Regional Drought Resilience Plan

Central West Region

Blayney Shire, Cabonne, Cowra, Orange City, and Weddin Shire Councils

September 2024

Australian Government
Department of Agriculture, Fisheries and Forestry

Future Drought Fund

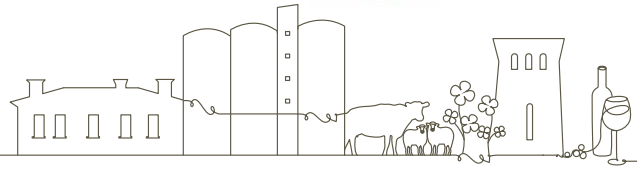
Supported by NSW Government

Blayney Shire Council

Cabonne Council

Cowra Council

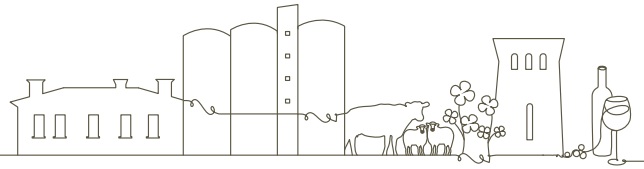
Orange City Council



Abbreviations

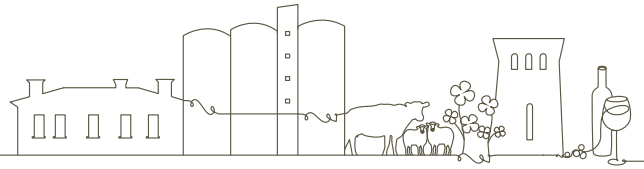
Term	Definition
ABARES	Australian Bureau of Agricultural and Resource Economics and Sciences
ABS	Australian Bureau of Statistics
AIHW	Australian Institute of Health and Welfare
BoM	Bureau of Meteorology
CASP	Country Arts Support Program
CBD	Central Business District
CDI	Combined Drought Indicator
CEF	Country Education Foundation
CENTROC	Central NSW Region of Councils
COAG	Council of Australian Governments
CS	Community Sensitivity
CSEP	Community and Stakeholder Engagement Plan
CTLX	Central Tablelands Livestock Exchange
CTW	Central Tablelands Water
CNSWJO	Central New South Wales Joint Organisation
CSIRO	Commonwealth Scientific and Industrial Research Organisation
CWA	Country Women's Association
CWELC	Central West Equestrian and Livestock Centre
CWIW	Central West Inspired Women
DAFF	Commonwealth Department of Agriculture, Fisheries and Forestry
DAWE	Department of Agriculture, Water, and the Environment
DPE	Department of Planning and Environment
DPIE	Department of Planning, Industry and Environment
DDI	Drought Direction Index
DCCEEW (NSW)	Department of Climate Change, the Environment, Energy and Water New South Wales; formerly Department of Planning and Environment
DRAMP	Drought Resilience, Adaptation and Management Policy
DPIRD	Department of Primary Industries and Regional Development (previously known as Department of Regional NSW and The Department of Primary Industries)
EDI	Economic Diversity Index
EDIS	Enhanced Drought Information System
FS	Farm Sensitivity

Term	Definition
FDF	Future Drought Fund
GVA	gross value added
HSE	Health, Safety, and Education
IPCC	Intergovernmental Panel on Climate Change
IRSAD	Index of Socio-Economic Advantage and Disadvantage
LLS	Local Land Services (forms part of Department of Primary Industries and Regional Development)
LGA	Local Government Area
LEP	Local Environmental Plan
LUTN	Light Up the Night
PDI	Potential Drought Impact
MEL	Monitoring, Evaluation Learning
NASA	National Aeronautics and Space Administration
nbn	National Broadband Network
NHPC	Newell Highway Promotions Committee
NRM	Natural Resource Management
PCG	Project Control Group
POW	Prisoner of War
RDA	Regional Development Australia
REDS	Regional Economic Development Strategies
REZ	Renewable Energy Zone
RFCS	Rural Financial Counselling Service
RFS	Rural Fire Service
RDC	Rural Development Corporation
RDRP	Regional Drought Resilience Plan
RCP	Representative Concentration Pathway
RAA	Rural Assistance Authority
SEIFA	Socio-Economic Indexes for Australia
SPI	Standardised Precipitation Index
SRG	Stakeholder Reference Group
SSMI	Standardised Soil Moisture Index



Key Terms

Term	Definition
Absorptive capacity	The ability of individuals and groups to maintain key functions and structures without adapting or changing their behaviour, in response to environmental and socioeconomic changes (Béné et. al., 2012).
Adaptation	Adjustment or modification in natural and/or human systems in response to actual or expected shocks and stresses to moderate harm, reduce vulnerability and/or exploit beneficial opportunities.
Adaptive capacity	The ability of individuals and groups to adjust and respond to environmental and socioeconomic changes.
Adaptive governance	Coordinating iterative, flexible and responsive interactions between systems when designing interventions and for their implementation and evaluation.
Co-design	The process of partnership to develop and formulate project delivery and agreed objectives and needs, using participatory methods. A process of working together utilising generative and explorative processes.
Climate Change	Global, long-term shifts in average weather conditions, such as becoming warmer, wetter, or drier over several decades or longer.
Drought	Drought in general means acute water shortage. Drought is a prolonged, abnormally dry period when the amount of available water is insufficient to meet our normal use (BoM, 2024a). Drought is complex and multi-dimensional and impacts society, the environment and the economy. There are many types of drought including meteorological, agricultural, hydrological and socioeconomic. Definitions are provided within the report.
Economic resilience	The ability of the economy to absorb or adapt to the economic impact of shocks and stressors without changing the economic status or outcomes.
Environmental resilience	The ability of the natural environment to cope with (absorb) a diverse range of shocks and stressors while maintaining natural processes and ecosystem services. Adaptation and transformational change can be slow-moving in natural systems.
Governance	Governance is the structures and processes by which individuals, groups and agencies in a society share power and make decisions. It can be formally institutionalised, or informal.
Intervention options	Alternative or complementary actions, projects, programs, policies, initiatives and investments that are planned to bring about change in the system (Maru et. al., 2018).
Local knowledge	Local knowledge and First Nations knowledge incorporates elements of lived experience within a landscape, bearing witness to the operation of systems. It includes aspects of people, landscape, culture; how people interact with surroundings and as part of communities and processes.
Preparation	Action taken to reduce the impact of an event that occurs and accelerate the recovery period.
Recovery	A return to longer term viability. Recovery may be a return to business as usual or require transformational change.
Resilience	The ability of a system to absorb a disturbance and reorganise so as to maintain the existing functions, structure and feedbacks (Walker et. al., 2004). Also see economic resilience, environmental resilience and social resilience, Absorptive capacity, adaptation, adaptive capacity, transformation. Resilience also encompasses adaptive and transformational change. This is further expanded within the report.
Risk	The potential for adverse consequences for human or ecological systems, recognising the diversity of values and objectives associated with such systems (Reisinger et. al, 2020). Drought risk refers to the difference in farm outcomes (e.g., profits) between 'normal' and 'drought' conditions.
Shock	Sudden, short-term events that threaten a city (or region). Examples include: major storms, floods, bush fires, heatwaves, disease outbreaks, terrorism and cyber-attacks' (City of Sydney, 2018).
Social resilience	The ability of the human society to cope with a diverse range of shocks and stressors while maintaining existing social and community functions. Regarding climate change, social resilience may only be possible after adaptive or transformational change.
Stressor	An event that occurs gradually over a timeframe that causes an adverse effect, e.g. drought, climate change.
Systems	The interaction of processes, networks and inter-dependencies across a complex 'whole'.
Theory of change	Refers to theories, causal mechanisms and assumptions that explain how and why outcomes and impacts will be achieved through use, implementation and production of proposed inputs, activities and outputs (Maru et. al., 2018).
Trends	A trend is a general direction or movement towards change or a new development. It refers to a prevailing tendency or pattern that is emerging or becoming more popular over time.
Transformation	The process of radically changing or building a new system with different structure, functions, feedbacks and identity (Folke et al., 2010).
Trigger point	A pre-agreed situation or event, that when met, activates a management intervention. Trigger points are usually defined in the planning phase (Wise et. al., 2014).



Acknowledgements

We acknowledge the Wiradjuri people as the Traditional Custodians of the land throughout Central West NSW. We pay our respects to their Elders, past, present and emerging, and recognise their ongoing connection to the land and waterways, particularly the Lachlan, Macquarie, and Murrumbidgee rivers.

The Wiradjuri people have thrived in this region for over 40,000 years. Their culture is rich with traditions, stories, and a deep understanding of the land's delicate balance. Droughts pose a significant threat to their way of life, impacting their ability to connect with their land and maintain their cultural practices.

We recognise the significant impact droughts have on Wiradjuri cultural practices, traditional food sources, and social issues. Unresolved issues like Aboriginal Water Entitlements further compound these challenges.

A successful approach to drought resilience requires the full participation of Aboriginal communities. Their involvement is crucial for advocating for positive cultural, environmental, and economic outcomes.

The Regional Drought Resilience Planning (RDRP) program is a key initiative of the Australian Government's Future Drought Fund. This program focuses on developing innovative strategies to build regional resilience against droughts. By planning ahead, we can lessen the impact of future droughts on our region.

A note from the Mayors

We are delighted to announce our collaboration with the NSW and Australian Governments in anticipation of future challenges, particularly droughts. Proactivity is key in initiatives of this nature, and we are very pleased about our joint efforts.

The $220,000 grant allocated for the development of a Regional Drought Resilience Plan is absolutely essential in safeguarding our communities. Reflecting on past experiences, which remain deeply impactful for many members of our community, reinforces the necessity of this Plan.

We are truly pleased that we have taken this important step in formulating a Regional Drought Resilience Plan.

This significant collaborative effort among our five Central West Councils—Blayney, Cabonne, Cowra, Orange, and Weddin alongside the NSW and Australian Governments, will enable us to be stronger together when facing uncontrollable weather conditions.

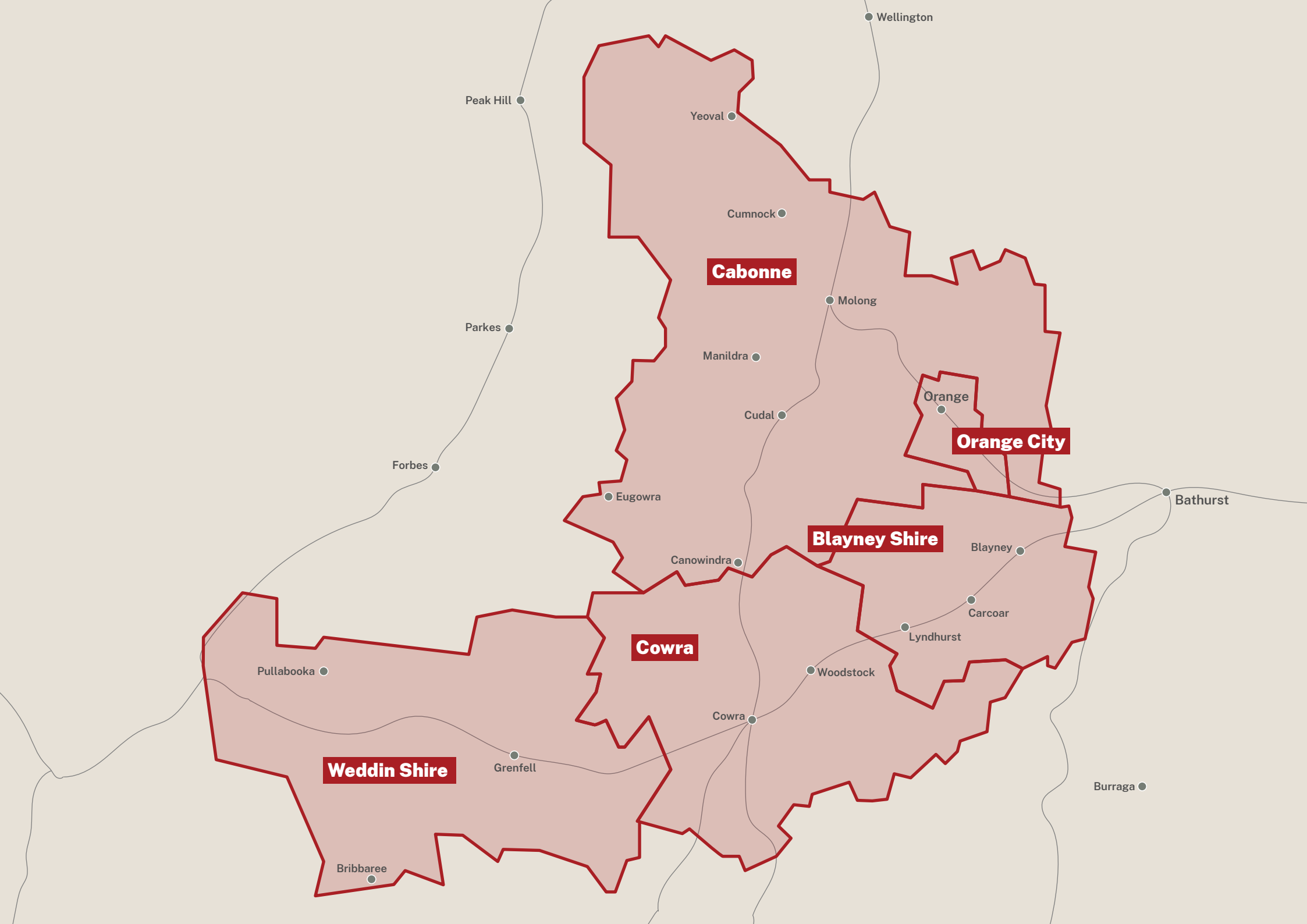
The Regional Drought Resilience Planning Program signifies our commitment to proactive measures, recognising the imperative of preparing our communities and businesses for the inevitable challenges of reduced rainfall.

Through the development of a comprehensive Central West Regional Drought Resilience Plan, we aim to fortify our preparedness, response capabilities, and recovery strategies. This funding will enable us to craft tailored strategies that address the unique needs of our region, empowering us to confront drought challenges with resilience and foresight.

With this Regional Drought Resilience Plan, we are setting ourselves up for success, equipped with locally informed strategies that resonate with the realities of our area.

This program prioritises community engagement, offering opportunities for consultation to ensure that our resilience Plan reflects the diverse needs and perspectives of our residents and the residents of the different communities.

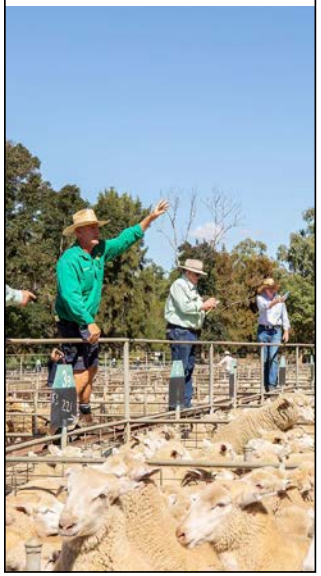
Let's utilise the strength of our community as we navigate the challenges of drought and emerge stronger and more resilient than ever before.


Wellington
Peak Hill
Yeoval
Cumnock
Cabonne
Molong
Parkes
Manildra
Orange
Cudal
Orange City
Forbes
Eugowra
Bathurst
Blayney Shire
Blayney
Canowindra
Carcoar
Lyndhurst
Cowra
Pullabooka
Woodstock
Cowra
Weddin Shire
Grenfell
Burraga
Bribbaree

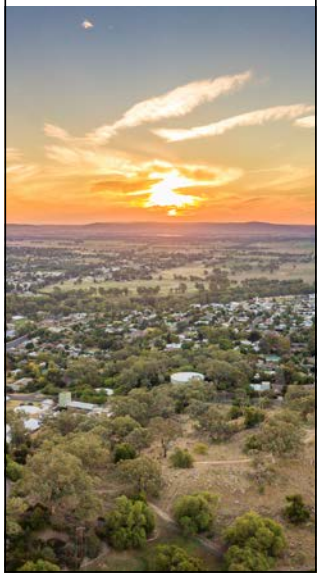
Quick Guide

1 Regional Drought Resilience

2 Region and Communities



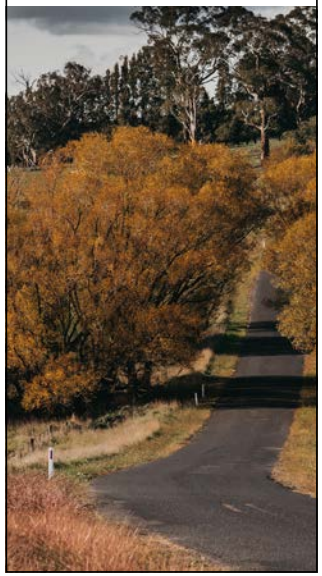
3 Drought, climate and impacts



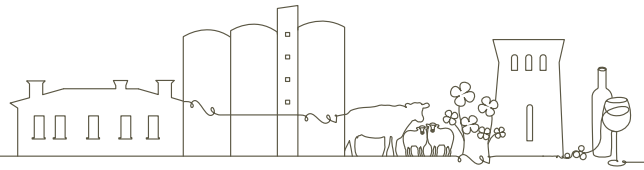
4 Listening to Local Experience

5 Drought Resilience Actions

6 Conclusion



Contents



01

Regional Drought Resilience

1. Regional Drought Resilience

1.1. Background

Drought affects all aspects of the community, resulting in major social, economic, and environmental impacts (Abunyewah et al., 2023). The National Drought Agreement (signed in 2018) commits the Australian, State and Territory Governments to prioritise objectives and outcomes that enhance long-term preparedness, sustainability, resilience and risk management for farming businesses and farming communities in Australia (Department of Agriculture, 2019). This includes establishing and operating a Future Drought Fund (FDF). The new National Drought Agreement is expected to come into effect in July 2024.

The Regional Drought Resilience Planning (RDRP) Program is part of the FDF (co-funded by the Commonwealth Department of Agriculture, Fisheries and Forestry (DAFF) and the Department of Regional NSW (DRNSW)), which has the aim of supporting local governments to work together to proactively plan for drought resilience (DAFF and ABARES, 2023). The RDRP's aim to:

- Identify ways for Councils to support their region's resilience to future droughts.
- Devise actions communities can undertake to build their drought resilience across regions.
- Following development of RDRP's, implementation funding will be available to the participating consortium of Councils across Australia under the Australian Government's FDF.

The FDF seeks to enhance the public good by building drought resilience in Australia's agricultural sector, the agricultural landscape and communities. The intent of its eight interrelated foundational programs is to have an innovative and profitable farming sector, a sustainable natural environment and adaptable rural, regional and remote communities, all with increased resilience to the impacts of drought and climate change (DAFF, 2024a). This intent is an outcome from the 2009 Inquiry into Government Drought Support which advocated for communities and farmers to become more self-reliant and refocus on the broader issue of climate variability (resulting from climate change) (Productivity Commission, 2009). The eight FDF programs include: Climate Services for Agriculture Platform, Drought Resilience Self-Assessment Tool, Farm Business Resilience, Regional Drought Resilience Planning, Drought Resilience Innovation and Adoption Hubs, Four grant programs, Drought Resilience Leaders and Networks to Build Drought Resilience.

The FDF is intended to deliver against three inter-connected strategic priorities:

- economic resilience for an innovative and profitable agricultural sector.
- environmental resilience for sustainable and improved functioning of farming landscapes.
- social resilience for resourceful and adaptable communities.

1.2. Purpose of this Plan

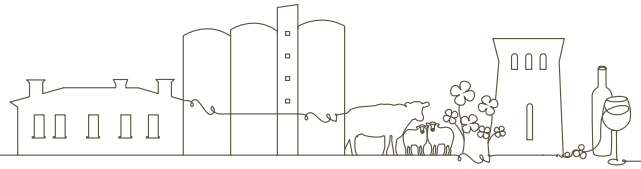
The Central West RDRP (consisting of Blayney Shire, Cabonne, Cowra, Orange City and Weddin Shire Councils) provides guidance to help our region better plan for and become more resilient to the impacts of drought over time. Resilience is important in rural and regional communities. It reinforces the connectedness of its members, their ability to manage through seasonal conditions (that create uncertainty and present a challenge to their businesses and way of life).

This Plan provides an opportunity to identify actions that will directly assist the region to strengthen social, economic and environmental resilience, supporting communities in future droughts. It builds on the wealth of effort, research and planning, that has been, and continues to be delivered in drought.

The purpose of this Plan is:

- Creating stronger connectedness and greater social capital within the communities of Central West, contributing to wellbeing and security.
- Increasing self-reliance and improving risk mitigation by building on the local and regional resilience initiatives already been undertaken.
- Supporting leadership and community networks to thrive.
- Improving timely and evidence-based decision making that meets the needs of Central West.
- Empowering communities to implement transformative activities that improve their resilience to drought.
- Supporting more primary producers to adopt whole-of-system approaches to Natural Resource Management to improve the natural resource base, for long-term productivity and landscape health.

This Plan has been developed between the five Councils and their respective communities in a collaborative approach that has drawn on the experience and input of those who live and work in our region.



1.3. Vision for the region

The vision was created via an iterative process across the stakeholder workshops that were held across the five Local Government Areas (LGAs). Following inputs from the first workshops, a vision statement was drafted and feedback sought during the second workshops. The final vision statement was tested through the Project Control Group which consisted of members from each of the Councils.

Our vision is to create resilient, healthy, and prosperous communities who thrive through the challenges of drought. We wish to be a liveable, connected, and inclusive rural region. We look to prioritise innovation that helps secure our natural resources and leads to assured and flexible employment opportunities.

1.4. Key inputs to the Plan

The following documents were considered through the development of this Plan and incorporated into the stakeholder engagement activities. Please note this is not a comprehensive list of the literature that was reviewed to inform the Plan. Regional documents including:

- Council strategic planning documents
- Local economic development strategies
- NSW Regional Water Strategies (Macquarie-Castlereagh, Lachlan)
- Regional Water Strategies
- Regional Economic Development Strategies (Orange, Blayney and Cabonne, Cowra Regional, South West Slopes)
- Resilience Principles: Infrastructure Australia's approach to resilience
- QLD Government: Investment Logic Mapping Guide
- CSU Southern NSW Innovation Hub Baselining Drought - Developing a baseline understanding of farmer and community perceptions of drought
- Drought Resilience, Adaptation and Management Policy (DRAMP) Framework 2018
- CSIRO Drought Resilience mission (2022)
- NSW Government: Central West and Orana Regional Plan 2041
- Government organisation publications including Australian Bureau of Agricultural and Resource Economics and Sciences (ABARES), Australian Bureau of Statistics (ABS), Bureau of Meteorology (BoM), Commonwealth Scientific and Industrial Research Organisation (CSIRO), Infrastructure Australia, Productivity Commission, Rural Industries Research and Development Corporation, Grains Research and Development Corporation and others.
- Government department publications including Department of Agriculture, Fisheries and Forestry (formerly Department of Agriculture),
- Academic publications.

The Regional NSW Investment Attraction Strategy 2022 – 2027 (DRNSW, 2022b) sets out the NSW Government's priorities and plans to achieve long-term social and economic success for regional communities across the state.

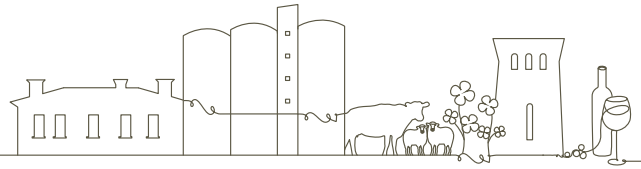
Additionally, contributions from a broad range of community and stakeholders - including community organisations, First Nations Peoples, businesses, regional industries, primary producers, volunteers and Local and State Government agencies with a regional focus- were instrumental in the co-design of this Plan.

It is intended for this Plan to be a living document and to be considered and factored into a range of other plans and strategies by local government, state government, non-government organisations, not-for-profits, businesses and others.

1.5. A Plan for drought resilience

Drought is a defining feature of the climatic cycle of the Australian landscape (Department of Agriculture, 2019). In a large part this owes to our geography. Our continent spans the latitudes of the subtropical high-pressure belt (BoM, 2024a). This is an area of sinking, dry, stable air and usually clear skies. The far north and south of the country come under the influence of reasonably regular rain-bearing systems for at least part of the year (BoM, 2024a). The east coast is normally well watered by moisture from weather driven by the Tasman and Coral Seas. However, over most of the country rainfall is low and erratic. Even in the wetter areas, very dry years can disrupt normal activities and lead to water shortages (BoM, 2024a).

As such, droughts will come again, and they are anticipated to get worse in parts of the country as a result of a changing climate. The costs of drought are far-reaching, impacting not just at the farm gate, but across the entire community and natural landscape. To minimise the costs of drought, an effective response for greater resilience is to plan, learn, innovate and develop skills that can be applied to recover and respond quicker to more disasters (COAG, 2011). Striving to be a more resilient community will protect the regions natural assets, build sustainable community resilience and generate economic opportunities in social and infrastructure domains (DAWE, 2021). It is important that communities are well-prepared and resilient in the face of climate change and drought.



The costs of drought are spread across economic, social and environmental factors. The toll taken on regions and their communities has been enormous and the impacts often linger for decades (Southern NSW Innovation Hub, 2022).

The most effective response to rising uncertainty is to plan for greater drought resilience. This can be achieved by building sustainable and diverse regional economies, reducing the vulnerability of communities to changing economic conditions and accelerating recovery, as well as enhancing thriving natural environments.

1.6. Drought resilience at a glance

When it comes to drought, "our best defence against the shocks of drought is to prepare. Planning for greater drought resilience across all aspects of regional and remote communities, not just for primary producers, will have the greatest impact. Resilience can be achieved by building sustainable and diverse regional economies, reducing the vulnerability of communities to changing economic conditions, accelerating recovery, and enhancing the natural environment" (DRNSW, 2022a). It is also important to consider and understand when adaptation and/ or transformational change is required to build resilience.

The impact of multiple disaster events such as the Black Summer bushfires, floods of 2021 and 2022, mice plagues, and COVID-19 related supply chain and labour force disruptions, compound any existing issues and erode the community's resilience to deal with another stress such as drought. The impacts of drought are also dependent on the timing, duration and the area over which the drought occurs. These factors can affect how the community is able to respond. No two droughts are the same and this in itself presents a challenge to communities.

Drought resilience goes beyond water management; it's a holistic approach aimed at safeguarding the fabric of our communities. The lasting effects of past droughts, including the Millennium Drought, serve as reminders for the need of forward-thinking and strategic planning.

The journey for developing this Plan for the Central West is illustrated in Figure 1. The process recognises communities in the region have been consulted about drought previously, with this plan aiming to build on this work.

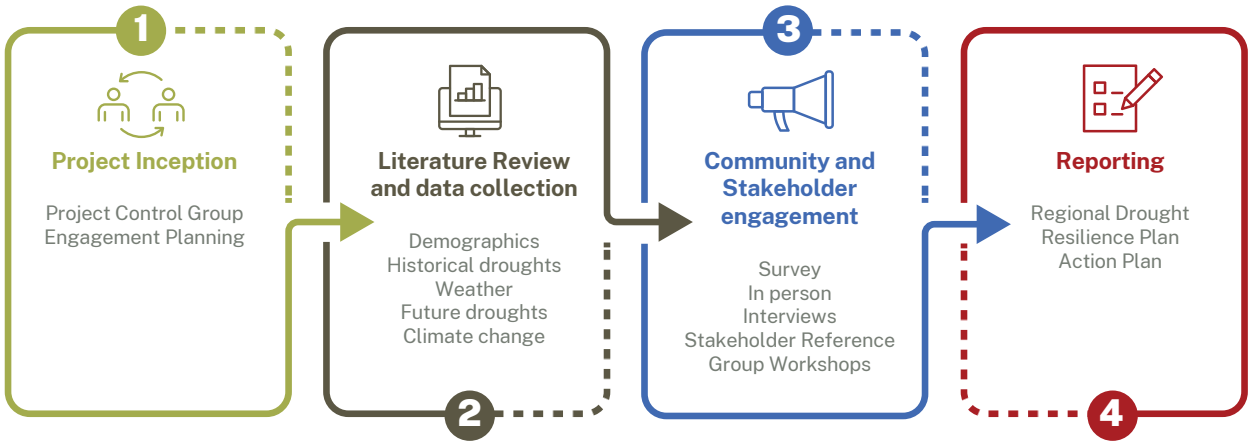


Figure 1 -The Drought resilience journey

1.7. Drought resilience framework

Defining resilience

Resilience is a broad concept that encompasses a range of interconnected factors and conditions. For a system to be resilient it must have the ability to absorb a disturbance (sometimes referred to as shocks and stresses) and reorganise to maintain the existing function's structure (Walker et al., 2004). However, it is important that the system maintains options to develop and remains open to transformative and non-linear change (Nelson, 2011).

Shocks and stresses

Shocks and stresses in the context of this Plan refers to the following:

1. Episodic shocks are sudden, large-scale disasters that disrupt and threaten communities. In the context of drought, some significant shocks may include:

- Sudden water shortages
- Extreme weather events (storms, bushfires, landslides, earthquakes, heatwaves)
- Agricultural supply chain disruption.

2. Chronic stressors can be thought of as slow-moving disasters that affect the community. In the context of drought, stressors may include:

- Food and water shortages
- Climate change
- Aging infrastructure.

Drought significantly impacts economic activities, particularly in agriculture, which is often the most affected sector. Reduced precipitation leads to lower crop yields and livestock productivity, which in turn affects food security and income for farming families. This economic strain can lead to unemployment, decreased local business revenues, and increased costs for food and water, exacerbating poverty levels in vulnerable communities.

Moreover, the economic consequences of drought extend beyond immediate agricultural losses. They can trigger a series of indirect effects, such as increased migration as families leave drought-stricken areas in search of better opportunities, which can destabilise local economies and social structures. The interconnectedness of the food-water-energy nexus means that economic impacts can ripple through various sectors, affecting everything from energy prices to urban development.

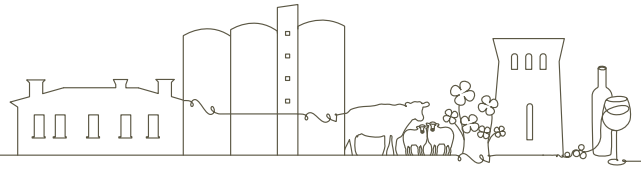
The social impacts of drought are profound and multifaceted. Drought can lead to significant health issues, including mental health challenges due to stress and anxiety related to economic instability and food insecurity. Vulnerable populations, particularly women and children, often bear the brunt of these social impacts, as they are typically assuming greater responsibilities for on and off-farm labour. This burden can limit their access to education and economic opportunities.

Social cohesion within communities can also be affected. Drought may foster mistrust in government and institutions, particularly if responses to the crisis are perceived as inadequate. This erosion of trust can hinder community resilience and complicate recovery efforts. Furthermore, social networks that provide support during crises can be strained, leading to increased isolation and vulnerability among affected individuals.

Drought has significant environmental consequences, impacting ecosystems and biodiversity. Water scarcity can lead to habitat degradation, reduced agricultural productivity, and increased susceptibility to wildfires, which can further exacerbate environmental stress and lead to loss of biodiversity. The degradation of natural resources not only affects the environment but also diminishes the livelihoods of communities that depend on these resources for their survival.

The relationship between environmental factors and drought is cyclical; for instance, environmental degradation can increase the severity of drought impacts, while drought can lead to further environmental degradation, such as desertification and loss of arable land. This creates a feedback loop where each factor exacerbates the others, complicating recovery efforts and increasing the overall vulnerability of affected communities.

The interplay between economic, social, and environmental factors creates cascading impacts that can be devastating. For instance, a drought that reduces agricultural output can lead to economic decline, which in turn can increase social tensions and health issues, further straining community resilience. These cascading effects highlight the need for integrated approaches that consider the interconnectedness of these factors.



Types of resilience

To establish a holistic approach towards resilience, a broad range of systems must be considered, including social resilience, economic resilience and environmental resilience. Each of these dimensions is relevant in its own way and they are all strongly interconnected, allowing there to be coordinated adaption in building resilience.

