

Mallee Economic Growth Strategy

Contents

Foreword	4
Executive Summary	5
1 Introduction	14
1.1 Mallee Region	16
1.2 Strategy Development	18
2 Investment Objectives	20
3 Regional Focal Investment Areas	22
3.1 Murray Mallee Economic Region	24
3.2 Business Expansion & Innovation	32
3.3 Future Skills for the Region	38
3.4 New Energy, Mining & Resource Recovery	44
3.5 Build our Rural Towns & Cities	54
Endnotes	66

Published August 2019

Acknowledgement of Country

We acknowledge Aboriginal Traditional Custodians within the Region, their rich culture and spiritual connection to Country. We also recognise and acknowledge the contribution and interest of Indigenous people and organisations in the development of a prosperous Region.

Disclaimer

All figures and data presented in this document are based on data sourced from the Australia Bureau of Statistics (ABS), and other government agencies. Using ABS datasets, the regional economic modelling software REMPLAN, developed by REMPLAN has been applied to generate industrial economic data estimates. This document is provided in good faith with every effort made to provide accurate data and apply comprehensive knowledge. However, REMPLAN does not guarantee the accuracy of data nor the conclusions drawn from this information. A decision to pursue any suggestions mentioned in the report is wholly the responsibility of the party concerned. REMPLAN advises any party to conduct detailed feasibility studies and seek professional advice before proceeding with any action and accept no responsibility for the consequences of pursuing any of the findings or actions discussed in the document.



Table of Figures & Tables

Figure ES1-1	Regional Economic Growth Strategy Framework	5	Table 3-3	Economic impact of 1,000 new residents in the Mallee Region	43
Table ES1-1	Summary of Regional Focal Investment Area Initiatives	6	Figure 3-10	Victoria's energy transformation	44
Table 1-1	Targeted areas of investment to increase capital	15	Figure 3-11	Mallee Region Large Scale Solar Power Projects	45
Figure 1-1	Mallee Region	16	Figure 3-12	Preferred option for Western Victoria Renewable Integration RIT-T	46
Table 1-2	Key Economic Profile Statistics – Mallee Region	17	Figure 3-13	Major transmission required to connect strategic storage initiatives	47
Figure 1-2	Regional Economic Growth Strategy Development	18	Figure 3-14	Australian electricity generation from renewable sources	48
Figure 3-1	Regional Focal Investment Areas	23	Figure 3-15	Comparison of 2018 capital costs of generation technologies with estimates from previous studies	49
Figure 3-2	Food Industry Employment – Value(\$)-added per workers	24	Figure 3-16	Location of the proposed Goschen Rare Earths and Mineral Sands Project	50
Figure 3-3	Murray Mallee LGAs Business by Sector, Localities adjoining Murray River	25	Figure 3-17	Projected waste landfilled for Loddon Mallee Region 2018	51
Figure 3-4	Murray Mallee Businesses located in localities adjoining the Murray	25	Table 3-4	Typical Annual Construction of Utility Solar Farm	52
Figure 3-5	Net expansion in irrigated horticulture 1997 – 2017 (Hectares)	29	Table 3-5	Utility Solar Generation Facility – Typical Operational Benefit	53
Figure 3-6	Impact on output and employment as a result of 20% contraction in horticulture	30	Figure 3-18	Regional Population Growth	54
Figure 3-7	Contribution to GRP (Value Added) Food Industry (Agriculture, Food & Beverage Manufacturing) in the Mallee Region	32	Figure 3-19	Interdependent factors result in intergenerational cycles of disadvantage	57
Table 3-1	Economic impact of 25% productivity gains over a proportion of Mallee region	36	Figure 3-20	Population of gazetted localities in Mallee Region – > 100 to < 2,500 residents	60
Table 3-2	Preliminary outlook on job growth by industry	38	Figure 3-21	Kerang residents' plea for a General Practitioner	61
Figure 3-8	Percentage of Population with Bachelor's degree or higher	39	Figure 3-22	Mallee Region Employment	65
Figure 3-9	Industry contribution to GRP (Value-Added) compared with local jobs	41	Table 3-6	Marginal economic benefit of an additional nights visitation within the region	65

Foreword

The Mallee Economic Growth Strategy succeeds the *Loddon Mallee Strategic Plan 2015-2018* with a clear economic focus.

It has been jointly developed by the Mallee Regional Partnership and Regional Development Australia Loddon Mallee Committee in consultation with regional stakeholders. It is one of two strategies (Mallee and Loddon Campaspe) which together cover the Loddon Mallee region.

Operating under a new charter, Regional Development Australia Loddon Mallee is focused on developing a strong, confident and vibrant regional economy. It is one of a network of 52 committees across the nation made up of local leaders who work with all levels of government, business and community groups to support the economic development of their regions.

The Mallee Regional Partnership (MRP) is one of nine Regional Partnerships established by the Victorian Government in 2016. The Regional Partnerships provide an opportunity for local communities to have their voices heard and actioned by providing advice directly to the Victorian Government, so they can then be incorporated into government policies, programs and planning.

The MRP covers an area with a diverse population and a buoyant economy based on agriculture, retail, health and manufacturing. The partnership model has matured over three years and the MRP has grown from connecting with community on immediate regional issues to harnessing community aspirations that drive greater economic growth for the region.

We envisage that this Strategy will provide aspiration and guidance for both committees and the region's stakeholders to successfully boost investment and growth. We are committed to using this Strategy as the basis for joined-up regional advocacy and action, and look forward to working alongside community, business, not-for-profit and government to bring about positive change for our region. We firmly believe that collaboration is the key to developing the Mallee's potential.



Winifred Scott

Chair Mallee Regional
Partnership

A handwritten signature in black ink, appearing to read 'Winifred Scott'.



Linda Beilharz OAM

Chair Regional Development
Australia Loddon Mallee

A handwritten signature in black ink, appearing to read 'Linda Beilharz'.

Executive Summary

The Mallee region is an economic powerhouse that leverages horticultural investment and large-scale food industry production to support local prosperity. Agriculture, Forestry & Fishing and Manufacturing & Construction are the top three industry sectors, representing \$4.458 billion (43.6 percent) of total output in the Mallee region.

Since the last Census 5,324 new jobs were created in the Mallee region, primarily across Health Care & Social Assistance, Construction, Accommodation & Food Services, Education & Training, Agriculture, Forestry & Fishing and Administrative Services.

In 2018, the Regional Development Australia (RDA) Loddon Mallee Committee in collaboration with the Mallee Regional Partnership initiated the development of the next significant strategic economic development framework on a regional scale.

Delivered over three stages, the work provides a basis and rationale for priority strategic investment throughout the Mallee region.

The initial stage involved preparing a consolidated regional economic analysis. Based on a combination of the most recently available evidence and targeted engagement, the *Mallee Technical Report* stands up as a key economic snapshot of the region.

The Economic Growth Strategy builds on this analysis and is designed to promote broad direction to assist in focusing action and advocacy efforts on activities that will benefit the economy of the Mallee.

Five regional focal investment areas underpin the success of the region, as outlined in Figure ES1-1. These include a focus on the Murray Mallee cross border economic zone, investment and improvement in the areas of energy generation, mineral resources and resource recovery and digital connectivity to support business expansion and innovation and attracting the right workers across a range of sectors.

Figure ES1-1 **Regional Economic Growth Strategy Framework**



The following table summarises the regional focal investment area initiatives that will drive the economic objectives for the region and deliver broader economic benefits. It is not intended to be an exhaustive list, instead providing a guide to the range of opportunities available.

Stage three will involve the preparation of a regional Investment Prospectus that will highlight the shovel ready opportunities that require State or Federal investment to be realised. As part of this process, opportunities requiring further development will be gathered to secure a regional pipeline of projects.

Table ES1-1 Summary of Regional Focal Investment Area Initiatives

Focal Area	Economic Objective	Economic Priority	Economic Benefit
Murray Mallee Economic Region	Economic transport connections	<ul style="list-style-type: none"> • Create Murray River crossings at Swan Hill and Tooleybuc capable of handling oversize and over-mass vehicles including High Performance Freight Vehicles (HPFV). • Commence planning for a second road bridge in Mildura. • Identify and develop a clearly defined HPFV road network that connects with the NSW and Victorian arterial road network and connects with the ports of Melbourne and Geelong. • Progressively upgrade the carrying capacity of important freight routes within the Goulburn Murray Irrigation District (GMID) that are constrained by bridges and culverts. • Complete the Murray Basin Rail Project and support related development by logistics companies to ensure it is fully utilised. • Commence a feasibility study of a standard gauge rail connection between Yelta (near Merbein) and either Menindee or Broken Hill providing intercontinental rail connection with Darwin, Perth and Sydney. 	<ul style="list-style-type: none"> • More regional export. • More regional employment (jobs). • Better levels of service delivery.
	Regulatory efficiency	<ul style="list-style-type: none"> • Ensure the Victorian Cross Border Commissioner (VCBC) is focused on the most important issues facing the region's economy, including, but not limited to: <ul style="list-style-type: none"> » Harmonisation of heavy vehicle rules on allowable weights and configurations of vehicles and drivers' licenses. » Differences in labour hire regulations between NSW and Victoria. » Rationalisation of licensing of bus drivers in cross border areas. 	<ul style="list-style-type: none"> • Streamlined regulatory and licensing requirements. • Growth in the border economies through dedicated cross border facilitation. • Reduced barriers to accessing services regardless of state boundaries.

Focal Area	Economic Objective	Economic Priority	Economic Benefit
Murray Mallee Economic Region (continued)	Coordination and advocacy	<ul style="list-style-type: none"> • Renew efforts to undertake economic development planning for the Functional Economic Zone crossing the NSW and Victorian border and establish resourcing arrangements to implement the plans. • Strengthen efforts to coordinate across jurisdictions such as the Murray River Group of Councils and the Central Murray Regional Transport Forum. • Create a Sunraysia Agrifood Network to articulate the long-term strategic vision for the horticultural industry along the Murray River and advocate for common issues such as freight, water and biosecurity policy. • Prepare a prospectus (or similar) to support attraction of both government and private investment in the region's industries. • Attract investment into key regional industry sectors including agriculture, manufacturing, construction and tourism. 	<ul style="list-style-type: none"> • Larger regional population (persons). • Increased regional export.
	Sustainable use of irrigation water	<ul style="list-style-type: none"> • Better understand and engage in national water policy to ensure it encourages sustainable and productive use. • Investigate physical constraints to supplying water to the Mallee and what can be done to mitigate negative effects. • Fund infrastructure renewal in irrigation districts to achieve resource efficiency. • Implement the Horticulture Sustainability Development Study. 	<ul style="list-style-type: none"> • Scenario modelling of water allocations equivalent to millennium drought conditions could result in a 20 percent reduction in production and result in \$32.247 million less regional output and a contraction of 225 jobs in the local supply chain. • Sustainable water use implementation is required to ensure more private investment, coordinated delivery of land use and infrastructure, and population (persons) and industry growth (\$ Value-add).

Focal Area	Economic Objective	Economic Priority	Economic Benefit
Business Expansion & Innovation	Export opportunities	<ul style="list-style-type: none"> • Leverage momentum in Free Trade Agreements. • Test the feasibility of creating a Mildura inland port, with infrastructure and services to facilitate export, such as quarantine, AQIS and fumigation. • Ensure State and Federal government support for export businesses. • Ensure governments invest in regional freight infrastructure. 	<ul style="list-style-type: none"> • Increased regional export.
	Value adding opportunities and supply chain improvement	<ul style="list-style-type: none"> • Complete supply chain analysis to understand demand for export, local value-add opportunities and farm income diversification, including opportunities to leverage current and future transport infrastructure. • Invest in interconnecting transport infrastructure such as intermodal sites. • Attract new rail operators to extend value to local businesses and create a competitive freight market to access Victorian ports. • Pursue business opportunities, such as new services, as identified in the supply chain analysis. • Utilise the supply chain analysis to inform freight route planning. 	<ul style="list-style-type: none"> • Increased value of Regional Expenditure. • Coordinated delivery of land use and infrastructure to support economic development.
	Attract new business investment	<ul style="list-style-type: none"> • Extend current government support for private businesses wishing to expand, through grants, export assistance and help with planning issues. • Create a Regional Capital Investment Fund (or similar) to support businesses wishing to expand and requiring access to equity. 	<ul style="list-style-type: none"> • Increased regional employment (jobs).

Focal Area	Economic Objective	Economic Priority	Economic Benefit
Business Expansion & Innovation (continued)	Regional research and development (R&D)	<ul style="list-style-type: none"> Expand the capability and depth of the agricultural R&D and extension-focused institutions within the region, including Birchip Cropping Group, Southern Mallee Farming Systems, Mallee Sustainable Farming, Irymple Horticulture Centre, La Trobe University and SuniTAFE. Realise the potential for the newly formed Mallee Regional Innovation Centre (MRIC) to drive innovation and the uptake of technology. 	<ul style="list-style-type: none"> Research activities drive economic benefits for the region, for example MRIC is estimated to create annual economic benefits of \$19.7 million arising from its research program. Research investment will boost the number of local jobs in tertiary education.
	Digital connectivity for agricultural systems	<ul style="list-style-type: none"> Encourage implementation of new technologies particularly the use of: <ul style="list-style-type: none"> » Automation » Internet of Things (IoT) » Data sharing and use of big data Provide fit-for-purpose networks to allow uptake of new technologies. Investigate the role of government subsidies and user pays arrangements in establishing these networks. 	<ul style="list-style-type: none"> Better digital connectivity drives business efficiency and positions industry to leverage digital technologies to improve productivity. A 25% increase in productivity in blackspot areas could generate an additional \$52.038 million and support up to 303 (direct and indirect) long term jobs.

Focal Area	Economic Objective	Economic Priority	Economic Benefit
Future Skills for the Region	Ensure school leavers are ready for work or further education	<ul style="list-style-type: none"> • Prepare an action plan to achieve increased Year 12 completion rates and increased levels of participation and achievement in vocational training and higher education. • Increase awareness amongst students of career paths available within local industries. • Establish a Mildura-based Tech School that encourages take up of STEM (Science, Technology, Engineering and Mathematics) related careers and ensure the Tech School benefits students from the broader region. 	<ul style="list-style-type: none"> • A sustainable workforce.
	Create the skilled workers required by our industries	<ul style="list-style-type: none"> • Better orientate the vocational and higher education sectors to expand their course range in the Mallee to focus on the needs of industry. • Support and encourage the dual enrolment model developed by La Trobe University and SuniTAFE. • Undertake a Skills Demand Assessment in the dryland parts of the Mallee region and develop options to meet these needs. 	
	Encourage inward migration	<ul style="list-style-type: none"> • Establish concierge and settlement services to encourage skilled workers to relocate to the Mallee. • Explore other options for encouraging skilled migration (both domestic, secondary and from overseas). • Advocate for Government policy supporting the supply of unskilled and semi-skilled labour. 	<ul style="list-style-type: none"> • Population growth supports economic activity and broader regional benefits. Based on the current demographic profile of the Mallee region, a general population increase of 1,000 residents would see an additional 405 working residents, 373 of which would work within the region.
	Provide appropriate worker housing and other fundamental services	<ul style="list-style-type: none"> • Complete the Robinvale housing strategy and ensure its implementation. • Address worker housing shortages in other parts of the region, particularly Mildura. 	

Focal Area	Economic Objective	Economic Priority	Economic Benefit
New Energy, Mining & Resource Recovery	Unlocking new energy	<ul style="list-style-type: none"> Undertake a consolidated analysis of recent regional transmission upgrade and augmentation works to understand their impact and determine actions. Develop an advocacy and engagement strategy to address regulatory barriers and identify grid constraints within the system. Advocate to the Australian Energy Market Operator (AEMO) for a feasibility study into the duplication of the existing transmission lines in north west Victoria to unlock constrained renewable energy investment throughout the Mallee region. Advocate for changes to national policy to ensure decisions about grid infrastructure are based on the complete economic Cost Benefit Analysis and not a financial assessment of the transmission line. Advocate for changes to national policy that currently restrict movement of electricity between states. 	<ul style="list-style-type: none"> If the proposed \$2.8 billion of pent up utility scale investment was constructed over a 20 year period with annual construction totals of \$140 million, it is estimated that up to 549 jobs would be supported throughout the broader Loddon Mallee Region.
	Capitalising on the Mallee's mineral sands and rare earth deposits	<ul style="list-style-type: none"> Encourage further opportunities for mineral sands and rare earths mining within the region. Ensure the completion of the Murray Basin Rail Project to support mineral sands mining in the Lalbert area. 	<ul style="list-style-type: none"> Increase in economic output. Growth in employment base for region.
	Waste and resource recovery	<ul style="list-style-type: none"> Seek the investment required to increase recovery and reprocessing of materials within our region. Implement the Loddon Mallee Regional Organics Strategy 2019-25. 	

