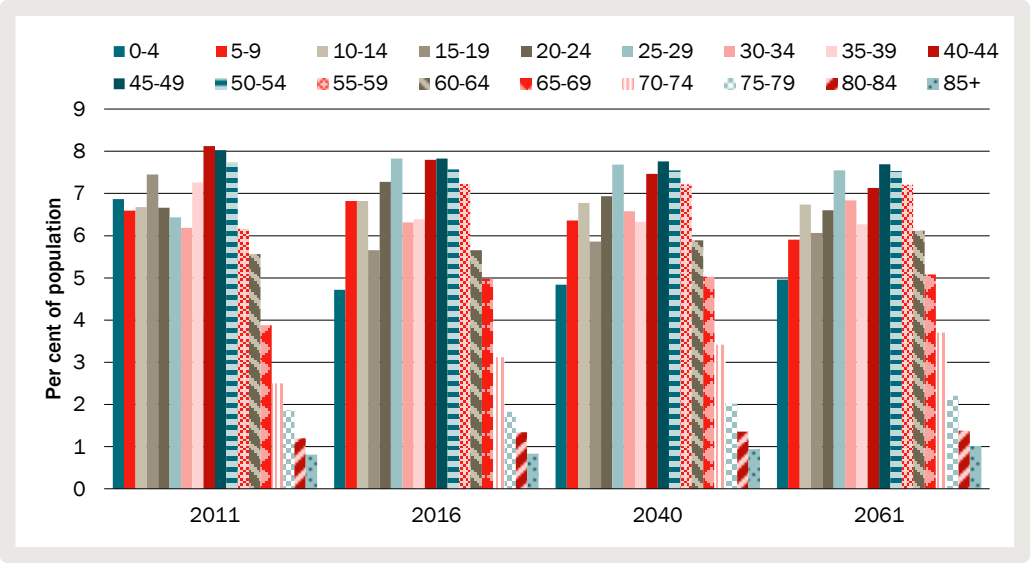
6.13 Components of population change for Snowy Mountains SAP region — Snowy Mountains SAP scenario



Data source: The CIE.

The demographic profile of the SAP region under the SAP scenario is relatively stable for most of the period, with an ageing effect most noticeable at the end of the period (chart 6.14).

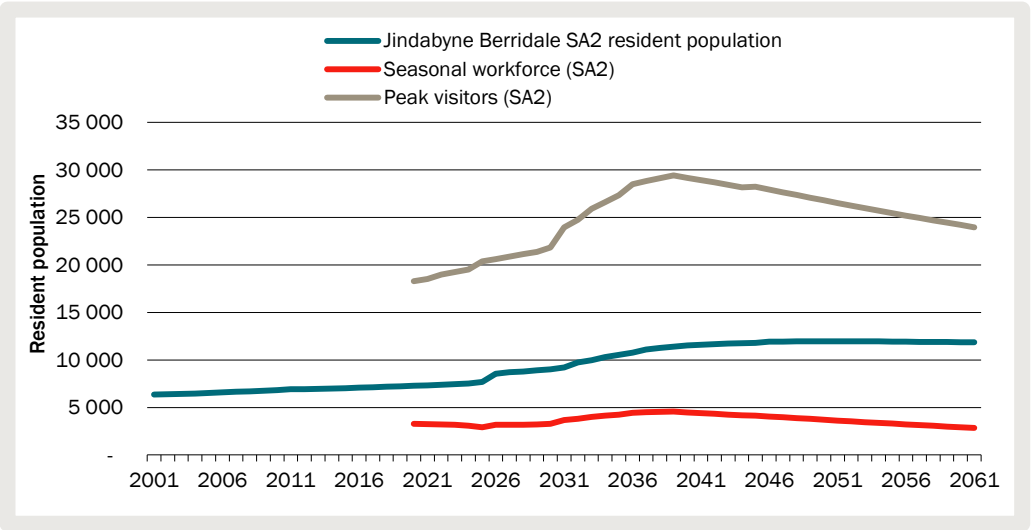
6.14 Age profile of the SAP population — Snowy Mountains SAP scenario



Data source: The CIE.

In terms of the seasonal population component, the seasonal workforce increases to a peak of around 4 500 from an estimated 3265 today (with substantial uncertainty about the true size of the seasonal workforce). The peak winter visitors, as represented by peak overnight visitors staying in the SA2, increases to a peak of 30 000 per night in 2040 and then declines (chart 6.15).

6.15 Forecast population by population type — Snowy Mountains SAP scenario



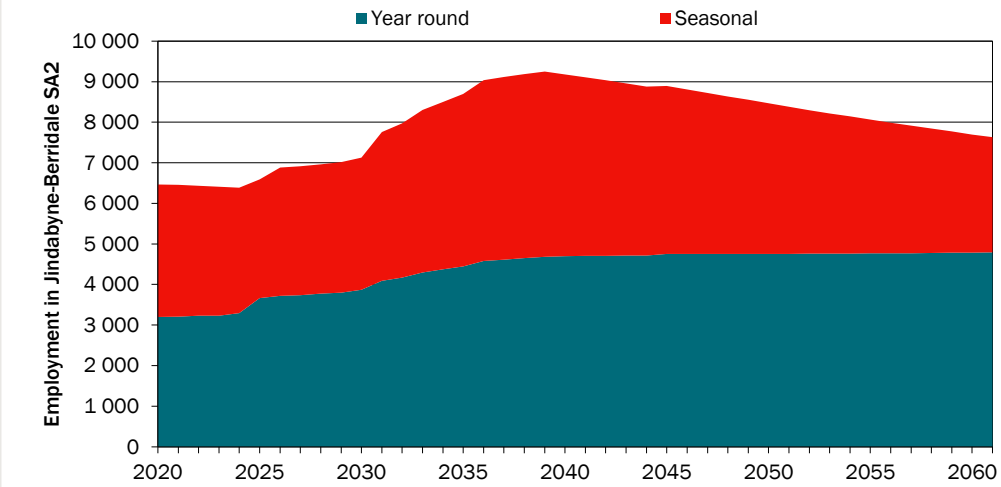
Data source: The CIE based on data from Go Jindy Housing and Demographics report, ABS Census 2016, DPIE provided data on estimated resident population

Employment projections

The employment projections related to tourism activities follows a similar path as visitation expenditure. Year-round employment increases because of increased summer

expenditure, and then stabilises as the impacts of climate change reduce winter expenditure. Seasonal employment falls once the impacts of climate change occur. Peak employment in winter reaches over 9 000 people in ~2040.

6.16 Employment projections under Snowy Mountains SAP scenario



Data source: The CIE

The employment projections are somewhat conservative, as they include the direct impacts of tourism expenditure on tourism employment, and maintain non-tourism employment at similar levels. There would be expected to be an increase in non-tourism related employment from flow-on impacts to provide services to a larger population.

7 Market analysis

We have obtained initial data on the retail businesses within the Snowy Mountains SAP area, and the current zoning. This chapter sets out a snapshot of these businesses and the land requirements.

Retail and food businesses

There are over 150 retail and food businesses that we have identified in the Snowy Mountains SAP region. These include:

- 100 restaurants (including cafes, bars, and take away stores). This does not include chalets that offer a food service for guests only
- 32 shopping outlets, including a Woolworths in Jindabyne and The Market Jindabyne at Nugget's Crossing
- 18 businesses providing services and shopping, such as ski hire rental businesses
- 2 breweries.

A list of businesses identified is set out in table 7.1.

7.1 Retail and food businesses

Region	Type of space	Business name	Type of business
Jindabyne	Retail	Jindabyne seafood	Restaurant
Jindabyne	Retail	Sentinel Sports	Shopping
Jindabyne	Retail	Kosciuszko Brewing Company	Restaurant
Jindabyne	Retail	Sacred Ride	Shopping
Jindabyne	Retail	The Base Ski Service	Service
Jindabyne	Retail	Mitre 10 Jindabyne (Hardware Shop)	Shopping
Jindabyne	Retail	Birchwood Café	Restaurant
Jindabyne	Retail	Jindabyne Brewing	Restaurant
Jindabyne	Retail	The Shed Ski Hire	Service
Jindabyne	Retail	Burger Biz	Restaurant
Jindabyne	Retail	Brumby Bar & Grill	Restaurant
Jindabyne	Retail	ESS Boardstore Jindy (Snowboard)	Shopping
Jindabyne	Retail	Summit Snowsports	Service
Jindabyne	Retail	Gravity Jindabyne	Shopping
Jindabyne	Retail	Cherri Cherri Pow Pow	Shopping
Jindabyne	Retail	Time II Ride	Shopping

Region	Type of space	Business name	Type of business
Jindabyne	Retail	Café Darya	Restaurant
Jindabyne	Retail	Chong Yees	Restaurant
Jindabyne	Retail	Angie's Italian Restaurant	Restaurant
Jindabyne	Retail	Clancy's Brassie	Restaurant
Jindabyne	Retail	The Overflow	Restaurant
Jindabyne	Retail	Clancy's Cocktail Bar	Restaurant
Jindabyne	Retail	Musters Main Bar	Restaurant
Jindabyne	Retail	Snowy Mountains Cookies	Restaurant
Jindabyne	Retail	Rokits Edibes	Restaurant
Jindabyne	Retail	Panorama Café, Bar & Restaurant	Restaurant
Nugget's Crossing	Retail	Takayama Restaurant Bar	Restaurant
Nugget's Crossing	Retail	Woolworths	Shopping
Nugget's Crossing	Retail	Monchichi	Shopping
Nugget's Crossing	Retail	Snowy Mountains Medical Centre	Service
Nugget's Crossing	Retail	Commonwealth Bank (Branch)	Service
Nugget's Crossing	Retail	Westpac Jindabyne (Branch)	Service
Nugget's Crossing	Retail	High Country Outfitters	Shopping
Nugget's Crossing	Retail	Apres-she	Shopping
Nugget's Crossing	Retail	Snuxe active fashion	Shopping
Nugget's Crossing	Retail	Romance Me	Shopping
Nugget's Crossing	Retail	Vanity Hair	Service
Nugget's Crossing	Retail	Bacco Italian Restaurant	Restaurant
Nugget's Crossing	Retail	Barber Andy	Service
Nugget's Crossing	Retail	Snowy Mountains Natural Health and Beauty	Service
Nugget's Crossing	Retail	Jindabyne Pharmacy	Service
Nugget's Crossing	Retail	Eirawen Day Spa	Service
Nugget's Crossing	Retail	The Avenue Hair Artistry	Service
Nugget's Crossing	Retail	Rip Curl	Shopping
Nugget's Crossing	Retail	Wilderness Sport	Shopping
Nugget's Crossing	Retail	First Tracks Snowboards	Shopping
Nugget's Crossing	Retail	Thredbo Centre	Shopping
Nugget's Crossing	Retail	Perisher Ticket Office	Shopping
Nugget's Crossing	Retail	Larry Adler Rent a Ski	Shopping
Nugget's Crossing	Retail	Larry Adler Ski and Outdoor	Shopping
Nugget's Crossing	Retail	The Market Jindabyne	Shopping
Nugget's Crossing	Retail	BWS	Shopping
Nugget's Crossing	Retail	Jindabyne Indoor Heated Pool	Service
Nugget's Crossing	Retail	Alpine Sports	Shopping
Nugget's Crossing	Retail	Jindy Juice Bar	Restaurant
Nugget's Crossing	Retail	Mountain Munchies	Restaurant
Nugget's Crossing	Retail	Dudley's Cafe	Restaurant

Region	Type of space	Business name	Type of business
Nugget's Crossing	Retail	CBD Coffee Shop	Restaurant
Nugget's Crossing	Retail	Sundance Bakery	Restaurant
Nugget's Crossing	Retail	Nimmitabel Bakery	Restaurant
Old Town, Jindabyne	Retail	Raz Tandoori Indian Cuisine	Restaurant
Old Town, Jindabyne	Retail	Kebabz	Restaurant
East Jindabyne	Retail	Jindy Snow Ski Hire	Service
Thredbo	Retail	Lounge Bar	Restaurant
Thredbo	Retail	Eagles Nest	Restaurant
Thredbo	Retail	Kebabz Cafe	Restaurant
Thredbo	Retail	Alfresco Pizzeria	Restaurant
Thredbo	Retail	Keller Bar	Restaurant
Thredbo	Retail	Central Road 2625	Restaurant
Thredbo	Retail	Schuss Bar	Restaurant
Thredbo	Retail	Village Pharmacy Thredbo	Shopping
Thredbo	Retail	Sante Churrasco Brazillian Style BBQ	Restaurant
Thredbo	Retail	The Bakery in the Village	Restaurant
Thredbo	Retail	The Local Pub	Restaurant
Thredbo	Retail	Cascades Restaurant	Restaurant
Thredbo	Retail	Merritts House	Restaurant
Thredbo	Retail	Segreto Restaurant	Restaurant
Thredbo	Retail	Bullhead Bar & Bistro	Restaurant
Thredbo	Retail	Apres Bar – the Denman	Restaurant
Thredbo	Retail	The Terrace – the Denman	Restaurant
Thredbo	Retail	House of Ullr	Restaurant
Thredbo	Retail	Candlelight Restaurant	Restaurant
Thredbo	Retail	Bernti's Brasserie & Grill	Restaurant
Thredbo	Retail	Kareela Hutte	Restaurant
Thredbo	Retail	Black Bear Inn	Restaurant
Thredbo	Retail	Black Sallees	Restaurant
Thredbo	Retail	T Bar	Restaurant
Thredbo	Retail	The Bottleshop	Shopping
Thredbo	Retail	Snowsport Ski Shop	Shopping
Thredbo	Retail	FoodWorks	Shopping
Thredbo	Retail	Avalanche Café	Restaurant
Thredbo	Retail	Alp Thai Asian	Restaurant
Thredbo	Retail	Thredbo burger bar	Restaurant
Thredbo	Retail	Friday Flat, Bar & Bistro	Restaurant
Thredbo	Retail	Donut & Coffee Hut	Restaurant
Thredbo	Retail	Frostbite Kiosk	Restaurant
Thredbo	Retail	Alpine Bar	Restaurant
Perisher	Retail	Sundance Bakehouse	Restaurant

Region	Type of space	Business name	Type of business
Perisher	Retail	Brunelli's Café	Restaurant
Perisher	Retail	Curve Bar & Café	Restaurant
Perisher	Retail	High Ground Coffee Bar	Restaurant
Perisher	Retail	Loco Mexican	Restaurant
Perisher	Retail	Ski Rock Café	Restaurant
Perisher	Retail	Wilderness Sport	Shopping
Perisher	Retail	Perisher Valley Supermarket	Shopping
Perisher	Retail	Powder Inn	Restaurant
Perisher	Retail	The Pub Family Food Court	Restaurant
Perisher	Retail	Perisher Snowsports Hire	Service
Perisher	Retail	Alpine Eyre	Restaurant
Perisher	Retail	Perisher Mid-Station Cafe	Restaurant
Perisher	Retail	Aldo's Cafe & Pizzeria	Restaurant
Perisher	Retail	Man from Snowy River Hotel	Restaurant
Perisher	Retail	Mid Perisher Centre Restaurant, Bar & Grill	Restaurant
Perisher	Retail	JJ's Mountain Kisok	Restaurant
Perisher	Retail	Li'l Orbits Doughnuts	Restaurant
Perisher	Retail	JAX Bar & Café	Restaurant
Perisher	Retail	Avalunch Cafe	Restaurant
Perisher	Retail	Pretty Valley Kiosk	Restaurant
Perisher	Retail	Base 1720 Bar & Restaurant	Restaurant
Perisher	Retail	YAMA noodle bar	Restaurant
Perisher	Retail	Mr Chan Hong Kong Cuisine & Café	Restaurant
Perisher	Retail	Perisher Pizza	Restaurant
Perisher	Retail	Snow Gums Restaurant & Bar	Restaurant
Perisher	Retail	The White Spider	Restaurant
Perisher	Retail	Perisher Pizza and Chicken	Restaurant
Perisher	Retail	Refuel	Restaurant
Perisher	Retail	Snowy Mountains Burgers	Restaurant
Blue Cow	Retail	Blue Cow Bistro	Restaurant
Blue Cow	Retail	Cowpuccino Café	Restaurant
Blue Cow	Retail	Doug's Dogs	Restaurant
Blue Cow	Retail	Holy Cow Cafe	Restaurant
Blue Cow	Retail	Stamping Ground Cafe	Restaurant
Blue Cow	Retail	Top Sport Bar	Restaurant
Blue Cow	Retail	The BBQ	Restaurant
Smiggin Holes	Retail	Pipers Café	Restaurant
Smiggin Holes	Retail	Smiggins Hotel	Restaurant
Smiggin Holes	Retail	Hot Spot Kiosk	Restaurant
Smiggin Holes	Retail	Smiggins Bistro (Overboard)	Restaurant
Dalgety	Retail	Tuscany In Dalgety	Restaurant

Region	Type of space	Business name	Type of business
Dalgety	Commercial	Snowy Vineyard & Microbrewery	Brewery
Guthega	Retail	Burning Log Restaurant	Restaurant
Crackenback	Commercial	Wildbrumby Schnapps Distillery	Brewery
Crackenback	Retail	Crackenback Farm	Restaurant
Crackenback	Retail	Alpine Larder Café	Restaurant
Berridale	Retail	AOK Installations (Blind Shops)	Shopping
Berridale	Retail	The Perfect Piece (Homeware Store)	Shopping
Berridale	Retail	Whisk & Cocoa	Restaurant
Berridale	Retail	Arlberg Ski Centre	Service
Berridale	Retail	Alpen Auto Rentals	Service
Berridale	Retail	Unique Bootique	Shopping
Berridale	Retail	Shut the Gate Wines The Little Grocer	Restaurant
Berridale	Retail	Rossignol Pro Shop + Demo Centre (Ski Shop)	Shopping/Service

Note: All businesses listed for Nugget's Crossing are retail as they are within a shopping centre. We have excluded businesses that are not directly related to tourism such as legal offices, real estate offices and government agencies.

Source: Websites (https://www.thredbo.com.au/, https://www.skicheap.com.au/perisher/perisher-restaurants-and-cafes/, https://www.perisher.com.au/resort-info/know-perisher/restaurants-and-cafe-guide, https://www.skicheap.com.au/perisher/perisher-restaurants-and-cafes/),.

For retail and commercial space, Jindabyne has two Business zonings: zone B2 Local Centre and zone B1 Neighbourhood Centre[45]. Zone B2 Local Centre contains Jindabyne's town centre.

Zone B1 Neighbourhood Centre is a small site in East Jindabyne along Jindabyne Road. This is designed to service the essential needs of the East Jindabyne Community the main commercial centre is the Jindabyne town centre. Under Snowy River Local Environmental Plan 2013 Clause 5.4 limits shops' retail floor space in B1 Zones to 100sqm and supermarkets to 1,000sqm.[46]

Industrial areas

There is only one industrial zone in the Snowy Mountains SAP, Leesville Industrial Estate in Jindabyne, that is relatively developed, of over 100 000 square metres. The estate is mostly populated with light industries and a few retail or commercial businesses. Lack of a significant population-based market and high establishment costs rules out any heavy industry and manufacturing locating in the area[47].

Note that there is a Mitre 10 located in the Jindabyne centre, choosing this as preferable to the industrial estate.

45 Snowy River Shire Council (2005), Snowy River Shire Residential Planning Project, p53.

46 Snowy Monaro Regional Council (2019), Snowy Monaro Region Planning and Land Use Discussion Paper, p65.

47 Snowy River Shire Council (2012), Leesville Industrial Estate Business Case, p14.

Land zoning

Land zoned in terms of square metres and lot numbers in the Snowy Mountains SAP suburbs is shown in table 7.2 and table 7.3.

- There is 138 858 square metres of industrial land, all in Jindabyne, in 57 lots
- There is 79 407 square metres of business land in Jindabyne and 2 443 in East Jindabyne, in 54 and 3 lots respectively
- No other suburbs have industrial or business zoned land
- In comparison, there is ~1.5 million square metres of residential and environmental living zoned land

7.2 Land zoning in the Snowy Mountains SAP area

Suburb	B1	B2	IN1	IN2	Residential And environmental living
	m2	m2	m2	m2	m2
Jindabyne	0	79 407	138 858	0	856 519
Kosciuszko National Park	0	0	0	0	233 424
East Jindabyne	2 443	0	0	0	342 536
Cootralantra	0	0	0	0	511
Crackenback	0	0	0	0	29 003
Dalgety	0	0	0	0	49 962
Moonbah	0	0	0	0	176 958
Kalkite	0	0	0	0	0

Source: The CIE based on data from the NSW Land Valuer General.