- Economic – focuses on the ability of local economies to adapt to and recover from the economic shocks caused by drought. This may include diversifying the local economy, supporting businesses that are drought-resistant, and providing financial resources to mitigate economic losses during drought events (DPIE, 2021).
- Social – the ability of individuals and communities to withstand the psychological and social impacts of drought. It involves fostering strong social networks, community cohesion, and mental health support systems to help people cope with the stress and challenges associated with water scarcity.
- Environment – centres on the capacity of natural ecosystems and water resources to endure and recover from the ecological impacts of drought. This may involve protecting and restoring habitats, improving water conservation practices, and preserving biodiversity to maintain ecosystem services during and after drought.

Resilience capacity

This Plan focusses on three types of resilience capacity (see Figure 2). Absorptive capacity is often described in traditional resilience terms as the ability to absorb shocks or to 'bounce-back' (Haider and Cleaver, 2023). Adaptive capacity is often the next step on the resilience journey and entails having the necessary resources to learn and adapt the system (Haider and Cleaver, 2023). However, it is increasingly being recognised that adaptation is insufficient to deal with large-scale environmental issues like climate change. Transformation, which is the shift to a new system including change in priorities and leading to changes across multiple scales, is sometimes the best way to deal with large scale issues. However, transformation is not always needed or 'good' and in certain circumstances adaptation is the best course of action (Haider and Cleaver, 2023). These three concepts are used in Section 5 to indicate how the proposed resilience action may contribute to resilience building in the region.

Resilience thinking

Resilience thinking incorporates the notions of absorption, adaptation, and transformation into a unified approach. It investigates how multiple systems, including people and environmental systems, can still operate when there are disruptions and uncertainty (Simonsen et al, n.d.). It offers a structured framework and principles for developing plans and strategies aimed at enhancing resilience across all levels, from national, regional and local (Folke et. al., 2010; Greet et al., 2021). These different capacities are vital components of building resilience, and this holistic perspective acknowledges resilience is not a one-size-fits-all concept and tailored approaches are necessary to address the diverse and dynamic challenges communities, ecosystems, and organisations / businesses face.

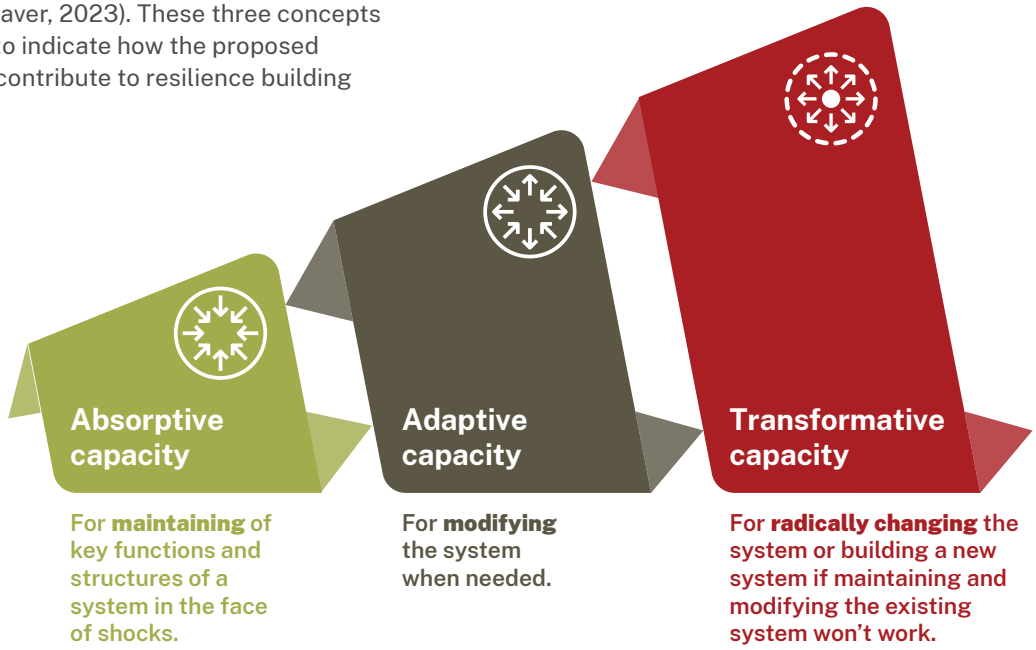


Figure 2 Types of resilience capacity as outlined by Haider and Cleaver, 2023

Creating a resilient community demands there to be an awareness of the nature of disasters in the region, acknowledge where the community is vulnerable to allow for growth, and not be afraid to probe the boundaries of a resilience system (Greet et al., 2021). The components integrated in resilience thinking are vital if a region, community or business are to thrive, but building resilience cannot be achievable if it isn't an 'all hands-on deck approach' (Greet et al., 2021).

Resilience measures should assist with (Walker, 2020):

- building intentional redundancy to create reserves and spare capacity
- creating response diversity – that is having multiple options to achieve a given need or fulfill a particular function (so if one becomes unviable, or doesn't work, there are back-up options)
- fostering an appropriate level of connectivity such that a region is not over- or under-connected, and not overly dependent on external support
- enabling preparedness, flexibility and quick and effective responses to stresses and shocks
- building absorptive, adaptive and transformative agency and capacities
- managing the key variables and feedback loops central to the manifestation and effect of drought and associated shocks in the region.

Resilience assessment

The Australian Bureau of Agricultural and Resource Economics and Sciences (ABARES) developed a national index to rank rural or regional communities by their potential to be adversely affected by drought (ABARES, 2022). As shown in Figure 3, this index combines drought exposure and drought sensitivity (at the farm enterprise level), and data representing community sensitivity (agricultural dependence of a community), to initially produce an index of 'Potential drought impact' (PDI). This PDI index can be applied consistently across LGAs. Whether the PDI will cause lasting loss or harm depends on the community's adaptive capacity (ABARES, 2022). The project is ongoing and the next step is to include indicators of potential adaptive capacity of communities, to better understand the likely resilience of a community to drought (ABARES, 2022). Consequently, the output of the framework would be a measure of drought vulnerability and resilience, describing the degree to which Australian agriculturally dependent communities are likely to be adversely affected by a drought and their ability to withstand those impacts.

Within the Farm Sensitivity measure there is drought exposure and drought sensitivity. Drought exposure represents the amount of external stress farm enterprises experience due to the climate variability they are exposed to at their location (ABARES, 2022). Drought sensitivity represents the effects that climate variability has on farm outcomes, reflecting the responsiveness of farm production systems to short-term climate variability and short-term management responses (ABARES, 2022). Currently, only broadacre farms are represented by this indicator.

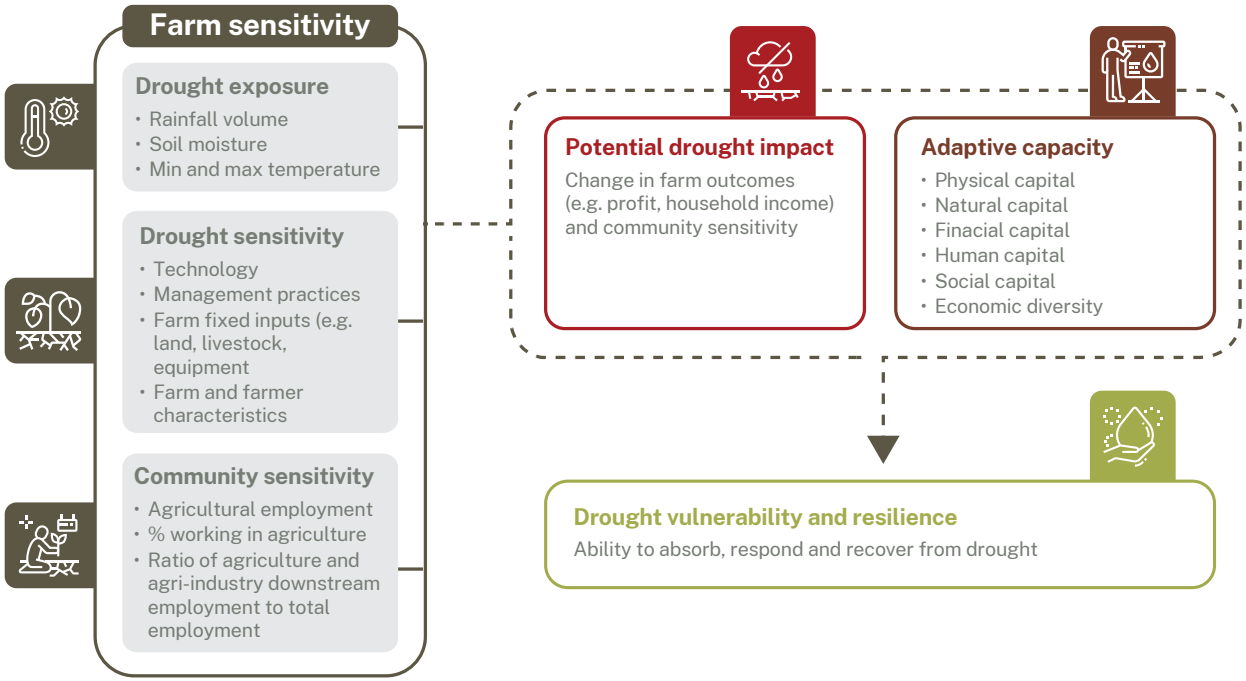


Figure 3 Drought Indicator Framework (Source: ABARES 2022)

The community sensitivity measure represents the reliance of a LGA on employment in agricultural production industries (broadacre and irrigated) and related downstream food and beverage manufacturing (for example, meat processing, dairy product manufacturing and fruit and vegetable processing) (ABARES, 2022). Community sensitivity is measured as the proportion of people employed in those agri-industries compared to total employment in the LGA. The PDI index highlights the need for drought resilience Plans to consider the risk and exposure of a region to drought (such as considering the PDI ranking) and how that can be minimised, as well as how a community can build in adaptive capacity to manage the impact of droughts (overall drought vulnerability and resilience).

While the adaptive capacity measure is yet to be fully developed, the economic diversity index (EDI) has been calculated for all LGAs. The EDI reflects the composition of the local economy across all industry of employment sectors compared to the Australian economy with a low score representing a less diverse economy (ABARES, 2022). This index also correlates with population density and access to services, as communities that exhibit the highest levels of economic diversity are usually the larger population centres (ABARES, 2022).

The ABARES technical report (2022) lists five forms of capital, or resources, which are positively related to the communities ability to manage or cope with impacts. These are:

- human capital—labour and influences on the productivity of labour, including education, skills and health
- social capital—claims on others by virtue of social relationship
- natural capital—land, water, and biological resources
- physical capital—produced by economic activity, including infrastructure, equipment and technology
- financial capital— savings and credit.

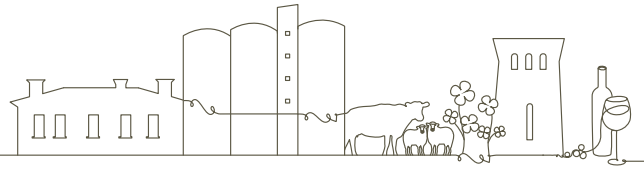
A Tableau© dashboard generates an ordinal (0 to 1) PDI ranking of agriculturally dependent communities based on their potential to be impacted by drought. The most sensitive LGAs (with both high farm sensitivity and high agricultural dependence/ community sensitivity) receive a ranking near 1 and the least (with both low farm drought risk and low agricultural dependence) receive a rating near 0 (ABARES, 2022). Table 1 provides the data contained in the Tableau© dashboard as well as including the Index of Socio-Economic Advantage and Disadvantage (IRSAD). The IRSAD is one of the socio-economic indexes for Australia (SEIFA). The IRSAD summarises information about the economic and social conditions of people and households. SEIFA indexes orders areas from lowest to highest, with decile 1 representing the most disadvantaged areas relative to other areas, and 10 representing the most advantaged areas.

The bold numbers in Table 1 highlight Weddin LGA as the most vulnerable of the five LGAs for all except the SEIFA indicator. Weddin has low economic diversity and a high PDI indicating a high potential for drought impact due to high farm drought risk and high community dependence on agriculture. Comparatively, Orange has high economic diversity and very low PDI, reflective of the fact that there is less agriculture (or land) within the LGA and therefore they are less contingent on agricultural productivity. Blayney's economic diversity and PDI echo their relative diversification away from an agricultural base with Cadia mine and the Nestle factory situated within the LGA (see section 2.1 for further details). Cabonne and Cowra LGAs are reasonably similar in both economic diversity and PDI however the SEIFA decile highlights other areas of vulnerability for Cowra. Weddin also has a lower SEIFA score. Cowra has

Local Government Area (LGA)	Economic Diversity	Farm Sensitivity (FS)	Community Sensitivity (CS)	Potential Drought Impact (FS+CS)	Socio-economic advantage / disadvantage (SEIFA decile)
Blayney	0.62	0.04	0.22	0.17	6
Cabonne	0.48	0.23	0.30	0.35	8
Cowra	0.51	0.11	0.27	0.26	**2**
Orange	0.85	-no rating	0.05	0.03	7
Weddin	**0.19**	**0.59**	**0.52**	**0.75**	5

(Data source: ABS, 2021b; ABARES 2022).

Table 1 Drought indicator framework outputs and SEIFA decile by LGA



the highest unemployment rate of the five LGAs (see Table 1), followed by Weddin. Both Cowra and Weddin have around a 51% labour force participation rate, 10% lower than the other LGAs, and have the lowest median household income of the five LGAs. They both have a higher median age compared to the other LGAs. Additional vulnerability indicators that may reflect the community's adaptive capacity are provided in Section 2.1. Additionally, further information relating to climate vulnerability is provided in Section 3.

1.8. Plan development

The development of this Plan has been overseen by a Project Control Group (PCG) comprising representatives from Blayney Shire, Cabonne, Cowra, Orange City, Weddin Shire Councils, DPIRD and consultants. A three phased approach was used, focussed on community-led development of themes, vision and actions.

At the inception of the development of the Plan. Each Local Council provided a list of stakeholders that were representative of the demographic of their communities. This mix of stakeholders was dependent on the individual characteristics of each LGA and included representatives from the business community and business chambers, tourism operators, health services, agriculture and agricultural service industries, community groups, progress associations, training organisations, environmental groups and first nations representatives. These stakeholders were invited to provide input on key aspects of developing the vision and actions for the Plan through the formation of the Stakeholder Reference Group (SRG) for each LGA.

State and local government stakeholders were engaged through both the SRG and through one-to-one interviews to provide input to actions and provide insight into existing resilience pathways.

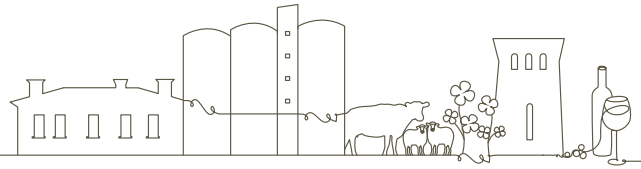
Phase 1: Understanding the community profile, what is known about drought in the region, the lessons learnt and the region's greatest risks

Phase 1 involved the formation of a PCG which consisted of members of the five Councils, Department of Regional NSW, and consultants. The PCG provided inputs and guided the development of the Plan. They also assisted with arrangements for community and stakeholder engagement activities. This phase of the project also included a review of literature to better understand the community profile, what we currently know about drought in the region, the lessons learnt from previous droughts and where the greatest risks lie. Some of the sources utilised are outlined in Section 1.4. The literature review informed future phases of the project including identification of plan themes and ensures the plan is built on past work and programs. This also included looking at resilience frameworks and bringing together ideas for what may be most relevant to the region, to test with the stakeholder groups. A Project Plan and Community and Stakeholder Engagement Plan (CSEP) were developed to help guide the project and to identify key groups to attempt to engage with. This included some stakeholder mapping and started conversations between the Councils and the consultants to identify key stakeholders within the community who should be involved in workshops and/or one-on-one interviews.

Phase 2: Community and stakeholder engagement to identify, test and understand the regional opportunities

Phase 2 comprised the delivery of the engagement approach. A review of Councils' Community Strategic Plans resulted in the development of five initial common themes. These themes were tested with the stakeholders through the workshops and with the PCG to make sure they were a sound representation of the region's key areas of focus. These themes were then used for categorising and analysing the actions and initiatives identified during the Phase 1 review and in the series of resilience workshops (Stakeholder Reference Group (SRG) meetings).

Originally, two in-person workshops per LGA alongside a series of targeted interviews with other agencies and community members were proposed. Due to challenges with availability and engagement fatigue, especially in Cabonne LGA who had been focussed on flood recovery planning, alternative arrangements were required for Blayney and Cabonne LGAs. For these LGAs, one-on-one interviews and small group online workshops were held instead of the initial workshop. This reduced the richness of the information gleaned as there was little ability to interact with each other and build and/or test ideas. Given the time restraints of the project, adequate engagement with a broad section of the community was not necessarily obtained. An in-depth stakeholder mapping exercise that identifies the small and hard to engage with segments of the community such that inputs from these community members could be pursued would be beneficial for the future update of the plan. Learning from this plan and Councils regarding constraints to engagement is required.



The SRGs were held with targeted regional stakeholders to test the findings from Phase 1 and identify strategic opportunities. A range of community members were invited to participate. These included but are not limited to:

- Local businesses/ business chambers
- Retailers
- Manufacturers
- Primary producers/agribusinesses and agricultural suppliers
- Primary producers
- Progress associations/ community committees
- Educational providers (schools, Technical and Further Education (TAFE), Universities)
- Health providers (GPs, Hospital and health district staff)
- Tourism operators/corporations
- Volunteer groups (Rotary, Lion's Club, Country Womens Association, etc)
- Sporting clubs/associations
- Councillors
- Agencies (Regional Development Australia (RDA), Department of Primary Industries and Regional Development DPIRD, Local Land Service (LLS)).

The Local Aboriginal groups and/or Elders or representatives were invited to participate in the Plan's development . This engagement was limited as the plan timeframes were not conducive to deep engagement with First Nation's people.

During the first workshop, key drought related impacts (Section 4.3) were discussed and identified for each of the themes, with major impacts rated as low, medium or high. Initial ideas for actions were encouraged from the stakeholders and developed through discussion within the group. The second workshop focussed on further developing the actions and starting the process of prioritisation.

Simultaneous to the workshops, targeted interviews were conducted with a number of organisations and agencies. These included:

- Central NSW Joint Organisation
- Central Tablelands Water
- NSW Department of Climate Change, Energy, the Environment and Water (DCCEEW)
- Department of Primary Industries and Regional Development (DPIRD)
- Destination NSW
- Local Land Services (LLS)
- WaterNSW.

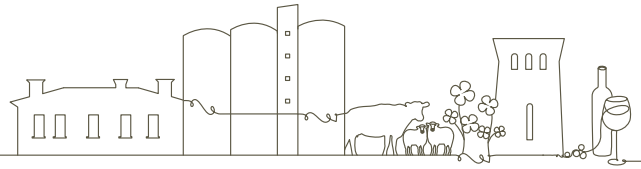
Additional to the workshops and targeted interviews, a community survey was promoted by each of the Councils to ensure those who were unable to attend workshops or be invited to interviews were able to express their views and input into the plan.

Community engagement was designed with the communities' diverse needs and perspectives in mind. The engagement activities were designed to encourage meaningful conversations and insights from the broad range of community. Engagement allowed people to express information in their own words so that local voices and needs were highlighted. The engagement combined the use of in-person and digital methods, ensuring inclusivity and transparency throughout the process. An overview of the engagement activities is provided in Figure 4.

Phase 3: Prioritise and develop the Plan

Phase 3 consisted of prioritising the opportunities (through the second SRG and PCG) and documenting each in this plan. These actions are organised using the thematic framework shown in Figure 5. The investment logic framework (Section 5) was applied to the long list of actions to better identify priority actions. The Plan identifies actions that can be progressed now that align with the consortium of Councils' ability to influence and will improve outcomes for the community.

The communities of the Central West have initiated several actions within their communities developed through successive droughts. Those actions have been built on in this plan in an effort to improve the region's drought resilience. These actions include continuing to support water infrastructure improvements, advocating for increased services to support the health and well-being of the community, diversifying the region's economy through business and tourism attraction and protecting landscape health and natural resource management. The PCG provided final review of the plan before it was sent to CSIRO for review. The PCG was also involved in the final updates before the plan was published and publicly available.



Stakeholder Reference Group (SRG) Meetings

8 SRG sessions were held between April 2024 and June 2024. They comprised of representatives from the local government areas, community subject matter experts, project team members, and other stakeholders. Over 200 stakeholders were invited to participate in the SRG's, 76 members provided ideas, insights and feedback. The majority of these members attended both workshops to offer their contribution.

Targeted interviews with stakeholders

Targeted interviews with over 30 industry and community members to obtain more detailed input on experiences of drought, the drought work already undertaken in the region and additional actions to build resilience. Additionally, two online workshops were held, providing the opportunity to bridge geographical gaps, ensuring a wider array of stakeholders could provide insights without the constraints of location.

Online Survey

Using digital tools and publishing a survey enabled engagement of a broader audience and made participation more convenient for community members. 52 survey responses were received and formed part of the feedback that informed the recommendations included within this Plan.

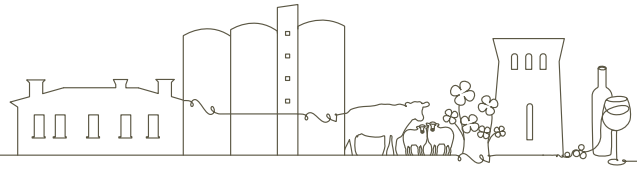
Online Meetings and phone calls

A total of 10 PCG and meetings with individual councils were held.

Email Communication

Employing email outreach provided an additional channel for engaging with stakeholders. It enabled targeted stakeholders, in remote areas, to share their insights in a convenient manner. This approach not only facilitated the collection of valuable data but also allowed for a thoughtful, well-documented exchange of ideas and feedback. Around 90 stakeholder specific emails were sent and over 400 email communications sent.

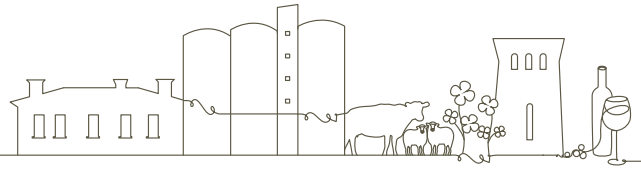
Figure 4 – Summary of Engagement activities



Through undertaking extensive community and stakeholder engagement, GHD uncovered these five key themes that encompass the insights and feedback received from the communities of the Central West.

The Economy – Diverse and resilient agricultural businesses and regional economies	The Environment – Protection of the Natural and Built Environment	Governance – Leadership and Collaboration	Community – Vibrant, connected, and supported communities	Infrastructure – built assets and technology
Diversify the economy and continue to attract investment in education, medical services, mining, local food, wine, tourism, agriculture, agribusiness, transport and logistics to allow for sustainable growth and increased employment. Ensure infrastructure exists to support local businesses and innovative industries.	Protect and conserve the natural environment and heritage infrastructure and ensure land use is well planned. Support sustainable practices and diversification in agriculture. Manage natural hazard impacts and promote the renewable energy industry and climate change adaptation. Improve water security – secure, reliable, and healthy water that is equitably allocated.	Strong, transparent, and accountable leadership is a cornerstone of a thriving community. Community involvement and engagement in the decision-making process and investing in the development of future leaders will improve community ownership and cohesion.	Strong community bonds are a focal point, showcasing the importance of enhanced support/service networks (e.g. health and education) and community infrastructure (including service accessibility, transport, and recreation infrastructure). Vibrant and inclusive communities as well as diverse housing choices that fit the needs of community will improve quality of life.	Infrastructure and facilities play an important role in promoting and supporting our areas as a place to live, work, and invest. Road and rail infrastructure, digital connectivity, and water infrastructure is essential for economic prosperity, environmental management, and community liveability and resilience.

Figure 5 Five key themes of the Plan



02

Region and communities

2. Region and Communities

2.1. Introduction to the region

The RDRP for the Central West comprises the LGAs of Blayney Shire Council, Cabonne Council, Cowra Council, Orange City Council, and Weddin Shire Council. The five LGAs cover approximately 1.2 million hectares and are home to over 80,000 people (ABS, 2021a). Orange is the largest town within the region, serving as the primary location for health care, education, and retail services (Section 2.6).

First Nations Peoples within the Central West Region are the Wiradjuri Peoples, with strong connections and responsibilities to Country for over 60,000 years, and making up 6.4% of the region's population (ABS, 2021c).

The region's water resources and river systems – including the Lachlan River (Wiradjuri: Kalari, Galari) – underpin the health of the natural environment and are important parts of the broader Murray Darling Basin (NSW Government, 2022). The water systems support agriculture, recreation, tourism, and have a cultural significance for the Wiradjuri Peoples. Significant rivers and creeks include the Abercrombie River, Belubula River, Macquarie River, Cudgegong River, and Molong Creek (NSW Government, 2022).

In recent years, the Central West has experienced many natural disasters including most recently severe flooding in the LGA of Cabonne through both the townships of Canowindra, Cudal, Manildra, Molong and Eugowra (NSW Government, 2022).

Local economy

The Central West region has a diverse economy, and is renowned for its agricultural produce, food, wine and gastrotourism industry (Infrastructure Australia, 2022). Water security challenges have promoted the diversification of agricultural products and the growth of mining, healthcare, and tourism (ABS, 2022a; Infrastructure Australia, 2022). However, water security and the competition for water can impact the expansion of new businesses and attraction of new people. Orange, Blayney, and Cabonne have focused on economic diversification through tourism, launching Orange360 – a joint committee that works with local groups, events and providers to market the region and drive visitor numbers (Think.Orange Region, 2019).

Figure 6 illustrates a shift in the diversity of industries, livelihoods and employment opportunities across the five LGAs. Using a time series analysis from the 2011, 2016 and 2021 Census', it shows the incline in non-agricultural industries, health care and social assistance, across all LGAs and education and training in Orange LGA. The agriculture, forestry and fishing industry was in the top 3 industries for all LGAs, except for Orange. The data showed a decline for Cabonne LGA and Weddin LGA, with a contrasting increase from Cowra and Blayney LGAs. The diversity in the industries and indicators shows a future ability for LGAs to weather droughts in the future.

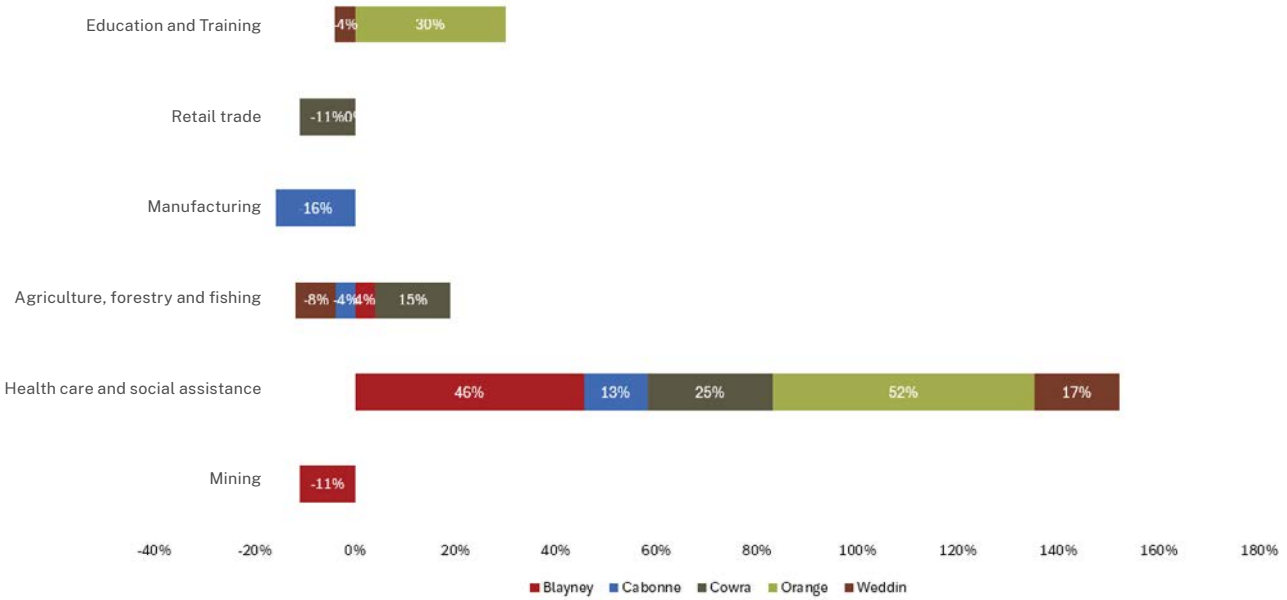


Figure 6 Time series data by Top 3 industry per LGA 2011 – 2021

The region is recognised as a nationally significant focal point for road and rail freight, supporting productive and diversified agribusiness, mining and manufacturing industries and enabling distribution of products domestically and around the world, including organics and free-range produce, raw fruits, seeds, vegetables, meats, and dairy products (Infrastructure Australia, 2022).

Despite this, Infrastructure Australia (2022) notes that there are still gaps in the region's transport and water infrastructure. In 2016, more than 43 million tonnes of freight were moved out of the broader Central West and Orana region, including coal, agricultural commodities, construction materials, and forestry. It is expected that coal transportation will decrease, while grain and other quarry materials will increase (Infrastructure Australia, 2022). Increased investment in transport and freight infrastructure will be necessary to grow industries, with a particular focus on access to Sydney.

In 2020, the size of the economy in Orange, Blayney, and Cabonne, was estimated to be $4.34 billion and in Cowra it was estimated to be $685 million (DRNSW, 2023a; DRNSW, 2023b).

In Orange, Blayney, and Cabonne, industries that experienced Year-on-Year growth between 2011 to 2020 included 'agriculture, forestry and fishing' and 'healthcare and social assistance' (Table 2). The 'mining' industry's Year-on-Year growth was -5.7% across the same period, however it still constituted the highest gross value added (GVA) compared to other industries (Table 2).

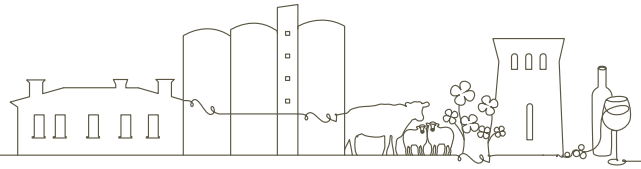
Cowra's industries of 'tourism', 'healthcare' and 'agriculture' all experienced positive Year-on-Year growth between 2011 to 2020, with agriculture the highest gross value adding industry in 2020 ($118 million).

The South West Slopes' Regional Economic Development Strategy encompasses the LGAs of Weddin, Bland, Temora, Hilltop, and Cootamundra-Gundagai, and therefore is only partially representative of Weddin's industry trends. The South West Slopes region experienced Year-on-Year growth between 2011 to 2020 in 'agriculture', 'tourism', and 'energy generation' - highlighting the emerging opportunities in the renewable energy sector (Table 2) (DRNSW, 2023c).

- **Central West LGAs covers 1.2 million hectares and is home to 80,000 people**
- **Largest economic sector is agriculture in four of the five LGAs valued at $769 million for 2020-21 (ABS, 2022a)**
- **The average unemployment rate was 1.36% (September 2023) lower than rate for NSW (3.3%)**
- **The size of the economy in Orange, Blayney, and Cabonne, was approximately $4.34b / Cowra was approximately $685 million**

Industry	Year-on-Year growth 2011–2020	Goss Value Added (GVA) 2020 ($m)
Agriculture, forestry and fishing	+6.1%	$262
Mining	-5.7%	$572
Healthcare and social assistance	+4.9%	$463
Manufacturing	-1.9%	$312

Table 2 Orange, Blayney, Cabonne growth of key industries and value added (DRNSW, 2023a)



2.1.1. Blayney

Snapshot

The Blayney Shire Council covers an area of approximately 152,464 hectares and has a population of 7,497 (ABS, 2021a; ABS, 2021c). In 1815, Surveyor George Evans explored the country to the south of Bathurst and into the lands that eventually became part of the Blayney Shire (Blayney Shire Council, n.d.). Land grants were made to European settlers in Blayney around 1843.

Today, the Blayney LGA is made up of a number of historic and picturesque villages, including: Blayney, Millthorpe, Carcoar, Mandurama, Lyndhurst, Neville, Newbridge, Hobby's Yards, and Barry (Blayney Shire Council, n.d.).

The town of Carcoar remains a historic town, serving as the major town centre during the gold rushes of the 1850s (Blayney Shire Council, n.d.). In 1876, rail came to the town of Blayney, and it has been the main centre since (Blayney Shire Council, n.d.). Blayney has a population of 3,448 and sits 850m above sea level on the Central Tablelands of NSW (ABS, 2021c).