Focal Area	Economic Objective	Economic Priority	Economic Benefit
Build our Rural Towns & Cities	Boost our rural cities	<ul style="list-style-type: none"> • In areas of population growth ensure that facilities grow with increasing demand: <ul style="list-style-type: none"> » Renew Swan Hill Hospital » Complete the Mildura Future Ready suite of projects • Complete the visions of the cities of Swan Hill and Mildura to better orientate their CBDs towards the riverfront. • Utilising the significant prior research that has been undertaken, prepare a feasibility study for a convention centre suited to the needs and opportunities within Mildura. • Advocate and lobby for location of a Government agency to be headquartered in Mildura or surrounds. • Support increased numbers of international students attending tertiary institutions. 	
	Economic inclusion for all Mallee residents	<ul style="list-style-type: none"> • Address interdependent factors such as poor physical and mental health, housing insecurity, addiction and family violence that result in intergenerational cycles of disadvantage and non-participation in the economy. • Focus efforts on vulnerable groups, such as children in Out-of-home care and students at risk of long-term unemployment. • Better manage preventable disease including obesity, smoking, chronic disease caused by poor diet and lifestyle choices. 	
	Improved passenger services	<ul style="list-style-type: none"> • Realise the aspiration within the Regional Network Development Plan, Connecting Regional Victoria of five return passenger train services per day between Melbourne and Swan Hill. • Undertake a robust passenger transport study to examine all options for providing improved public transport and connectivity between Mildura and Melbourne. • Undertake a feasibility study exploring the potential of a regular commuter flight from Bendigo to Adelaide via Mildura. 	

Focal Area	Economic Objective	Economic Priority	Economic Benefit
Build our Rural Towns & Cities <i>(continued)</i>	Vibrant small towns	<ul style="list-style-type: none"> • Explore the role of co-design, place-making and citizen-led approaches to activate township renewal. • Provide funding to stimulate amenity enhancements, community infrastructure projects and capacity building in small towns. • Develop innovative service delivery models that meet local demand for primary healthcare, childcare and training. • Provide improved small-town transport options and digital connectivity. 	
	Infrastructure supporting the visitor economy	<ul style="list-style-type: none"> • Address the lack of overtaking lanes and provide intersection treatments on major tourist routes that are shared with freight traffic. • Seal Arumpo Road and Marma Box Creek Road (NSW) to permit all-weather access to Mungo National Park. • Bring access roads to Lake Tyrrell and the expanding Silo Art Trail up to a safe and appropriate standard. • Provide excellent mobile reception on all major tourist routes. 	
	Build the value of the region's tourism assets	<ul style="list-style-type: none"> • Complete construction of Stage One of the Murray River Adventure Trail. • Build the Swan Hill to Lake Boga Active Trail. • Realise the potential of Lake Tyrrell and the Tchingal Trail between the lake and Birchip. • Expand the Silo Art Trail into the Mallee LGAs. • Develop the village square component of Stage Two of the Mildura Riverfront Redevelopment Project. • Develop the Mildura Motorsport and Community Precinct Project. • Implement Mildura Rural City Council's 'Tracks and Trails Strategy'. • Encourage the development of Indigenous tourism enterprises. • Achieve appropriate funding for Wimmera-Mallee tourism that provides focus and coordination of tourism development and marketing for areas not currently served well by regional tourism boards (dryland parts of the Mallee). • Support local tourism training for small businesses. 	<ul style="list-style-type: none"> • Modelling the potential impact of increasing the average length of stay of International and domestic overnight visitors by a single night is estimated to generate an additional \$91.238 million annually, creating 512 direct jobs and up to another 247 jobs across other industries in the Mallee that have exposure to the visitor economy.

1 Introduction



This Economic Growth Strategy (the Strategy) outlines a strategic direction for the Mallee region to invest in skills, build capability and leverage current and future capital infrastructure through a package of targeted investment.

The Strategy aims to increase regional capacity and prosperity for the residents of the Mallee. The initiatives and strategic direction outlined in the Strategy are integrated and multifaceted, addressing economic focal areas of regional cross-border connection, business expansion and innovation through digital connectivity, new energy and mining opportunities and improving liveability in rural towns and cities. Throughout the region, investment in skills and supporting relationships beyond the region are central strategies.

The Strategy is unashamedly focused on increased employment, growing Gross Regional Product (GRP) and improving prosperity of the region as recognised through productivity gains, increased wages and salaries and a higher level of educational attainment.

While the primary objective of this strategic work is underpinned by economic development, insights from practitioners, policy makers, institutional managers and senior local government staff have enabled the integration of broader policy objectives across education, health, housing, urban design, environmental restoration and protected areas management.

Strong and vibrant communities underpin a healthy economy. Integrating broader policy approaches that address issues which reduce the ability of people to participate in the economy, such as isolation, disadvantage or poor health, drives success and economic prosperity of the region and its community.

Objectives include investment targeted to support enhancement of key areas of capital (Table 1-1).

Table 1-1 **Targeted areas of investment to increase capital**

Capital	Area of investment strategy
Political	Strategy & Policy Development
Human	Skills, Capability & Knowledge
Built	Regional Infrastructure Investment
Cultural	Celebrating our Region & Heritage
Social & Financial	Partnerships & Capacity

The Strategy is focused on the specialisation opportunities of the region and responds to the key drivers of the regional economy. In the Mallee, the overriding economic driver is production and export-driven activity where rural land use provides economic return to the region through high levels of output per worker.

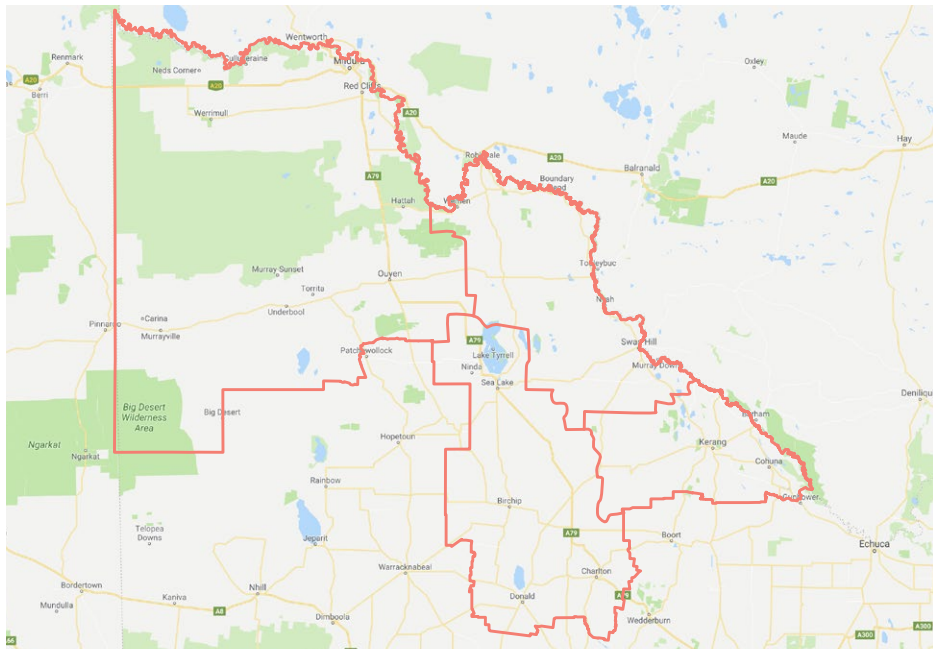
Of course, this simple view does not reflect the complexity of the region. However, it is fundamental in the approach to the development of the Strategy

Economic activity occurs across the region and across regional boundaries. Whilst major population centres are major economic drivers, our smaller economic centres are just as important as they enable economic prosperity to be extended across the region.

1.1 Mallee Region

The Mallee region is comprised of the following four Local Government Areas: Mildura Rural City, Swan Hill Rural City, Gannawarra Shire and Buloke Shire.

Figure 1-1 **Mallee Region**



Source: <https://remplan.co/2QMwPDc>



Current economic profile

The latest key economic indicators for the Mallee region demonstrate challenging population growth figures. Across the region the 20-year annual average growth rate is -0.41 percent. While Mildura Rural City is forecast to sustain over 0.7 percent, the *Victoria in Future 2016* report forecasts negative growth across the other three municipalities. The strength of the Agriculture, Forestry & Fishing sector is

apparent. It is the most important sector within the Mallee in terms of total output, total employment and contribution to Gross Regional Product (Value-added).

In addition, the tourism sector remains an important contributor representing 7.1 percent of all jobs and the sixth largest industry sector in terms of total revenue (Output) generating \$474.364 million.

Table 1-2 **Key Economic Profile Statistics – Mallee Region**

Estimated Resident Population	92,777 (ABS)	Annual Population Growth Rate	-0.41% (VIF)	Projected Population 2031	280,669 (VIF)
Gross Regional Product (GRP)(\$B)	\$5.332	Per Capita GRP (\$'000)	\$58.451	Per Worker GRP (\$'000)	\$140.166
Total Output (\$B)	\$10.222	Total Employment (Jobs)	38,038	Total Value-added (\$B)	\$4.923
Top 3 Sectors by Output		Top 3 Sectors by Jobs		Top 3 Sectors by Value-added	
16.5% Agriculture, Forestry & Fishing	15.6% Manufacturing	11.5% Construction	15.6% Agriculture, Forestry & Fishing	13.8% Health Care & Social Assistance	12.3% Retail Trade
16.2% Agriculture, Forestry & Fishing	8.9% Health Care & Social Assistance	7.4% Construction			
Tourism Output (\$M)	\$474.364	Tourism Employment	2,700	Tourism Value-added (\$M)	\$216.366

Source: Australian Bureau of Statistics, Victoria in the Future, REMPLAN.

Note: Economic estimates exclude Rental, Hiring and Real Estate Services of which a significant component includes 'Ownership of Dwellings'. Ownership of dwellings consists of landlords and owner-occupiers of dwellings. Owner-occupiers are regarded as operating a business that generates a gross operating surplus. The imputation of a rent to owner-occupied dwellings enables the services provided by dwellings to their owner-occupiers to be treated consistently with the marketed services provided by rented dwellings to their tenants.

1.2 Strategy Development



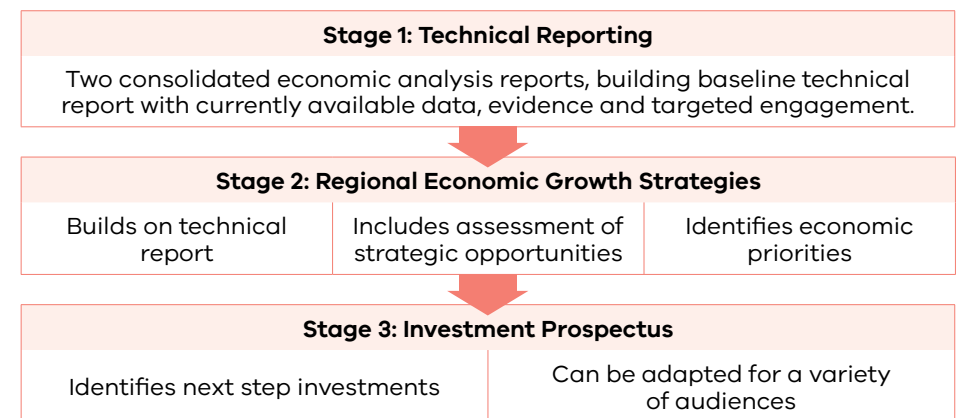
The Mallee Economic Growth Strategy has been developed as part of a three stage process as outlined in Figure 1-2.

Stage One involved a consolidated economic analysis of the current situation based on evidence (data information) and targeted engagement to provide insights and identify emerging priority areas for regional economic development.

Stage Two built on this evidence base to develop this consolidated Strategy utilising strategic opportunity assessment and priority project identification.

Stage Three will involve the preparation of a revised and updated Investment Prospectus for the Loddon Mallee region.

Figure 1-2 **Regional Economic Growth Strategy Development**





2 Investment Objectives



Identifying areas of focus is the key to the development of the Strategy. Regional focal investment areas will help categorise priorities that best leverage existing regional strengths and address weaknesses.

The purpose of this document is not to detail or design specific investment projects, rather to outline preliminary investment logic at both a program and focal area level to support further substantiation.

Importantly, while the focal areas are targeted, and proposed actions and responses have been aligned to a specific area, the proposals are often integrated and holistic in their approach. In several focal areas, a project or initiative has a positive impact on or supports a proposal in another nominated priority area.

The role of government and regional structures including Regional Partnerships and Regional Development Australia to expedite and support economic development within their region is fundamentally linked with policy. While this policy support is often expressed through advocacy and engagement, it is most commonly demonstrated through contractual agreements, financial instruments and grants.

Key partners in the region are Local Government bodies, whose regional economic development efforts are commonly directed toward capital investment in infrastructure and assets, regulatory change of land use planning, and a range of business support approaches, such as collaboration/networking, lobbying and promotion.

Central to many of these decisions is coordination of strategic line of sight between demonstrated business need, evidence and information, strategies and plans and business case development to unlock capital.

Each of the focal areas provides an investment summary with overview of strategic assessment. Summary material included in the Strategy has been supported through technical reporting and subject matter expert workshops.

The Strategy provides an overview of each focal area including:

- ▶ **Economic objectives** – why the region should target this focal area
- ▶ **Economic priorities** – description of investment/service need, including likely high-level solutions and priority recommended actions
- ▶ **Economic benefits** – preliminary assessment of regional investment benefits.

Recommended actions are aligned to the role of government but ultimately seek to unlock private sector investment. Typically, these approaches recognise a need for partnership in the investment.

3 Regional Focal Investment Areas



The Economic Growth Strategy outlines priority areas that leverage strengths and address problems requiring investment to remove impediments to increased productivity and prosperity in the Mallee region.

The positive economic outcomes (increased productivity and prosperity) of the Mallee region will be structured around the success of key regional strengths.

These positive economic outcomes are fundamentally driven by a strong relationship to the attraction and capability of the region's human capital, structural policy shifts that advance future strategy and investment in the region's built and natural environment.

Forging new regional success stories, economic outcomes and positive histories links to the future with the region's significant cultural heritage. These lived experiences underpin the success of the region. Shared experiences and cultural celebration are the bond that ensures economic outcome within the regions is fostered through partnership and celebration and broad regional relationships that extend beyond the immediate Mallee region.

Figure 3-1 **Regional Focal Investment Areas**



3.1 Murray Mallee Economic Region

Economic Objectives

The importance of the Murray Mallee region (incorporating Central Murray NSW) requires a coordinated policy to drive investment to support the region's businesses, communities and long-term prosperity. Recognising the region as an economic zone will enable coordinated marketing, infrastructure provision, and accelerate access to export markets for local value adding.

The importance of the Murray Mallee region (incorporating Central Murray NSW) requires a coordinated policy to drive investment to support the region's businesses, communities and long-term prosperity. Recognising the region as an economic zone will enable coordinated marketing, infrastructure provision, and accelerate access to export markets for local value adding.