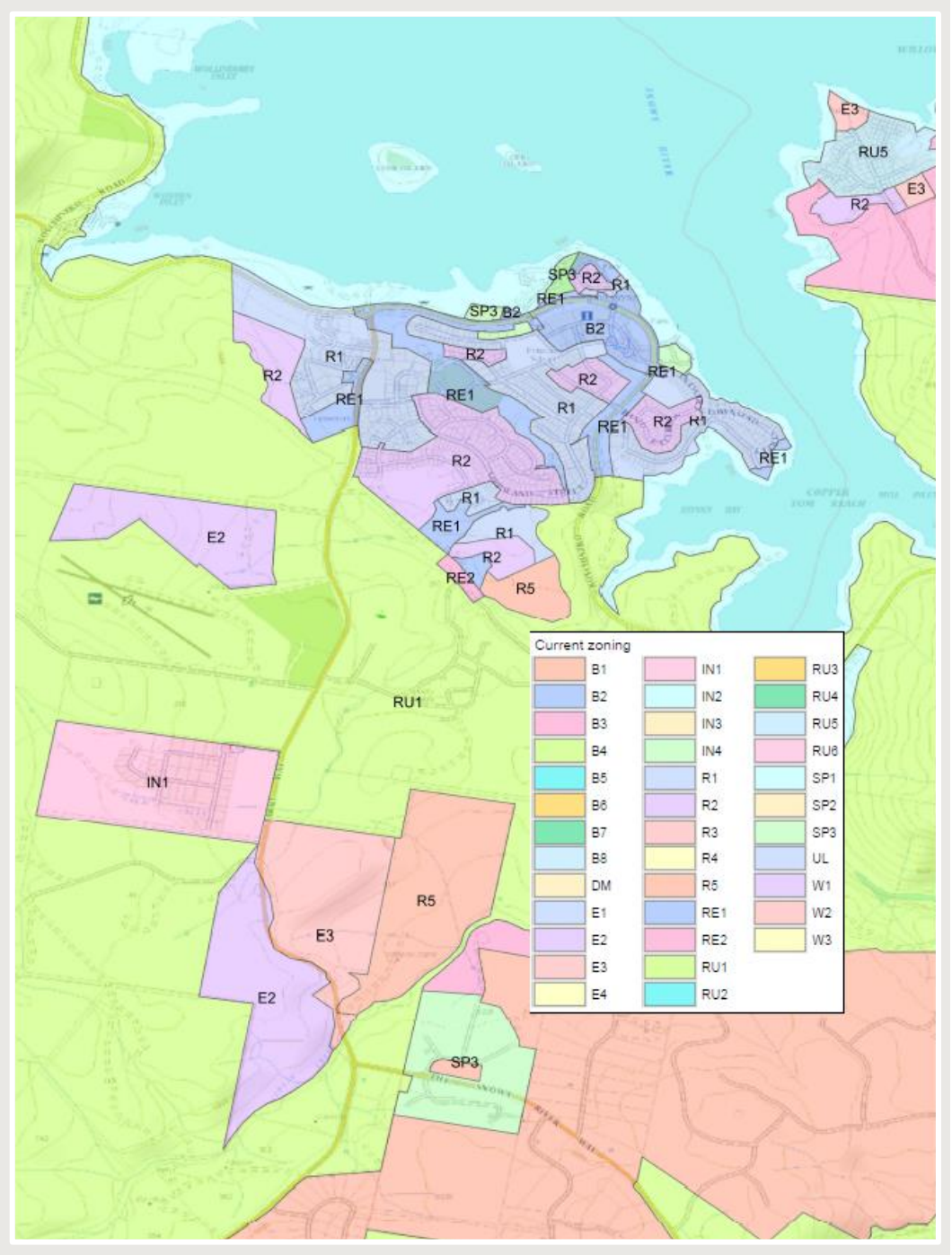
7.3 Lot numbers in the Snowy Mountains SAP area

Suburb	B1	B2	IN1	IN2	Residential And environmental living
	No.	No.	No.	No.	No.
Jindabyne	0	54	57	0	952
Kosciuszko National Park	0	0	0	0	168
East Jindabyne	3	0	0	0	167
Cootralantra	0	0	0	0	5
Crackenback	0	0	0	0	127
Dalgety	0	0	0	0	58
Moonbah	0	0	0	0	63
Kalkite	0	0	0	0	0

Source: The CIE based on data from the NSW Land Valuer General.

The zoning map shown in chart 7.4 show the location of the business and industrial zones.

7.4 Zoning of Jindabyne and East Jindabyne



Data source: NSW DPIE.

Drivers of land and floor space requirements

The main driver of floor space for retail in the Snowy Mountains SAP area is winter tourism demand and expenditure. However, the extent to which businesses will expand capacity tends to be limited by all year-round value. For example, the supermarket at Jindabyne is over-capacity during winter, with many people wanting to purchase at a

similar time (straight after skiing) and high demand. Expanding the supermarket to cope with this peak is commercially unpalatable, given low use the rest of the day and the rest of the year.

Restaurant and food demand is also heavily influenced by the operating models of the accommodation providers. Where chalets or other accommodation providers supply food then this reduces the demand on external food venues. This is a common model in the resorts.

For industrial land, this is driven partly by the resident population, partly by the visitation demand and partly by the level of growth (which impacts construction and renovation businesses).

Forecasts of land and floor space requirements

To project land use requirements, we have used forecasts of population and visitation demand for the winter season, to provide percentage increases under the Snowy Mountains SAP scenario by 2036 and 2061 (table 7.5).

Note that we do not know how much of existing land and floor space is used versus vacant.

7.5 Land growth requirements

Type of land	Assumed driver	Current zoned land	Increase to 2036	Increase to 2061
		m2	Per cent	Per cent
Industrial	Population	138 858	66	82
Business	Winter demand	81 850	78	52

Source: The CIE.

A Conceptual framework for visitation forecast

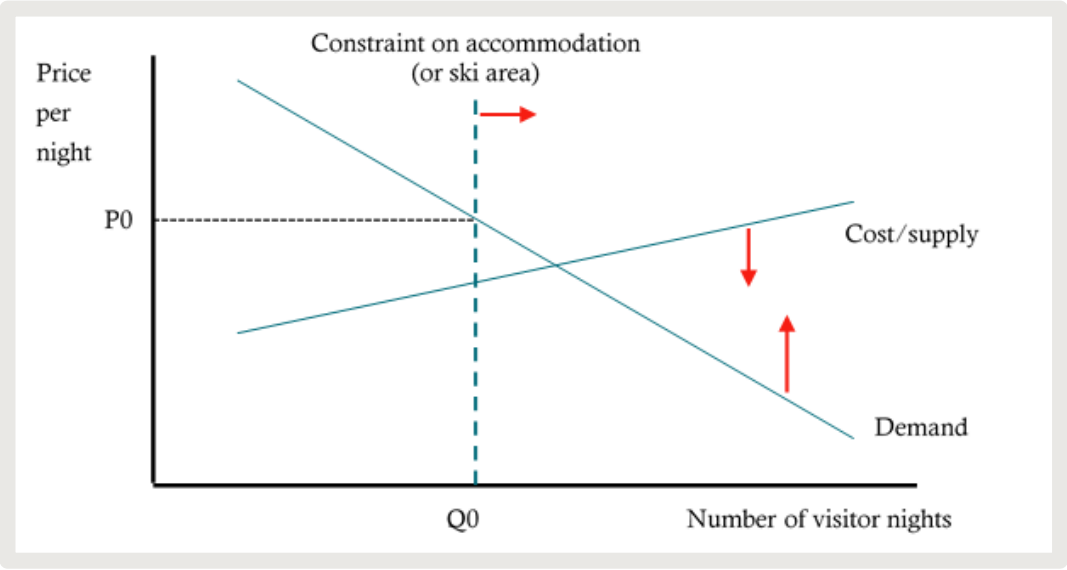
Conceptual framework

The economics of visitation in the Snowy Mountains reflects a combination of:

- a demand curve for visitation, which is different at different times of year, and also impacted by factors such as snow cover
- an underlying supply or cost curve for visitors
- a set of constraints around the amount of visitation, such as restrictions on capacity. These have the effect of increasing prices and reducing visitation.

For example, using these impacts are shown in the market for visiting the Snowy Mountains in winter in chart A.1. The existing price is P0 and existing number of visitor nights is Q0. The NSW Government is seeking to do some or all of the red arrows in this chart. The overall impact will be some change in the price of visiting the Snowy Mountains and some change in the number of visitor nights, depending on these inter-relationships. Note that the economic benefits would also be directly related to these impacts, as cost benefit analysis is built off understanding demand and supply.

A.1 Supply and demand for winter tourism

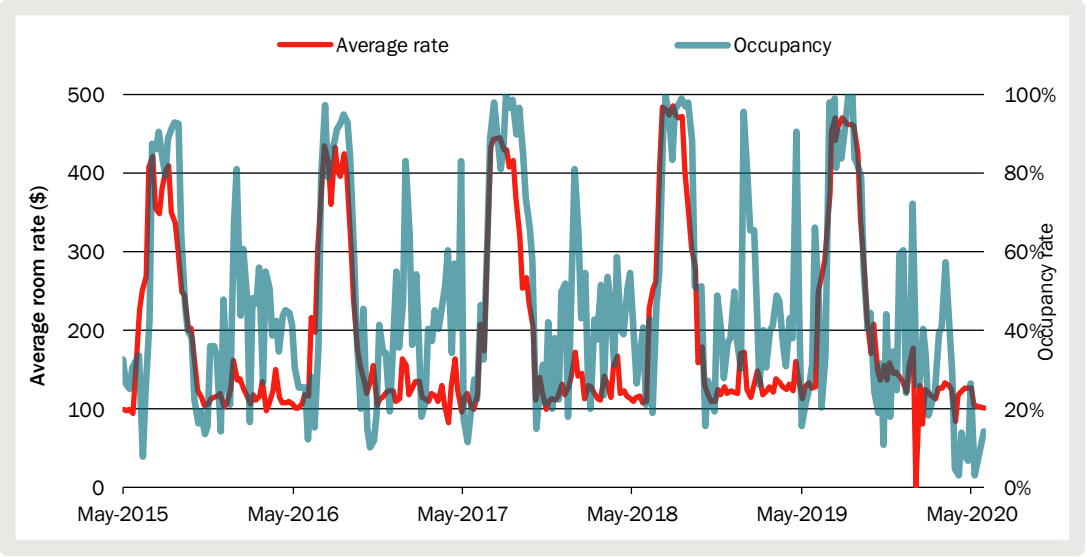


Data source: The CIE.

Estimating the supply curve

The supply curve represents how rapidly costs and prices increase as more people demand going to the Snowy Mountains. Currently, there is a close relationship across the year between prices (such as accommodation prices) and occupancy — see example in chart 1.4. Within a season the relationship is weaker. For example, even where relatively high occupancy is achieved in summer, room rates have remained fairly low.

A.2 Occupancy and average rates for accommodation in the Snowy Mountains



Data source: Confidential data provided to CIE.

The slope of the supply curve has the effect of determining how much changes in demand translate into more visitors versus higher prices for visitors. A very steep supply curve would lead to a higher price, but not much impact on visitor numbers and nights. A flat supply curve leads to more visitors at a similar price.

The visitation model has built in the functionality to choose different supply curves. However, at this stage we have run scenarios assuming that the supply curve is flat. This is aligned to a long term view that additional tourism capacity can be brought on line at a similar cost regardless of the amount.[48]

The 'price' used for winter and non-winter demand is based on past data collated on expenditure, as set out in table 6.12. The price of accommodation, and overall expenditure per night, follows the same pattern as occupancy. During the peak season, expenditure per visitor night is almost $300, compared to ~$150 per night in other seasons.

48 This is also equivalent to assuming constant returns to scale.

A.3 Seasonality

Quarter	Visitors	Visitor nights	Regional expenditure	Expenditure per night
	000	000	$m	$
March	76	268	37	138
June	71	222	37	167
September	302	1 143	329	288
December	70	226	39	173

Note: For four year to 2017/2018.

Source: Hill PDA, p. 42.

Estimating the demand curve

Allocating demand across the year and across locations

The Economic Strategic Context Report for the Snowy Mountains SAP set out the highly seasonal profile of tourism demand in the region. For the modelling, we allocate existing demand out to three destinations and across seasons based on:

- bed numbers for the KNP areas and an estimated bed number for Jindabyne based on achieving the same average occupancy
- TRA data on trips ending in each month, with July, August and September allocated as winter and the remaining months allocated as non-winter.

The estimated allocation is shown in table A.4.

A.4 Allocation of visitors across destinations

Destination	Share of trips		Implied visitor nights		Implied occupancy		Visitor beds
	Winter	Non-winter	Winter	Non-winter	Winter	Non-winter	
	Per cent	Per cent	Per cent	Per cent	Per cent	Per cent	No.
Jindabyne	42.9	55.0	518 932	497 132	74.0	23.9	7 627
Perisher	30.0	5	362 235	45 194	74.0	3.1	5 324
Thredbo	27.1	40.0	327 944	361 551	74.0	27.5	4 820

Note: Perisher includes Charlottes Pass, Guthega, Smiggins, Ski Rider; Jindabyne includes all areas outside of KNP.

Source: The CIE.

The slope of the demand curve

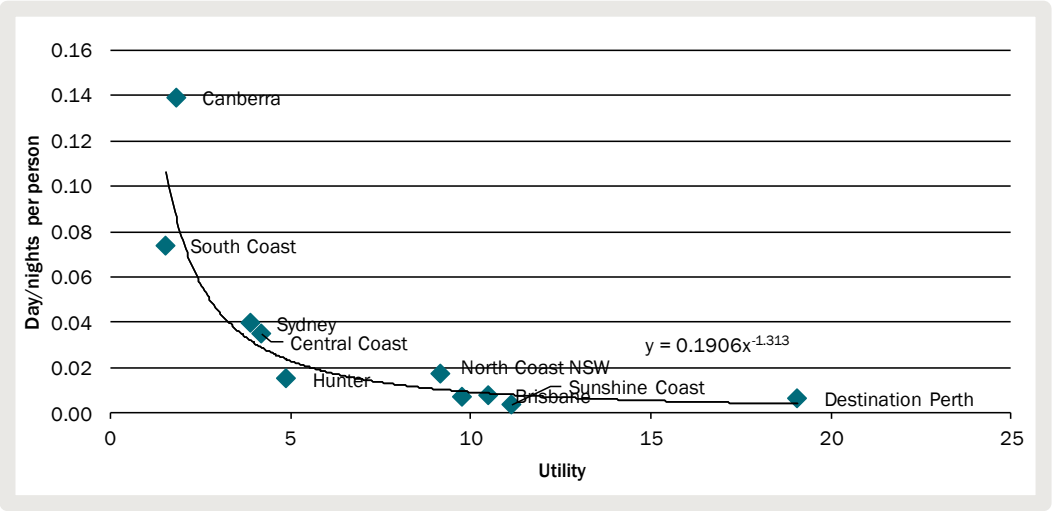
The slope of the demand curve is an important driver of the changes in visitation that occur under a SAP. The slope of the demand curve informs the additional number of visitors associated with changes in price. Price based impacts can manfiest in a number of ways through the Snowy Mountains SAP and these include:

- cost changes associated with accessing the Snowy Mountains and travelling within the region

- changes in the price of accommodation, which would be impacted by supply constraints

We have estimated the slope of the demand curve based on the amount of visitor days and nights spent in the Snowy's from different locations and related this to the cost of accessing the region in both winter and non-winter periods. Chart A.5 presents this relationship in winter. A lower utility score is associated with a lower cost of accessing the region and a higher propensity to visit. Using this relationship, we have estimated a price elasticity of demand of -0.51, which indicates a 0.51 per cent reduction in trip demand for every 1 per cent increase in price.

A.5 Visits per person and utility (cost of travel) — winter



Data source: The CIE, based on data from TRA and Google Maps.

For the general demand curve for other factors, we have used the demand response based on the equivalence of a reduction in time from Sydney (as the main market) converted to a cost.

Capacity constraints on the mountain

The bed limits noted for KNP are set out in table A.6, as well as the actual beds. Currently resorts are not at their permitted bed limits. However, to gain approval for new beds is not automatic.

A.6 Bed limits in KNP

Resort	Actual beds No.	Beds permitted No.
Thredbo	4 356	4 820
Perisher	2 789	3 367
Charlottes Pass	611	Na
Guthega	272	330
Smiggins	965	1 016

Note: For our analysis. we include Charlottes Pass, Guthega and Smiggins as part of Perisher.

Source: https://www.environment.nsw.gov.au/-/media/OEH/Corporate-Site/Documents/Parks-reserves-and-protected-areas/Alpine-resorts/schedule-8-accommodation-bed-numbers-kosciuszko-national-park-2019.pdf?la=en&hash=970FAE57726E31398FE0A31E8EE68A280269B9F5.

The model base case does not allow for usage to exceed the bed limits. If this happens then people are redirected into Jindabyne. There is an assumption that shifting development outside of the mountains leads to a loss of visitation. The assumption for this is that 75 per cent of people end up in Jindabyne and 25 per cent no longer visit the area. This is a value judgement based on the responsiveness of demand in the area in general and the historical patterns.

The area of the resort leases is also limited. Bed limits and resort areas are potentially a hard regulatory constraint for on-mountain accommodation and ski area. However, it appears that Thredbo and Perisher are not currently at their bed limit. Rather increased bed capacity has not happened because of a lack of infrastructure such as sewage treatment, or a lack of a commercial case for expansion, or other reasons that we need to understand. We also need to confirm if resorts are fully using their allowable ski areas.

There are also softer constraints, such as the amount of car parking on the mountain. This can be varied by the resorts, through planning application, if approved. Such capacity constraints would ideally be included in the model, and varying these an action that could be pursued as part of the Snowy Mountains SAP.

There are no limitations on the number of people skiing or snowboarding per day. This means that additional demand can spillover into accommodation outside of the National Park, such as Jindabyne. Of course, Jindabyne itself may also act as a destination for those seeking more economical accommodation options compared to the on-mountain resorts.

The current model has only a limited set of capacity constraints due to information being required from the other teams around transport and sewage capacity constraints that has not yet been obtained. Once implemented, this would reduce the base case forecasts.

B Visitation model appendix – developing the Base Case

The Base case visitation scenario reflects what is expected to occur in the absence of the Snowy Mountains SAP. That is, visitation that will occur based on current trends and pre-committed interventions.

Starting point for visitation projections

In order to provide a forecast of visitation, we must first specify a starting point for the current level of visitors to the Snowy Mountains Snowy Mountains SAP area. We do this for a number of different visitation indicators, including:

- the number of domestic overnight visitors
- domestic day visitors
- the total number of domestic nights
- international visitors

We also specify these levels for each season including Winter (July, August and September) and non-winter (all other months except those designated as winter months). In addition to visitation indicators, we also estimate spend per visitor type so that we can forecast future visitation related expenditure in the area.

Geographical basis for visitation forecasts

For domestic visitation estimates, we model visitation from each origin to a set of Snowy destinations. The geography of these regions follows the Tourism Region basis set by Tourism Research Australia. TRA defines constructs tourism regions from allocations of whole Statistical Area level 2s (SA2s), in conjunction with consultation with relevant national and state/territory tourism organisations[49]. Tourism regions of origin include regions from all Australian states as well as the Northern Territory. While international visitors may come from any number of countries, for our modelling purposes international origins is treated as one origin region.

In the model, destinations reflect the region where visitors seek accommodation, and these include both on-mountain and off-mountain locations including:

- Thredbo
- Perisher — which includes Charlottes Pass, Sponars and Ski rider
- Jindabyne

The tourism regions included for origins include those specified in table B.1

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49 See, https://www.tra.gov.au/regional/tourism-regions/tourism-regions

B.1 Regions of origin

Tourism region	State	Tourism region	State
Sydney	NSW	Adelaide	South Australia
Blue Mountains	NSW	Adelaide Hills	South Australia
Capital Country	NSW	Barossa	South Australia
Central Coast	NSW	Clare Valley	South Australia
Central NSW	NSW	Eyre Peninsula	South Australia
Hunter	NSW	Fleurieu Peninsula	South Australia
New England North West	NSW	Limestone Coast	South Australia
North Coast NSW	NSW	Murray River, Lakes and Coorong	South Australia
Outback NSW	NSW	Riverland	South Australia
Riverina	NSW	Yorke Peninsula	South Australia
Snowy Mountains	NSW	Flinders Ranges and Outback	South Australia
South Coast	NSW	Kangaroo Island	South Australia
The Murray	NSW	Destination Perth	Western Australia
Melbourne	Victoria	Australia's Golden Outback	Western Australia
Ballarat	Victoria	Australia's North West	Western Australia
Bendigo Loddon	Victoria	Australia's South West	Western Australia
Central Highlands	Victoria	Australia's Coral Coast	Western Australia
Central Murray	Victoria	Hobart and the South	Tasmania
Geelong and the Bellarine	Victoria	East Coast	Tasmania
Gippsland	Victoria	Launceston and the North	Tasmania
Goulburn	Victoria	North West	Tasmania
High Country	Victoria	West Coast	Tasmania
Lakes	Victoria	Darwin	NT
Macedon	Victoria	Barkly	NT
Mallee	Victoria	Alice Springs	NT
Melbourne East	Victoria	Litchfield Kakadu Arnhem	NT
Murray East	Victoria	Katherine Daly	NT
Peninsula	Victoria	Lasseter	NT
Phillip Island	Victoria	MacDonnell	NT
Spa Country	Victoria	Canberra	ACT
Upper Yarra	Victoria	International	
Great Ocean Road	Victoria	Townsville	Queensland
Western Grampians	Victoria	Outback Queensland	Queensland
Wimmera	Victoria	Sunshine Coast	Queensland
Brisbane	Queensland	Tropical North Queensland	Queensland
Bundaberg	Queensland	Whitsundays	Queensland

Tourism region	State	Tourism region	State
Southern Queensland Country	Queensland	Capricorn	Queensland
Fraser Coast	Queensland	Gladstone	Queensland
Gold Coast	Queensland	Mackay	Queensland

Source: Tourism Research Australia.

Starting value of visitors

Our visitation forecast spans the period 2019 to 2061. To arrive at a starting value for the number of visitors from each tourism region origin, we use data from Tourism Research Australia on the historical number of day trips, overnight trips, total domestic nights and international trips to the Jindabyne-Berridale SA2. These data include observations on the number of visitors at the monthly level and are split by the type of mode used to visit the area (such as by car, public transport or air).

Because the dataset is built up from survey information and is reported at the monthly level, there is a degree of volatility over time in terms of the number of domestic visitors coming from different origins. To reduce this volatility, we apply the proportion of visitors to the region from each origin that occur over a 10-year period and apply this to an average level of monthly visitation for the most recent 3 years (2017 to 2019 inclusive).

The starting points for the number of visitors by visitor type and tourism expenditure by season are set out in table B.2. These values are further disaggregated at the origin-destination level in the visitation model.

