



Regional
Development
Australia

NORTHERN INLAND NSW

New England Joint Organisation

Economic Development Strategy

May 2022

Executive Summary



Regional Development Northern Inland (RDANI) have been engaged by the New England Joint Organisation (NEJO) to prepare a regional Economic Development Strategy (EDS) as part of their commitment to the region. This EDS provides an evidence base of the local economy for the member Local Government Areas (LGAs) upon which recommendations for the NEJO are based.

Industry

Industry within the NEJO region experienced growth in all economic metrics, with the largest growth experienced in total value-added and output, and lower growth measured for local expenditure and wages and salaries.

Despite the previous dry conditions in the NEJO region, commodity-based sectors of mining and agriculture out-performed all other industries for each metric and observed consistent growth over the 5-year period between 2011 and 2016. Specialisation of these industry sectors is evident in the region, with a great emphasis on the importance of regional cooperation and coordination of supply chains across LGAs.

The majority of the economic activity measured for the NEJO region is concentrated in a few LGAs. Armidale Regional LGA contributes the largest proportion to output, employment and wages and salaries, whilst the majority of value-added is generated in Narrabri from mining activity.

Employment

The top employing sectors within the NEJO region are not the same as the sectors that generate output and value-added. Agriculture, education and training, and healthcare and social assistance support 41.8% of total jobs. Despite this, they do not support the highest proportion of wages and salaries. Employment in the NEJO region experienced growth between 2011 and 2016, with the largest growth occurring in the healthcare and social assistance sector which was offset by a fall in employment in retail trade.

The NEJO region presents an abundance of labourers, machinery operators and drivers, and managers. However, there are evident divergences in other occupations relative to the state average including professionals and clerical and administrative workers. Similarly, the NEJO region observes a higher proportion of certificate education attainment but less tertiary education. It is unclear whether this occupation and education comparison is simply due to industry make-up or evidence of skills shortages.

Much of the workforce that work in the NEJO region, also live in the region. However, many people still opt to commute to or from surrounding LGAs, representing an opportunity to target work and live in region efforts.



Mining and agriculture outperformed all other sectors with consistent growth between 2011 and 2016



While the agriculture and healthcare/social assistance sectors dominate jobs, the education and training sector heads wages and salaries

Gap Analysis

Overall, the NEJO region is a net exporter of goods and services, which leads to a net inflow of money into the region. Demand for goods and services by local industry sectors from the rest of Australia (domestic imports) exceed exports for the majority of local industries. This provides opportunity for import substitution for local expenditure and sales rather than having external economies benefiting.

Tourism

Output attributable to tourism activity has fallen between 2016 and 2020 by 19.7%. The majority of this loss was experienced by the largest sector, accommodation and food services before the COVID pandemic caused the closure of the sector. This also caused large falls in employment that supports tourism activity, particularly from the same largest sector.

Competitive Advantages

Natural endowments and infrastructure support industry and communities throughout the NEJO region. The top 5 key propulsive industry sectors are driving the NEJO economy in terms of employment, value-added, exports, and local expenditure with only two exceptions in employment and exports. This concentration of industry activity provides evidence of industry specialisation in the NEJO region. Key factors that will support the region's resilience and growth include linkages made by the Inland Rail project, associated Special Activation Precincts (SAP), and the Renewable Energy Zone (REZ) development.



Disaster Period Trends

Gross Regional Product (GRP) estimates for the NEJO region for 2020 is \$7.3 billion (\$7.6 billion, including the Gwydir Shire), which has steadily grown since 2020 in both real terms and per capita. However, Estimated Residential Population (ERP) estimates over the same period observed growth up to 2013 and decline thereafter.

Breaking down business and employment trends show differing impacts from drought, bushfire, and pandemic events. Building approvals grew to a peak in 2013–14 before experiencing continual decline until 2020–21. Business counts grew between 2016 and 2018 before declining into 2020. However, despite the ongoing drought and long bushfire season, business counts from agriculture grew over the period, whilst major losses were experienced in financial and insurance services.

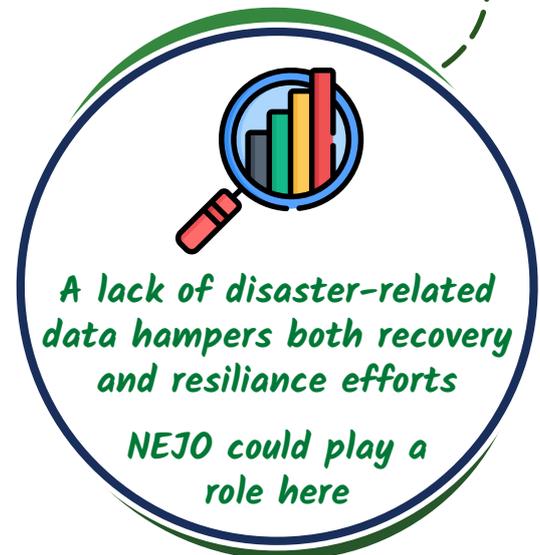
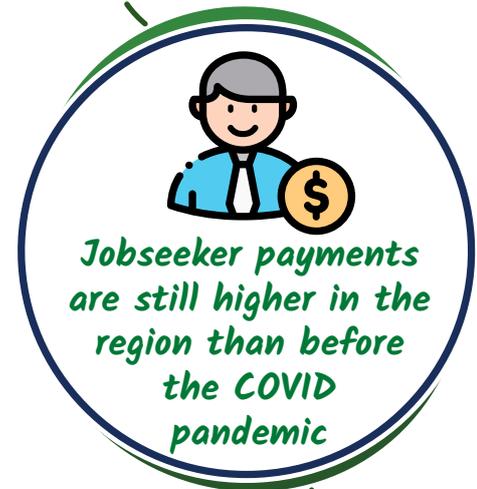
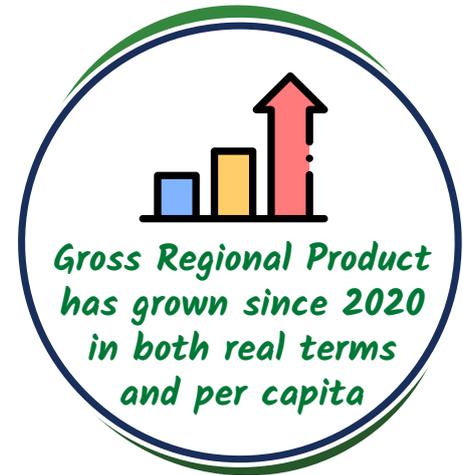
During the pandemic, business observed large decreases in output and value-added but recovered by the year's end. This trend is also picked up by Jobkeeper application data that shows high uptake over the period into the final quarter of the 2021 calendar year. Changes to employment and wages and salaries were impacted much less but took longer to recover into growth. However, Jobseeker data shows support payments are still higher than pre-pandemic.

Business Risk and Threat Mitigation

Federal and State Governments have established frameworks that support disaster recovery and resilience practices that local governments can utilise in their local-level planning. The three major aims of risk identification and threat mitigation include:

- Avoid loss and suffering.
- Reduce unexpected future recovery costs.
- Unlock economic opportunities and social benefits.

Monitoring post-disaster impacts is a key part in risk assessment and planning but it is often difficult to collect accurate, reliable, and timely data following a disaster. Most data collection for disaster recovery purposes relates to potential risks and hazards. However, there is a need to capture key economic data to monitor performance on business, the workforce, and the community post-disaster to distribute resources effectively.



Business Resilience Strategies

The quantified economic and social costs of natural disasters in Australia are summarised as:

- Asset damage on residential and commercial property.
- Financial costs on asset damage, clean-up costs, reduced economic activity and other emergency response costs.
- Social costs from injury, fatality, illness and impacts to mental health.

Resilience is built from having clearly defined roles by all stakeholders to deliver on disaster risk identification, threat mitigation, and resilience development. Ongoing communication and stakeholder engagement ensures that plans and data collection are continually updated and reviewed so that management in times of disaster is effective.

Growth Inhibitors and Opportunities

The NSW Government expects the New England region to continually experience heatwaves, drought, fire risk, flooding events and increasing temperatures. Varying weather into the longer term will dampen economic activity without sufficient risk identification and threat mitigation that makes local communities, industry, and supply chains more resilient to future disasters.

Continual analysis into business supply chain status and impacts from natural disasters and mega-trends will enable businesses to identify the risks to their business and resilience strategies with an aim to growth. Similarly, supporting the attraction and retention of a skilled workforce required to deliver on the growth plans is important particularly when facing a competitive labour market.

Embedding sustainability into business strategy has been shown to support business growth and resilience by enabling business to develop long-term competitive advantage. At a local level, understanding how businesses have been impacted by a disaster can support local response and recovery actions in a way that prioritises resources. Supporting local business to navigate their recovery phase from the disruption caused by natural disasters can help them reduce their recovery costs and minimise impacts to their operation and supply chains. Identifying immediate steps for action and providing support where needed gets business operating faster and able to seize opportunities where markets have failed.



Recommendations

Economic development approaches will differ for a diverse economy, whereas specialist economies benefit when opportunities related to their dominant sectors grow. Exploring opportunities for diversification by building on existing and established industry sectors, along with their supporting sub-sectors, will support economic development and resilience. Additionally, the specialization of these LGAs places greater emphasis on the importance of regional cooperation and coordination of supply chains.

Considering the notable challenges that industry and the workforce have faced over the course of the drought, bushfire and pandemic, many businesses and workers have shown resilience and adaptability to come out trading and working into 2022. A preliminary literature review into managing and recovering from natural disasters has highlighted recurrent themes and a set of key actions that local governments and stakeholders can pursue.

Business planning for future economic shocks is subject to a few factors. Industry development in an economy that is dominated by commodity-based industries is challenging with many natural disaster and mega-trend headwinds. Capturing more value from the supply chain, expanding export opportunities, and investing in R&D are options available.

Targeting industry sub-sectors that support the large industry sectors will boost local supply chains and generate a higher flow-on effect when positive economic impacts occur whilst also softening the impact from negative shocks such as a natural disaster. Similarly, import substitution is an important opportunity to bolster local supply chain resilience and grow the local economy.

Business risk and resilience planning is crucial to disaster resilience and recovery efforts. Continual, direct engagement with local business will support a greater understanding of supply chains and growth inhibitors of business. Understanding the current business climate will support government's recovery effort after a disaster event whilst also assessing change over time to support future planning and investment.

Workforce shortages threaten the viability of local business, inhibit growth, and weaken supply chains. Workforce retention and attraction programs that are driven by the private sector, with support from local government, is required for a resilient economy and community. Following workforce movements and identifying skills shortages from business is important.

The community also needs to be brought along with disaster resilience and recovery planning. Communication and education of what to do in the face of disaster is commonly identified as an issue in disaster preparedness and response planning. This includes all stages of planning, response, recovery communication, and stakeholder engagement. For members of the community, consultation and education enhance a community's resilience and improve their reaction and response to disasters.



Businesses and workers have been resilient and adaptable to continue trading into 2022



Industry development in an economy dominated by commodity-based industries is challenging



Workforce shortages threaten the viability of local business, inhibit growth, and weaken supply chains

Regional comparative advantages are developed when natural endowments or strengths are capitalised on. The NEJO region is geographically diverse with each LGA benefiting from their own unique set of endowments and specialisations. Improving on natural endowments and other competitive advantages will drive positive economic development outcomes for the NEJO region.

Priority actions for the NEJO are identified as:

1. Advocacy for the positive developments and features within the region to counter the too-often negative sentiment around local government and the regional economy.
2. Advocacy for improved communications infrastructure to support business development and attraction, access to remote markets and new technologies.
3. Workforce skills attraction/development.
4. Housing – matching demand with supply, critical to skills employment attraction.
5. Actions that improve liveability within the region to attract business and residents.
6. Advocacy for services – health, education, transport which is related to the liveability objectives.
7. Road upgrades – with a focus on key freight routes and a more efficient freight task.
8. Pursuing opportunities related to the New England REZ – e.g. transition of workers from Inland Rail to the REZ projects, maximising the opportunities for local employment on the REZ as opposed to importing workers for short-term contracts.
9. Education around business and community disaster recovery and resilience.

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1

Introduction

Member Councils of the NEJO span across a diverse geography and feature various economic drivers. Council's unique economic drivers may differ from each other, but combined, provide a powerful economic base to leverage. Therefore, it is important that members of the NEJO work together cohesively and strategically for the improvement of their local communities and the region as a whole.

Regional Development Australia – Northern Inland (RDANI) have been engaged by NEJO to prepare a regional EDS as part of their commitment to the region.

This report provides socio-economic analysis for the Local Government Area (LGA) of each member Council, benchmarked to the region. This forms the basis for contextualising the historic and current state of the local economy to provide an evidence base for the NEJO actions.

It also documents current trends and economic growth opportunities for the region, as well as analysis on the current economic climate, taking into consideration recent shocks including drought, bushfires, and COVID-19.

1.1 Regional Overview

NEJO was established by the NSW Government in 2017 with the aim of driving better planning, economic development, and service delivery for regional NSW. Members of NEJO are united in their commitment to work together for the improvement and enhancement of their respective communities. NEJO is formed by seven participating local government areas located on the highlands, slopes, and plains of northern New South Wales. NEJO member councils include Armidale Regional, Glen Innes Severn, Inverell Shire, Moree Plains, Narrabri Shire, Tenterfield Shire, and Uralla Shire. The NEJO region fits within the broader New England region of NSW (Figure 1-1 and Figure 1-2).



Although not a gazetted Member of the NEJO, Gwydir Shire Council are an Associate Member and valued contributor to the aims of the NEJO. The Gwydir Shire economy represents around 5 percent of the total NEJO economy. As such, we have included some data and commentary on the Gwydir Shire in this NEJO Strategic Plan.

NEJO is one of NSW's prime agricultural regions, boasting abundant natural resources, vibrant communities, and proximity between the key metropolitan precincts of Brisbane and Sydney. Agriculture, education, and the energy sector are key economic drivers for the region, with each LGA contributing various economic strengths and assets. As an example, Narrabri supports a high proportion of the region's mining, while Inverell is a manufacturing powerhouse, and Armidale is the education centre for the region. Each LGA is backed by strong natural assets, a safe and secure water supply and accessible transport networks.

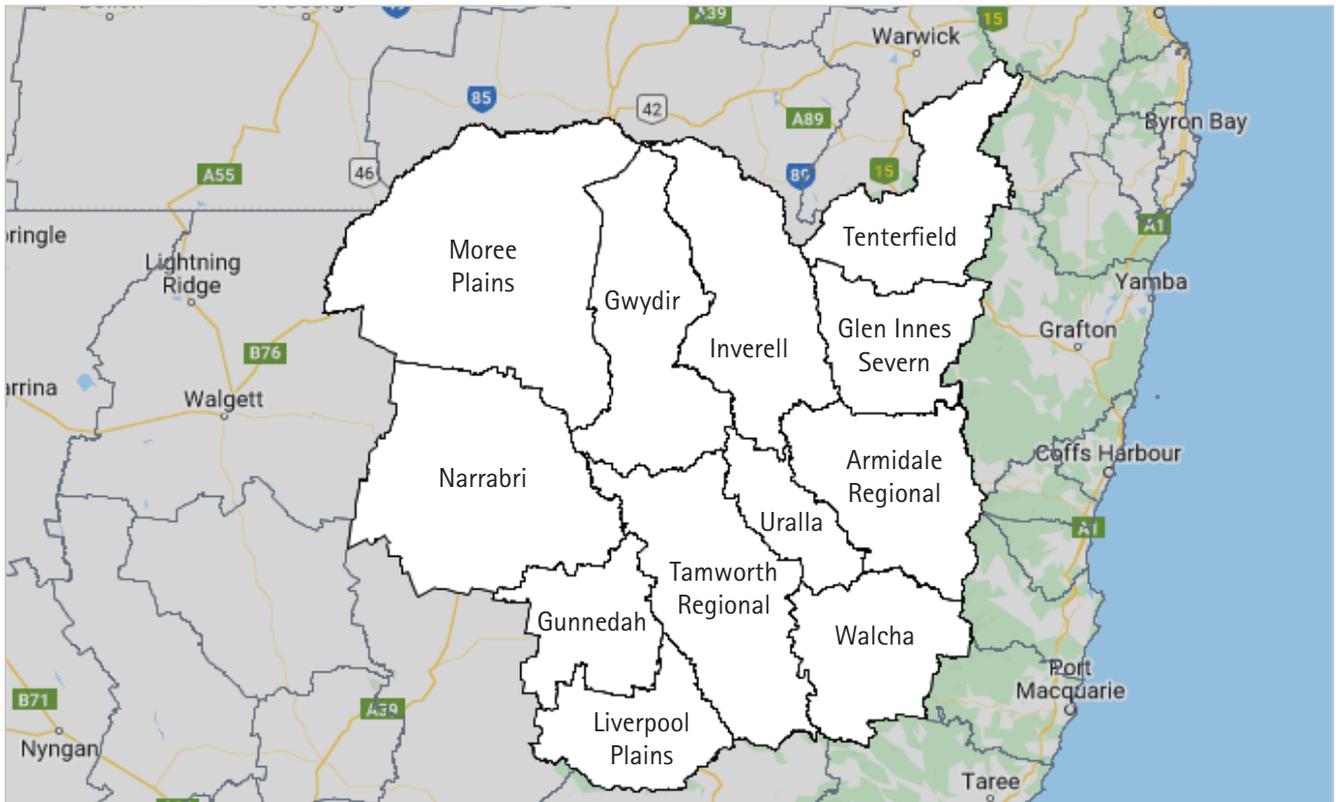
Figure 1-1 Member LGAs of the NEJO



The region is strategically located along principal inland freight routes that link the region to every cardinal direction:

- The Inland Rail will connect Melbourne and Brisbane via freight rail line at Narrabri and Moree.
- The New England Highway runs north-south, linking the region to Southeast Queensland and the Hunter/Sydney regions of NSW.
- The Newell Highway provides additional north-south connections in the region's west, providing access to Southeast QLD, Southern NSW through to Melbourne.
- The Gwydir and Kamilaroi highways provide an east-west corridor across the region.

Figure 1-2 Wider Northern Inland Region, NSW



Source: REMPLAN MapBuilder <https://remplan.co/36mSP00>

1.2 About This Economic Development Strategy

Local economic development aims to prioritise economic growth and increase a region's capacity which, in turn, aims to improve the overall wellbeing of local communities. An EDS provides a strategic framework to improve future economic wellbeing and quality of life of a community through targeted actions and effective initiatives.

This EDS commences with an evidence-based report to support the economic development of the NEJO EDS providing socio-economic analysis on each member Council's local area, relative to the NEJO region, and will:

1. Define the current economic climate, taking into consideration the impact of drought, fires, and COVID-19; and
2. Identify current trends and opportunities for economic growth in the NEJO region.

The scope of this work is to provide a strong evidence base for individual and partnering Councils, along with the community, to support implementation of the updated economic development strategy. Key outcomes include:

- To set the broader economic context in which trends and opportunities can be assessed.
- To highlight strategies which improve the capacity and capability of businesses to be more resilient to future disaster in the wake of bushfires, drought and COVID-19, as well as adequate mitigation practices for risks and threats.
- Identifying business growth inhibitors and opportunities.
- To support the development of a prioritised action plan with clear, measurable outcomes.

To achieve these items, this preliminary research will:

- Explore and discuss growing industries, emerging trends, and major drivers of the NEJO economy.
- Identify key regional assets, along with notable opportunities and challenges related to business risk and threat mitigation, and disaster resilience explored in the literature review.
- Demonstrate the impact that drought, bushfire, and COVID had on the regional economy.

1.3 Role and Responsibility of NEJO and Its Members

'The New England Joint Organisation is an inclusive and united group of councils advocating, planning and delivering positive economic and social benefits for its member communities.'
(NEJO vision statement)

In terms of local economic development, the role of local government and NEJO is to consult closely with industry, government, community, and tourism groups to identify key focus areas that can assist in creating a prosperous economy. Working as a collective, with the support of Federal and State Governments, NEJO's stated role is to¹:

- Plan and prioritise services/projects which deliver regional benefits.
- Advocate to our partners on the need for these projects/services.
- Collaborate with our partners for service/project delivery.

In fulfilling its role, NEJO has identified three priorities which aim to deliver positive outcomes for the collective community. The three priorities of NEJO are:

- Sustainable economic growth.
- Educated, healthy and connected communities.
- Investment in critical infrastructure.

¹ <https://nejo.nsw.gov.au/>



2

Economic Profile: Industry Sector Overview

This section provides an analysis of the current economy across the seven LGAs that make up the NEJO region, as well as an overview of economic trends occurring in 'Industry' in the region. Industry sectors discussed have been defined by ANZSIC 19-sector level.

Each LGA has a unique economy with their own strength and risk profiles that make up the diverse economy of the NEJO region. The region's growth is fuelled by activity across several sectors, ranging from production of commodities, manufacturing, and education.

Commodity production includes broad-acre farming for livestock and grains, as well as an established coal mining industry with emerging gas production. Food product manufacturing is another important industry with abattoirs that supply the nation's supermarkets. An established university (University of New England) supplies tertiary-level education and place-based research capabilities that are sought after by various regions across the state and nation.

2.1 Regional Economic Analysis

This section of the report provides an economic profile of the NEJO region as well as relevant benchmarking to the state of NSW, the wider region, and comparisons between the local economies of member Councils.

2.1.1 Industry

The industry section includes an assessment of key economic indicators for each LGA in the NEJO region. Economic indicators include output, gross regional product, wages and salaries, value-added and local supply chain analysis.

Output

Output data, also referred to as total sales or total income, represents the gross revenue generated by businesses/ organisations in each of the industry sectors in the NEJO region. Estimates of economic output provide an indication of the level of activity occurring in the region by industries.

Total output for the NEJO region economy is estimated at \$13.9 billion (\$14.5 billion, including Gwydir Shire). This represents 51.9% of the wider New England region's output. As at 2020, the agriculture industry contributes the largest share of output at \$2.2 billion (16.0%), followed by mining (\$2.1 billion, 15.2%), and rental, hiring and real estate services (\$1.2 billion, 9.1%). At a 45-sector level, mining (\$2.1 billion, 15.0%, mostly from coal mining), livestock, grains and other agriculture (\$1.9 billion, 14.0%), and property services (\$1.2 billion, 8.6%) contribute the largest share of output.

Between 2016 and 2020, the mining sector has experienced the highest growth (369.1%) from \$449.7 million to \$2.1 billion. This large increase in mining activity is due to the recent development of coal resources in Narrabri. This is followed by administrative and support services (46.0%) and the health care and social assistance (22.9%) sector. Industry sectors that experienced a decline in output include retail trade (-9.9%), transport, postal and warehousing (-11.0%), and wholesale trade (-21.3%).

Armidale Regional and Narrabri together contribute 54.8% of total output generated in the NEJO region. The agriculture sector is important for all LGAs in the region with high output (greater than 20%) for Glen Innes Severn, Moree Plains, Tenterfield, and Uralla. The sector is also important for Armidale Regional (12.3%), Inverell (11.9%) and Narrabri (10.4%), generating the second most output of all sectors within their respective LGAs. The majority (12.8%) of output for Armidale Regional is from the education and training sector, whilst 53.5% of Narrabri's output is attributable to mining and Inverell contributes highly to regional output generated by the manufacturing industry and electricity, gas, water and waste services sector.

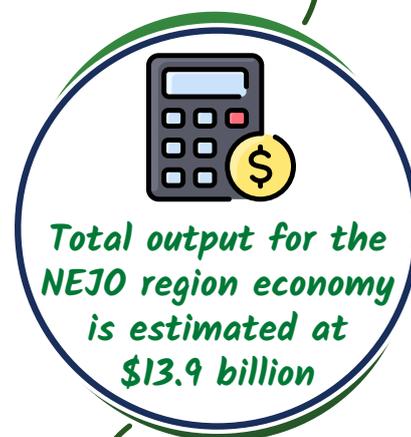
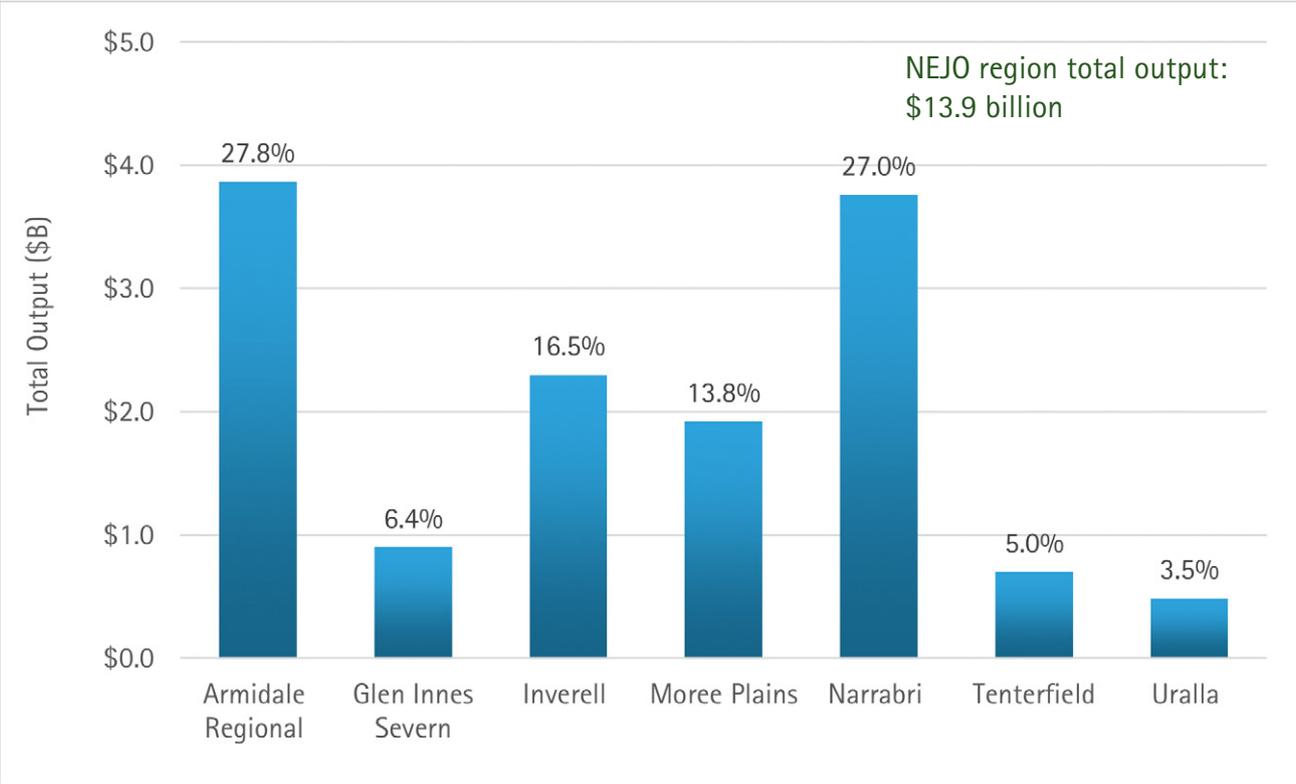


Figure 2-1 LGA Share of NEJO region's Output, 2020



Wages and Salaries

Wages and salaries represent the estimated remuneration paid to employees who work in the NEJO region.