The area is popular for bushwalking, cycling and horse riding. The Shire annually hosts Sculptures by the Bush. Carcoar Dam hosts water sports enthusiasts, and a number of streams and waterways allow for recreational fishing. Millthorpe hosts a market twice a year in autumn and Christmas and is recognised as one of the best in NSW (Blayney Shire Council, n.d.). Milthorpe has also been a set for numerous historical film and TV series.

The 'agriculture, forestry and fishing' industry is the largest industry of employment, with the gross value of agricultural commodities totalling over $63 million in 2020-21, with 51% of value generating from cattle (ABS, 2022a). Whilst agriculture, forestry and fishing may be the largest employer, Table 2 shows that mining represents the largest income source for the region.

Industry summary

Across Blayney, mining, manufacturing, agriculture, construction, education and training constitute the main industries. The geographical position of Blayney allows it to serve as a strategic transport centre, with close proximity to both Orange and Bathurst city centres, a rail terminal, direct road access to Melbourne, Sydney, and Adelaide, and easily accessible to the Mid-Western Highway and the Great Western Highway (Think.Orange Region, 2019). Prominent businesses include Newmont Corporation, Nestle, Blayney SeaLink (major cold storage operation), Blayney Crane Services (family-owned crane hire and lifting services), and Australian Native Landscapes.

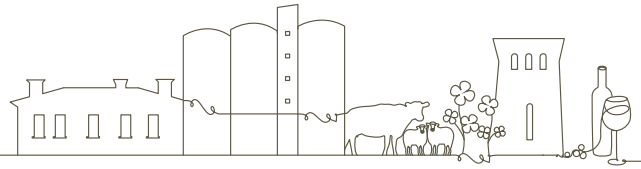
Newmont Corporation owns and operates Cadia Mine in Blayney (Newmont Corporation, 2023). The gold mine is another significant employer and economic contributor to the local region. The mine's water supply is sourced from the Belubula River, Cadiangullong Dam, on-site groundwater bores, Upper Rodds Creek Dam, Flyers Creek Weir, Cadia Creek Weir, Orange Sewage Treatment Plant treated effluent, Blayney Sewerage Treatment Plant treated effluent, Cadia Extended open pit, and site runoff (Newmont Corporation, 2023).

Nestle is a multi-national company which opened its Blayney factory in 1989 to produce wet and dry pet foods (DRNSW, 2022b). Over the last 10 years, more than $200 million has been invested into the site (DRNSW, 2022b). In 2022, the most recent $90 million upgrade was completed, allowing for increased production capacity, export growth, and 20 new jobs on site (Nestle, 2022). Today, it employs more than 300 people (Nestle, 2022). The factory supports more than 60 local businesses and contractors within NSW, with Nestle stating that following the upgrade, more than 85% of raw materials will be sourced locally, including meats and grains (Nestle, 2022).

Blayney Shire also has one of the most advanced livestock facilities in Australia, with Carcoar housing one of the largest livestock exchanges in NSW, the Central Tablelands Livestock Exchange (CTLX) (Blayney Shire Council, n.d.).

Additional to the already existing industry in Blayney, Regis Resources Ltd has been granted development consent by the NSW Independent Planning Commission for the McPhillamys Gold Project, with a final feasibility study and funding strategy now in development. The proposed open-cut mine in Blayney will generate approximately 480 jobs during the initial 12-18 month construction period and 260 jobs once operational, with local recruitment a priority (McPhillamys Gold Project, n.d.).

A demographic and socio-economic summary of the Blayney LGA is provided in Figure 7.



Population characteristics

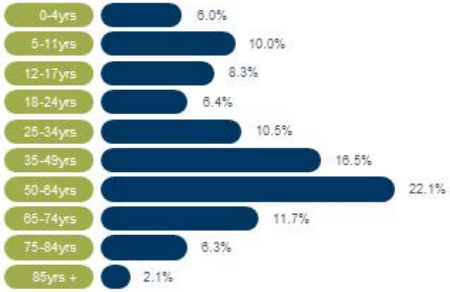
Blayney population 2021
7,497

Aboriginal and Torres Strait Islander population
433

Population by 2041
7,861

Estimated annual population growth rate of 0.4%

Age distribution



Median age

Blayney	43 years
NSW	39 years

Born overseas

Blayney	6.2%
NSW	29.3%

Speaks a language other than English

Blayney	1.6%
NSW	26.6%

With the top 3 most spoken language other than English in Blayney including:

- German – 0.1%
- Spanish – 0.1%
- Urdu – 0.1%

Require assistance with core activities

Blayney	2.6%
NSW	2.7%

Work and economy

Top industries of employment

Top occupations

Unemployment

Blayney	4.3%
NSW	4.9%

Labour force participation

Blayney	61.1%
NSW	58.7%

Journey to work by car

Blayney	67.5%
NSW	46.6%

Median individual income

Blayney	$765
NSW	$813

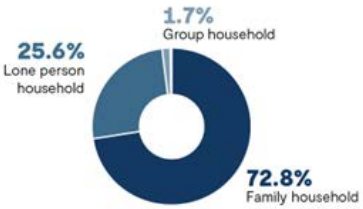
Median household income

Blayney	$1,547
NSW	$1,829

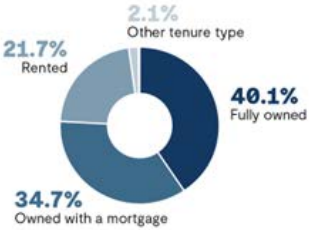
Family and dwelling characteristics

- **19** suburbs
- Average household size **2.5** people
- **95.1%** of residential dwelling are separate houses
- **2.8%** of households had no motor vehicle
- **90.9%** of residential dwellings are occupied
- **80.9%** of people have lived at the same address as one year ago
- Experience rental stress **25.3%**
- **2.0%** rent social housing

Household type



Tenure type



Education and qualifications

Have completed Year 12 or equivalent

Blayney	41.4%
NSW	58.9%

Have completed a Bachelor's degree

Blayney	21.7%
NSW	32.9%

Have completed a Certificate level (total)

Blayney	52.9%
NSW	32.3%

Community and wellbeing

54.9%

reported having no long-term health conditions in the 2021 Census. Of those who reported long-term health conditions, the most common where:

- **Arthritis**
- **Asthma**
- **Mental health condition**

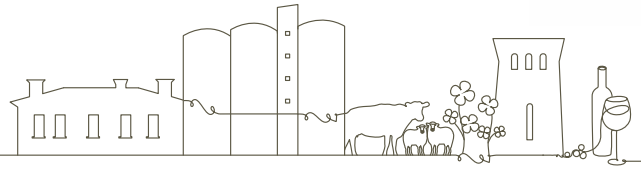
Score of 6 within NSW and Australia

in terms of their relative socio-economic advantage and disadvantage (IRSAD). This indicates a moderate level o advantage in Blayney when compared to the rest of NSW and Australia.

Volunteered

Blayney	18.2%
NSW	13.0%

Figure 7 Socio-economic summary of the Blayney LGA (ABS, 2023), (ABS, 2022)



2.1.2. Cabonne

Snapshot

The Cabonne LGA is the largest geographically of the five LGAs, covering an area of 602,235 hectares and hosting a population of 13,877 (ABS, 2021a; ABS, 2021c). It is made up of 11 towns, villages, and localities, including Borenore, Canowindra, Cargo, Cudal, Cumnock, Eugowra, Manildra, Molong, Mullion Creek, Nashdale and Yeoval. The largest towns are Canowindra and Molong, each with approximately 2,500 residents.

The area is known as 'Australia's Food Basket' and is largely under agricultural production (427,438 hectares or 71%), producing an array of food including dairy products, beef, lamb, venison, apples, berries, canola oil, wine, flour, eggs, honey, and gourmet products (ABS, 2022b). The gross value of agricultural commodities in 2021 totalled over $286 million, with livestock products accounting for 20% of the value produced, closely followed by cattle meat (16%) (ABS, 2022a). The Cabonne area contains two different wine regions, generating over $2.7 million in gross value from wine production (ABS, 2022a). Nearer to Orange is the cool-climate wine region that produces red varieties, and nearer to Cowra is the hot climate wine region which is famous for its chardonnays (Cabonne Council, n.d.).

The region also boasts stunning natural scenery and National Parks, including Gaanha Bula (Mount Canobolas) and Borenore Caves. In Eugowra lies Escort Rock - the site of Australia's biggest and most famous gold robbery by Frank Gardiner (Cabonne Council, n.d.). Yeoval village is the childhood home of Banjo Paterson, one of Australia's most famous poets. Cabonne hosts several events including the Canowindra International Balloon Festival, Eugowra Canola Cup Carnival, and the Australian National Field Days (Cabonne Council, n.d.).

Visitors can tour several museums to learn about the history of Cabonne, including its bushranger history and Australia's first gold rush. Cabonne hosts several events, including the Eugowra Mandagery Cup, Banjo Paterson Festival, Orange Wine Month, and Eugowra High Tea (Cabonne Council, 2023).

Industry summary

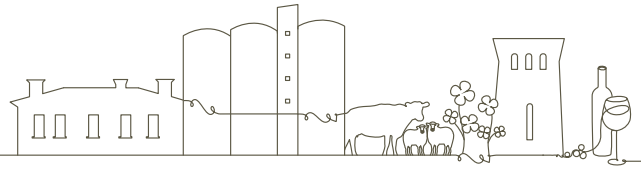
Cabonne's economy was founded on agriculture, however mining has started to play an increasing role, as well as manufacturing for food and wine products.

Cabonne has many large manufacturers, including the Manildra Group, an Australian family-owned agribusiness established in 1952 (Manildra Group, n.d.). The company manufactures food and industrial products in Australia and the United States, and exports to every continent. They own and operate Manildra Flour Mill, Australia's largest flour mill (Manildra Group, n.d.). In conjunction with their three other mills in regional NSW, more than 1 million tonnes of wheat per annum is milled (close to one-sixth of NSW's total wheat production) and more than 1,000 regional people are employed (Manildra Group, n.d.).

Manildra Group also owns and operates MSM Stockfeeds and MSM Milling. The MSM Milling facility in Manildra processes oilseeds and is a partnership with local farming brothers Bob and Pete Mac Smtih. Manildra Group also operate four state-of-the-art grain storage facilities, with one located in Manildra (Manildra Group, n.d.). Other businesses located in the Cabonne region include Canobolas Eggs, Bryton Wool and Gundamain Pastoral Co (Think.Orange Region, 2019).

In 2021 Cabonne Council produced a Cabonne Economic Development and Visitor Economy Strategy. The strategy focuses on leveraging agriculture, population attraction and retention, tourism, and agri-tourism. As part of the strategy, Council has launched the Cabonne Collective to assist local businesses, and has undertaken projects to activate the Molong and Canowindra CBDs (Cabonne Council, 2023).

A demographic and socio-economic summary of the Cabonne LGA is provided in Figure 8.



Population characteristics

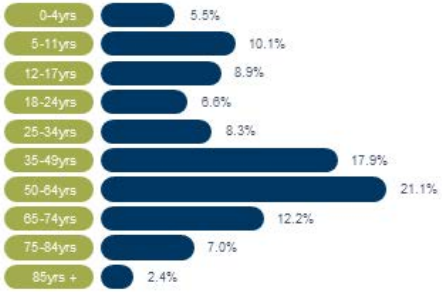
Cabonne population 2021
13,766

Aboriginal and Torres Strait Islander population
693

Population by 2041
15,657

Estimated annual population growth rate of 0.6%

Age distribution



Median age

Cabonne	44 years
NSW	39 years

Born overseas

Cabonne	5.7%
NSW	29.3%

Speaks a language other than English

Cabonne	2.1%
NSW	26.6%

With the top 3 most spoken language other than English in Cabonne including:

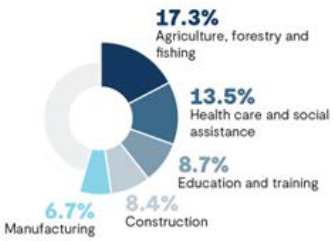
- German – 0.2%
- Afrikaans – 0.2%
- Mandarin – 0.1%

Require assistance with core activities

Cabonne	2.2%
NSW	2.7%

Work and economy

Top industries of employment



Top occupations

Unemployment

Cabonne	2.6%
NSW	4.9%

Labour force participation

Cabonne	61.1%
NSW	58.7%

Journey to work by car

Cabonne	67.7%
NSW	46.6%

Median individual income

Cabonne	$768
NSW	$813

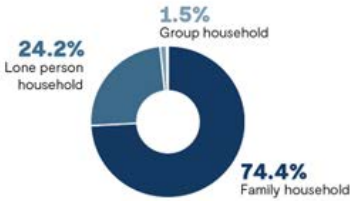
Median household income

Cabonne	$1,538
NSW	$1,829

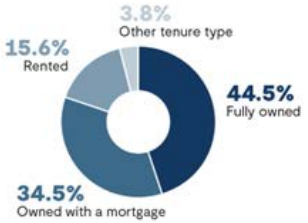
Family and dwelling characteristics

- 56 suburbs
- Average household size 2.6 people
- 93.6% of residential dwelling are separate houses
- 2.4% of households had no motor vehicle
- 89.7% of residential dwellings are occupied
- 82.7% of people have lived at the same address as one year ago
- Experience rental stress 22.4%
- 0.6% rent social housing

Household type



Tenure type



Education and qualifications

Have completed Year 12 or equivalent

Cabonne	42.8%
NSW	58.9%

Have completed a Bachelor's degree

Cabonne	24.7%
NSW	32.9%

Have completed a Certificate level (total)

Cabonne	47.7%
NSW	32.3%

Community and wellbeing

56.5%

reported having no long-term health conditions in the 2021 Census. Of those who reported long-term health conditions, the most common where:

- Arthritis
- Asthma
- Mental health condition

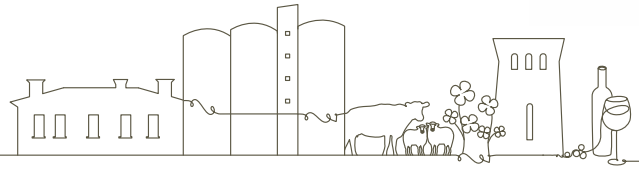
Score of 8 within NSW and Australia

in terms of their relative socio-economic advantage and disadvantage (IRSAD). This indicates a moderate to high level of advantage in Cabonne when compared to the rest of NSW and Australia.

Volunteered

Cabonne	18.2%
NSW	13.0%

Figure 8 Socio-economic summary of the Cabonne LGA (ABS, 2023), (ABS, 2022)



2.1.3. Cowra

Snapshot

The Cowra Council LGA is in Central NSW, approximately one hour drive from Orange. It has a total population of 12,705 and an area of 280,878 hectares (ABS, 2021a; ABS, 2021c). The Cowra LGA includes the township of Cowra (the main centre) and the villages of Darby's Fall, Wyangala, Woodstock, Wattamondara, Gooloogong, Noonbinna, Billimari, and Morongla.

The Cowra Prisoner of War (POW) Camp site is a top heritage site in NSW (Cowra Council, n.d.). It was constructed in 1941-43 to house Italian POWs captured by allied forces during WWII. By December 1942, over 2,000 prisoners (mainly Italian) were housed in the camp, and in 1943 and 1944, over one thousand Japanese prisoners arrived. A mass breakout of over 1,000 Japanese occurred in 1944, the biggest in British and Australian War History (Cowra Council, n.d.)

As a result, Cowra has historical ties to Japan and Italy, represented through the Avenue of Cherry Trees, the Cowra Japanese Garden, War Cemetery, and the Sakura Matsuri Festival. Cowra also prides itself on its accepting community and celebration of different cultures, annually hosting the Festival of International Understanding. Cowra also celebrates different cultures through the Cowra Regional Art Gallery which offers exhibitions, events, and educational activities to engage the community and visitors (Cowra Council, n.d.)

The 'agriculture, forestry, and fishing' industry accounts for 16.3% of Cowra's employment (ABS, 2021a), with agricultural commodities in Cowra generating over $217 million in gross value (ABS, 2022a). These commodities include horticulture, sheep and lamb, cattle, grains and other crops.

Industry summary

Cowra's position, two-hours from Canberra and four hours from Sydney, provides a great base for manufacturing and retail providers with increased transportation and distribution needs. Cowra's retail, business services, agricultural services, manufacturing, wholesale trade, education, health, and hospitality services has expanded significantly in recent years (Cowra Council, n.d.). In 2020, the agricultural industry contributed to the highest gross value added in the Cowra LGA ($118 million), followed by healthcare ($43 million), and manufacturing ($49 million) (Reference Table 3.) (DRNSW, 2023b).

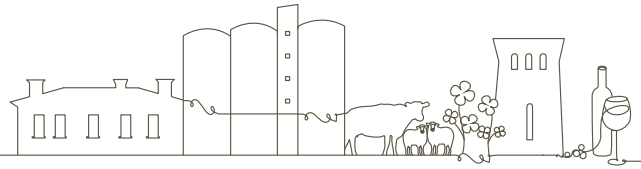
Main businesses include Breakout River Meats, an agricultural enterprise that processes high quality lamb, pork, and beef products for the Australian domestic market (Breakout River, 2014). Brumby Aircraft Australia is another notably Cowra-based business. They design and manufacture aircraft, as well as install hard-to-source aircraft parts (Brumby Aircrafts Australia, 2024). Brumby Aviation has plans to expand its manufacturing plant and develop an international pilot training academy in Cowra (Cowra Council, n.d.). Cowra airport continues to grow, with the Council constructed 21 lot subdivision almost sold out to a variety of general aviation operators. FlyOz has expanded its pilot training operation and the NSW Rural Fire Service has located its regional office operations at the Cowra airport. Other businesses within the Cowra LGA includes JGW Harvesting, Fred Fahey Aerial Services, Beecher Wool Services, Cowra Concrete Products, K-Line Agriculture, and Geronimo Farm Equipment, who produce high quality farm equipment.

The Cowra Agricultural Research and Advisory Station as part of DPIRD is known for its impressive research to improve the Australian sheep meat industry and plant breeding (DPI, n.d.a).

Industry	Year-on-Year growth 2011 - 2020	Goss Value Added (GVA) 2020 ($m)	Visitor spend in 2020 ($m)
Tourism	+3.4%	NA	$43
Healthcare	+4.6%	$63	NA
Agriculture	+8.6%	$118	NA
Manufacturing	-1.6%	$49	NA

Table 3 Cowra industry growth, industry value add, and visitor spend (DRNSW, 2023b)

A demographic and socio-economic summary of the Cowra LGA is provided in Figure 9.



Population characteristics

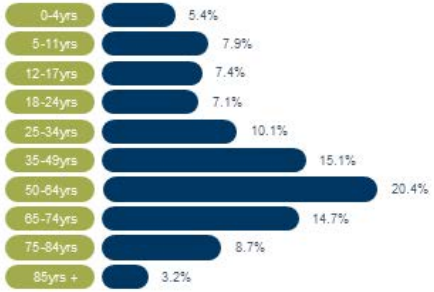
Cowra population 2021
12,724

Aboriginal and Torres Strait Islander population
1,126

Population by 2041
14,265

Estimated annual population growth rate of 0.5%

Age distribution



Median age

Cowra	47 years
NSW	39 years

Born overseas

Cowra	7.1%
NSW	29.3%

Speaks a language other than English

Cowra	3.8%
NSW	26.6%

With the top 3 most spoken language other than English in Cowra including:

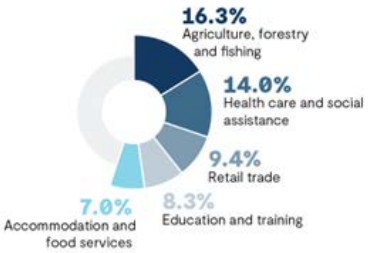
- Wiradjuri – 0.3%
- Kinyarwanda – 0.2%
- Mandarin – 0.2%

Require assistance with core activities

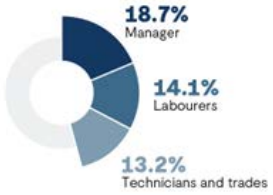
Cowra	4.0%
NSW	2.7%

Work and economy

Top industries of employment



Top occupations



Unemployment

Cowra	5.1%
NSW	4.9%

Labour force participation

Cowra	51.5%
NSW	58.7%

Journey to work by car

Cowra	70.8%
NSW	46.6%

Median individual income

Cowra	$606
NSW	$813

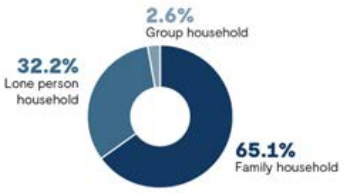
Median household income

Cowra	$1,112
NSW	$1,829

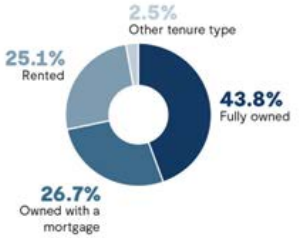
Family and dwelling characteristics

- **15** suburbs
- Average household size **2.3** people
- **92.1%** of residential dwelling are separate houses
- **6.1%** of households had no motor vehicle
- **87.4%** of residential dwellings are occupied
- **79.3%** of people have lived at the same address as one year ago
- Experience rental stress **30.1%**
- **4.4%** rent social housing

Household type



Tenure type



Education and qualifications

Have completed Year 12 or equivalent

Cowra	33.4%
NSW	58.9%

Have completed a Bachelor's degree

Cowra	18.2%
NSW	32.9%

Have completed a Certificate level (total)

Cowra	56.3%
NSW	32.3%

Community and wellbeing

50.6%

reported having no long-term health conditions in the 2021 Census. Of those who reported long-term health conditions, the most common where:

- **Arthritis**
- **Mental health condition**
- **Asthma**

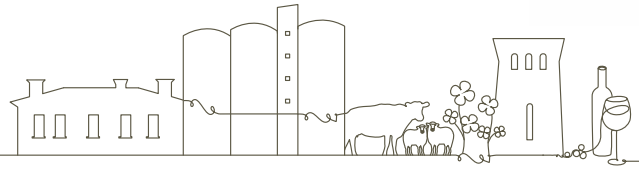
Score of 2 within NSW and Australia

in terms of their relative socio-economic advantage and disadvantage (IRSAD). This indicates a high level of disadvantage in Cowra when compared to the rest of NSW and Australia.

Volunteered

Cowra	18.0%
NSW	13.0%

Figure 9 Socio-economic summary of the Cowra LGA (ABS, 2023), (ABS, 2022)



2.1.4. Orange

Snapshot

Orange City Council is part of the Central West and is almost entirely surrounded by the Cabonne LGA. The Orange LGA covers 28,422 hectares and has a population of 43,512 people; the smallest land size of the five LGAs but the largest population (ABS, 2021a; ABS, 2021c).

The area surrounding Orange has a rich mining past; in 1851 William Tom found the first payable gold in Australia at Ophir (Orange City Council, n.d.a). The mining of gold in and around the region brought great wealth to the area. The fertile land in the area coupled with its reliable rainfall allowed Orange's development to continue beyond the goldrush. By the 1860s, the Orange area was well known as the granary of the west. Today, Orange's largest industries of employment include health care and social assistance (20.8%), education and training (9.6%), and retail trade (9.6%) (ABS, 2021a).

Orange serves as a regional city and a strategic centre that provides people in the surrounding rural communities' access to quality health, aged care, and community services and facilities. Orange markets itself as a family-friendly community that is affordable and convenient (Orange City Council, n.d.a). Orange City Council is currently in the process of re-vitalising its Central Business District (CBD) with the FutureCity project. The three-year plan will attract visitors and new businesses into the CBD and bolster its role as a key service provider of central NSW (Orange City Council, n.d.a). Orange's population is growing, with a 7.9% increase between 2016 and 2021 (ABS, 2021c).

Orange's already successful and growing gourmet restaurant and café culture and internationally recognised wine industry has fostered the city's reputation as a 'food capital'. Orange's value of agricultural commodities produced in 2020-21 totalled over $15 million, with fruit and nuts, wine, and nurseries accounting for $3.9 million (26% of the value of all agricultural commodities produced in Orange) (ABS, 2022a). Other attractions and events include the Orange Regional Museum, the Orange Harmony Festival, its numerous parks such as Cook and Robertson Parks, F.O.O.D. Week, the Orange farmers market, and the Botanic Gardens (Orange City Council, n.d.a).

Industry summary

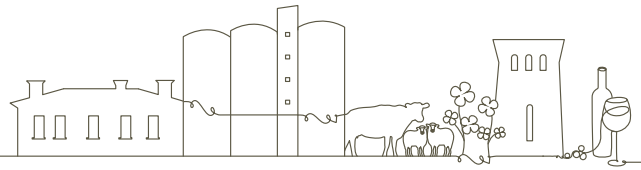
Orange businesses are diverse in nature, and benefit from sizeable facilities and business premises, a skilled workforce, and a large catchment area. Orange's economy is stimulated from mining in neighbouring Blayney Shire (Cadia Mine), gastrotourism from its and Cabonne's food and wine production, healthcare, public administration, manufacturing, education, and training (Think.Orange Region, 2019).

Orange has a significant healthcare industry and provides services to many parts of the Central and Western parts of NSW. Orange Health Service is the regional trauma centre for the mid-west and the largest hospital in the Western NSW Local Health District (NSW Government, 2024b). The hospital has five operating theatres, 12 beds in the critical care unit, and provides education through its affiliation with the University of Sydney, Charles Sturt University, and the University of Wollongong (NSW Government, 2024b; Hospitals Accommodation, 2024).). Also located on its campus is the Central West Cancer Care Centre, a Ronald McDonald House, and the Bloomfield Hospital that provides inpatient and outpatient treatment for mental health, drugs, and alcohol (NSW Government, 2024b).

As a regional hub, there are several government departments, and government-funded businesses that provide employment and drive industry growth. The head office of DPIRD is located in Orange; along with the Orange Agricultural Institute of Research and an office of the Orange Rural Assistance Authority (RAA) (DPI, n.d.b). Orange also hosts a regional office for NSW Department of Education and Service NSW.

Orange hosts Charles Sturt University who among other disciplines provide tertiary education in health, dentistry, and agriculture. The University of Sydney's School of Rural Health and NSW TAFE also have campuses in Orange (TAFE NSW, 2024). These education institutions leverage expertise through industry collaborations, attract students from surrounding areas, and help to retain young people in the region. Other businesses include LiveBetter (NDIS and aged care provider), Catholic Healthcare, Green Homes, Uniting (aged care), and Ron Finemore Transport (Think.Orange Region, 2019).

A demographic and socio-economic summary of the Orange LGA is provided in Figure 10.



Population characteristics

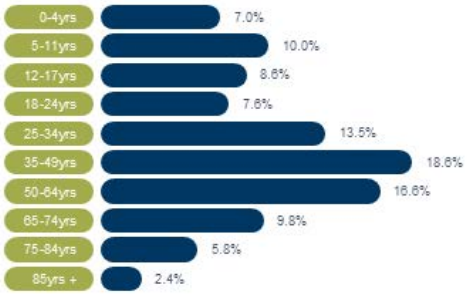
Orange population 2021
43,512

Aboriginal and Torres Strait Islander population
3,330

Population by 2041
51,161

Estimated annual population growth rate of 0.9%

Age distribution



Median age

Orange	37 years
NSW	39 years

Born overseas

Orange	10.6%
NSW	29.3%

Speaks a language other than English

Orange	7.2%
NSW	26.6%

With the top 3 most spoken language other than English in Orange including:

- Malayalam – 0.6%
- Nepali – 0.5%
- Mandarin – 0.4%

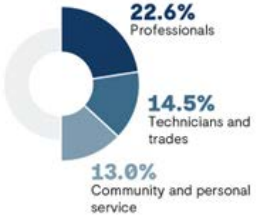
Require assistance with core activities

Orange	3.0%
NSW	2.7%

Work and economy

Top industries of employment

Top occupations



Unemployment

Orange	3.5%
NSW	4.9%

Labour force participation

Orange	62.1%
NSW	58.7%

Journey to work by car

Orange	73.5%
NSW	46.6%

Median individual income

Orange	$842
NSW	$813

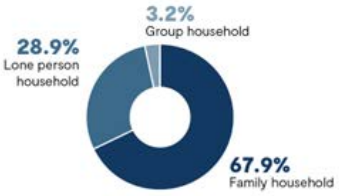
Median household income

Orange	$1,665
NSW	$1,829

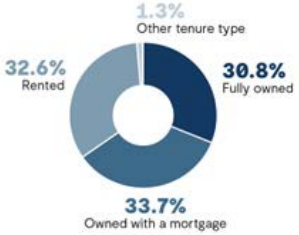
Family and dwelling characteristics

- **13** suburbs
- Average household size **2.5** people
- **86.3%** of residential dwelling are separate houses
- **6.1%** of households had no motor vehicle
- **91.7%** of residential dwellings are occupied
- **78.7%** of people have lived at the same address as one year ago
- Experience rental stress **27.2%**
- **5.2%** rent social housing

Household type



Tenure type



Education and qualifications

Have completed Year 12 or equivalent

Orange	48.5%
NSW	58.9%

Have completed a Bachelor's degree

Orange	26.9%
NSW	32.9%

Have completed a Certificate level (total)

Orange	43.3%
NSW	32.3%

Community and wellbeing

55.2%

reported having no long-term health conditions in the 2021 Census. Of those who reported long-term health conditions, the most common where:

- **Mental health condition**
- **Asthma**
- **Arthritis**

Score of 7 within NSW and Australia

in terms of their relative socio-economic advantage and disadvantage (IRSAD). This indicates a moderate to high level of advantage in Orange when compared to the rest of NSW and Australia.

Volunteered

Orange	15.2%
NSW	13.0%

Figure 10 Socio-economic summary of the Orange LGA (ABS, 2023), (ABS, 2022)

2.1.5. Weddin

Snapshot

The Weddin LGA is in the mid Central West and is bordered to the east with the Cowra LGA. The Shire is at the crossroads of the major thoroughfares from Sydney to Adelaide and Brisbane to Melbourne, and thus can play a strategic role in attracting people passing through. The Weddin LGA covers 341,486 hectares and has a population of 3,608 (ABS, 2021a; ABS, 2021c). This includes the towns and villages of Grenfell, Greenthorpe, Caragabal, Bimbi, and Quandialla.

Weddin is centred around and derives its name from the Weddin Mountains. The mountain is of great significance to the Wiradjuri people and local residents and reaches 400 metres above the surrounding landscape. The Weddin Mountains National Park receives over 25,000 visitors annually, making it the most popular tourist attraction in Weddin (Weddin Shire Council, n.d.b).

In recent years there has been investment in community facilities such as the Grenfell Main Street Renewal project, Weddin Shire entry signs, major upgrades to the New Forbes Road and Pullabooka Road, Library, Aquatic Centre, Taylor Park, and sporting amenities that all residents can access and enjoy (Weddin Shire Council, n.d.a). It is a culturally rich, vibrant, and inclusive community. The area hosts a number of events including the Henry Lawson Festival of Arts, Weddin Mountain Muster, and the Light up the Night festival (see case studies in Section 4). Accessibility is a high priority for the community, with the Council improving its social media presence, introducing Council Mobile Hubs, and offering 'reducing social isolation' grants (Weddin Shire Council, n.d.a).

The region's largest employer is the 'agriculture, forestry, and fishing' industry (32.7%) (ABS, 2021a). The gross value of agricultural commodities produced in 2020-21 totalled over $186 million, with wheat the dominant commodity produced, accounting for 44% of gross value (ABS, 2022a). Further detail is provided in Table 4.

Weddin has low unemployment rate of 1.4%, but a decreasing population with a -1.5% change between 2016 and 2021 (Australian Government 2023; ABS, 2021c). To combat its decreasing population, Weddin Shire Council is attempting to adjust its 2011 Local Environmental Plan (LEP) to increase opportunities for more residential development (Weddin Shire Council, 2023).

Industry summary

Of the five LGAs, Weddin had the smallest population in 2021 at just 3,601 people (ABS, 2021a). According to the Weddin Shire Council's Community Strategic Plan, the community wants to grow the total resident population to more than 4,700 people by 2027 to support local employment and business (Weddin Shire Council, n.d.b). Specifically, Weddin wishes to expand specialist retailers, manufacturing, agri and eco-tourism (farm stays and tours), and see the region promoted as a place to live, work, and invest (Weddin Shire Council, n.d.b). The Shire has a strong gold mining history, boasting that the Grenfell goldfields were the richest gold fields in NSW during the late 1860s (Weddin Shire Council, n.d.a).