Visitation and tourism expenditure is higher in the winter period, with around over 405 000 visitors and $365 million in tourism expenditure over the period compared with over 297000 visitors and $139 million in the non-winter months.

B.2 Starting values for visitors and tourism expenditure — 2019

	Winter	Non-winter	Total
	No.	No.	No.
Visitors			
Overnight visitors	340 217	243 748	**583 965**
Visitor nights	1 216 257	857 582	**2 073 839**
Day trip visitors	65 332	53 528	**118 860**
Total visitors	405 548	297 276	**702 825**
	$m	$m	$m
Expenditure			
Day trip expenditure	8	4	**12**
	$m	$m	$m
Overnight expenditure	357	136	**493**
Total expenditure	365	139	**504**

Source: The CIE, based on data from Tourism Research Australia.

Table B.3 presents the starting value by each destination for winter and non-winter. The allocation process is set out in the previous chapter. Note that people, nights and expenditure are allocated to where people are accommodated. For example, a person staying in Jindabyne but skiing at Perisher will have their expenditure allocated to Jindabyne.

B.3 Starting value for visitors and tourism expenditure, by destination — 2019

	Winter			Non-winter		
	Jindabyne	Thredbo	Perisher	Jindabyne	Thredbo	Perisher
	No.	No.	No.	No.	No.	No.
Visitors						
Overnight visitors	147 692	90 453	102 071	134 061	97 499	12 187
Visitor nights	527 992	323 366	364 900	471 670	343 033	42 879
Day trip visitors	0	32 666	32 666	13 382	37 470	2 676
Total visitors	147 692	123 119	134 737	147 443	134 969	14 864
	$m	$m	$m	$m	$m	$m
Expenditure						
Day trip expenditure	0	4	4	1	3	0
Overnight expenditure	155	95	107	75	54	7
Total expenditure	155	99	111	75	57	7

Source: The CIE.

Drivers of visitation and expenditure

There are a range of variables we include in our visitation model that we expect to drive Base case visitation and expenditure growth over time.

Population growth

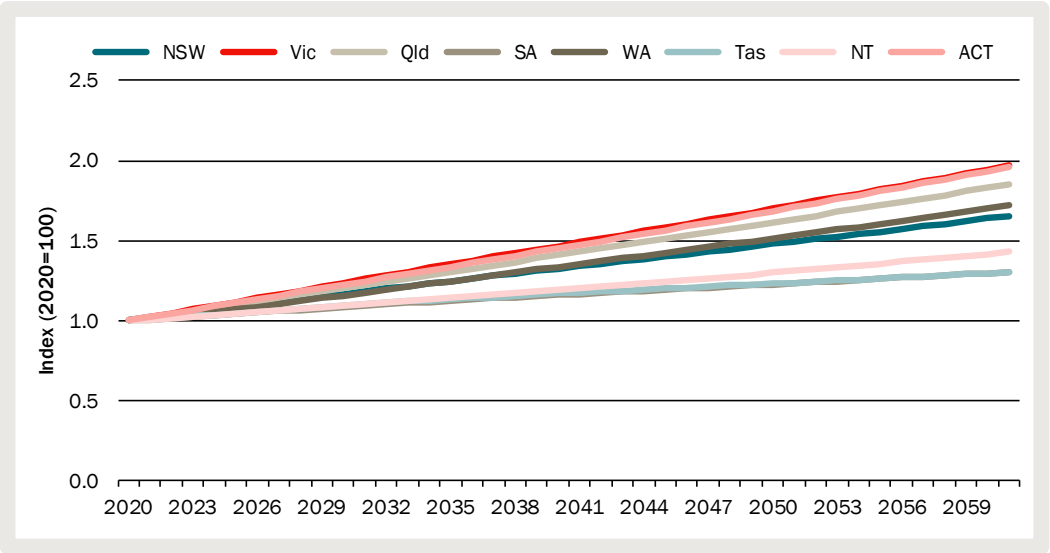
Population growth is an external or exogenous driver of visitation since all else being equal, the number of people that would visit increases as the size of the market increases (e.g. if 4 per cent of visitors come from Sydney, then as Sydney's population grows then so does the number of people that visit from Sydney at that same rate). We increase visitation from each origin by the rate of expected population growth for that origin. Since the increase in visitation resulting from population growth is exogenous, the actual number of new visitors is determined after accounting for price changes that occur through demand and supply dynamics.

Our Base case assumption for population growth and its impacts on visitation includes the effects of Covid-19, however we estimate the Base case scenario without Covid-19 in order to isolate the impact Covid-19 has on visitation.

Chart B.4 reflects the ABS population growth projections for each state to 2061. The ABS produces population projections between 2017 and 2066 for capital cities and states.

We apply the relevant growth projection to each of the tourism regions we use as origins in the model. For international visitors, we assume a growth rate equal those experienced by Sydney and Melbourne.

B.4 Assumed growth rate by State – ABS population projections



Data source: ABS population projections 2016-2066, http://stat.data.abs.gov.au/index.aspx?DatasetCode=POP_PROJ_REGION_2012_2061

To account for the impact of COVID-19 on population growth, we apply a recent estimate by NSW Government[50] on the impact of COVID-19 on population growth in NSW. It is forecasted that population will be 6.3 per cent lower by 2041 in NSW. Applying this change to the ABS time series, the compound annual growth rate of population falls from 1.42 per cent per year to 1.12 per cent. We have applied the proportional change in growth to the other regions to estimate the impact of COVID-19 across Australia. Table B.5 shows that by 2061, population is lower across all states than it would have been without COVID-19.

B.5 Impact of COVID-19 on 2061 population

State	Population reduction by 2061 Per cent
NSW	-0.2%
Vic	-0.3%
Qld	-0.3%
SA	-0.1%
WA	-0.2%
Tas	-0.1%
NT	-0.2%
ACT	-0.3%

Source: CIE calculations.

50 NSW Government preliminary projections on COVID-19 on population growth

Income growth

While overall tourism expenditure in the Snowy Mountains will increase with more visitation, the average amount spent per person over time is driven by changes in income. Tourism expenditure per person varies by trip type (overnight or day trip) and by season (winter and non-winter).

We base the starting value for tourism spend per person on recent work by LEK[51] and this includes:

- $294 per visitor night in winter and $158 per visitor night in non-winter
- $125 per day trip in winter and $67 per day trip in non-winter

We project tourism spend per person to grow based on recent forecasts of per capita disposable income by the RBA[52] for both a COVID-19 and non-COVID-19 scenario. We base the Non-COVID scenario on the forecasts produced as part of the February 2020 Statement of Monetary policy (prior to the large-scale outbreak in Australia) and the COVID scenario on a more recent forecast in the May Statement of Monetary policy.

B.6 RBA forecast real household disposable income

Period	Non-COVID-19 Per cent	COVID-19 Per cent
Dec-19	1.6	1.8
Jun-20	1.5	-8
Dec-20	1.4	-8
Jun-21	2.2	6
Dec-21	3.3	8
Jun-22	3	6

Source: RBA Statement of Monetary Policy February 2020, available at https://www.rba.gov.au/publications/smp/2020/feb/forecasts.html , RBA Statement of Monetary Policy May 2020, available at https://www.rba.gov.au/publications/smp/2020/may/forecasts.html

After adjusting to a per capita basis, the implied growth path of real disposable income per capita is 0.49 per cent without the impacts of COVID-19and -1.25 percent with the impacts of COVID-19. We assume that the negative impacts of COVID-19 on income last between 2020 and 2024, before converging back to trend growth of 0.49 per cent (table B.7).

51 Numbers were derived from the LEK visitation model 25 November 2019

52 Growth rates were based on forecasts of real household disposable income from December 2019 to June 2022 as part of the RBA statement of monetary policy, Feb 2020 and May 2020.

B.7 Forecast change in tourism spend per person by trip type

Year	Winter		Non-winter	
	Overnight spend $/night	Day trip spend $ per/day	Overnight spend $/night	Day trip spend $ per/day
2019	294	125	158	67
2020	294	125	158	67
2024	279	118	150	64
2028	312	132	168	71
2032	324	138	174	74
2036	337	143	182	77
2046	373	158	201	85
2061	433	184	233	99

Source: The CIE.

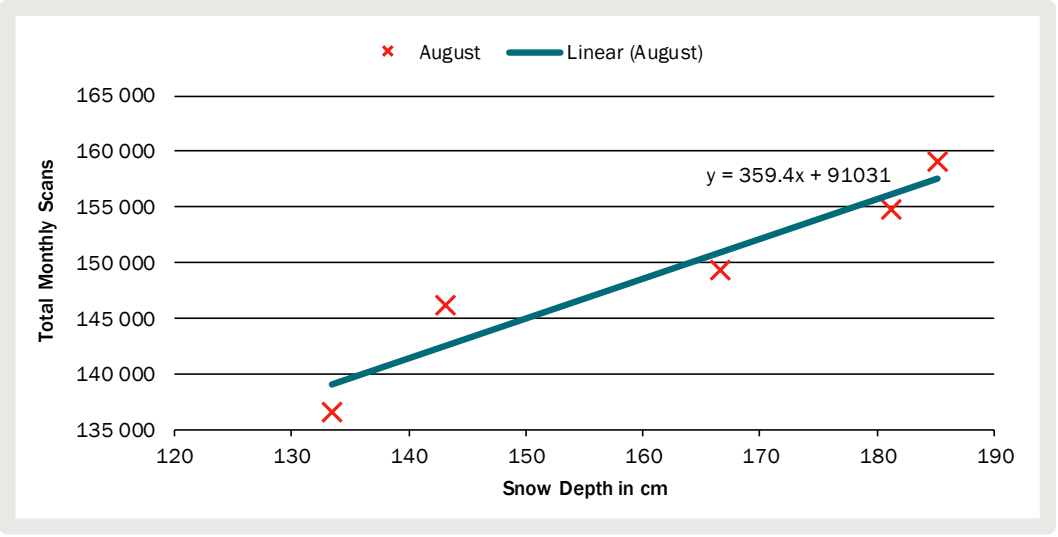
Climate change

Climate change is expected to materially impact the Snowy Mountains region. A 2017 combined study by researchers at the Climate Change Research Centre UNSW and the Office of Environment and Heritage and Department of Planning and Environment estimated that by 2039 snow depth in the region will fall by 16 per cent from levels seen in 2020 and by 59 per cent by 2079.

There is a positive relationship between on-mountain winter activity (such as skiing) and snow depth. Analysis of time series for daily ski lift scanner data snow depth measurements at Spencer's creek made by Snowy Hydro over time show a strong association between ski lift usage and snow depth, with activity peaking at around the same time snow depths are at their highest.

Using the estimated relationship and applying a 59 per cent reduction in snow depth by 2079, we estimate a 62 per cent reduction in snow-based activity (total predicted scans falls from 149 000 scans to 56 700). We apply this reductor as a negative demand impact in the visitation model by assuming that a 2 per cent reduction in visitation per year from 2040 onwards.

B.8 Relationship between winter activity and snow depth



Data source: Snowy Hydro Snow depths data, available at https://www.snowyhydro.com.au/generation/live-data/snow-depths/ , Ski lift data.

Transport costs

A key feature that drives holiday destination choice is the cost associated with travelling to that destination. As part of our visitation forecast model, we estimate the transport costs associated with travelling to each of the Snowy destinations, including both time costs and financial costs from each origin.

These costs vary by mode, which include travel by private vehicle, public transport or via air. Typically, travelling by car involves physical time spent driving in a vehicle, as well as fuel and parking costs. In contrast, travelling by air involves first travelling to the nearest airport, the time spent boarding and being in-flight (either to the destination airport or to a connecting flight at another airport) as well as air fares. The cost effectiveness of any one particular mode can vary depending on where people are travelling from. A complete list of the costs associated with each mode of travel is presented in table B.9.

B.9 Financial and time costs by mode

Mode	Types of costs
Private car	▪ Car in-vehicle travel time ▪ Vehicle operating costs (e.g. fuel) ▪ Road tolls and parking costs
Air	▪ Journey time to airport ▪ Car park costs ▪ Pre-flight time (e.g. check in time, wait time) ▪ Frequency of available flights ▪ Time spent in-flight ▪ Air fare ▪ Egress time (from airport to destination) ▪ Egress fare (e.g. taxi/car hire charge)
Public transport	▪ In-vehicle time (e.g. time on bus) ▪ Waiting time ▪ Transport fare (e.g. coach fare) ▪ Boarding penalty

Source: The CIE.

Since travel costs involve a mixture of time costs and financial costs, we aggregate these into a single measure with the purpose of being able to compare the total cost of each mode consistently. To do this, we calculate a total time value known as the generalised cost of travel and this involves denominating each cost component by a value of time parameter. We assume a value of travel time of $17.72 per hour per person. This is based on the Transport for NSW Principles and Guidelines for Economic Appraisal parameters[53]. Since journeys to the Snowy Mountains are much longer than the typical local-based journeys people undertake each day, we apply a 100 per cent value of time adjustment to reflect the premium associated with travelling long distances. This premium also accounts for the different socioeconomic status of those that can afford to holiday in the region (and therefore would value their time at a higher rate than those who cannot).

In order to aggregate the financial and non-financial time-based costs on a consistent basis, we combine the various components of costs into generalised time. This involves converting financial costs into time costs using a particular value per hour of time for private (non-business) travel. We assume a value of travel time of $17.72 per hour per person. This is based on the Transport for NSW Principles and Guidelines for Economic Appraisal parameters[54].

53 TfNSW, Principles and Guidelines for Economic Appraisal of Transport Investment and Initiatives – Economic parameter values 9 June 2020, available at https://www.transport.nsw.gov.au/projects/project-delivery-requirements/evaluation-and-assurance/technical-guidance

54 TfNSW, Principles and Guidelines for Economic Appraisal of Transport Investment and Initiatives – Economic parameter values 9 June 2020, available at

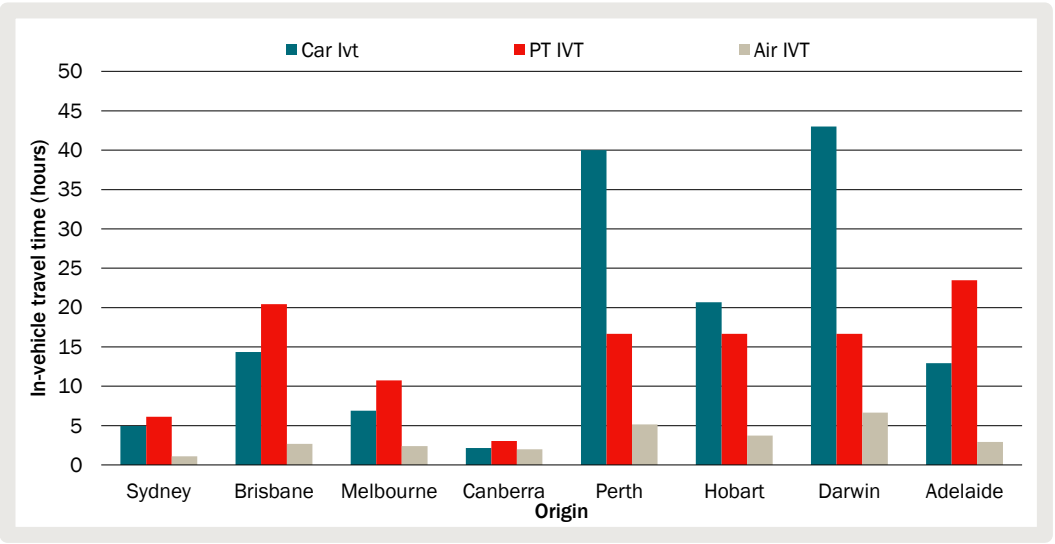
Intraregional travel costs

Transport costs involve both travel to and within the Snowy Mountains. For example, a visitor might have travelled from Sydney to stay in Jindabyne, with the ultimate purpose of skiing in Thredbo. Where the place of accommodation differs to place of activity, there will be additional travel involved to reach the ultimate destination where activity takes place (e.g. for each night spent in Jindabyne, there will be travel to and from Thredbo to go skiing each day). The final component of transport costs therefore involves travel within the Snowy mountains itself, either by car or by available public transport (e.g. the Ski Tube).

Base case transport costs

The in-vehicle travel times between each major city and the Snowy Mountains is presented in chart B.10. It takes around 5 hours to travel between Sydney and Thredbo by car and road based public transport, and just over an hour by air. In contrast, road-based travel from origins such as Perth and Darwin are excessively high, meaning very few people use these modes to reach the Snowy Mountains.

B.10 In-vehicle travel time to Snowy Mountains (Thredbo) — Base case



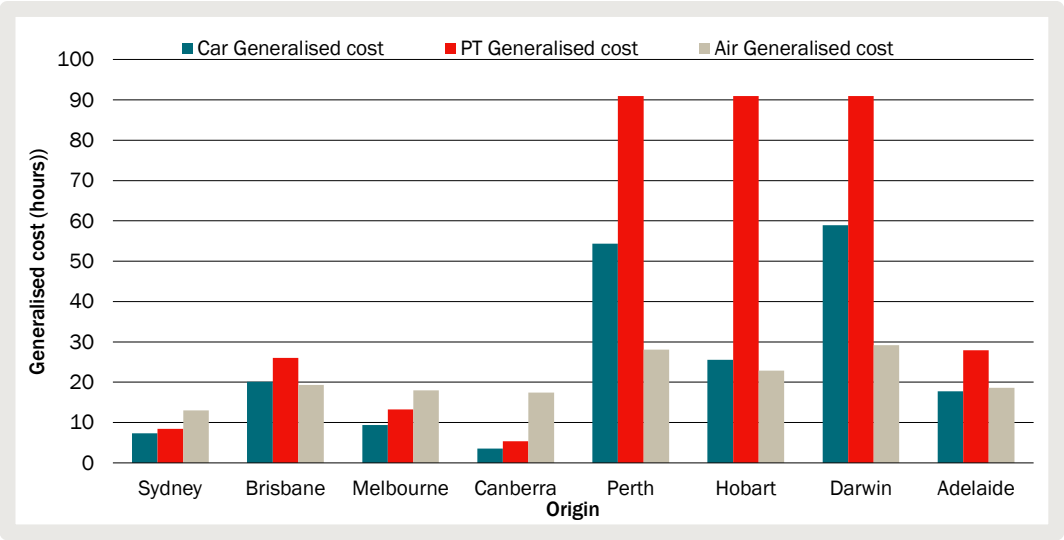
Data source: The CIE.

Once taking into consideration all of the other costs involved in a journey, such as access, egress, financial costs (e.g. tolls and fares), the generalised cost of a journey can be calculated (chart B.11). For example, while travel by air involved the shortest amount of physical time spent in transit between Sydney and the nearest airport in Cooma, it is relatively more expensive compared to travel by car and public transport after accounting for extra time costs associated with accessing Sydney Airport and the journey between Cooma and Thredbo.

https://www.transport.nsw.gov.au/projects/project-delivery-requirements/evaluation-and-assurance/technical-guidance

For origins further away such as Perth, Darwin and Brisbane, air travel is comparatively cheaper, although these journeys first involve catching a plane to Sydney before transferring onto a direct flight to Cooma.

B.11 Generalised cost to Thredbo — Base case



Data source: The CIE.

Based on these costs, mode share is car dominant from origins such as Sydney and Canberra, with higher mode shares from places such as Brisbane, Perth and Darwin (table B.12). These mode shares have been calibrated to match existing travel patterns set out in survey data from Tourism Research Australia (table B.13). The limited sample size of travellers from some origins can lead to unrealistic mode shares (e.g. 57 per cent car mode share from Perth). In these instances, we have made adjustments to reflect the fact that this would not be representative of the typical visitor. It is likely that currently people coming from these origins are on larger trips, such as touring around Australia.

B.12 Mode share from each major city — model prediction

Origin	Car	Public transport	Air
	Per cent	Per cent	Per cent
Sydney	96.6	1.3	2.1
Brisbane	69.2	0.0	30.8
Melbourne	99.6	0.1	0.3
Canberra	97.7	2.3	0.0
Perth	0.0	0.0	100.0
Hobart	50.1	0.0	49.9
Darwin	0.0	0.0	100.0
Adelaide	83.3	0.0	16.7

Source: The CIE.

B.13 Mode share from each major city — Tourism Research Australia survey data

Origin	Car	Public transport	Air
	Per cent	Per cent	Per cent
Sydney	92.7	5.7	1.6
Brisbane	51.1	13.3	35.6
Melbourne	87.2	3.8	9.0
Canberra	97.5	2.5	0.0
Perth	57.8	19.2	23.0
Hobart	60.2	9.7	30.1
Darwin	24.8	36.0	39.2
Adelaide	84.1	6.4	9.4

Source: Tourism Research Australia.

Base case visitation forecasts

With an understanding of the drivers of visitation under the base case, we can project visitation and tourism expenditure over time to 2061. Our base case includes the impact of climate change on visitation as well as COVID-19 on the future number of visitors driven by population growth and tourism expenditure driven by income growth.

Visitation and tourism expenditure is forecast to increase to just before 2040 and then begins to decline due to the impacts of climate change on snow depths, leading to a decrease in demand for winter activities such as skiing (table B.14). Following the impact of climate change, visitation by 2061 is slightly below 2020. Tourism expenditure is higher due to a higher spend per person for those that do visit (driven by higher income growth).

B.14 Base case visitation and expenditure forecast — Winter

	2019	2024	2028	2032	2036	2046	2061
	No.	No.	No.	No.	No.	No.	No.
Visitors							
Overnight visitors	340 217	357 590	367 377	376 130	383 946	376 241	338 449
Visitor nights	1 216 257	1 276 894	1 310 969	1 341 372	1 368 399	1 338 897	1 201 913
Day trip visitors	65 332	67 918	69 207	70 332	71 321	71 079	66 813
Total visitors	405 548	425 508	436 584	446 463	455 267	447 319	405 262
	$m	$m	$m	$m	$m	$m	$m
Expenditure							
Day trip expenditure	8	8	9	10	10	11	12
Overnight expenditure	357	357	408	435	462	499	520
Total expenditure	365	365	418	445	472	510	532

Source: The CIE.