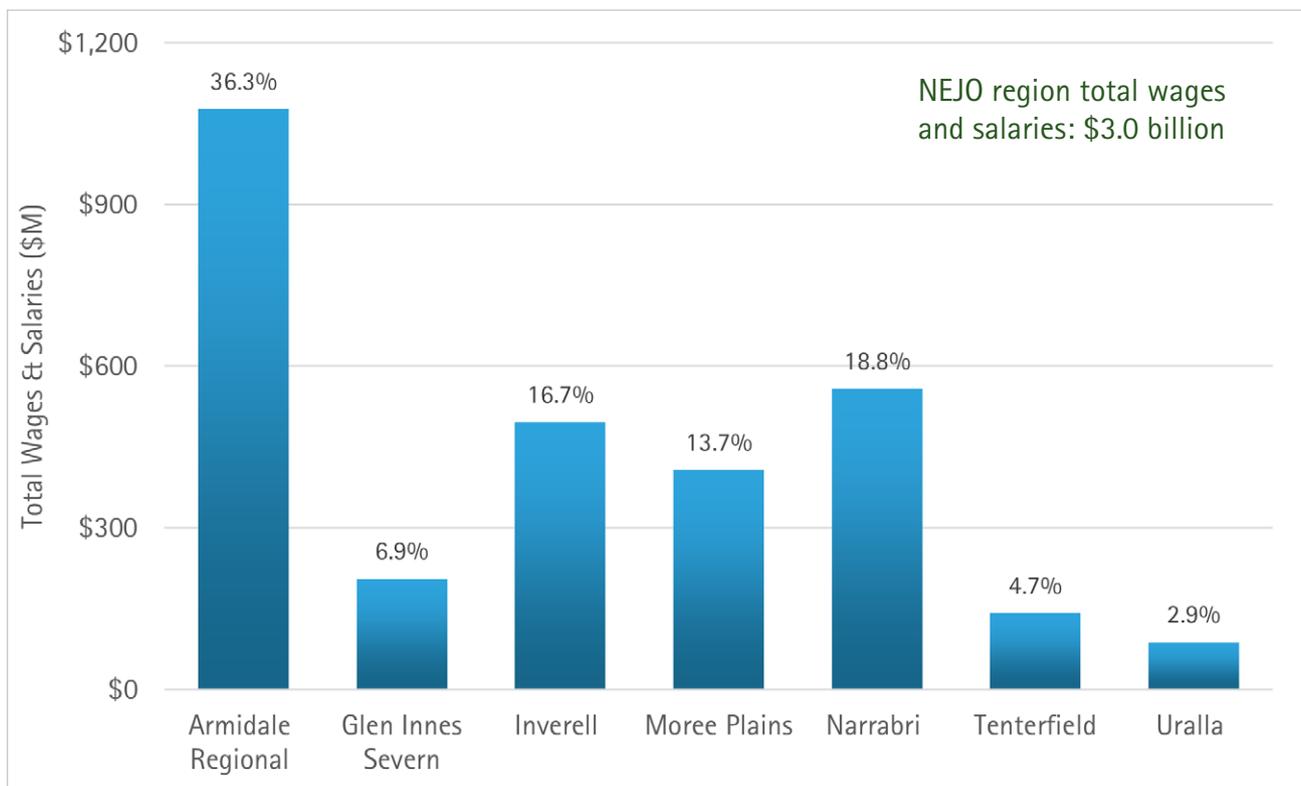
Total wages and salaries estimated for the NEJO regional economy is \$3.0 billion, as shown in Figure 2-2. This represents 51.3% of the New England Region's wages and salaries. As at 2020, education and training contributes the largest share of wages and salaries at \$481.4 million (16.2%), followed by health care and social assistance (\$402.0 million, 13.5%), and public administration and safety (\$285.9 million, 9.6%). At a 45-sector level, education and training (\$481.4 million, 16.2%, split between school and higher education), public administration, regulatory services, order and safety (\$277.2 million, 9.3%), and residential care and social assistance services (\$240.8 million, 8.1%) contribute the largest share of wages and salaries.

Between 2016 and 2020, the mining sector has observed the highest growth (183.7%) from \$65.9 million to \$186.9 million.

Armidale Regional contributes the majority (36.3%) of the total wages and salaries paid in the NEJO region. This is due to Armidale Regional employing the largest proportion of the NEJO workforce and having the largest economy of all member Councils.



Figure 2-2 LGA Share of NEJO region's Wages and Salaries, 2020



Value-Added

Value-added represents the marginal economic value added by each industry sector in the NEJO region. Value-added by industry sector is the major element used to calculate Gross Regional Product (GRP). It is an approximation of the returns to capital and labour after intermediate inputs have been accounted for.

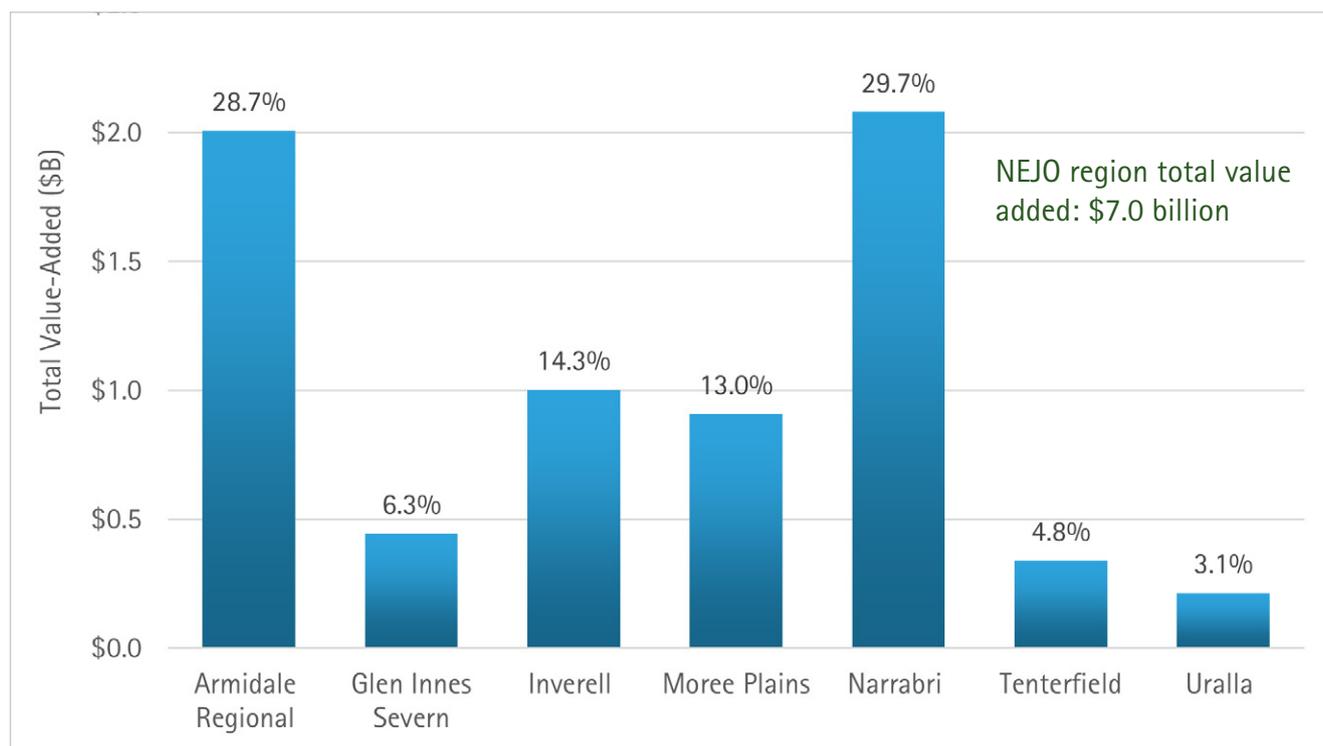
Total value-added for the NEJO region is estimated to be \$7.0 billion (Figure 2-3), or \$7.3 billion including Gwydir Shire. This represents 53.9% of the New England regions value-added. As at 2020, mining contributes the largest share of value-added at \$1.3 billion (18.6%), followed by rental, hiring and real estate services² (\$901.6 million, 12.9%), and agriculture (\$891.8 million, 12.8%). At a 45-sector level, mining (\$1.3 billion, 18.5%, predominately from coal mining), property services (\$880.0 million, 12.6%), and livestock, grains and other agriculture (\$795.1 million, 11.4%) contribute the largest share of value-added.

Between 2016 and 2020, the mining sector has observed the highest growth (607.3%) from \$183.9 million to \$1.3 billion.

Narrabri and Armidale Regional contribute the majority (58.4%) of the total value-added generated in the NEJO region. Value-added for Narrabri's mining sector is mostly due to gross operating surplus (53.5%), that is, for every \$1 of value-added generated, \$0.54 of that is attributable to company profits. For Armidale, education and training sector's value-added is mostly attributable to wages and salaries (58.5%).



Figure 2-3 Value-Added, Proportion of NEJO region per LGA, 2020



² The 'Rental, Hiring and Real Estate' industry also includes 'ownership of dwellings' which includes both landlords and owner-occupiers, the latter incorporating rental payments which is not an actual transaction. Under Australia's National Accounts, owner-occupiers are regarded as receiving rents (from themselves as consumers), paying expenses, and making a net contribution to the value of production which accrues to them as owners. 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.

Local Expenditure and Supply Chain Depth

Local expenditure data represents the value of intermediate goods and services purchased by local industry sectors within the NEJO region.

The total local expenditure estimate for the NEJO region is \$3.8 billion. As at 2020, agriculture contributes the largest share of local expenditure at \$815.0 million (21.4%), followed by construction (\$879.1 million, 15.2%) and manufacturing (\$461.4 million, 12.1%). At a 45-sector level, livestock, grains and other agriculture (\$705.2 million, 18.5%), mining (\$365.5 million, 9.6%, predominately from coal mining), and food product manufacturing (\$319.8 million, 8.4%) contribute the largest share of local expenditure.

Between 2016 and 2020, the mining sector has experienced the highest growth (176.8%) in local expenditure from \$135.0 million to \$373.8 million. This is followed by health care and social assistance (53.6%) and education and training (42.6%). Industry sectors that experienced declines in local expenditure include financial and insurance services (-13.8%), transport, postal and warehousing (-19.8%), and wholesale trade (-30.1%).

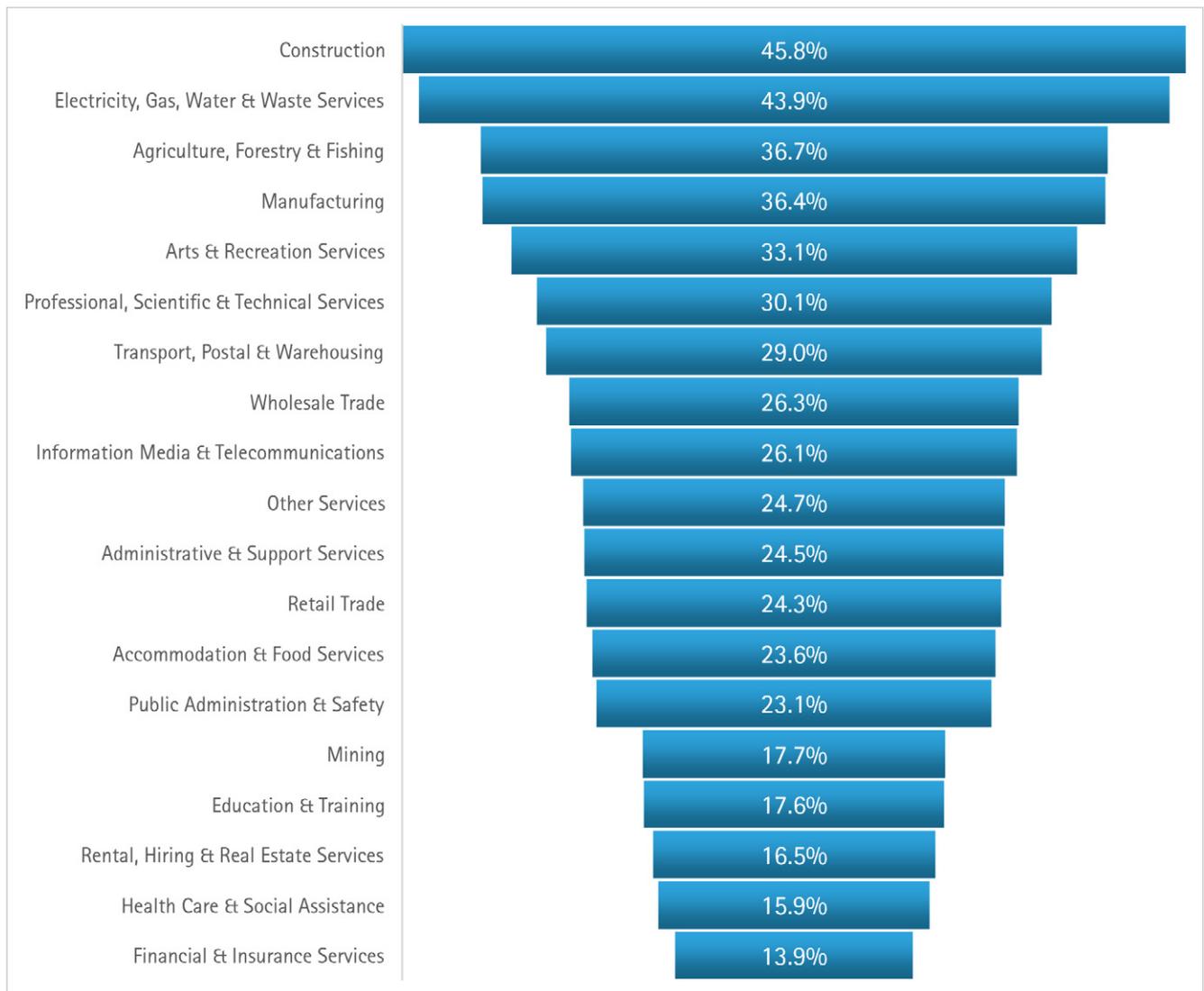
Comparing the value of local expenditure relative to output for each industry sector provides insight into the depth of the region's supply chains. In 2020, the NEJO region observed a lower proportion (27.4%) of local expenditure on intermediate goods and services proportionate to total output compared to the New England region (29.7%). This means that local supply chains are somewhat underdeveloped and that any expansion in the local economy will have limited benefits for the region's economy.

Within the NEJO region, there are four standout industries which have strong local supply chains. The construction industry has the highest level of local expenditure relative to output, with 45.8% of revenue being spent on locally sourced inputs. This is typical of many regions where construction is characterised by many individual trades each engaging the services of each other to complete projects.

Electricity, gas, water and waste services has a similarly high level of local expenditure (43.9%) relative to total output. This is driven by purchases by the electricity sub sector, and the provision of services by electricity distribution, but strong supply linkages also exist through services provided by the construction sector as well as professional services.

Both agriculture and the manufacturing sectors have similar levels of local expenditure relative to output, at 36.7% and 36.4% respectively. For manufacturing, there are strong connections between the meat product manufacturing industry and livestock production.

Figure 2-4 Local Expenditure Proportion of Output by Industry Sector, NEJO region, 2020



2.1.2 Workforce

The following section analyses the workforce of the NEJO region, which includes both residents and non-residents³. Workforce analysis includes insights into occupation, skills, and education level of the local workforce in the NEJO region with an aim to identify potential shortfalls and opportunities.

Employment by Industry

Employment shows the number of employees whose place of work is located within NEJO region.

The total employment estimate for the NEJO region was 39,318 jobs as at 2016 Census. This represents 51.3% of jobs in the New England Region. The Gwydir Shire represents a further 1,881 jobs.

As of 2020, agriculture supports the largest share of jobs at 6,551 (16.7%), followed by education and training (4,976, 12.7%), and health care and social assistance (4,900, 12.5%).

Between 2011 and 2016, the mining sector experienced the highest growth (173.7%) from 490 jobs to employing 1,188 workers. This is followed by administrative and support services (51.1%) and health care and social assistance (11.8%). Industry sectors that experienced declines in jobs include electricity, gas, water and waste services (-14.1%), information media and telecommunications (-14.9%), and wholesale trade (-22.6%).

Armidale Regional supports the majority (34.7%) of the jobs in the NEJO region. Education and training contributed the largest proportion of jobs for the Armidale Region (20.5%), which is derived from a close share of jobs between school and higher education sectors. Inverell, Narrabri, and Moree Plains contribute 17.1%, 16.7%, and 14.7% of total jobs in the NEJO region respectively.

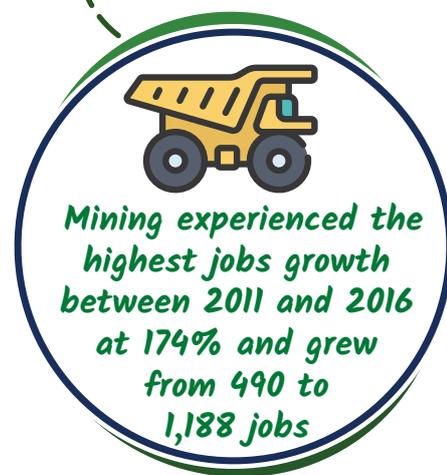
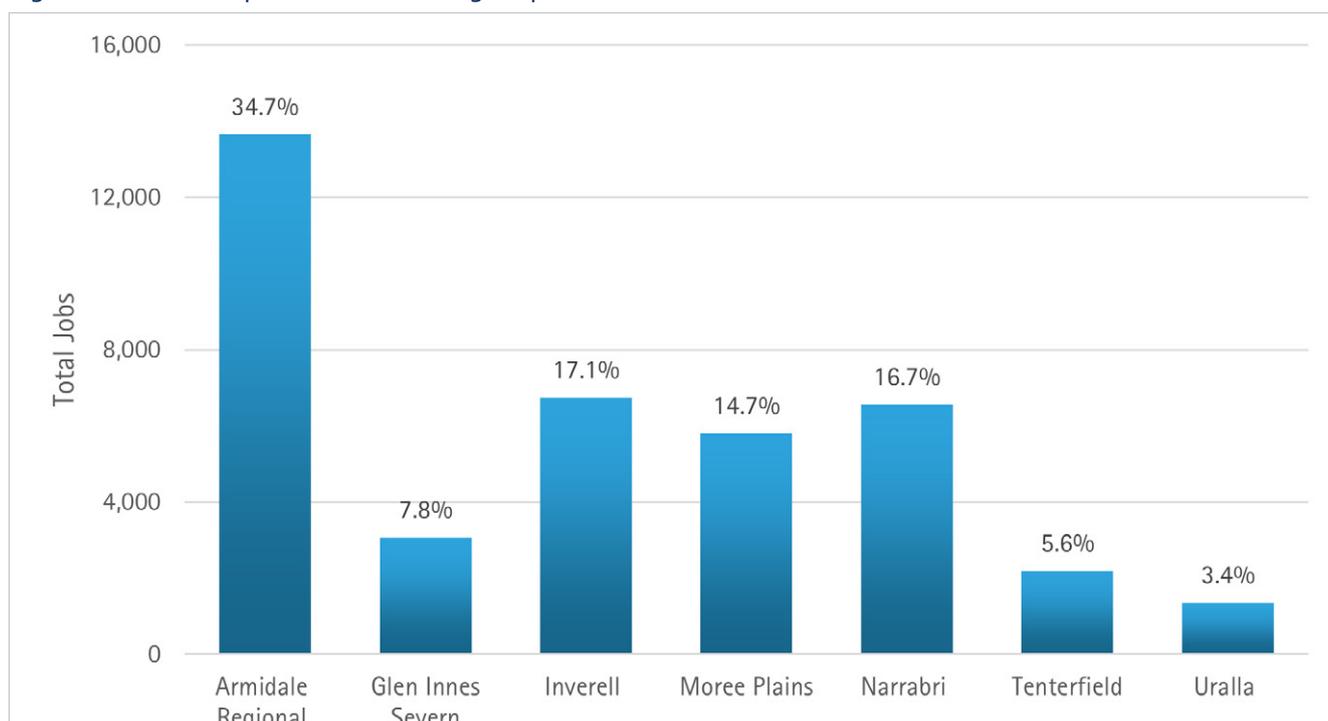


Figure 2-5 Jobs Proportion of NEJO region per LGA, 2016



³ Place of work employment (2016 Census)

2.1.3 Tourism

Tourism is one of the primary ways for the NEJO region engage with people from outside the region. Tourism is also a form of export as it brings money into the region as visitors spend money on local goods, services, and experiences. As such, tourism attraction is both an economic driver and a way to tell people from outside who you are, and what you are about, ultimately informing people's views about what the region has to offer.

Of the total output generated by an economy, a portion of output is supported by local tourism activity. Tourism is not classified as a separate industry sector in the National Accounts data released by the Australian Bureau of Statistics (ABS). Instead, tourism is an amalgam of activities across various industry sectors such as retail, accommodation, cafes and restaurants, and cultural and recreational services.

The estimated output generated by tourism for each industry sector has been deducted from individual industries and consolidated to estimate the value of the tourism sector in the NEJO region.

Tourism Output

The total output estimate for the NEJO region is \$13.9 billion, of which, Tourism contributes \$500.6 million, or 3.6% of total output. As a proportion of their respective economies, 3.6% of output for the NEJO region is attributable to tourism activity, compared to 3.4% in NSW. Over the four years to 2020, output attributable to tourism fell by \$122.7 million, from \$623.3 million in 2016 to \$500.6 million in 2020, or -19.7%.

Armidale Regional contributes the most output attributable to tourism at \$215.9 million, or 43.1% of the total NEJO tourism output. For the Armidale Regional economy, this tourism activity generates 5.6% of total output, which is followed by Tenterfield (5.4%) and Glen Innes Severn (5.2%).