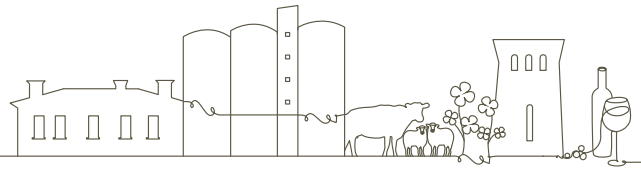
Presently, there are a number of agribusinesses including Delta Agribusiness who have an office in Grenfell and employ 60 full-time agronomists across NSW and Victoria (Delta Agriculture, n.d.). Bromar Engineering is a family owned and operated business established in 1990 which employs 30 local people (Bromar Engineering, n.d.). They provide farming products and equipment. Conron Stockcrete are another local family-owned business who have a state-of-the-art manufacturing facility in Grenfell, delivering precast concrete products for agricultural use across NSW, Victoria, South Australia and Southern QLD (Conron Stockcrete, 2024). Grenfell Commodities is a locally owned, family operated business employing 9 people (Grenfell Commodities, 2024). They provide milling operations and are a supplier of stockfeed. Additionally, they commissioned a muralist in 2018 to transform the four silos on the corner of West Street and South Street which are part of the Silo Art Trail (Grenfell Commodities, 2024).

There are numerous business services and mining engineering and construction businesses in the LGA, including those working at or delivering services for the Lake Cowall open pit gold mine in the neighbouring LGA of Bland (Evolution Mining, 2024). The main industries apart from agriculture are health care and social assistance, education and training, construction and manufacturing (RDA Central West, 2021). The Newell Highway connects Victoria and QLD. Grenfell is approximately midway between Melbourne and Brisbane, just east of the Newell Highway, and is a popular stop for caravan, campervan and motorhome communities (NHPC, 2024).

	Year-on-Year growth 2011–2020	Gross Value Added (GVA) 2020 ($m)	Visitor spend in 2020 ($m)
Agriculture	+7.8%	$594	NA
Mining	-2.8%	$159	NA
Tourism	+1.8%	NA	$72
Energy generation (including renewables)	+4%	$159	NA

Table 4 South West Slopes (includes Weddin LGA) industry growth, industry value add, and visitor spend (DRNSW, 2023c)

A demographic and socio-economic summary of the Weddin LGA is provided in Figure 11.



Population characteristics

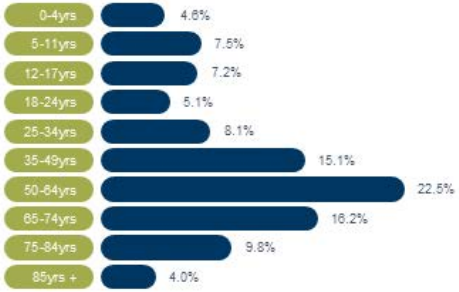
Weddin population 2021
3,608

Aboriginal and Torres Strait Islander population
169

Population by 2041
3,292

Estimated annual population growth rate of -0.5%

Age distribution



Median age

Weddin	52 years
NSW	39 years

Born overseas

Weddin	4.9%
NSW	29.3%

Speaks a language other than English

Weddin	1.5%
NSW	26.6%

With the top 3 most spoken language other than English in Weddin including:

- Malayalam – 0.2%
- Hindi – 0.2%
- Arabic – 0.1%

Require assistance with core activities

Weddin	4.0%
NSW	2.7%

Work and economy

Top industries of employment

Top occupations

Unemployment

Weddin	4.7%
NSW	4.9%

Labour force participation

Weddin	51.0%
NSW	58.7%

Journey to work by car

Weddin	58.4%
NSW	46.6%

Median individual income

Weddin	$575
NSW	$813

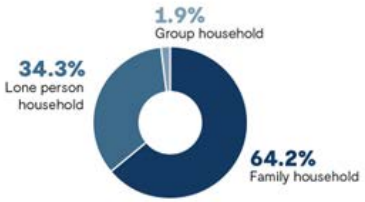
Median household income

Weddin	$1,046
NSW	$1,829

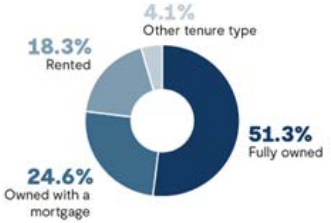
Family and dwelling characteristics

- **13** suburbs
- Average household size **2.2** people
- **93.7%** of residential dwelling are separate houses
- **5.5%** of households had no motor vehicle
- **85.5%** of residential dwellings are occupied
- **82.1%** of people have lived at the same address as one year ago
- Experience rental stress **23.4%**
- **1.9%** rent social housing

Household type



Tenure type



Education and qualifications

Have completed Year 12 or equivalent

Weddin	35.1%
NSW	58.9%

Have completed a Bachelor's degree

Weddin	20.3%
NSW	32.9%

Have completed a Certificate level (total)

Weddin	54.0%
NSW	32.3%

Community and wellbeing

50.4%

reported having no long-term health conditions in the 2021 Census. Of those who reported long-term health conditions, the most common where:

- **Arthritis**
- **Asthma**
- **Mental health condition**

Score of 4 within NSW and 5 within Australia

in terms of their relative socio-economic advantage and disadvantage (IRSAD). This indicates a moderate level o disadvantage in Weddin when compared to the rest of NSW and Australia.

Volunteered

Weddin	24.2%
NSW	13.0%

Figure 11 Socio-economic summary of the Weddin LGA (ABS, 2023), (ABS, 2022)

2.2. First Nations People

The Central West LGAs are steeped in the history of the Wiradjuri people, who are the Traditional Custodians of the land, water, and sky. Spanning from Central Tablelands on the western side of the blue mountains to the semi-arid Central West Plains, Wiradjuri Country holds stories and connections that transcend time. Wiradjuri people continue to care for Country in this area.

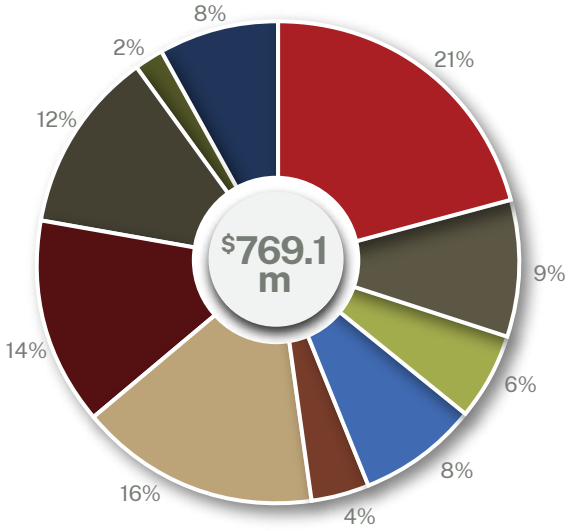
Despite social and cultural challenges prevalent today, Wiradjuri culture has continued to thrive. The resilience of these First Nations people is evident in their ongoing connection to the lands, waters, and sky. Over the years, much knowledge about Wiradjuri heritage has been passed down, researched, and recorded, providing a glimpse into their enduring culture.

Today, several locations around Orange and neighbouring LGAs offer valuable insights into Wiradjuri heritage, culture, and Country. Visitors can pay homage at the gravesite of Yuranigh, a Wiradjuri figure recognised for his exemplary courage, honesty, and unwavering loyalty (Culture maps for Central NSW, 2023). Educational opportunities are available through Aboriginal Culture Tours and Education Services, located within the central regions of the Orange, Blayney, and Cabonne Shires. These tours, guided by Wiradjuri knowledge keepers, offer a deeper understanding of traditional practices, tools, and narratives loyalty (Culture maps for Central NSW, 2023).

Visual displays are a focus of expression for the Wiradjuri people in this area. A collaborative project within the Orange City Centre has resulted in the establishment of a Gathering Space. This space features eleven distinct animal totems, each representing the diverse language groups of the region. The Gathering Space serves as a testament to the significance of community and interconnectedness for the Wiradjuri people locally (Culture maps for Central NSW, 2023). In addition, situated beneath the Lachlan River Bridge in the Cowra area are the Cowra Bridge Pylons. These pylons are adorned with Aboriginal Murals, which depict the historical significance and cultural heritage of the Wiradjuri inhabitants of this region (Culture maps for Central NSW, 2023). These spaces serve as windows into the deep-rooted history and cultural significance of the Wiradjuri people, embodying their continued presence and contributions to the region.

2.3. Agriculture

The area's climatic conditions coupled with improvements in research and technology, has made the Central West region a considerable contributor to Australia's agricultural production. The 2021 ABS census valued the region's gross agricultural production at $769 million for 2020-21 (ABS, 2022a). Figure 12 provides a detailed breakdown of this production by commodity.



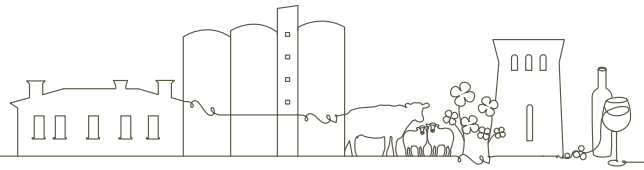
	Wheat	157.9m
	Canola	65.6m
	Other crops	48.7m
	Hay	64.8m
	Vegetables	33.6m
	Livestock products	121.4m
	Cattle and Calves slaughtered	109.9m
	Sheep and lambs slaughtered	89.7m
	Other slaughtered (pigs, poultry)	14.2m
	Other (fruit and nut, nurseries, wine)	63.3m
	Total	**769.1m**

Figure 12: Gross value of agricultural commodities produced within the LGAs of Blayney, Cabonne, Cowra, Orange, and Weddin 2020-21 (ABS, 2022a).

The 'agriculture, forestry, and fishing' industry also contributes to the economy by serving as the largest industry of employment for four of the five LGAs (ABS, 2021a). In Weddin, it accounts for 32.7% of employment, and Cabonne 17.3% (ABS, 2021a).

The Central West region lies within the Murray Darling Basin. The topography is diverse and characterised by wide valleys, floodplains, and numerous Darling River tributaries (NSW Government, 2021). Rainfall across the region is fairly uniform throughout a year (see Figure 25).

The diversity of production includes wheat, canola, hay, barley, vegetables, fruit and nuts, wine and nurseries (ABS, 2022a). Livestock production also constitutes a significant portion of agricultural production (16% of gross value). A large portion of land is used for livestock grazing (802,532 hectares), with Blayney having a total of 179,150 sheep and lamb and 52,085 cattle (around 2,000 of those were used for dairy) (ABS, 2022a). Cereal crops including wheat and canola are the dominant crops produced in the region followed by other grazing crops for cattle and sheep. Improved grazing accounted



for the highest land-use type within the region.

Agricultural commodity prices and profit can affect drought sensitivity. In years of high crop prices, drought risk tends to increase as farmers plant more crops and apply more inputs in order to maximise potential profits. This can however expose farms to higher drought risk (ABARES, 2020).

Previous research has shown that larger agricultural farms tend to be less sensitive to drought than smaller farmers, and farms with managers less than 50 years of age are also generally less sensitive to drought (ABARES, 2022).

Water security has been at the forefront of challenges faced by the agricultural sector in Central West. It is recognised that there is a growing need to build resilience through improved water management and infrastructure. Significant and on-going investigation into water security projects for the Central West continues with agencies across all levels of government working together. In early 2024 funding was announced to complete a Final Business Case for the augmentation of Lake Rowlands. Without increased water security, the greater Central West region would be unable to fulfil its full agricultural production potential and could face an average loss in economic uplift of $167 million each year (Infrastructure Australia, 2022).

2.4. The region's infrastructure

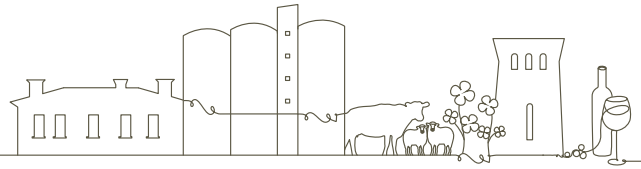
Infrastructure including road, rail, air, and telecommunications can influence a community's ability to thrive. The services available contribute to the livability and accessibility of the LGAs and support the attraction of industry to the region.

The Mid-Western Highway serves as a key road in and out of the region. It stretches between Bathurst (NSW), and Hay (NSW), passing through Blayney, Carcoar, Cowra, and Grenfell. The Mitchell Highway spans the south western regions of Queensland and terminates in Bathurst. It passes through Molong and Orange City Centre, with a heavy-vehicle diversion around the town. Bathurst is connected to Sydney through the Great Western Highway. The road network serves as critical infrastructure for the regions' connectivity. For example, in Cabonne, out of 6,525 employed persons aged 15 years and over, only 20 used at least one form of public transport to commute to work (bus, train, tram, ferry) compared to 4,461 people who travelled to work by car (ABS, 2021a). The road network also enables the movement of freight, connecting the region to major markets in Sydney, Melbourne, Adelaide, and Brisbane.

The region is connected via regional airfields near Cowra and Orange. Orange Regional Airport accommodates the movement of air freight and provides daily passenger connections with Sydney. Between 2018-2023 over $2.5 million has been invested in Orange Airport upgrades and $0.1 million on Cowra airport entrance upgrades (DRNSW, 2023a; DRNSW, 2023b).

The region's current railway infrastructure includes the Orange Broken Hill Railway line that links Sydney to Orange Railway Station via Blayney, Milthorpe, Spring Hill, and Lucknow Railway Stations (Transport for NSW, 2023). At Orange, the railway network splits and heads either northwest to Dubbo, or west to Parkes. These railway networks service both passenger and freight trains (DRNSW, 2023a). Many of the other towns within the five LGAs were previously part of the railway network, with stations at Grenfell, Carcoar, Mandurama, Borenore, Molong, Cumnock, and Eugowra (NationalMap, n.d.). Today, they are no longer in use, with some serving as a base for local community groups, motor clubs, and as tourist trains. Between 2018-2023, $1.1 million was invested on Milthorpe Railway station upgrade (DRNSW2023a). The inland rail corridor passes through the western side of the Weddin LGA.There are also private railway operators such as the Manildra Group who operate their own rail yards and rolling stock and transport produce to port (Manildra Group, n.d.).

The region stands to benefit from new energy transmission infrastructure as part of the Central-West Orana Renewable Energy Zone (REZ) (Infrastructure Australia, 2022). Additionally, the Flyers Creek Wind Farm is in the Blayney and Cabonne LGAs (Iberdrola Australia n.d.). Construction began in April 2022, and it is expected to be operational in 2024. It comprises 38 wind turbines, access tracks, local road infrastructure upgrades, electrical connections, and powerlines. Once operational, it will generate approximately 450 gigawatt hours of electricity per year and provide 6-8 permanent jobs. (Iberdrola Australia n.d.).



Digital connectivity and mobile coverage within the five LGAs rely on telecommunications infrastructure. Geographic features such as hills or mountains can affect coverage (Telstra, n.d.a). In recognition of the importance of digital connectivity, the Federal Government's Mobile Black Spot Program was launched in 2015 (Telstra,n.d.b). The Program's goal was to expand mobile coverage in regional and remote Australia. Across the five LGAs, 18 projects have been funded and completed through the Black Spots Program (NationalMap, n.d.).

Telstra is the main mobile network service provider across the region, with Figure 13 displaying the predicted likely areas of outdoor 4G coverage (Telstra, n.d.a). Figure 13 shows that Telstra's 4G mobile network covers a significant portion of the Central West region, however some gaps still exist. Telstra's newest mobile network technology '5G' covers the towns of Orange, Cowra, Canowindra, and Grenfell, and their older mobile network technology '3G' is set to be discontinued mid-2024 (Telstra, n.d.a).

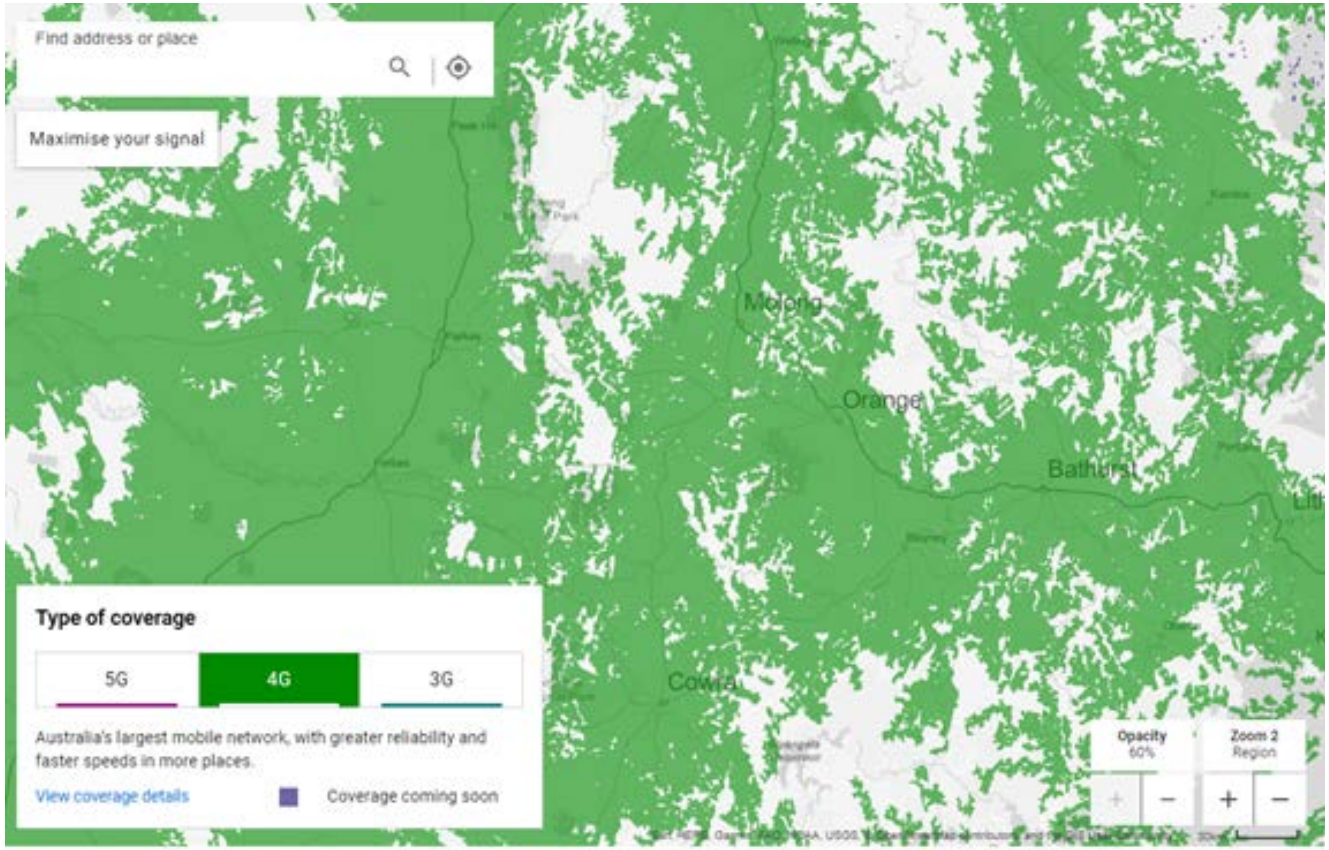


Figure 13 Central West Telstra 4G mobile map network coverage (Telstra, n.d.a).

2.5. The region's services

2.5.1. Education

The LGAs within this plan are home to a range of services for the benefit of their individual communities. The following provides a summary of these services.

Education is one of the key services offered within the region; the Regional Economic Development Strategy identified Orange, Blayney, and Cabonne as having a comparative advantage in education service delivery based on employment numbers in the sector (DRNSW, 2023a). Across the five LGAs, there are over 50 primary and high schools (Australian Schools Directory, 2024). There are three NSW Tafe Campus's in Orange and one campus each in Cowra and Grenfell (TAFE NSW, 2024). Orange also hosts Charles Sturt University and a University of Sydney campus (Rural Medical School) in Orange (TAFE NSW, 2024). Additionally, several not-for-profit organisations and charity's support education pathways. For example, Verto is a Registered Training Organisation and provider of the Australian Government's Australian Apprenticeship Support Network Program. Their support extends to 15,721 participants across Australia (Verto, 2024). Verto are located in Blayney, Cowra and Orange.

With the region experiencing accelerated population growth and a higher number of young people compared to the NSW average, there is a growing demand for education services (DRNSW, 2023a; DRNSW, 2023b). Since 2018, the region has received significant private, commonwealth, state, and local funding as detailed in Table 5.

Project	Estimated project value (m)
Charles Sturt University Rural Medical School and Regional Health Institute (Orange)	$40
Glasshouse facilities at the Cowra Agricultural Research Station	$2.3
Country Universities Centre Cowra	$1.27
Milthorpe Primary School upgrade (Blayney)	$20
Bletchington Primary School upgrade (Orange)	$25
Orange Anglican School expansion	$5.2
Grenfell TAFE Connected Learning Centre	$4

Table 5 Education investments in the region between 2018- February 2023. Source: DRNSW, 2023a; DRNSW, 2023b; DRNSW, 2023c

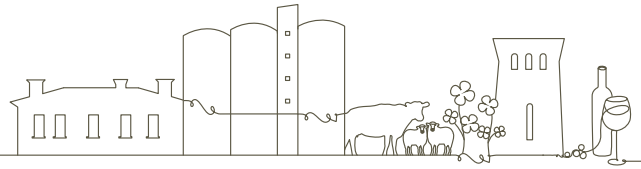
2.5.2. Health and aged care

The region is facing significant challenges to deliver healthcare services, including workforce attraction and retention, a growing and aging population, and an overall increased demand for high quality healthcare services (Infrastructure Australia, 2022; DRNSW, 2023a).

The region has 7 public hospitals: Blayney District Hospital, Canowindra Soldiers Memorial Hospital, Eugowra Memorial Multipurpose Service, Molong Health Service, Cowra Health Service, Orange Health Service (Hospital) and Grenfell Multi Purpose Service (AIHW, 2024a) that offer varying levels of service to their communities. There are also two private hospitals in Orange: Orange Private Centre and Dudley Private Hospital (AIHW, 2024a). Additionally, located on the same campus as Orange Health Service are Bloomfield Hospital which provides specialised psychiatric services, the Central West Cancer Care Centre and a Ronald McDonald House which provides accommodation and support for seriously ill children.

Recent investments (since 2018) to further increase health services within the region include the Cowra Hospital redevelopment (over $110 million), the Molong Multipurpose Health Service ($15 million) and the Canowindra HealthOne Facility ($5.5 million) (DRNSW, 2023a; DRNSW, 2023b).

As shown in Section 2.1.5, nearly 30% of Weddin's population is over the age of 65. In all other LGAs, with the exception of Orange, over 20% of their population is over the age of 65%. The average for NSW is 17.7%. All LGAs have a range of aged care services however, in most cases demand for services outstrips supply. A number of the LGAs note this as a challenge for retaining residents in the area (where there are not appropriate health and aged care services available).



2.5.3. Housing

Housing availability and affordability is another factor that can indicate a community's resilience. The region is argued to have affordable housing (cost advantage) compared to NSW. Table 6 depicts indicators of mortgage and rent affordability across the five LGAs (ABS, 2021a). Compared to NSW, each LGA has a lower percentage of households with mortgage repayments more than 30% of household income, and each LGA has a lower percentage of households with rent payments more than 30% of household income (Table 6). Moreover, Blayney, Cabonne, Cowra, and Weddin exhibit higher rates of dwellings that are owned outright (40%, 45%, 44%, 51% respectively) compared to only 32% in NSW (Table 7). This may indicate that the region experiences better housing affordability compared to broader NSW.

	Blayney	Cabonne	Cowra	Orange	Weddin	NSW
Mortgage repayments more than or 30% of imputed household income (%)	10.8%	12.4%	9.4%	10.0%	9.2%	17.3%
Rent payment more than 30% of imputed household income (%)	26.3%	23.3%	30.3%	29.4%	24.5%	35.5%

Table 6 Mortgage and rent affordability indicators for occupied private dwellings (2021 Census) (ABS, 2021a)

	Blayney	Cabonne	Cowra	Orange	Weddin	NSW
Total occupied private dwellings (2021)	2,763	4,913	5,081	16,183	1,500	2,900,468
Dwellings owned outright	1,108 (40%)	2,187 (45%)	2,225 (44%)	4,983 (31%)	769 (51%)	914,537 (32%)
Dwellings owned with a mortgage	959 (35%)	1,693 (34%)	1,355 (27%)	5,454 (34%)	369 (25%)	942,804 (33%)
Dwelling rented	600 (22%)	767 (16%)	1,274 (25%)	5,269 (33%)	274 (18%)	944,585 (33%)

Table 7 Total number and tenure type (owned outright, owned with a mortgage, and rented) of occupied private dwellings 2021 (ABS. 2021a).

Despite this observed cost advantage, housing availability within the region has decreased due to population growth, increased demand for housing, and residential building approvals not keeping pace with demand (DRNSW, 2023a). Table 8. displays the number of buildings approved and their value, with Orange exhibiting the highest number of approvals.

	Blayney	Cabonne	Cowra	Orange	Weddin	NSW
Total dwelling units (no.)	32	73	44	222	3	54,636
Total value of private sector dwelling units ($m)	15	38	20	102	3	24,521

Table 8 Building approvals and values (year ended 30 June 2022) (ABS, 2021a).

The decreased housing availability has reduced housing affordability within the region (DRNSW, 2023a). The median house price between June 2018 and June 2022 increased by 73% in Orange, 67% in Blayney, 26% in Cabonne, and 45% in Cowra (DRNSW, 2023a; DRNSW, 2023b) with the residential vacancy rate in the region for Cabonne, Blayney and Orange reducing from 2.7% March 2020 to 0.7% in August 2022 (Figure 14). Moreover, the region also has a lower estimated price-to-income ratio than the average for NSW. This means that continuous increases in housing prices will place pressure on housing affordability and pose challenges in attracting and retaining workers.

Figure 14 Orange, Blayney and Cabonne residential vacancy rates and residential building approvals, 2018-2022 (Reproduced from DRNSW, 2023a, pg21)

2.6. Digital Inclusion

Connected digital technologies have changed the way we live, learn, and work. In such a context, being able to access, afford, and effectively use digital technologies had never been more important to participating fully in society. While digital transformation is generating social, cultural, and economic benefits for many Australians, these benefits are not shared equally. The premise of digital inclusion is that everyone should be able to make full use of digital technologies and the benefits they bring, while avoiding their potential negative consequences. Participation in an increasingly digital economy and society requires a combination of technical and financial resources and specific skills and knowledge. To understand the distribution of digital inequalities across the country, the Australian Digital Inclusion Index brings together measures of our access to the internet and digital technologies, our capacity to pay for these things, and our ability to use digital technologies skilfully.

Table 9 presents the digital inclusion index for each of the LGA's in the Plan.

The higher the score, the greater the level of digital inclusion. ADII scores are relative: they allow comparisons across different social groups, different geographic areas, and over time. Each of the Index dimensions – Access, Affordability and Digital Ability – are equally weighted to derive the total Index score (National Digital Inclusion Index, 2020).

LGA	ADII score	Difference
Blayney	70.5	-2.7
Cabonne	70.3	-2.9
Cowra	66.6	-6.6
Orange	72.4	-0.8
Weddin	64.4	-8.8

Table 9 Digital inclusion index by LGA

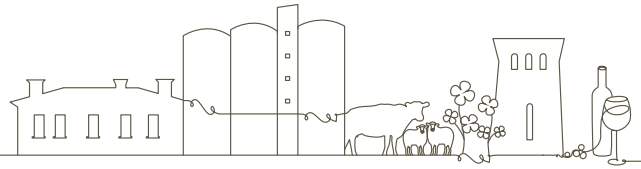
All the LGA's are in deemed digitally included based on scoring between 61-80. When considering the national data and considering age, disability and income levels and employment there are also noticeable differences in the data highlighting the need to consider these groups when considering interventions.

Interrogating this data and over the last couple of years and it can be observed that these scores are improving and the ability to access, afford and digital abilities are improving over time.

2.7. Land use

Land use is largely determined by climate. The Central West broadly experiences a temperate climate with warm/mild summers and cool/cold winters. The region has four distinct seasons throughout the year. The summer climate is ideal, with warm days and cool nights. Winters are cold with frosts and occasional snow.

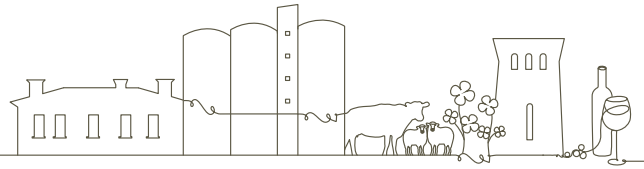
Table 10 shows that the consortium of Blayney, Cabonne, Cowra, and Weddin LGAs have a total land holdings area of 1,192,000 hectares, with land use dominated by agricultural production (94%) (ABS, 2022b). The land use is reflective of dryland agriculture, with the 2020-21 census finding that 67% (803,000 hectares) of the region was used for grazing and 27% (322,000 hectares) was used for cropping (ABS, 2022b). Of land used for grazing, 581,000 hectares was used for grazing on improved pastures and 221,000 hectares for other grazing. Land used for cropping was dominated by wheat (148,000 hectares), canola (52,200 hectares), and hay production (40,100 hectares)
(ABS, 2022b).



Land use (hectares, main land use)	Blayney	Cabonne	Cowra	Orange	Weddin	Region Total
Total area of holding	155,368	456,989	251,844	21,784	306,226	1,192,210.9
Agriculture	151,758	427,438	238,008	19,885	282,127	1,119,215.8
Grazing (all)	140,486	335,012	170,033	17,866	139,136	802,532.6
Grazing improved	121,156	232,317	143,334	13,553	70,865	581,225.4
Grazing other*	19,330	102,695	26,699	4,312	68,271	221,307.3
Cropping (all)	12,575	84,997	77,832	2,954	143,231	321,587.8
Cropping wheat	3,033	35,549	32,147	674	76,343	147,745.8
Cropping Canola	2,119	10,385	12,156	182	27,316	52,158.4
Cropping Hay	3,935	13,420	14,711	1,488	6,550	40,104.3
Cropping Other	3,487	25,643	18,817	610	33,022	81,579.24
Not agriculture	4,682	23,691	6,677	1,027	10,848	46,925.4
Conservation/protection purposes	2,470	15,756	3,106	706	6,426	28,464
Other areas not used for agriculture	2,212	7,935	3,571	321	4,422	18,461

*'Grazing other' refers to land used for grazing on native pastures or unimproved land, whereas 'grazing improved' refers to land used for grazing on pastures that have been improved, such as the use of non-native grass species.

Table 10 Land use for Blayney, Cabonne, Cowra, Orange, and Wedding LGA (ABS, 2022b).



Agricultural production in the region is largely dryland. Blayney has 155,368 hectares of agricultural land, almost exclusively dryland (ABS, 2021a). Cowra has 251,844 hectares of agricultural land, with only 4,775 hectares irrigated (ABS, 2021a). Cabonne has an area of 456,989 hectares of land under agricultural use, and Weddin has 306,226 hectares of land used mainly for agriculture (ABS, 2022b).

Farm drought risk varies significantly across agricultural commodities, with cropping farms more sensitive to drought than livestock farms (ABARES, 2020). This is because crop yields are directly linked to weather conditions, whereas livestock producers can smooth impacts over multiple years through increased turn-off (sales) of livestock in drought years (ABARES, 2020). As a result, the percentage of land devoted to crops is a key driver of drought sensitivity and risk. Cropping constitutes 321,587 hectares of land across the five LGAs in the Central West, accounting for 28.73% of the agricultural land use - a significant allocation that contributes to drought sensitivity and risk for the region (ABS, 2022b).

The area also contains protected lands that are used for recreation, culture, and ecological conservation. Blayney has a total of five protected land areas, covering a total of 238 hectares (ABS, 2021a). Cabonne has a total of nine protected land areas, including four national parks and four nature reserves, with a total protected area of 43,828 hectares (ABS, 2021a). Cowra has one national park, one nature reserve, and ten other protected land areas, covering a total of 7,245 hectares (ABS, 2021a). Weddin is comprised of three national parks, and nine other protected land areas for a total of 11,494 hectares protected (ABS, 2021a).