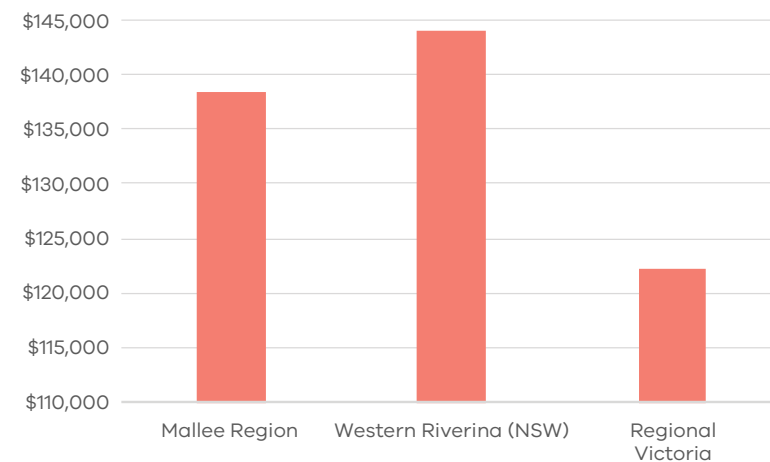
Geography is a key influence on the region's prosperity, and accessible water from the Murray River is vital to drive productivity and a strong economy. Productivity, not population, drives the region's contribution to Gross Regional Product (GRP). Accessible and secure access to water underpins both food related industry (agriculture and manufacturing) as well as the region's visitor economy.

Establishing the Murray Mallee as a nationally significant economic region requires policy and investment that focuses on production (rather than population) and cross border connections.

Productivity per worker is higher in the Mallee region than the rest of regional Victoria (see Figure 3-2). This trend extends across other resource-based food regions in the Western Riverina (NSW - including the Local Government Areas (LGAs) of Balranald, Murray River and Wentworth).

Regional economic activity naturally extends across state borders, with notable land and resource based economic activity in NSW, and a higher proportion of urban settlement and household driven economic activity in Victoria. Business activity is also concentrated toward localities that adjoin the Murray River.

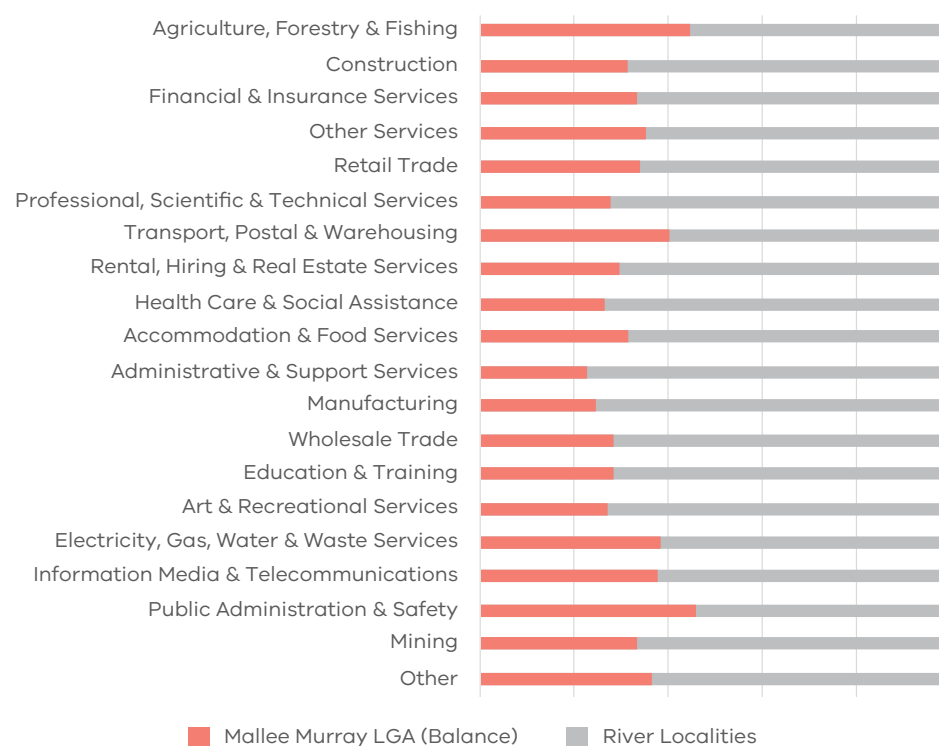
Figure 3-2 **Food Industry Employment – Value(\$)-added per workers**



Source: REMPLAN, Loddon Campaspe (Dec 2017) dataset.

Across all industry sectors, on average 67 percent of businesses located within the Murray Mallee LGAs (Central Murray) are in localities that adjoin the Murray River. The concentration of business types includes Agriculture, Forestry & Fishing, Construction, Financial & Insurance Services, Other Services and Retail Trade.

Figure 3-3 Murray Mallee LGAs Business by Sector, Localities adjoining Murray River



Source: REMPLAN Business Module, (map of region <https://remplan.co/2Hzwwla>)

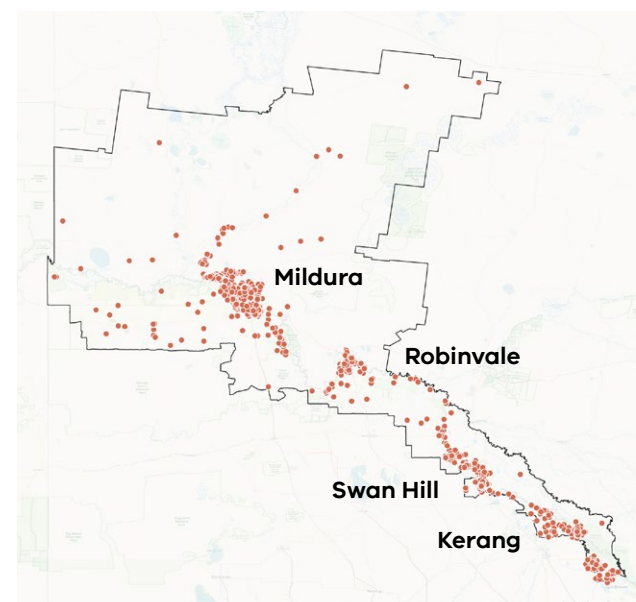
The region's economic activity is tied to sustained levels of economic productivity associated with horticulture and dryland agriculture. Over the last five years, the Murray Mallee region has generated comparably high productivity levels, driven by primary producers investing in technology and systems to drive output and

counter higher costs and limited access to local labour. The impact of economic transition and population decline in rural areas of the region has required a private sector led response to ensure ongoing economic output.

Public infrastructure investment and regulatory reform will continue to drive output (revenue \$M) by key industry sectors and support longer term prosperity for the region.

There is a need to shift funding models for the region to recognise the sustained economic output that exists in the absence of population growth to ensure higher levels of public and private investment per capita.

Figure 3-4 Murray Mallee Businesses located in localities adjoining the Murray





Economic Priorities

3.1.1 Economic transport connections

The region performs an important national role. While not associated with population growth like metropolitan or regional centres, the nationally significant contribution in the Murray Mallee region from food related industries demands an equitable infrastructure investment by government.

Critical investment to increase productivity and support improved connections from farm gate to processing facility/market/port will drive investment and increased profitability for Murray Mallee businesses.

Regional priorities have been identified in the *Central Murray Regional Transport Strategy 2018* that seek to improve connections for industry export, community connections and the visitor economy. Investment in regional transport infrastructure is the cornerstone to boosting productivity and economic benefit.

There is a need to identify and develop a High Productivity Freight Vehicle (HPFV) network that connects with the NSW and Victorian arterial road network, as well as the ports of Melbourne and Geelong. This freight network needs to include the Hattah to Robinvale Road, the Calder Highway Corridor, and the Sunraysia, Sturt, Mallee and Murray Valley highways.

The Transport Strategy includes a focus on freight route priorities including first mile/last mile trips, supply chain analysis, and broader highway and road infrastructure upgrades.

The flow of goods and services throughout the region does not recognise geographic or administrative boundaries. There remains a need to improve cross border connections to support increased economic benefit. Modernising and upgrading old bridge assets would enable HPFVs to cross at Swan Hill and Tooleybuc, improving safety and industry efficiency.

Other central plans and investment include a broader strategic assessment for a second bridge crossing at Mildura, leveraging air transport, completing the Murray Basin Rail Project with an emphasis on the Murrayville line and rail connection for Mildura to the transcontinental railway.

Future investment criteria should recognise the region's increased levels of production and greater value-add contribution per worker. The region contributes significantly to Gross Regional Product, and infrastructure delivery should recognise this contribution by business and industry in the region.

3.1.2 Regulatory efficiency

The unintended consequences of regulatory structures that straddle the Murray River impact community and businesses daily. Multiple levels of government - Local and two State Governments results in additional administrative and regulatory burden for the border communities.

The role of Cross Border Commissioners requires support and information from regional leadership to support greater efficiencies that reduce costs to business. Common impacts occur for business accreditation/approvals, construction related activity triggering planning and building requirements.

The need for dual accreditation and access to training requirements often act as inhibitors to seamless economic activity within cross border communities. Issues requiring immediate attention include the harmonisation of regulations controlling heavy vehicle crossing between NSW and Victoria, and the differences in labour hire regulations between the two states.

There are other misalignments of regulation that need to be addressed. It is important that both the NSW and Victorian Cross Border Commissioners engage with Mallee businesses to identify other high priorities.



3.1.3 Coordination and advocacy

Enabling economic development to occur at a regional scale requires coordination between governments to drive activity.

Recognising the scale of business and community services that support the local economy will be important in targeting resources. Critical first actions should be directed towards renewing efforts to undertake economic development planning for the Functional Economic Zone crossing the NSW and Victorian border and establishing resourcing arrangements to implement the plans.

Enabling action across borders will require building a strengthened Murray Mallee region governance framework across Central Murray councils focused on economic prosperity and social/community infrastructure needs that reflect the region's needs. Consideration needs to be given to investment attraction to the Murray Mallee. Seeking both government support for related policy change and infrastructure funding, but also seeking private investment throughout the Murray Mallee Region.

Efforts to coordinate between jurisdictions such as through the Murray River Group of Councils, the Railing Ahead advocacy group, and the Central Murray Regional Transport Forum have proven valuable and can lay claim to achieving funding for Murray Basin Rail and realising the Ports of the Murray projects. These sorts of forums should be encouraged and well resourced.

Horticulture in the Murray Mallee is not one but several industries, each industry having its own peak representational organisation. There is no regional voice for the food industry in the Murray Mallee. It is recommended that a Sunraysia Agrifood Network is established to articulate the long-term strategic vision for the entire horticultural region along the Murray and advocate for common issues such as freight, water and biosecurity policy change.

3.1.4 Sustainable use of irrigation water

The recent growth and prosperity in the Mallee region's irrigated horticultural base has been in contrast to the experience in other regions. And to some extent the current confidence of the horticultural industry in the Murray Mallee is masking issues that our irrigators will have to face in the future.

The growth seen in horticultural plantings has arisen from amendments to Victoria's Water Act made in the 1980s. These changes allow water to be transferred between farms. As a rule, water is sold to more profitable enterprises (that can afford to pay higher prices), and the Mallee has benefited from this trade.

Figure 3-5 on the following page illustrates the expansion seen in the region over the past two decades. Since 1997 through to 2015, increases in area of irrigable horticulture throughout the Victorian Mallee went from 39,700 to 73,000 ha. While at the same time horticultural plantings in the Goulburn Murray Irrigation District have remained stable and constant².

Whilst the area of Mallee horticultural plantings has more than doubled since water transfers became possible. The total pool of water in the Murray Darling Basin available for irrigation has reduced.

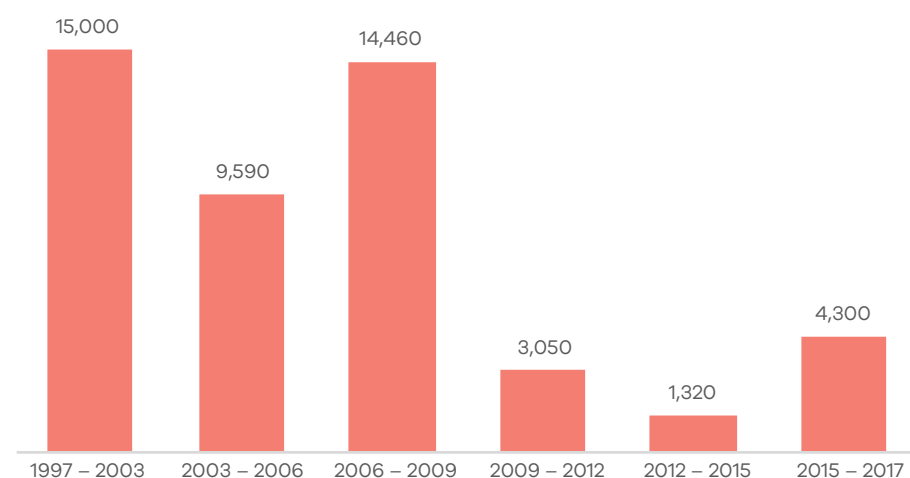
This reduction has occurred as a result of implementation of the Murray Darling Basin Plan which is seeking to see some of the water once used for irrigation to maintain environmental condition. The Mallee region has benefited from this shift seeing environmental water ensure the future of iconic wetlands at Hattah Lakes, Gunbower Forest and Lindsay and Wallpolla Islands.

As the irrigators in the Mallee are now using a greater volume of water, and a greater overall proportion of the total amount of water flowing down the Murray River, there are two issues looming for the region.

The first of these is that the Mallee region is approaching the physical limit to the amount of water that can flow down the river at peak demand times. Secondly, if another drought of the scale experienced during the 'Millennium Drought' 2001 – 2009, was to occur the Mallee region will be more exposed to its impact.

The 2017, *Social and economic impacts of the Basin Plan in Victoria* report prepared by TCA and Frontier Economics for the Victorian Government has predicted that 'if allocations in a future drought were to drop to 32 percent (impact equivalent to the millennium drought), one fifth of current horticultural plantings may need to be dried off'. This direct loss of production would have a significant economic and social impact throughout the region.

Figure 3-5 Net expansion in irrigated horticulture 1997 – 2017 (Hectares)



Source: SunRCS Annual Report 2017 [Sunraysia Rural Counselling Service Inc. – SunRISE Mapping & Research Report]

These challenges require us to better understand and engage in national water policy to ensure that the policy settings encourage sustainable and productive use given the climatic variations that occur. The region should continue to investigate the physical constraints to the supply of water to the Mallee and examine what can be done to mitigate against these constraints.

The region must seek investment in our irrigation distribution systems to increase the efficiency of the water supply networks (Goulburn Murray Water and Lower Murray Water). Likewise, primary producers need to be supported in adopting water efficient irrigation systems.

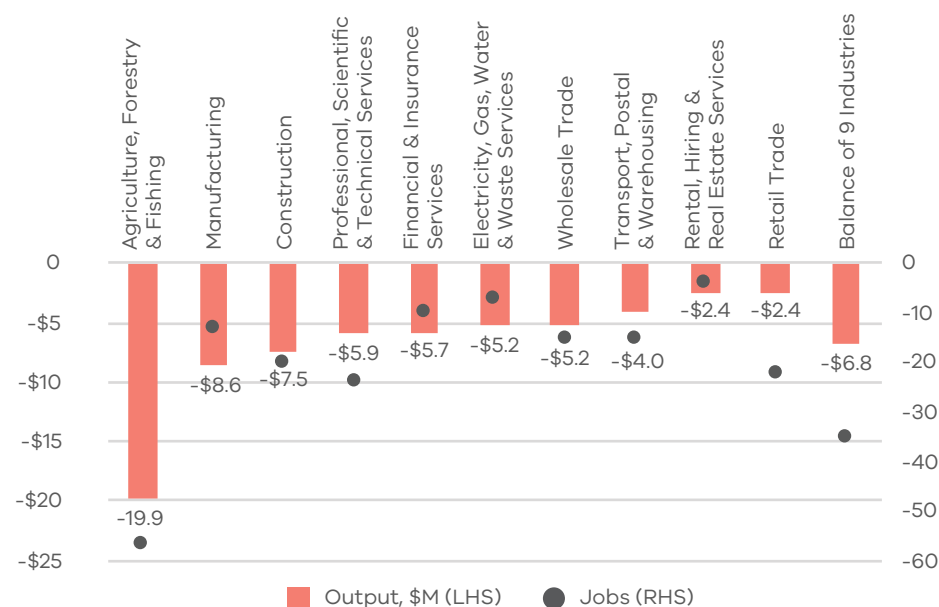
Economic benefits

The horticultural sector is a major contributor to regional output for the Mallee region, contributing an estimated \$865.614 million or 8.5 percent of total regional output. The sector is also an important employer, supporting over 2,700 jobs. Large reductions in the level of output generated by this sector could have potential negative effects for the economy of the region.