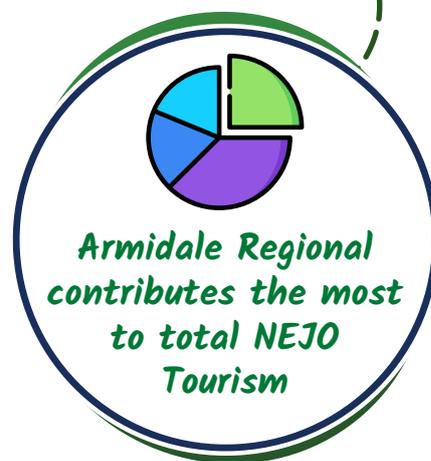
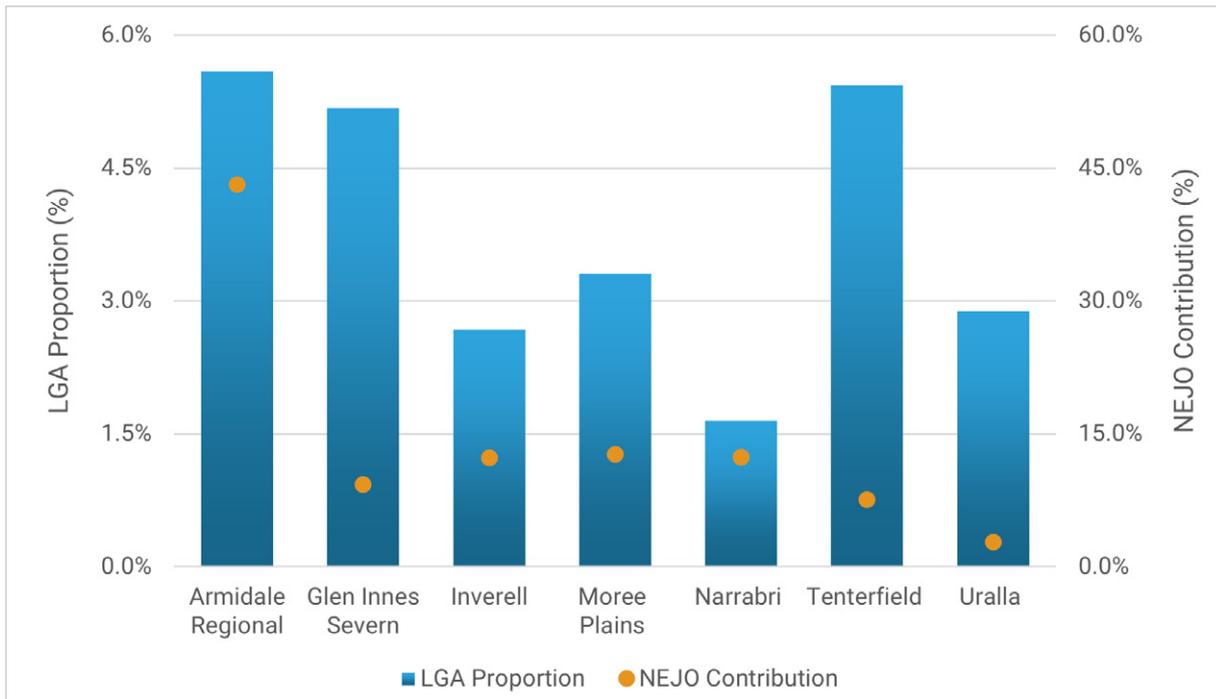


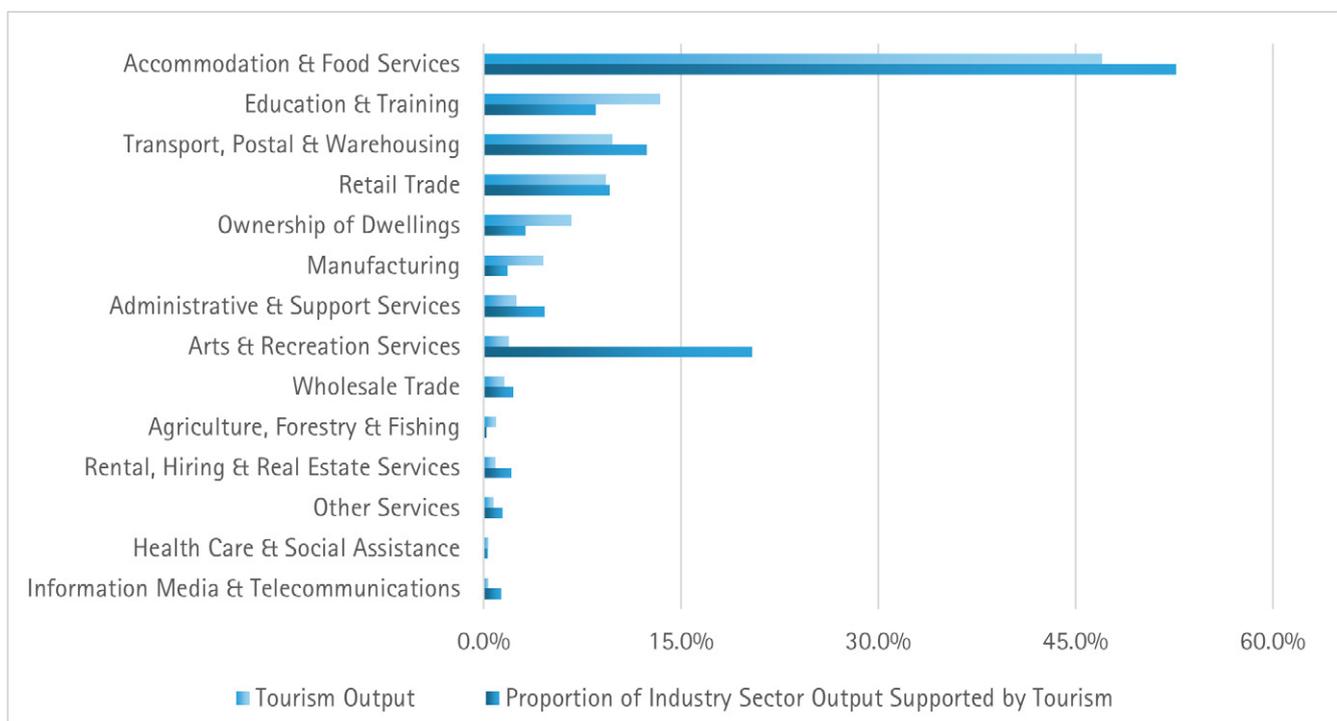
Figure 2-6 Output Attributable to Tourism for each LGA and Share of NEJO region, 2020



Tourism Output by Industry

As of 2020, the accommodation and food services industry sector is the largest contributor to tourism, generating \$235.3 million, or 47.0% of total output generated to service demand generated by tourists in the area. This is followed by education and training (\$67.2 million, 13.4%) and transport, postal and warehousing (\$49.0 million, 9.8%). Industry sectors that experienced declines in output attributable to tourism between 2016 and 2020 include manufacturing (-27.5%), transport, postal and warehousing (-34.6%), and rental, hiring and real estate services (-50.0%).

Figure 2-7 Total Tourism Output and Reliance on Tourism, per Industry Sector, NEJO region, 2020

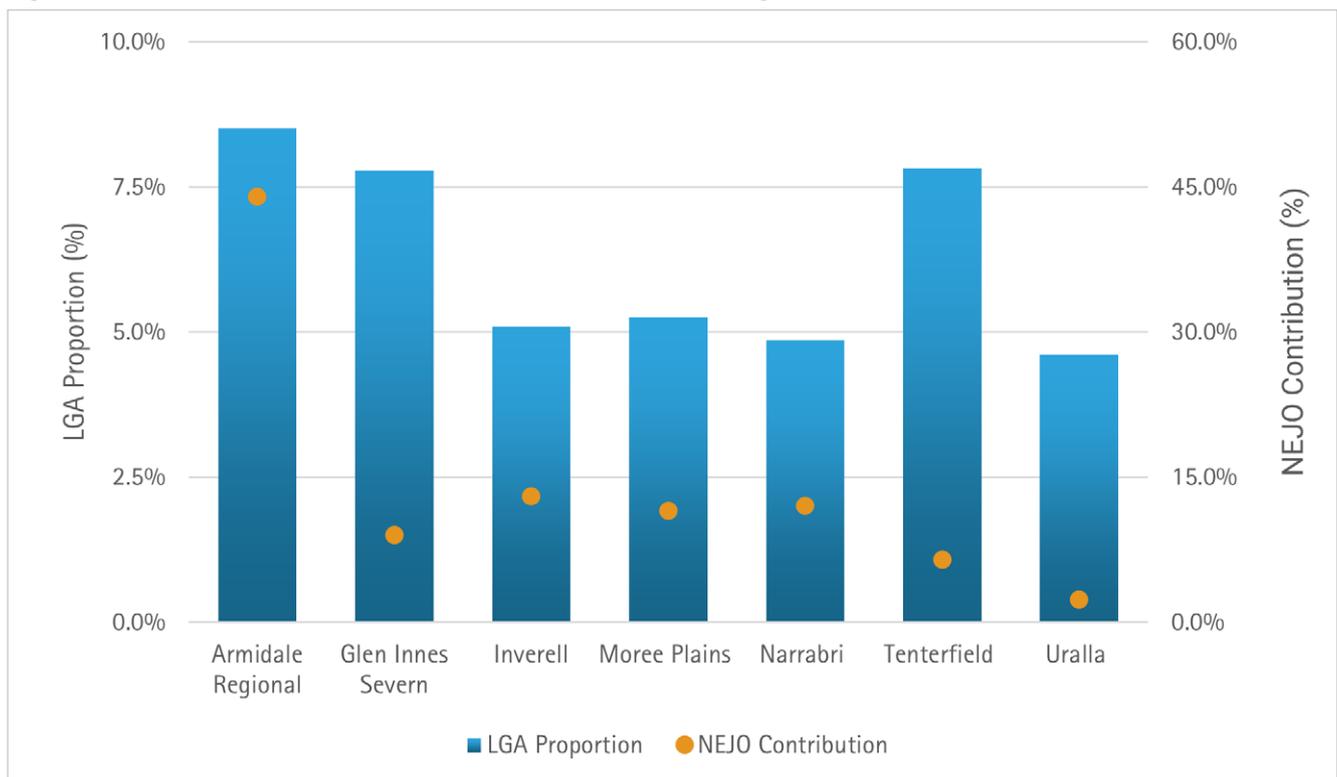


Tourism Employment

The total employment estimate for the NEJO region is 39,318 of which Tourism is estimated to support 2,641 jobs, or 6.7% (higher than that of NSW at 6.1%). Jobs attributable to tourism fell by 631, from 3,272 in 2016 to 2,641 in 2020, or by -45.2%. In terms of contribution to total employment, the tourism sector ranks 5th, a position which has remained steady since 2016.



Figure 2-8 Jobs Attributable to Tourism for each LGA, NEJO region, 2020



2.1.4 Competitive Advantages

This section analyses the competitive advantages and main economic drivers that are evident within the NEJO region and economy. Included in this analysis are key propulsive industry sub-sectors of the region's economy, along with an overview of major projects and infrastructure throughout the region.

Key Propulsive Industry Sub-Sectors

Key propulsive industries, sectors, and sub-sectors represent key drivers of the NEJO region's economy in terms of regional exports, employment, value-added and backward linkages. Backward linkages represent the level of local expenditure relative to total revenue.

At a 19-sector level, the industry sectors considered to be the top 5 in terms of regional exports, employment, value-added and backward linkages on goods and services are:

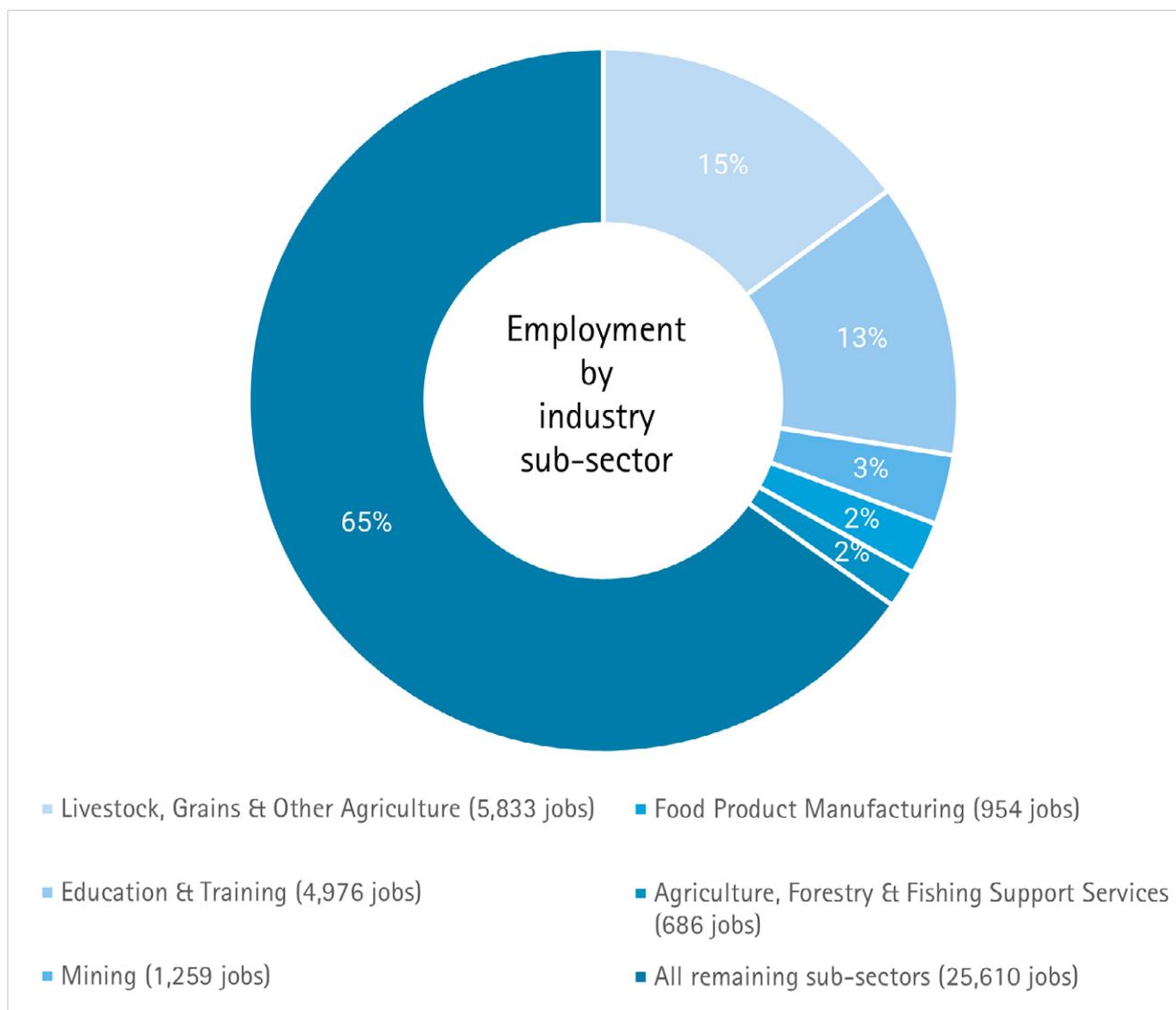
- Agriculture forestry and fishing for all four factors.
- Education and training for exports, employment, and value-add.
- Mining for exports and value-add.
- Manufacturing for backward linkages and exports.
- Health care and social assistance for employment and value-add.

Key Propulsive Industry Sub-Sectors – Employment

The top 5 key propulsive industry sub-sectors collectively support 13,708 jobs, accounting for 34.9% of total jobs in the NEJO region. This represents an increase of 11.1%, from 12,349 jobs in 2011. The remaining industry sectors collectively experienced a decline of 90 jobs, from 25,700 in 2011 to 25,610 in 2016, or -0.4%.

In 2016, livestock, grains and other agriculture was the largest sub-sector for employment, comprising of 5,833 jobs, which accounts for 14.8% of total employment in the NEJO region. Education and training was the second largest employing sub-sector supporting 4,976 jobs (12.6%), followed by retail trade (4,067 jobs, 10.3%)⁴.

Figure 2-9 Key Propulsive Industry Sub-Sectors, Employment, NEJO region, 2016



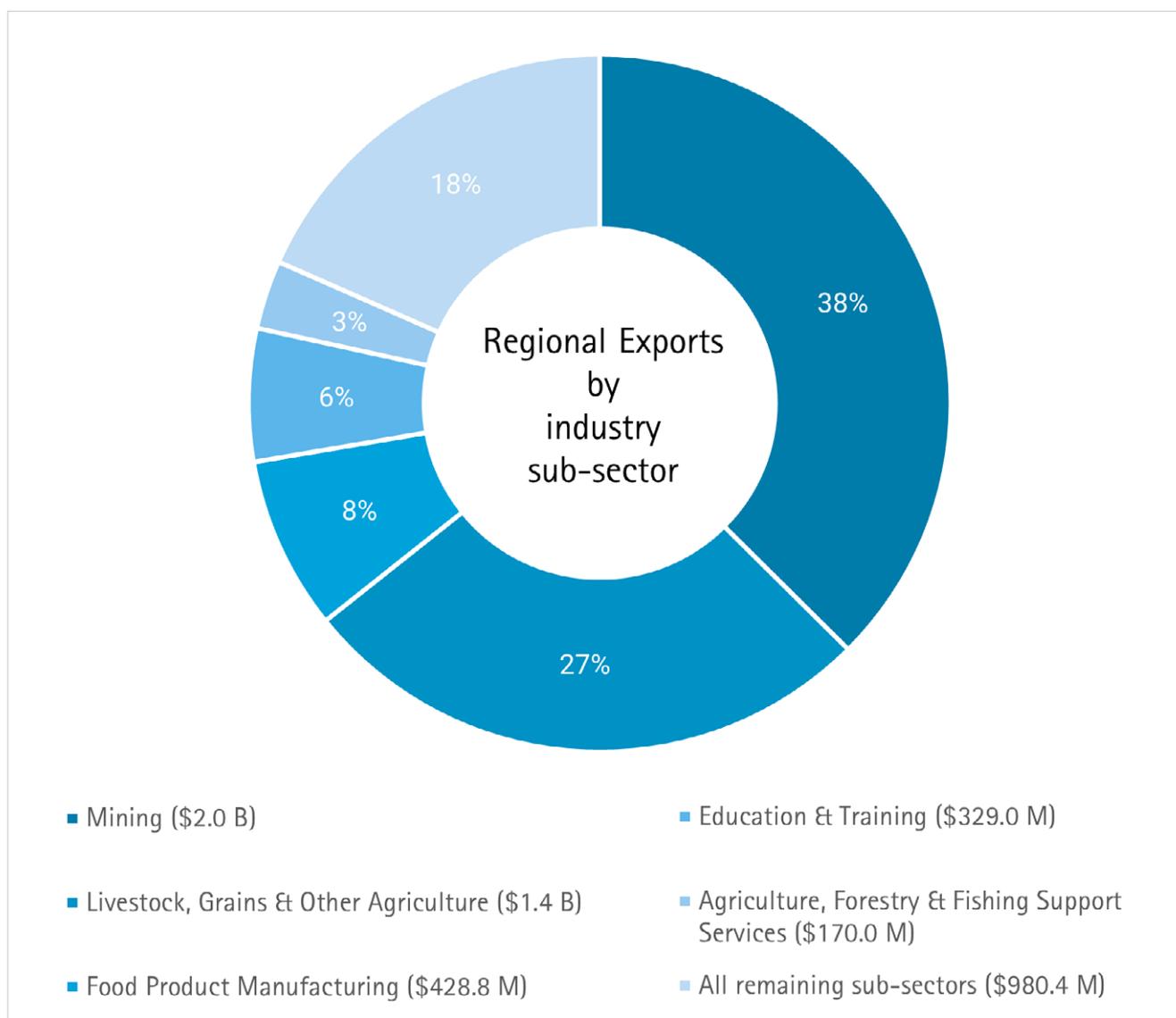
⁴ Note retail trade is not present in the graph as it is not identified as being a key propulsive industry sub-sector but is included in the 'all remaining sub-sectors' category.

Key Propulsive Industry Sub-Sectors – Regional Exports

The top 5 key propulsive industry sub-sectors collectively export \$4.4 billion worth of goods and services, accounting for 81.6% of the total regional exports in the NEJO region. Between 2016 and 2020, the top 5 key propulsive sectors collectively increased the value of exports from \$2.3 billion, representing 90.8% growth. The remaining industry sectors collectively experienced a decline of \$250.8 million, from \$1.2 billion in 2016 to \$980.4 million in 2020, or -20.4%.

In 2020, Mining was the largest sub-sector for regional exports, exporting \$2.0 billion worth of goods and services, accounting for 37.5% of total regional exports from the NEJO region. Livestock, grains and other agriculture supports the second highest level of regional exports (\$1.4 billion, 26.8%), followed by food product manufacturing (\$428.8 million, 8.0%)⁵.

Figure 2-10 Key Propulsive Industry Sub-Sectors, Exports, NEJO region



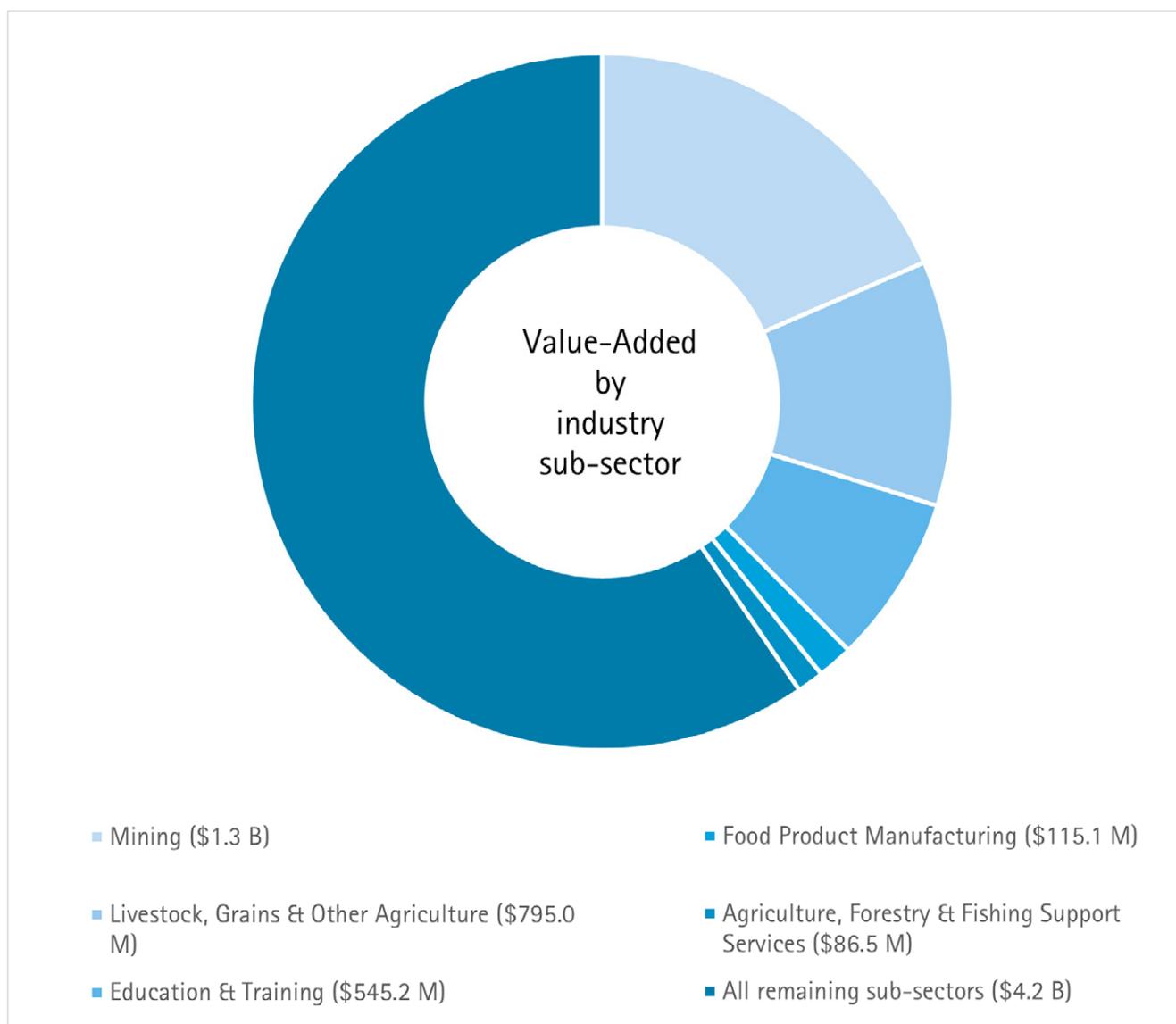
⁵ Note retail trade is not present in the graph as it is not identified as being a key propulsive industry sub-sector but is included in the 'all remaining sub-sectors' category

Key Propulsive Industry Sub-Sectors – Value-Added

The top 5 key propulsive industry sub-sectors collectively produce \$2.8 billion in value-added in 2020, accounting for 40.5% of total value-added in the NEJO region. In 2016 the top 5 sub-sectors generated \$1.5 billion of value-added, representing an increase of 88.6%. The remaining industry sectors collectively experienced an increase of \$134.7 million (3.3%), from \$4.0 billion in 2016 to \$4.2 billion in 2020.

In 2020, Mining is the largest sub-sector for value-added, accounting for 18.5% (\$1.3 billion) of total value-added for the NEJO region. This is followed by property services⁶ which generated \$880.0 million (12.6%), and livestock, grains and other agriculture (\$795.1 million, 11.4%).