2.8. The Region's water

Water resources within the Central West are supplied from a range of sources including the Macquarie and Lachlan Rivers, Council owned and operated dams, Central Tablelands Water (CTW) as well as groundwater networks across the region. These sources are used to meet the needs of communities, industry, the environment, and agriculture.

The Lachlan and Belubula Rivers are some of the key water features that flow through the region. With the Lachlan passing through the town of Cowra. The Belubula joins further downstream just east of Goologoong. The Macquarie River also intersects the Plan area near the boundary Orange LGA. The Bell River intersects the town of Molong in the Cabonne LGA.

Crucial water infrastructure including the Wyangala Dam in the Cowra LGA, and the Carcoar Dam and Lake Rowlands in the Blayney LGA, supply water to towns, agriculture, the environment and industries (Infrastructure Australia, 2022). Central Tablelands Water (CTW) located in the Blayney LGA is the water utility provider for Blayney, parts of Cabonne and Cowra Shires and Weddin. CTW manage a large amount of the water supply for the region, however, a number of the local Councils within the region have responsibility for managing other town water supply dams within their LGA (CTW, 2019). Orange is able to access water from the Macquarie River via a pipeline under certain restricted circumstances. Along with a series of pipelines across the LGA which provide connection between most of the Councils included in this plan.

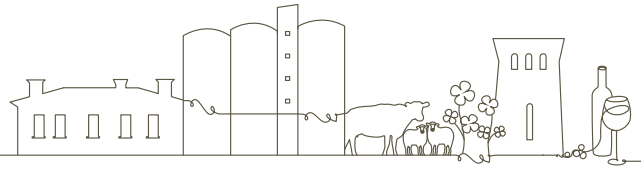
The following dams are the major water storages in the Plan area Wyangala Dam has a capacity of 1,217 GL Carcoar Dam has a capacity of 36 gigalitres (GL) and Lake Rowlands 4500 megalitres (ML), Suma Park, Spring Creek and Gosling Creek Dams Blackmans Swamp Creek and Ploughmans Creek stormwater harvesting schemes.

During the 2017-2020 drought most communities in the region were on the highest levels of water restrictions and water sharing plans governing water management for the Macquarie, Belubula and Lachlan Rivers were restricted under certain circumstances Recycled water.

In recognising the impact of the most recent drought and the importance of water security across the region, several investments have been made across the LGA to investigate and progress action to increase drought resilience. These include:

- The Central West Water Security Project helped ensure availability of water for Cabonne and Orange via a pipeline from Molong to Orange (DRNSW, 2023a).
- The NSW Government has invested $5.5 million to connect Cowra and the CTW systems. This project includes the installation of new infrastructure – including a pump station at Woodstock, a reservoir at Carcoar Water Treatment Plant, and upgrading Cowra's inlet system. It will deliver regional water infrastructure to connect major storage dams with communities across the region, enabling water to be shared when supplies hit critically low levels (Barker, 2023)
- A $10 million investment for the Cowra region for the Billimari Bores and Pipeline project to enhance water security (DRNSW, 2023b). Further information on this project can be found in section 4 – Local stories of resilience.
- The NSW Government invested $577,500 for Cabonne Shire Council to accelerate important investigative works that will determine the best infrastructure options to help build drought resilience for its residents (Barker, 2023).

The above-named water security investments highlight the criticality of water security for the region further supported by the what we heard information in Appendix A which captures some of the sentiment from the most recent drought.



2.8.1. Central Tablelands Water

CTW is a major water supplier for the region. CTW has approximately 6,000 water connections and provides potable water for around 15,000 consumers across 14 towns and villages (Blayney, Cudal, Mandurama, Canowindra, Eugowra, Millthorpe, Carcoar, Grenfell, Manildra, Cargo, Lyndhurst, Quandialla, Woodstock, Gooloogong) (CTW, 2019). CTW's supply relies mainly on Lake Rowlands, which is situated in the Lachlan catchment (see Figure 16).

The CTW system comprises two trunk mains which channel the water from Lake Rowlands to Carcoar Water Filtration Plant and Blayney Water Filtration Plant (CTW, 2019). There are 306km of trunk mains and 267km of reticulated water mains through the region (Conlon, 2021). In addition, there are seven bores that also service the region and provide an additional 7ML/day capacity (Conlon, 2021). In 2019, the total annual metered consumption for the region was 1667ML, with 784ML being used for residents, indicating that over 50% of the water usage in the region is for non-residential purposes (Conlon, 2021). Given the significant impact historic droughts have had on the region, not only its residents but also on agricultural industries, there has been a significant focus on water security for the region. As part of emergency response measures to drought in regional NSW, funding from the NSW government was awarded in late 2019. This $1 million was to complete a feasibility study for augmentation of Lake Rowlands capacity (CTW, 2019). In March 2024, $7.7 million in joint funding from the Federal and State governments was announced to complete the final business base that will consider (CTW, 2024):

- Raising the Lake Rowlands Dam wall to increase storage from 4.5 gigalitres to 8 gigalitres, securing water for CTW's consumers and assisting Orange with their town water security needs.
- A new pipeline between Lake Rowlands Dam and Carcoar Dam which could transfer up to 2 gigalitres of water per year, capturing spills and boosting supply.
- Building a new dam 2.5 kilometres downstream of Lake Rowlands.
- Operational rules for an interregional pipeline connecting the Belubula and Macquarie Valleys.

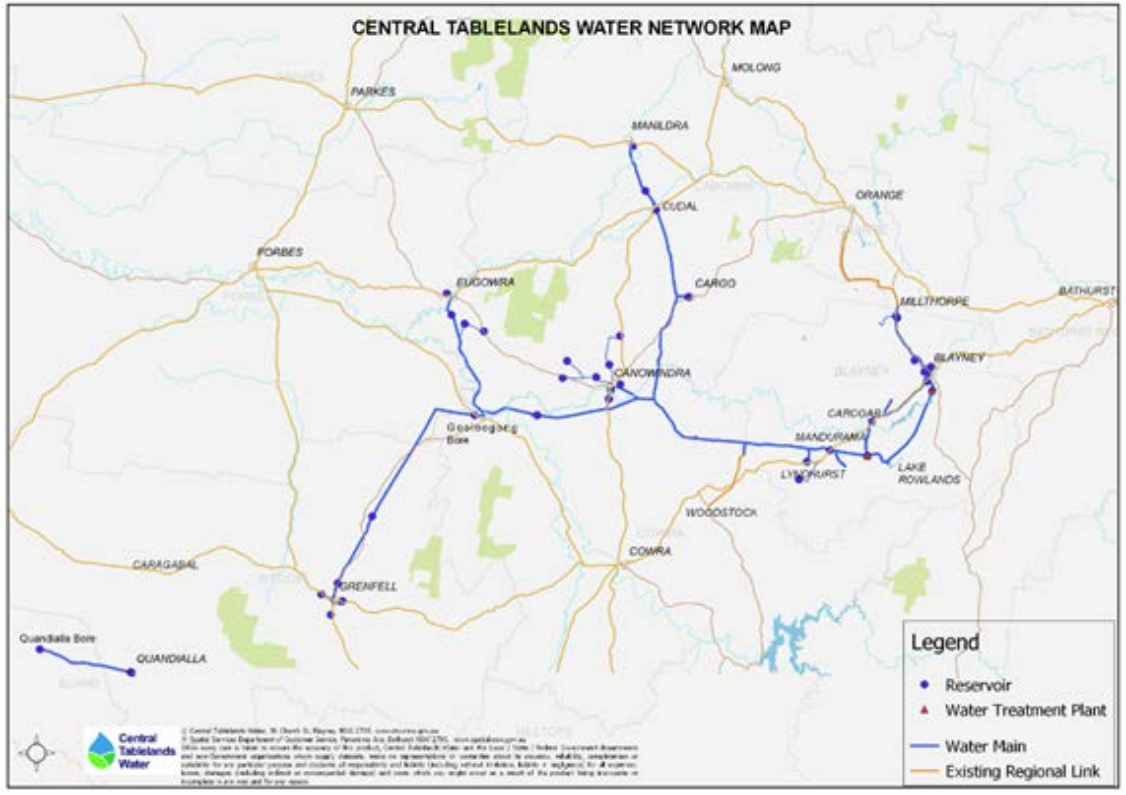


Figure 16 Central Tablelands Water area of operation. Source: reproduced from CTW, 2019

2.8.2. Groundwater

The following maps depict the spread of groundwater water bores across the plan area. Noting much of this water is to supply agricultural needs from irrigation of grain and fodder crops, watering of stock and domestic supplies for households.

Groundwater is used across the Plan area

CTW primarily utilises groundwater from the Lachlan and South Western Fractured Rock aquifer for its water supply, bores in Blayney, Gooloogong, Bangaroo, and Cudal drawing from this source (CTW, 2018).

Additionally, the Quandialla water supply system draws from the Lachlan inland alluvial aquifer, providing fresh water suitable for municipal use (CTW, 2018).

Within these groundwater areas there are certain areas of higher vulnerability due to characteristics of predominantly alluvial aquifers coupled with shallow water tables, high-moderate recharge potential and permeable soils which make them less reliable in the Lachlan Plan area these highly vulnerable sections are along the Lachlan River from Cowra through to Forbes and along the Belubula River as shown in Figure 17.

In the Macquarie catchment these highly vulnerable areas are located around Orange due to relatively high recharge potential and shallow water table in the fractured rock terrains (NSW Department of Climate Change, Energy, the Environment and Water, n.d.), as shown in Figure 18.

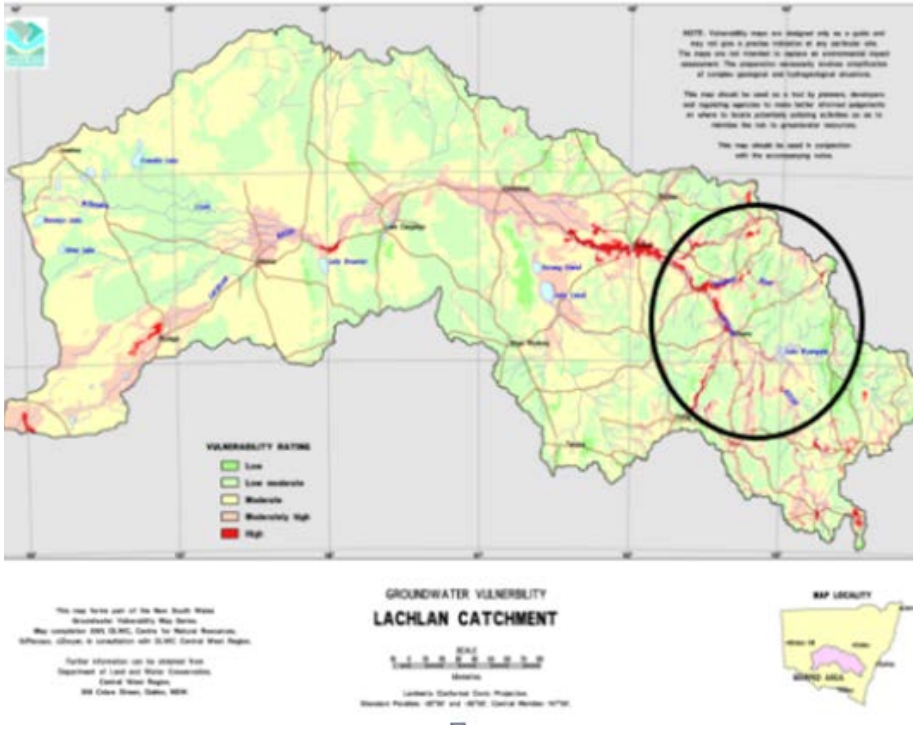


Figure 17 Lachlan Catchment Groundwater Vulnerability (NSW Department of Climate Change, Energy, the Environment and Water, n.d.)

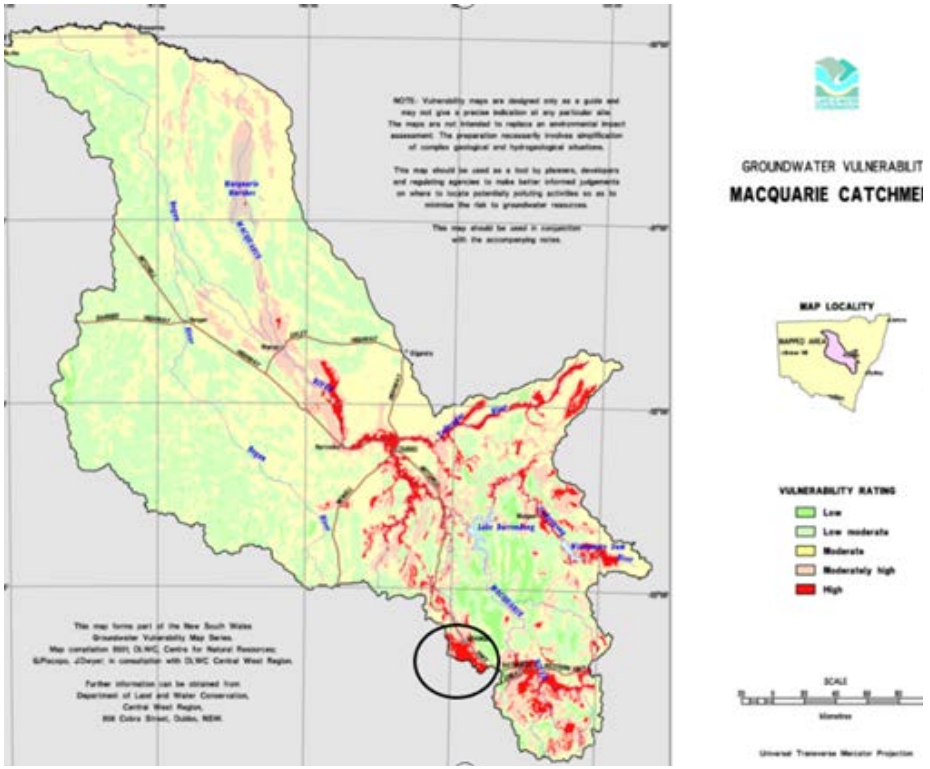


Figure 18 Macquarie Catchment Groundwater Vulnerability

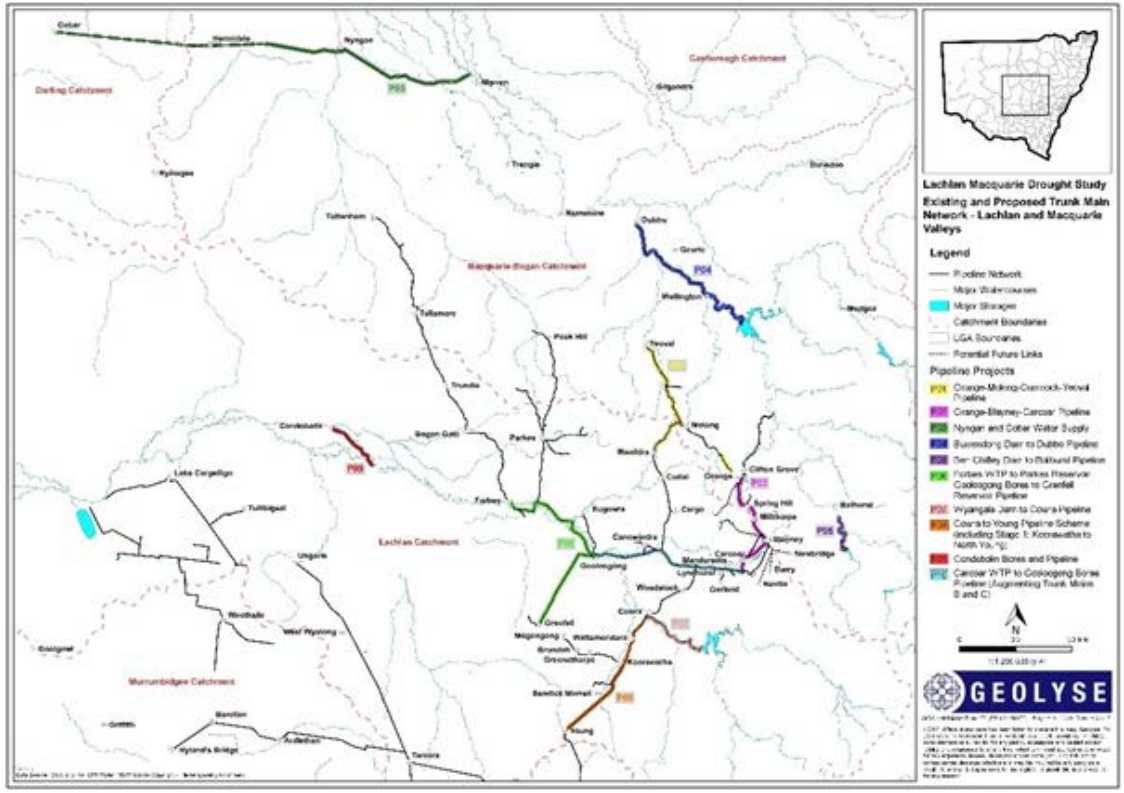


Figure 19 Existing and planned water infrastructure pipelines (Geolyse, 2017).

2.8.3. Water Infrastructure and key connections

The majority of the Local Councils within the plan area own and operate their own water infrastructure including water treatment plants, stormwater services and associated pipe infrastructure. CTW owns and operates the majority of existing infrastructure that connects various communities within the Plan area to a water service.

Figure 19 outlines the major planned and existing water infrastructure in the region. Most of the Orange-Molong-Cumnock-Yeoval pipeline connections (P01 on the map), have been developed, with the aim to connect the greater Lachlan system. The stretch from Molong to Manildra is still under development. The new pipeline would connect to the existing pipeline from Molong Creek Dam (Geolyse, 2016).

Orange to Blayney and Carcoar via Millthorpe (P02) on the map) is an integral cog in the CTW Network. This pipeline, along with pumps, will enable the bi-directional transfer of potable water. It will serve two operational components: regional water security and contingency. Water security will be ensured by sharing water resources between various sources, facilitating the transfer of water between Orange City Council and CTW as needed. Contingency measures will involve linking major water filtration plants to address plant failures or contamination within either water supply system. This pipeline is in its final stages of development, and will bolster Orange's water supply, which has had issues historically.

Forbes WTP to Parkes Reservoir pipeline already exists, but the pipeline connecting the WTP to Gooloogong (P06 on the map) is currently under development. The pipeline connecting Gooloogong to Grenfell was upgraded in 2019.

2.8.4. Regional Water Strategies

The Regional Water Strategies are designed to create a plan to manage the regions water needs for the next 20-40 years. They set out a roadmap of actions to deliver five objectives:

- Delivering and managing water for local communities
- Enabling economic prosperity
- Recognising and protecting Aboriginal water rights, interests, and access to water
- Protecting and enhancing the natural environment
- Affordability

The five LGAs within this plan are covered largely by two regional water strategies, the Macquarie-Castlereagh (2023), and the (draft) Lachlan.

Lachlan Regional Water Strategy (DPE, 2023a)

The future climate in the Lachlan region could see a decrease in critical winter and spring rainfall with more rain in summer and autumn, leading to overall lower average annual rainfall. River flows may reduce, and evapotranspiration could increase by up to 5% by 2070. Inflows into major dams like Wyangala and Carcoar are expected to decline, resulting in lower storage levels. Additionally, droughts might become more frequent, and rainfall events could grow more intense.

To manage the severity of these events, the strategy identifies key focus areas, these are:

- Improving water quality
- Sustaining the health and resilience of the region's water dependent ecosystems
- Addressing barriers to Aboriginal water rights
- Supporting a sustainable and diverse regional economy
- Managing water resources during more extreme events for people, industry, and the environment
- Understanding flood risks to individuals, businesses and communities

Underpinning these focus areas are the priorities of building resilience to climate extremes, improving catchment health and supporting a strong and sustainable economy in a capped system.

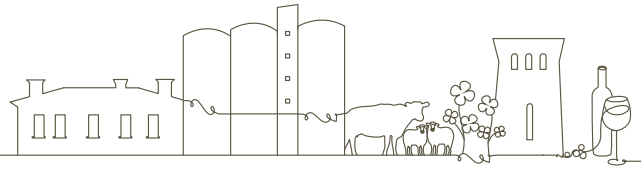
Macquarie–Castlereagh Regional Water Strategy (DPE, 2023b)

Future climate projections in the region suggest potentially lower average annual rainfall, but with less frequent yet more intense rainfall events. Evapotranspiration may increase by up to 5% by 2070, particularly in autumn and winter. Prolonged droughts could become more frequent, with a higher probability of extreme drought events. Median annual inflows into Burrendong Dam could decline significantly by 2070, particularly under the driest climate scenarios.

To manage the severity of these events, the strategy identifies key focus points that should be targeted, these are:

- Reducing water supply risks for regional cities and rural and remote towns
- Supplying water to high priority needs in the west of the catchment and connected valleys
- Maintaining and improving river, floodplain and wetland health
- Addressing barriers to Aboriginal people's water rights
- Supporting a growing regional economy in a future of potentially reduced water availability.

Underpinning these focus areas are the priorities of ensure safe and reliable water supplies for growing regional cities and towns, reduce water security risks in the region's west, support industry and community climate adaptation, and improve the health and resilience of natural systems.



03

Drought, climate and impacts

3. Drought, climate and impacts

Australia is the driest inhabited continent on Earth with one of the world's most variable rainfall climates (AdaptNSW, 2024b; BoM, 2024a). This makes drought a defining feature of our history, with Australia experiencing severe drought on average once every 18 years (NSW Government, 2024a). Around 90% of the rain that falls in Australia evaporates back into the atmosphere, and around 2% soaks into the ground to re-fill groundwater reserves (AdaptNSW, 2024b). That results in less than 10% as runoff which is NSW's most important source of water for agriculture, urban water supplies and ecosystems (AdaptNSW, 2024b). Drought is set to have an increasing effect on the country as a result of climate change, with the frequency, intensity and duration of severe droughts expected to increase, particularly in inland areas of NSW (DAFF, 2024a).

3.1. What is drought?

Drought is defined as "a prolonged, abnormally dry period when the amount of available water is insufficient to meet our normal use" (BoM, 2024a). It is difficult to determine a start and end, or identify when the landscape has recovered. Droughts are difficult to predict or compare as they differ in the seasonality, location, geographic extent, and duration of the associated rainfall deficiencies. Both the Bureau of Meteorology and Kirono et al. (2020) define four types of drought: meteorological, agricultural, hydrological, or socioeconomic and town water supply drought as shown in Figure 20.

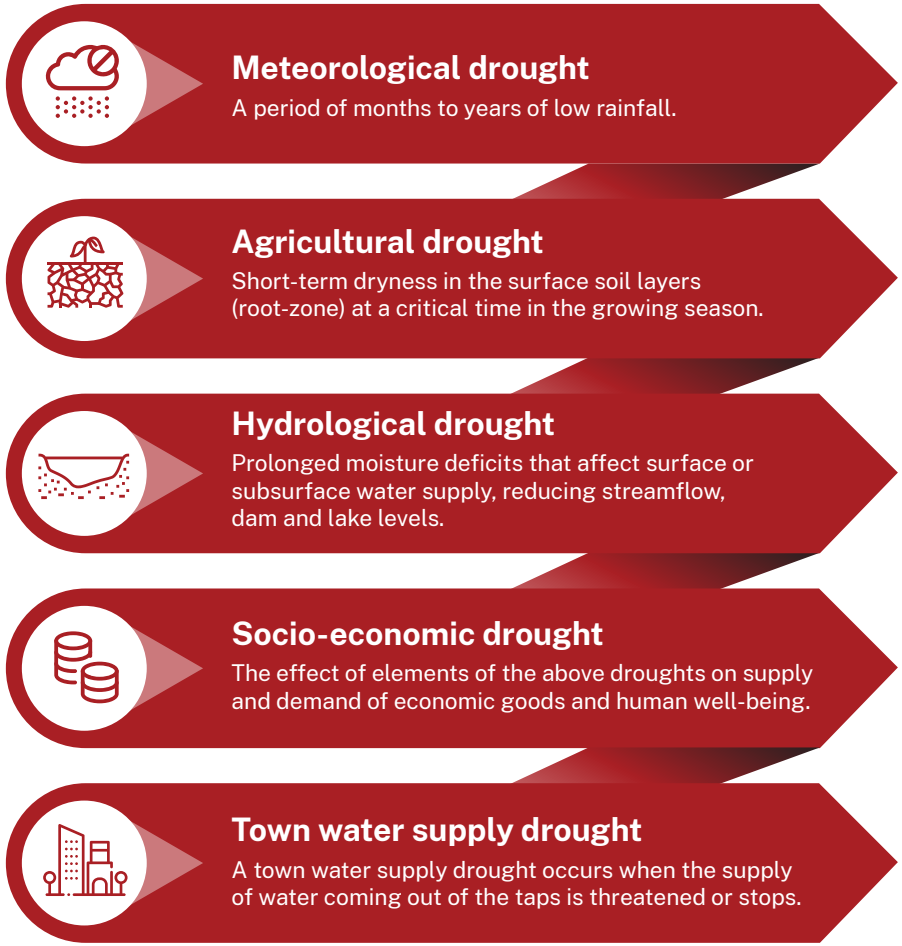


Figure 20 Types of drought (BoM, 2024a)

Drought affects all parts of the community; from agricultural producers and suppliers, to industry, First Nations People, and the broader community. Droughts are challenging times, with water intensive industries affected by a reduction in output and increased costs. The economic, social, and environmental impacts are not limited to these industries but extend to entire communities and regions. Local loss of production has flow on effects to the regional economy. Drought can also impact human and environmental health including impacts on nutrition, exacerbation of mental health issues, and ecological decline for flora and fauna (Steffen, 2015).

3.1.1. Drought monitoring in NSW

Drought monitoring over the years has become increasingly complex. The most common means of currently monitoring drought is through the Enhanced Drought Information System (EDIS) which is a publicly available drought monitoring tool that monitors seasonal conditions across NSW. The EDIS was launched in March 2018 with the second version launched in October 2022, and is used across government and farming stakeholders to build drought risk awareness, emphasise drought preparedness and improve confidence in drought monitoring and early warning (DPI, n.d.c).

A key feature of EDIS is the development of DPIRD Combined Drought Indicator (CDI) (DPI, n.d.c). The CDI combines meteorological, hydrological and agronomic definitions of drought (above) using indexes for rainfall, soil water, and plant growth (DPI, n.d.c). From these, a fourth index, drought direction (DDI), is developed. EDIS is undergoing redevelopment to provide farmers with world-leading weather and climate data to enable better business decisions. It is important to recognise the CDI provides an aggregated view of NSW, and that on-ground conditions can be different to those displayed in the maps. They provide an 'on average' view of a particular region only.

Figure 22 shows the current (May 2024) CDI across the five LGAs, and defines an area of NSW to be in a drought category if any of the indices (rainfall, soil moisture, modelled pasture/crop growth) fall below 30% when compared to historical records (DPI, n.d.c). Cabonne is predominantly considered drought affected, whereas Orange, Cowra, Blayney, and Weddin are largely not in drought. Each LGA contains small areas that are considered to be recovering from drought.

Ground cover (total vegetation cover) is recognised as an important biophysical indicator of landscape health, function, and soil condition. Ground cover is influenced by historical weather conditions, a region's natural resource management activities, and farming management practices (DAFF and ABARES, 2023). Higher levels of cover throughout every stage of the drought cycle provides protection from water and wind erosion, enabling water infiltration and soil carbon retention (DAFF and ABARES, 2023). Therefore, when ground cover is low, the environment is likely to be more sensitive to future drought events. According to DAFF and ABARES (2023), the LGAs of Blayney, Cabonne, Cowra, Orange, and Weddin struggled in severe drought years to maintain sufficient levels of ground cover, but otherwise typically met targets.

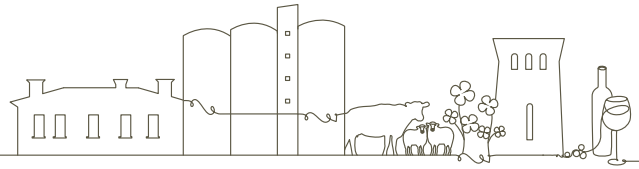
3.1.2. Stages of drought

Used together, the indexes of the EDIS indicate the stage of drought (DPI, n.d.c).

The six stages progress from a non-drought category where all indicators suggest good conditions for production, to recovery, through to a Drought Affected (weakening or intensifying) category, a Drought phase and into Intense Drought. The six stages are shown in Figure 21 below and current conditions for the LGAs are presented in Figure 22.

Complementing the stages is detailed information on:

- the technical and on-the-ground description of typical field conditions.
- a suggested on-farm response and
- a suggested advisory or policy response.



3.2. Historical drought in Central West

Climate anomalies, such as drought, are regularly observed occurrences in southern and inland Australia. NSW naturally goes through cycles of wet and dry conditions, however, over the past 40 years, average annual rainfall in NSW has decreased, leading to widespread droughts. This is due to climate change increasing temperatures and affecting rainfall and climate systems in NSW (AdaptNSW, 2024b; AdaptNSW, 2024c). Throughout the years, Australia has experienced a range of droughts with differing durations and intensities, as outlined in Table 11.