The scenario outlined above from the TCA and Frontier Economics report predicted that the impact of water allocations equivalent to that experienced in the millennium drought could result in one fifth (20%) of horticultural plantings being dried off. The flow on impact through local supply chains of a 20 percent reduction in horticultural output in the Mallee region could potentially see a total reduction in regional output of \$32.247 million accompanied by a contraction of 225 jobs in local supply chain organisations (Figure 3 6).

Cross border communities face a range of additional issues, burdens and requirements that are not present in non-cross border contexts. A Cross Border Commissioner is considered an important resource to facilitate both economic and social transformation and deliver benefits for cross border communities.

Figure 3-6 Impact on output and employment as a result of 20% contraction in horticulture



Source: REMPLAN Economy

A Cross Border Commissioner is anticipated to deliver three key benefits for Victorian communities.

Benefit 1 – Streamlined regulatory and licensing requirements

- ▶ Reduce the burden of differing regulatory and legislative requirements for Victorian based workers and businesses that also work or operate in NSW.
- ▶ A study shows that small businesses operating in cross border communities incur compliance costs averaging 330 hours per annum, a 74 percent greater regulatory burden than businesses operating outside cross border communities.
- ▶ Examples are provided relating to duplication or differing regulation for bus companies, construction trades and Department of Justice and Regulation.

Benefit 2 – Growth in the border economies.

- ▶ There is currently limited ability to fund projects which would deliver significant economic impact to Victoria due to them being located across the border, in whole or in part.
- ▶ The private sector would benefit greatly from a visible, dedicated resource to facilitate cross border projects.
- ▶ The benefits accrue primarily due to taking a regional perspective. When considered individually, the communities along the border may be small, but as a whole they are economic regions generating considerable levels of economic activity.
- ▶ An example is provided of a business expansion project (cross border pipeline) for a food product manufacturer that has been stalled for 20 years.

Benefit 3 – Reduced barriers to accessing services regardless of location.

- ▶ The existing state focused service delivery model is preventing equitable access of services in cross border communities.
- ▶ This is a social benefit for people living in cross border communities. Vulnerable people in cross border communities are often physically distant from state-based services that they require in their own state, but close to the same service across the border and unable to access it.
- ▶ Examples are given relating to services provided to victims of family violence and other non-law enforcement support services.
- ▶ Other benefits include:
 - ▶ streamlining working relationships not only with NSW, but potentially SA and TAS
 - ▶ positioning border regions as well-connected communities, and
 - ▶ aligning with current policy such as Victoria's Regional Statement (2015).



3.2 Business Expansion & Innovation

Economic Objectives

The Food Industry sector (made up of Agriculture, Forestry & Fishing and Food Product Manufacturing) contributes \$2,382.249 million (23.3 percent) of total output in the Mallee and supports over 6,950 jobs in the region.

The sector provides a higher proportional share of GRP than Health Care and Social Assistance, Construction, Education & Training and Retail Trade in the region (Figure 3-7).

The region's agricultural success directly drives increased levels of regional export and demands higher levels of local regional employment.

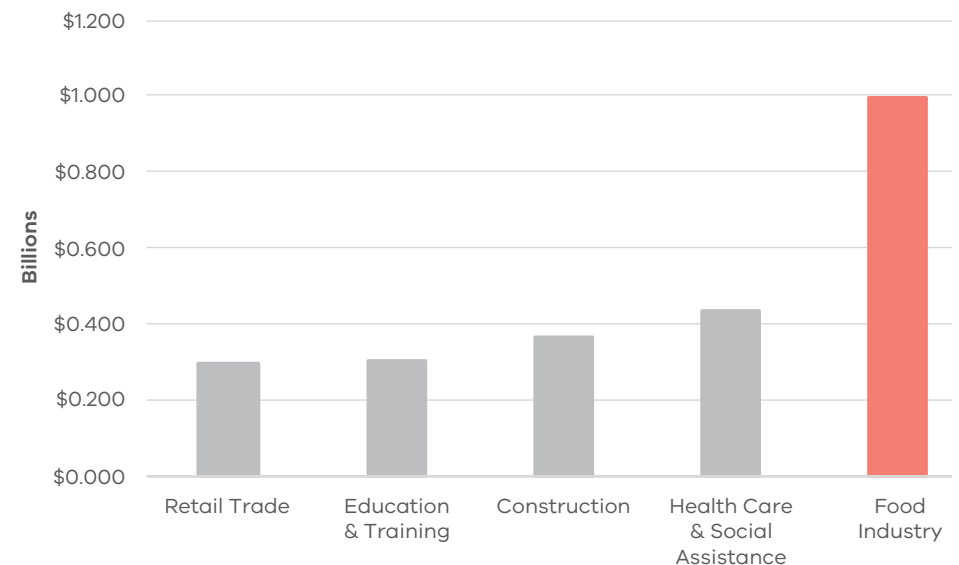
There is a need to ensure innovation drives greater efficiency and economic return rather than simply focusing on volume of production.

The future for both our irrigated and dryland agricultural industries lies in becoming more productive with available resources, adopting new technologies, adapting and implementing business level innovation to create greater efficiency and increased local value adding.

The importance of the food industry that includes representation of both primary production (Agriculture) and secondary and tertiary value-adding through local food manufacturing is strategically important for the region.

Research suggests 'unconstrained digital agriculture' could achieve a 25 percent increase in Gross Value of Production. There is clearly a need to position the region for high speed mobile network investment beyond the coverage extended by existing 3G and future 4GX networks³.

Figure 3-7 **Contribution to GRP (Value Added) Food Industry (Agriculture, Food & Beverage Manufacturing) in the Mallee Region**



Source: REMPLAN Economy Analysis

Secure, reliable, cost effective and efficient digital connectivity infrastructure is fundamental to improved regional business opportunities. Current coverage and network speed are inadequate and requires sufficient investment to ensure equitable provision of services throughout the Mallee region.

Economic priorities

3.2.1 Export opportunities

Free Trade Agreements created over the past decade with some of our main trading partners include:

- ▶ Australia-Chile (ACI-FTA) 2009
- ▶ ASEAN-Australia-New Zealand (AANZFTA) 2010 – 2012
- ▶ Malaysia-Australia (MAFTA) 2013
- ▶ Korea-Australia (KAFTA) 2014
- ▶ Japan-Australia (JAEPA) 2015
- ▶ China-Australia (ChAFTA) 2015, and
- ▶ Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP) 2018.

Agreements are expected to be ratified with Indonesia, Hong Kong, Peru and the Pacific Island nations and more free trade agreements are in negotiation with the European Union, India and the Gulf Nations.

Generally, free trade agreements help make Australia's exports more competitive enabling market access for exports in a faster and in a more cost-effective manner. But to do so requires potential exporters to act on the opportunities available.

Many Mallee region primary producers are actively exporting. \$3.2 billion⁴ in product is exported from the Mallee each year. Approximately 60 percent of grain produced in the Mallee each year is exported. In addition, the Mallee is responsible for between 75 and 80 percent of horticultural exports from Victoria.

The scale of exports already originating from the Mallee may warrant the creation of a Mildura inland port, with infrastructure and services to facilitate export, such as quarantine, AQIS and fumigation.

There is a significant role for both State and Federal Governments and peak industry bodies to support businesses interested in becoming export ready. Governments also have a role in ensuring appropriate investment in freight infrastructure to ensure the supply chain is optimised.

3.2.2 Value adding opportunities and supply chain improvement

Much of the product exported out of the Mallee receives value adding elsewhere.

A supply chain analysis is needed to understand the potential for local value-add opportunities, such as in food product manufacturing, prior to commodities leaving the region. Often value adding opportunities allow pre-existing enterprises to diversify their income and expand their workforce.

The Murray Basin Rail Project will reduce the cost of transporting goods, it will increase the load carried per car, improve the speed of trips, expand the choice of port (Melbourne, Geelong or Portland) and increase the number of operators on the line by employing standard gauge rail. All is anticipated to reduce the cost of transporting goods.

To realise the full benefit of the Murray Basin Rail Project investment is required in interconnecting transport infrastructure development, such as intermodal sites. New rail operators must be attracted to the region to ensure value is extended to local businesses to encourage competition between the three Victorian ports.

3.2.3 Attract new business investment

Private investment is the engine room of the economy and the Mallee region needs to attract as much investment as possible.

Both State and Commonwealth Governments have played a role in supporting businesses that wish to establish or expand in the region. Grants have been provided, as well as support to overcome planning hurdles, attract investment and establish trade opportunities.

In the 2017/18 financial year the Victorian Government granted \$1.78 million to businesses across the Mallee region. This support leveraged \$7.573 million in private investment and resulted in the creation of an estimated 108 new jobs in the region.

With greater demand for grants that help businesses expand than is capable of being met through current government programs, it is recommended government support is increased.

It can be difficult to obtain government support for business expansion when the investment aims to increase economic output but doesn't create many new jobs. Often Mallee businesses are operating in areas with full employment, and skilled labour is not readily found. Investment in these businesses is important to ensure their ongoing profitability and protect against job losses that would occur if the business fails.

Businesses report difficulty in accessing equity to support business growth, so evidence is being collected to substantiate these concerns. If proven, there is a need to seek solutions such as developing a line of business capital through a product such as a Regional Capital Investment Fund.



3.2.4 Regional research and development

While improvements in total revenue (output) can arise from increased scale and intensity of an operation, implementing a new process, marketing method, organisation method or product innovation will drive gains in productivity and support business growth.

Research economists estimate that 85 percent of increased productivity is due to new or innovative approaches⁵.

The Mallee region has a deficit in efforts to drive innovation through research and development activities. The Mildura and Swan Hill Regional City areas score poorly for 'Innovation' in the Regional Australia Institute's *Regional Competitiveness Index*⁶, with the two LGAs ranked 480th and 493rd out of Australia's 563 LGAs. On the sub-indices 'Registered Research Service Providers' and 'Research and Development Managers' both LGAs were on the lowest possible ranking.

It is important to build on the capacity of our region's industries. The recent establishment of the Mallee Regional Innovation Centre – a joint venture between the University of Melbourne and La Trobe University – is estimated to create annual economic benefits arising from the Centre's research program of \$19.7 million per year. This economic benefit arises from increased agricultural production, irrigation water savings, and cost savings in the delivery of environmental watering programs.

While regional institutions have a role in directly pursuing research, the need to ensure innovation knowledge is shared with those working in industry (through training, extension and higher education) is fundamental for the future of the region. Institutions with a focus on the Mallee food industry, such as La Trobe University, the Birchip Cropping Group, Southern Mallee Farming Systems, Mallee Sustainable Farming, the Irymple Horticulture Centre and SuniTAFE, have adopted research and extension responsibilities.

Innovation is needed to address the uncertainties and challenges facing our agricultural industries. Increasing energy and fuel prices, climate change, challenging seasonal conditions and the need to maintain profitable agricultural businesses in an increasingly complex environment are key challenges for the sector.

3.2.5 Digital connectivity for agricultural systems

Smart farming is the incorporation of information and communication technologies into farm equipment, and sensors into agricultural production systems. It allows a large volume of data and information to be generated via process automation.

Smart farming relies on being able to transmit and store data remotely for analysis to aid decision making. In turn agriculture benefits from better management, monitoring and evaluation techniques to support greater economic return.

However digital connectivity in parts of the Mallee is inadequate to support many of these new technologies. Mapping of mobile connectivity (Telstra, Optus and Vodafone) across most of the Mallee was conducted in 2017 by the Loddon Mallee RDA Committee⁷. This mapping surveyed 5,423 kilometres of road within Buloke shire – typical Mallee grain cropping country. Ratings of 'very poor' to 'black spot' were recorded for a total of 940 kilometres on all three carrier networks, demonstrating that current mobile coverage isn't adequate to support smart farming.

Whilst some subsidies have been provided to fix mobile blackspots, the scale of funding hasn't been adequate to impact on these broadscale areas, and the funding has been weighted towards fixing blackspots in areas with more population.

The Victorian Government is currently running four 'Internet of Things' trials in key agricultural areas, covering Victoria's major agriculture sectors of dairy, broad-acre cropping, meat production and horticulture. The trials will investigate issues from the network level all the way through to end-user devices and machinery on-farm.

Ensuring fit-for-purpose networks are built to allow uptake of new smart farming technologies will be an important outcome once trials are completed. Building these networks requires a clear understanding of the right combination of government subsidy and user pays arrangements.

While advocating for improved infrastructure is essential, the region must be ready for new opportunities, developing skills in digital literacy, and addressing industry data standards to match technology requirements.

Economic benefits

The mapping of mobile connectivity in 2017 showed blackspots covering 12 percent of the land area of Buloke, Swan Hill and Gannawarra LGAs. Many more areas had coverage from only one carrier.

With much of this area being productive agricultural land, mobile blackspots potentially limit the productivity gains that could be realised with digital connectivity.

In a scenario where blackspot areas experienced a 25 percent increase in productivity through better digital connections, this could potentially generate an additional \$52.038 million of direct output each year. This is outlined in Table 3-1.

Table 3-1 **Economic impact of 25% productivity gains over a proportion of Mallee region**

Impact	Direct Effect	Supply-chain Effect	Consumption Effect	Total Effect	Type 2 Multiplier
Output (\$M)	\$52.038	\$27.462	\$10.103	\$89.602	1.722
Long Term Employment (Jobs)	179	84	40	303	1.693
Value-added (\$M)	\$23.685	\$11.956	\$5.731	\$41.371	1.747

Source: REMPLAN Economy



3.3 Future Skills for the Region

Economic Objectives

There is a disconnect between the demand for skills in the region and the skills available to support industry growth. Despite growth in regional employment, local employers continue to report difficulty attracting the right skills.

The Victorian Skills Commissioner's 2017 *Regional Skills Demand Profile, The Mallee*, predicts it will become even harder to find skilled workers, with up to 4400 more workers being required in the Mallee by 2020.

This skills deficit is compounded by a local workforce with a higher proportion of lower income earners. An ageing workforce and changing demographics will lead to additional demand for skills.

The Mallee region is experiencing demand for up to 4,350 positions requiring Certificate Level 3 or 4 in the occupations of Community & Personal Service Workers, Clerical & Administrative Workers, Sales Workers, Labourers and Managers across a range of key local sectors (Table 3-2).

Targeted skills and training development is required to support employees in the largest growth industries of Health Care & Social Assistance, Construction, Accommodation & Food Services, Education & Training, Agriculture, Forestry & Fishing, Administrative & Support Services and Manufacturing. This will include re-training lower skilled workers to mitigate the impact of automation and new technology⁸.

Table 3-2 Preliminary outlook on job growth by industry

Industry Group	Estimated FTE (circa)	Taskforce estimate of 2017-2020 workforce growth (CAGR)	Total required workforce growth (range)
Horticulture	4300	3.5% - 7.0%	600 - 1100
Other agriculture	2400	0.5% - 1.5%	100 - 200
Hospitality and tourism	2900	2.0% - 2.5%	250 - 300
Construction	2300	1.8% - 3.5%	200 - 300
Manufacturing	2300	2.5% - 4.5%	250 - 400
Transport, logistic & automotive	3300	2.6% - 4.5%	350 - 550
Retail trade	5500	1.5% - 2.0%	400 - 500
Healthcare & social assistance	6200	2.9% - 4.2%	750 - 1000

Source: (Recreated table) Victorian Skills Commissioner (2017) Regional Skills Demand Profile, The Mallee.

Economic priorities

3.3.1 Ensure school leavers are ready for work or further education

The percentage of Mallee school leavers who did not complete year 12 was 63.31 percent in the Mallee compared with 33.06 percent⁹ in metropolitan Melbourne (inner-middle).

Some 8.43 percent of 15-19-year-olds are not engaged in school or employment, compared to 4.8 percent in metropolitan Melbourne.

Improving student engagement and educational attainment is a complex issue, with entrenched social disadvantage and other deep-seated issues contributing to the problem.