Figure 2-11 Key Propulsive Industry Sub-Sectors, Value-Added, NEJO region



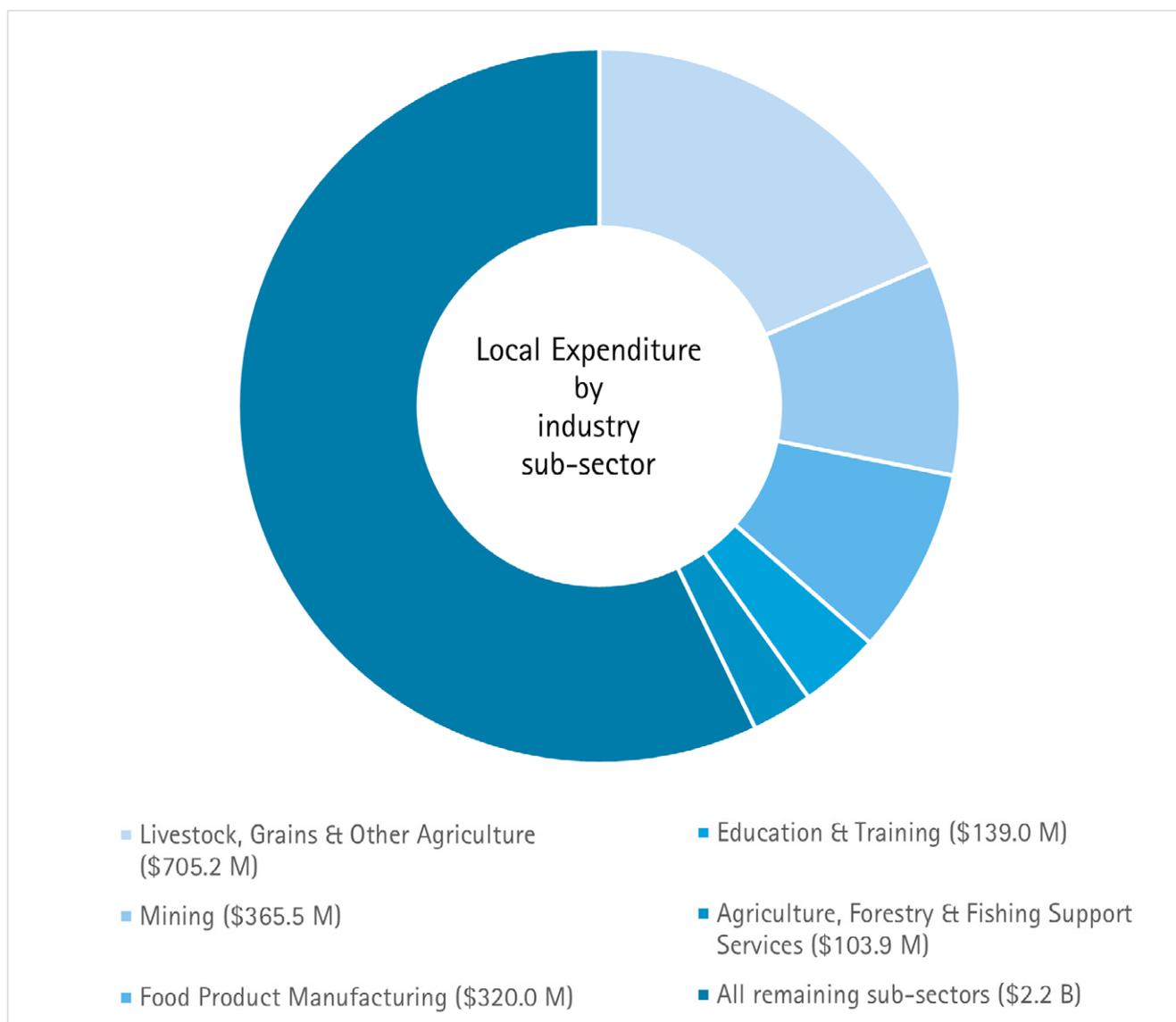
⁶ Note property services is not present in the graph as it is not identified as being a key propulsive industry sub-sector but is included in the 'all remaining sub-sectors' category.

Key Propulsive Industry Sub-Sectors – Local Expenditure

The top 5 key propulsive industry sub-sectors collectively account for \$1.6 billion worth of locally procured goods and services, accounting for 42.9% of the total local expenditure. This level of local expenditure is an increase of 37.2%, up from \$1.2 billion in 2016. The remaining industry sectors collectively experienced a decrease of \$38.2 million, from \$2.213 billion in 2016 to \$2.174 billion in 2020, or -1.7%.

In 2020, livestock, grains and other agriculture is the largest sub-sector contributing to local expenditure, accounting for 18.5% (\$705.2 million) of total local expenditure within the NEJO region. Mining supports the second highest level of local expenditure (\$365.5 million, 9.6%), followed by food product manufacturing (\$319.8 million, 8.4%).

Figure 2-12 Key Propulsive Industry Sub-Sectors, Local Expenditure, NEJO region



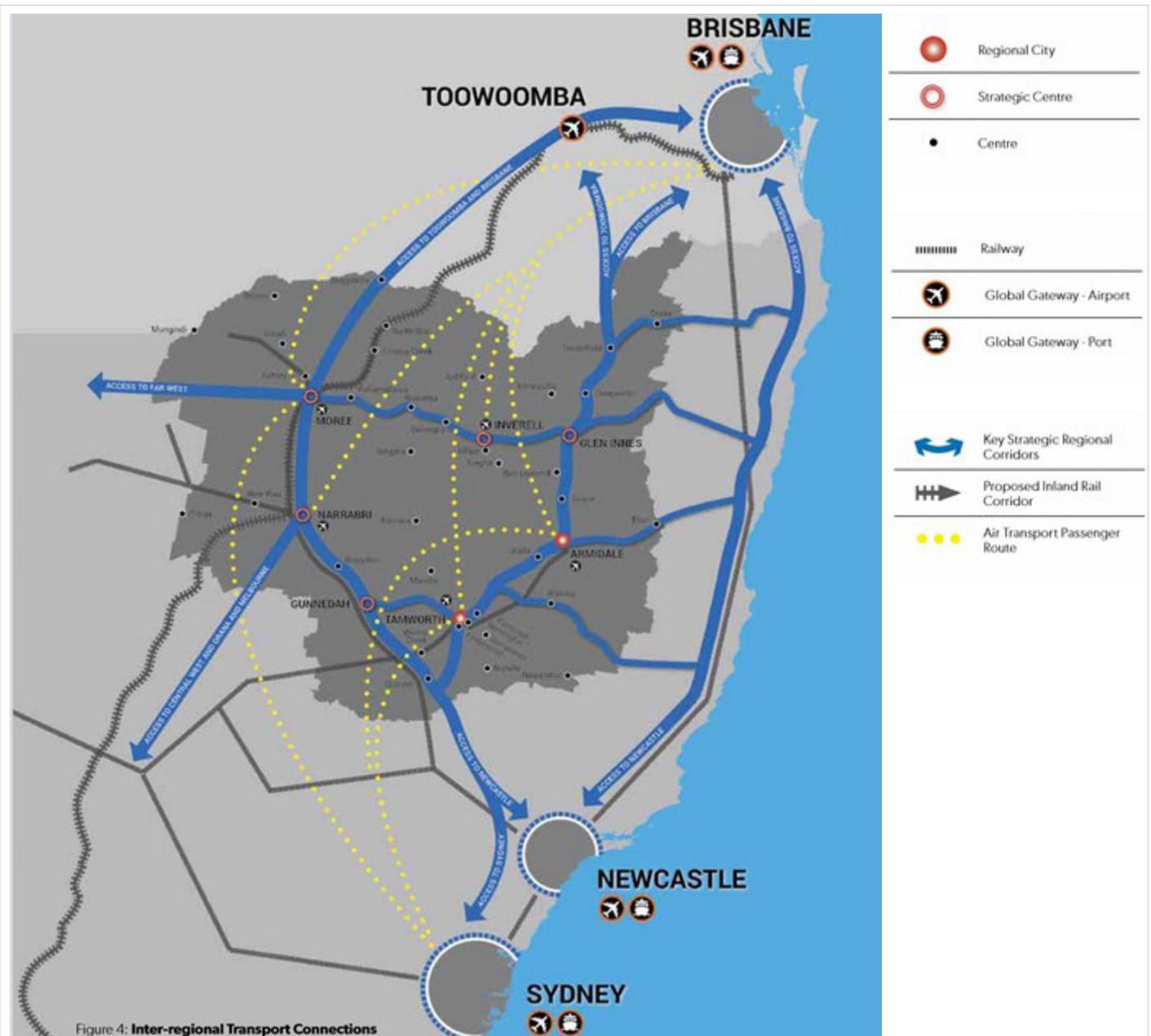
2.1.5 Major Projects and Infrastructure Assets

Logistics

Located between Sydney and Brisbane, the NEJO region is well positioned to access domestic and international markets via road, rail, and airfreight to move good and services to people across the region and further. An overview of the region's logistics network includes:

- The Inland Rail will connect Melbourne and Brisbane via freight rail line via Narrabri and Moree.
- The New England Highway runs north-south, which links the region to Southeast Queensland and the Hunter/Sydney regions of NSW.
- The NEJO region links to the Newell Highway to the west, giving access to Southeast QLD, Southern NSW, through to Melbourne.
- The Gwydir and Kamilaroi highways provide an east-west corridor across the region.
- The New England's central location on key freight routes mean that the region is both a destination and generator of freight for the region.
- Passenger airlines to Sydney and Brisbane.

Figure 2-13 Inter-Regional Transport Connections, NSW



Source: NSW Government Department of Planning and Environment 2017, New England North West Regional Plan

Natural Resources

The NEJO region operates some of Australia’s largest, most efficient, and productive broad-acre and grazing enterprises. Primary production, intensive agriculture and food processing sectors thrive from the rich soils and the favourable climate. Agriculture products (primarily grains, cotton, wool, horticulture, and fresh produce) and coal make up most outbound freight to markets such as Brisbane, Newcastle, and Sydney.

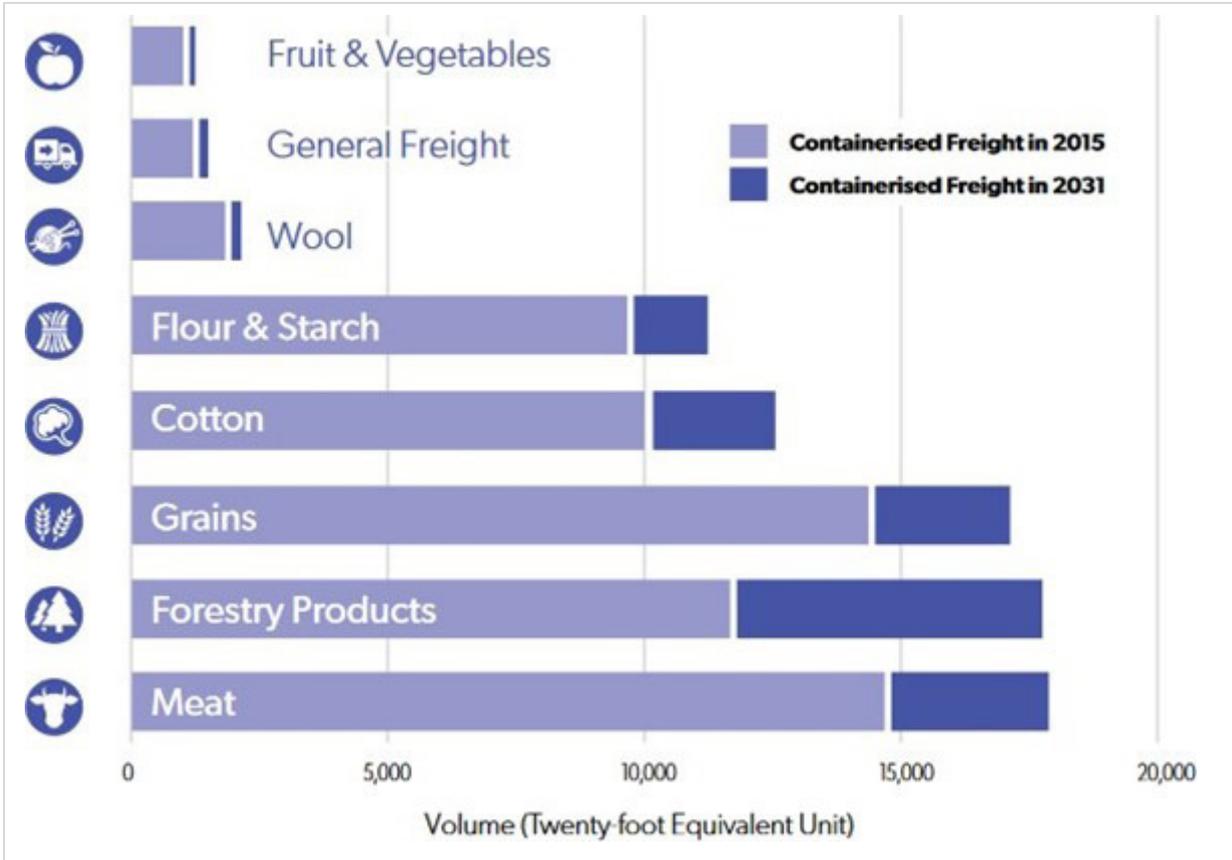
Figure 2-14 New England Agricultural Freight Network



Source: NSW Government Department of Planning and Environment 2017, New England North West Regional Plan

With the benefit of location, more than 13.6 million tonnes of freight move through the New England region each year, primarily by road and rail⁷. Many commodities that are produced within the region make their way across Australia including, Darling Downs, Toowoomba, Brisbane, Newcastle, and Sydney. The sector is expected to continually grow, with containerised freight in the New England region projected to increase into 2031.

Figure 2-15 Containerised Freight Growth in the New England Projection 2015 - 2031



Source: NSW Government Department of Planning and Environment 2017, New England North West Regional Plan

The region’s diverse geology provides vast mineral and energy production. The Gunnedah Coal Basin contains the state’s third largest coal reserves and an unknown coal seam gas potential. Recent development of coal and gas reserves have occurred in Narrabri. Deposits of gemstones, industrial minerals and extractive materials are also servicing many small-scale mines.

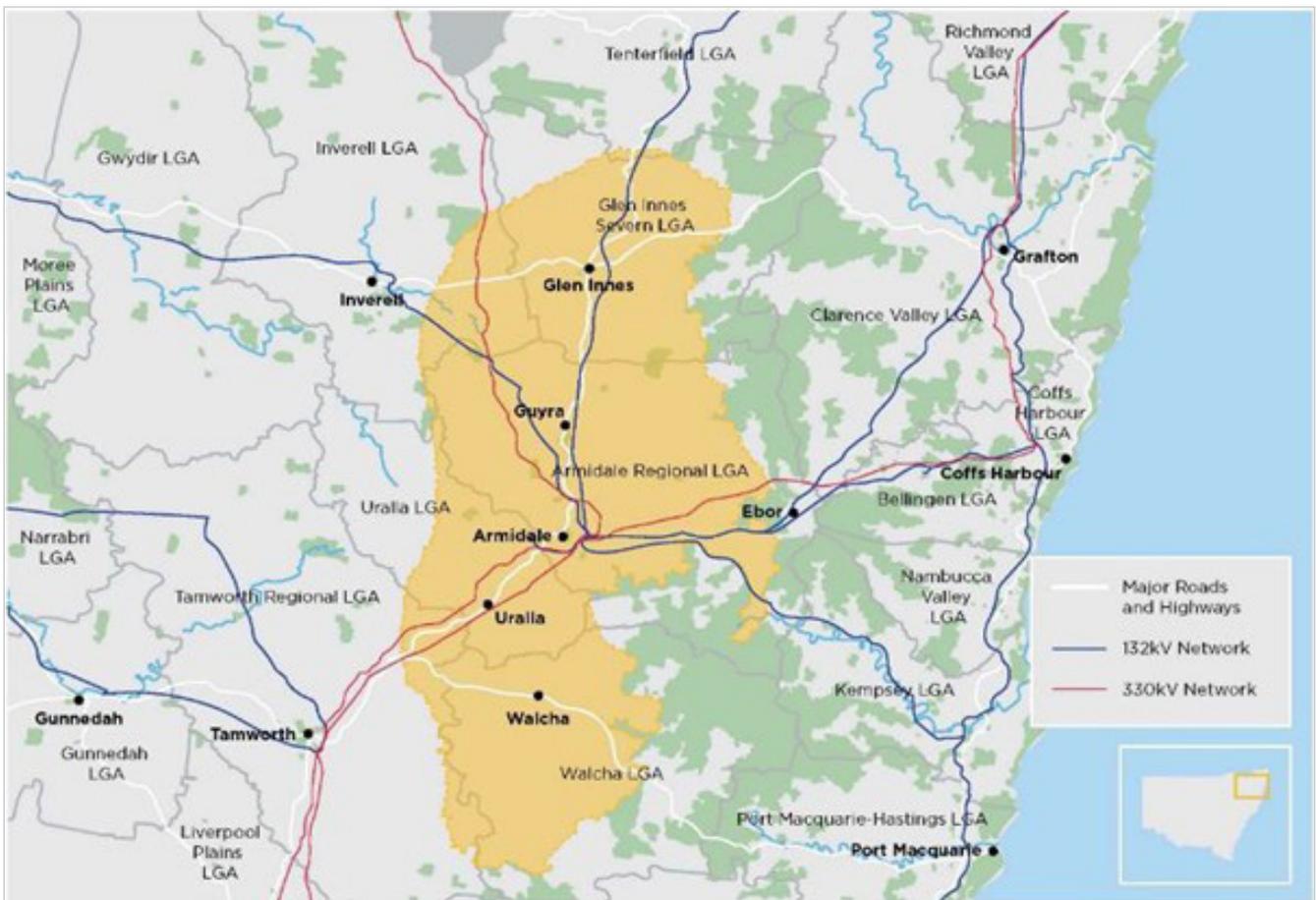
⁷ NSW Government Department of Planning and Environment 2017, New England North West Regional Plan

Special Zoning Areas

As part of the Snowy Hydro Legacy Fund, the NSW Government have established a Special Activation Precinct (SAP) for both Moree Plains and Narrabri⁸. The precincts are designed to leverage both the Inland Rail development and federal highways to create a new business hub that specialises in agribusiness, logistics and food processing industries⁹. This is done via a process that involves government-led technical studies and development planning, fast tracked approvals, infrastructure development and business concierge services¹⁰.

The New England Renewable Energy Zone (REZ) will be located over a geography spanning between Glen Innes, Armidale, and Walcha. Initial scoping by the NSW Government suggests the REZ is expected to deliver approximately \$10.7 billion in investment, 830 operational jobs and 1,250 construction jobs annually¹¹.

Figure 2-16 New England Renewable Energy Zone Geographical Area



Source: NSW Government 2020, Renewable Energy Zones

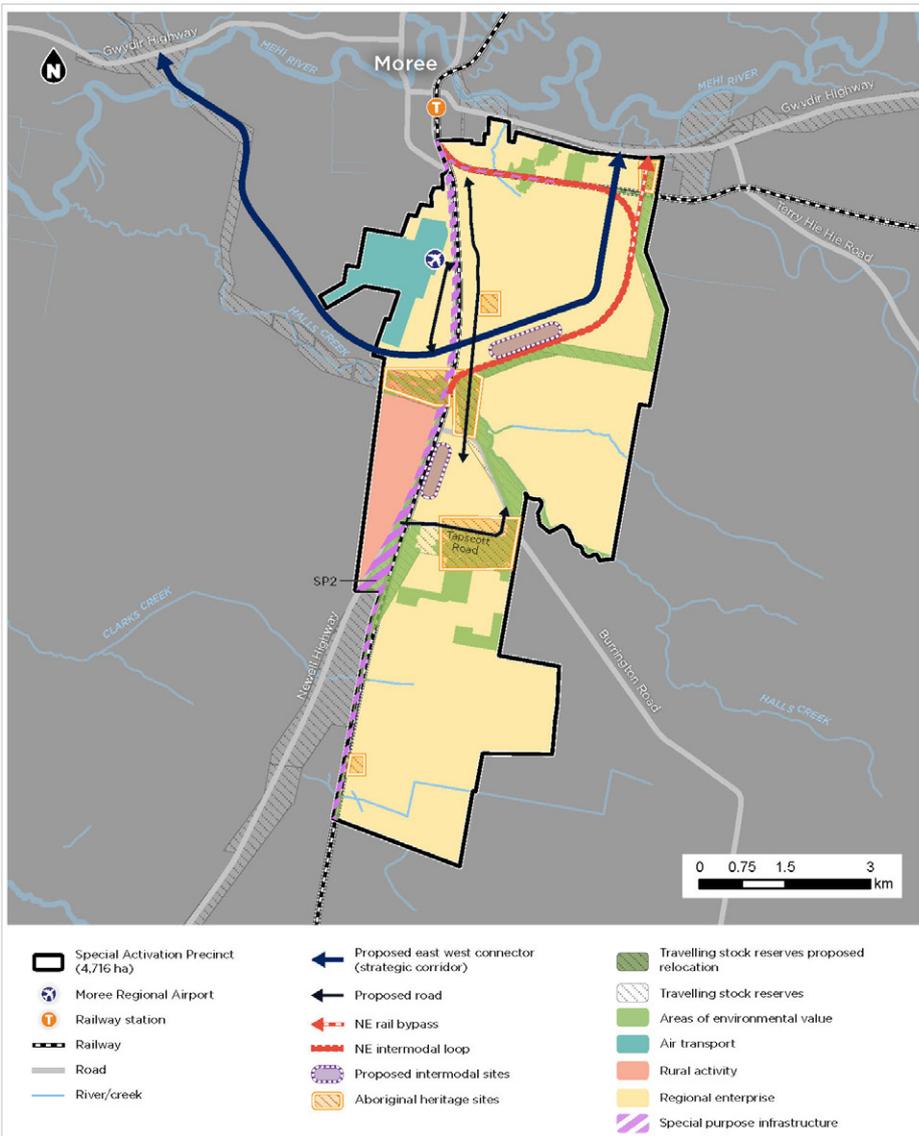
⁸ NSW Government 2021, Special Activation Precincts

⁹ NSW Government Department of Planning 2021, Special Activation Precinct Snowy Mountains Draft Master Plan

¹⁰ NSW Government 2021, Special Activation Precincts Explained.

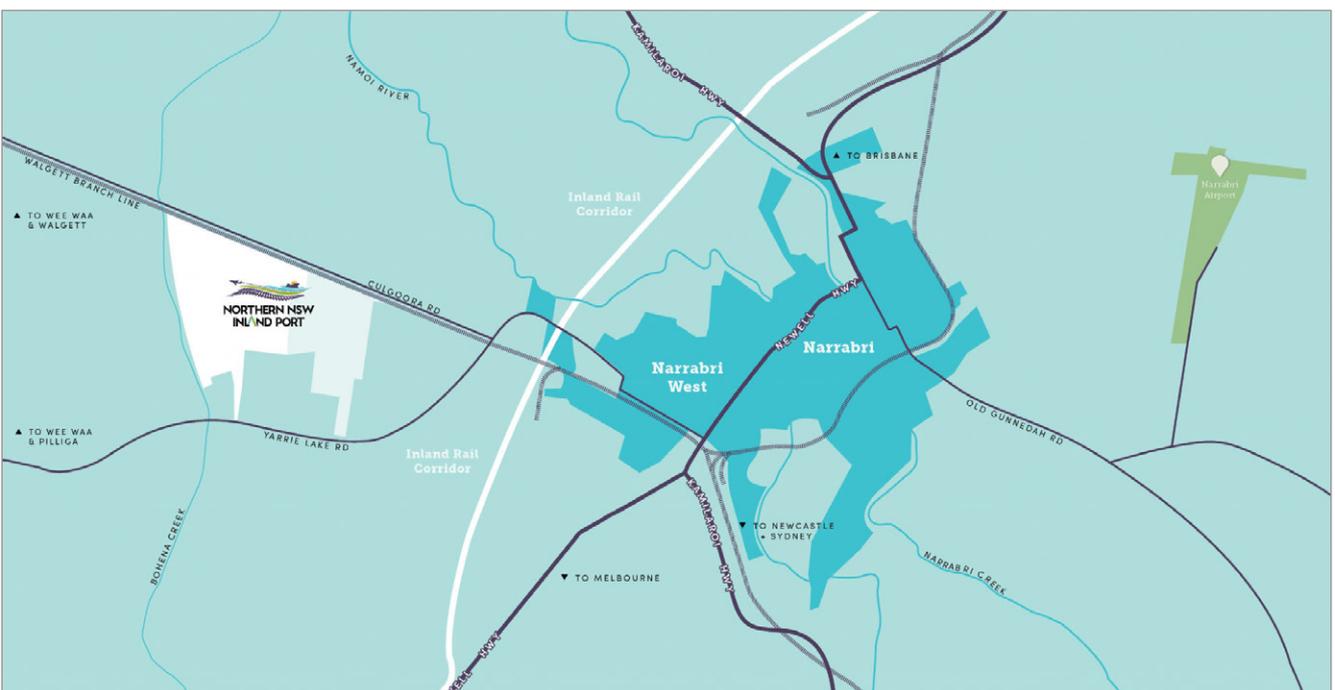
¹¹ Energy NSW 2020, Renewable Energy Zones

Figure 2-17 Proposed Moree Special Activation Precinct (SAP) Location



Source: NSW Government 2022, Moree Special Activation Precinct

Figure 2-18 Proposed Narrabri Special Activation Precinct (SAP) Location



Source: Northern NSW Inland Port

Renewable Energy

National and international demand for energy has the potential to be a cornerstone of a thriving economy for regions with capabilities to create and supply energy. The New England region is well positioned, to capitalise on these opportunities with high solar and wind potential. The NSW Government has established five Renewable Energy Zones (REZs) throughout regional NSW with the aim of delivering affordable, reliable energy generation as the State's existing power stations come to their scheduled end of operational life¹¹. These zones will coordinate investment in renewable energy technology with transmission infrastructure to capitalise on economies of scale in energy production.

A range of existing and planned renewable energy projects are located within the NEJO region¹². Existing and operating renewable infrastructure includes¹³:

- Pumped Hydro at Copeton Dam, Pindari Dam, Split Rock, Lake Keepit, and Oven Mountain.
- Major solar farms Moree Solar Farm and White Rock Solar Farm.
- Wind farms including White Rock Wind Farm, Sapphire Wind Farm, UNE Solar Farm.
- Bindaree Beef Bioenergy Plant.

A list of proposed projects within the REZ that are operational, under construction, approved, or still in planning, is shown in Figure 2-19. This development is supported by the NSW Government and is expected to occur over several years and provide a boost to local economic activity and support the up skilling of the workforce.

Figure 2-19 Indicative New England Renewable Energy Zone Projects



¹¹ Energy NSW 2020, Renewable Energy Zones

¹² Renew Economy 2021, NSW stumps with 34GW of wind, solar proposals for New England renewable zone

¹³ NSW Government Department of Planning and Environment Resources and Geoscience, Renewable energy resources of New South Wales – basic viewer

University of New England

The University of New England (UNE) was formed in 1938 as the New England University College, a College of the University of Sydney, and became independent in 1954. It is Australia's first university established outside of a capital city. Research conducted by UNE seek to solve the complex problems faced by rural and regional Australia with research clusters involving agricultural, biological, earth and environmental science to name a few¹⁴.