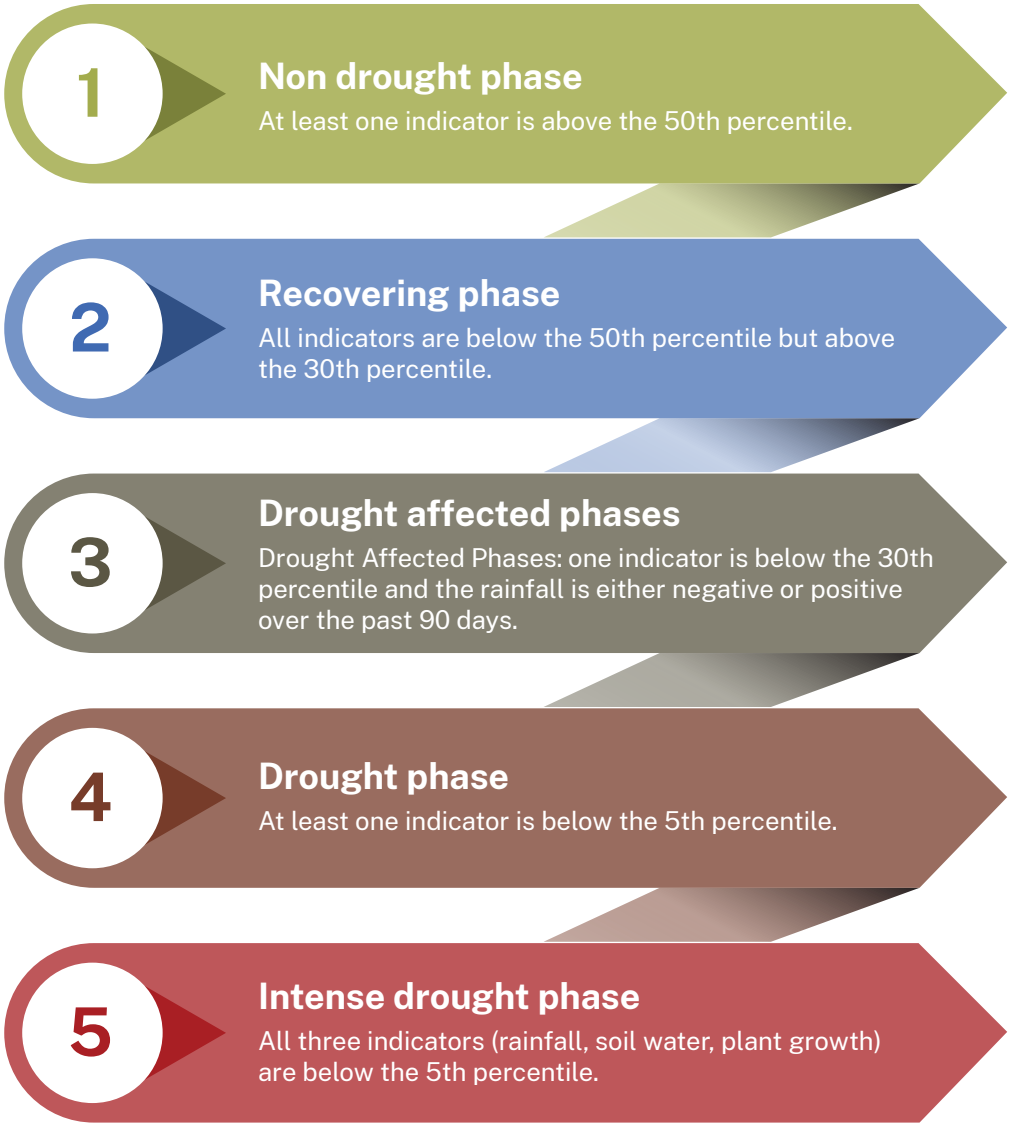


Figure 21 Stages of drought in NSW (DPI, n.d.c)

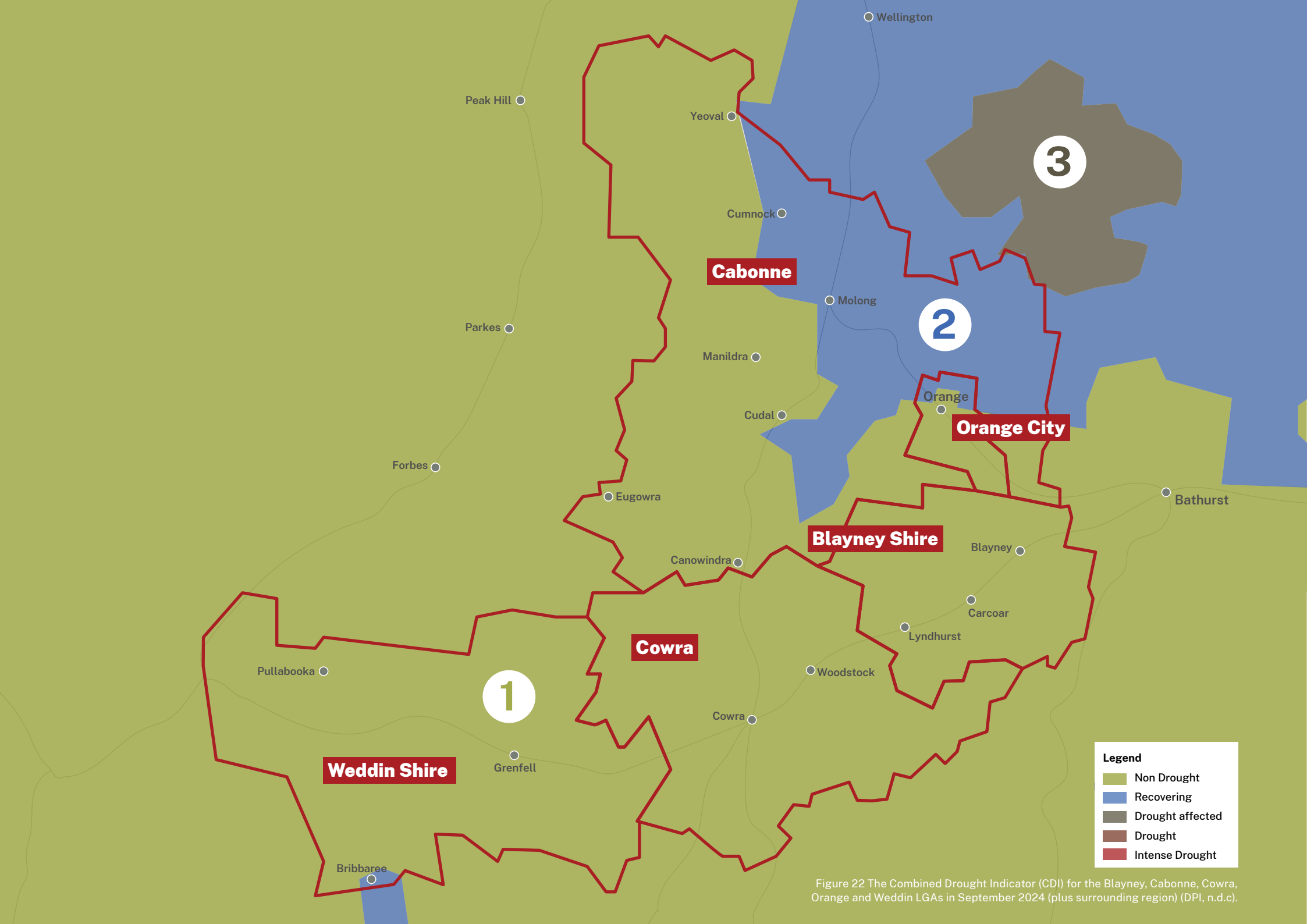
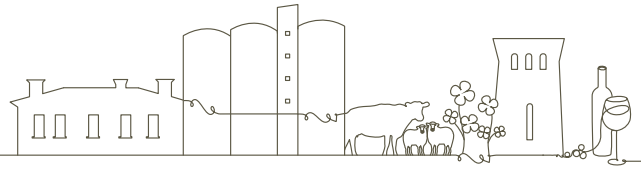


Figure 22 The Combined Drought Indicator (CDI) for the Blayney, Cabonne, Cowra, Orange and Weddin LGAs in September 2024 (plus surrounding region) (DPI, n.d.c).

Period	Duration	Characteristics
The Federation Drought	1895-1902	One of Australia's worst droughts. It had far-reaching implications for agriculture, water availability, and the economy, especially as the national wheat crop was lost.
World War I Drought	1914-1915	Although relatively short, it had a significant impact because the severe drought conditions were occurring simultaneously in both southeastern and southwestern Australia.
World War II Drought	1937-1945	Occurred frequently over eastern Australia, characterised by intense dry spells and breaks, similar to the Federation drought, but with more intermittent dryness. Isolated parts of NSW had record low rainfall, particularly the Central West. Major driver of the Black Friday bushfires in January 1939.
1965-1968 Drought	1965-1968	Generally dry conditions for Australia, especially severe in NSW.
1982-1983 Drought	1982-1983	One of Australia's most severe droughts in the 20th century, associated with a strong El Nino event.
The Millennium Drought	1997-2009	The region experienced a prolonged dry period which led to water scarcity and agricultural challenges in the Central West. This drought event was particularly significant because of the contrast with a wet period in northern Australia and its absence of major wet episodes. Figure 22 displays this contrast. This may have been the first major Australian drought that was impacted by the changing climate, with temperatures higher than ever seen before. The Millennium drought ended with two of the wettest years on record for Australia in 2010–11 (Beard et al., 2011, National Climate Centre and BoM, 2012).
The 2017-2020 Drought	2017-2020	Following a wet period in 2016, this drought impacted the Central West as water restrictions had to be put in place, due to substantially below-average rainfall from 2017-2019. Suma Park dam fell to 27% capacity and Wyangala Dam fell to 8% capacity in February 2020 (DRNSW, 2023a; DRNSW, 2023b). Despite the falling dam levels, Cowra maintained high levels of water allocation, reflecting the regions resilience in drought periods (DRNSW, 2023b). Soil moisture levels in different regions hit unprecedented lows during this time. Overall, this drought led to disruptions in stock replenishments, low water supplies, increased food prices and led to many farmers being under significant financial pressure (DRNSW, 2023a). In June 2018, more than 99% of NSW was declared as affected by drought (AdaptNSW, 2024b). In 2019, Orange moved to Level 5 (Council Communications, 2019) water restrictions, in 2020 the whole Central Tablelands Water Network was moved to Level 5 restrictions (CTW, 2020).

Table 11 Historical droughts which affected Central West (BoM,2024a)



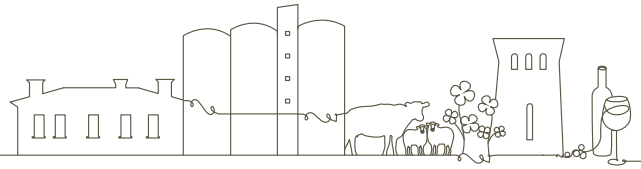
Since the mid-1990s, southeast Australia has experienced a 15% decline in late autumn and early winter rainfall and a 25% decline in average rainfall in April and May (Whetton et al., 2015). The region has also experienced significant warming during the last 50 years (Timbal et al., 2015). This has led to the area experiencing a range of droughts throughout the years, with differing durations and intensities. The last two droughts have had a significant impact to Central West LGAs due to both the duration of the Millennium Drought (rainfall deciles shown in Figure 22) and the significant period of below average rainfall to the area during the 2017-2020 drought (shown in Figure 24) which placed the region in the very much below average rainfall range. It is estimated that total farm production in NSW contracted by 6% between 2017-2020 and that broadacre profits in 2020 were the lowest in 40 years (DRNSW, 2023b).

According to a 2018 survey by Business NSW (formerly the NSW Chamber of Business), 93.9% of businesses in Central NSW were impacted either directly or indirectly by 2017-2020 drought. 11.9% of businesses indicated they were only slightly exposed to drought conditions, 49.7% were moderately exposed, and 38.4% were highly exposed. Of those affected businesses, 67.1% were affected due to the weakening of the local economy, 29.5% were a primary producer unable to sustain production, and 22.8% were impacted due to supplying directly to primary producers (NSW Business Chamber, 2018).

In the Central West, 87.9% of businesses experienced a decrease in sales/revenue due to the drought conditions, with sales/revenue on average decreasing by 34%. 8.9% of businesses anticipated they would need to close or significantly scale back their business because of the drought, 56.9% reported that their business remained viable, and 34.1% reported that their business would be at risk if conditions deteriorated. (NSW Business Chamber, 2018). 9.4% of respondents in Central West felt that their business was very well equipped to mitigate risks associated with drought, 72.5% were moderately well equipped, and 18.1% were not well equipped (NSW Business Chamber, 2018).(Infographic to be created) 40.1% of businesses were 'very concerned' that the drought would affect their business in the long term, demonstrating the mental toll that drought causes businesses (NSW Business Chamber, 2018).

Drought also impacts the natural environment in which people in drought-affected areas are heavily reliant on for their wellbeing and livelihoods. Water restrictions were introduced across all users of surface water in the Central West during the last drought, water restrictions were introduced due to the areas being declared at stages of emergency and severe drought (AdaptNSW, n.d.). In the Lachlan River, low water flows led to poor water oxygen levels and resulted in fish deaths (DRNSW, 2023b). Replenishment flows to rivers and creeks ceased and dam levels were extremely low, disconnecting water supplies to many small communities. This caused a massive disruption to agricultural supplies, including livestock and wheat. Alongside water supplies being restricted, prolonged hot days increased the incidence of illness and death among the vulnerable communities, including people who are older, have pre-existing medical conditions and those with a disability (AdaptNSW, n.d.).

The lasting effects of past droughts, including the Millennium Drought, serve as reminders for LGAs to have drought management plans in place and include the communities who are impacted to have a voice in future thinking and planning. It is important that these communities are well-prepared and resilient in the face of climate change and drought. Some of the initiatives and tools the region has been able to build and utilise in response to these past drought events and to help adapt and build resilience to future drought events are outlined in the case studies in Section 4.



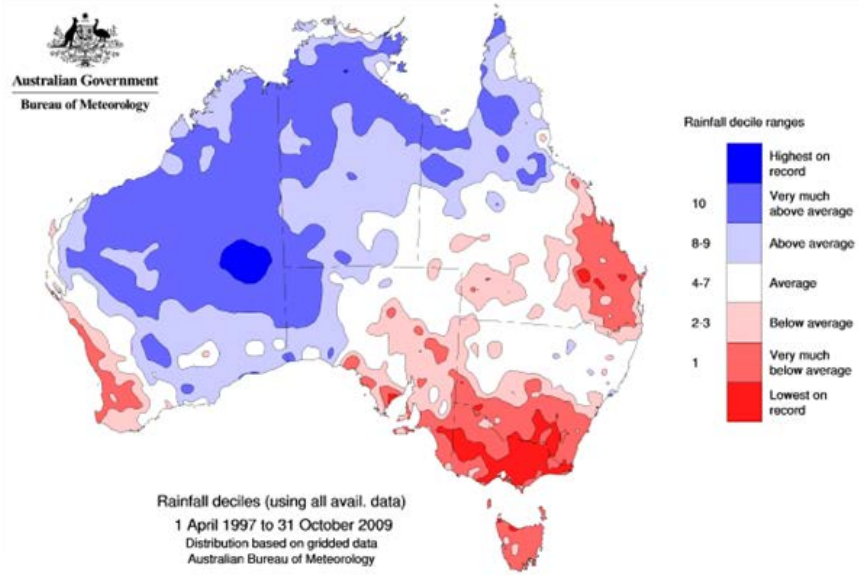


Figure 23 Rainfall deciles in Australia during the Millennium Drought (1997 - 2009) (BoM, 2024a)

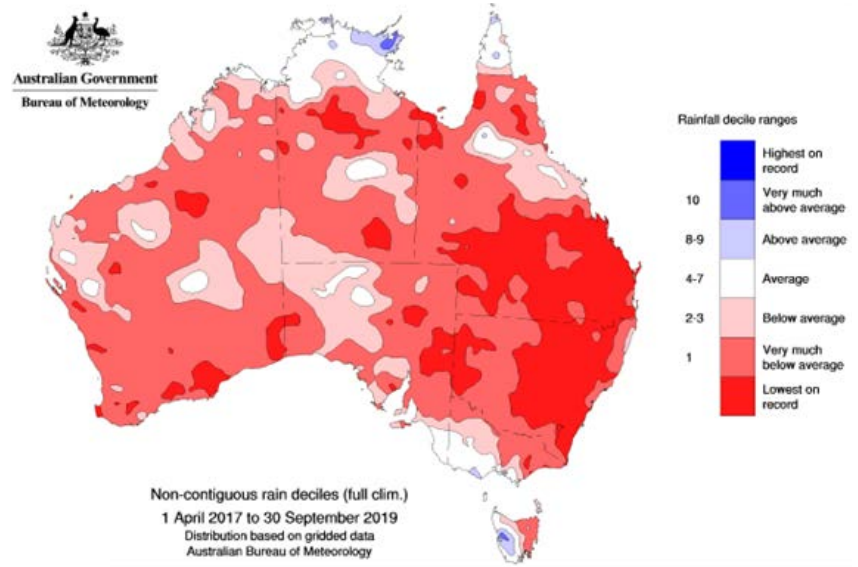


Figure 24 Rainfall deciles in Australia during drought (2017 - 2019) (BoM, 2024a)

3.3. Regional weather and climate

Australia's natural climate is highly variable and experiences lower average rainfall and higher rainfall variability than most other nations (ABARES, n.d.b). Climate change refers to global, long-term shifts in average weather conditions, such as becoming warmer, wetter, or drier over several decades or longer. There is a growing body of evidence, driven by the work of CSIRO, BoM, DCCEEW NSW, that shows Australia's climate has changed and continues to change significantly. Temperatures in Australia have risen by about an average of 1.47 degrees (+ or - 0.24) (refer Figures 23 and 24) since national records began in 1910 and there is a high level of scientific confidence that anthropogenic greenhouse gas emissions are a major driver of this increase in temperature (CSIRO and BoM 2018; CSIRO and BoM, 2022).

The distribution of rainfall throughout the year in the Central West is relatively consistent with an expected increase in rain in the winter months. The lowest temperatures are experienced in July with an average minimum temperature of 2°C. The highest temperatures are experienced in January with an average maximum temperature of 27°C, illustrated in Figure 25.

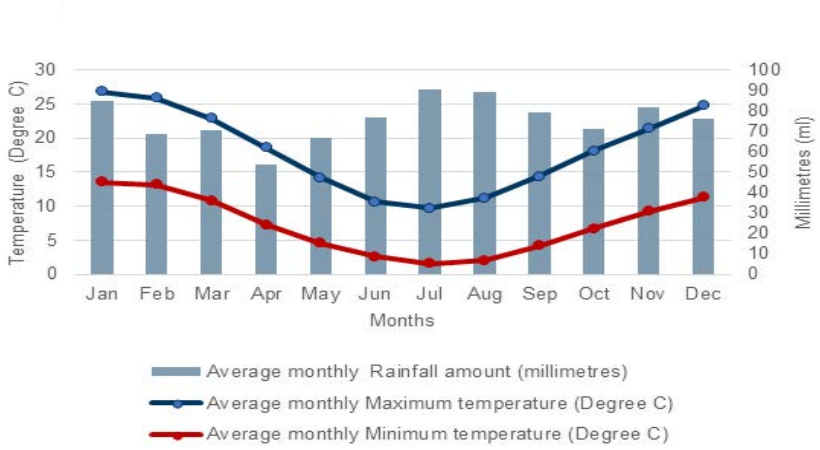


Figure 25 Average monthly rainfall and maximum and minimum temperature from January 1976 to March 2024, Orange Agricultural Institute, Central West, NSW (BOM, 2024b).

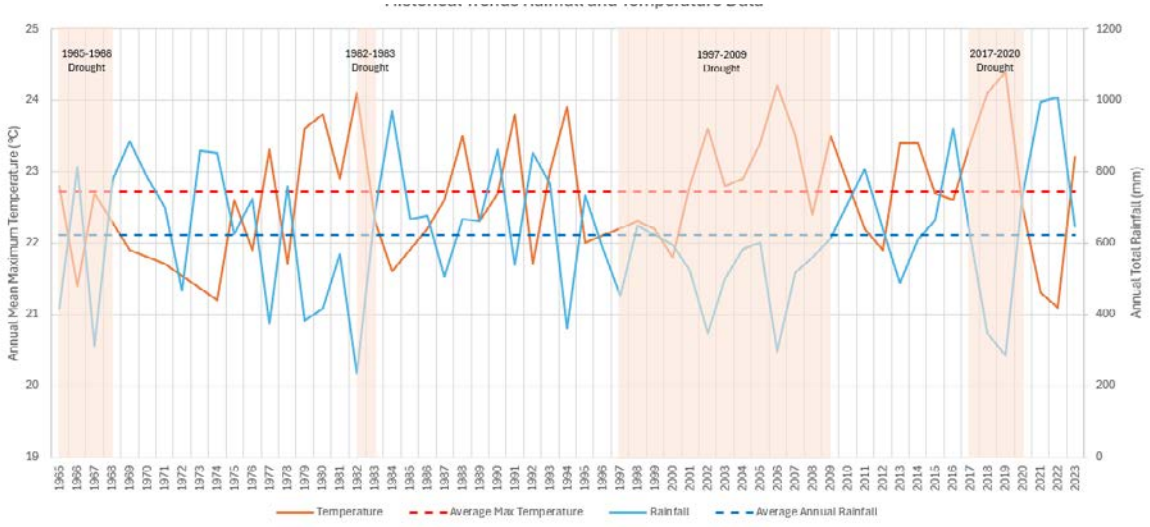


Figure 26 Historical trends in rainfall and temperature data from 1965 to 2023 for Grenfell (AWS Grenfell (Manganese Rd (073014)) (BoM, n.d.). Note: where there were gaps in available data, information was interpolated and graphed.

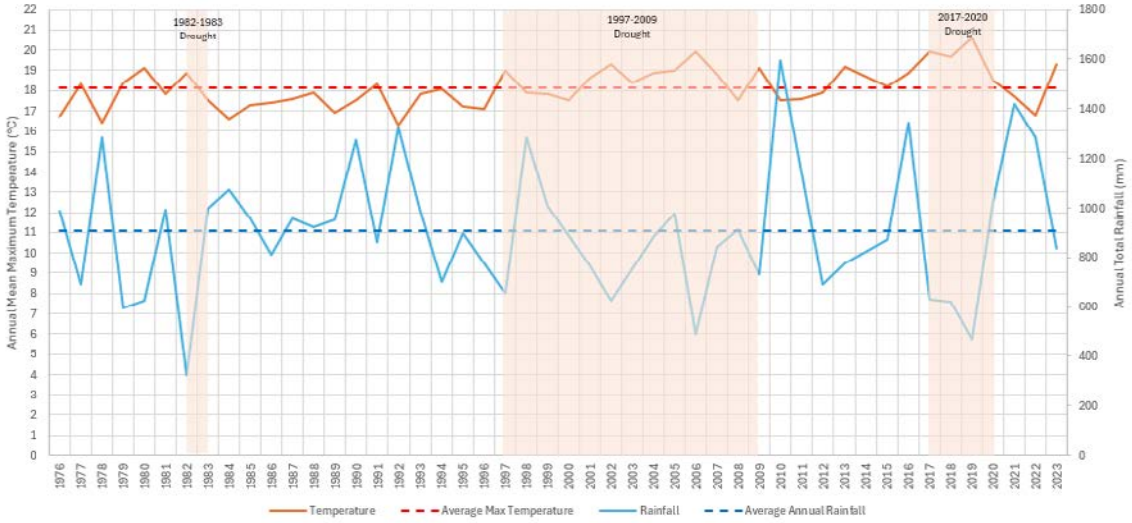


Figure 27 Historical trends in rainfall and temperature data from 1976 to 2023 for Orange (AWS Orange Agricultural Institute (063254)) (BoM, n.d.). Note: where there were gaps in available data, information was interpolated and graphed.

As discussed in Section 3.1.1, DPIRD have established the CDI to aid in defining the various stages of drought. However, there are some meteorological trends that can be observed which can indicate drought and drought impacts. Lower than average rainfall coupled with higher than average maximum temperatures often over a prolonged period of time can result in drought. Figure 26 and Figure 27 demonstrate this trend for some of the historical droughts that have occurred in the Central West Region. The figures have only been prepared for Grenfell and Orange LGAs as they have the most comprehensive set of meteorological data available.

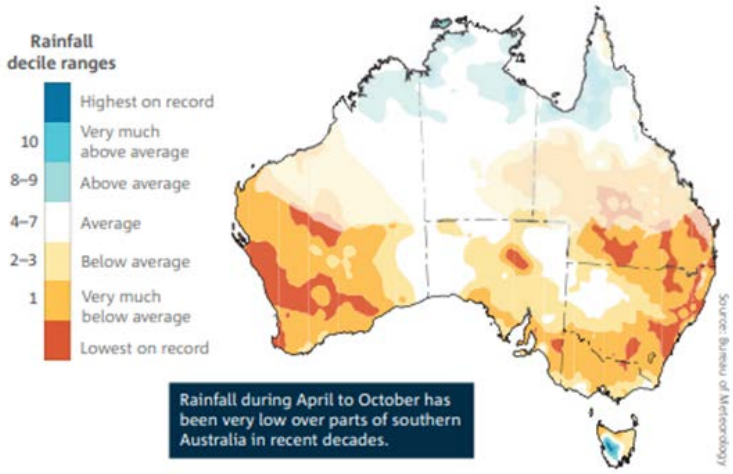
Recent decades have seen trends towards lower average winter season rainfall in the southwest and southeast of Australia (Hughes et al., 2019). This reduced rainfall in the winter will have a direct impact on winter variety crop yields including Central West's wheat, canola, and hay crops which form the three largest gross value cropping commodity products. Figure 27 illustrates the drying trend over 22 years in Southern Australia during April to October.

3.4. Future drought projections

Climate change is making drought conditions in southwest and southeast Australia worse. Climate change has contributed to a southward shift in weather systems that typically bring cool season rainfall to southern Australia. In addition to decreasing rainfall, climate change is driving an increase in the average temperature and in the intensity and frequency of hot days and heatwaves, leading to increased water losses and thus exacerbating drought conditions (Whetton et al., 2015). Figure 28 shows that due to the region's agricultural dependence, the Central West will be highly sensitive to the impacts of a changing climate. Climate variability effects the Australian agricultural industries through variations in commodity prices, with trends of lower rainfall and drought related to lower farm profits (Hughes et al., 2019).

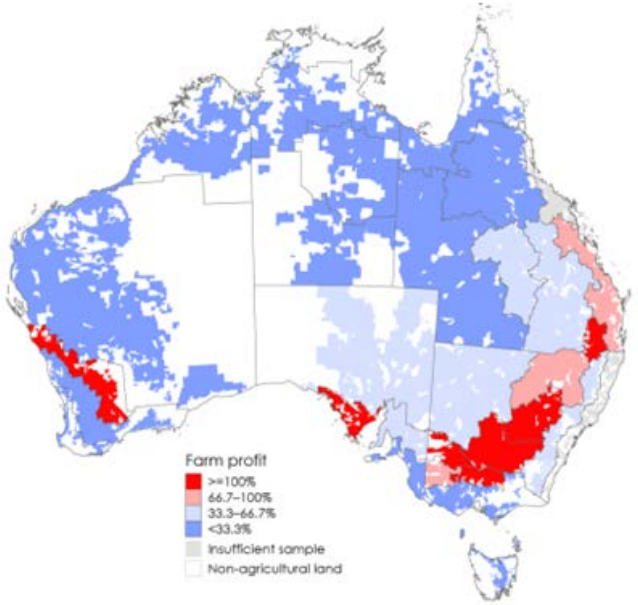
ABARES (2020) has assessed the drought risk by region. Figure 29 shows that the Central West region was at risk of a 141.8% (compared to the average of 51.3%) change in cropping farm profits between normal years to drought years (ABARES, 2020). This high drought risk is because the region has both a higher proportion of cropping activity (high sensitivity) and more variable climate (high exposure) (ABARES, 2020).

Given the direct influence of drought on cropping activities and crop productivity many farms are financially impacted. Figure 30 shows farm profitability for the Central West Region from 1990 to the present. As can be seen the compounding impact of drought results in the greatest reduction in profitability towards the tail end of the drought period followed by a significant spike in profit. Given the regions strong agricultural industry it will be critical to continue monitoring the trends in farm profitability and the changing climate such that existing systems and services, including individual farmers, are financially prepared for the next drought.



April to October rainfall deciles for the past 22 years (2000–21). A decile map shows where rainfall is above average, average, or below average for this period compared to all years from 1900 (when reliable rainfall records began). Areas across northern and central Australia that receive less than 40 per cent of their annual rainfall from April to October are faded.

Figure 28 Southern Australia has experienced a drying trend during the growing season from 2000-2021 (CSIRO and BoM, 2022).



Note: Drought risk is defined as the percentage change in farm profit between normal and drought years.
Source: ABARES *farmpredict*, Scenario 1 (see Appendix A). See Appendix B for region definitions and results by industry.

Figure 29 Estimated drought risk by region- farm profits. (source: ABARES, 2020)

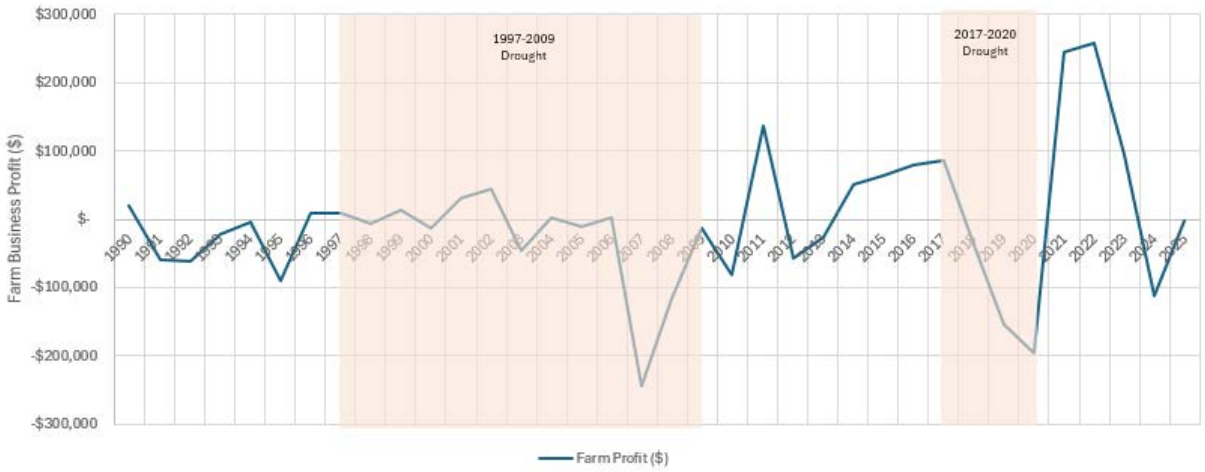


Figure 30 Historical trends in farm profitability for the Central West Region. (ABARES, n.d.a).

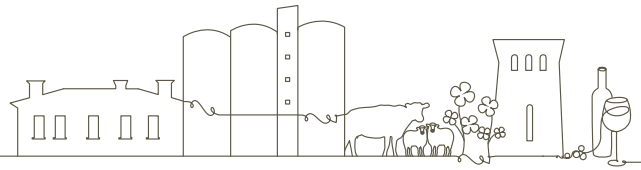
There is high confidence that global temperatures will continue to rise for many decades, mainly due to greenhouse gases produced by human activities (NASA, 2024). This will exacerbate climate extremes already experienced and worsen the duration and effects of drought in Australia. A reduction in winter rainfall leads to a proportionately greater (1.5 to 4 times) reduction in surface water runoff and groundwater recharge (Walker et al., 2021).

Time spent in drought is projected to increase in the future across Southern and Southeast Australia (Climate Council, 2018). The five LGAs are part of two climate clusters, Central Slopes and Murray Basin, the majority within the Murray Basin (Whetton et al., 2015). Future climate change projections suggest that the Central Slopes and Murray Basin will experience more time in drought and more intense drought, especially in the east (Kirono et al., 2020). In the Murray Basin there is high confidence that soil moisture will decline as drought in the area becomes more apparent, with less rain and higher evaporation rates, especially during the winter and spring months (Timbal et al., 2015).

As part of the Climate Services for Agriculture FDF program, the CSIRO and BoM have developed My Climate View, a digital product designed to help Australian farmers understand what the future climate might mean for their location. My Climate View provides primary producers and their advisers with past climate data, seasonal forecasts and future climate projections, tailored to various agricultural commodities, from meat to grains to horticulture and many more (DAFF, 2024c). Primary producers can therefore more easily assess how climate factors that matter to their business could change into the future. For example, a wheat producer can see how the timing and intensity of seasonal rainfall in their region might change over time and how that might impact the way they farm (DAFF, 2024c).

The CSIRO's My Climate View tool was used to analyse the impact of worsening climate change on temperature and rainfall for the Central West region. Through this tool, we can see how the region's climate is predicted to evolve over time, using the Intergovernmental Panel on Climate Change (IPCC) representative concentration pathway (RCP) 8.5. Under this climate change scenario, three Central West LGAs have been chosen to represent the change in the number of heat damage days above 35°C by 2030 and 2050. Orange LGA is predicted to have, on average, a 20% increase in days above 35°C by 2030, and a 50% increase by 2050, illustrated in Figure 31. Cabonne LGA is predicted to have on average a 33% increase by 2030, and an 89% increase by 2050, as shown in Figure 32. Cowra LGA is predicted to have a 33% increase by 2030, and a 74% increase by 2050, as illustrated in Figure 33. These figures also present two historical 30-year periods (in purple) to allow comparison across time.

Warmer temperatures are contributing to longer droughts and harsher fire weather. This can make land unsuitable for agriculture, lead to crop stress and attract new pests (that thrive in warmer temperatures) (AdaptNSW, 2024a). This can impact the yield and quality of key agricultural commodities grown in the region, such as barley and grain. In addition to impacting grain yield, it adversely affects physical grain quality (weight and plumpness) and market value (AdaptNSW, 2024a). The incidence of heat stress during grain filling is rising with global warming (Shirdelmoghanloo et al., 2022). Warmer temperatures and drought are also contributing to animal stress, decreasing production and increasing animal welfare issues (AdaptNSW, 2024a)



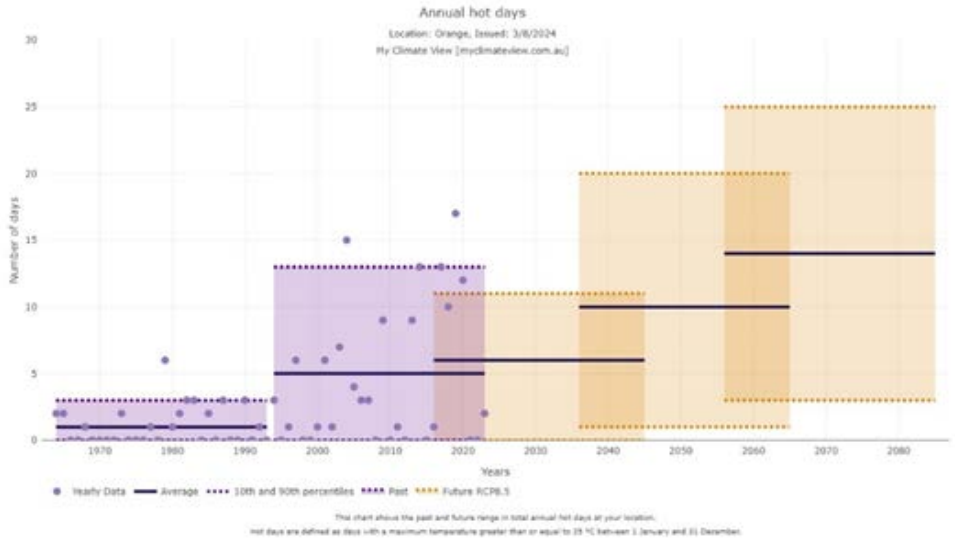


Figure 31 Change in number of hot days across Orange City (source: My Climate View, 2023).