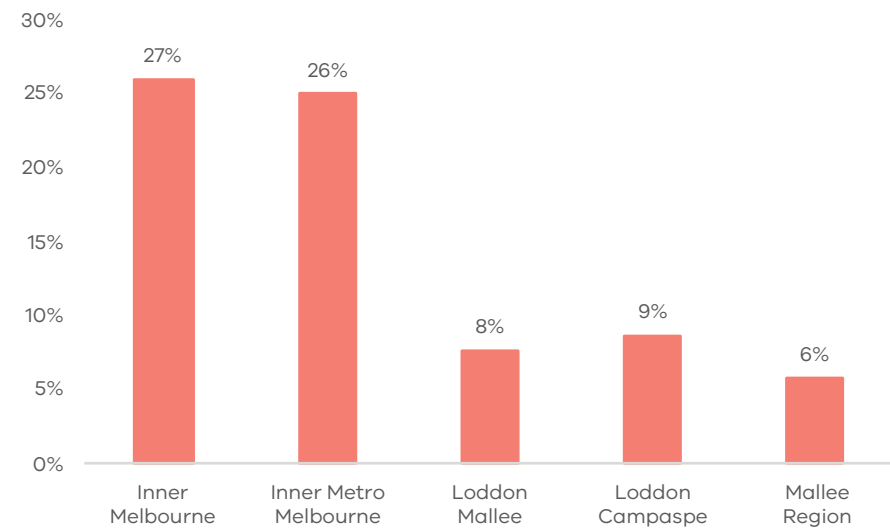
Approaches taken in some jurisdictions to improve educational outcomes include increased attention on early years literacy, and ensuring children start school with issues such as learning difficulties and speech therapy needs being addressed. It is also important that there are safety nets in place if a child falls behind its peers.

The region's future workforce must be able to cope with increasing complexity and well equipped to deal with change. Training and education will help them prepare, yet fewer Mallee children complete higher education compared to the average for Victoria. Bachelor's degree attainment (or higher) across the regional population is below half that seen in metropolitan Melbourne (Figure 3-8).

Ten Tech Schools have been established across the state, focused on technology rather than trades. They are well resourced and furnished with cutting edge technology designed to stimulate an interest in STEM subjects. Establishing a Mildura based Tech School to service students in the broader Mallee region is a key priority.

To ensure secondary students, parents and careers teachers know about the range of career opportunities available in the region, growing industries need to invest in increasing awareness of their industry and the employment opportunities within it.

Figure 3-8 **Percentage of Population with Bachelor's degree or higher**



Source: ABS 2016, Compiled in REMPLAN Community

Career mentoring programs may be one approach. The Robinvale Mentoring Project successfully engaged young people with local regional economic opportunities. Mentors with skills across trades, agriculture, horticulture and business were able to pass their knowledge and experience to local students, lifting aspiration and fostering insights into the link between education and local employment opportunities.

3.3.2 Create the skilled workers required by our industries

There is a need to better match skills requirements to local training on offer. Educational providers and professionals report students completing training programs for skills that have limited employment opportunities within the Mallee region, and yet other skills required by local industries are not being offered through training courses. Improving the link between workforce training opportunities and local industry demand will be important.

In the *2017 Regional Skills Demand Profile, The Mallee*, the Victorian Skills Commissioner identified the types of skilled workers needed over the next three years and the courses required to deliver these skills.

Since publication, the Skills Commissioner has maintained a presence within the region and by working with the vocational sector has made progress in improving the vocational training offering to ensure it is in line with industry needs.

In other regions collaborative industry networks have been established to support skills development, communicate future needs of the workforce and provide career advice connected to local industry. This model should be explored for the Murray Mallee region.

The work of the Skills Commissioner in assessing the skills needs of larger businesses - particularly in the Murray Mallee - has been very successful. Recently an assessment of the needs in the less populated dryland areas of the Mallee has commenced.

Increasing the relatively low numbers of people with bachelor's degrees or higher is another challenge that needs to be met. The Mildura campus of La Trobe University provides Nursing and Business degree courses and Monash University offers support for postgraduate medical education. But other courses that relate to local industries like Agricultural Science or Engineering

require an undergraduate to travel to either Adelaide, Melbourne, Bendigo or further afield. Increasing participation of students in the region will also require addressing the costs of commuting.

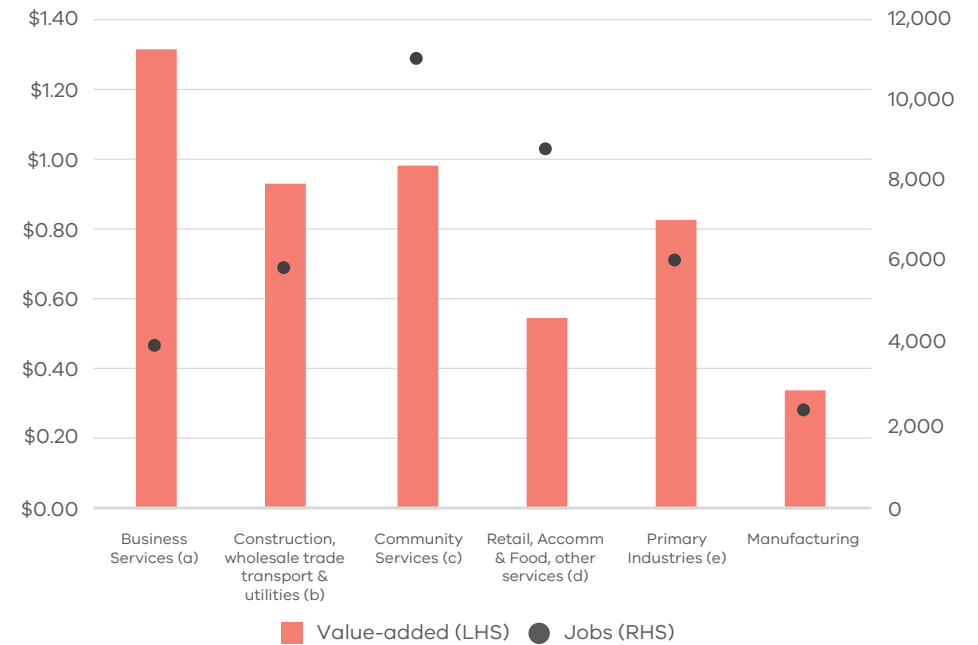
The capping of Commonwealth Supported Places (CSP) funding for domestic university students adversely affects the region. The university campuses and clinical schools in the region cannot grow in this environment, and without growth, educational attainment will not increase. Innovative programs such as the dual enrolment (degree-diploma) model delivered jointly by SuniTAFE and La Trobe University have been adversely affected by CPS capping.

These programs have proven the ability to grow pathway opportunities for students in segments of society that have traditionally had very low participation in higher education.

This need to match skills to high performing industries is also evident when comparing industries relative to the contribution to Gross Regional Product, by Value Added, compared with local employment levels. As outlined in Figure 3-9, there is opportunity to expand employment to increase economic contributions with a focus on Business Services, Primary Industries and Manufacturing. These local sectors sustain high levels of contribution to Gross Regional Product (value-added) and have lower levels of employment than community services and service industries concentrated in retail, accommodation and food services.



Figure 3-9 Industry contribution to GRP (Value-Added) compared with local jobs



Source: REMPLAN, Mallee Region dataset.

3.3.3 Encourage inward migration

Inward migration can be grown through initiatives that support development of skills by newcomers to feel supported and stay locally. This has been successful in places such as Nhill (with the Luv-a-Duck business) by including support for English language learning, and access to health and education programs to support immigrants. Formalising these opportunities through a concierge and settlement service will help encourage skilled workers to relocate to the Mallee region. This service is anticipated to assist and coordinate arrival, entry, immigration, and local accreditation pathways through assistance with key social and community organisations.

The region should also explore other options for encouraging migration (domestic, secondary and overseas). This can include supported visa schemes, creating a Designated Area Migration Agreement (DAMA) and marketing job opportunities in the region.

Horticulture continues to be reliant on migrant labour. Whilst it is important to ensure that there isn't exploitation of hired labour used within the industry, it is also important to ensure that State and Federal Government policies do not endanger the supply of this labour.



3.3.4 Provide appropriate worker housing and other fundamental services

Some smaller towns in the Mallee struggle to attract workers due to a lack of services. Workers are more likely to be attracted to an area with adequate housing, transport, health services, education and lifestyle opportunities.

Robinvale, population 3,300¹⁰, has a critically low stock of suitable housing, as locals and seasonal workers face lower-than-average rental vacancy rates and illegal rooming issues.

Whilst worker housing shortages are most acute in Robinvale, there are housing shortages across many parts of the Mallee including Mildura.

A housing strategy is currently being developed by Swan Hill Rural City to understand what can be done to alleviate housing pressure in Robinvale. The study will assist in identifying strategies to overcome issues of housing supply and preferences to support current and future workforce demand.

The dispersed and often modest scale of many townships throughout the Mallee presents a significant challenge for renewal and investment. However, investment in towns promotes pride and aspiration and is good for both visitors and residents.

There are indications that the local horticultural industry surrounding Robinvale is prepared to invest in solutions to problems found within the community, such as a housing shortage. In fact, in late December 2018 it was reported that more than 40 new rooms will be created on two on-farm developments that are being built at Lake Powell and on Happy Valley Road¹¹.

Employers should be encouraged to participate in solving issues in their communities as they ultimately benefit from having an available, secure and skilled workforce. There is an opportunity for co-investment by government and industry in presentation and infrastructure to improve the amenity of local towns.

Economic benefits

A number of emerging industries are providing the opportunity for economic growth and job creation within the Mallee. Opportunities exist in the expansion of solar farms, sand mining and resource recovery.

Population growth is a proven economic driver. Areas with growing populations typically experience growth in service sectors such as health care, education, retail and food. Larger populations can also mean access to a larger pool of labour for employers.

Based on the current demographic profile of the Mallee region, a general population increase of 1,000 residents would see an additional 405 working residents, 373 of which would be employed within the region. These additional 373 workers would generate an estimated \$172.968 million in output annually and support an additional 268 jobs through supply chain and consumption effects.

Table 3-3 Economic impact of 1,000 new residents in the Mallee Region

Impact	Direct Effect	Supply-chain Effect	Consumption Effect	Total Effect	Type 2 Multiplier
Output (\$M)	\$97.936	\$42.870	\$32.162	\$172.968	1.766
Long Term Employment (Jobs)	373	139	129	641	1.718
Value-added (\$M)	\$46.888	\$18.705	\$18.244	\$83.836	1.788

Source: REMPLAN Economy

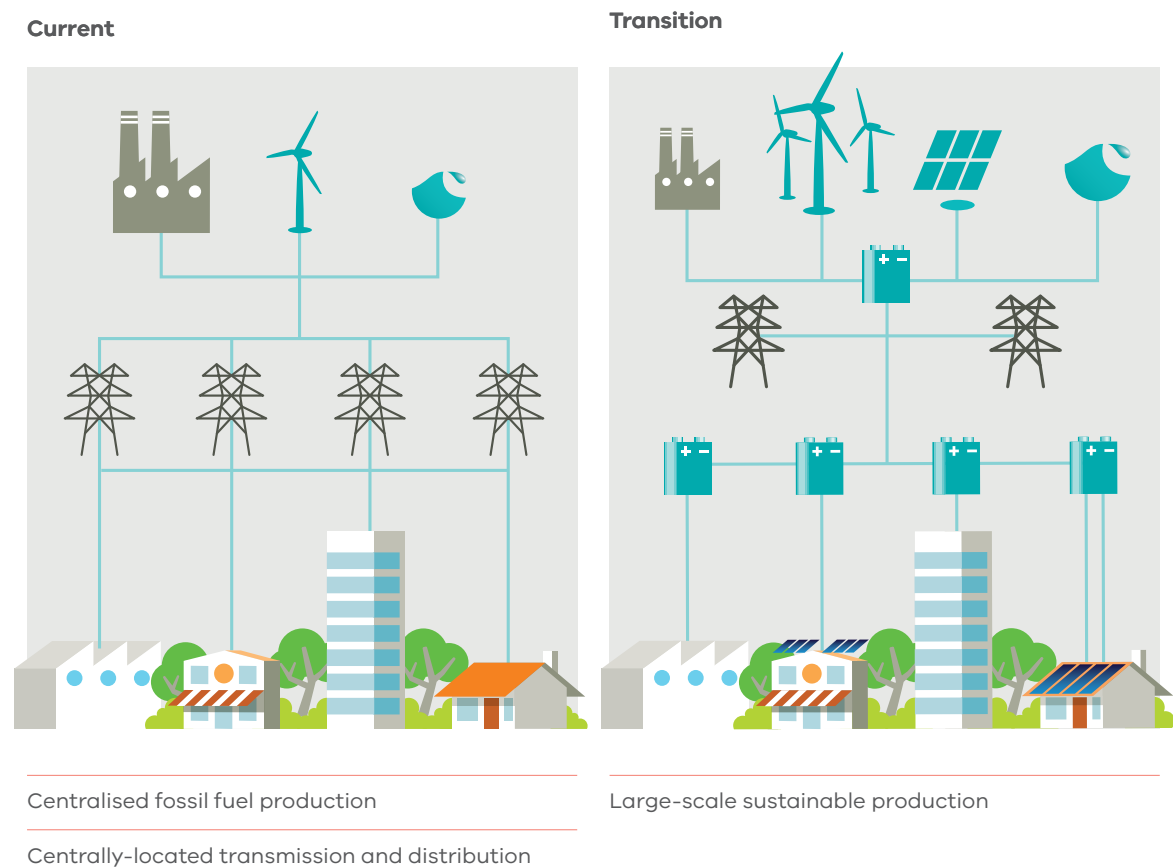
3.4 New Energy, Mining & Resource Recovery

Economic Objectives

A number of emerging industries are providing the opportunity for economic growth and job creation within the Mallee. Opportunities exist in the expansion of solar farms, sand mining and resource recovery.

Victoria's energy sector is in transition. Rapidly declining renewable technology costs and government policy are driving significant investment in renewable generation. Unlocking the potential for large scale energy generation offers significant opportunities for the northwest of Victoria.

Figure 3-10 **Victoria's energy transformation**



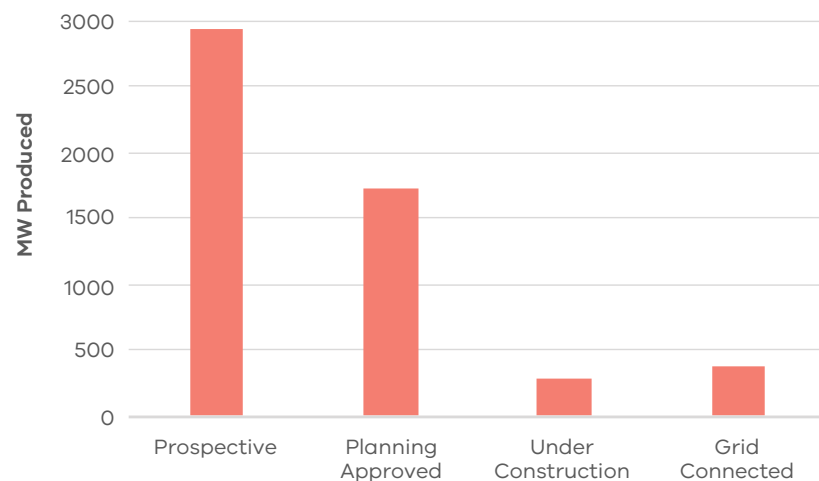
Source: The State of Victoria Department of Environment, Land, Water and Planning 2017 Renewable Energy Action Plan

Nineteen large-scale solar projects, valued over \$2.8 billion, have either received planning permission, are under construction or are operational in the four municipalities across the Mallee. These projects have a combined energy capacity of 2380 MW (Figure 3-11), which exceeds the capacity of Victoria's largest coal fired power station Loy Yang A.

Planning departments within the four Mallee LGAs are aware of a further thirteen prospective solar farm developments, which have a regional energy capacity of 2,950 MW. Combined, they have a total potential energy capacity of 5,280 MW.

The region is also seeing investment in battery storage and this is expected to accelerate. Battery storage has the capacity of providing solar electricity at times of peak demand.

Figure 3-11 Mallee Region Large Scale Solar Power Projects



Source: RDV (2019) Loddon Mallee Renewable Energy Projects.