UNE also facilitates research collaborations with a list of centres, institutes, and Collaborative Research Centres¹⁵. Most of the research facilitated by UNE involve agriculture, agribusiness, health, and environment which correlates with leading industry sectors in the NEJO region.

Research into agriculture is a research specialisation of UNE, particularly with their SMART Farm Innovation Centre in Armidale. This institution drives Research and Development (R&D) into farm efficiency and productivity technologies to improve environmental sustainability, market opportunities and other competitive advantages.

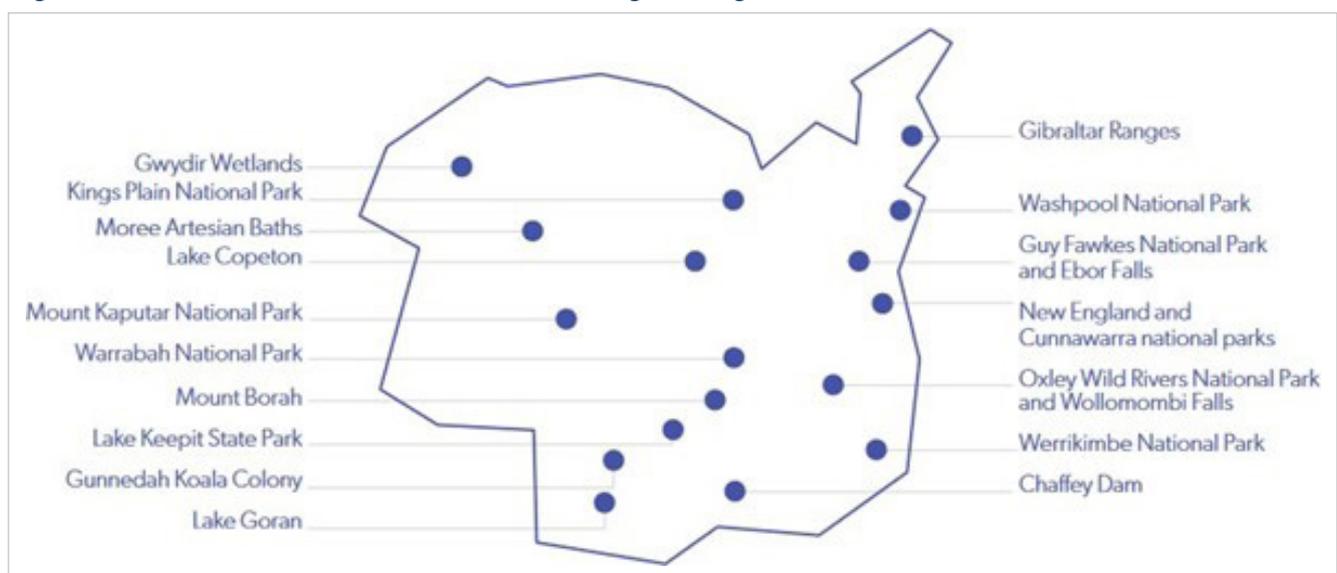
Other specialisations of UNE include:

- UNE Regional Study Centres in Glen Innes, Guyra, Inverell, Tenterfield, Moree, and Narrabri
- UNE's Joint Medical Program with the University of Newcastle, in collaboration with the Central Coast and the Hunter New England Local Health Districts
- UNE Smart Regional Incubator
- Agricultural Business Research Institute (ABRI)
- UNE Partnerships

Environmental Tourism Assets

The New England Region has a diverse natural environment, featuring from protected ecosystems, World Heritage-listed rainforests, wetlands, mountainous areas and sweeping plains¹⁶. Local industry developed around these key natural endowments with productive and sustainable agriculture to nature-based tourism.

Figure 2-20 Environmental Tourism Assets, New England Region



¹⁴ University of New England Research Themes and Clusters

¹⁵ University of New England Centres, Institutes, CRCs

¹⁶ NSW Government Department of Planning and Environment, 2017, New England North West Regional Plan 2036

2.1.6 Key Considerations

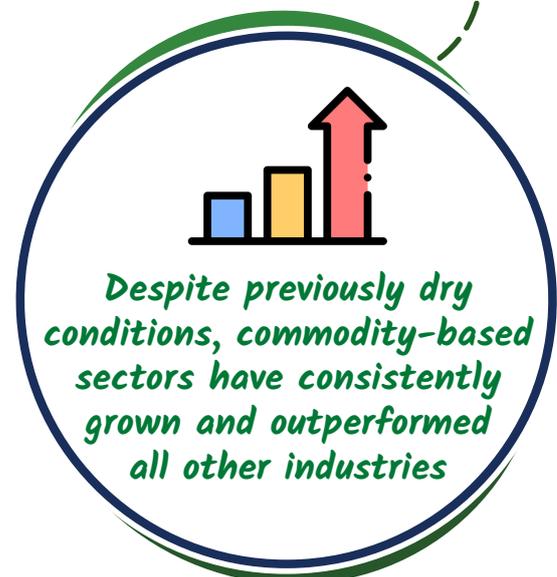
Industry

For industry, the NEJO region has experienced growth in all the economic metrics analysed. Value-added and output generated by the region grew the most, with lower growth measured for local expenditure and wages and salaries.

Despite the previously dry conditions, commodity-based sectors consistently out-perform all other industries for each metric and observe consistent growth over the period. However, other local sectors such as wholesale trade and transport, postal and warehousing have declined. Both local agriculture and mining sectors have increased their demand for imported goods and services from external wholesale trade and transport, postal and warehousing sectors, requiring further investigation.

A high level of local expenditure on intermediate goods and services proportionate to total output is indicative of well-developed local supply chains and that any expansion in this sector would typically deliver broad based benefits for the region's economy. Industry sectors with the highest local expenditure relative to their output include construction, electricity, gas, water and waste services, and agriculture. This observation is typical for construction and agriculture sectors that require goods and services that are costly to freight and can be serviced locally. At the 45-sector level, high local expenditure from electricity is supported by the competitive advantage of an established electricity distribution network in the region.

Exploring opportunities for diversification by building on existing and established industry sectors, along with their supporting sub-sectors, will support economic development and resilience. Additionally, the specialization of these LGAs places greater emphasis on the importance of regional cooperation and coordination of supply chains. One LGA with an established industry sector that is not established in another invites an opportunity for inter-regional trade in place of importing from metro areas.



Workforce

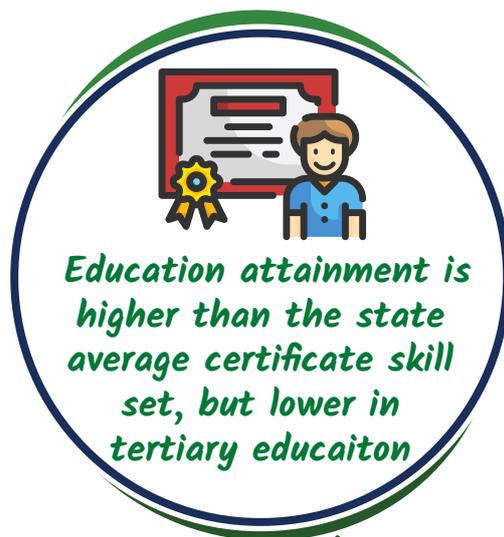
Employment in the NEJO region has grown between 2011 and 2016. Most of the jobs are observed in four sectors with large gains in employment occurring in the health care and social assistance sector, that are offset by falls in retail trade.

Workforce education attainment characteristics demonstrate a higher than state average certificate skill set but lower tertiary education. When viewed with workforce occupations, an abundance of labourers, machinery operators and drivers, and managers suggests certificate education suits the larger industry needs such as agriculture and mining. However, there are clear shortages of other occupations relative to the state average such as professionals and clerical and administrative workers that require higher education such as tertiary.

Workforce specialisation is also evident in each LGA. Armidale Regional supports the highest number of jobs within the region and the highest proportion of jobs in most industry sectors. Moree Plains supports the highest number of jobs in agriculture, Narrabri contains almost all of mining jobs in the region, whilst Inverell supports the largest share of jobs in both manufacturing and electricity, gas, water and waste services.

Much of the workforce that work in the region, also live in the region. However, many people still work or live in the region and choose to commute to or from surrounding LGAs. This represents a workforce that can be easily targeted for work and live in the region efforts.

In terms of industry performance and jobs, Armidale Regional LGA shows signs of being a much more diversified economy whilst also been the largest. Therefore, Armidale Regional has a different relationship with the other LGAs where they can develop their industry and workforce to complement the primacy of Armidale Regional. This is also the case with the importance of Tamworth Regional as the largest regional city in the New England region, but is not a member of the NEJO and therefore not discussed in this report.



Gaps

The NEJO region is a net exporter of goods and services, which leads to a net inflow of money into the region. Between 2016 and 2020, regional exports have grown larger in magnitude than regional imports despite the prevalence of drought and dry conditions throughout the region. However, only five industry sectors export more than they import, with most exports concentrated in agriculture and mining. The lack of diversity in exports from the commodity-based sectors exposes the region to natural disasters mega trends that are outside the control of the region.

Demand for goods and services by local industry sectors from the rest of Australia (domestic imports) have increased for most local industries and at a higher rate than local expenditure (and thus local sales). This indicates that elements of the growth in economic activity isn't being captured by local sectors and external supply sectors from the rest of Australia are benefiting. Economic growth can be captured by industry sectors reducing their imports and buying from local business which will increase the economy's local expenditure metric.

- Livestock, grains and other agriculture represents 16.7% of total local demand for imported goods and services, or 86.4% of the total agriculture industry sector's imports to NEJO region.
- Supporting new or existing business to supply what this sub-sector already demands will replace regional imports with local supply and increase local expenditure and the local sales of an associated local industry sector.

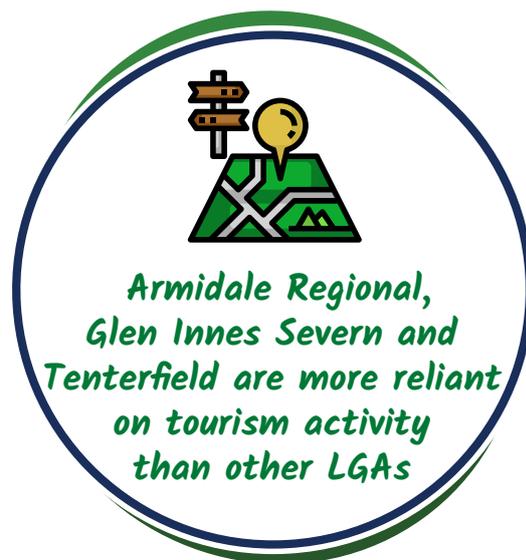


Tourism

Tourism activity is important for the NEJO region workforce as it is the 5th highest supporting sector for jobs, but it is less important for total revenue ranking 11th in terms of highest contributors to economic output. Output attributable to tourism fell between 2016 and 2020 which coincides with the impacts felt by drought, bushfire, and early period of the pandemic analysed in the trends section.

Most industry sectors observed a decline in output generated by the visitor economy. Each industry sector should be viewed separately when considering planning for the visitor economy. Industry sectors such as accommodation and food services support most of the tourist activity, but it also has the highest reliance of all industry sectors. Other sectors such as arts and recreation services contribute a lower proportion of regional tourist-related output but is heavily reliant as a sector.

Output attributable to tourism is highest for Armidale Regional, which also contributes the highest proportion of output from visitors to the NEJO region. Glen Innes Severn and Tenterfield are more reliant on tourism activity than other LGAs in the NEJO region except for Armidale Regional. However due to their smaller economies, relative to Armidale Regional, both Glenn Innes Severn and Tenterfield make smaller contributions to the regional total.



Competitive Advantages

The top 5 industry sub-sectors identified as key propulsive sectors support most of the employment, regional exports, value-added, and local expenditure. Two notable exemptions to the five key compulsive sectors include retail trade supporting large employment and property services generating high value-added. As these key propulsive sectors grow, the economy will share more of the prosperity generated by these sectors. Similarly, if these sectors decline, much of the economy will likely follow. It is important that future economic development planning supports both the key propulsive sectors plus their supportive sectors.

Dominant commodity-based sectors in agriculture and mining complement the development of the Inland Rail. LGAs along the Inland Rail will have access to better land planning and development conditions from the SAPs to build industry sectors aligned with the federal and state governments priorities. This investment will provide greater market access for commodity-based sectors, improve the potential for exports, and develop industry that would not normally have occurred.

The region is also planned for a range of differing renewable energy and associated infrastructure from the REZ. This will create new industry, see investment and business grow, along with providing meaningful jobs for the workforce that could not have normally occurred from market conditions.

Finally, UNE offers unique opportunity for R&D and commercially led research that benefit both the education sector, workforce training, and industry development.



2.2 Drought, Bushfire, and Pandemic Period – Trends

At a time when Australia was facing extreme weather events, the country suffered further impacts when COVID-19 entered the country in early 2020. A series of natural events, including below average rainfall and drought from 2017 to 2019, widespread severe bushfires in the summer of 2019/2020 and the presence of COVID-19 caused devastating financial and social impacts on individuals, businesses, and local communities.

Observing the series of weather and health events over the 2016 to 2021 period, we can see the wide range of impacts that have been felt by all Australians. Businesses have experienced unprecedented changes to trading conditions whilst the workforce learn to face the changing dynamic of their skills base in the new economy.

Understanding the impact that natural disasters have on the region is complex to analyse. Time series data on varying economic indicators is aimed to shed light on the period that has seen the NEJO region face devastating drought that led into the worst bushfire season in living memory, followed by an ongoing global pandemic that has impacted every industry sector.

2.2.1 Timeline

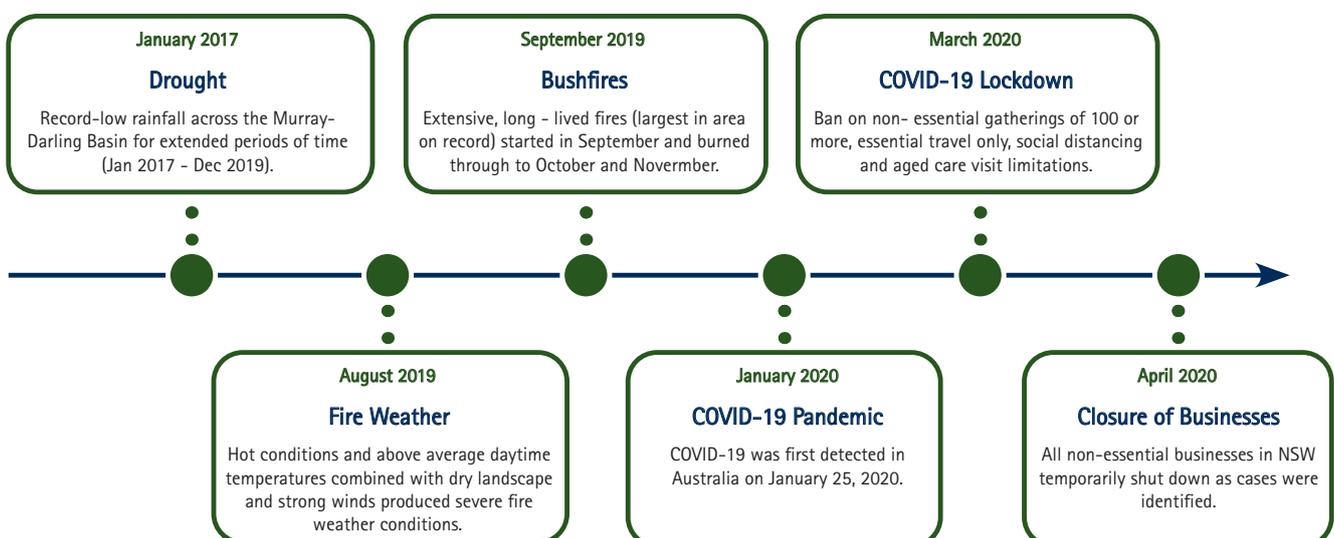
After a particularly wet winter and spring in 2016, conditions became dry in 2017 with rainfall in the Murray Darling Basin reaching record low averages in 2017, 2018 and 2019. The three years from January 2017 to December 2019 were the driest on record for any 36-month period when averaged over the Murray-Darling Basin and New South Wales¹⁷.

Of all the climate challenges to affect Australia, drought is one of the most feared and costly. This is particularly evident for the NEJO region that has an economy highly reliant on agriculture production and related industry sectors such as transport, wholesale, and retail. All three groups of business, workforce, and the community feel the force of drought conditions.

By the middle to end of winter of 2019, the extremely dry climate created the highest fire weather danger (as measured by the Forest Fire Danger Index) in recorded history. Hot conditions further combined with the dry landscape and strong winds created the dangerous bushfires that lasted between October 2019 before ending towards March in 2020.

As bushfires were a focus of the region in early 2020, COVID-19 was first detected in Melbourne on January 25, and on the same day a further two cases were detected in New South Wales. The COVID-19 pandemic saw the closure of Australian borders, business disruption across all states and social distancing measures were put into place to contain the spread.

Figure 2-21 Timeline of Drought, Bushfire and Pandemic in NSW, 2017 to 2020



¹⁷ Australian Government Bureau of Statistics, Historical Droughts

2.2.2 Gross Regional Product

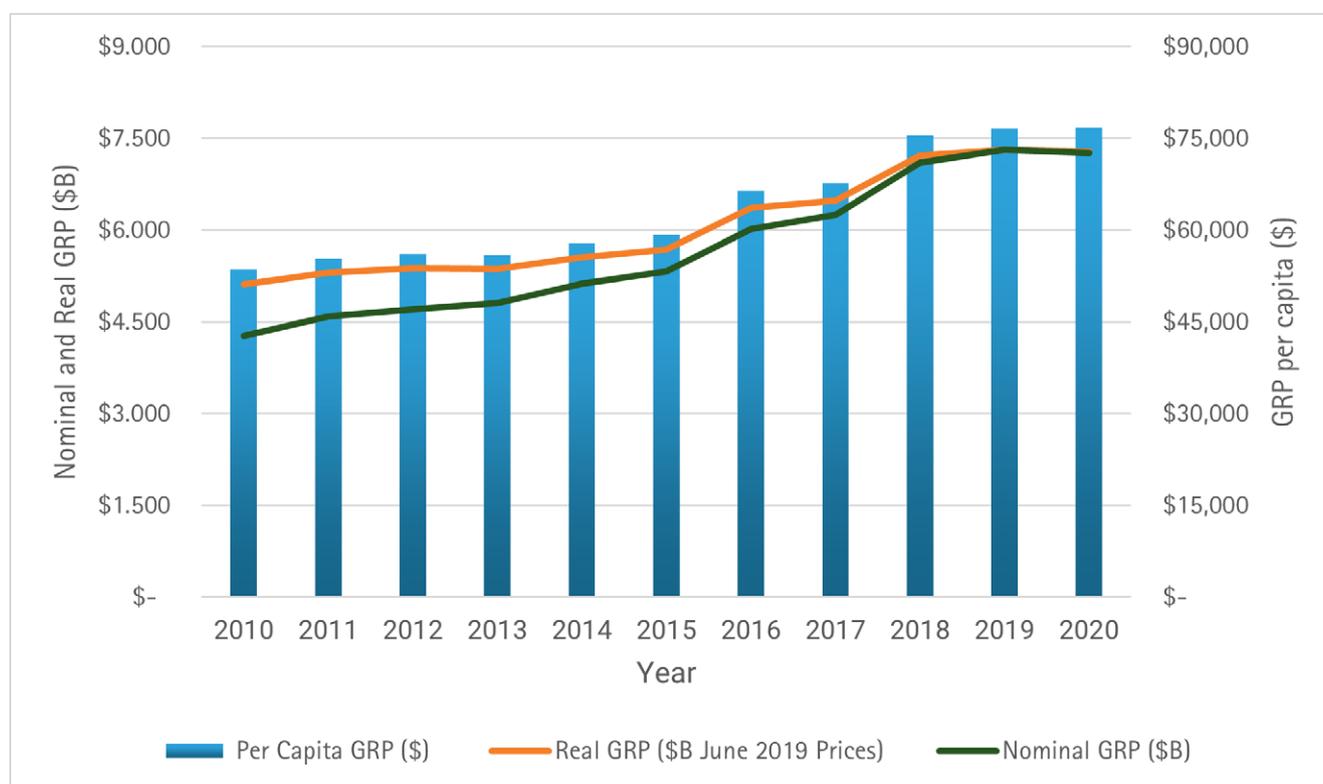
Gross Regional Product (GRP) is the total value of final goods and services produced across the NEJO region over the period of one year. This includes consumption by households and governments, changes to assets and net exports. GRP can be measured by adding up all forms of final expenditure, including:

- Consumption by households
- Consumption by governments
- Additions or increases to assets (minus disposals)
- Exports (minus imports)

Using the Expenditure method of estimating GRP, the NEJO region's GRP for 2020 was \$7.3 billion (\$7.6 billion, including Gwydir Shire. This represents 53.5% of the New England Region GRP and 1.2% of NSW's GRP. Overall, the NEJO region has experienced growth in GRP since 2010 with real per capita GRP increasing from \$53,566 in 2010 to \$76,125 in 2020.



Figure 2-22 GRP Trends, NEJO region, 2010 to 2020

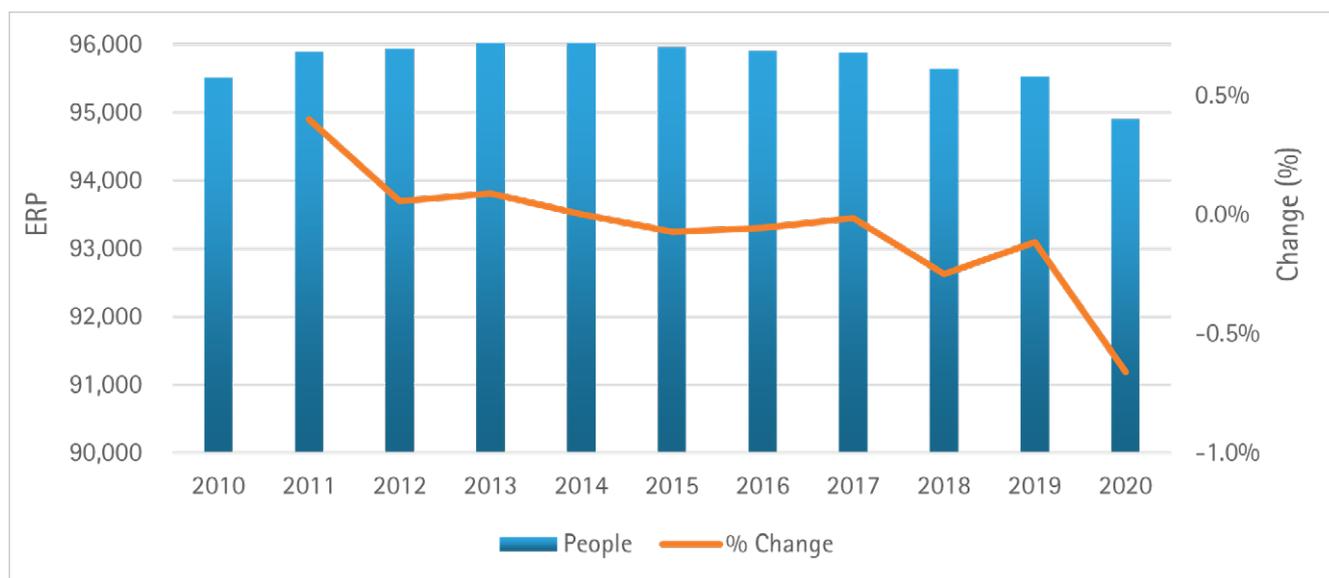


2.2.3 Estimated Residential Population

The Estimated Resident Population (ERP) of the NEJO region as of June 2020 was 94,897 people. This represents a decline of 607 people from June 2010, a decline of 0.6% over the period, or a Compounded Annual Growth Rate (CAGR) of -0.06%. This change is the result of population growth from 2010 to a peak in 2014 and then continual decline thereafter.