Non-winter demand in contrast is projected to increase over the entire forecast horizon from around 297 300 visitors in 2019 to 506 800 visitors by 2061 while tourism

expenditure similarly increases over the same period. Non-winter visitation is not impacted by climate change in the same way, since visitors do not undertake snow-based activities outside of peak winter months.

B.15 Base case visitation and expenditure forecast — Non-winter

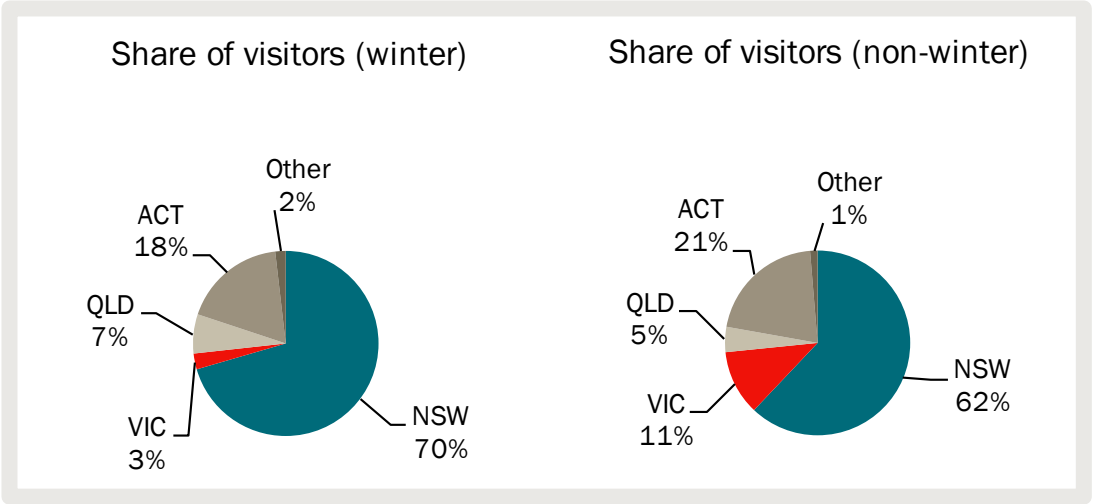
	2019	2024	2028	2032	2036	2046	2061
	No.	No.	No.	No.	No.	No.	No.
Visitors							
Overnight visitors	243 748	295 122	328 447	340 995	353 069	381 870	425 238
Visitor nights	857 582	1 047 972	1 171 306	1 216 646	1 260 374	1 364 982	1 522 720
Day trip visitors	53 528	57 236	60 084	62 845	65 507	71 884	81 517
Total visitors	297 276	352 358	388 531	403 840	418 575	453 754	506 755
	$m	$m	$m	$m	$m	$m	$m
Expenditure							
Day trip expenditure	4	4	4	5	5	6	8
Overnight expenditure	136	157	196	212	229	274	355
Total expenditure	139	161	201	217	234	280	363

Source: The CIE.

Origin of visitors under the base case

Visitors under the base case are primarily from NSW, followed by the ACT. Visitation numbers are very minimal from states such as Western Australia, Tasmania and South Australia and this is due to the high costs associated with a accessing the Snowy Mountains SAP area. The share of visitation from states other than NSW are slightly higher in non-winter months (NSW share of trips to the region is 70 per cent in winter compared to 62 per cent in non-winter).

B.16 Origin of visitors in winter and non-winter — 2036



Data source: The CIE.

Impacts of Climate change and COVID-19 on Base case forecast

It is possible to separately estimate the impact of Climate change and COVID-19 on the visitation and expenditure forecasts (table B.17). We estimate that by 2061, climate change results in around 225 800 fewer winter visitors due to the large reduction in snow depths. This further results in around $289 million lost tourism expenditure to the region.

Similarly, the impacts of COVID-19 are also negative. COVID-19 results in slower population growth and therefore reduced domestic and international demand for trips to the Snowy Mountains. By 2061, there are 72 500 fewer trips to the region and around $91 million less tourism expenditure due to these avoided trips. COVID-19 also has a more immediate impact on the income levels of visitors to 2024, which results in a $33 million reduction in tourism expenditure. This larger impact is temporary and reduces by 2028 onwards.

The total reduction in tourism and expenditure occurring from both Climate change and COVID-19 simultaneously is slightly lower than the individual impacts. This is because the negative demand shock that results from climate change is partially offset due to the lower number of overall visitors occurring due to COVID-19 (i.e. there are less people skiing to begin with that cancel out of their trip due to poor snow conditions)

B.17 Impact of Climate change and COVID-19 on Base case forecasts — Winter

Impact scenario	2019	2024	2028	2032	2036	2046	2061
	No.	No.	No.	No.	No.	No.	No.
Visitors							
Impact of climate change	0	0	0	0	0	-63 306	-225 887
Impact of COVID-19	0	-7 078	-12 516	-17 803	-22 906	-39 094	-72 589
Total impact	**0**	**-7 078**	**-12 516**	**-17 803**	**-22 906**	**-97 255**	**-274 511**
	$m	$m	$m	$m	$m	$m	$m
Expenditure							
Impact of climate change	0	0	0	0	0	-70	-289
Impact of COVID-19	0	-33	-11	-17	-22	-42	-91
Total impact	**0**	**-6**	**-11**	**-17**	**-22**	**-107**	**-351**

Source: The CIE.

For non-winter visitation and expenditure, there is no impact of climate change since the reduction in demand is related to snow depths and skiing activity that takes place only in winter. Non-winter visitation and expenditure does still decrease however due to the impacts of COVID-19, with around 56 000 fewer visitors by 2061 and $40 million less expenditure (table B.18)

B.18 Impact of Climate change and COVID-19 on base case forecasts — Non-winter

Impact scenario	2020	2024	2028	2032	2036	2046	2061
	No.	No.	No.	No.	No.	No.	No.
Visitors							
Impact of climate change	0	0	0	0	0	0	0
Impact of COVID-19	0	-5 771	-10 554	-15 484	-20 510	-33 610	-56 065
Total impact	**0**	**-5 771**	**-10 554**	**-15 484**	**-20 510**	**-33 610**	**-56 065**
	$m	$m	$m	$m	$m	$m	$m
Expenditure							
Impact of climate change	0	0	0	0	0	0	0
Impact of COVID-19	0	-14	-5	-8	-11	-21	-40
Total impact	**0**	**-14**	**-5**	**-8**	**-11**	**-21**	**-40**

Source: The CIE.

C Visitation model appendix – developing the Snowy Mountains SAP scenario

The Snowy Mountains SAP scenario has been constructed to represent some of the key activities that could occur under the Snowy Mountains SAP. It is a hypothetical scenario for planning purposes and is no reflective of any commitments. The key elements of the Snowy Mountains SAP scenario are set out in box 6.3.

C.1 The Snowy Mountains SAP scenario

The Snowy Mountains SAP Scenario involves:

- Increasing or removing bed limits and other capacity limits on the mountain resorts
- providing a transport solution within the KNP
- Improved air connectivity through more flights from Sydney, Brisbane and Melbourne, lower fares and improved connections between airports to Jindabyne and the resorts.
- reducing the cost for developing new investments inside KNP, which would translate into a reduced cost overall of 2.5 per cent, as capital is about 25 per cent of costs for accommodation and food services. We expect that this would translate into a reduction in peak costs of 2 per cent and off-peak costs of less than 1 per cent, as non-winter is currently priced to reflect operating costs
- investment in in new tourist attractions and marketing for the region

A summary of the individual or standalone impacts of each of the Snowy Mountains SAP activities for the year 2040 is set out in table C.2. We consider the impact of each activity individually, as well as a combined program:

- In 2040, under the base case we expect 901 000 visits per year, with 447 000 in winter and 454 000 in non-winter
- Improved air connectivity through more flights from Sydney, Brisbane and Melbourne, lower fares and improved connections between airports to Jindabyne and the resorts would increase trips by 68 000 in 2040
- Increasing or removing bed limits and any other capacity constraints would increase trips by 16 000 in 2040.
- Reducing the cost of new developments within the KNP (by around 3.8 per cent in winter and 1.3 per cent in non-winter) would lead to 6 000 new trips in 2040

- Providing a transport solution to overcome car parking constraints would boost visitation by around 42 000 by 2040 during winter months
- New investment in marketing and tourist attractions would lead to over 268 000 extra visitors by 2040, most occurring during non-winter months.
- Doing all of the above leads to an additional 433 000 extra visitors by 2040. This is greater than the sum of the standalone impacts of each activity, due to the unique interaction between multiple initiatives within the Snowy Mountains SAP.

C.2 Standalone Impacts of the Snowy Mountains SAP activities in 2040

	Winter 2040 000 trips per year	Non-winter 2040 000 trips per year	Total – 2040 000 trips per year
Base	459 424	432 844	892 268
Change from SAP activities			
Increasing or removing bed limits	15 859	0	15 859
Transport solution	41 888	0	41 888
Reduced cost of new developments	4 399	1 215	5 613
Improved air connectivity to Snowies from Sydney, Melbourne and Brisbane	39 659	28 200	67 860
Investment in new activities and marketing	39 554	228 946	268 500
SAP scenario (all of the above)	634 044	691 383	1 325 427

Source: The CIE.

Another way to consider the impact of the Snowy Mountains SAP is through a sequential implementation of each of the Snowy Mountains SAP activities. A sequential approach is more likely, since not all of the components would be rolled out at once but instead over time. Table C.3 shows the incremental impact of each SAP activity.

The impact of increasing or removing bed limits and transport solutions first means that more visitation can be facilitated by larger investment initiatives. If these capacity constraints were not addressed, then these SAP activities would generate less visitation since the region would continue to struggle to accommodate tourism during winter.

C.3 Sequential Impacts of the Snowy Mountains SAP activities in 2040

	Winter 2040 000 trips per year	Non-winter 2040 000 trips per year	Year round 2040 000 trips per year
Base case	459 424	432 844	892 268
Change from SAP activities			
Increasing or removing bed limits	15 859	0	15 859
Transport solution	37 219	0	37 219
Reduced cost of new developments	6 280	1 215	7 495
Improved air connectivity with improved access and frequent flights from Sydney, Melbourne and Brisbane	61 155	28 378	89 533
Investment in new attractions and marketing	54 106	228 946	283 052
Total for SAP scenario (all of the above)	634 044	691 383	1 325 427

Source: The CIE.

The rest of this chapter discusses each of the SAP components in more detail and presents additional results on the standalone impacts on visitation and tourism expenditure.

Increasing or removing bed limits and other capacity constraints

This scenario considers the impacts of removing bed limits on the mountain. Currently, bed limits act as a constraint on overall visitor numbers to destinations such as Thredbo and Perisher. We assume bed limits as the current number of beds being utilised (excluding staff beds), which include:

- 4 227 beds at Thredbo
- 4 808 beds at Perisher

With this limit, there is a cap on the maximum accommodation that can be provided in these two locations, preventing those that would visit from staying on the mountain. Note that we are using the actual beds available, on the assumption that new beds are sufficiently difficult to gain approval for currently that the actual numbers is a limitation.

Increasing or removing bed limits leads to an increase in visitation and expenditure in winter months and no change in non-winter months, since demand is lower and the constraints are never reached (table C.4). By 2036, winter visitation increases by around 14 000 people as well as $17 million additional tourism expenditure.

The impacts of Increasing or removing bed limits reduces beyond this point, however, as climate change begins to reduce snow depths and leads to an overall reduction in demand. By 2061, demand is lower than what the bed limits originally allowed and so there is no incremental benefit to allowing more beds.

C.4 Forecast additional visitation and expenditure – Changes to bed limits

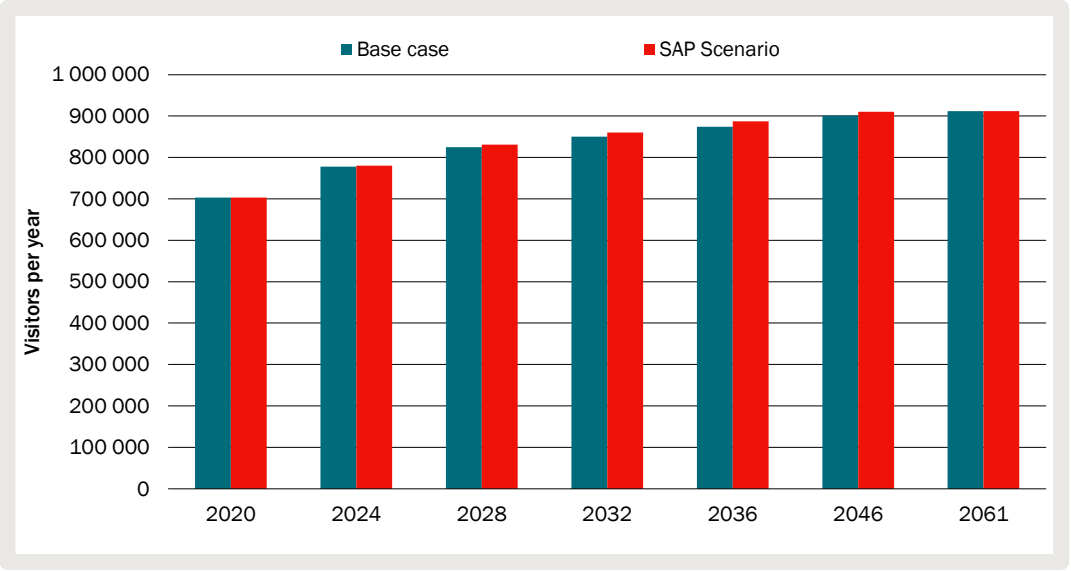
	2020	2024	2028	2032	2036	2046	2061
	No.	No.	No.	No.	No.	No.	No.
Winter							
Visitors							
Overnight visitors	837	2 464	5 877	9 677	13 775	9 414	198
Visitor nights	2 991	8 797	20 970	34 510	49 095	33 502	704
Day trip visitors	0	0	0	0	0	0	0
Total visitors	**837**	**2 464**	**5 877**	**9 677**	**13 775**	**9 414**	**198**
	$m	$m	$m	$m	$m	$m	$m
Expenditure							
Day trip expenditure	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Overnight expenditure	0.9	2.5	6.5	11.2	16.6	12.5	0.3
Total expenditure	**0.9**	**2.5**	**6.5**	**11.2**	**16.6**	**12.5**	**0.3**

	2020	2024	2028	2032	2036	2046	2061
	No.	No.	No.	No.	No.	No.	No.
Non-winter							
Visitors							
Overnight visitors	0	0	0	0	0	0	0
Visitor nights	0	0	0	0	0	0	0
Day trip visitors	0	0	0	0	0	0	0
Total visitors	**0**	**0**	**0**	**0**	**0**	**0**	**0**
	$m	$m	$m	$m	$m	$m	$m
Expenditure							
Day trip expenditure	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Overnight expenditure	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total expenditure	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
	No.	No.	No.	No.	No.	No.	No.
All seasons							
Visitors							
Overnight visitors	837	2 464	5 877	9 677	13 775	9 414	198
Visitor nights	2 991	8 797	20 970	34 510	49 095	33 502	704
Day trip visitors	0	0	0	0	0	0	0
Total visitors	**837**	**2 464**	**5 877**	**9 677**	**13 775**	**9 414**	**198**
	$m	$m	$m	$m	$m	$m	$m
Expenditure							
Day trip expenditure	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Overnight expenditure	0.9	2.5	6.5	11.2	16.6	12.5	0.3
Total expenditure	**0.9**	**2.5**	**6.5**	**11.2**	**16.6**	**12.5**	**0.3**

Source: The CIE.

The impacts over time relative to the base case are clearer in chart C.5. The impacts are very incremental and reduce to zero by 2061.

C.5 Increasing or removing bed limits versus Base case



Data source: The CIE.

Improved air connectivity to the Snowy Mountains

Transport impacts

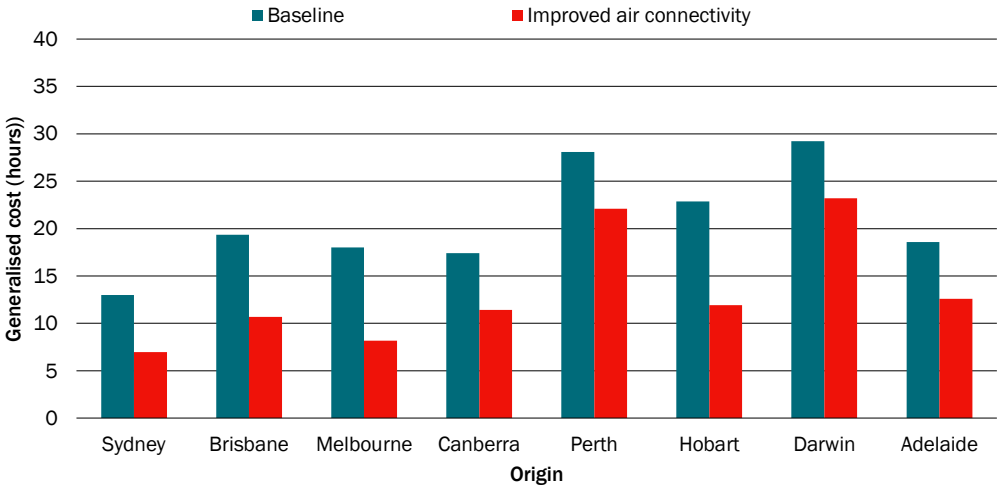
Currently, air travel to the Snowy Mountains involves catching a plane to Cooma which is around 46 minutes away from the Snowy Mountains SAP area. Direct flights are limited and typically are only available at Sydney at one flight per day. The air fare for this flight is ~$128 each way.

To estimate the impact of improved air connectivity, we modelled a mix of improvements including increased flights, lower fares and better connections between the airport and Jindabyne. These improvements included:

- much higher frequency of direct flights available from Sydney, Melbourne and Brisbane
- a $78 air fare from Sydney, $111 from Melbourne and $143 from Brisbane to the Snowy Mountains
- quicker and cheaper connection from the airport to Jindabyne, and
- new services to begin operating in 2031 and ramping up to full capacity by 2036.

The impact of these changes is a dramatically reduced generalised cost of travel for air from major cities where direct flights are available (previously connecting flights to Sydney was required to fly to the Snowy Mountains). Air is now more cost effective compared to the Base case scenario, particularly for major cities other than Sydney, with the generalised cost effectively halving (chart C.6).

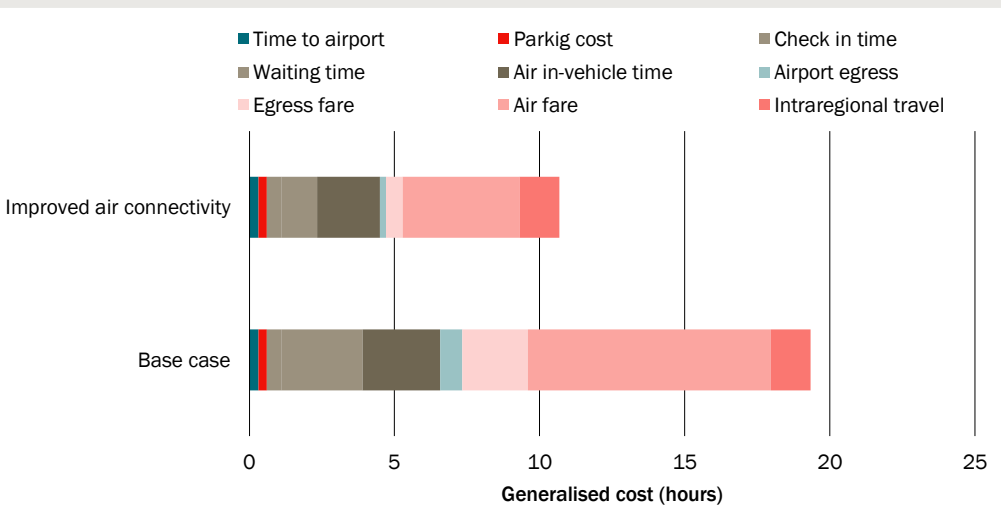
C.6 Generalised cost of air travel including intra-regional travel



Note: Assuming that a person is accommodated at Thredbo.
Data source: The CIE.

An example of the drivers of the differences in generalised cost is provided in chart C.7. This provides a breakdown of the total generalised cost from Brisbane to Thredbo under the Base case and under the scenario with improved air connectivity. A large reduction in the generalised cost is driven by reduced airfares, since direct flights are available from Brisbane. This is much cheaper than under the Base case, which required first flying to Sydney before catching a connecting flight to Cooma.

C.7 Change in generalised cost components (Brisbane)



Data source: The CIE.

Mode share also changes as a result of air becoming more cost effective. Mode share has increased for Sydney[55] with around 45 per cent of trips occurring from air compared to

[55] Any international visitors to the Snowies are also assumed to be travelling via Sydney

2.1 per cent under the Base case scenario and likewise for Brisbane and Melbourne, which sees air travel become the dominant mode of choice (table C.8).