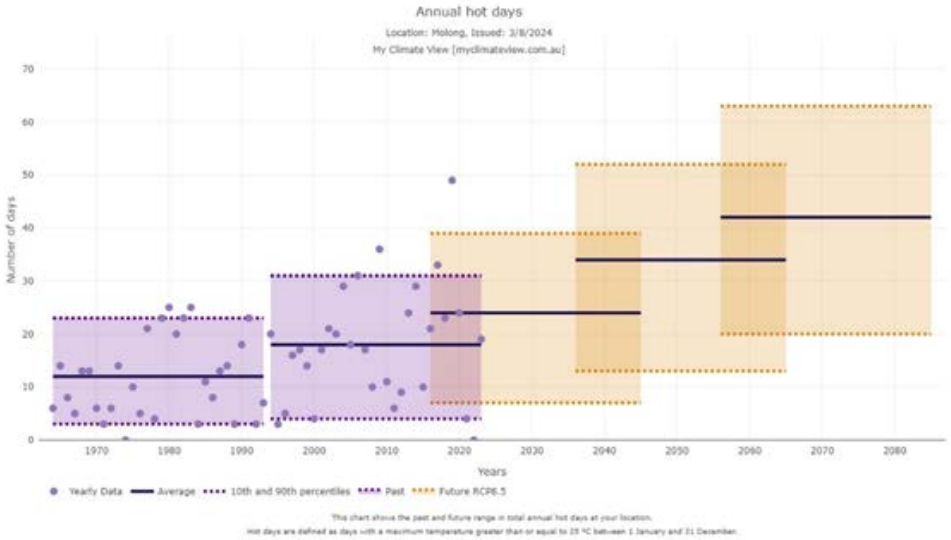


Figure 32 Change in number of hot days across the Cabonne Shire (source: My Climate View, 2023).

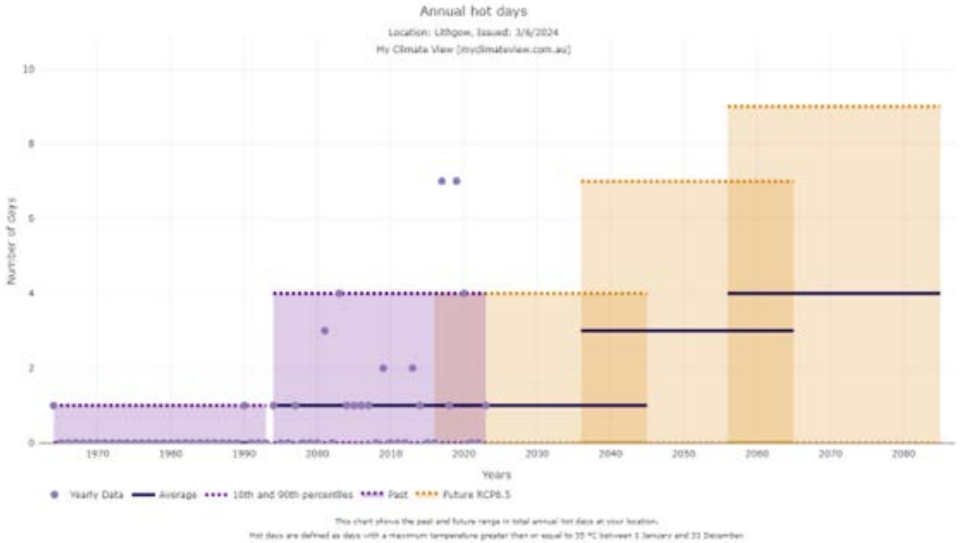
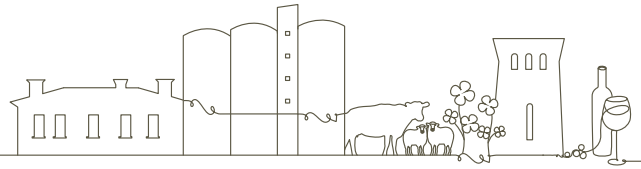


Figure 33 Change in number of hot days across the Cowra Shire (source: My Climate View, 2023).

Utilising projections from Murray Basin Cluster report (Whetton et al., 2015), Central Slopes Cluster Report (Ekström et al., 2015), the My Climate View Tool (My Climate View, 2023), and Drought Projections for Australia (Kirono et al., 2020), the following findings relating to critical drought indices are presented in Table 12 below.

Critical variables	Details
Average temperature	Average temperatures will continue to increase in all seasons (very high confidence). By late in the century (2090), for a high emission scenario (RCP8.5) the projected range of warming is 2.7 to 4.5 °C.
Extreme temperature	More hot days and warm spells are projected with very high confidence. Frost risk days (minimum temperatures under 2 °C) are projected to decrease across the cluster (high confidence) and could halve by late in the century.
Average rainfall	Less rainfall is projected during the cool season, with high confidence in 2090. There is medium confidence that rainfall will remain unchanged in the warm season. For the near future natural variability is projected to dominate any projected changes. The magnitude of projected changes for late in the century (2090) span approximately -40 to +5 percent in winter and -15 to +25 percent in summer for a high emissions case (RCP8.5).
Intense rainfall events	High confidence that the intensity of heavy rainfall events will increase
Evapotranspiration	Projections for potential evapotranspiration indicate increases in all seasons, with largest absolute rates projected with high confidence in summer by 2090.
Standardised Soil Moisture Index (SSMI)	There is high confidence in decreasing soil moisture in the southern regions (particularly in winter and spring) driven by the projected decrease in rainfall and higher evaporative demand (Whetton et al., 2015). Changes are larger in 2090, with simulated decreases of up to 15 % in winter in Southern Australia.
Percent time spent in drought and extreme drought (Standardised Precipitation Index (SPI) is less than -1) (calculated as the fraction of the time in drought over a given period)	There is medium confidence that the time spent in meteorological drought will increase. Within the drought metric the projected median percent time was a significant increase. In the south region, the ranges of uncertainty all tended to be above the baseline level, indicating a high model agreement on the increase.
Drought and extreme drought duration (defined as the number of events in a given period)	For drought duration, little change is projected in moderate and severe drought but an increase for duration in extreme drought.
Drought and extreme drought frequency (measures the average length (in months) of drought events in a given period)	There is medium confidence that the frequency of extreme drought will increase over the course of the century under RCP8.5.
Drought and extreme drought intensity (reflects the average of cumulative SPI or SSMI from all events. The more negative the value the more intense the event.)	The multi-model median indicated that under climate change, Australia will spend more time in intense drought, particularly across southern and eastern Australia.

Table 12 Climate projections for critical variables



3.5. Future climate scenario

The previous sections have highlighted the main factors that may affect the region, in terms of a changing climate, in the coming years, and some of the impacts of these challenges. To enable a more focussed approach to drought resilience planning, a summary of the predictions and the impacts these may have are provided below:

- An increase in the average temperature and in the intensity and frequency of hot days and heatwaves, leading to increased water losses and thus exacerbating drought conditions (Whetton et al., 2015). Warmer temperatures also contribute to longer droughts and harsher fire weather as well as increase animal stress. This can make land unsuitable for agriculture, lead to crop stress and attract new pests.
- Changing rainfall patterns; by 2070 a reduction in average annual rainfall between 10-15% but with more intense rainfall events, with a decrease in winter and spring rainfall and an increase in summer and autumn rainfall (DPE, 2023a; DPE, 2023b). This may impact growth, ability to plant/harvest and increase erosion.
- Increased rate, length and severity of droughts; there is increased potential for droughts that persist for more than 10 years and increased chance of events similar to the 2017-2020 drought going from a 1 in 1,000-year event to a 1 in 50-year event (DPE, 2023b). Primary producers are usually able to weather a drought for 2-3 years, however long-term droughts and increased frequency will likely push more off the land.
- Higher evapotranspiration, an increase of around 5% by 2070 (DPE, 2023a; DPE, 2023b). This has impacts on soil moisture, water availability and therefore crop growth.
- Decrease in water inflows in the region, increasing the risk of dam levels falling below critical levels (DPE, 2023a; DPE, 2023b). This has significant impacts on water security.

This information is combined with the resilience framework and helps to inform the actions included in this plan, to ensure they are building resilience in the region.

3.6. Future scenarios

Aside from future climate scenarios the strategic foresight for regional Australia: Megatrends, scenarios and implications illustrates 5 megatrends that are anticipated to impact regional communities in Australia. Aside from future climate scenarios the strategic foresight for regional Australia: Megatrends, scenarios and implications illustrates 5 megatrends that are anticipated to impact regional communities in Australia (Taylor, 2017) These include:

- Disruptive automation which has the potential to alter job landscapes
- Growing significance of the Asia-Pacific market which influences trade and investment opportunities
- Increased demand for cleaner energy reflecting changing global priorities
- Higher educational attainment which is driving the growth or knowledge-based economies and
- Technical advancements in communication and transportation.

These megatrends create the potential for 4 major scenarios in regional Australia in 2040 that can create either positive or negative impacts

1. Global Niche

Economic Impact: Communities may experience economic growth due to specialisation in high-demand industries. However, this could lead to job losses in traditional sectors due to automation.

Social Dynamics: Wealth may concentrate among industry leaders, leading to increased inequality. Communities could face challenges in retaining youth as they migrate to urban centres for diverse opportunities.

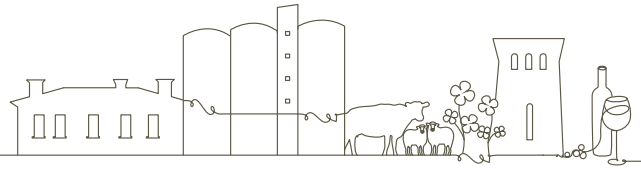
Infrastructure and Services: There may be heightened demand for advanced infrastructure and services to support the specialised industries, potentially straining local resources.

2. Fast and Flexible

Innovation and Employment: This scenario fosters a vibrant economy with diverse job opportunities, particularly in technology and services. Communities could become hubs of innovation, attracting talent and investment.

Cultural Vibrancy: Increased population and economic activity may enhance cultural and social life, leading to stronger community ties and engagement.

Challenges of Rapid Change: The fast pace of change could result in displacement of traditional industries and create challenges for those unable to adapt, leading to social tensions.



3. Natural Advantage

Resource Utilisation: Communities may benefit from sustainable practices that leverage local resources, potentially improving resilience against climate change.

Community Cohesion: A focus on local strengths can foster community pride and cohesion, as residents engage in sustainable practices and local governance.

Economic Vulnerability: Despite the advantages, communities might struggle with competitiveness and productivity, risking long-term economic viability if they cannot adapt to changing market demands.

4. Holding Ground

Stagnation and Decline: Communities may face economic stagnation as traditional industries decline, leading to job losses and reduced investment.

Population Challenges: Outmigration of youth could exacerbate demographic challenges, resulting in an aging population and reduced community vitality.

Social Issues: The lack of growth may lead to increased rural poverty and social isolation, with communities becoming more vulnerable to external shocks like climate change and economic downturns.

These megatrends will significantly impact the regions resilience to drought through economic, social and environmental factors. Understanding these interactions is key in developing effective actions to improve resilience to drought and will shape the capacity of each community to withstand and recover from drought. Suggesting that resilience measures should be considered not just alongside drought but also in the context of the potential future state.

3.7. Summary of drought related impacts

The impact of droughts and the magnitude of such impacts is a function of exposure to drought, the sensitivity of the community, and the adaptive capacity of the community (ABARES, 2022). Due to the interconnection and interaction between the community, economy, and environment, the impacts of drought can be both direct and indirect, with wide-reaching effects. Drought impacts were identified through the drought literature reviewed as a part of the plan development. This long list of drought impacts was then tested with members of the stakeholder reference group who were asked to add to this list and then rate each of the impacts in relation to the effect on their community which produced a priority ranking for each. This provided a customised view of the impacts that most greatly affect the communities within which the plan operates. Some of this prioritisation is provided in Section 5. Figure 34 shows that these impacts were then categorised into three components of social, economic and environmental. When considered together, these components form the foundations of drought resilience as they highlight vulnerabilities. It is important when considering impacts to note that droughts are difficult to predict in their duration and severity and due to these differences, impacts differ between drought events. Figure 34 details the impacts identified either through literature (and confirmed as relevant to the region by the stakeholders) or by the stakeholders. A key document for gaining an understanding of drought impacts in the region and generally was the 2022 Southern NSW Innovation Hub ‘Baselining Drought’ report. Other specific references are provided.

Social

- Impacts on farmers' mental health in rural communities during drought (Abunyewah et al., 2023). As drought becomes more severe, the risk of suicide can increase by up to 15% for rural males aged 30 to 49 years (AdaptNSW, 2024b).
- Consequences of exposure to extreme or prolonged climatic events such as drought can lead to delayed disorders including posttraumatic stress or transmitted to later generations (Cianconi, Betro and Janiri, 2020).
- Impacts on children's mental health from observing the impact of drought on their families, declining animal welfare and reduced educational opportunities.
- Access to suitable mental health services and education to support the community.
- Changes in attendance at school.
- Impact to the social fabric of the community.
- Reduction in volunteering numbers and fatigue amongst those existing volunteers.
- A loss of local service provision including health care due to the reduction in population that underpin the community. This also impacts post-drought population and employment.
- Government responses receive mixed support due to eligibility loopholes, arduous application processes, and perverse impacts.
- Positive social impacts of locally organised, government (or locally) funded community activities that rallied communities.
- Anxiety, distress, and unrest among First Nations Peoples communities from observing the deprived landscapes, perishing animals, and drying water systems.
- Women's roles may be impacted by drought. For example, they may have to find other off-farm work to support farm incomes or forego other paid jobs to provide much needed cost-saving labour on farms (Lester, et al., 2022).
- Drought impacts on human health, including dust storms affecting respiratory health.
- Climate change exacerbating drought impacts on human health. Water storage facilities such as dams, necessary to manage droughts, at a higher risk of bacterial and algae growth given warmer waters.

Economic

- Increased pressure on the local economy from reduced cashflow from the agricultural sector.
- Reductions in discretionary spending on non-essential services.
- Loss of businesses, workers, and families from the community from prolonged drought.
- Reductions in tourism to retail and food businesses and smaller centres that don't have large tourist attractions.
- Reduction in business and investor confidence.
- Financial stress on agricultural and regional businesses through decreased production, reduced incomes, increased expenditure, and increasing debt levels.
- Reduced business confidence for investors.
- Critical labour shortages post-drought in both agriculture and broader industries.
- The burden of financially recovering from previous droughts limits some businesses from taking advantage of non-drought conditions, restricting their ability to improve resilience for the future.
- Droughts can affect domestic food prices and export earnings (Climate Council, 2018).

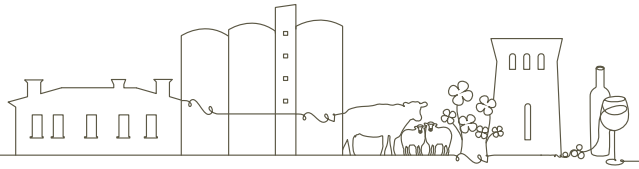
Environment

- Reduced groundcover (tree die-back), pasture and topsoil which exacerbates wind and rain related soil erosion (LLS, n.d.).
- Greater habitation of some animals into regional centres, for example, kangaroos.
- Reduced water availability to both agriculture and the community. Especially those businesses without a permanent water supply.
- Concerns with the ability to gain access to water (equity).
- Water quality issues, for example, salinity.
- Threat of other natural disasters such as bushfires (Abunyewah et al., 2023) and dust storms.
- Reduced access to water for the environment.
- Impacts to culturally significant sites for First Nations Peoples.
- Reduction in bush tucker and medicine.
- Post-drought, farmers can be slow to restock due to the need to give pastures time to recover and limited access to capital.
- Post-drought, kangaroo numbers increase sharply.
- Decline in water bird, fish, and aquatic plant populations, as well as decreases in terrestrial plant and animal populations (Climate Council, 2018).
- Drought has negative environmental changes that accumulate over time. Climate change exacerbates land degradation, creating a reinforcing feedback loop between climate change, land degradation and drought (Masson-Delmotte et al., 2019)
- Risks of parasites and worm infestations. A number of conditions occur more commonly when drought-feeding, especially when livestock are congregated on small areas due to drought-feeding situations.
- Climate change is likely to make the environmental impacts of droughts more frequent and severe (DPE, 2023b). Warming temperatures are predicted to increase evaporation from waterbodies and evapotranspiration from plants, overall reducing the availability of surface water. Climate change, including changes in climate patterns such as El Nino and the Indian Ocean Dipole, will affect the frequency and magnitude of rainfall events over NSW.

Figure 34 - Summary of the key social, economic and environmental impacts experienced in the Central West region during the past drought

04

Listening to local experience



4. Listening to local experience

4.1. Local stories of resilience

The communities of Central West have forged their own pathways to improve their resilience. The following case studies have been developed to showcase the activities and initiatives across the LGAs.

Case study – Blayney Men's Shed Walk

The Blayney Men's Shed walk is not just a simple stroll, it helps towards building resilience within the community. The local men gather at the designated meeting point, sharing news and laughter, they forge connections that combat isolation, a common foe for men's wellbeing.

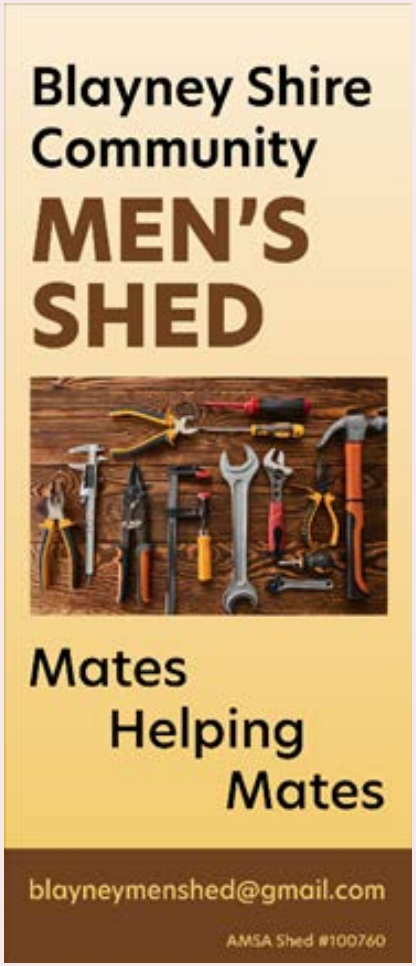
The walk itself is a leisurely exploration of Blayney's streets on Sunday morning. The slow pace allows for conversation, fostering camaraderie and trust. Men share experiences, offering support without judgment. This open dialogue promotes mental health awareness, creating a space to confront challenges and anxieties.

Along the way, local knowledge is exchanged as men point out sights of interest. This connection to place and history fosters a sense of belonging, a vital source of strength. The walk culminates in a barbecue breakfast back at the shed, where the conversations continue. But it is more than just food. It is a chance to showcase projects, seek advice, and build a supportive community.

Each Tuesday and Friday the rhythmic clatter of saws mingles with laughter, a heartwarming symphony of collaboration. The Men's Shed transforms into a vibrant hub, not just of activity, but of resilience.

By weaving together physical activity, social connection, and a sense of community, the Blayney Men's Shed tackles a crucial aspect of resilience: the power of belonging. It fosters a supportive network, equipping men to face life's challenges with newfound strength.

Source: I. Tooke, personal communication.



Case study – Blayney Pilot Farm

Angullong, the Crossing family property, stands as an innovative example of the power of smart farming in building resilience against drought. Nestled near the Belubula River, this unique property pursues a diversified income stream by combing wine grapes with cattle grazing. Angullong served as a pilot smart farm in 2020-21 as part of the Farms of the Future Program. The Farms of the Future Program is being delivered by the NSW Department of Primary Industries and aims to facilitate tech-enabled production through improved connectivity and installation of sensor equipment. During the program, Angullong was a leader in how innovation can empower farmers to navigate the cyclical challenges of drought.

The smart farm was powered by a robust network of agricultural technologies that improved water management. Water monitoring systems – the biggest labour-saving innovation according to James Crossing – tracked stock tank levels and river flow. This real-time data, especially crucial during dry seasons and times of drought, allowed for informed decisions to ensure water security for their cattle operations. Previously, manual monitoring of river levels in steep terrain was challenging and time-consuming.

Furthermore, the pilot smart farm was able to monitor soil moisture, providing valuable insights for targeted water delivery to crops, while weather and crop data collection empowered proactive planning and resource allocation. The focus on precision agriculture optimised water usage and minimised waste, advancing Angullong's resilience to drought.

The benefits of the smart farm extended beyond water, with Wi-Fi connectivity across the property allowing for dependable data transfer and remote monitoring. This improved cattle tracking and well-being, while security and farm safety management systems provided an extra layer of protection.

Angullong demonstrates how smart farming can empower agricultural businesses to build resilience against droughts and other challenges. However, since the pilot farm concluded and funding support withdrawn, Angullong has faced affordability and longevity challenges. With 3G set to be removed by mid-2024, weather station technology will be obsolete and require replacing (at a high cost). This highlights how technology must be designed to prioritise longevity, adaptability, reliability, and affordability to build long-term drought resilience. It also highlights the role that funding support can play in building on-farm drought resilience through technology adoption.

Source: Baguley, 2021; DPI, n.d.d.; J. Crossing, farm owner, personal communication

Case study – Central West Equestrian and Livestock Centre Sports Facility Upgrade

The establishment of the Central West Equestrian and Livestock Centre (CWELC) has created a regional hub for equestrian and livestock events in the Blayney area in addition to a drought proofing opportunity.

In 2019, the facility had two major projects, being the construction of the Central West Equestrian and Livestock Centre and the Blayney Showground Drought Resilience Enhancement Project.

The CWELC was a $2.2 million grant funded project to develop an undercover, 80m x 50m purpose-built facility for equestrian and livestock events. As the only undercover facility in the region, Blayney has the capacity to host large regional events in addition to User Groups normal training and club days. The facility and improvements have attracted a series of new large events to the Shire including the National All Breeds Junior Heifer Show, the Bucking Bulls Australia National Finals and Tom Curtain's 'Nothin's Gonna Stop Us' Tour. These events have had continued flow on benefits to the Blayney Shire visitor economy and benefitted many of the town and surrounding village businesses. The facility also becomes a safe and secure hub during natural disasters including future droughts and bushfires.

To take advantage of the large facility being built in 2019, the Blayney Showground Drought Resilience Enhancement Project was established. The Drought Resilience Project provided the capability to harvest water from the CWELC to the nearby Dam for storage. Water is reticulated via pipes and pump system and for top up storage of the large Bore Water Tank. This provides drought proofing measures for the showground main arena irrigation system, providing water for dust suppression on the new and existing sand arenas and livestock water via troughs in the Cattle Pavilion, Equestrian and general livestock handling areas.

A Blayney Showground MasterPlan has also been endorsed providing Council with a roadmap for future additions pending grant funding opportunities. Some of the ongoing projects include additional camping areas, permanent cattle yards, undercover day yards, outdoor fenced arena and a stable block complex.

Source: Blayney Shire Council, 2020; B. Reynolds, personal communication; M. Rodd, personal communication

Case study – Blayney Rotary Club

Blayney's Rotary Club showcases the power of volunteers to support a region during times of drought. The Blayney Rotary Club meets every Wednesday at the Blayney Golf Club where members socialise and plan actions to serve the Blayney community. The most recent drought motivated the club to assist those doing it tough – utilising the Rotary network across Australia, the Blayney Club compiled pre-paid visa cards, petrol cards, and Christmas hampers that included basic supplies and toiletries. While this bolstered the resilience of individuals and their families to deal with the impacts of drought, recipients were also encouraged to spend visa cards locally. This meant that money was cycled through the community and strengthened broader economic resilience of the area.

During the time of drought, the club also joined up with the local family-owned supermarket, Bernardi's, to support relief to families who were facing hardship. The funding from Bernardi's through their Building Stronger Communities Program for community groups occurs every six months and is decided through community voting. Every six months, three community groups - who are identified as in-need of financial support - are nominated. Shoppers can submit a vote for their preferred group every time they make a purchase. At the end of the six-month cycle, each community group receives a proportion of the funding through the supermarket. In addition to encouraging local spending, this initiative supports the resilience of other community groups who play a pivotal role in providing community connection and delivering services.

The Blayney Rotary Club demonstrates the critical assistance that charity and service organisations through their volunteers offer during a drought, highlighting how support networks are an essential component of resilience.

Source: Rotary International, n.d.; I. Tooke, Secretary, Blayney Rotary Club, personal communication

Case study – Farmers Helping Our Own

‘Farmers Helping Our Own’ empowers rural, regional and remote communities across Australia to create localised support networks during times of severe adversity. Core to the mission, is ensuring farmers and their families have the confidence and tools to check in on their mates and those in the wider community, to provide support when its needed most. It is driven by the very people within the community, who understand the challenges faced within the industry.

At its essence, these workshops are about farmers helping their own, being proactive and mitigating the decision-making paralysis during adverse times. The initiators of this workshop are Stuart Austin and Gem Green, with logistics and planning support from House Paddock Consulting’s Bec Fing and Heidi Smith.

The decision to put together a roadshow of mental health workshops was about being proactive at a time when everything can feel like it's out of our control. Historically and now, the farming industry has poor statistics with mental health issues such as anxiety, depression and suicide, fundamentally FHOO seeks to proactively ‘step ahead’ of this before the impacts became really significant. These workshops are designed for people living in rural and remote areas to develop practical strategies for decision making in challenging times, keeping communities together and building mental health resilience.

Each session is run to align with local needs and be guided by participant involvement. The workshops will be supportive and in an open space, to foster a sense of community and encourage individuals from all walks of life who regularly communicate with those in the farming community to come forward and have a seat.

The workshops provide an opportunity for those who regularly engage with farmers and the rural community to listen and learn how to best support them when they need it most. There are unique challenges faced by farm businesses, particularly in the context of severe adversity, such as drought, floods and challenging trading conditions. More specifically, the sessions delve into identifying warning signs and asking important questions about how to facilitate better support with the community.

Driven by the community, ‘Farmers Helping Our Own’ is an effort to create lasting resilience. The program is hosted in collaboration with key mental health support organisations including Rural Adversity Mental Health Program and TIACS which is a free counselling service.

“TIACS is thrilled to facilitate support for our farmers and their communities on the ground, delivering these crucial rural workshops,” says Jason Banks Co-CEO of TIACS.

Source: Workshops for mental health resilience in the bush - The Farmer Magazine and Gem Green.

Case study – Blayney Bore Network: A Sustainable Approach to Drought Resilience

Blayney's innovative bore water system provides a crucial source of water during dry periods, alleviating pressure on strained surface water resources and household tanks. Residents can access water from strategically located bores across the LGA for a minimal fee. A key system is used to manage usage and restrict access with residents having to pay a deposit and annual fee to access the water source.

The bore water serves as a reliable backup during droughts. The network is not intended for potable, commercial, or agricultural operations, but rather small-scale use such as garden maintenance and to supplement stock water. This reduces reliance on often-restricted surface water sources and assists to maintain stock welfare.

Access to bore water empowers residents to maintain their gardens during droughts, preserving property values. It also reduces water bills – less water needs to be purchased and transport costs are minimised. Knowing they have a secondary water source fosters mental resilience among residents during droughts. The bore network contributes to a sense of community preparedness and self-sufficiency during drier conditions.

The Blayney system prioritises responsible water management. Occasional water quality testing ensures the bore water remains suitable for its intended use. The Council monitors extraction rates to maintain aquifer health and implements sustainable management practices. The scheme was originally put in place in the 1980's under a Commonwealth drought scheme, and some parts have recently been upgraded, including some new water tanks and piping.

Source: Blayney Shire Council, 2021; B. Reynolds, personal communication

Case study – Seeds for Success Podcast and Wongalee Farm

Seeds for Success is a podcast by the Central West Local Land Services to share stories of farmers from the region. The podcast has covered everything from how people got through droughts, to the pros and cons of corporate farms and managing lambing ewes and creep feeding cattle. Hear from farmers in the Central West area, battling the elements, making tough calls, and getting the job done.

"The nature of farming means that producers are often working the land rather than getting together and sharing information. They are also modest in their own achievements and how they have managed to overcome challenges or improve production" says Brennan who hosts the podcast.

One of the podcast episodes features the Morse's who operate a family farm 'Wongalee,' near Molong, a 1,094-hectare cattle breeding and trading enterprise. In pursuing trading, they realised they can look after their country better. They talk about their whole farm system with sustainability in mind. Coming out of the 2019 drought, the Morse's made the decision to destock and keep cattle off the grass to allow the ground cover to regenerate even though it meant losing 3 years of production.

In pursing regenerative agriculture, they aim to have something that will grow all year around while also aiding production. They aim to remove undesirable ground cover and replace it with native species, noting that grasses help protect the soil surface.

James believes whenever there is a problem there is an opportunity, you just need to change the way you look at it.

Source: J. Morse and S. Morse, 2020; LLS, 2021

Case study – Recovery and Resilience Workshop

The Rural Financial Counselling Service NSW (RFCS NSW) presented a free workshop to the residents of Canowindra. The aim was to help farmers and small business owners with how to minimise the impacts of the loss of income due to natural disasters. The two-hour workshop was both interactive and practical and aimed to provide attendees with information both about financial and mental health resilience. The financial aspect of the workshop aimed to teach locals how to better plan and manage finances.

“I have seen so many farmers struggle with their cash flow due to these ongoing impacts. I am excited to bring the workshop to Parkes and to have the chance to help address some of the issues with locals and provide them with contacts and support networks,” said local Rural Financial Counsellor, Danielle Davenport.

Source: Canowindra Phoenix, 2024

Case study – Woodfired Eugowra

Woodfired Eugowra is more than just an afternoon of merriment; it's a vibrant celebration of the Eugowra region itself. Stepping beyond entertainment, the event showcases the rich tapestry of the area's history, agriculture, and indigenous culture. Visitors and locals alike can immerse themselves in this unique heritage through captivating demonstrations and informative displays.

This spirit of community extends throughout the festivities. Live music fills the air, creating a backdrop for bustling markets brimming with regional crafts and local produce. Food vendors tempt taste buds with an array of delectable offerings, while toasty fire buckets provide a warm and inviting atmosphere for gathering and sharing stories. The aim, after all, is to provide a truly special afternoon for the people of Eugowra and its surrounding communities.

This celebration wouldn't be possible without the tireless efforts of Cabonne Council and Eugowra Events and Tourism. Their dedication ensures a smooth-running event filled with unforgettable experiences. A highlight each year is the awe-inspiring replica gold coach, a testament to the region's fascinating past and a guaranteed crowd-pleaser. Woodfired Eugowra also fosters a platform for regional artists and vendors, allowing them to showcase their talents and wares, further enriching the connections between community members and visitors.

Source: Forbes Advocate, 2023

Case study – Cabonne Balloon Festival

The Canowindra International Balloon Challenge, organised by Canowindra Challenge Incorporated, is a major event not just for Australia but for the entire Southern Hemisphere. It boasts the title of the biggest hot air balloon event in the region.

The festival's signature event, the Cabonne Community Glow, is a dazzling display of light and music. After inflating just after sunset, 15 hot air balloons transform into giant glowing orbs 20 meters tall. These illuminated balloons then synchronise their lights to a soundtrack featuring the best music of the last two decades, creating a truly unforgettable spectacle.

Beyond the Cabonne Community Glow, the festival offers a variety of experiences for attendees. Participants can take sunrise balloon flights, soaring over the picturesque Canowindra countryside as the day begins. Local food trucks line the markets, providing delicious refreshments while also supporting the community's economy.

Source: Canowindra International Balloon Challenge. n.d.

Case study – MSM Milling Mental Health First Aid Training

Local business MSM Milling (MSM) employs around 100 people and operates a fully integrated oilseed crushing, oil refining, packaging, and stockfeed manufacturing operation in Manildra, NSW. In addition to transforming canola seed into value added products, MSM has identified that mental health could be better supported in their company and community. MSM aspires to improve this support through increased access to mental health first aid training and increasing the number of people within their company, local council, high school, and broader community who are mental health trained.