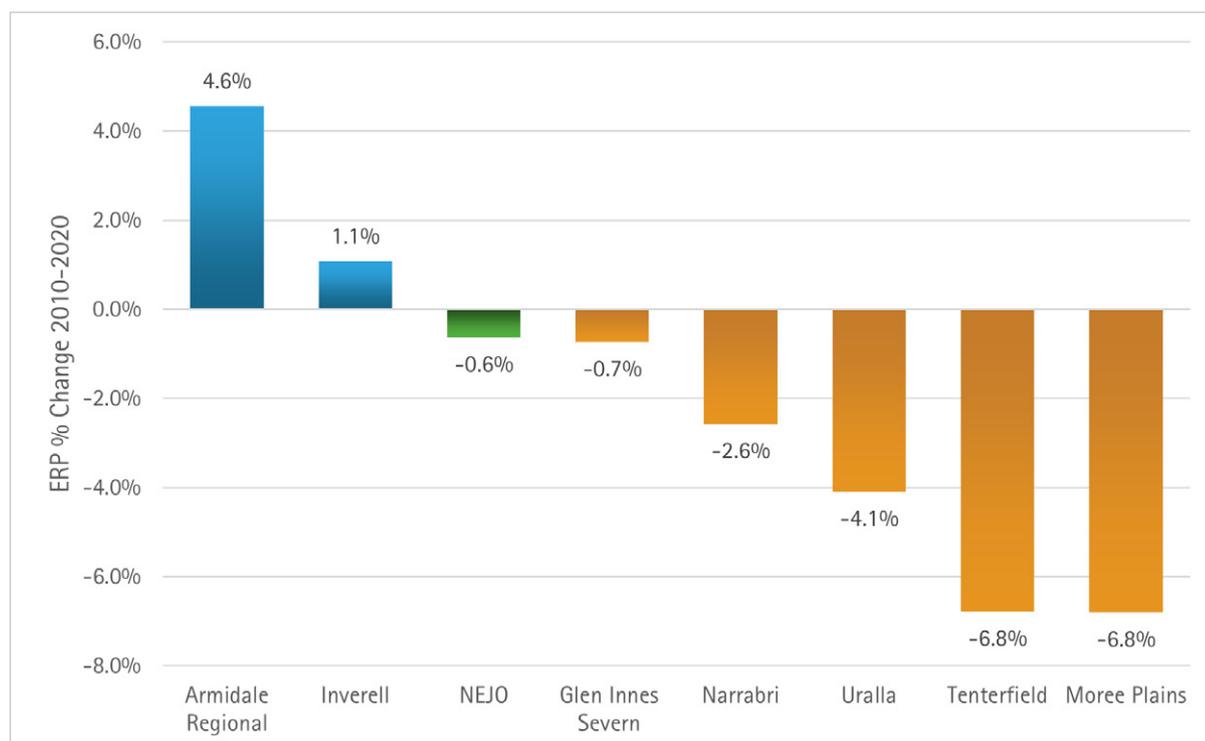


Figure 2-23 ERP Trends, NEJO Region, 2010 to 2020



Each LGA within the NEJO region experienced differing changes to their population. Armidale Regional observed the highest growth rate of 4.6% (CAGR 0.4%), with a positive change being observed each year except for 2019. Inverell also experienced growth over the same period of 1.1% or 0.1% annually. All other LGAs experienced a decline in ERP with the largest declines observed in Moree Plains and Tenterfield, both experiencing a fall of 6.8% over the period, or 0.6% annually.

Figure 2-24 ERP Trends per LGA, NEJO Region

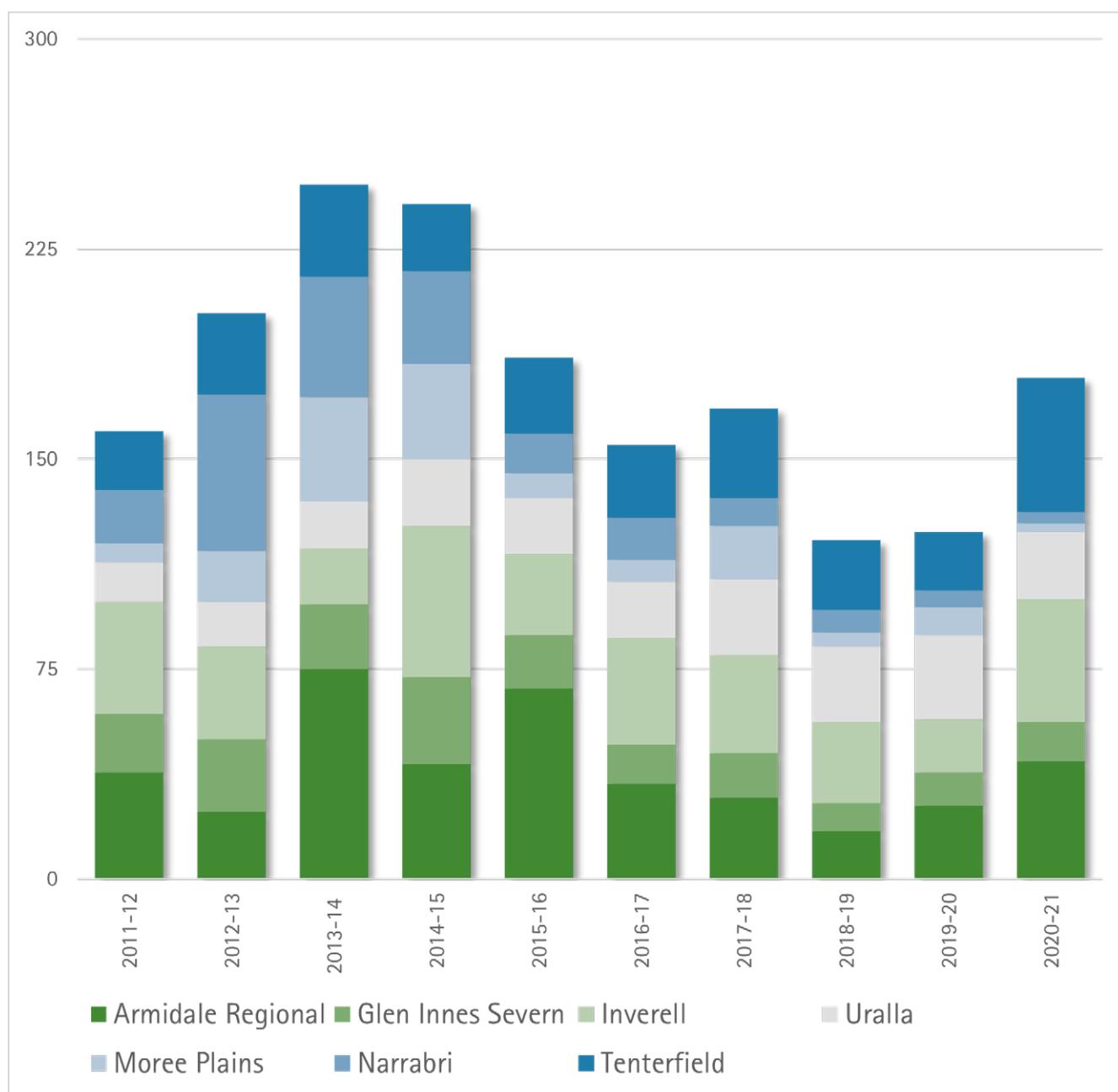


2.2.4 Building Approvals Trends

Building approvals data is a key indicator of the general level of residential development, economic activity, and investment in a region.

The total number of new dwelling approvals in the NEJO region during the 2020–21 financial year was 193, consisting of 179 new houses and 14 other dwellings. Dwelling approvals reached a peak of 287 in the 2014–15 financial year, comprising 241 new houses and 46 new other dwellings. Dwelling approvals reached the lowest point in the past decade of 131 in 2018–19.

Figure 2-25 Building Approvals (New Houses) by LGA, 2011-12 to 2020-21



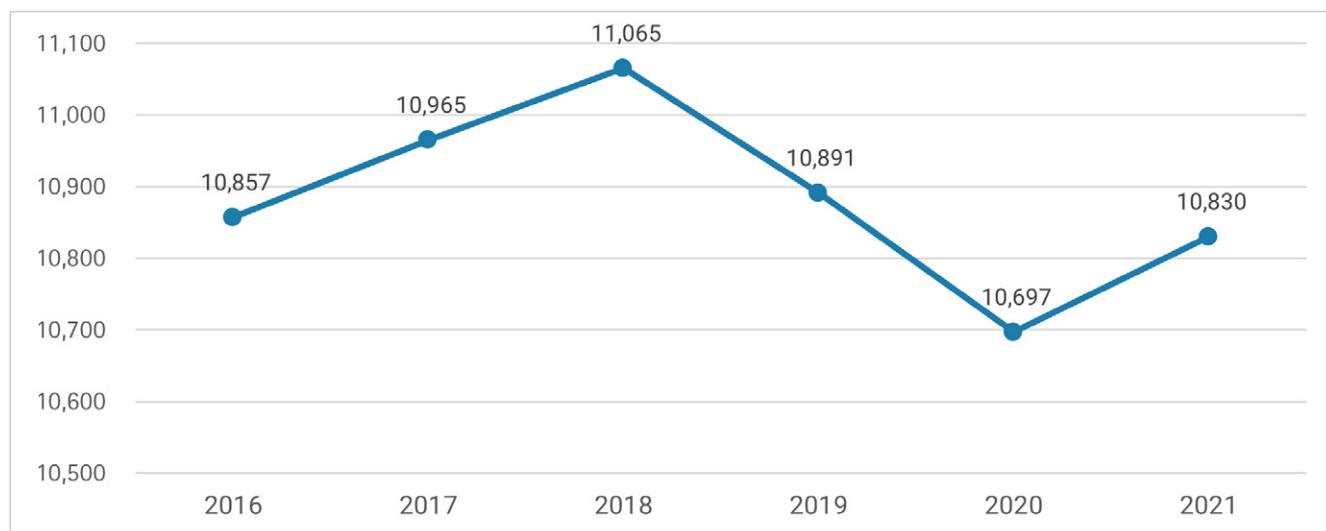
Armidale Regional experienced the largest number of new house approvals between 2011-12 to 2020-21 period, closely followed by Inverell. Over the 2020-21 financial year, the majority of new houses were approved for Tenterfield (48), Inverell (44) and Armidale Regional (42).

2.2.5 Business Counts Trends

The total number of active businesses in the NEJO region over the period between 2016 and 2021 reached a peak of 11,065 in 2018. Following the peak, total businesses dropped by 235 to 10,830 in 2021, with a consistent drop in active businesses across all LGAs in the NEJO region.

Business counts in the agriculture sector increased over the period by 3.3% and grew consistently over the period except for a small decline in 2020. The largest fall in magnitude (-51.2%) occurred in financial and insurance services sector. Wholesale trade and transport, postal and warehousing saw only moderate decreases in business counts over the period at -5.8 and -5.9% respectively despite the large falls in economic metrics in sections 2.1.1 and 2.1.2.

Figure 2-26 Business Counts (Total) NEJO region, 2016 to 2021



Between 2016 and 2021, the number of total active business across LGAs in the NEJO region has remained relatively consistent, with notable increases in medium size (20-199 employees) businesses in Armidale Regional and Narrabri.

In 2021, Armidale Regional and Moree Plains together contributed 42.9% of total active businesses in the NEJO region, with most of those new business (61.0% and 63.1% respectively) being non-employing.



2.2.6 COVID-19 Impacts

Travel restrictions and other social lockdown measures associated with controlling the COVID-19 pandemic are estimated to result in lower levels of all economic metrics across the LGAs that make up the NEJO Region. These impacts are felt after the black summer bushfires between 2019 and 2020 that followed from years of drought and dry conditions.

Output Impacts

At the peak of the negative downturn in May 2020, output in the NEJO region declined by -5.7% (see Figure 2-27). Since May 2020, monthly output in the NEJO region has continued to trend upwards, reaching a peak 2.0% increase just 12 months later in May 2021.

Early into the pandemic, Armidale Regional was the worst impacted with the largest decline of -6.9% observed in May 2020, followed by Glen Innes Severn (-6.0%). Armidale Regional and Inverell experienced the longest recovery period before showing signs of growth by January 2021.

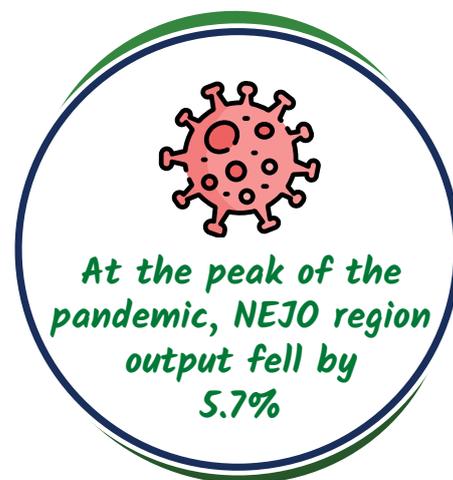
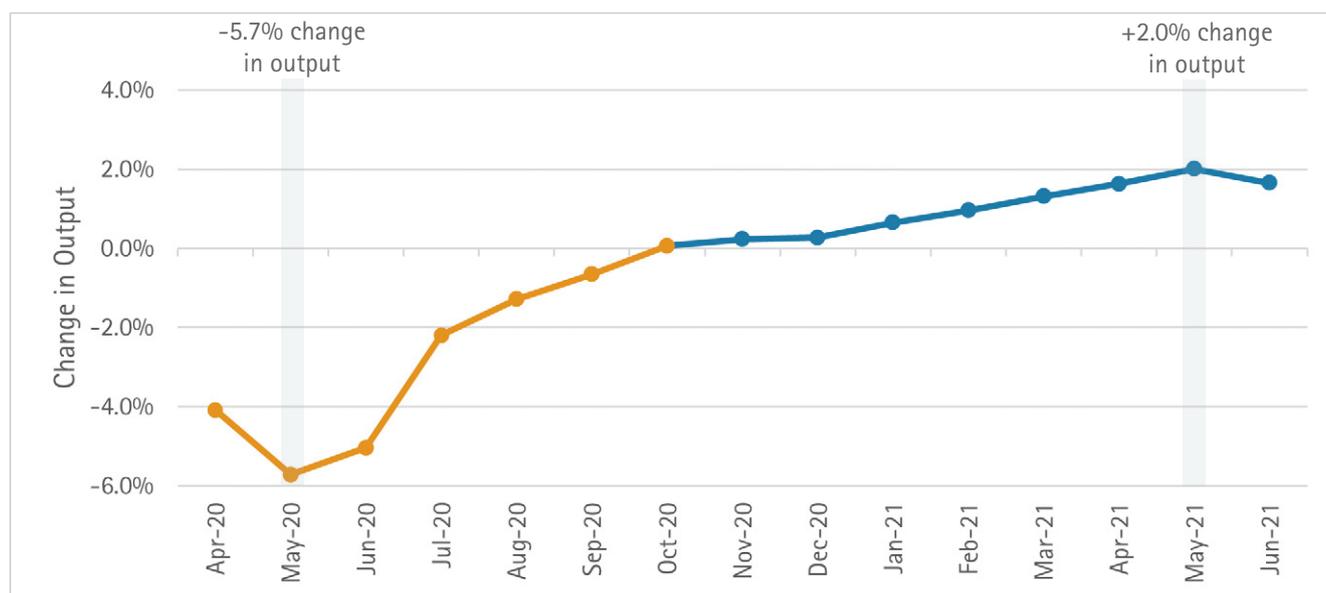


Figure 2-27 Percentage Change in Total Output in NEJO region, April 2020 to June 2021



Value Added Impacts

The NEJO region experienced the largest downturn of value-added in May 2020. At the lowest point of economic activity, value-added declined by -9.1% as illustrated in Figure 2-28. Proportionally, this is the largest drop of all economic indicators in this COVID-19 impacts section. Value-added slowly recovered in the NEJO region over the 12-month period to May 2021, at 3.5%.

In May 2020, Armidale Regional (-10.3%), Inverell (-10.1%) and Glen Innes Severn (-9.2%) experiencing the largest impacts. As of June 2021, Narrabri presents the highest increase in value-added of 3.7% relative to other LGAs in the NEJO region. Overall, the percentage increase of value-added across all LGAs in the region has increased consistently month by month between May 2020 and May 2021.

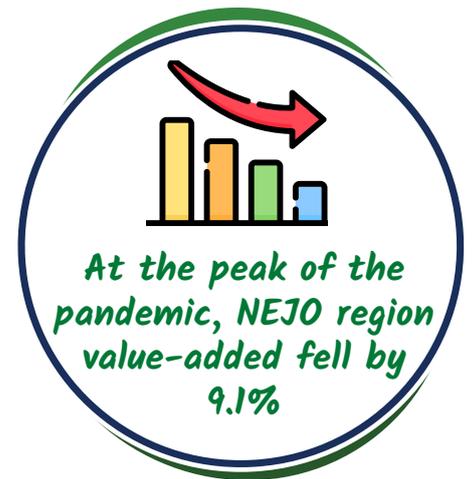
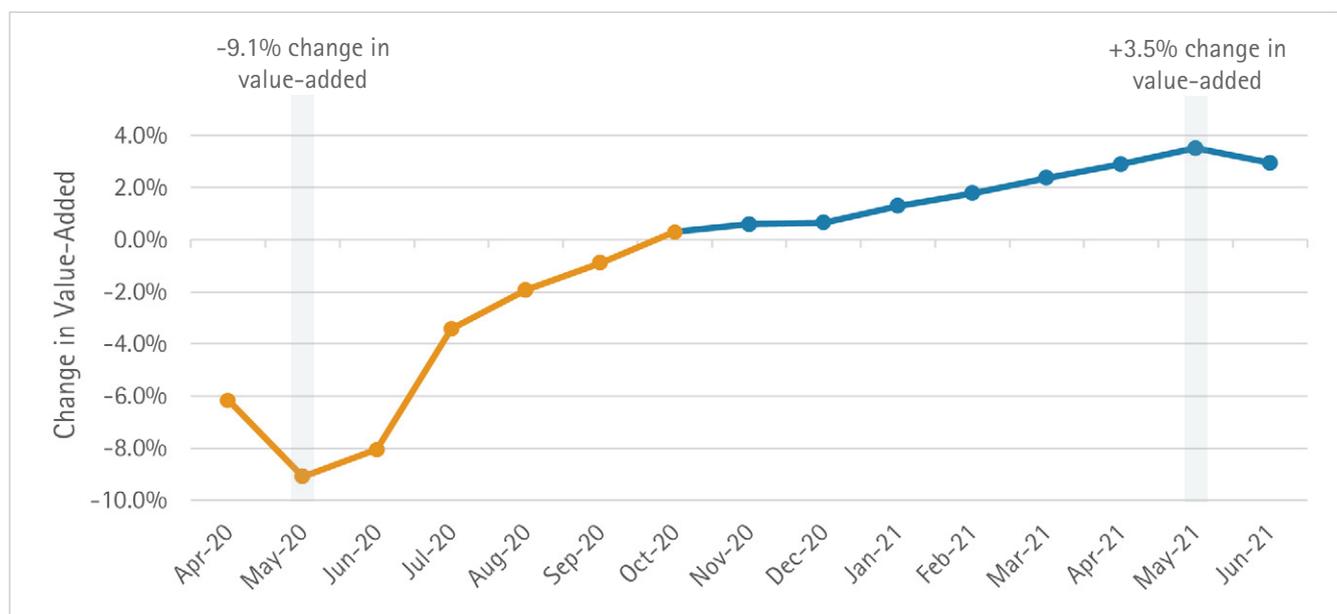


Figure 2-28 Change in Value-added in NEJO region, April 2020 to June 2021



Employment Impacts

Sharp declines in employment were observed as health measures were introduced by both State and Federal Governments. Employment in the NEJO region remained relatively consistent between April and June 2020 with the largest decline in May 2020 estimated at -3.2%. Growth in employment did not return until January 2021.

In May 2020, Armidale Regional (-3.9%), Inverell (-3.4%) and Glen Innes Severn (-3.4%) experienced the largest decline in employment in the NEJO region. As of June 2021, Narrabri achieved the greatest positive change in employment at 0.6%, likely due to growth in the mining industry sector that experienced lower level of impacts through the COVID-19 pandemic.

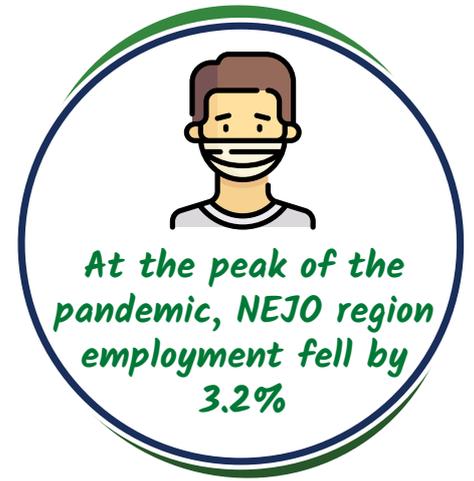
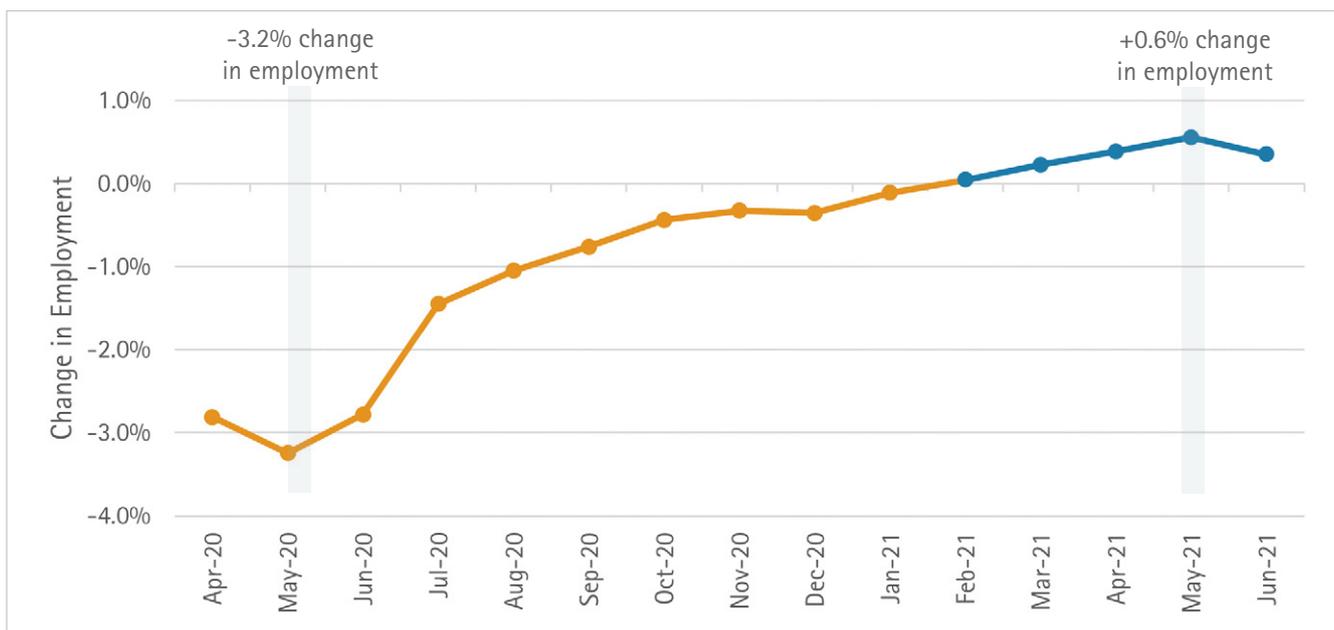
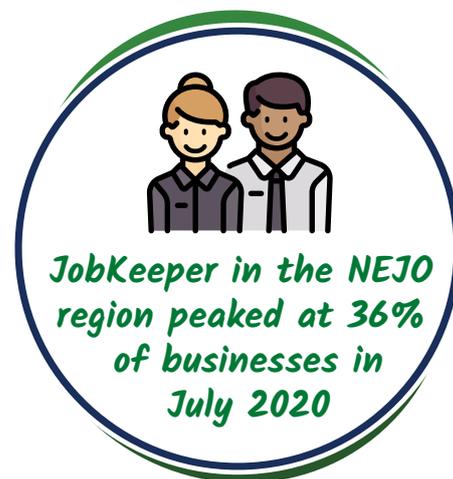


Figure 2-29 Change in Employment in NEJO region, April 2020 to June 2021



JobKeeper

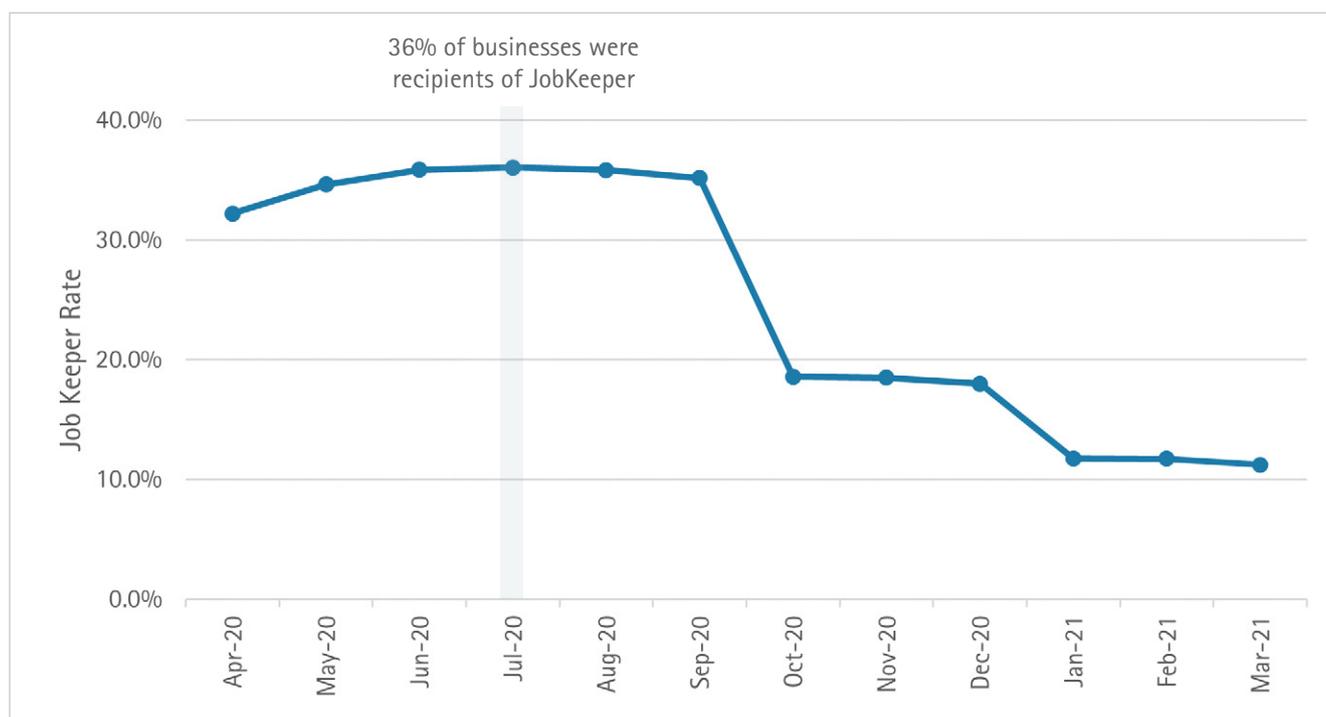
The Australian Government announced the JobKeeper initiative in March 2020 to keep Australians in jobs and support businesses affected by the significant economic impact of the COVID-19 pandemic. Businesses eligible for JobKeeper support payments must have experienced a decline in revenue of at least 30%. Higher levels of JobKeeper applications are a likely indicator of greater negative economic impacts from COVID-19.