C.8 Air mode share from each major city

Air share by major city	Base case Per cent	Scenario Per cent
Sydney	2.1	44.6
Brisbane	30.8	98.8
Melbourne	0.3	53.6
Canberra	0.0	0.7
Perth	100.0	100.0
Hobart	49.9	99.9
Darwin	100.0	100.0
Adelaide	16.7	88.1

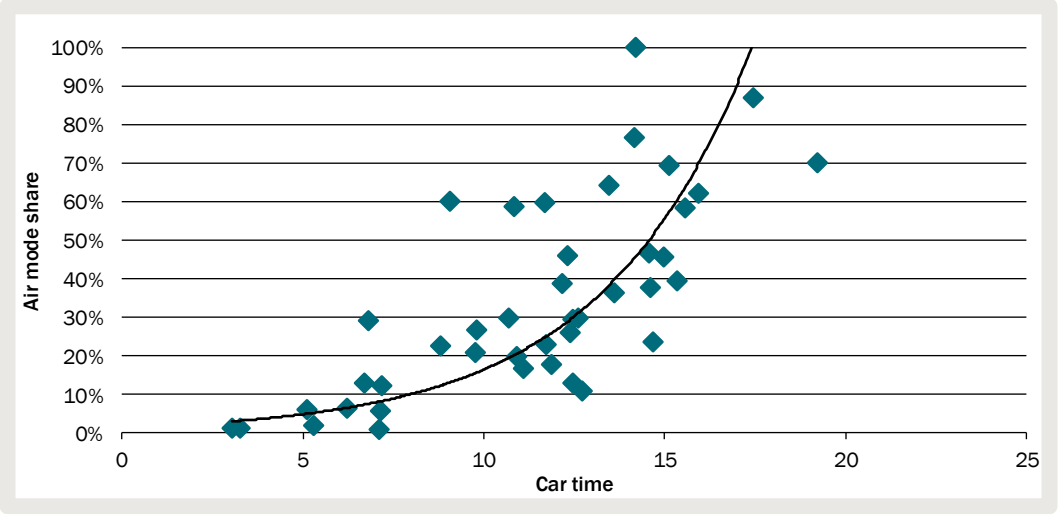
Source: The CIE.

We have benchmarked the air mode shares from our modelling against data on holiday visitation from origins and destinations around Australia (chart C.9). Our estimates of air mode share are higher than general tourism data suggests. This reflects:

- a low fare for use of the route ($78 Sydney to Jindabyne for example)
- a very high frequency service for air travel
- an essentially free transport system for people once they arrive by air to get around the Snowy Mountains SAP area — there is an assumption that there would be no need for car hire or expensive transfers.

The air mode shares are highly sensitive to the above assumptions.

C.9 Air mode share and car time



Note: Air mode share is based on data for past three years.

Data source: The CIE, based on data from Tourism Research Australia and google maps.

Impacts on visitation and tourism expenditure

The maximum improved air connectivity scenario leads to higher overall visitation across both summer and winter, as well as higher tourism expenditure (table C.10). By 2061, we forecast an additional 74 000 trips with 39 000 occurring in winter and 35 000 occurring in non-winter months. Similarly, tourism expenditure increases by around $97 million over the year.

C.10 Forecast additional visitation and expenditure — improved air connectivity

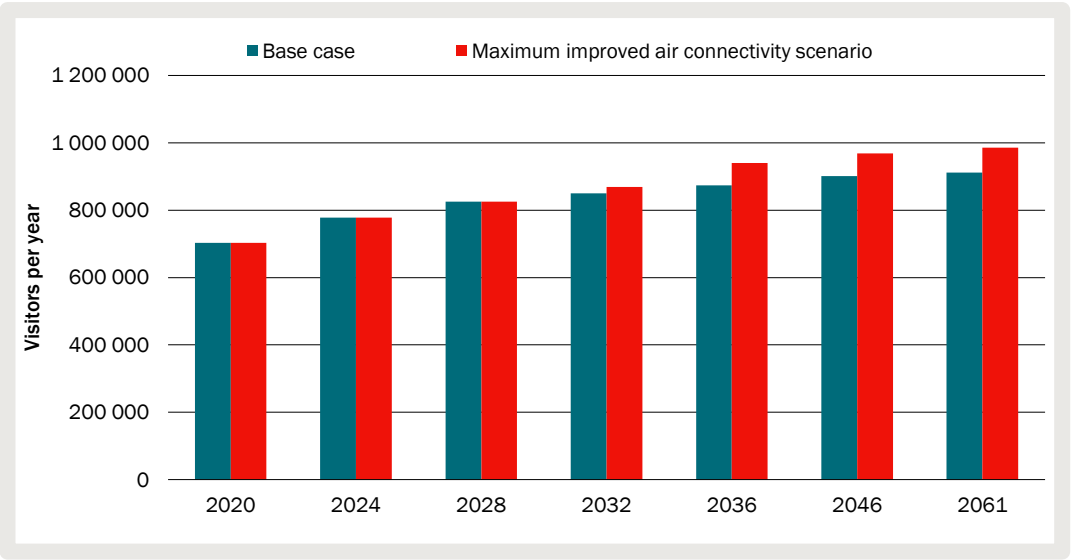
	2020	2024	2028	2032	2036	2046	2061
	No.	No.	No.	No.	No.	No.	No.
Winter							
Visitors							
Overnight visitors	0	0	0	9 986	36 082	36 022	35 760
Visitor nights	0	0	0	40 112	142 379	142 161	141 116
Day trip visitors	0	0	0	896	3 193	3 219	3 070
Total visitors	**0**	**0**	**0**	**10 882**	**39 275**	**39 241**	**38 830**
	$m	$m	$m	$m	$m	$m	$m
Expenditure							
Day trip expenditure	0.0	0.0	0.0	0.1	0.5	0.5	0.6
Overnight expenditure	0.0	0.0	0.0	13.0	48.0	53.0	61.1
Total expenditure	**0.0**	**0.0**	**0.0**	**13.1**	**48.5**	**53.5**	**61.6**
	No.	No.	No.	No.	No.	No.	No.
Non-winter							
Visitors							
Overnight visitors	0	0	0	6 642	24 399	27 259	31 606
Visitor nights	0	0	0	31 463	115 792	129 911	151 399
Day trip visitors	0	0	0	681	2 515	2 847	3 355
Total visitors	**0**	**0**	**0**	**7 322**	**26 914**	**30 106**	**34 961**
	$m	$m	$m	$m	$m	$m	$m
Expenditure							
Day trip expenditure	0.0	0.0	0.0	0.1	0.2	0.2	0.3
Overnight expenditure	0.0	0.0	0.0	5.5	21.0	26.1	35.3
Total expenditure	**0.0**	**0.0**	**0.0**	**5.5**	**21.2**	**26.3**	**35.6**
	No.	No.	No.	No.	No.	No.	No.
All seasons							
Visitors							
Overnight visitors	0	0	0	16 628	60 480	63 281	67 366
Visitor nights	0	0	0	71 575	258 171	272 072	292 515
Day trip visitors	0	0	0	1 577	5 708	6 066	6 425

	2020	2024	2028	2032	2036	2046	2061
Total visitors	**0**	**0**	**0**	**18 204**	**66 189**	**69 347**	**73 791**
	$m	$m	$m	$m	$m	$m	$m
Expenditure							
Day trip expenditure	0.0	0.0	0.0	0.2	0.7	0.8	0.9
Overnight expenditure	0.0	0.0	0.0	18.5	69.1	79.0	96.3
Total expenditure	**0.0**	**0.0**	**0.0**	**18.7**	**69.7**	**79.8**	**97.2**

Source: The CIE.

The overall Snowy Mountains SAP scenario versus the base case in terms of year-round visitor numbers is shown in chart C.11.

C.11 Improved air travel scenario versus base case



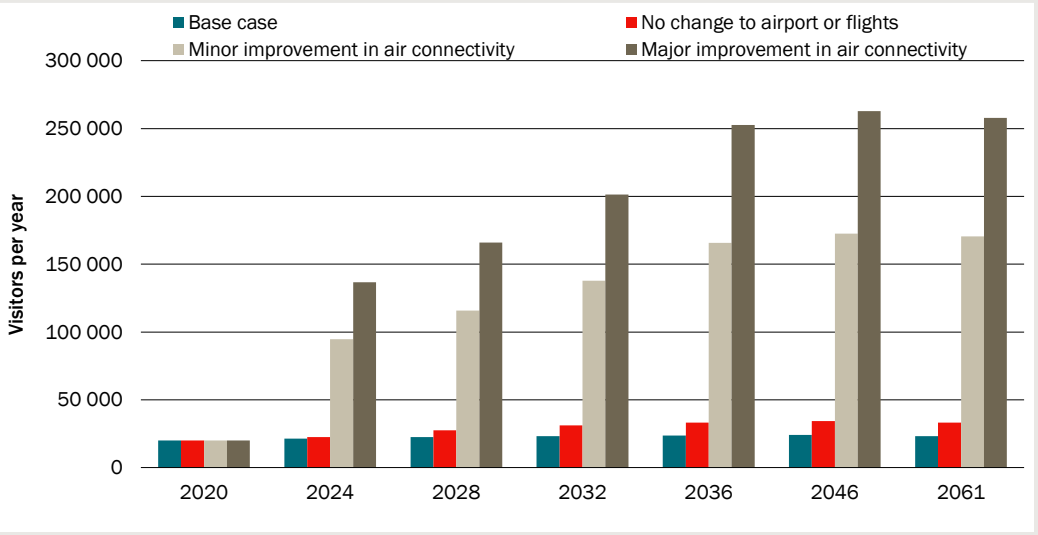
Data source: The CIE.

The impact of improved air services is also important to consider in the context of all other Snowy Mountains SAP investments. Chart C.12 presents variations in the type of air connectivity improvement in the context of other SAP investments, and a range of degrees of improved connectivity. The different air connectivity scenarios include:

- No improvement to air connectivity (i.e. base case air connectivity) and other base case assumptions
- No improvement to air connectivity (i.e. base case air connectivity) and other Snowy Mountains SAP scenario assumptions
- The maximum air connectivity improvement scenario discussed previously
- A lesser air connectivity scenario, including
  - Direct, but less frequent, flights from Sydney, Melbourne and Brisbane
  - Less connectivity to Jindabyne, with transfers taking longer and being more expensive.

Under these assumptions, the number of air passengers with other Snowy Mountains SAP investments could range from 33 000 to 258 000 in 2061.

C.12 Visitors by air with different air improvement assumptions

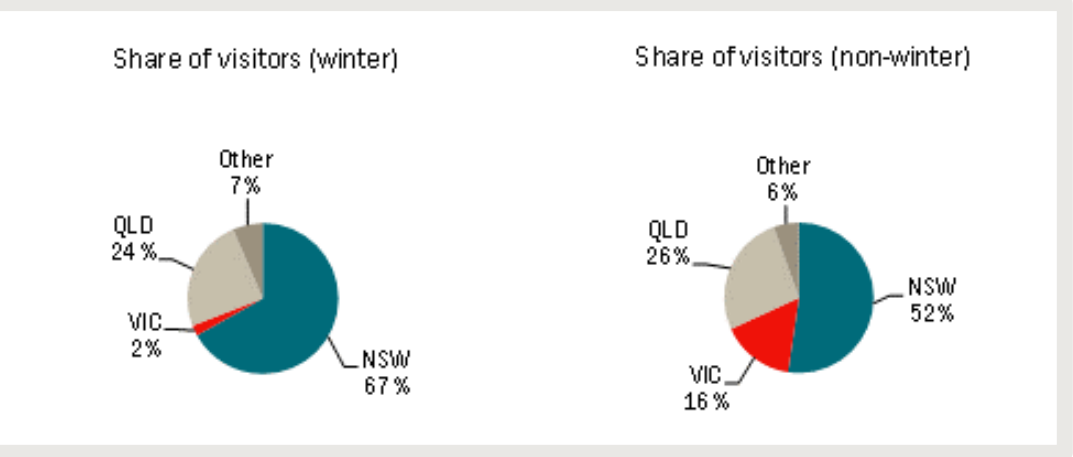


Note: No change to airport or flights includes other SAP investments.
Data source: The CIE.

Origin of new visitors

While the majority of visitors under the base case originated from regions in NSW, the proportion of new visitors in this scenario is much more diverse, with around 24 per cent of new visitors coming from Queensland in winter (chart C.13). This is driven by the increased accessibility of these regions to the Snowy Mountains due to direct flights to the Jindabyne region.

C.13 Share of new visitors by state with improved air connectivity — 2036



Data source: The CIE.

Table C.14 shows the number of trips that are made by air under the base case in 2036 compared to the number of trips under the scenario with improved air connectivity. Total trips by air increases from around 24 000 to 191 000 in 2036. Also, of note is the fact that around 36 per cent of these air trips are made by new visitors, while the remaining share are visitors who changed from using other modes to air travel. The rate of inducement for

new trips is higher in states which previously had low accessibility to the Snowy Mountains (such as Queensland)

C.14 Number of visitors that travel by air — Base case versus maximum improved air connectivity scenario — 2036

	Base case air trips	Air trips with high air connectivity	Induced trips due to airport	Existing visitors that switch	New visitors
	No.	No.	No.	No.	Per cent
NSW	8 193	118 439	40 481	66	34
VIC	69	13 247	4 523	66	34
QLD	9 504	47 988	20 135	58	42
SA	278	2 158	548	75	25
WA	4 580	5 955	1 264	79	21
Tas	155	1 196	514	57	43
NT	830	1 050	218	79	21
ACT	20	656	314	52	48
International	30	692	255	63	37
Total	**23 659**	**191 381**	**68 253**	**64**	**36**

Source: The CIE.

Reducing development costs

Reductions in costs related to planning should feeds into a downward shift in supply. This has the effect of reducing accommodation prices and increasing visitation in line with the slope of the demand curve.

The impact of this scenario is around 6 000 additional visitors by 2061 (table C.15). Likewise, tourism expenditure increases by around $6 million by 2061.

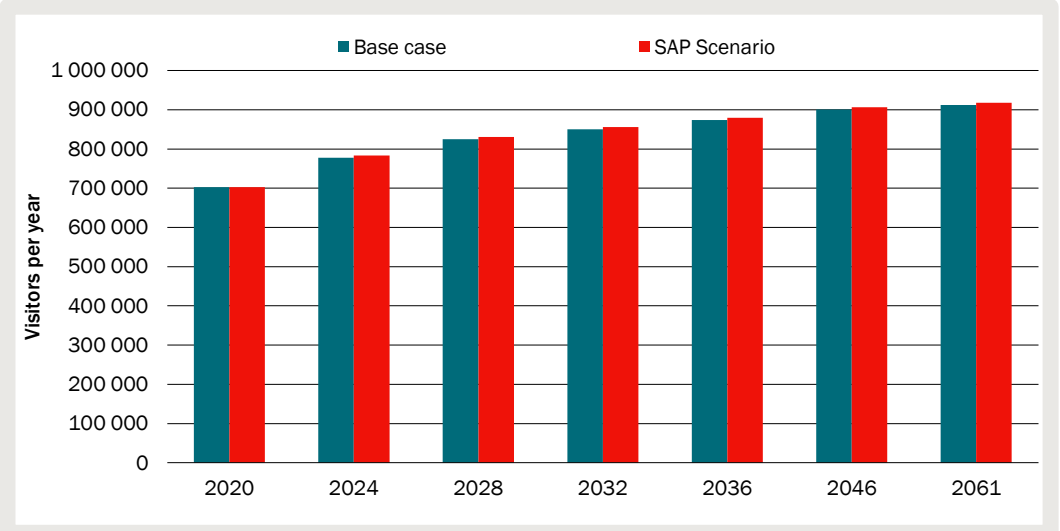
C.15 Forecast additional visitation and expenditure — Reduced development costs

	2020	2024	2028	2032	2036	2046	2061
	No.	No.	No.	No.	No.	No.	No.
Winter							
Visitors							
Overnight visitors	0	2 890	2 936	2 976	3 009	2 978	3 258
Visitor nights	0	10 320	10 478	10 612	10 724	10 597	11 569
Day trip visitors	0	1 299	1 324	1 345	1 364	1 359	1 278
Total visitors	**0**	**4 189**	**4 260**	**4 321**	**4 373**	**4 337**	**4 536**
	$m	$m	$m	$m	$m	$m	$m
Expenditure							
Day trip expenditure	0.0	0.2	0.2	0.2	0.2	0.2	0.2
Overnight expenditure	0.0	2.9	3.3	3.4	3.6	3.9	5.0
Total expenditure	**0.0**	**3.0**	**3.4**	**3.6**	**3.8**	**4.2**	**5.2**
	No.	No.	No.	No.	No.	No.	No.

	2020	2024	2028	2032	2036	2046	2061
Non-winter							
Visitors							
Overnight visitors	0	748	785	821	856	938	1 063
Visitor nights	0	2 635	2 769	2 899	3 024	3 324	3 777
Day trip visitors	0	274	287	300	313	344	390
Total visitors	**0**	**1 021**	**1 072**	**1 121**	**1 169**	**1 282**	**1 452**
	$m	$m	$m	$m	$m	$m	$m
Expenditure							
Day trip expenditure	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Overnight expenditure	0.0	0.4	0.5	0.5	0.5	0.7	0.9
Total expenditure	**0.0**	**0.4**	**0.5**	**0.5**	**0.6**	**0.7**	**0.9**
	No.	No.	No.	No.	No.	No.	No.
All seasons							
Visitors							
Overnight visitors	0	3 638	3 721	3 797	3 865	3 916	4 320
Visitor nights	0	12 954	13 246	13 510	13 748	13 921	15 346
Day trip visitors	0	1 573	1 611	1 646	1 677	1 703	1 668
Total visitors	**0**	**5 210**	**5 332**	**5 442**	**5 542**	**5 619**	**5 988**
	$m	$m	$m	$m	$m	$m	$m
Expenditure							
Day trip expenditure	0.0	0.2	0.2	0.2	0.2	0.2	0.3
Overnight expenditure	0.0	3.3	3.7	3.9	4.2	4.6	5.9
Total expenditure	**0.0**	**3.4**	**3.9**	**4.2**	**4.4**	**4.9**	**6.2**

The impacts over time relative to the base case are presented in chart C.5.

C.16 Reduced development costs scenario versus base case



Data source: The CIE.

Investment in marketing and new tourist attractions

There has been substantial success in developing mountain biking as an activity in KNP focused on Thredbo, and further development is currently underway through an extension of the Thredbo Valley Trail. In addition, NPWS has received approval to develop the Snowies Iconic Walk. Both the Thredbo Valley Trail extension and Snowies Iconic Walk had a business case developed, setting out costs and expectations of visitation.

NPWS estimated that the TVT extension would generate 46 000 visits per year and Snowies Iconic Walk would generate 51 000. These estimates are based on KNP visitation numbers, and percentage changes reflecting econometric analysis of the impact of infrastructure on visitation.[56]

To use in the visitation model, we convert these into unique new visits — NPWS visitation numbers will count someone if they enter and exit the park multiple times. The starting point is also quite high because of skiing visitors which are not impacted by this infrastructure. We use an adjustment of 25 per cent, reflecting:

- The current visitation to the Snowies in terms of overnight trips for cycling is 30 000 to 40 000 per year, with a duration of 4.2 days.[57] Thredbo mountain biking passes indicate around 30 000 mountain biking days per year for 2019. Existing TVT usage in 2017/18 weas 21 000 per year and this includes day visitors and people using the track multiple times in the same trip. Based on this we allow for 25 per cent of visits to be unique overnight visits staying for 4.2 days per trip.
- Major iconic walks in Tasmania and New Zealand have typically achieved 10 000 to 15 000 users doing the full walk. There are many more who visit the area. For example, the overland, which is capacity limited achieves 9 000 visitors per year, Three Capes 12 000, Routeburn (NOZ) 15 000, Milford (NZ) 7 000, Kepler (NZ) 14 000 and Tongariro (NZ) (9 000). The exception is the Abel Tasman (NZ), which can be multiple walks, and achieves 37 000. Based on this we allow for 25 per cent of visits to be unique overnight visits staying for 4.2 days per trip.

These projects would therefore drive ~23 000 unique new overnight visitors, which is a significant increase in non-winter visitation, which is currently 300 000 per year (across day and overnight).

C.17 Visitation and cost for projects under development

Item	Unit	TVT extension	Snowies Iconic Walk
Visits	No.	45 634	51 394
Capital cost	$m	9.9	17.2
Benefit cost ratio	No.	3.1	2.1
CIE estimate of unique new overnight visitors	No./year	11 409	12 849

56 For example, KNP visitor numbers are estimated at 1.8 million, while all unique visits to the Jindabyne-Berridale SA2 region is ~700 000 per year, most of which would enter the park.

57 Based on TRA data for Jindabyne-Berridale SA2. Note there will be a small sample size in this estimate.

Item	Unit	TVT extension	Snowies Iconic Walk
CIE estimate of new visitor nights	No./year	47 573	53 578
CIE estimate of cost per induced night	$/visitor night	20.8	31.9

Source: National Parks and Wildlife Service 2017, *Thredbo Valley Track Extension Final Business Case;* National Parks and Wildlife Service 2017, *Kosciusko Snowies Iconic Great Walk Final Business Case*; CIE calculations.

For the Snowy Mountains SAP we have estimated the impact of investing in new tourist attractions such as outdoor adventure activities, mountain biking facilities and new accommodation. The number of unique visitors generated by these new attractions was calculated using estimated usage forecast for each attraction and combining these with visitor uplift factors based on the Best-Worst survey rankings

Stafford consulting has developed a set of tourism activators that would provide new attractions for the region and increase visitation. To estimate the impact of these attractions on unique new visitors, we have:

- estimated the percentage uplift in visitation expected from the best worst survey results if a range of attractions were developed in the Snowy Mountains SAP, for winter and summer
- estimated the impact for individual items from the best worst survey based on their score for winter and summer
- used the maximum of the usage estimate for each attraction from Stafford and the unique new visitor estimate from the best worst survey, and
- made specific adjustments based on case studies of other alpine locations where available (see Appendix F for details of case studies).

The visitor uplift from each of these activities is set out in table C.18.