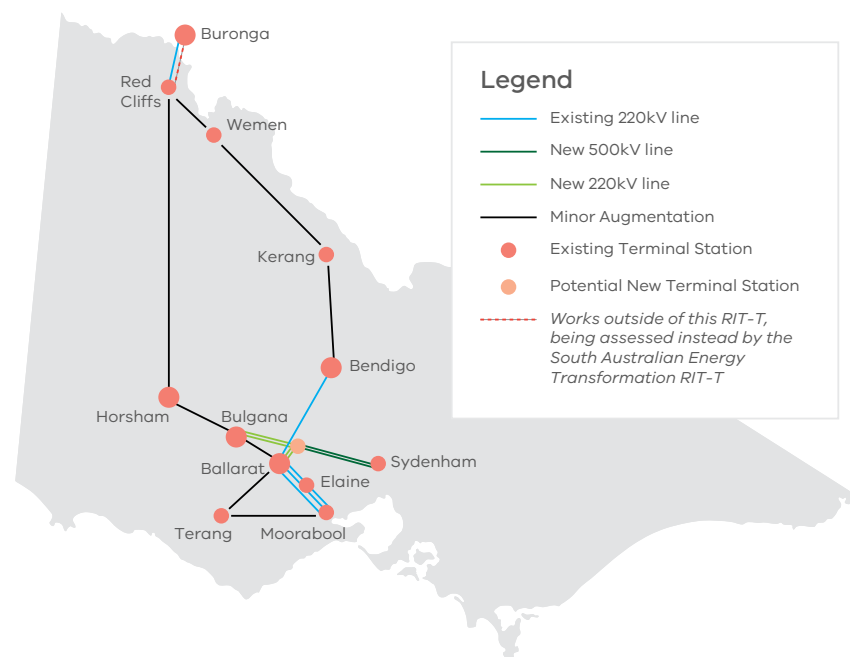
In Victoria, the Australian Energy Market Operator (AEMO) is the transmission system planner, undertaking the necessary engineering and economic studies to improve system capability and capacity. The economic analysis is restricted in its breadth by the Regulatory Investment Test (RIT) Guidelines, governed by the Australian Energy Market Commission and policed by the Australian Energy Regulator.

Under the RIT Guidelines, any augmentation of the distribution or transmission systems is only considered economically feasible if it pays for itself through the existing tariffs. Community or social benefits of an augmentation can be captured as cash contributions to the project, effectively reducing the capital cost, thereby making it more likely that a project will be deemed economically feasible.

The Mallee is connected into the National Electricity Market through two 220kV transmission lines to Ballarat and Melbourne (via Moorabool) and interconnectors to NSW and SA.

At the beginning of 2018, the Ballarat-Horsham-Mildura transmission line was considered as at or approaching capacity due to wind farms, and the Bendigo-Kerang-Mildura transmission line was expected to reach capacity with the solar farms that were scheduled to commence construction in that year.

Figure 3-12 Preferred option for Western Victoria Renewable Integration RIT-T



Source: AEMO Western Victoria Renewable Integration – Project Assessment Draft Report

Despite planned and approved renewable energy projects, the need to ensure increased levels of system strength within the grid is at the core of local renewable energy investment.

In recognition of the existing and impending constraints, AEMO performed a RIT – Transmission (RIT-T) on the Ballarat to Mildura transmission lines. Recommendations include network enhancements for Western Victoria¹², which include:

- ▶ minor transmission line augmentations to the existing 220kV powerlines between Red Cliffs and Kerang and between Moorabool and Ballarat (by 2021)
- ▶ upgrading the Ballarat Terminal Station (by 2021)
- ▶ construction of an additional 220kV line between Bulganna and Ballarat (via Waubra (2021-2025), and
- ▶ construction of a new 500kV double-circuit powerline between Ballarat and Sydenham including a new North Ballarat Terminal Station, with the new 500kV powerline being rated to carry 3GW each (2021 – 2025).

While the Western Victorian Renewable Integration Project does not appear to remove the constraints for solar farms in Northern Victoria, there has been significant transmission augmentation works or planning occurring in parallel, the full extent having only recently become available.

These include:

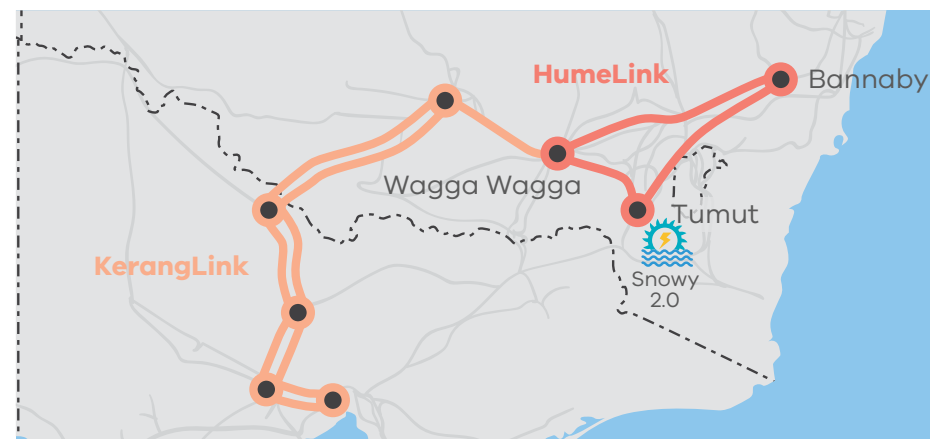
- ▶ Installation of a third 220kV circuit between Ballarat and Moorabool (completed 2018)
- ▶ The Murray River Renewable Energy Zone¹³
- ▶ Upgrades between Ballarat and Mildura including increasing the thermal capacity to 495MW, replacement of insulators and installation of communications systems (April 2019–April 2020)¹⁴
- ▶ Project Energy Connect – a new interconnector between Wagga Wagga NSW and Robertstown SA via Buronga and doubling the capacity of the Buronga to Red Cliffs interconnector, with Stage 1 (Robertstown to Red Cliffs) scheduled for completion in 2022 and Stage 2 to Wagga Wagga in 2024¹⁵.

In addition, AEMO has recently released an Insights paper, *Building power system resilience with pumped hydro energy storage* (July 2019) identifying the 'early, pre-emptive development' of the KerangLink as a strategy that would strengthen the reliability and resilience benefits from Snowy 2.0. This crucial NSW-Victoria interconnector will further strengthen the north-western Victoria renewable energy zone. KerangLink is currently proposed to be completed prior to Yallourn Power Station shutdown (2028–2032).

The net impact of these projects is difficult to measure without a consolidated analysis, however the potential for the Mallee to provide electricity to Melbourne, Sydney and Adelaide, or store electricity in the Snowy 2.0 scheme rather than just sending electricity to Melbourne is likely to become a reality.

Reliable access to digital connectivity continues to inhibit new energy investment in the Mallee region. Digital infrastructure improvements are required to meet latent industry demands from agriculture, health, education and the local government sectors. Assessment of the adequacy of current communications upgrades will need to be made for the proposed solar farms in the Mallee.

Figure 3-13 **Major transmission required to connect strategic storage initiatives**



Source: AEMO 2019 | Building power system resilience with pumped hydro energy storage

Economic priorities

3.4.1 Unlocking new energy

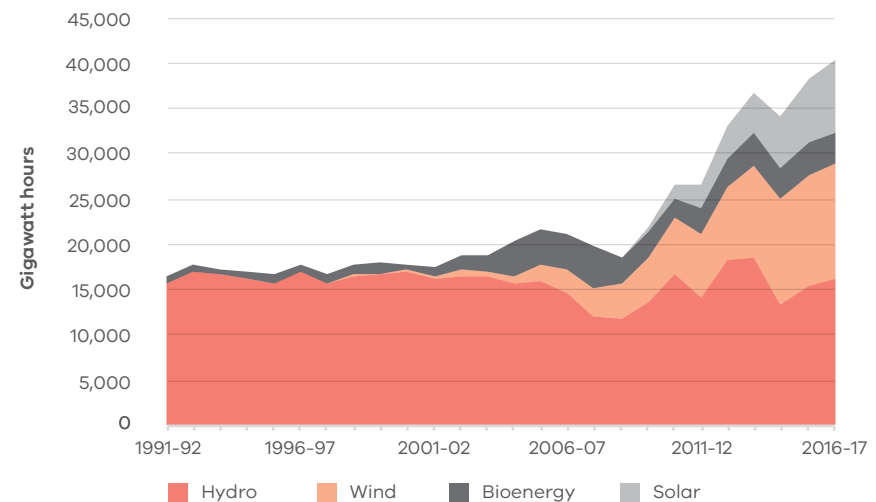
Energy generation across Australia was dominated by coal in 2016-17, however the renewable energy sector represented 16 per cent of Australia's electricity generation in the same year. This was a result of a 6 per cent increase across the solar, hydro, and wind generation mix. Solar generation grew by 18 per cent predominantly as a result of growth in existing large-scale facilities and small-scale rooftop solar Photo Voltaic installations¹⁶.

The Mallee receives more energy from the sun than the rest of Victoria. The cost of producing electricity through solar farms has reduced to such an extent that it is now competitive with conventional generation technologies.

However, a Catch 22 situation appears to be holding back the development of renewables in the Mallee, where the developers will not invest where there is no transmission capacity, and transmission capacity will not be opened up until there are developers!

In locations like the Mallee region where significant energy generation opportunities exist, the impact of national policy on new transmission infrastructure as well as restrictive jurisdictional trading policies inhibit local regional economic investment.

Figure 3-14 Australian electricity generation from renewable sources

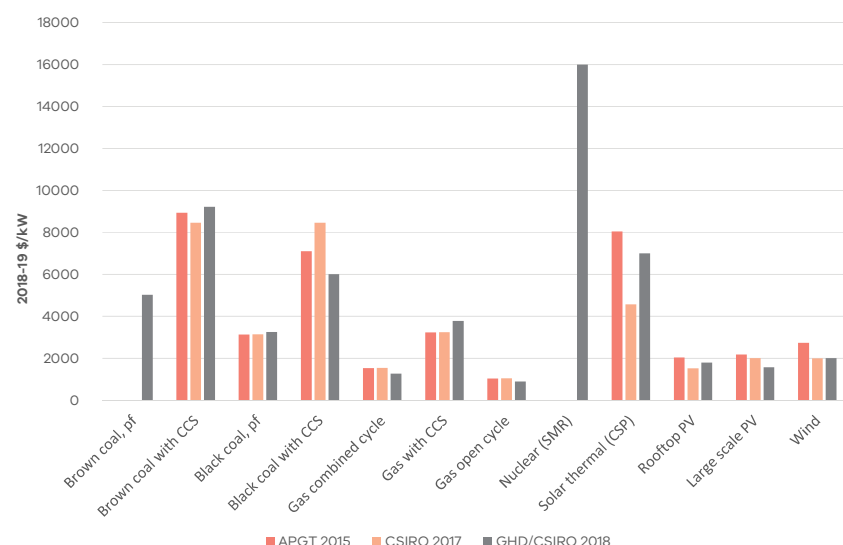


Source: Department of the Environment and Energy (2018) Australian Energy Statistics

There is enough evidence to warrant national policy change to support infrastructure interventions into the national grid based on a whole-of-life cost benefit analysis that recognises both direct and in-direct economic benefits for the region.

The current regulatory environment for the AEMO is limited to the consideration of financial benefits of new transmission infrastructure (e.g. the RIT-T). The RIT-T is focused on revenue opportunities without considering the broader economic benefits to communities from more dispersed energy generation in rural and regional locations without those communities providing significant financial contributions to the project.

Figure 3-15 Comparison of 2018 capital costs of generation technologies with estimates from previous studies¹⁷



Source: *CSIRO GenCost2018 report* by Graham, P.W., Hayward, J, Foster, J., Story, O.I and Havas, L for AEMO, available publicly at: <https://publications.csiro.au/rpr/download?pid=csiro:EP189502&dsid=DS1>

There may be a need to develop an advocacy and engagement strategy to address regulatory barriers and grid constraints. The strategy will ultimately support State and Local Government policies that currently enable approval of renewable energy projects.

There may also be requirements to augment transmission capacity between Mildura and Melbourne duplicating the existing AC transmission line. There are private investors interested in building transmission lines of this nature to help accommodate the forecast increase in renewable energy generation.

However, what is required is a study of the existing transmission projects that impact the Mallee - committed and planned, to gauge the impact that these will have on the ability for solar farms to proceed to construction and generation.

Such a study should investigate proposed projects competing for transmission capacity within the Murray River Renewable Energy Zone in NSW and Victoria and the Western Victoria Renewable Energy Zone and the likelihood of those projects proceeding. A future position on what is achievable in the Mallee within the constraints of the proposed future transmission capacity to Adelaide, Sydney and Melbourne could then be developed. The study should also make recommendations as to the adequacy of the communications infrastructure to support further solar farms and where energy storage and/or further transmission augmentation works are required as well as investigating barriers in the current rules and regulations (e.g. RIT-T limitations).

3.4.2 Capitalising on the Mallee's mineral sands and rare earth deposits

Beneath its soil the Mallee has hidden reserves of sands rich in minerals and rare earths. Minerals such as ilmenite, zircon and rutile are used in pigments, ceramics, nuclear fuel rods, catalytic fuel converters, water and air purification systems, electronics componentry and fibre optics. Rare earths are used in high technology applications such as lasers, magnets, batteries and fibre-optic telecommunication cables.

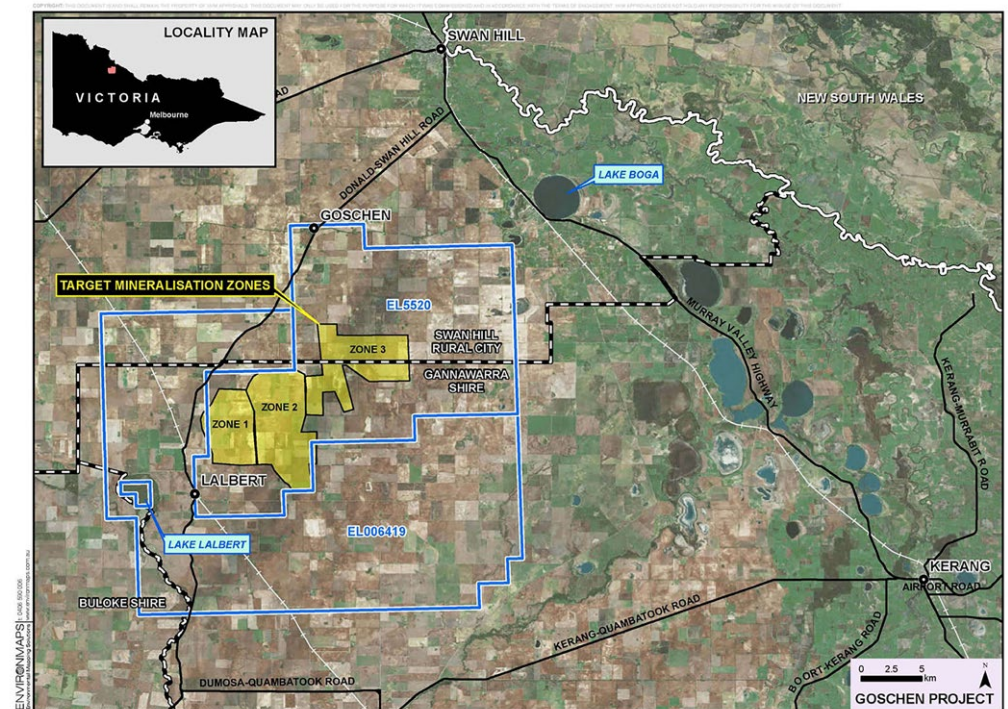
The extensive Murray Basin reserves of mineral and rare earth rich sands have been known to exist since the 1960s and have been mined since the 1980s. The minerals generally collect in long narrow 'strands' that have been mined through open cut.

The Goschen Rare Earths and Mineral Sands project is a proposal by VHM Limited to mine an area between Kerang and Swan Hill. The proposal is of considerable scale, predicted to employ around 250 people and operate for up to 30 years.

Cooperation with VHM Limited in the planning phase will ensure the region realises the full benefit of the mine, including leverage potential for infrastructure such as water pipelines that could also service new agricultural developments in the region. Opportunities for similar operations exist across both the Mallee and Wimmera and should be encouraged.

The Goschen mine will also benefit significantly from the completion of the Murray Basin Rail Project to enable the rare earths and mineral sands to be taken to port. Upgrade of this rail line should be a priority.