The height of JobKeeper applications in the NEJO region occurred in July 2020, when it is estimated that 36.0% of local businesses applied for JobKeeper support. This indicates more than one third of businesses in the NEJO region experienced a loss in revenue of 30% or more. By September 2021 businesses in the NEJO region utilising JobKeeper support had fallen to an average of 11.2%.

At the peak of businesses receiving JobKeeper support payments in July 2020, the greatest impacts were observed in Glen Innes Severn with 41.8% of businesses experiencing a loss of revenue of 30% or more. This is followed closely by Armidale Regional with 37.6% of business receiving JobKeeper support.

Figure 2-30 Change in JobKeeper Support Rates in NEJO region, April 2020 to March 2021



JobSeeker

The JobSeeker financial assistance program was introduced by the Australian Government alongside the JobKeeper initiative. JobSeeker is for people aged between 22 years and Aged Pension age, who are looking for work and who qualify under income and asset tests. The number of JobSeeker recipients differs from JobKeeper by acting as an indicator of underemployment, unemployment, and general need for welfare.

The highest average uptake of JobSeeker support for the NEJO region was in the June quarter 2020 at 13.5% and continued into the September quarter 2020. The rates of JobSeeker support have remained higher than the pre-pandemic rate of 9.6% in the December quarter 2019.

By March 2021, the number of JobSeeker recipients dropped to 11.2% which is indicative of employment conditions improving. This is in line with non-essential businesses opening back up and adjustments to business operations (i.e., working from home, click and collect, density limits to non-essential businesses).

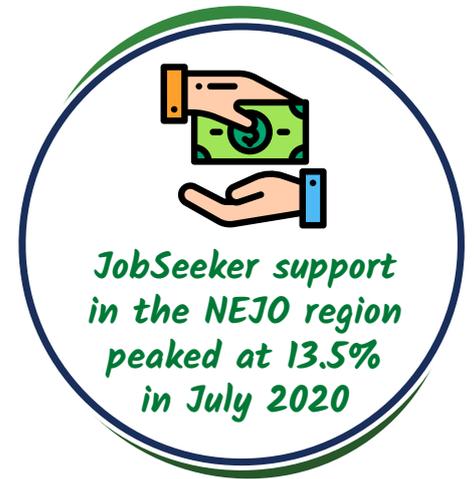
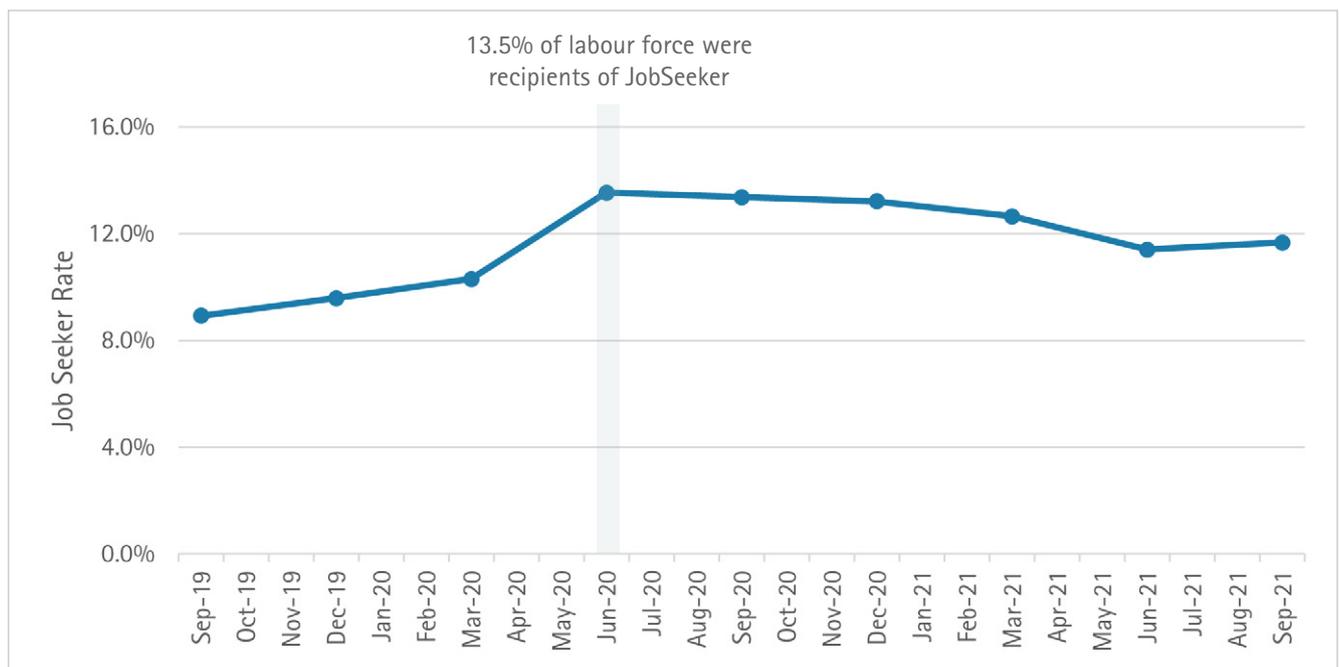


Figure 2-31 Change in JobSeeker Support Rates in NEJO region, September 2019 to 2021



2.2.7 Key considerations (drought, bushfire, and pandemic trends)

GRP has continued to grow during the disaster period, along with GRP per capita. However, ERP fell from 2015 into 2020 when the largest fall in ERP was observed for the region. Therefore, GRP per capita growth will be influenced by the lower population to some degree. Population growth is predominately concentrated in Armidale Regional with declines observed for all other LGAs except Inverell.

During the disaster period, changes in business activity can be observed. Business counts continued to climb during the drought but fell in 2019 and 2020. This indicates that the bushfire season and early into the pandemic (all else being equal) had a greater impact than the drought. Despite the dry conditions and dominant agriculture-based economy, business count activity continued to grow for this sector. The largest decline in business counts was observed in the 'Financial and Insurance Services' sector.

Value-added and output experienced the largest impacts during the onset of the pandemic early in 2020 but recovered before the year's end. This is also evident in the rate of JobKeeper support recipients being much higher than JobSeeker but falling away quickly. Business were the larger portion of the pandemic's impact on the economy in the short term but recovered quickly.

The workforce has been impacted by the disaster period differently to business. Employment and wages were impacted by a smaller proportion than output and value-added but took a much longer time to recover. Similarly, the workforce was facing pressures during the drought and bushfire season, as observed with the rates of JobSeeker recipients remaining above pre-pandemic levels. In combination, business seem to have been impacted hard by the pandemic but shows signs of faster recovery than observed for employees.

The NEJO region has experienced population decline. Of the seven LGAs in the region, only Armidale Regional and Inverell have experienced population growth between 2010 and 2020 with Armidale Regional achieving the highest growth rate. This population data, coupled with declining building approvals, long-standing high JobSeeker rates and longer employment rate recovery indicate that workers felt more of the long-term economic impact over a longer time, where business saw sharp declines followed by faster recovery.



Businesses were most of the pandemic impact in the short term but recovered quickly



Workers faced longer term negative economic impacts from the natural disasters than businesses



3

Literature Review: Future Disaster Resilience

The cumulative impact of a one-in-100-year drought, followed by a devastating six-month bushfire season that spanned across the nation, to be faced then with a global pandemic, has changed regional NSW. For the NEJO region's most prevalent sector, agriculture, activity endured the lowest rainfall and driest conditions in 120 years which placed immense pressure on regional communities facing water shortages, industry decline and workforce deterioration.

The past few years has highlighted the importance of planning for and mitigating risks posed by hazards and disasters.

A 'hazard' refers to the phenomenon (natural or human) that presents a risk of harm or damage to humans, while a 'disaster' refers to the event which has caused loss of human life, damage to property or loss of livelihood.

Action to limit the effects of natural disasters must be coupled with interventions to better prepare communities to understand hazards and respond to disasters. This section will analyse relevant previous work conducted on risks and threats faced by business, along with planning and other strategies that support the identification of threats and associated mitigation practices.

3.1 Business Risk and Threat Mitigation

This section will investigate current national and state approaches to assessing business risk and threat mitigation. The Commonwealth Government have established a risk reduction framework to support a whole-of-society approach to risk and threat mitigation. From there, the NSW Government developed a risk management framework that can help guide local governments, organisations, and communities to be proactive and responsive to disaster events. To support disaster planning, local-level organisations can engage in various actions that support proactive planning, reaction to an event, and recovery thereafter.

National Disaster Risk Reduction

As the climate continues to change, natural hazards are occurring at increasing scale whilst the frequency of disasters grows. This places essential services and infrastructure at risk, including power, water, and telecommunications. At a local level, these factors increase the cost of disaster recovery for governments, industry, business, and communities.

In 2018, The Australian Government, states and territories, local government, and key private sector representatives developed the National Disaster Risk Reduction (NDRR) framework¹⁹. The purpose of the NDRR is to create a whole-of-society guide to proactive disaster risk and threat mitigation to minimise loss.

This report found public spending on direct recovery from disasters is estimated at \$2.8 billion per year with indirect recovery costs borne by industry and households. Industry must invest in disaster risk and threat mitigation to limit the cost of future disaster impacts. Investment in risk reduction can:

- Avoid loss and suffering.
- Reduce unexpected future recovery costs.
- Unlock economic opportunities and social benefits.

Limiting the impact of disasters now and into the future requires a coordinated effort across and within many areas including land use planning, infrastructure, emergency management, social policy, industry, (agriculture, education, and health), community development, energy, and the environment. A focus is required to:

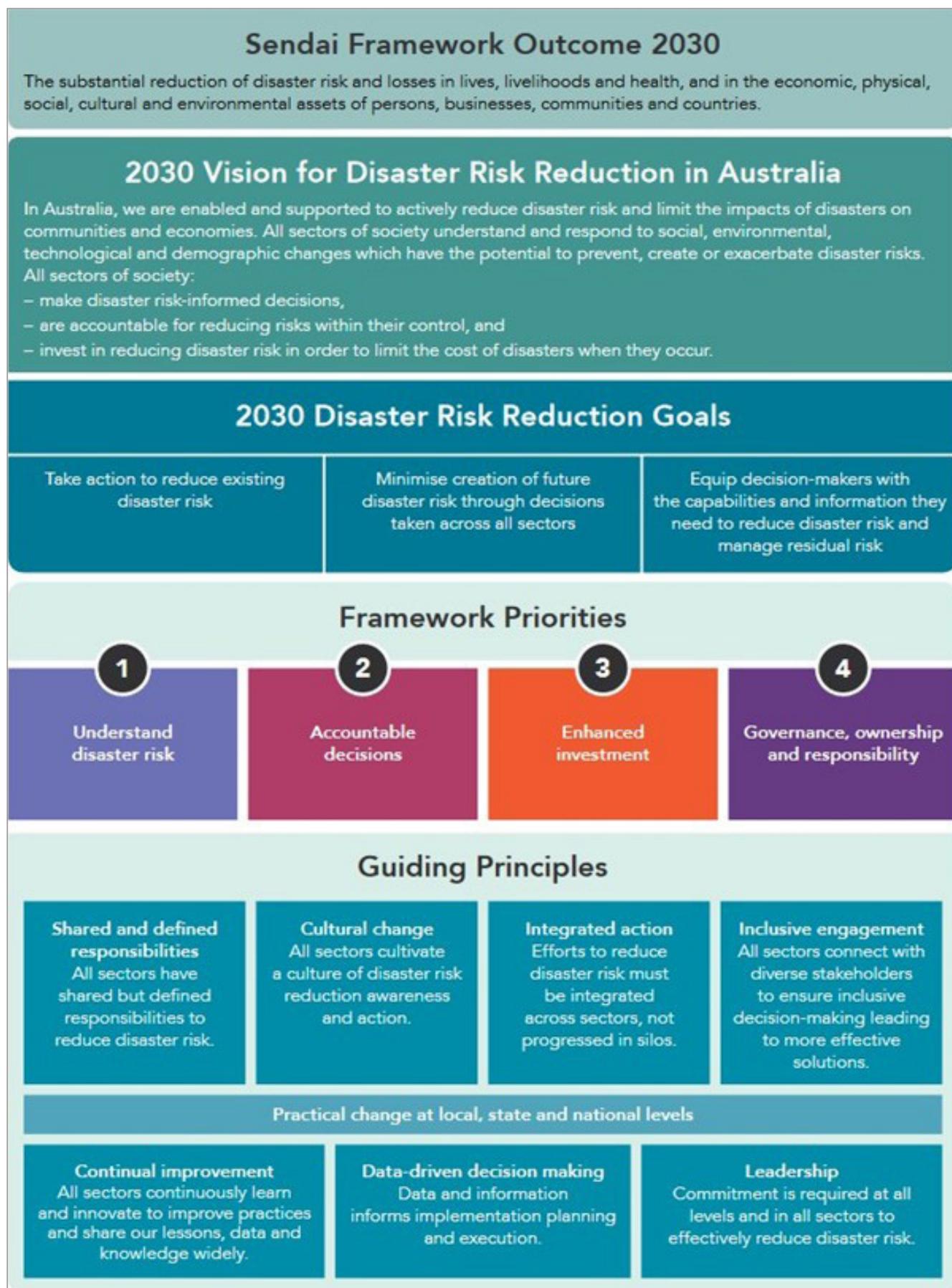
1. Establish financing and funding pathways to address existing high priority risks, and
2. Identify financing mechanisms for disaster risk reduction measures in planned projects.

With support from State and Federal Government, NEJO and local councils have an opportunity to leverage the availability of data, funding, and support to address high priority risks and allocate funding for disaster risk reduction planning. This includes coordinating local government investment and governance towards the priorities set in the NDRR framework.

¹⁸ NSW Government 2021, A 20-Year Economic Vision for Regional NSW

¹⁹ Commonwealth of Australia 2018, National Disaster Risk Reduction Framework

Figure 3-1 Sendai Framework Outcome 2030



Source: Commonwealth of Australia 2018, National Disaster Risk Reduction Framework

State Emergency Risk Management

The NSW Government's Emergency Risk Management Framework (ERM), commissioned in 2017, was developed to "build an integrated emergency risk management system that informs decision making and the allocation of resources to proactively manage current and future emergency risks and strengthen emergency management capability and capacity"²⁰. Risk is managed by the reduction in the frequency or consequence of an event through prevention measures, preparation, and provision for response and recovery.

The ERM framework provides a structure for the public and private sector to support investment and is prioritised based on the best available information for risks and threats in NSW. In particular, the framework establishes guiding principles that help to proactively manage current and future emergency risks and strengthen emergency management capability. However, there is little reference to economic risk and threat mitigation in the framework.

Prior to the NSW Government's ERM, PricewaterhouseCoopers (PwC) worked closely with the Victorian Bushfire Reconstruction and Recovery Authority (VBRRA) following the 2009 Victorian "Black Saturday" natural disaster to establish a report into the findings into the Black Saturday Bushfires²¹. The following recovery framework is outlined for the short, medium-, and long-term planning.

Figure 3-2 A Model for Disaster Recovery Management, PwC, 2010

		Immediate post-disaster (short-term)	Plan (medium-term)	Recover (long-term)
Recovery framework	Community	<ul style="list-style-type: none"> Impact assessment Set up community shelters and contact hubs Conduct initial community meetings 	<ul style="list-style-type: none"> Establish Community Recovery Committees Assign committee leaders Community meetings to provide information and understand needs for recovery and rebuild Community meetings and facilitation to identify and prioritise rebuild needs Conduct/facilitate community events (eg. entertainment, etc.) 	<ul style="list-style-type: none"> Ongoing community recovery and planning meetings
	People	<ul style="list-style-type: none"> Impact assessment Assign case managers Assist with emergency food, health and shelter arrangements Assist with short-term welfare support, including counselling 	<ul style="list-style-type: none"> Case management and welfare services Provide material aid via donations Facilitate financial support via financial support packages, insurance and donations fund Plan programs to support recovery of individuals and families 	<ul style="list-style-type: none"> Ongoing case management and welfare services Implement people programs as per Master Recovery Plan
	Environment	<ul style="list-style-type: none"> Impact assessment Remove immediate dangers (eg. trees, erosion, etc.) Assist/facilitate authorities responsible for roads, power, telecommunications, water, gas, etc. Assist with livestock and wildlife issues 	<ul style="list-style-type: none"> Plan programs for environmental recovery For example: <ul style="list-style-type: none"> Parks & wildlife Erosion control Water management 	<ul style="list-style-type: none"> Implement environment programs as per Master Recovery Plan
	Economic	<ul style="list-style-type: none"> Impact assessment 	<ul style="list-style-type: none"> Plan economic recovery programs For example: <ul style="list-style-type: none"> Local business Tourism Re-skilling Agriculture and farming 	<ul style="list-style-type: none"> Implement economic programs as per Master Recovery Plan
	Reconstruction	<ul style="list-style-type: none"> Impact assessment Clean up dangerous sites 	<ul style="list-style-type: none"> Implement medium-term programs for: <ul style="list-style-type: none"> Temporary accommodation Property cleanup Confirm building regulations and any revisions Assess skills and materials available via donations Plan construction programs for community facilities, local government services, schools, infrastructure, etc. 	<ul style="list-style-type: none"> Implement reconstruction programs as per Master Recovery Plan

²⁰ NSW Department of Justice, Office of Emergency Management 2017, NSW Emergency Risk Management Framework

²¹ Pricewaterhouse Coopers 2010, Effective Disaster Recovery: What lessons can we learn from Australia's Black Saturday Bushfires?

Four areas of economic focus in times of disaster were outlined including individuals, business, infrastructure, and government. The priority outcome set for the model is to ensure that individuals and organisations in and around the disaster-affected area are supported in a way that minimises both direct loss and subsequent economic loss. NEJO and member local governments can look to implement this recovery framework when developing both individual and regional responses to disasters. In particular, the role of regional data collection and technology is a key action/task to assist with making informed decisions around disaster planning, response, and recovery.



At a Local-Level - Monitoring and Data Collection

A background paper presented at a United Nations conference on disaster risk reduction stated how governments at all levels need to make informed decisions based on sound economic analysis, to ensure risk reduction investments yield the highest net benefit²². To do so, ongoing data collection to build a strong evidence base at a local level is needed to support both short-term risk response and longer-term threat mitigation.

Monitoring post-disaster impacts is a key part in risk assessment and planning but it is often difficult to collect accurate, reliable, and timely data following a disaster. Most data collection for disaster recovery purposes relates to potential risks and hazards. However, there is a need to capture key economic data to monitor performance on business, the workforce, and the community post-disaster to distribute resources effectively.

To support and inform disaster management practices in Australia, the Australian Disaster Resilience Knowledge Hub (AIDRKH) was developed by the Australian Government as an open-source platform that supports and informs policy, planning and decision making in disaster resilience²³. NEJO and Local Governments have an opportunity to analyse disaster event data in terms of trends and geography to support risk management and threat mitigation. Also, place-based action plans and frameworks, in conjunction with national and state planning frameworks, become evidence-based and more informed.



Developing a long-term impact management framework will assist NEJO to monitor business and industry activity after a disaster or event which is valuable in measuring recovery efforts. Doing so is critical to better manage current risks, prepare for uncertain future, and reduce impacts and costs to both industry and communities. The framework will also enable member Councils to identify potential issues across industries and allow for targeted support and assistance for recovery and future emergency management.

An example of a local government-driven initiative is evident from the South Australian Zone Emergency Management Committees program. This initiative built local capacity for strategic emergency risk management and planning through regional zone emergency management committees. These committees are chaired by local government and include representatives from community services to better manage local risks and harness capabilities²⁴.

²² United Nations International Strategy for Disaster Reduction (UNISDR) (2015) Economic Aspects of DRR: Background Document for Working Session (UN World Conference on Disaster Risk Reduction March 2015, Sendai, Japan)

²³ Improving Disaster Data Systems to Inform Disaster Risk Reduction and Resilience Building in Australia: A Comparison of Databases

²⁴ Deloitte Access Economics 2017, Building resilience to natural disasters in our states and territories

3.2 Business Resilience Strategies

What is resilience?

Resilience is the capacity to adapt to rapid change and new circumstances. For a local economy, a critical aspect of overall community resilience is ensuring employment is disrupted as little as possible. Keeping local and regional business and industry in operation after an event is critical in supporting healthy and resilient communities and economic activity. If goods and services can flow through the economy with little interruption during economic shocks, local business are able to remain open, business and consumer demand is met, and local employment is maintained.

What is affected?

Economic costs of natural disasters comprise of²⁴:

- Direct tangible costs for emergency response efforts and repairs to property and infrastructure.
- Indirect tangible costs occur when businesses supply chains are disrupted, and network outages occur.
- Intangible costs include impacts on health and wellbeing and negative influences on employment and community connectedness.

More specifically, the quantified economic and social costs of natural disasters in Australia are summarised as:

- Asset damage on residential and commercial property.
- Financial costs on asset damage, clean-up costs, reduced economic activity and other emergency response costs.
- Social costs from injury, fatality, illness and impacts to mental health.

What needs to be managed?

Underinvestment in risk and threat mitigation, that would lessen the impact of disasters, leads to over-investment in post-disaster reconstruction which leads to the higher cost of recovery²⁵. Investing in resilience at a local level can lessen or prevent losses to communities, business, and individuals. Targeted investments in both physical assets and communities will reduce the cost of natural disaster impacts, and include:

- Physical measures that influence land use, infrastructure, and building development that affect where people live and operate, along with the exposure of the assets they depend on.
- Community measures including awareness campaigns, place-based preparedness programs targeted to withstanding, adaption and response to disasters when they occur.

Roles

Local government and the private sector continue to play a critical role in reducing and managing disaster risks.

As major local asset owners for infrastructure that supports resilience and recovery, resilience should be embedded in infrastructure planning that includes location, design, and construction. However, funding is an ongoing challenge for councils with minimal direct influence over their budgets. Co-funding from State and Federal governments, along with partnerships with private sector is important.



²⁵ Productivity Commission 2014, From Deloitte Access Economics 2021

The private sector plays an important role in supporting resilience and community protection. The private sector manages other essential infrastructure assets, such as telecommunications and electricity, which underpin response and recovery agility. By working with the private sector to embed resilience planning, governments at all levels can holistically mitigate disaster risk and make communities safer.

Investing in resilient infrastructure provides a key opportunity to build physical resilience into local communities. Examples include Launceston City Council in Tasmania upgrading its levee system, Warragamba dam upgrade, and land swap agreements with Lockyer Valley Regional Council with residents in flash flooding areas. Community resilience measures that support the community's awareness of disaster impacts include the Victorian Community Fireguard program and the South Australian Community Fire Safe initiative²⁶.

Communication and Stakeholder Engagement

Investing in infrastructure and planning is equally as important as building resilience within industry, business, and the community. Resilient industry and business strengthen the local economy for both growth and response to disaster. Most importantly, having resilient industries and businesses enable displaced workers to return to work sooner. This ongoing effort is only possible with stakeholder engagement, whereby business and industry contribute to the government effort to better enable the economy and workforce to normalise post-disaster event.

Often, activities that build community resilience are low cost and are likely to continue gaining benefits over the longer-term as awareness and behaviour adjust and become normal practice²⁶. Establishing and supporting key contacts with local business with regular communication and clearly defined roles, will assist in efficient identification of where assistance should be focussed in times of disaster.

Managing Resilience

Managing the complexity of delivering an ongoing resilient industry and community is important. In instances where there is a current disaster, the management of immediate recovery efforts is at the forefront of planning and action. Responding to the crisis at hand is initially important but understanding the situation and developing a process to respond to future crisis effectively and efficiently builds resilience.

Disaster management at the regional level, particularly for disaster and crisis that is specific to the region, will ultimately better position a region to respond to future issues. This is achievable through the creation of a regional disaster response committee that has the support of member Councils of the NEJO.



²⁶ Deloitte Access Economics 2017, Building Resilience to Natural Disasters in our States and Territories.

3.3 Growth Inhibitors and Opportunities

There are several challenges faced by small areas because of natural disaster that have substantial impacts on various measures of the economy. These key inhibitors are felt by local businesses and the workforce, which if recognised and addressed, will better position the economy to respond to future events and economic losses.

Investment in local resilience provides two broad benefits. The reduction in future natural disaster costs and the faster recovery of local communities and economies will reduce the losses that would have incurred without resilience planning²⁶.