C.18 Visitation uplift from new tourist attractions in 2040

Activity	Winter 2040 No. visitors	Non-winter 2040 No. visitors
New & Expanded Camping Grounds	0	5 500
4-star 250-room Hotel	10 069	3 056
120 Owner Occupied Apartments	5 898	1 734
250-room Athlete/Student Accommodation (as part	3 194	4 092
Destination Holiday Park	607	7 143
Perisher Branded 4-5-star Hotel (120 rooms)	8 034	7 327
E-Bike Cycleways	920	4 693
Iconic Overnight Horse Trek	0	4 900
Outdoor Adventure Hub near Jindabyne	0	82 078
Lake Jindabyne Water Activities & Experiences	0	7 563
Mountain Biking & Trekking Hub (Masterplanned)	0	50 000
Hot Pools & Wellness Facility	12 744	5 524
Fly Fishing School	0	3 500
18-Hole Golf Course	0	3 131
Indoor Fun Park	1 139	1 031
Major Cantilevered Viewing Sky Deck	0	8 955

Activity	Winter 2040 No. visitors	Non-winter 2040 No. visitors
Aviation Tourism Experiences	0	3017.599
Hallmark Winter Alpine Sporting Event	10000	0
Hallmark Summer Sporting Event	0	10000
National Alpine Conference Centre (500-Seat)	1500	5700
Total accommodation	27803	28853

Source: The CIE, based on data received from Department of Regional NSW & Stafford Consulting

Table C.19 presents the visitor and tourism expenditure uplift resulting from investment in new tourist attractions. By 2061, there are 338 000 more visitors and an uplift of $336m in tourist expenditure.

C.19 Forecast additional visitation and expenditure — marketing and new attractions

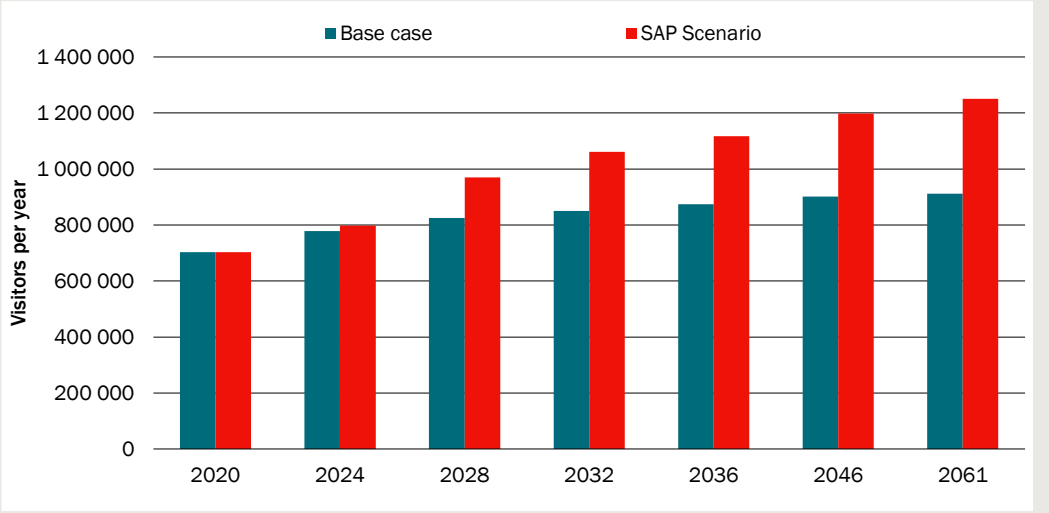
	2020	2024	2028	2032	2036	2046	2061
	No.	No.	No.	No.	No.	No.	No.
Winter							
Visitors							
Overnight visitors	0	0	9 073	33 100	38 289	47 154	53 095
Visitor nights	0	0	34 172	124 662	144 274	177 594	199 283
Day trip visitors	0	0	0	0	0	0	0
Total visitors	**0**	**0**	**9 073**	**33 100**	**38 289**	**47 154**	**53 095**
	$m	$m	$m	$m	$m	$m	$m
Expenditure							
Day trip expenditure	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Overnight expenditure	0.0	0.0	10.6	40.4	48.7	66.2	86.2
Total expenditure	**0.0**	**0.0**	**10.6**	**40.4**	**48.7**	**66.2**	**86.2**
	No.	No.	No.	No.	No.	No.	No.
Non-winter							
Visitors							
Overnight visitors	0	19 572	136 076	177 740	205 143	250 541	285 291
Visitor nights	0	73 635	511 939	668 687	771 783	942 576	1073 754
Day trip visitors	0	0	0	0	0	0	0
Total visitors	**0**	**19 572**	**136 076**	**177 740**	**205 143**	**250 541**	**285 291**
	$m	$m	$m	$m	$m	$m	$m
Expenditure							
Day trip expenditure	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Overnight expenditure	0.0	11.1	85.8	116.7	140.1	189.1	250.0
Total expenditure	**0.0**	**11.1**	**85.8**	**116.7**	**140.1**	**189.1**	**250.0**

	2020	2024	2028	2032	2036	2046	2061
	No.	No.	No.	No.	No.	No.	No.
All seasons							
Visitors							
Overnight visitors	0	19 572	145 149	210 840	243 432	297 694	338 386
Visitor nights	0	73 635	546 111	793 349	916 057	1120 170	1273 037
Day trip visitors	0	0	0	0	0	0	0
Total visitors	**0**	**19 572**	**145 149**	**210 840**	**243 432**	**297 694**	**338 386**
	$m	$m	$m	$m	$m	$m	$m
Expenditure							
Day trip expenditure	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Overnight expenditure	0.0	11.1	96.5	157.1	188.8	255.2	336.3
Total expenditure	**0.0**	**11.1**	**96.5**	**157.1**	**188.8**	**255.2**	**336.3**

Source: The CIE.

Chart 1.2 compares total visitor numbers under the scenario where Government invests funds to boost non-winter tourism to the Base case.

C.20 New attractions versus base case



Data source: The CIE.

Impact of providing a transport solution within the KNP

Under the base case, visitation is restricted due to a limitation of car parking facilities. This scenario considers the impact of overcoming such transport constraints within the KNP. This scenario does not specify what the solution is, but rather estimates the impact of such constraints being alleviated.

Transport constraints are an issue during the winter months due to high demand occurring over a few months of the year. Removing these constraints means that by 2036,

visitation would be over 36 700 visitors higher per year. There are no impacts by 2061, since demand decreases due to climate change and the transport constraints no longer bind (table C.21).

C.21 Forecast additional visitation and expenditure — transport solution

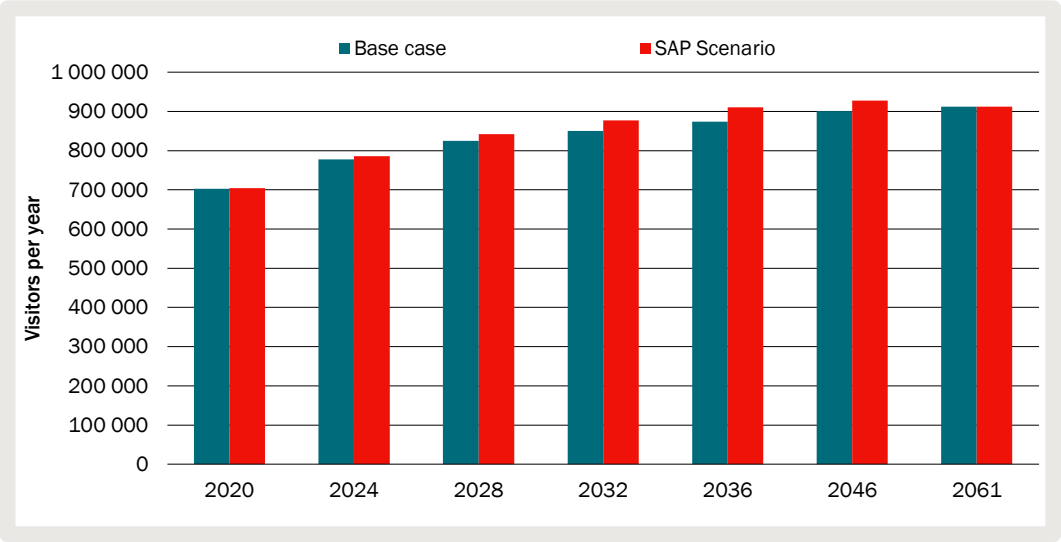
	2020	2024	2028	2032	2036	2046	2061
	No.	No.	No.	No.	No.	No.	No.
Winter							
Visitors							
Overnight visitors	1 027	5 554	11 984	19 020	26 498	18 615	0
Visitor nights	3 670	19 833	42 764	67 830	94 439	66 244	0
Day trip visitors	452	2 388	4 948	7 590	10 274	7 521	0
Total visitors	**1 479**	**7 942**	**16 932**	**26 610**	**36 772**	**26 136**	**0**
	$m	$m	$m	$m	$m	$m	$m
Expenditure							
Day trip expenditure	0.1	0.3	0.7	1.0	1.5	1.2	0.0
Overnight expenditure	1.1	5.5	13.3	22.0	31.9	24.7	0.0
Total expenditure	**1.1**	**5.8**	**14.0**	**23.0**	**33.3**	**25.9**	**0.0**
	No.	No.	No.	No.	No.	No.	No.
Non-winter							
Visitors							
Overnight visitors	0	0	0	0	0	0	0
Visitor nights	0	0	0	0	0	0	0
Day trip visitors	0	0	0	0	0	0	0
Total visitors	**0**	**0**	**0**	**0**	**0**	**0**	**0**
	$m	$m	$m	$m	$m	$m	$m
Expenditure							
Day trip expenditure	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Overnight expenditure	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total expenditure	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
	No.	No.	No.	No.	No.	No.	No.
All seasons							
Visitors							
Overnight visitors	1 027	5 554	11 984	19 020	26 498	18 615	0
Visitor nights	3 670	19 833	42 764	67 830	94 439	66 244	0
Day trip visitors	452	2 388	4 948	7 590	10 274	7 521	0
Total visitors	**1 479**	**7 942**	**16 932**	**26 610**	**36 772**	**26 136**	**0**
	$m	$m	$m	$m	$m	$m	$m
Expenditure							

	2020	2024	2028	2032	2036	2046	2061
Day trip expenditure	0.1	0.3	0.7	1.0	1.5	1.2	0.0
Overnight expenditure	1.1	5.5	13.3	22.0	31.9	24.7	0.0
Total expenditure	**1.1**	**5.8**	**14.0**	**23.0**	**33.3**	**25.9**	**0.0**

Data source: The CIE

While the impact of a transport solution appears marginal relative to the base case, the impact is much higher once considered as part of the full Snowy Mountains SAP scenario, since the visitor uplift that would occur due to other Snowy Mountains SAP activities would be limited without a transport solution (chart C.22).

C.22 Transport solution versus the base case

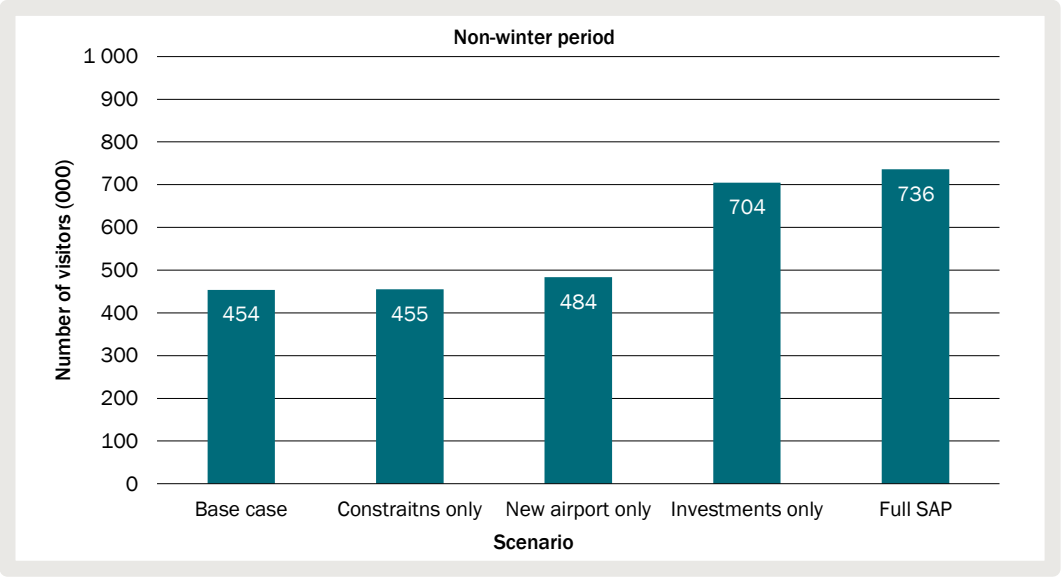


Data source: The CIE.

Sensitivity analysis

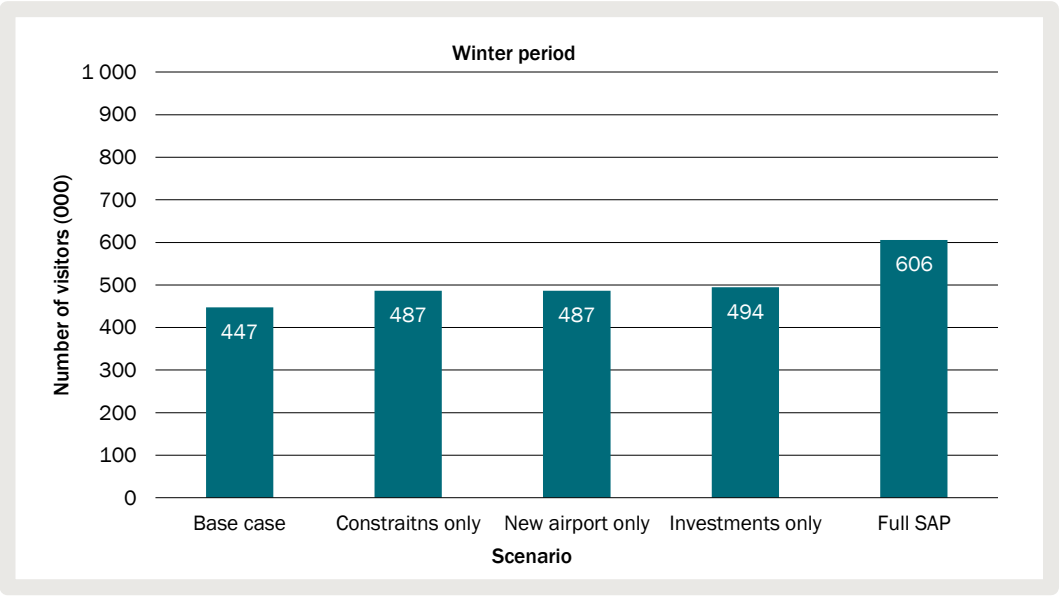
Charts C.23 and C.24 present the impacts of the Snowy Mountains SAP activities across winter and non-winter by 2040. Overall, the combined impact of all Snowy Mountains SAP activities is larger than the standalone impact of different components and groups of components. This is mainly due to the fact that, while the standalone impact of removing constraints is relatively smaller, they are required to enable the visitation boost from the more visitor intensive SAP activities such as new attractions. This is more so the case for winter, which is already capacity constrained at present.

C.23 Impact of different Snowy Mountains SAP components — 2040 (Non-winter)



Data source: The CIE.

C.24 Impact of different Snowy Mountains SAP components — 2040 (winter)

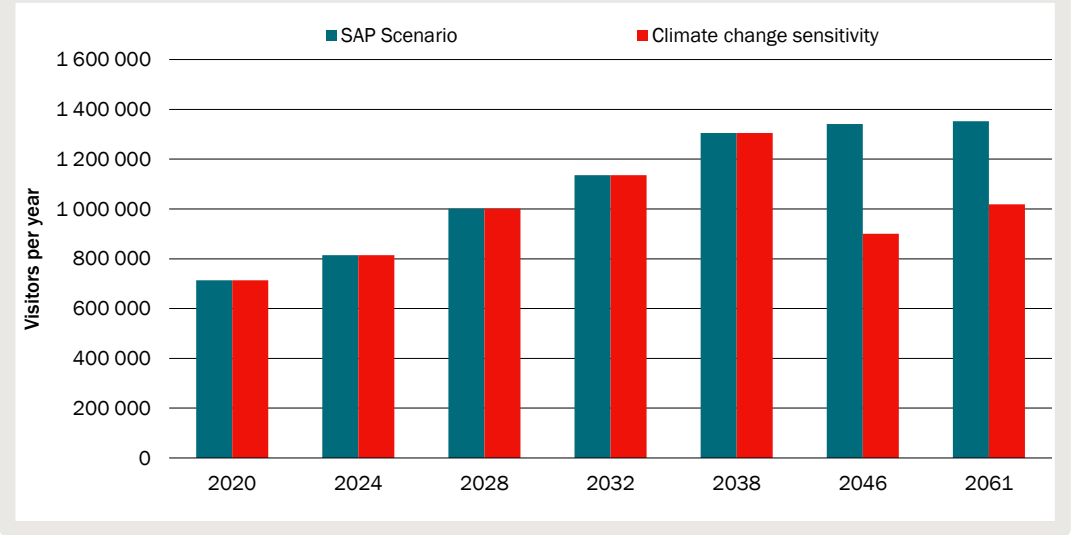


Data source: The CIE.

Climate change sensitivity

This scenario considers the impacts of climate change being worse than currently assumed in the central modelling results. Chart C.25 shows what the total visitation impact would be assuming snow falls were to deteriorate to a level such that winter visitation were equivalent to the average level achieved in an off-peak month (May) from 2040 onwards. This would lead to over 330 000 less visitors by 2061, which is a significant reduction in visitation.

C.25 Climate change sensitivity



Data source: The CIE.

D Climate change in the Australian Alps

It is projected that the Australian Alps are going to be the first alpine region in the Southern hemisphere to be affected by global warming owing to its latitudinal location and low elevations. Given seasonal snow in the Australian Alps is crucial to the sustainability of the alpine tourism industry, the exceptional vulnerability of these areas to climate change poses a threat to both ski resorts and the unique ecosystem that it is built upon.

Changes in Snow Characteristics and Impact on Resort visitation

It has been observed that there is a weak decline in the maximum snow depth across the Alps from 1950s onwards with evidence of minor increases in temperature recorded in New South Wales[58]. Another report documenting the Victorian Highlands revealed that since 1985, maximum snow depths have gone down in the region and the snow season has finished earlier as average temperatures across Australia has gone up.[59] This declining trend in snow depth and snow cover in most studies is statistically insignificant, however owing to the substantial reduction in snowfall and snowpack projected over the years, these trends will have a lasting impact on the ski industry which will have to adapt to the changes in natural snow by increasing artificial snow production.

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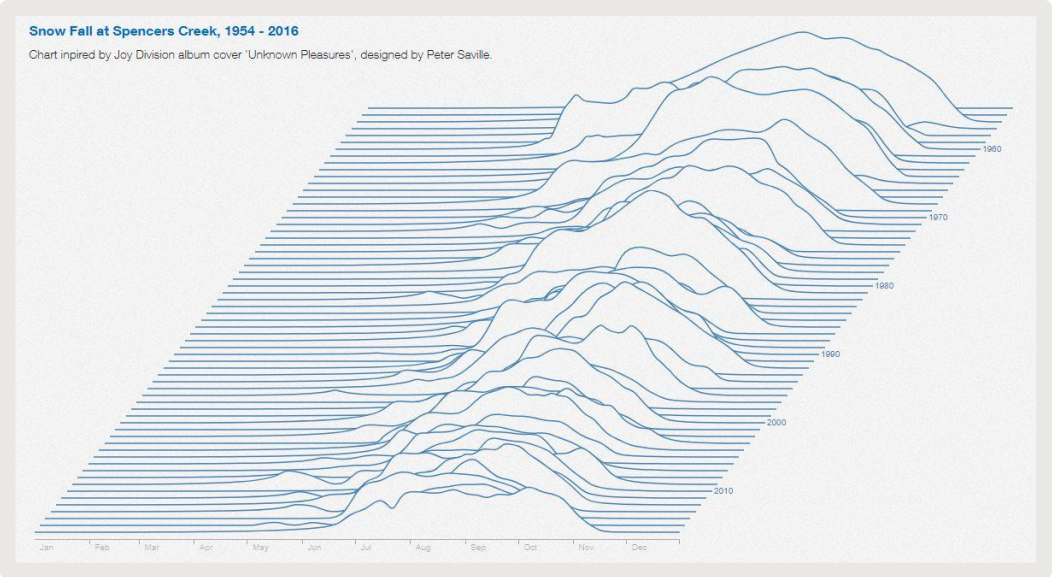
58 Hennessy, K. et al. (2003), The impact of climate change on snow conditions in mainland Australia, pp1

59 NSW Government, Climate Change Impacts in the NSW Alpine Region: Projected changes in snowmaking conditions

D.1 Snowfall at Spencers Creek, 1954-2016



Data source: Macleod, K., Now that it's winter snow sports enthusiasts in Australia's southern states will be weighing the perennial dilemma – when to book time off and where to go., [website], available at https://www.sbs.com.au/interactive/2015/kosciuszko-snow-depth/, accessed 24 July 2020

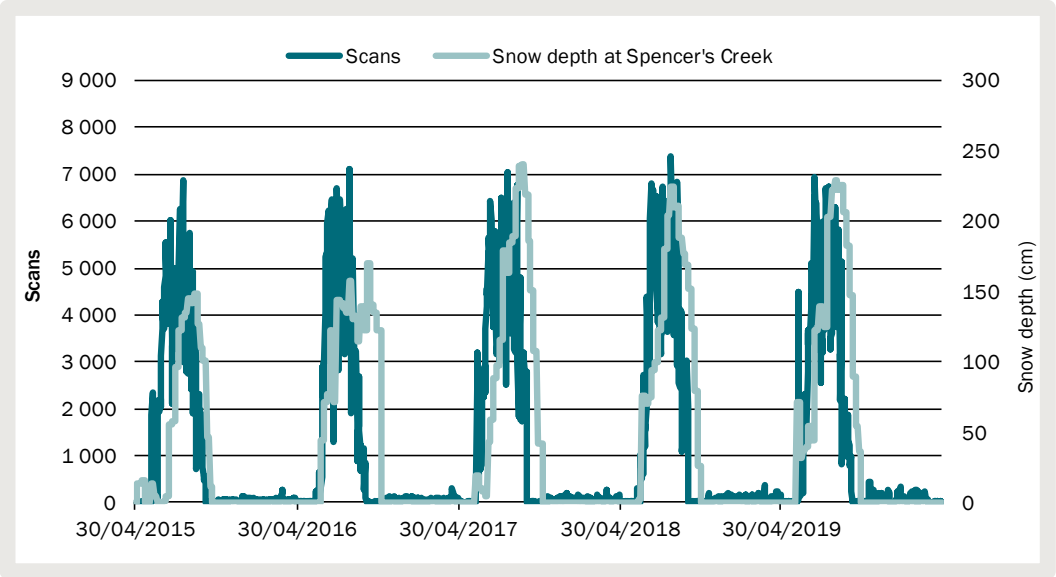
Most studies considered for simulating future snow levels apply the Global Climate Model (GCM) to estimate climate change for the Alpine Region, despite the GCM resolution not possessing the capacity to represent the complex topography of the region. As a result, Di Luca et al (2018) used a 10km resolution simulation from the NSW/ACT Regional Climate Modelling project[60] (NARCliM), better placed to account for mountainous areas, to make future climate projections for expected changes in snow season characteristics in the near future (2020-2039) and far future (2060-2079). It is observed that, due to increases in surface temperature and decrease in snowfall, the snowpack is stated to go down by 15% and 60% in 2030 and 2070 respectively relative to 1990-2009; similarly simulations based on 1999-2009 climate observations suggest snow season will contract by 12 days in 2020-2039 and by 45 days by 2060-2079.[61]

Moreover, the level of elevation for each resort determines how global warming affects peak depth disproportionately: Impact on peak depths are more drastic at lower elevation with higher elevation sites only moderately affected. There is also a possibility of the maximum snow depth to shift into warmer months. Therefore, lower lying Thredbo resort faces a more imminent threat of losing skiing driven demand as it loses out natural snow cover more rapidly than its counterpart at Mt Perisher.