Figure 3-16 Location of the proposed Goschen Rare Earths and Mineral Sands Project



Source: <https://www.vhmltd.com.au/project/project-overview/>

3.4.3 Waste and resource recovery

The challenges within Australia's recycling sector, triggered recently by the rising standards for some types of exported material, has highlighted the need to develop better methods to reduce waste and improve resource recovery and recycling domestically. As outlined in Sustainability Victoria's *Resource Recovery Market Bulletin (April-May 2019)*, The 'reduction in export market outlets has not been matched by an expansion of domestic remanufacturing activity'.

There are untapped opportunities to reduce landfill and increase recovery and reprocessing of materials by improving the circular economy within the region. Most of the recyclables that are produced within the region are transported to Melbourne and the cost of transporting them back is prohibitive to their use within the Mallee. The Victorian Government's Statewide Waste and Resource Recovery Infrastructure Plan (2018) clearly states its commitment to supporting a sustainable and robust local resource recovery industry.

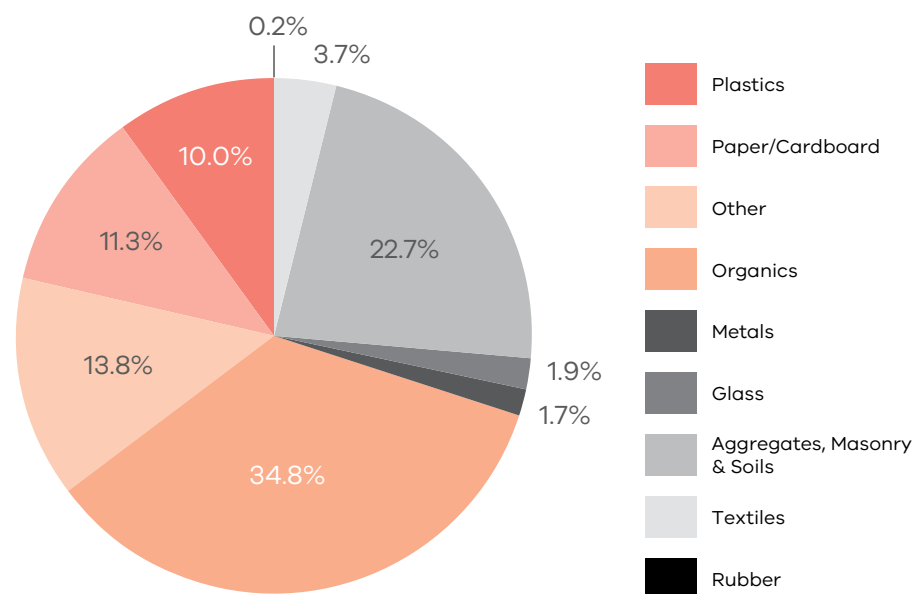
The Loddon Mallee Waste and Resource Recovery Group's Regional Implementation Plan 2016-26 identifies the current infrastructure gaps and opportunities for both current and projected future infrastructure requirements. Underpinning these actions are goals to grow the regional economy and jobs by maximising the recovery of valuable resources.

Government has a role in encouraging the use of reclaimed waste products by establishing the requirement to use these products within tenders for materials that are suited to being wholly or partially replaced by recovered waste products.

If there is enough volume and reasonable levels of consistency in demand for these recovered materials it is likely that industry will be attracted to start local production of these materials to avoid the costs associated with transporting the waste to Melbourne, and then back again as a recovered product.

Similarly, as outlined in the Loddon Mallee Regional Organics Strategy 2019-25 there is potential to improve the management of organic waste and increase the amounts to be processed and reused within the region, whether collected through the domestic waste stream or generated from intensive agriculture.

Figure 3-17 **Projected waste landfilled for Loddon Mallee Region 2018**



Source: Sustainability Victoria Waste projection model (Loddon Mallee region)
<https://www.sustainability.vic.gov.au/Government/Victorian-Waste-data-portal/Interactive-waste-data-mapping/Waste-projection-model#>



Economic benefits

Estimates of the proposed \$2.8 billion solar farm generation expenditure have been modelled over a 20-year period to estimate a typical annual benefit of solar farm construction. Assuming an equitable distribution of annual construction, this amounts to a total of \$140.000 million expenditure per annum.

Based on a typical expenditure across utility scale solar farm installations, the economic benefit for industries within the Loddon Mallee, including Heavy & Civil Engineering Construction (for roads and access), Construction Services (for installation) and Professional Services (for Planning, Engineering and Design) have been assessed for economic benefit. Technology expenditure, which typically amounts to 45% of the project, has been omitted from assessment as it is assumed most associated technology will be imported to the region from overseas suppliers.

Under this scenario, a direct annual increase of \$77 million per annum could support 241 direct jobs and up to 549 per annum when considering both direct and indirect benefits that would accrue throughout the broader Loddon Mallee region (Table 3-4).

Table 3-4 **Typical Annual Construction of Utility Solar Farm**

Impact Summary	Direct Effect	Supply-chain Effect	Consumption Effect	Total Effect	Type 2 Multiplier
Output (\$M)	\$77.000	\$57.169	\$33.872	\$168.040	2.182
Employment (Jobs)	241	179	129	549	2.278
Value-added (\$M)	\$29.249	\$22.649	\$18.719	\$70.617	2.414

Advice from LGAs actively engaged with utility scale solar farm proponents indicate the benefit of scale of operation to ongoing employment. While the most significant benefit can be attributed to the short-term impacts of construction activity over an extended period, it is anticipated that facility operations will support direct and indirect employment within the Mallee Region.

Direct employment varies from one job to manage a 1 MW facility through to six jobs for a 300 MW site. The impact of a 300 MW site directly employing six local people could amount to over \$4 million in output and support up to 15 jobs when considering direct and flow on benefits (Table 3-5).

Table 3-5 Utility Solar Generation Facility – Typical Operational Benefit

	30 MW Facility	100 MW Facility	300 MW Facility
Workers	1	3	6
Output (\$M)	\$0.689	\$2.068	\$4.136
Total Jobs	3	7	15

The economic benefit of the proposed Goshen mine that leverages mineral sand deposits within the region is significant. Estimates of the planning, design and establishment of the mine are beyond this strategy, however preliminary assessment of the ongoing benefits of 250 jobs within the Mallee Region clearly demonstrates the broader industrial and consumption benefits throughout the economy.

The total output estimate for Mallee Region is \$10,212.707 million and Mineral Sands, or the *Non Metallic Mineral Mining* sector is estimated to contribute \$28.009 million (0.3 percent) of total output. The ongoing employment of 250 workers in this sector is estimated to support an increase in Gross Regional Product by \$64.407 million and a direct increase in output of \$82.379 million.

Forecasts of the 250 direct jobs in the sector would have flow on benefits. Total employment, including all direct, supply-chain and consumption effects could support an increase in regional jobs up to 425 jobs.

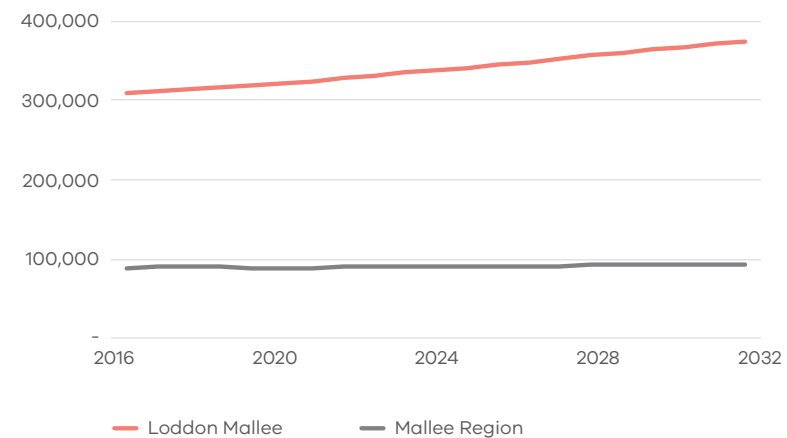
3.5 Build our Rural Towns & Cities

Economic Objectives

Liveability underpins investment decisions and attracts not only workers but partners and families who support social and community capital in the region. The ability to attract inward migration, a strong workforce and tourism visitation is essential for the region's economy. A failure to invest in the liveability of settlements is a handbrake on economic growth.

The ability to attract visitors and skilled workers is critical for all regions. However, in the absence of improved infrastructure for communities the Mallee region is disadvantaged. While economic output is driven through increased output per worker, static population growth throughout the region presents challenges to governments. Long range forecasts suggest a proportional decline in the region's population.

Figure 3-18 **Regional Population Growth**



Source: Mallee Region (VIF 2016, Compiled by REMPLAN)

To secure a stable future workforce, the Mallee needs to attract new residents. Long range forecasts suggest a proportional decline in the region's population. The region is forecast to be home to 375,000 people in 2031. The Mallee is projected to decrease its proportional share of population within the Loddon Mallee region to 25 percent in 2031 (Figure 3-18).

Issues of distance, poor local infrastructure and services in rural communities has affected the region's ability to attract workers. Localised market failure is constraining appropriate housing in key economic locations.

With investment to strengthen the arts and culture, and boost social capital infrastructure such as housing, schools and hospitals, liveability will increase and support regional job retention. This will also facilitate improved levels of community service and support an adequate skilled workforce for the region.

High levels of socio-economic disadvantage exist within the Mallee. These need to be addressed to facilitate more inclusive access to the economic prosperity of the region and to reduce the significant costs to the broader community. High levels of disadvantage result in higher public expenditure on health intervention, welfare assistance, public housing and costs associated with the justice system.

Despite unprecedented levels of private investment throughout the region, evidence of regional prosperity is lacking in many of the region's small settlements and townships.

The dispersed and often modest scale of many townships throughout the Mallee presents a significant challenge for renewal and investment. However, investment in towns promotes pride and aspiration and is good for both visitors and residents.

Any investment in improving the liveability or vibrancy of towns and cities will also benefit the visitor economy.

Tourism in the Mallee has traditionally centred around the Murray River but there are many more attractions such as the Mallee National Parks, Lake Tyrrell and the developing Silo Art Trail, Gunbower State Forest, Kerang Lakes and abundant Indigenous culture and European heritage.

The tourism sector contributes 2,555 jobs (71%) and \$474.364 million to the economy. International visitation to regional Victoria increased by 9.8 percent in 2017, however, international overnight expenditure in the Murray tourism region experienced a decrease of 42.1 percent down to \$54 million. Tourism product development leveraging the connection of the region to local Indigenous groups, natural assets and stories has been identified as a significant gap in the local offering.





Economic priorities

3.5.1 Boost our rural cities

Mildura and Swan Hill are the largest, most populous and only cities in the Mallee region, and accommodate most of the region's population growth.

As a regional city¹⁸, Mildura has the most population services and employment in the region including major retailing, hospitals, university, transport interchanges, and utility services. It also services extensive communities of interest.

As a regional centre, Swan Hill has a large and diverse population with significant retail and employment bases that service extensive communities of interest. There is access to hospitals, education, arts and cultural facilities with well-defined commercial and industrial precincts.

Being relatively remote, it is important that Swan Hill and Mildura have an extensive range of services available to their residents. Improved services and opportunities help attract businesses and increase population, which in turn helps to attract more services.

Infrastructure and services that are required to drive population growth include: medical and allied health facilities, inter-regional transport connectivity, arts and culture facilities, high quality sporting facilities, diverse employment opportunities, high quality secondary and tertiary education, and affordable quality housing.

To accommodate current growth, there is a need to renew the Swan Hill Hospital, complete the *Mildura Future Ready* suite of projects and complete the vision for both cities of better orientating their CBDs towards the Murray River.

In Mildura a more comprehensive package of tourism opportunities is needed, including addressing the need for an appropriately scaled convention centre. Utilising prior research that has been undertaken, a feasibility study should be prepared that explores the potential market, style and scale of convention centre in Mildura. This study should include an audit of established accommodation facilities to assess their adequacy.

Mildura should also advocate and lobby for the relocation of a government agency such as divisions of the Murray Darling Basin Authority (MDBA) that undertake river regulation, and joint venture activities like salinity management that are funded with contributions from NSW, Victoria and South Australia. These functions would be well placed in Mildura which is near all three contributing states.

A multicultural and export-focused Mildura can build upon its global outlook and leverage connections. The new pilot academy being established at Mildura Airport has potential to expand, possibly to other regional centres.

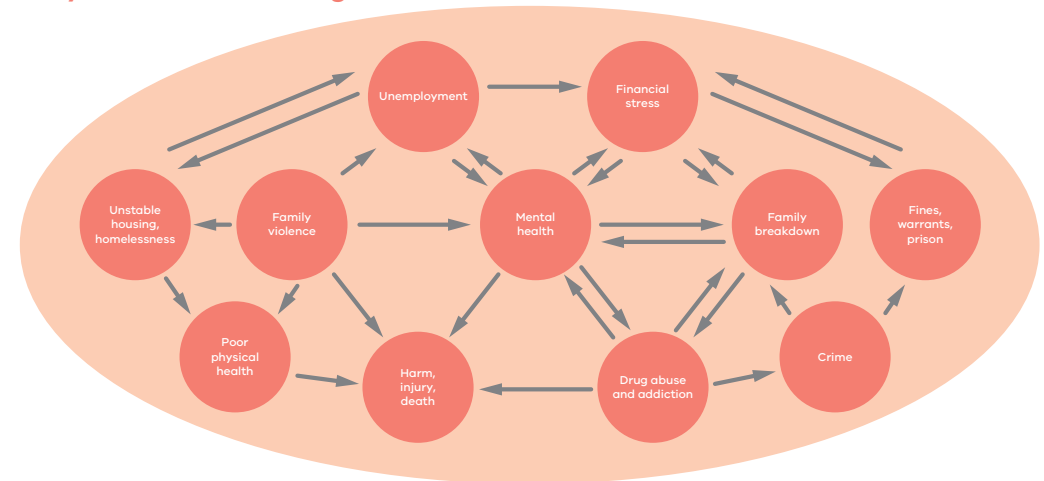
La Trobe University's Mildura Campus has the capacity to attract and support more international students. At present the campus has approximately 100 international students but this number could rise to 300 with appropriate services in place. International students are valuable to the visitor economy with families often visiting their children.

Mildura continues to offer a point of difference for visitors to the Mallee, with access to the Murray River, a Mediterranean climate and a rich calendar of events. It plays a key role in the region's visitor economy, with accommodation, food services and transport dominating visitor expenditure and as a result local tourism related employment. When compared with other regional cities the proportion of income associated with Arts and Recreation in Mildura clearly has greater capacity to grow.

3.5.2 Economic inclusion for all Mallee residents

A complex of interdependent factors such as poor physical and mental health, housing insecurity, addiction and family violence (Figure 3-19) can result in intergenerational cycles of disadvantage.

Figure 3-19 **Interdependent factors result in intergenerational cycles of disadvantage**



Source: Haven Home Safe and Think Impact From surviving to thriving, a model breaking negative cycles: A Social Return on Investment evaluation of the Sidney Myer Haven Program.

Disadvantage is an important consideration in the Mallee region, with the SEIFA Index of Relative Disadvantage¹⁹ the lowest of any Regional Partnership region in Victoria. (Simple average of 952 over the four LGAs). This average hides the fact that there are smaller pockets of disadvantage that are considerably worse.

Some interdependent factors of note in the Mallee include concerns with comparably higher rates of preventable health issues, particularly related to alcohol, drug use and obesity.

Advocacy for increased health funding to address these preventable health problems is needed, as well as services that reach groups of people with higher than normal burdens of disease such as Indigenous populations or those people who might be living in poverty.

The rates of family violence incidents in the Rural Cities of Mildura and Swan Hill are the second and third highest out of all 78 Victorian municipalities in the 2017/18 financial year²⁰.

At-risk groups such as young homeless mothers and children that find themselves in Out-of-home-care should be targeted for support that gives wrap around care.

Children who come from disadvantaged backgrounds and aren't fully supported whilst growing up, will often enter an ecosystem of adverse outcomes that echo throughout their life. This includes: neglect and harm, poor health, developmental delay, trauma, mental health issues and disengagement from education and homelessness²¹, leading to a self-perpetuating cycle.