Inhibitors

Natural hazards and disasters are becoming more frequent and more intense, driven by Australia's changing climate. Natural disasters are expected to cost Australia \$1.2 trillion in present value terms over the next forty years²⁷. The NSW Government expects the New England region to continually experienced heatwaves, drought, fire risk, flooding events and increasing temperatures²⁸. Varying weather into the longer term will dampen economic activity without sufficient risk identification and threat mitigation that makes local communities, industry, and supply chains more resilient to future disasters.

Not all industry sectors respond the same to natural disasters. Capital-intensive sectors, such as 'Mining' that rely more in equipment than workers will see profit margin impacts from rising insurance and replacement costs. Labour-intensive sectors will face impacts on their workforce, which will directly impact their operation and the broader supply chain immediately, along with impacting the community. This will be particularly evident in sectors with higher rates of casual workers who would look for other employment opportunities quickly when they experience job loss in times of economic downturn.

In conjunction to natural disasters, global-scale forces are having a similar effect on the New England economy²⁹:

- Global economic persuasion is shifting from 'the West' to Asia which will see increasing global trade competition and tension, along with changing global supply chains.
- Urbanisation of metro and regional centres displaces the local workforce, increasing the challenges of attracting skilled workers.
- Demographic and social change is occurring with shifts in international migration, domestic migration, and fertility rates.
- Digital disruption improves industry competition and workforce attraction but also acts as a deflationary action and can hinder local industry sectors that are not able to adapt to and adopt new technology.



²⁷ Deloitte Access Economics 2021, Special report: Update to the economic costs of natural disasters in Australia

²⁸ NSW Government Department of Planning and Environment 2017, New England Northwest Regional Plan

²⁹ Deloitte 2020, Human inside: How capabilities can unleash business performance

At a local level, business management practices and systems shape the work culture and environment with rigid processes and business models becoming more of an inhibitor to attracting a talented and skilled workforce to the region³⁰. Business must redefine their workplace for value creation in place of traditional methods to create an environment that harnesses their workforce capabilities and enables the business to remain competitive where tight labour markets exist.

Business benefits from increased workforce capabilities by:

- Enabling new value creation by supporting workers that identify unseen problems and opportunities and address them.
- Continuously adapt and re-skill the workforce where specific skills become obsolete quickly.
- Access better talent and improve workforce motivation with meaningful and satisfying work.



Opportunities

Growth for business can occur with investment into processes that improve efficiency and productivity, strengthens local supply chains, and expanding export potential. Similarly, business that can attract and retain skilled workers will be better able to succeed with growth initiatives. As business invests in capital and labour, the flow-on effects of those investments will be felt throughout industry, the workforce, and the community.

Redeploying existing workers can also present an opportunity. The ability to identify at-risk workers from natural disasters and how they can be re-utilised in the workforce will support the post-disaster recovery effort of the local economy and minimise loss of workers. Similarly, as some of the workforce gets displaced from one sector, an opportunity to re-skill them quickly into another similar sector is possible.

Executives consider several factors as the most important to drive post-pandemic business recovery³¹. Smaller businesses in the NEJO region can explore, or recognise as future challenges, these factors which include:

- A more skilled and rejuvenated workforce, with a focus on talent with technical skills and supporting burned-out employees.
- Supply chain agility to meet demand and policy shocks to reduce supply chain disruptions and maintain consumer demand.
- Environmental, social, and governance (ESG) factors to grow trust and transparency, in addition to financial performance.
- Preparation for potential tax-increasing legislation.

Embedding sustainability into business strategy has been shown to support business growth and resilience by enabling business to develop long-term competitive advantage through³²:

- Identifying new sources of growth and innovation.
- Investing in brand differentiation and consumer loyalty.
- Identifying cost efficiencies from reduced waste and resource consumption.
- Investing in talent attraction and retention.
- Protecting against reputational risks and loss of social licence to operate.
- Investing in strategies that manage operational risks and disrupted macro-economic, social, and environmental factors.

³⁰ Deloitte 2020, Human inside: How capabilities can unleash business performance.

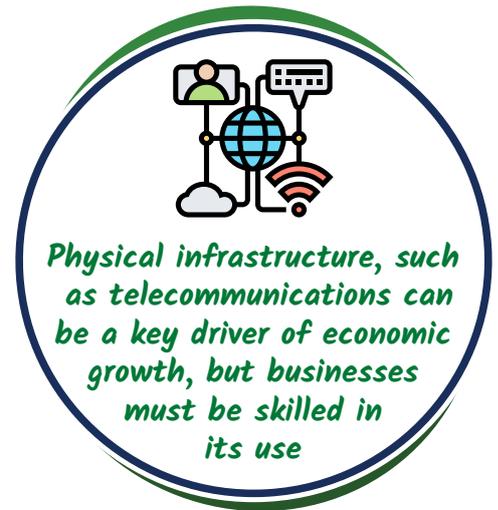
³¹ PricewaterhouseCoopers 2021, Pursuing growth in 2021: The C-suite focuses on a rejuvenated workforce and building trust.

³² Deloitte 2020, Embedding sustainability into core strategy and business operations.

For the NEJO region and member Councils, being able to quickly identify how businesses have been impacted and what is needed for support will provide opportunities for growth via shorter downtime. Bringing business together to strategize will support business recovery, resilience, and growth. Elements for such discussions could include how the customer base will be impacted, challenges on operation, disruptions in the workforce, and potential market access into the future.

Opportunities will also be realised with investment in physical infrastructure. Locally, infrastructure investment that will act as enablers of economic growth include¹⁷:

1. Affordable, reliable, and fast mobile and internet connectivity to support people and business.
2. Improved travel between regional centres and from regional centres to international gateways
3. Freight networks that will increase the competitiveness of key regional sectors
4. Reliable accessible water and energy



Key considerations (future disaster resilience)

The cumulative impact of drought, extended bushfire season, and an ongoing pandemic has changed how business, the workforce, and communities perceive their futures in regional Australia. The past few years has highlighted the importance of planning for and mitigating risks posed by hazards and disasters. Action to limit the effects of natural disasters must be coupled with interventions to better prepare communities to understand hazards and respond to disasters.

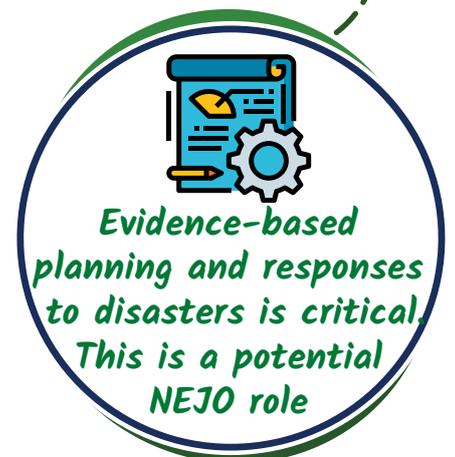
Both the Commonwealth of Australia and the NSW Government have adopted various disaster risk and threat mitigation frameworks with the aim of avoiding loss and suffering, reduce future recovery costs, and to develop economies and communities for resilience. Local Governments can utilise these resources, along with utilising various tools, services, and funding opportunities that are targeted to risk identification and threat mitigation. Items for development that are commonly identified include:

- Land use planning
- Investment in infrastructure
- Emergency management
- Social policy
- A place-based approach to resilience

Local Government disaster management and resilience planning can only occur at a local level with the support of state and federal governments. One such example includes the coordination of emergency services, industry, and the community via Local Government with financial support from the public sector.



Very little planning can be done without appropriate data collection and monitoring for all factors of their LGA including the economy (industry, supply chains and business counts), the workforce (occupations, skills, and employment), and the community. Understanding historic impacts to key metrics such as business counts and jobs after a disaster event can inform current leaders on the expected impact if a disaster occurs again. This will support evidence-based planning and response to disasters.



For the NEJO region and member Councils, being able to quickly identify how business has been impacted and what is needed for support will provide opportunities for growth.



4

Recommendations

Based on analysis prepared in this report a range of emerging themes have been identified. These themes underpin key drivers of the economy, future actions, or challenges that if addressed could create new opportunities for the region.

Recommendations include:

- Economic and Community Resilience Actions
- Business Planning for Future Economic Shocks
- Addressing Workforce Skills Deficits
- Preparing the Community for Future Economic Shocks
- Developing Regional Competitive/ Comparative Advantages
- Infrastructure, Liveability and Advocacy

4.1 Economic and Community Resilience Actions

Considering the notable challenges that industry and the workforce have faced over the course of the drought, bushfire and pandemic, many businesses and workers have shown resilience and adaptability to come out trading and working into 2022. Recurrent themes and a set of key actions (from the NDRR Framework and the PwC Disaster Recovery Framework) and are summarised in Table 4-1.

Delivering this may require the establishment of an emergency and recovery team that is made up of representatives from each Local Government, private sectors likely to be most impacted, service providers, emergency services, and community leaders. An example includes a Regional Recovery Committee with a dedicated Manager that is focused on the process of planning and developing response and recovery initiatives for disaster events.

Table 4-1 Potential economic resilience actions and LGA capability

Source	Local Industry Capability	NEJO/ Local Government Response	Aid Other Levels of Government With Response
Communication			
Maintain business directory	✓	✓	
Maintain emergency notification service		✓	
Business communication	✓	✓	
Secure telecoms infrastructure			✓
Planning and Governance			
Decide and communicate the governance pathways for risk reduction		✓	
Maintain planning and development practices that adapt to rapid social, economic, environmental, and cultural change		✓	✓
Shared responsibilities for risk reduction and risk monitoring	✓	✓	
Remove local regulatory barriers during times of disaster and recovery		✓	
Establish and support a Disaster Recovery Team		✓	
Integrate plausible future scenarios into planning		✓	✓

Source	Local Industry Capability	NEJO/ Local Government Response	Aid Other Levels of Government With Response
Data Collection			
Monitoring economic impacts	✓	✓	
Monitoring socio-economic impacts		✓	✓
Establish method of collecting changes in rates of visitation		✓	
Establish an online accommodation provider database and survey to watch changes in visitation		✓	
Periodic consultation with retail and food services in key town centres during recovery		✓	
Periodic consultation with transport operators during recovery		✓	
Restoration and Recovery			
Workforce reallocation	✓	✓	
Monitor business activity		✓	
Monitor visitation	✓	✓	
Coordinate business forums		✓	
Open for business promotion		✓	✓
Investment			
Leverage government funding for priority risk reduction measures		✓	
Empower small business to make informed and sustainable investments		✓	

4.2 Business Planning for Future Economic Shocks

Industry Development

The NEJO region's economy shows characteristics of specialisation with dominant commodity-based industries of agriculture and mining. Both industries have important export potential which brings money into the region. With this, however, the broader economic performance is subject to the influence from a range of global factors such as exchange rates and commodity prices, along with domestic factors including weather events, infrastructure quality and workforce availability. Identifying and planning for these global, domestic, and local risks will support business resilience for future economic shocks. However, planning requires further research into how the NEJO economy can develop and secure supply chains.

Development of the two main industry sectors of agriculture and mining could be supported by³³:

- Capturing more value from the supply chain through strategic investments in further processing, value-adding, and transport efficiencies.
- Expanding export opportunities into new markets such as the wider regions of Asia.
- Investing in R&D.
- Supporting business which service agriculture and mining sectors.
- Attracting businesses that service these sectors and encouraging them to establish in the region.

By harnessing new markets presented through growing global connectivity and international trade agreements, the entire supply chain can benefit. This includes investment made in infrastructure and facilities such as silos, abattoirs, and saleyards that support secondary processing facilities, and transport and logistics industries.

Focusing on established industry sectors that have the greatest impact on the broader economy will have a flow-on effect on supporting sectors. Experiencing just 1% growth over a year for a large industry sector will have a greater impact on the wider economy than a similar proportional increase of a smaller sector.

Supportive Industry Sector Development

Supportive industry sectors are those that play an integral role in supplying goods and services to the NEJO region's main industries of agriculture and mining. When a region experiences an economic shock, impacts are felt by the economy, and in particular dominant industry sectors that support output and employment. These impacts cause a negative flow-on effect to supportive sectors, their workforces, and the broader community.

In addition to the direct business to business interaction, it is crucial to acknowledge that other aspects of the economy including infrastructure, housing and people also experience significant impacts from a negative economic shock. Building approvals, business counts, and population growth, as discussed in this paper, help create a clearer picture of how the community respond in the short term. Many more place-based indicators are important to observe but are difficult to measure. Engaging with local government and the private sector to create an appropriate business registry, along with ongoing data collection on supply chains, workforce, and household factors (household composition, median income etc), will support evidence-based decision making. Such engagement could take the form of a comprehensive and well-resourced survey. While not a business-focussed survey, an example of such engagement was developed by the City of Greater Bendigo Active Living Census which was undertaken to help with planning for health and recreation services and allow a better understanding of people's activity levels and preferences³⁴.

³³ RDANI 2016, Northern Inland NSW Investment Profile

³⁴ City of Greater Bendigo 2019, Active Living Census

Business Development

NEJO and member Councils can support regional and local business risk and resilience planning by supporting appropriate data collection and utilisation. Further analysis into business registry data published by the ABS will support stakeholders to understand the high-level local business climate. Continual, direct engagement with local business will support a greater understanding of supply chains and growth inhibitors of business. Understanding the current business climate will support government's recovery effort after a disaster event whilst also assessing change over time to support future planning and investment.

Businesses that currently service a local or domestic market can benefit from access to global markets. However, most businesses will have neither the scale nor capability to expand into these larger markets. Providing business support services can assist individual or collective enterprises to access new markets. These support services could focus on product/service diversification, legal structures, partnerships or even mergers that could generate larger scale production to suit bigger markets.

Place-based business R&D will support growth in a way that not only expands opportunities, but also brings traditional business into the digital age and further into other technologies such as automation and artificial intelligence. Partnership between local industry and UNE that leverage government funding presents a significant opportunity for the region. Advocacy and partnerships with local government is also key with driving public support for projects. An example of funding that is focussed on partnerships between industry and higher education institutions is the Strategic University Reform Fund³⁵.

At an individual business level, smaller scale and simple approaches to business development, risk management, and resilience is possible. Connecting local business with specialist consultancies can help with simple cashflow management and risk planning that builds business resilience into the future. Similarly, addressing workforce skill shortages from local education institutions and business opportunities will enable business to operate with a mindset of growth. The NSW Government's Business Concierge and Business Connect programs support business with independent business advice, events, and resources³⁶.

4.3 Addressing Workforce Skills Deficits

As observed in the trend section (section 2.2), business activity was impacted greatly during the disaster period. However, business activity did recover quicker than the labour market. Impacts on the workforce appear to have been less extreme but more protracted. This has caused many workers to leave their respective industry sectors and/or the region for other work opportunities. Workforce retention and attraction programs that are driven by the private sector, with support from local government, are required to address these issues.

Industry concentration potentially increases the local demand for similar skilled workers throughout the region. This in turn places pressure on demand for those workers, leading to workforce shortages in some sectors or some business that are unable to attract skilled workers in a competitive labour market. This competitive labour market is felt further afield than the NEJO region, leading to workers commuting from the region or moving permanently. Effort to address the intersection between workforce demand and supply needs to be addressed by private sector with the support of local government.

Worker productivity in the region has increased on average between 2016 and 2020 but does vary from industry to industry. Continual focus on workforce productivity is necessary to support economic growth and business resilience in the face of disruption. Investing in workforce skills and workplace practices will increase worker satisfaction, retention, and growth.

³⁵ Australian Government Department of Education, Skills and Employment 2021, Strategic University Reform Fund

³⁶ NSW Government 2021, Business advice and support

4.4 Community Preparation for Future Economic Shocks

The economy of any LGA is made up of many interconnected parts. Business and the workforce support local supply chains, which in turn, support disaster recovery and resilience for the community. The community, however, is made up of people including business owners, employees, and residents that are impacted differently by disaster events and economic shocks. Communication and education of what to do in the face of disaster is commonly identified as an issue in disaster preparedness and response planning. This includes all stages of planning, response, recovery communication, and stakeholder engagement.

For members of the community, consultation and education enhance a community's resilience and improve their reaction and response to disasters. Often, activities that build community resilience are low cost and are likely to continue accruing benefits over the longer-term as awareness and behaviour adjust and become normal practice³⁷.

Developing supply chain resilience and investing in infrastructure ensures the community has continual access to the goods and services they need to operate their business, access work, and clean and repair their physical assets post-disaster.

For local government, establishing and maintaining key local business contacts will aid in efficient identification of where assistance should be focussed in times of disaster. Similarly, ensuring the community is continually updated, or has access to vital communication is important during an event. Developing a risk mitigation/preparation strategy, along with delivering on those items in partnership with private sector is important.

4.5 Developing Regional Comparative Advantages

Regional comparative advantages are developed when natural endowments or strengths are capitalised on. The NEJO region is geographically diverse with each LGA benefiting from their own unique set of endowments and specialisations. In general, the NEJO region possesses aspects that support its competitive advantage including:

- Major infrastructure that support exports and energy generation and transmission.
- Inland Rail links with local export terminals and other logistics links to major ports.
- Proximity to complementary regions particularly through southern QLD.
- Current and planned investment into renewable energy at scale.
- Key propulsive industry sectors.

Improving on natural endowments and other competitive advantages will drive positive economic development outcomes for the NEJO region.

Further industry development is possible by building relationships with neighbouring regions. Partnerships between regions can create opportunities for growing supply chains that would be otherwise unfeasible for a single region. Exploring opportunities in international markets could also support local industry development and may require partnerships further afield. For example, accessing ports in other areas of the country that connect directly to international markets may be required. Investment in local freight and logistics infrastructure will also support the region's key propulsive sectors.

UNE provides a distinctive advantage for the NEJO region. The established research capacity of the university can support industry R&D, drive local innovation, plus help to increase resilience through education for the community.



³⁷ NSW Government Department of Planning and Environment 2017, New England Northwest Regional Plan

4.6 Infrastructure, Liveability and Advocacy

A number of other collaborative projects, initiatives and opportunities have been identified which would contribute to the economic development of the NEJO region:

- **Improved telecommunications infrastructure to support business development and attraction.** Fast/robust internet and mobile phone services are becoming increasingly important for regional businesses. Farming systems are increasingly relying on the use of real-time data sourced remotely. Businesses need the capacity to send/receive large amounts of data. Competition from on-line sales mean that many local businesses also need to sell their products/services online. The NEJO should advocate the more widespread availability of these communication and data services to ensure the region is not out-competed by other areas.
- **Housing.** Worker (and hence business) attraction will be hampered by a lack of affordable housing/accommodation options. This is an area where the NEJO could provide an improved information base upon which actions can be formulated to ensure housing supply meets demand.
- **Liveability.** A key attraction of the NEJO region are the enhanced liveability aspects – cheaper housing, minimal congestion and traffic, short travel times to work within towns, a clean environment. The NEJO should work to promote these aspects of the region for both resident and business/skilled worker attraction.
- **New England Renewable Energy Zone.** The region is also planned for a range of differing renewable energy and associated infrastructure from the New England Renewable Energy Zone. This will create new industry, see investment and business grow, along with providing meaningful jobs for the workforce that could not have normally occurred from market conditions.
- **Positive advocacy.** Some LGAs within the NEJO have been hampered by an excess of negative sentiment about local economic development and the role of council. Opportunities have been missed as a result. The NEJO should start to build upon the positive developments occurring in the region, including the significant amounts of funding which have been sourced recently for local projects (e.g. community facilities, tourism attractions, roads and bridges, new business attractions/expansions).



5

Joint Priority Areas

The following Joint Priority Areas have been identified in consultation with the New England Joint Organisation as potential projects/initiatives for collaboration across Member Councils.

The Joint Priority Areas include:

- Roads, Bridges and Rail of Strategic Importance
- Telecommunications
- Liveability
- Skills and Workforce Challenges
- Advocacy
- Resilience and Recovery
- Data Collection
- SAPs / Renewable Energy Zone Opportunities

Joint Priority Area	Detail	Output – What will we do?	Outcome – What will we achieve?
Roads, Bridges and Rail of Strategic Importance	<ul style="list-style-type: none"> Plan key road corridors and networks to improve inter and intra region transport, and rail and air intermodal connectivity, specifically to drive efficiency in moving regional freight to ports. Plan to overcome gaps and pinch points for freight and road connectivity to the proposed Inland Rail. Focus will be on improving the efficiency of the freight task and safety (e.g. fewer trips in larger trucks). 	<ul style="list-style-type: none"> Facilitate and engage to establish, identify and prioritise the infrastructure inhibitors to industry and growth. Develop robust business cases (demonstrating BCR of >1.0 and a positive NPV) for regionally significant infrastructure projects as the basis for making collective applications under available funding opportunities. Advocacy and evidence for reclassification of identified local roads to State roads. 	<ul style="list-style-type: none"> Identify priority projects through robust analysis. Provide information to assist with funding applications for transport projects. Advocate for funding. Improved freight efficiency, safety and business performance.
Telecommunications	<ul style="list-style-type: none"> Advocate and apply for improved telecommunications infrastructure (internet and voice services) to enhance connectivity and business growth. 	<ul style="list-style-type: none"> Compile a list of internet and mobile black spots across the NEJO region. Work with government departments, NBNco and mobile network operators to access funding for improved infrastructure. Develop joint proposals at the regional level. 	<ul style="list-style-type: none"> Identify priority projects through robust analysis. Provide information to assist with funding applications for telecommunications projects. Advocate for funding. Improved voice and data services to boost business competitiveness and resident connectivity/safety.

Joint Priority Area	Detail	Output – What will we do?	Outcome – What will we achieve?
Liveability	<ul style="list-style-type: none"> • A key attraction of the NEJO region are the enhanced liveability aspects – cheaper housing, minimal congestion and traffic, short travel times to work within towns and a clean environment. • Positive advocacy at a regional level is required. 	<ul style="list-style-type: none"> • Develop a regional housing strategy. • Minimise DA approval times • Ensure sufficient zoning is in place to cater for growth and reduce cost. • Promote positive aspects of the region for both resident and business/skilled worker attraction. 	<ul style="list-style-type: none"> • Population growth. • Business attraction. • Improved services due to population growth. • Increased economic diversity to reduce reliance upon the commodity sectors.
Skills and Workforce Challenges	<ul style="list-style-type: none"> • Consider provision of, and advocacy for, training and employment pathways for young people within the region. 	<ul style="list-style-type: none"> • Advocacy and support for TAFE, UNE, Registered Training Organisations and employers for training and employment pathways for young people. • Promotion of the region as a destination for skilled migrant workers (skilled and unskilled). 	<ul style="list-style-type: none"> • Improved business performance • Business attraction. • Regional business and economic growth. • Population growth. • Improved services. • Economic diversification.
Advocacy	<ul style="list-style-type: none"> • Strong advocacy and lobbying of relevant Ministers/Departments/ Agencies on matters negatively impacting Councils and communities. 	<ul style="list-style-type: none"> • Evidence-based advocacy and lobbying (including Media and PR) on matters impacting councils, communities, businesses and workers. E.g Asset depreciation/asset renewal/health services/education/rate pegging etc. 	<ul style="list-style-type: none"> • Improve the financial situation of local government. • Remove obstacles to local government asset renewal or new asset purchases (i.e. asset renewal set-aside provisions). • Grow the local economy.

Joint Priority Area	Detail	Output – What will we do?	Outcome – What will we achieve?
Resilience and Recovery	<ul style="list-style-type: none"> Considering the notable challenges that industry and the workforce have faced over the course of the drought, bushfire and pandemic, many businesses and workers have shown resilience and adaptability to come out trading and working into 2022. Continued education and events will further prepare communities for future economic shocks. 	<ul style="list-style-type: none"> Leverage the availability of data, funding, and support to address high priority risks and allocate funding for disaster risk reduction planning. Coordinate local government investment and governance towards the priorities set in the NDRR framework. Introduce community measures including awareness campaigns, place-based preparedness programs targeted to withstanding, adaptation and response to disasters when they occur. Create a regional disaster response committee that has the support of member Councils of the NEJO. 	<ul style="list-style-type: none"> A more coordinated response to disaster management and recovery. Better data on which to based post-disaster funding applications. Improved business and economic performance.
Data Collection	<ul style="list-style-type: none"> NEJO and member Councils can support regional and local business risk and resilience planning by supporting appropriate data collection and utilisation for future risk mitigation, disaster recovery and resilience. 	<ul style="list-style-type: none"> Implement appropriate data collection and monitoring for all factors of the region including the economy (industry, supply chains and business counts), the workforce (occupations, skills, and employment), and the community. This will support evidence-based planning and response to disasters. 	<ul style="list-style-type: none"> A more coordinated response to disaster management and recovery. Better data on which to based post-disaster funding applications. Improved business and economic performance.

Joint Priority Area	Detail	Output – What will we do?	Outcome – What will we achieve?
SAPs/Renewable Energy Zone Opportunities	<ul style="list-style-type: none"> • Maximising benefits for local communities, businesses and workers. • Address workforce and accommodation challenges. 	<ul style="list-style-type: none"> • Ensure member Councils are a conduit between project proponents and local business/communities, such that opportunities and challenges are identified early in the process. • Positive promotion of upcoming projects and opportunities for local workforce/suppliers. 	<ul style="list-style-type: none"> • Business and economic growth. • Retain more wages in the NEJO region. • A pool of skilled workers to move around the SAP/REZ projects. • Reduce the potential for overload in existing business including their inability to service other local customers.



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