60 Ji, F. et al. (2017), Projected changes in frequency of suitable snowmaking conditions for the Australian Alps, pp1216

61 Di Luca, A., Evans, J. P. and Ji, F., (2017) Australian snowpack in the NARCliM ensemble: evaluation, bias correction and future projections, pp20

D.2 Thredbo Resort Ski Pass Scans and Snow Depth in Spencers Creek (2015-2020)



Data source: The CIE.

With snow depths continuing to decline as snow seasons become more compact and irregular each year, with a later starting day and early end-of-season snow melt, Snowy Mountains may face declining trends in ski-holiday goers if snow levels cannot be maintained. Therefore, the gradual decline over years has prompted investment in artificial snow technology over the years to supplement natural snow cover as a form of snow guarantee to the numerous visitors that flock to the Alps during the winter season.

Projected Changes in Snowmaking Conditions

Ski Resorts have been using snowmaking to guarantee snow during particularly weak winter seasons and heavily rely on it to combat probable irreversible damage from global warming. In Italy 87% of the slopes in 2017 was artificial snow, in Austria it was 70%, and in Switzerland 49%. The values have risen steadily in recent years.[62] In 2004, the proportion of artificial snow used was 30-50% lower.

Similarly, Australian ski resorts have been routinely making use of snow-making technology to supplement natural snow during high demand season and for low lying ski runs and lift access areas to promote smooth operations of these resorts especially during the opening of winter season in June, even if natural snow is sufficient. Certain level snow depths are essential in the Australian Alps to maintain ski tourism in these regions and each resort has a snow-making manager that nominates a target depth level for natural plus artificial snow that needs to be met 90% of the time.[63] This requires recording natural snow depth and using man-made snow to make up for the discrepancy.

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62 Statista (2019). Schnee aus der Kanone [website], available at: https://de.statista.com/infografik/7385/beschneite-pisten-alpen/, accessed 24 July 2020

63 Hennessy, K. et al. (2003), The impact of climate change on snow conditions in mainland Australia, pp33

Snow-guns are a ubiquitous norm in ski alps across the world with the availability of both manually operated and automatic machines. The automatic snow-guns are triggered to operate instinctively using selected wet-bulb temperature whenever temperature falls below the -2˚C threshold. The Potential Volume of man-made snow is defined as the amount of snow that can be made using two standard snow-guns at each resort, based on information about the snow-gun performance and the frequency of wet-bulb temperatures suitable for snow-making. [64] The lower the temperature the more abundantly resorts can produce snow due to longer average number of hours suitable for snowmaking. Therefore, higher elevations like Mt Perisher in NSW boasts substantially greater snow-making capacity than lower lying peaks such as Mt Thredbo. Although the difference between the two peaks is only 101m, the disparity between the two in number of suitable snow-making hours is great: about 150 hours a year which accounts for 25% of Mt Perisher's suitable snowmaking time[65].

Moreover, there is inter-annual variation in snowmaking observable across all resorts in Australia with July being the best time for snow production, with most snow production occurring between June-July-August. The snowmaking is ramped up at the beginning of winter season in June.

Although for the time being man-made snow has been used as a sole mechanism to combat climate change in the alps, the future of snowmaking is at risk as hours suitable for its production contract across all locations.

Each ski resort records changes in snowmaking condition and projects decrease of suitable snowmaking conditions by 20% to 30% for 2020-2039, and by 60% to 70% for 2060-2070 relative to 1990-2009 levels.[66] This trend is consistent across all ski resorts in NSW and Victoria. Therefore, lower elevation sites could become obsolete for snow production while higher elevation sites are projected to have less than 300 hours for making snow in 2060-2079.[67] Accounting for inter-annual and altitude variation in snowmaking, July will have the greatest reduction in snowmaking hours for higher elevation locations.

There are a few things to consider with regards to how important snowmaking will remain as a viable climate change action. As future snowmaking becomes difficult, advancement in snowmaking technology will be crucial to adapt to the higher average temperatures across the alps. Moreover, it remains to be examined if man-made snow has slower ablation rate than natural snow and its impact on snow depth projections. The growing reliance on snowmaking will potentially have greater impact on future resource and energy demands.

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64 Hennessy, K. et al. (2003), The impact of climate change on snow conditions in mainland Australia, pp37

65 NSW Government, Climate Change Impacts in the NSW Alpine Region: Projected changes in snowmaking conditions, pp12

66 NSW Government, Climate Change Impacts in the NSW Alpine Region: Projected changes in snowmaking conditions, pp12

67 NSW Government, Climate Change Impacts in the NSW Alpine Region: Projected changes in snowmaking conditions, pp10

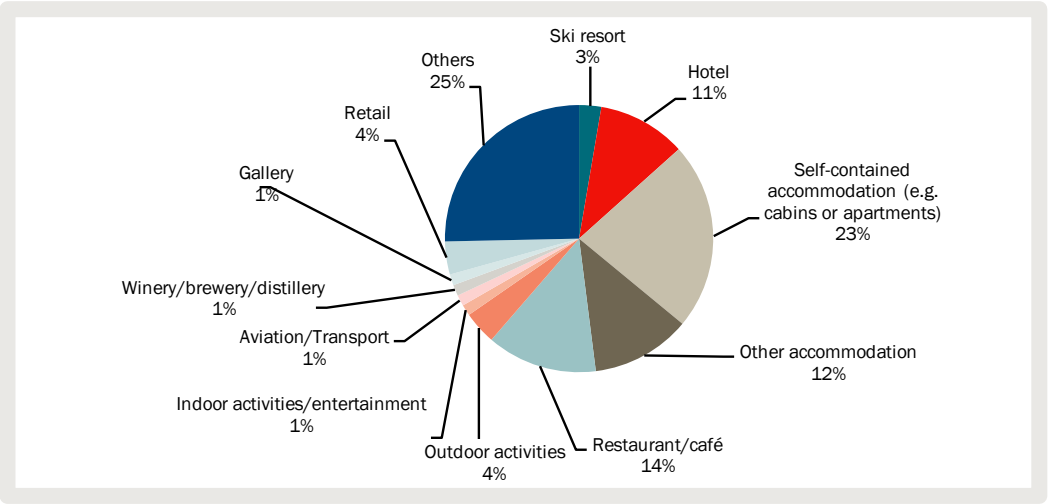
With the possibility of being able to produce artificial snow at higher temperatures -1.5˚C to -0.5˚C, the loss of suitable snowmaking hours can be compensated for. However, the effect of such changes in snowmaking on quality of snow remains to be assessed.
Another aspect that could affect demand for visitation to the alps is the change in peoples experience of increased man-made to natural snow and how it may affect future of ski tourism in the region.

E Snowy Mountains SAP business survey

Characteristics of the Snowy Mountains SAP business survey respondents

The Snowy Mountains SAP investigations into Jindabyne and Snowy Mountains Business Survey was conducted in 2020 with 58 local businesses responding to inquiries on the various needs, opportunities and barriers present in Snowy Mountains SAP for doing business. From among the survey respondents, 49 percent mainly operated in the provision of lodging and accommodations, with 14 percent businesses engaged in food and wine industry, 6 percent entertainment or activities related businesses (among them, 4 per cent worked in providing outdoor activities and 2 percent in Indoor entertainment and Gallery services) and 4 percent in retail services (chart E.1). There were 26 percent respondents who did not categorise themselves in any of the above industries and worked in Professional Services, Marketing, or Farming. None of the respondents operated in the Health and Wellness industry or Building and construction.

E.1 Type of business activity



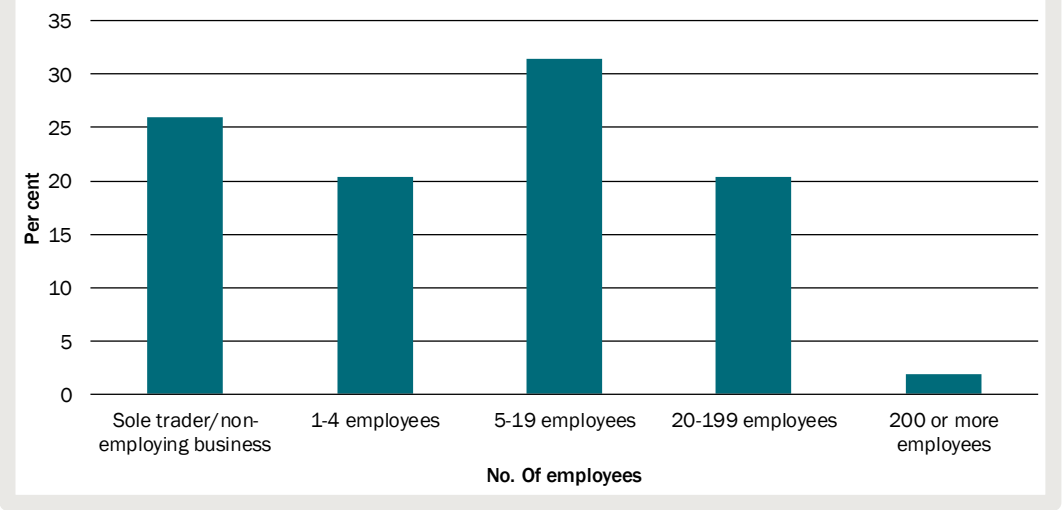
Note: Collected from the survey responses of 55 businesses in the Snowy Mountain Special Activation Precinct. There are respondents who engage in multiple business activities.

Data source: The CIE.

The businesses that participated in the survey were located in various towns within and around the Snowy Mountains SAP: 33 percent of the respondents were from Jindabyne, 19 percent from Perisher, 16 per cent from Thredbo, and 8 percent from Crackenback. The other 24 per cent of respondents either operated in multiple of the aforementioned locations or comprised of businesses operating in the towns of Berridale, Charlottes Pass or Adaminaby.

Most of the businesses surveyed employed less than 200 employees (around 98 percent of the respondents) with a quarter of the businesses identifying as sole trader or a non-employing business (chart E.2).

E.2 Number of employees employed by participating businesses



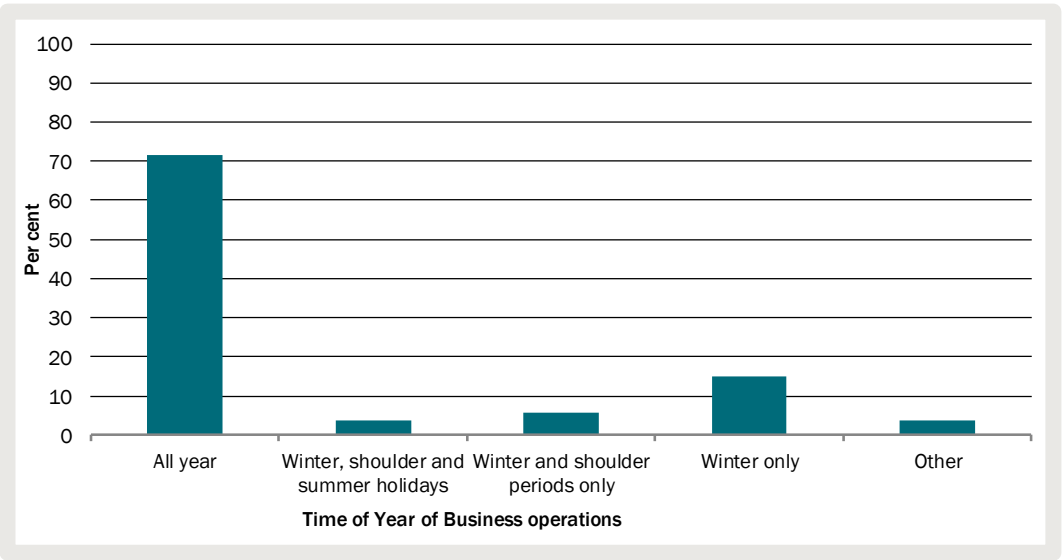
Note: Based on the survey responses of 54 businesses operating in the Snowy Monaro Region. This is not representative of all the businesses existing in the region but the 58 that participated in the survey.

Data source: The CIE.

Non-winter demand characteristics for businesses operating in the Snowy Mountains SAP

Most businesses surveyed operate all year round (around 71 percent respondents), with winter only businesses constituting 15 percent of the respondents. The rest were operational during winter, shoulder, and summer holiday periods.

E.3 Time of Year of Business Operations

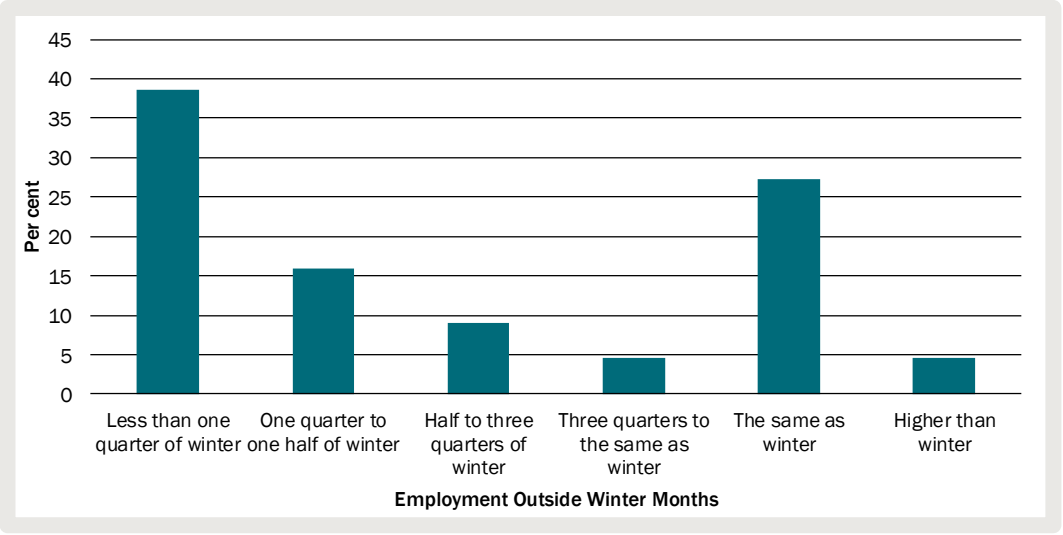


Note: Based on survey response of 46 out of 58 businesses that participated in the survey,

Data source: The CIE.

Even though businesses remain operational throughout the year, they have substantially less demand from customers during non-winter season and this is reflected in the reduction in operational capacity during the off-season. Only 27 percent of the respondents claimed that they employed the same number of staff throughout the year and 4 percent had higher than that of winter season. The rest approximately 68 percent businesses operated at some form of reduced capacity relative to winter.

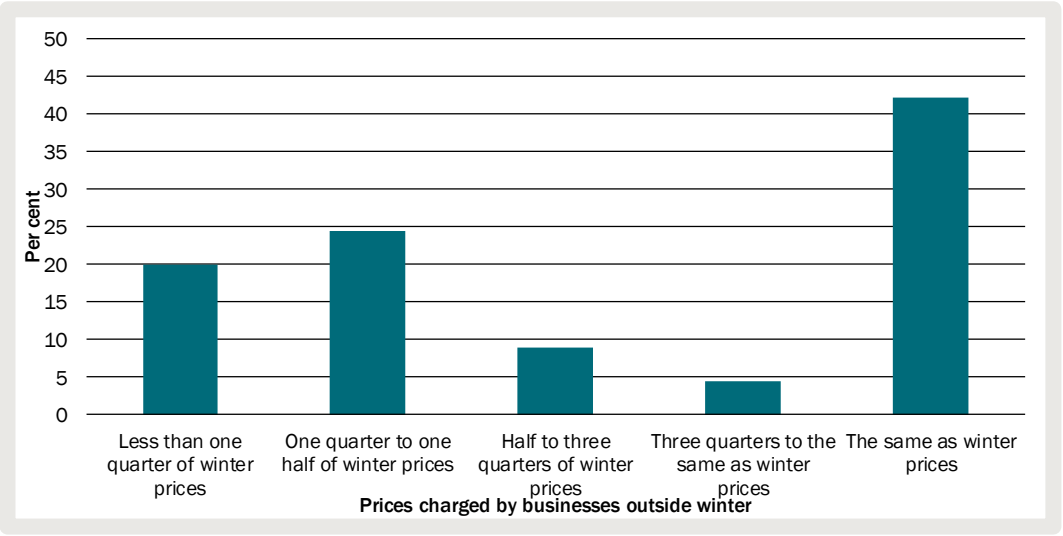
E.4 Full-time equivalent employment of businesses outside of winter



Note: Based on 44 responses to the Snowy Mountain SAP business survey of 58 businesses that participated in the survey.
Data source: The CIE.

Based on responses from 45 businesses, prices for their goods and services were affected in the non-winter season: approximately half had similar prices and half had substantially lower prices.

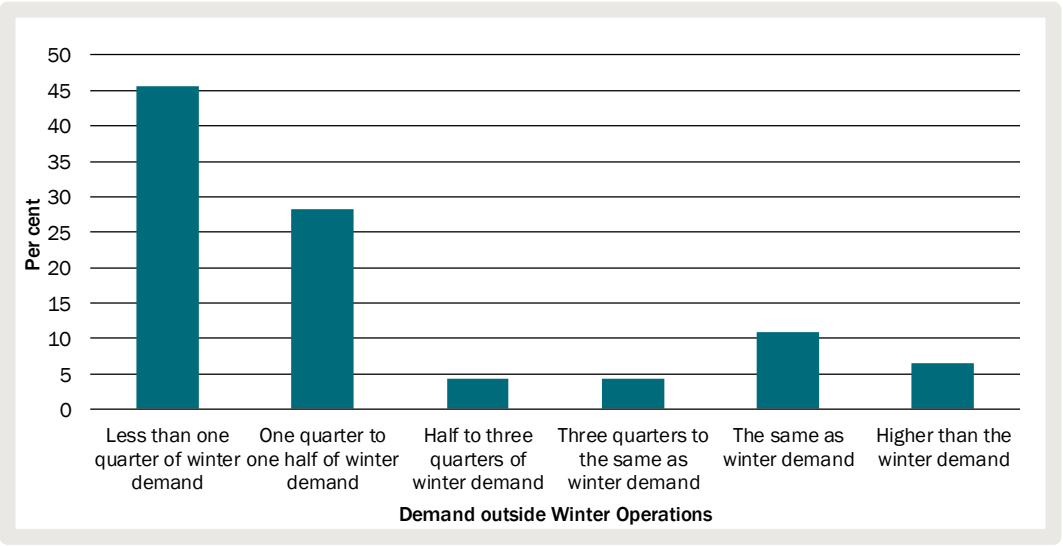
E.5 Prices charged by Businesses during Non-winter months



Note: Based on 44 responses out of 58 business participants of the Snowy Mountain SAP Business Survey.
Data source: The CIE.

The demand outside of winter season is enormously different to the demand faced by businesses during winter. There were 46 percent of the businesses who said that the demand during non-winter months was less than one quarter of winter demand, 28 percent claimed to have demand at one quarter to one half of winter demand and 4 percent had half to three quarters of winter demand.