Whilst incredibly important to intervene in this cycle, the problems require a long-term commitment from a wide range of sectors including Health, Education, Justice, Housing, and Welfare agencies across Government and the community spectrum.



3.5.3 Improved passenger services

The most impactful change that can be made to improve the appeal of Mildura and Swan Hill to residents, businesses and visitors is to improve their connection to the rest of the state.

Whilst the two rural cities have a good range of services, residents must travel to larger centres to access some specialist medical services, arena scale entertainment, a wide range of university courses and other specialised services. Improving transport connections will enable better access to these services.

In Swan Hill the most important transport need is more frequent passenger trains between Swan Hill and Melbourne. The *Regional Network Development Plan (Connecting Regional Victoria)* recommends five return passenger trains each day. Investment in rolling stock, as well as line and signalling upgrades will help achieve this. Providing efficient connection to Melbourne will also enable day commuter trips to Bendigo.

Mildura is the only top ten regional city in Victoria without a passenger rail service to Melbourne, this particularly disadvantages low income earners, the elderly, young people without a licence and people with a disability. It is proposed that a robust passenger transport study is prepared to examine all options for providing improved public transport and connectivity to Melbourne.

Building on the recent introduction of commuter flights between Bendigo and Sydney, it is proposed that regional advocacy focuses on attracting a commuter flight from Bendigo to Adelaide with a stopover in Mildura. This could be supported by the Bendigo Adelaide bank headquartered in Bendigo and should be popular given the large volume of passenger cars regularly driving between Bendigo and Mildura.

3.5.4 Vibrant small towns

The Mallee contains a high concentration of small towns, with 15 percent of the population living in settlements of fewer than 2,500 people (Figure 3-20).

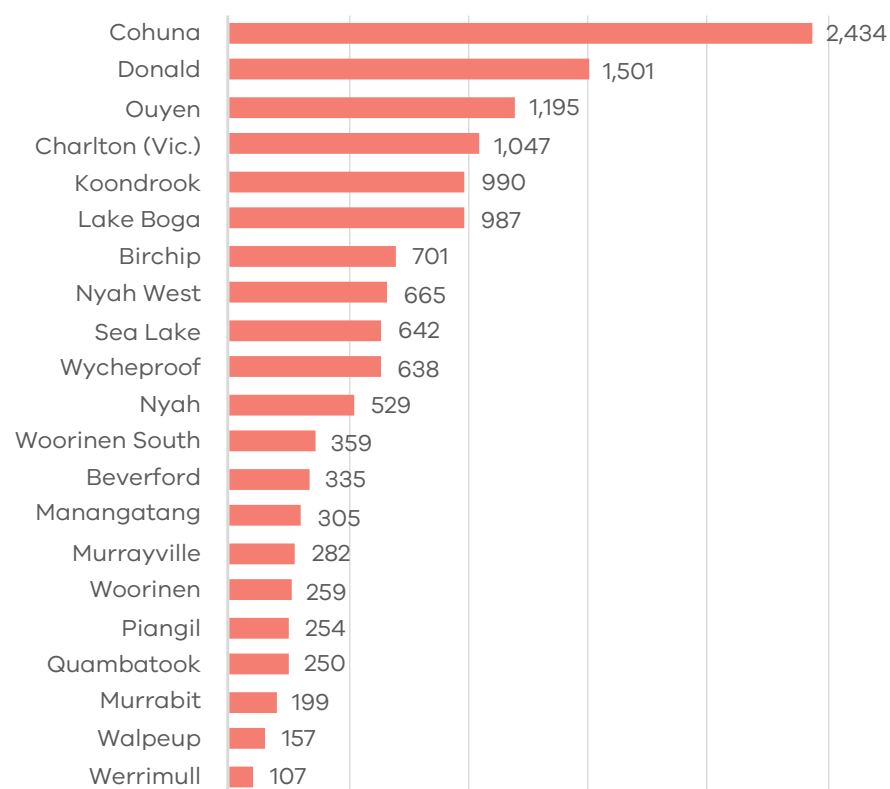
Population loss and the subsequent loss of services has confronted many small Mallee towns. There are, however many examples of small towns reversing the trend and retaining their vibrancy by communities working together as volunteers with a common purpose.

Approaches often used to support towns facing population decline include:

- ▶ Encouraging passing traffic to stop, thus encouraging patronage of local shops. This can be achieved by installing public toilets, painting silos, and other initiatives.
- ▶ Replacing multiple community facilities with one facility that serves multiple purposes, such as housing the CFA with the Bowls Club. This ensures more cost-effective use of available funds.
- ▶ Community buy-outs of services the community wants to keep, such as pubs, general stores or even hardware stores.
- ▶ Creating community hubs to provide a range of services not found elsewhere. Often these facilities attract tenants like banks, and
- ▶ Providing free housing to entice essential service providers such as doctors.

Examples of all these community driven innovations exist across the Mallee.

Figure 3-20 Population of gazetted localities in Mallee Region – > 100 to < 2,500 residents



Source: ABS (2016) Census. Compiled by REMPLAN Community.

Grants provided to small towns often leverage considerable community input. Innovative funding models such as the Mallee Regional Partnership's 'Small Town, Big Difference' fund could be employed to stimulate activity in small towns through amenity enhancements, community infrastructure projects and capacity building.

The role of co-design, place-making and citizen-led township renewal should be explored. Local government has a role in ensuring that community efforts are strategically targeted and small-town leadership and capacity building nurtured.

Local, state and federal governments that serve these communities also need to explore innovative ways to ensure services to our small towns in a cost-effective manner. Often the method of service delivery used in more populous areas is not fit-for-purpose. For instance, whilst it has been argued that there is an oversupply of General Practitioners (GPs) in metropolitan areas there are communities in the Mallee who cannot attract GPs to their towns²².

Innovative solutions need to be found. The Federal Government should support GP training models that bring more GPs to rural areas. The Federal and State Government need to collaborate on developing alternative models for primary care services where GPs are scarce.

Similarly, childcare and early childhood programs are geared towards larger regional towns and cities and are less viable in small rural towns. This disproportionately affects rural families where members (particularly women) are consequently unable to work – either on or off-farm – while raising children. Greater compliance regulations have inhibited family day care operations, a model which has been more suited to rural communities.

Figure 3-21 **Kerang residents' plea for a General Practitioner**



Source: <https://www.youtube.com/watch?v=kff-i3FFMmw>

Digital connectivity and small-town transport options are key to improving services. Both the private and public sectors are moving to digital platforms to deliver services. This offers potential as a great leveller in service provision – giving rural and remote communities the same level of service as their metropolitan counterparts. However poor digital connectivity in much of the Mallee reinforces the divide in service provision.

Apart from being important for service provision, digital connectivity allows people to participate in the economy. The number of workers telecommuting or participating in the 'gig economy' through part time, temporary or contract work is increasing. The Mallee region's comparatively higher costs for a lower standard broadband service, coupled with inadequate mobile connectivity, means people in regional areas are disadvantaged when it comes to participating in this new style of working.

Digital connectivity needs to be recognised as a fundamental service for rural areas. It will increasingly be relied upon as many physical services retract towards larger population centres. With improved digital connectivity comes reduced isolation, opportunities for expanded educational opportunities, innovative eHealth solutions as well as many other services provided by both public or private organisations.

Due to low rate bases, rural councils can struggle to provide the full range of services that larger councils can provide. This concern has been championed by Rural Councils Victoria (RCV), an alliance representing the 38 rural councils in Victoria, who explored issues associated with the low rate base problem and developed an action plan. The recommendations in RCV's *Sustainability Reform Program*²³ need to be implemented.

3.5.5 Infrastructure supporting the visitor economy

Infrastructure investment is required to support growth in the visitor economy.

Roads need to be improved for safer travel. On the Sturt, Sunraysia, Mallee and Murray Valley Highways, where major tourist routes are shared with freight traffic, overtaking lanes and better intersections are needed.

To encourage tourism to its 'gateway to the outback,' the Mallee region must have all-weather access to Mungo National Park by sealing Arumpo Road and Marma Box Creek Road in NSW. In addition, the roads into Lake Tyrrell and along the expanding Silo Art Trail must be brought up to a safe and appropriate standard.

Excellent mobile reception is required along all tourist routes. Tourists expect mobile connectivity that allows for 'on-demand' research, navigation and purchase of tourism-related services. They want to upload photos to social media, stay in touch with friends and be able to call for help if needed.

3.5.6 Build the value of the region's tourism assets

Tourism is estimated to employ 2,555 people in the Mallee region, but this figure could increase by taking a more coordinated approach to destination marketing and developing the existing tourism assets.

Opportunities include:

- ▶ Completing construction of stage one of the Murray River Adventure Trail, incorporating the Kerang-Koondrook Rail Trail, Koondrook to Cohuna Forest Trail, Koondrook to Torrumbarry Trail, and Ports of the Murray
- ▶ Building the Swan Hill to Lake Boga Active Trail
- ▶ Realising the potential of Lake Tyrrell and Tchingal Trail between the lake and Birchip
- ▶ Expanding the Silo Art Trail into the Mallee Shires.
- ▶ Developing the village square component of Stage 2 of the Mildura Riverfront Redevelopment Project
- ▶ Developing the Mildura Motorsport and Community Precinct Project
- ▶ Implementing the Mildura Rural City Council's *Tracks and Trails Strategy (2012)*

The current Regional Tourism Board structure is inadequate in supporting tourism development in some parts of the Mallee, particularly in the dryland parts of the Mallee. This area needs an appropriately funded tourism body that provides focus and coordination of opportunities.

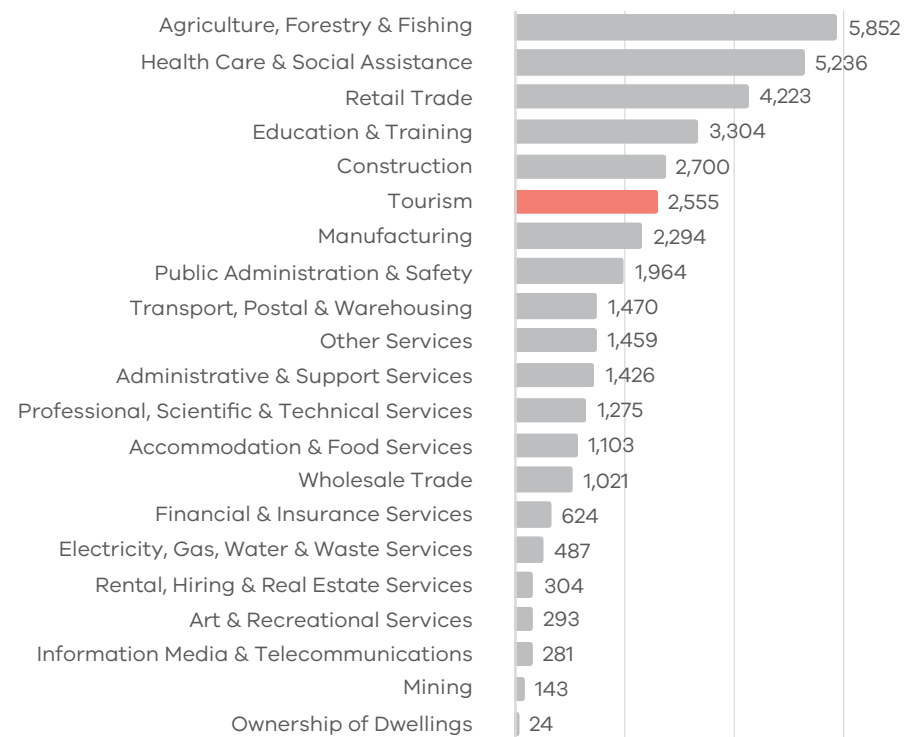


3.5



There is an urgent need for tourism training and ongoing support for local businesses. Stronger connections with local Indigenous groups should be developed to promote enterprise, strengthen regional links to arts, innovation and training and ensure recognition of culturally significant traditions and landscapes to enhance liveability and attract future visitors and potential residents.

Figure 3-22 **Mallee Region Employment**



Source: REMPLAN Tourism Analysis

Economic benefits

Current estimates of visitation in the Mallee Tourism Region²⁴ suggest total annual visitation of 1.147 million visitors. This is made up of 25,000 international visitors, 627,000 domestic overnights and 495,000 domestic day visitors.

The regional economy benefits when visitors extend their stay and increase their expenditure. Encouraging longer stays, higher value visitation and international visitors is a key target to boost regional exports.

Modelling the impact of increasing the average length of stay of International and Domestic Overnight visitors by a single night is estimated to generate an additional \$91.238 million annually. Taking into account indirect benefits, potential exists to create 512 direct jobs and another 247 jobs in industries with exposure to the visitor economy. Note that this excludes visitation to Buloke Shire, which contains two developing tourism products in the Silo Art Trail and Lake Tyrrell.

Table 3-6 **Marginal economic benefit of an additional nights visitation within the region**

Impact	Direct Effect	Supply-chain Effect	Consumption Effect	Total Effect	Type 2 Multiplier
Output (\$M)	\$91.238	\$37.149	\$30.537	\$158.924	1.742
Long Term Employment (Jobs)	512	125	122	759	1.482
Value-added (\$M)	\$40.929	\$16.376	\$17.322	\$74.627	1.823

Endnotes

- 1 Localities are Australian Bureau of Statistics Gazetted Suburbs.
- 2 TC&A & Frontier Economics (2017) Social & economic impact of the Basin Plan in Victoria.
- 3 CRDC (2017) Accelerating Precision Agriculture to Decision Agriculture – Enabling digital agriculture in Australia.
- 4 invest.agriculture.vic.gov.au - interactive mapped data; industries; regions
- 5 Innovation and economic growth, by Nathan Rosenberg, OECD 2004
- 6 <http://insight.regionalaustralia.org.au/> (first edition)
- 7 Digital Economy Group (2017) Regional Development Australia – Loddon Mallee, Mobile Coverage Report
- 8 Productivity Commission (2016) Digital Disruption: What do governments need to do?
- 9 Regional Development Victoria Information Portal: <https://www.rdv.vic.gov.au/information-portal/regional-snapshot> - Percentage who did not complete year 12 (2016)
- 10 3,300 is the population recorded during the 2016 ABS census – but it is suspected that the population is considerably higher.
- 11 Reported in Sunraysia Daily 05/12/2018
- 12 December 2018 draft of 'Western Victoria Renewable Integration – Project Assessment Draft Report, Australian Energy Market Operator (AEMO)
- 13 AEMO, July 2018, *Integrated System Plan for the National Electricity Market*
- 14 AEMO, February 2019, Planned Outages in North Western Victoria and South West New South Wales Transmission Network – Industry Communique
- 15 ElectraNet, 13 February 2019, *SA Energy Transformation RIT-T – Project Assessment Conclusions Report*
- 16 Department of the Environment and Energy (2018), Australian Energy Update 2018, August, Canberra.
- 17 *CSIRO GenCost2018 report* by Graham, P.W., Hayward, J, Foster, J., Story, O.1 and Havas, L for AEMO, available publicly at: <https://publications.csiro.au/rpr/download?pid=csiro:EP189502&dsid=DS1>
- 18 Definition provided within the Loddon Mallee North Regional Growth Plan, 2014
- 19 ABS Socio-Economic Indexes for Areas <https://www.abs.gov.au/websitedbs/censushome.nsf/home/seifa>
- 20 Victorian Crime Statistics Authority <https://www.crimestatistics.vic.gov.au/family-violence-data-portal/family-violence-data-dashboard/victoria-police>
- 21 First 1000 days of Life Evidence Review (2017) Centre for Community Child Health, Murdoch Children’s Research Institute.
- 22 Kerang campaigns for GP, ABC 2 Nov 2018
- 23 <https://www.localgovernment.vic.gov.au/grants/rural-and-regional-councils-sustainability-reform>
- 24 TRA Regional Profiles, 2015. The Mallee Tourism Region includes the Local Government Areas of Mildura (RC), Swan Hill (RC) and Gannawarra (S) but excludes Buloke (S).





Mallee **Economic Growth Strategy**

For further information about the Mallee Economic Growth Strategy, contact Regional Development Australia Loddon Mallee.

Phone	(03) 4433 8050
Email	rda.loddonmallee@rdv.vic.gov.au
Web	www.rdv.vic.gov.au