E.6 Demand faced by Businesses outside of winter season operations

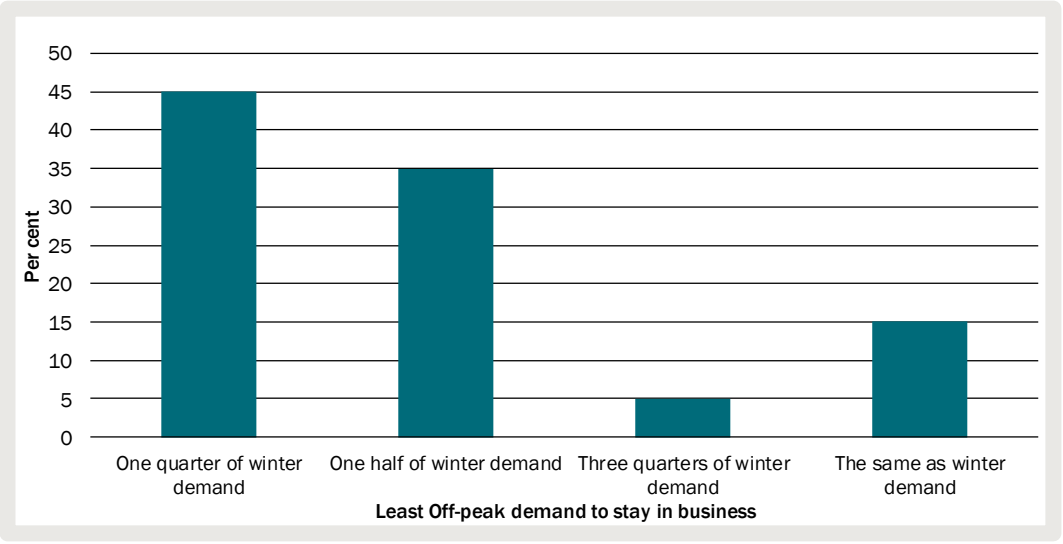


Note: Based on 46 responses out of 58 business participants of the Snowy Mountain SAP Business Survey.

Data source: The CIE.

According to 20 businesses the following is the least off-peak demand that they need to stay operational throughout the rest of the year. Given that most businesses are remaining operational (70 per cent), many are close to the threshold that they indicate.

E.7 Least off-peak demand required for operation

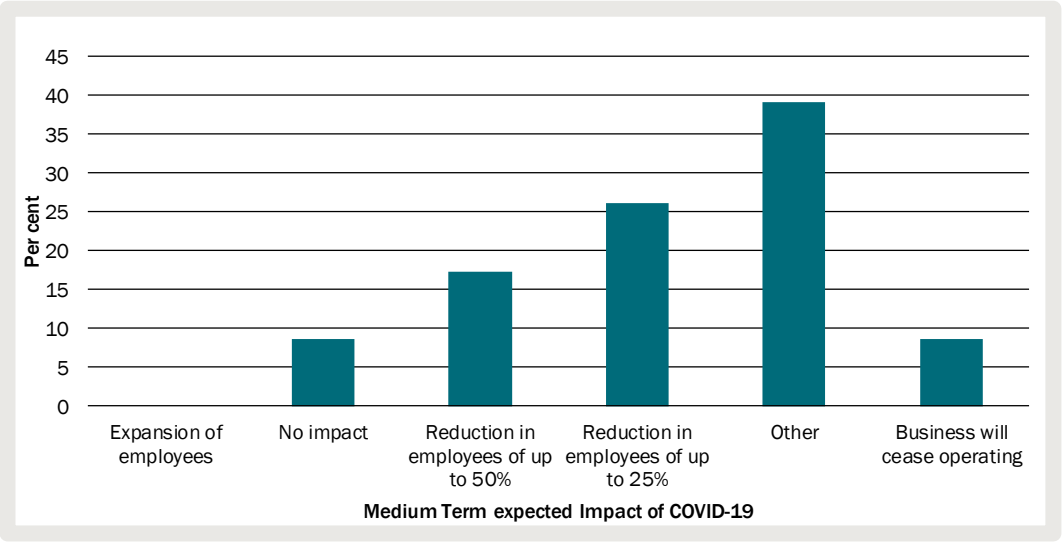


Note: Based on 20 responses out of 58 business participants of the Snowy Mountain SAP Business Survey.

Data source: The CIE.

The businesses participating in the survey were asked about their expectation of the medium-term COVID-19 impact on their operations and their responses are summarised in chart B.18. Most businesses expected some medium-term impacts. According to the businesses, COVID-19 impact on businesses in the Snowy Mountains will be felt in reduced sales revenues especially given the decline in visitation from lock-down and social distancing capacity limits. The businesses will also face increased costs in running businesses in accordance with COVID-19 safe practices. There is an expectation that businesses may need to decrease the number of employees it hires however, while some businesses believe that employee numbers may remain the same as staffing levels would need to be held at a certain level to provide a COVID-safe guest experience. Note that some of these impacts are shorter-term COVID-19 impacts.

E.8 Expected medium-term COVID-19 impact on business operations

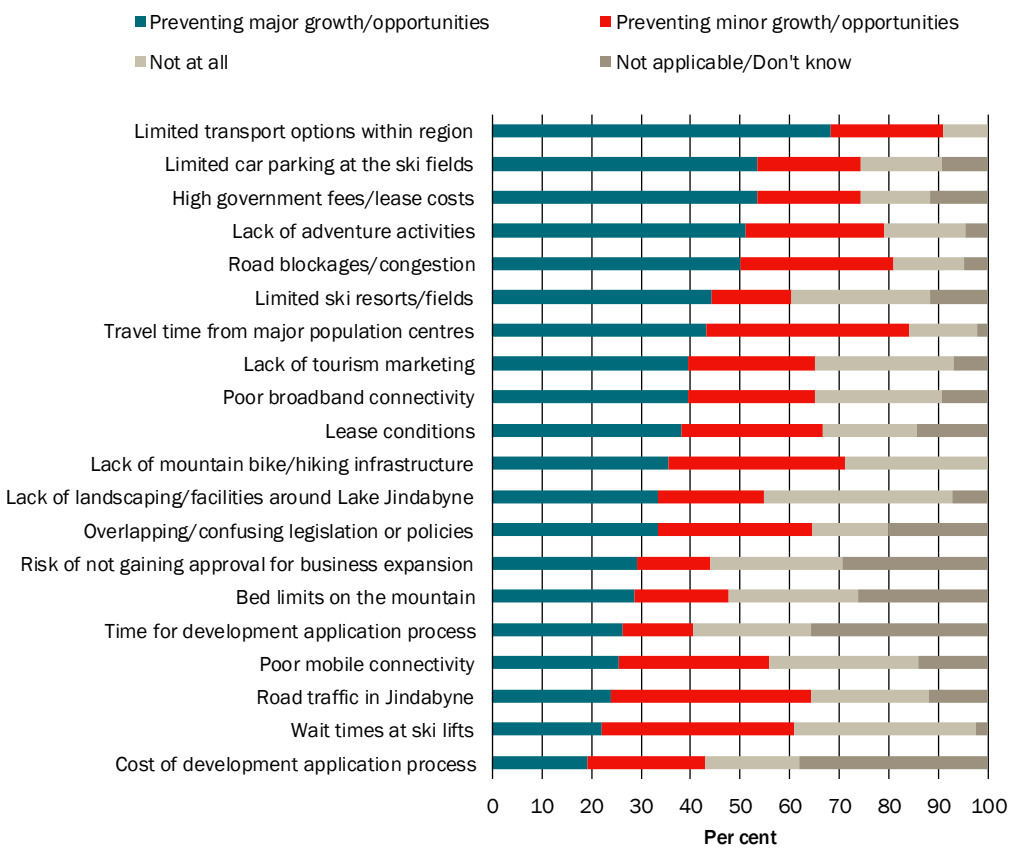


Note: 46 businesses responded to the question regarding the impact of COVID-19 on business activity in the medium-term.
Data source: The CIE.

Barriers to Business Expansion

The businesses were asked to identify some limitations that they face with regards to growth and expansion of their operation in the Snowy Mountains region. The responses of 46 businesses are summarised. The respondents shared common concerns about business prospects in the region.

E.9 Barriers to Business Expansion and Growth



Note: Based on 46 participant responses to the Snowy Mountain SAP Business Survey 2020.
Data source: The CIE.

Some of the barriers identified by more than half of the respondents as a major constraint to growth in the region for their businesses was the lack of transport options to get around Snowy Mountains (approximately 68 percent), limited car parking capacity at ski fields (54 percent), lack of adventure activities to pull customers into the region (51 percent) and costly leases or government fees (54 percent).

In qualitative comments, businesses noted that:

- transport was a major issue, ranging from taxis, buses, shuttles and car parking
- the leasing procedure (within KNP) is complicated and costly. According to the respondents, refinancing of short remaining lease terms was impossible and National Parks NSW are unwilling to entertain new leases. This is maintained by high lease renewal fees which is a damper on any potential commercial activity
- high living costs including housing and fuel costs can deter labour supply. According to the businesses, there is a heavy reliance on foreign temporary workers who tend to be seasonal resulting in high training costs for staff due to the short peak season.
- climate change is a risk factor influencing some business investment decisions.

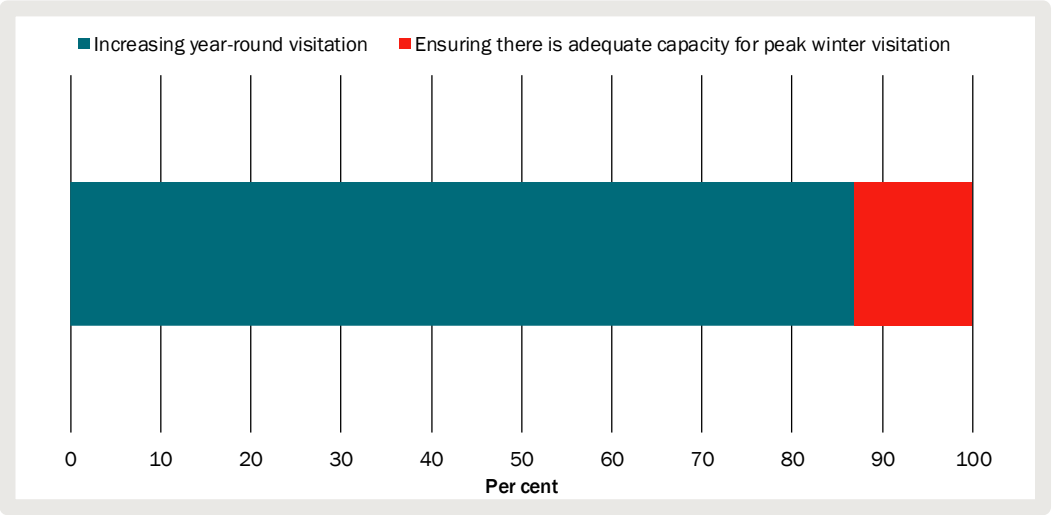
Potential Investment without barriers to expansion

Some of the investment that the participating businesses personally identified as important to their business growth prospects revolved around increasing bed capacity and accommodation, lodging refurbishments, redevelopment of buildings and infrastructure as well as investment in summer activity. The total size of investment identified by the businesses without any barriers to expansion was approximately 37 million dollars[68].

Focus of government action in the region for tourism

Most, 86 per cent, of respondents considered the focus should be on increasing year-round visitation in the region.

E.10 Respondents believe increasing year-round visitation is more important for the region



Note: Based on responses of 46 businesses that responded to the question relating to what they considered the most.
Data source: The CIE.

Qualitive comments noted in respect of the focus for Government investment included:

- to attract more Summer visitation, the Snowy Mountain region needs an attraction as unique as the snow is in Winter and to be able to be accessed by a wide demographic from families with young children to "grey nomads"
- multiple respondents recommended expanding water sports options for tourists, or basically anything that improves tourism to the area whether it be in the form of zipline or alpine coasters. A number of businesses noted that the existing Summer offering can be found at destinations closer to major capital cities and so a focus on active activities requiring specialised equipment will not give as large an increase in Summer visitation
- one respondent noted that there is an "opportunity for a cable car similar to Skyrail in Cairns in accessing a unique natural feature".

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- overnight attractions would encourage overnight visitation, and "this could possibly be in the form of an illuminated art installation similar to the Field of Lights installation at Uluru"
- it is important that money is retained within local businesses, rather than being driven by businesses that set up for winter, with seasonal employees and then disappear for the rest of the year

The businesses also recognised that the Snowy Mountains SAP is a huge opportunity for the region but has inherent risks through over commercialisation of the destination to the point where it is no longer a desirable or affordable place to live and work. There is a need to ensure the local community is not left behind and the workforce can afford to live in the region while promoting less seasonality and transience in the workforce.

F Case studies of summer alpine attractions

F.1 Case studies of summer alpine attractions

Development project	Resort	Location	Year	Visitor uplift	Current Visitor
Zip Line/Canopy Tour Mountain Coaster Mountain Biking and Hiking Trail Climbing Wall Multi-purpose activity area	Snowmass Ski Resort, Aspen[a]	Rocky Mountain, USA	2017	Anticipated use per day, 2000 guests per day. Breakdown- Mountain Coaster: 750 guests Climbing Wall: 300 Multipurpose activity: 230 Zip line: 150 Biking; 120 Zip line canopy tour: 80 Under the Proposed Action, Snowmass summer visitation is expected to increase by an additional 20,000 visits by 2019 for a total summer visitation of 45,000 While additional summer visitation is expected, winter visitation is anticipated to remain substantially higher	750,000 winter visits annually 25000 summer visits approx.
New Lift Trail Work Snow Patrol Hut Food and Beverage facility	Breckenridge Ski Resort[b]	Summit County, Rocky Mountain, USA	2010	Uptake at a rate of 2% annually for resort visitation, however peak season visitation is unlikely to be significantly impacted. Developments of peak 6 lift and associated terrain would increase by 1,100 guests (from 14920 to 16020 guests. The number of days resort operates at full capacity may increase.	
Snowtubing Centre New Lift Lift served mountain bike trail Snowshoeing trail	Taos Ski Valley[c]	Carson National Park, New Mexico	2010	Could generate an initial spike of between 15 and 20 percent in annual visitation at TSV for the first 3 to 5 years. These projects would potentially reduce the importance of natural snowfall in visitation at TSV. over the long-term (beyond 7 years) it could increase annual visitation by an average of 10 to 15 percent. The single Mountain bike alone is not measurably going to affect visitation.	193,796 (in 2010/11) Visitation has consistently fallen since the 1990s and has seen a 25% decline in annual visitation in 2 decades

Development project	Resort	Location	Year	Visitor uplift	Current Visitor
Enlargement of the existing tubing area at Adventure Point Improve Lift-Served Mountain Biking Install a new surface conveyor lift at the mid-terminal station of the River Run Gondola Install a new surface conveyor to accommodate a teaching terrain park above the A-51 terrain park. dedicated “Family Adventure Zone”	Decrum Mountain, Keystone Resort, CO[d]	Rocky Mountain, USA	2014	Projections do not anticipate major increase, although gradual increase related to regional growth is anticipated	Keystone is assumed to continue to experience moderately fluctuating skier visitation, hovering around 1.1 million visits
Alpine Coaster Mountain Biking Trail	Copper Mountain Resort[e]		2016	10,000 guests from Alpine Coaster in Summer season (100 days approx.)/ 100 guest per day. The mile-long mountain biking trail are not expected to affect visitation	
Development of New Ski Terrain; Changes to Summer Use Program: skating rinks, tube parks or ice climbing walls Facilities and Infrastructure (esp. new base pod, new parking, and water reservoir); Ski Area Operations (grooming and snowmaking); and, Races and Other Special Events. Development of a new lodge on Eagle Shoulder at the Top of Grizzly Gondola under condition of moving the summer use operation	Lake Louise Ski Area[e]	Banff National Park, Canada	2015	No projections	
Mountain Bike park Zip line Sky Cycle Canopy Tour Forest Flyer Alpine Coaster Interpretive Activities Hiking Trail Challenge Course Observation Deck Panoramic connecting trails Emergency Gondola Snow Cat Evacuation Route	Heavenly Resort[f]	Lake Tahoe Basin, Pacific Southwest Region, USA	2014	The Project will increase summer visitation to Heavenly Mountain Resort. Anticipated increase in summer visitation: 49,466 New Visitors (550 new visitors per day and 1000 on peak days) amongst them 27% are day trip visitors, 61% Overnight visitors and 12% Locals	appproximately 110,000 visitors during the summer season (approx. 90 days)

Development project	Resort	Location	Year	Visitor uplift	Current Visitor
Terrain Development Summit Access Road Lifts (Gondola and a backside chairlift and surface tow) Facilities and a new observatory near Summit Summer Activity: A zipline, Mountain biking Trail and bike zone, Hiking trails	Snow King Mountain Resort[g]	Jackson, Wyoming	2020	It is estimated that up to 10,000 people per season (roughly June 1 through August 31) would use the lift-served mountain bike trails at Snow King, representing a 7 percent increase over current levels of trail use in and around the ski area	
Mountain biking Zip Line Hiking Trail Mountain bike New Facilities and upgrades New lifts and upgrades	Lee Canyon Ski Area[h]	Humboldt-Toiyabe National Forest, Utah	2018	Under the proposed action, skier numbers are projected to increase from 1,880 to 2,850 on peak days.	
Canopy Tour/Challenge Course/Aerial Exploration Park2 Cross Country Mountain Biking Euro-Bungy/Trapeze/Climbing Wall Camping Scenic Lift Rides Snow Tubing Mountain oriented athletic events	Mount Agassiz Ski Area[i]	Canada	2012	Assuming the daily capacity of 1,200 of the existing/historic ski area facilities, a 60 day season (4 days a week for 16 weeks), and a utilization rate of 30% (industry standards are typically 30%–45%), the winter visitation at MASA could be 21,600. It is assumed that MASA could attract between 5 and 10% of the total visitation to the park, or between 12,500 and 25,000 visits, during the summer (spring/summer/fall) months approximately 47,350 skier visits and doubling the summer activity usage are required to obtain a breakeven level	Current visitor estimates to RMNPC are about 298,000 annually. The majority of this visitation (250,000) occurs in the summer

Development project	Resort	Location	Year	Visitor uplift	Current Visitor
Previously planned developments: Palmyra Basin Lift and ski patrol facility Upper San Joaquin surface lift (aka Gold Hill Summit surface lift) Restaurant Increase in snowmaking capabilities Trails/glades Newly planned projects: Lift upgrades Ski Patrol stations Summer Activity (newly planned): Future downhill mountain biking and cross-country biking trails Canopy tour Aerial trekking park Hiking and mountain biking trail system enhancements Additional winter and summer restrooms at the top of Village Express (Lift	Telluride Ski Resort[m]	Mountain Village, Colorado	2017	As a result of previously approved changes, the CCC (comfortable carrying capacity) for Telluride will increase from 6,550 guests to 8,230 guests (an increase of 26%).	over the last ten years is approximately 445,000 skier visits.
Lift Developments Sunrise learning Centre and Kids Zone New lodge, parking lot and access road Alpine training centre Relocating tubing hill Summer Activities: New hiking trails, down-hill mountain bike park, canopy tour zip line, Rock climbing course	Mt Bachelor Ski Area[j]	Bend-Ft. Rock Ranger District Deschutes National Forest, Oregon, USA	2013	Base-area capacity increased to 13,120 from 10,050 under the Proposed Action. Since the skier-visitation numbers targeted by the MDP are not to exceed not exceed that experienced during 2005/2006, so no major change in effects associated with ski area visitation anticipated. Target visitation: 12000 per day	
Construct a zip line course within the existing ski area footprint for summer use Construct a tubing hill on the western edge of skiable terrain	Sleeping Giant Ski Area[k]	Wapiti Ranger District Park County, Wyoming	2013	Did not project visitor uplift was project was implemented to expand facility recreation opportunities to the summer months when tourism traffic is at its highest and develop additional winter recreation opportunities to expand appeal to different segments of the public.	

Development project	Resort	Location	Year	Visitor uplift	Current Visitor
Recreational development at base of Peak 7: Gold Runner Mountain Coaster Ten Mile Flyer Zip line Alpine Super Slide (alpine slide) Rockpile Climbing Wall Gemstone Panning Segway Off-Road Tours 4x4 Off-Road Tours Summer Day Camp Trampoline Mini Golf Mountain Biking	Breckenridge Ski Resort[l]	Summit County, Rocky Mountain, USA	2015	Generate interest from the approximately 3 million visitors to the Town of Breckenridge annually. Projections show summer visitation expected to go up to 325,000 if activities provided on National Forest Service Lands. Concentrated use of private owned Summer fun Parks at peak 8 (35% of total visitation) but uptake in NFS provided summer activities in Peak 7 (20% of visitation).	175,000 visitors a season for existing summer activities like zipline, alpine coaster, bungee trampoline, mini golfing private owned Breckenridge fun park at Peak 8. Compared to 1.6 million annual winter visitors on average.

Source:

[a] USDA Forest Service 2017, Final Enviromental Impact Statement for the Snowmass Multi-season Recreation Project
[b] USDA Forest Service 2011, Breckenridge ski resort peak 6 project draft enviromental impact statement
[c] USDA Forest Service 2010, Final Environmental Impact Satement for Taos Ski Valley's 2010 Master Development Plan
[d] USDA Forest Service 2014, Decrum Mountain Improvements Project Environmental Assessment
[e] USDA Forest Service 2016, Copper Mountain Resort Recreation Enhancement Projects Environmental Assessment
[f] Parks Canada 2015, Lake Louise Ski Area
[g] USDA Forest Services 2020, Draft Environmental Impact Statement: Snow King Mountain Resort On-Mountain Improvements Project
[h] USDA Forest Service 2018, Draft Environmental Impact Statement Lee Canyon Ski Area MDP Phase I
[i] SE Group for Parks Canada 2012, Mount Agassiz Feasibility Study
[j] Bend-Ft. Rock Ranger District 2013, Mt. Bachelor Ski Area Improvements Project
[k] USDA Forest Service 2013, Decision Notice and Finding of Sleeping Giant Ski Area Development Projects
l USDA Forest Service 2015, Breckenridge Ski Resort MULTI-SEASON RECREATION PROJECTS DRAFT ENVIRONMENTAL IMPACT STATEMENT
[m] SE Group 2017, Telluride Ski Resort 2017 Master Development Plan.

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