Within the company, mental health first aid training has been implemented for staff to attend, and they have organised 'Are you Ok' day events and education. Moreover, MSM are working towards becoming an accredited workplace provider of mental health first aid training and are collaborating with the Country Women's Association and the Black Dog Institute to have one of their staff members qualified.

MSM have collaborated with the Manildra Flour Mill to deliver mental health first aid training to the community. Their next ambition is to work with local schools to organise training tailored towards young people.

Guin Dickie, the dedicated Health, Safety, and Education (HSE) Advisor at MSM, notes that safety at the workplace is not just physical, but also mental. She encourages other companies and communities to talk to their existing HSE training providers to organise mental health first aid training or nominate an employee to get qualified.

MSM Milling's actions demonstrate that the workplace can be an important place to build resilience. There is a need for mental health support services, and collaboration between industry, community, and charity can be a powerful means to build mental resilience.

Source: G., Dickie, MSM Milling, personal communication

Case study – Cowra Business Resilience Forum

The local businesses in the Cowra Shire have suffered the secondary effects of the impact of natural disasters on agriculture. To build the resilience of local business, a Business Resilience Forum was held at Club Cowra in 2023. The aim of the evening was to empower business owners and operators. The session shares the effective tools and knowledge needed to regain control and thrive in today's business landscape.

The event provided a platform for three guest speakers. Their specialties included business advisory, marketing strategy and workforce. Their talks centred around three key session topics: finance, marketing, and people. This event provided an opportunity for business owners in the Cowra Shire to connect, learn and share knowledge.

In particular, it allowed for attendees to better understand their respective CORE business drivers and learn what is important to them as business owners. The session addressed challenges faced by businesses and provided an opportunity for forward-thinking approaches to emerge through the guidance of specialists. Such an event is a step towards building resilience amongst businesses owners.

Source: Cowra Council, 2023.

Case study – Cowra Food Hall

The Cowra Uniting Church Food Hall is a service offered by the Cowra Uniting Church Congregation to provide low-cost fresh fruit vegetables and grocery items to registered clients in a warm and caring environment.

The aim of the Cowra Food Hall is to provide weekly access to food and household goods at a reasonable cost in a caring and supportive environment and to reduce the anxiety of food insecurity for members of their community. By offering low-cost essentials, the Food Hall empowers individuals and families to meet their basic needs. This stability allows them to focus on other aspects of life, fostering a sense of security and control.

The food and households' goods are sourced from two main sources: Foodbank NSW and local retailers. This means they offer a variety of items, potentially including non-perishables, canned goods, and fresh produce depending on availability. Sourcing from Foodbank NSW helps reduce food waste and allows the Food Hall to stretch their resources further. This promotes a culture of sustainability and empowers them to help more people.

This program is run by volunteers and aims to address food insecurity within the Cowra community. The welcoming environment and friendly volunteers go beyond just handing out food. They offer a sense of belonging and connection, which is crucial during challenging times. Sharing a cup of tea and conversation during morning tea can provide emotional support and combat isolation.

Source: Cowra Uniting Church. n.d.

Case study – Billimari Bore Project

Cowra Council is delivering the 'Cowra Drought Water Security - Billimari borefield and transfer pipeline' project. The 2019/20 drought identified the need for additional water sources that could be utilised when Wyangala Dam is nearing a "cease to flow" scenario.

The business case prepared for the project determined that an alternate emergency ground water supply could be established in Billimari to ensure that critical daily water needs in Cowra are met during prolonged dry seasons. The proposed site will have a number of boreholes, along with a "reservoir, pumps, and rising main infrastructure to deliver the water to Cowra."

The Project entails construction of 3 bores at Billimari, at a 60m depth, and a 26km pipeline from the borefield to the inlet system at the Lachlan River in Cowra where the water is then piped to the Cowra water treatment plant. This drought security project is funded through the NSW Safe and Secure Program and is expected to be completed by 30 June 2024.

Completion of this project will provide Cowra with an alternative water source in times of drought when the Lachlan River is at critically low or cease to flow levels.

Source: Cowra Shire Council, 2021

Case study – Central West Inspired Women Initiative Orange

Launched in Orange in 2022 by Regional Development Australia Central West, the Central West Inspired Women (CWIW) initiative is not just about networking events. It is a strategic program designed to cultivate resilience among regional women by fostering collaboration across sectors.

CWIW tackles the challenges faced by many regional women, particularly feelings of isolation. Through initiatives like "ladies' lunches" and speed networking, it creates a supportive environment for connection, inspiration, and knowledge-sharing. This network acts as a crucial support system, empowering women to navigate challenges and build long-term resilience.

However, CWIW goes beyond social interaction. It provides valuable upskilling and capacity-building workshops, equipping women with the tools and knowledge they need to excel in their careers and businesses. Moreover, the newfound confidence and competence allows them to adapt to change and overcome obstacles, fostering long-term resilience.

CWIW is not just about empowering women; it is about empowering the entire Central West region. Through fostering connections, providing valuable skills, and bridging communication gaps, CWIW equips women with the tools they need to be resilient, adaptable, and build a stronger future for themselves and their communities.

Source: Regional Development Australia, n.d.

Case study – Water Efficiency in Orange

The Orange City Council acknowledges the critical importance of water security and has adopted a multifaceted approach to ensure its long-term sustainability. Recognizing that water security is a shared responsibility, the Council implements initiatives that not only secure water supplies but also promote responsible water use within the community.

The Council is committed to fostering a culture of water conservation within Orange. This is achieved through a multi-pronged strategy. Firstly, they offer programs that identify and address household water leaks, preventing unnecessary water loss. They may also install shower efficient shower heads and weights for older toilets to reduce water use. Furthermore, the Council provides water savings action plans for high water users that equip commercial users with the knowledge and resources to manage water effectively. These plans often include suggestions for utilizing alternative water sources, such as rainwater tanks, promoting a more sustainable approach to water consumption.

Effective signage and interactive platforms are utilised by the Council to raise awareness and educate residents on the importance of water conservation, more so during drought and water restrictions. This approach emphasises the value of water as a finite resource and encourages behavioural changes that contribute to a more water-conscious community. It also promotes positively in the community by highlighting how well the community as a whole is performing with reducing water usage. Leading by example, the Council irrigates parks and gardens with bore water, demonstrating its commitment to responsible water use in its own operations. Additionally, financial incentives are offered to encourage residents to install rainwater tanks, further diversifying water sources and reducing reliance on traditional supplies.

These comprehensive strategies implemented by the Orange City Council are paving the way for a more resilient water future. Due to these measures, water usage in Orange is below 5,000 ML annually, a drop from a long-term average of around 7,000 ML. Their innovative approach to capturing urban water, diversifying water sources, and promoting water conservation fosters a strong community attitude towards water efficiency.

Looking ahead, the Council's commitment to water security extends beyond current initiatives. Future water efficiency improvements, including advocating for upgrades to Lake Rowlands, underscore Orange's position as a leader in sustainable water management.

Source: Orange City Council, n.d.b.; W. Beatty – Manager (Water and Sewer) Orange City Council, personal communication

Case study – Indigenous Cultural Adventures

Gerald Powers created the Indigenous Cultural Adventure. Gerald Powers is Juru man from Bowen in Queensland near the Whitsundays but has learnt from Wiradjuri elders the local stories and traditions of the region. With their blessing and approval, Gerald runs cultural tours around Orange to share local Wiradjuri sites and stories.

All cultural tours are hosted and guided by local Elders. Small to large groups can visit the Yuranigh's burial site. The site features a cluster of carved trees to signify the burial ground of an important person. The cultural tours explore the rich vibrant culture of the Wiradjuri nation who have been deeply rooted in the Orange (and surrounding) region for over 50,000 years.

A recent avenue of the Indigenous Cultural Adventures is the Bush Tucka. This venture made its debut at the 2016 Taste Orange. "We are giving our Australian Indigenous Bush Tucka food a 21st century twist. The public have now grown to enjoy the health benefits of a low-fat product marinated with indigenous herbs and spices" says Gerald Power.

Source: Indigenous Cultural Adventures. n.d.; We are Explorers, 2023

Case study – Orange Hospital

The unrelenting drought exposed a vulnerability in the lives of Orange Hospital staff. For those whose homes, relied solely on rainwater tanks, became battlegrounds against water scarcity. Yet, within the walls of the hospital, a different kind of strength emerged – the resilience of the institution itself.

In a stroke of pragmatic empathy, the hospital leadership unlocked a hidden wellspring of support. Staff, facing the indignity of limited water at home, were offered the haven of the on-call accommodation's showers. No intrusive questions, just the simple act of providing a cleansing respite before or during their shifts. This seemingly minor concession acknowledged the ripple effects of the drought, subtly alleviating a burden most likely carried in silence.

The hospital's washing machine, once solely for patients in need, became a shared resource. Staff, caught between the demands of work and dwindling home resources, could now tackle their laundry during their breaks. This wasn't just about clean clothes; it was a recognition of the emotional toll the drought inflicted. It was a bridge built between the professional and personal, a testament to the hospital's understanding that a well-supported staff translates to exceptional patient care.

The drought may have tested the Orange Hospital staff, but the response revealed a deeper truth. It showcased a community, both individual and institutional, that could bend but not break. It was a masterclass in quiet resilience, where small acts of kindness became the foundation for unwavering dedication.

Source: C. Nowland (Western NSW Local Health District), personal communication

Case study – ‘Let it Rain’ Fundraising Concert

The 2019/20 drought gripped Orange, NSW, leaving farmers struggling. But in the face of hardship, the community rallied. A "Let it Rain" concert, held on March 6, 2020, became a beacon of resilience.

Local musicians donated their time, from the Galumaay Indigenous Dance Troupe to established performers like Amy Viola and Robbie Mortimer. Businesses chipped in, offering everything from concert tickets to a tanker load of water for the silent auction. The event itself drew 400 attendees, each one a testament to the community's unwavering support.

The impact was immediate. The $18,000 raised went directly to drought-affected farmers, distributed as $200 cash cards with assistance from nearby Country Women’s Association branches. This financial injection provided a lifeline, helping families weather the storm.

But the "Let it Rain" concert was more than just fundraising. It was a powerful symbol of community spirit. Local media helped spread the word, businesses provided resources, and musicians brought hope through their performances. This collaboration fostered a sense of unity, reminding everyone that they weren't alone in the fight against the drought.

The "Let it Rain" concert stands as a testament to the power of resilience. It's a story of how a community, facing a seemingly insurmountable challenge, came together to support one another. It's a story that serves as an inspiration for the community, that when facing hardship, even the driest times can be overcome through collaboration and a shared spirit.

Source: G. Mickle, personal communication

Case study – Light Up the Night in Grenfell

Grenfell came alive with live music whilst they awaited to be amazed by one hundred drones lighting up the skies above Grenfell for 'Light Up the Night' (LUTN).

Approximately 2,500 people attended event funded by Weddin Shire Council and the NSW Government through their Reconnecting Regional NSW -Community Events Program. Funding also came through the Create NSW initiative Country Arts Support Program (CASP) to assist with the Indigenous story telling component of the drone lightshow. Wiradjuri images and stories are included in the drone light show; these were put together from local Wiradjuri people alongside assistance from Dinawans Connection cultural group based in Dubbo. Through the drone show, dreamtime stories come to life in the sky.

LUTN featured live music by five acts, with the majority being locals, followed by the drone show featuring ten symbols choreographed to music, all chosen for their connection to the community. At the time it was the longest drone show on record in Australia. It was an event the locals will talk about for years to come! One that repaired local community cohesion and delivered positive social outcomes.

The vision of LUTN was to provide a fun, free community event, through live music, market and food stall, and a spectacular drone show. It was easily accessible, appealing to all ages, and family friendly. The event was staged in the off-peak time of year for Weddin Shire, maximising the proportion of the community who attended. In farming communities, it is important to avoid peak times of year such as sowing, haymaking and harvest. With very few barriers to attendance the focus on reconnecting the community was achieved.

Source: Arts Out West NSW, 2023

Case study – Ooma Creek Tributary Riparian Restoration Project

Ooma Creek catchment was identified as an issue in the local environment. Weddin Landcare, together with three local landowners, are working on the Ooma Creek Tributary Riparian Restoration project. The goal of this project is to provide protection for and creation of valuable riparian habitat, reduce streambank erosion and to help improve water quality.

On the Mitton's site initial fence work was required before revegetation work could begin. The local trees and shrubs for all three sites were grown by the Weddin Community Native Nursery in preparation for the revegetation field day.

This field day on the Mitton's property included a demonstration of tree planting techniques. It also brought together members of the community who volunteered to help on a real project and contribute positively to building resilience in the local environment.

Landholders involved in the restoration project have completed the on-ground works associated with the project. The result of this project is the 30Ha of riparian land protected and restored and 2700 trees and shrubs planted. These trees and shrubs specifically aimed to reduced streambank erosion, improve water quality and biodiversity.

With an aim to stabilise the riparian area and improve the ecosystem, three sites on tributaries of the Ooma Creek have been key areas of focus. These sites have been fenced to control stock access to protect streambanks and allow native vegetation to establish and multiply. In collaboration with the Weddin Community Native Nursery, a mix of native trees and shrubs were propagated and planted at each site to improve the riparian corridor and further stabilise the banks. This included a demonstration of tree planting techniques and brought together members of the community to help on a real project and contribute positively to building resilience in the local environment.

Collaboration as such propels, unique ideas to be built and formulated by the community and as such stimulate resilience in the area.

Source: Weddin Landcare. n.d.; C. Diprose, personal communication

Case study – Weddin Community Native Nursery

The Weddin Community Native Nursery (WCNN) is an initiative of Weddin Landcare. The WCNN propagates plants of the Weddin Shire with the additional goal of preserving (for future generations) threatened species within the Shire. As the plants are grown from locally collected seeds, they are adapted to the growing conditions of the Central West. The seeds are cleaned and propagated. Propagation methods also include cuttings and divisions.

The nursery is open to the public for retail sales and has a dedicated group of volunteers with whom most hold a TAFE Certificate 3 in Conservation and Land Management. The volunteers are responsible for seed collection and nursery tasks as well as the fundraising and promotion of the nursery. This includes holding street stalls, community education and information sessions.

There was a recent community recycling and composting workshop where participants heard about national and local waste issues and solutions, as well as from a Council representative who informed the participants about the Cowra Materials Recycling Facility and the importance of recycling correctly. There was also the opportunity for some practical demonstrations. Conducting educational activities brings together community members and fosters support for taking care of the environment.

The importance of this project is apparent due to numerous regenerative projects taking place through the Shire due to the considerable loss of flora in the region. Some of these plants have been identified and registered by the local native plant elder. The nursery provides a regular opportunity for social connectedness. WCNN supports landscape regeneration and local resilience focused initiatives.

Source: Weddin Community Native Nursery, n.d.; C. Diprose, personal communication

Case study – KB5Fitness

KB5Fitness a personal training business owned by Kim Broomby. Growing up on a farm in Central West NSW, Kim knew the value of a strong, healthy, and balanced life. Her passion is exemplified through her adaptability to ensure exercise is accessible to all members of the community. Expanding her business to ensure the offering of fitness classes across the Weddin Shire, including the village communities, is an expression of this.

Kim varies her program to take advantage of local conditions with some planned activities taking place in local pools and local guide halls, to generate user group income to these local services. The classes create opportunities for regular social connectedness.

“You have got me hooked! Your classes are now part of my weekly routine, and I never miss one by choice. I love the variety of workouts, and the leadership, dedication and respect you show to your clients. There is such a positive and inclusive feel to your business, and everyone is supported where they are at with exercise.” Kylie M

Kim was also one of the original providers of the ‘active farmers’ fitness program, a program designed especially for farmers with limited or no local access to fitness expertise and equipment. KB5Fitness is diverse and caters to diverse age groups and backgrounds. Kim has grown her business in recent years with the introduction of pilates and, because of COVID, she now provides group face to face classes as well as virtual classes. KB5Fitness is a source of off farm income for her family unit, who also run a family farm. Kim knows firsthand the struggles of farming which many community members also face. Kim’s work with KB5Fitness and the active farmers fitness program has revitalised Weddin’s sense of community and fostered perseverance in the face of environmental struggles including drought.

Source: KB5Fitness. n.d.; K. Broomby, personal communication

Case study – Grenfell Food Hall

The Grenfell Food Hall is an example of the unwavering spirit of the Weddin community. Run entirely by volunteers, it provides a lifeline for many, offering low-cost food staples through diverse channels like home deliveries, online ordering, and even Christmas hampers. With numbers on Fridays reaching between 90 to over 100 people.

But the Food Hall goes beyond sustenance. It fosters connection, becoming a regular social outing for clients with its welcoming cafe. This focus on social interaction is even more poignant when considering the Food Hall's role during the Covid lockdown. When supermarket shelves were bare and social interaction dwindled, the Food Hall stood strong, ensuring both physical and emotional well-being through home deliveries and a safe space for connection.

Moving on from Covid. The Food Hall is now addressing the rise in 'cost of living' expenses and attempting to lighten the burden by providing hampers and essential food to families, couples, and singles within the community.

Grenfell Food Hall's story is one of resilience and unwavering commitment. It is a testament to the power of community, adapting to challenges, and finding innovative ways to provide not just food, but also a sense of connection and belonging.

Source: J. Cations, personal communication

Case study – The Criterion Hotel

The Cri Hotel is not just a pub, it is a testament to the power of reinvention and community spirit. Once a traditional "sportsman pub," the Cri has transformed into a multifaceted space that caters to all. The key to their success? Diversification.

By utilising their function room for workshops on everything from local crafts to financial literacy, the Cri has become a hub for learning and connection. Their Christmas markets showcase local businesses, fostering a sense of community pride. They have even elevated their catering with a top-notch kitchen, attracting patrons beyond the pub scene.

But the Cri's impact goes further. Recognizing the economic importance of tourism, they took a bold step by venturing into self-contained apartments above the pub, offering comfortable accommodation for visitors. Additionally, their acquisition of the local caravan park ensures it remains a viable option for budget-conscious travellers.

This transformation was not without its challenges. Shifting the perception of the Cri from a "sportsman pub" to a family-friendly space required dedication and community engagement. However, the Cri embraced the challenge, focusing on creating a welcoming environment for everyone. Now, the Cri is a vibrant space where families gather, workshops spark creativity, and the Christmas markets bring the community together. The Cri Hotel's story is a testament to the power of resilience, adaptation, and a deep commitment to the community it serves.

Case study – Country Education Foundation

The Country Education Foundation (CEF) stands as a vital organization within the Australian educational landscape. Established as a national non-profit headquartered in Orange, New South Wales, the CEF is dedicated to a singular mission: ensuring equitable access to educational opportunities for students residing in rural and regional areas.

The CEF recognises the inherent challenges faced by students from geographically dispersed communities who yearn to pursue further education and training. These challenges can be multifaceted, ranging from financial constraints to a lack of readily available support structures. In response, the CEF has implemented a comprehensive suite of programs designed to empower these aspiring students.

Financial assistance forms a cornerstone of the CEF's support system. Through the provision of scholarships and grants, the CEF mitigates the financial burdens associated with post-secondary education, allowing students to focus on their academic pursuits. However, the CEF's commitment extends beyond mere financial aid. Recognizing the complexities of transitioning to a higher education environment, the CEF offers invaluable guidance, encouragement, and access to essential resources, easing the path for students from rural backgrounds.

The CEF fosters a spirit of collaboration by working together with local communities. This collaborative approach manifests in the establishment of local CEF foundations, which possess the autonomy to tailor support and resources to the specific needs of students within their respective regions. Furthermore, the CEF actively champions educational equity through advocacy efforts, lobbying for policies that dismantle barriers and ensure all students, irrespective of their geographical location, have equal access to quality education.

CEF Grenfell fundraises throughout the year and accepts donations from residents and businesses to provide financial grants to students who need an extra helping hand. The funds come directly from your local community – none of it is government funded – celebrating the aspirations of local youth and working to help them achieve these aspirations. It's our way of saying "we believe in you and want to support your goals."

Source: CEF, n.d.

Case study – Grow Grenfell Group

The Weddin Shire has a champion in the Grow Grenfell Group Inc, a dedicated non-profit organization that was formed in 2022 with the express purpose of identifying and implementing sustainable local projects that can foster positive development for the township of Grenfell, NSW.

The first major project undertaken by the Grow Grenfell Group has been the 'Grenfell Lights' initiative whereby the town's Main Street precinct is gradually being lit-up with exhibition-style lighting. Shop windows building artwork and facades are being illuminated and a significant step-forward for this exciting project was achieved late last year with the installation of state-of-the-art lighting on the artwork at the Grenfell Silos.

The silo artwork is a compilation of images which represents the contemporary farming industry and landscape of the Weddin Shire. This captivating spectacle by day, is transformed by the Grow Grenfell Group into a mesmerising light show by night, drawing visitors in to experience its ever-changing display. The silos lights are on display every night from sunset to 9:45pm.

Looking ahead to September, they're taking the initiative to host the town's first-ever poker car rally, promising a fun and unique event for visitors and residents alike. Through these multifaceted projects, the Grow Grenfell Group is not only brightening Grenfell's nightscape but also injecting vibrancy and energy into the town, making it a more attractive destination for tourists.

Source: Australian Silo Art Trail, n.d.; J. Gallimore- President Grow Grenfell Group Inc, personal communication.

Case study – Weddin Mountain Muster

Conducted annually during the first week of the New South Wales Spring school holidays, the Weddin Mountain Muster, held in Grenfell, New South Wales, presents a unique opportunity for horse riders and their families to cultivate resilience through a compelling blend of outdoor adventure and a robust sense of community.

The Muster was established in 2001 with only a handful of riders and five committee members who came together to raise funds for the upgrades to the grandstand at the Grenfell showground. Since then, the Muster has grown to become one of Grenfell's major annual tourism events with 120 registered riders and makes a significant contribution to the local economy. Riders come from far and wide to attend this prestigious event and many have fallen in love with Grenfell.

The cornerstone of the Muster lies in the curated trail riding experiences. Participants are offered the chance to explore the countryside that surrounds Grenfell on guided trail rides over five days. Scenic trails, meticulously designed to cater to a range of riding abilities and showcase the countryside, ensure a stimulating and enjoyable experience for all involved. Riders and their families camp at the Grenfell Showground each night, where they sooth sore muscles around campfires and reminisce the day's events. At the end of the week, everyone comes together for a finale dinner to celebrate the week and enjoy light-hearted entertainment including poetry written during the week of the Muster.

This immersion in the natural world fosters resilience. The inherent beauty of the Australian bush landscape serves as a potent catalyst for stress reduction, rejuvenation, and the cultivation of perspective. Overcoming the challenges presented by the trails, be it navigating the terrain or establishing a strong bond with one's mount, fosters a sense of accomplishment and bolsters confidence, ultimately contributing to overall well-being.

Beyond the individual benefits accrued, the Weddin Mountain Muster serves to foster a sense of community amongst those who share a passion for horses. Riders from diverse backgrounds converge upon this event to celebrate their shared love of equine companionship and the exhilaration of exploring new landscapes on horseback. New friends are formed around campfires, and, over time, the Muster has created the feeling of family with many participants returning each year. This camaraderie fosters social connections and a profound sense of belonging, both of which are fundamental pillars of resilience.

The Weddin Mountain Muster transcends the confines of a mere equestrian event; it transforms into an experience that actively promotes holistic well-being, strengthens the connection between individuals and nature, and ultimately fosters resilience on both individual and collective levels.

Source: Weddin Mountain Muster Grenfell, n.d.; M. Cooper, personal communication

4.2. What we heard

The communities of the Central West region are committed to building a resilient and prosperous future. The voices of the community echo their commitment to maintaining a thriving agricultural landscape, fostering interconnected communities, supporting diverse local businesses, and advancing critical infrastructure and governance. Figure 4 provides a concise explanation of the feedback received during consultation.

4.2.1. Survey outcomes

The survey was open until 25 June 2024, there were 52 responses across the five LGAs and others, refer Figure 35.

The findings align with stakeholder group discussions and are explored in the LGA snapshots (Sections 4.2.2 to 4.2.6). To delve deeper, four key questions have been identified and are presented in the figures below.

The results of question 2 (Figure 36) in the survey demonstrate that drought resilience extends beyond the farm gate where our communities need to be resilient to survive and thrive, even during times of drought. Items were ranked in the order of priority, by respondents that believe should receive investment to enhance drought resilience in community. Figure 36 shows that a secure water supply was the most important aspect of the survey according to respondents, followed by reliable assets and infrastructure, skills in agriculture, prosperous economy, management and administration and connected and resilient community.

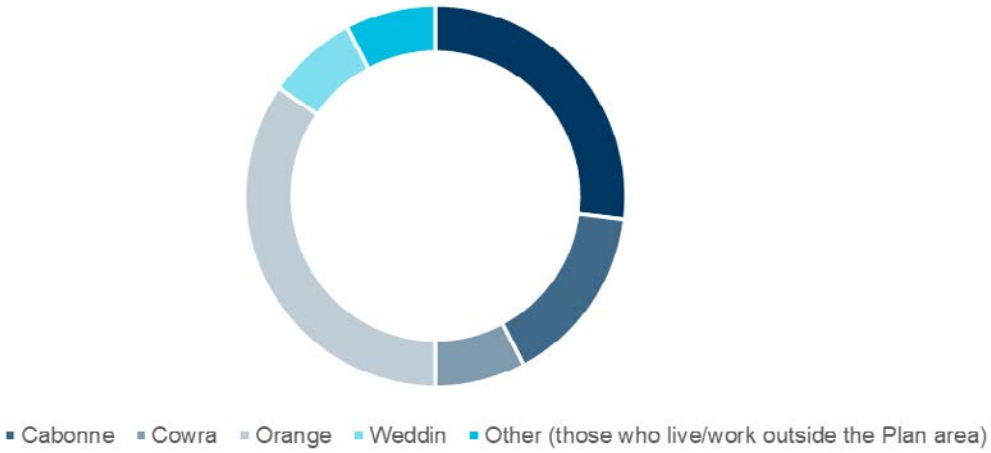


Figure 35 Survey responses by location

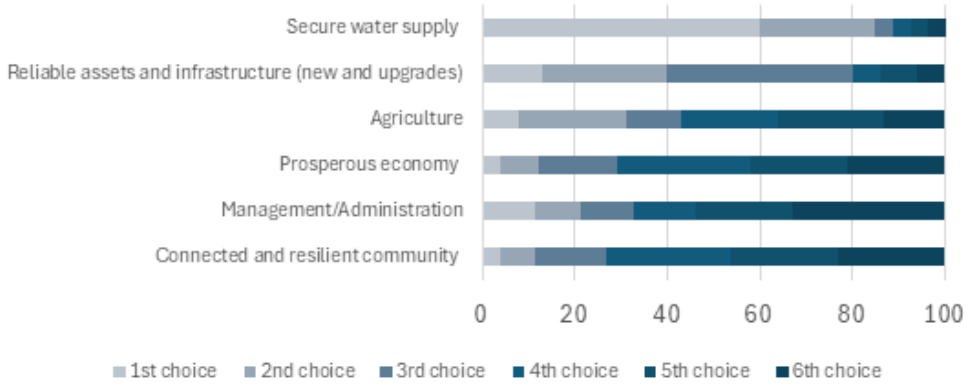


Figure 36 Survey question 2: Drought resilience extends beyond the farm gate where our communities need to be resilient to survive and thrive, even during times of drought. Items ranked in order of priority

Question 5 of the survey requested respondents rank six outcomes in terms of effectiveness of local resilience building. Figure 37 shows the respondents ranked 'investing in water conservation and efficiency' the highest. The top three align closely with the outcomes in Figure 36.

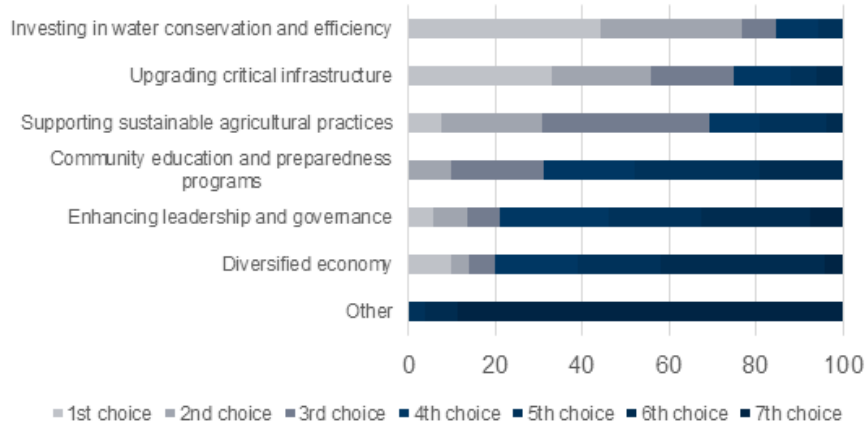


Figure 37 Survey question 5: Ranked from highest to lowest the outcomes respondents believed would be effective in building drought resilience for our region

Question 9 of the survey asked respondents which other economic areas should be considered when looked at diversified economy. Health care and wellness was chosen as the most popular, as seen in Figure 38.

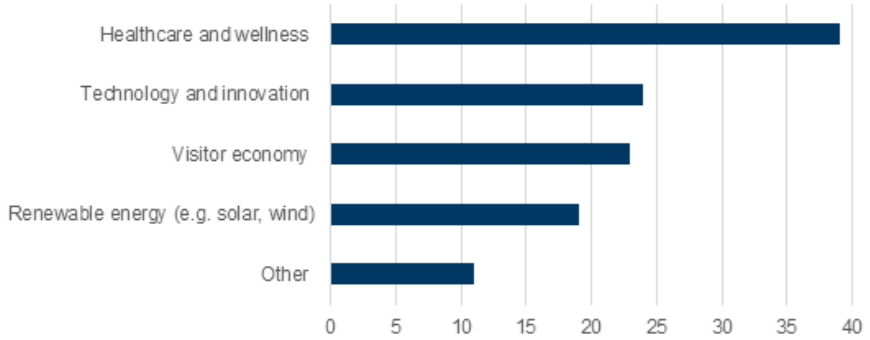


Figure 38 Survey question 9: Ranked from highest to lowest the outcomes respondents believed would be effective in building drought resilience for our region

Effectiveness of current communication and engagement during drought was rated in question 10. Figure 39 captured the response rate and overwhelmingly, respondents rated no for all options. This is reflective of the information gathered in consultation and written up in the LGA snapshots.

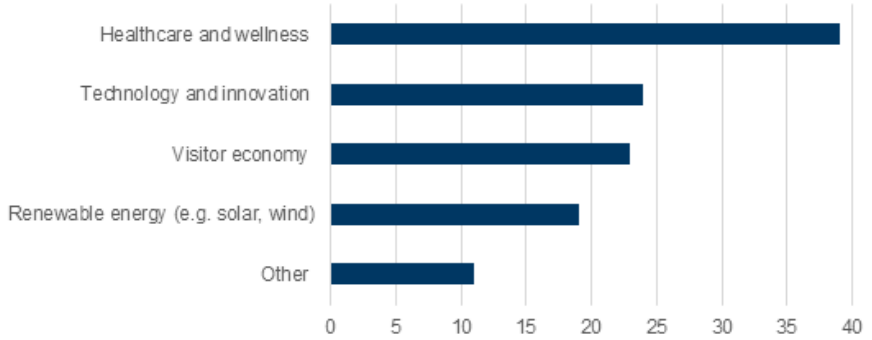


Figure 39 Survey question 10: In your opinion, is the current communication and engagement during drought sufficient and effective in keeping the community informed and engaged

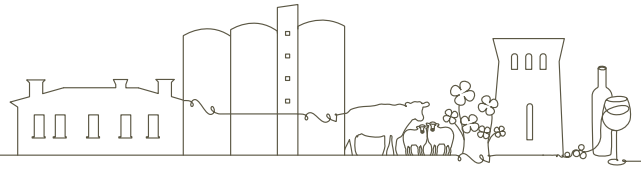
4.2.2. Blayney LGA Snapshot

As identified earlier in this plan, the LGA of Blayney is highly reliant on agriculture, however some of this impact is offset by the diversity of industry brought by Cadia mine (gold mining) and Nestle Purina (pet food manufacturing). In recent years a new gold project (McPhillamys) by Regis resources was announced. As shown in Table 1, Blayney's economic diversity is comparatively high compared to the other LGAs, at 0.62. Blayney's PDI is relatively low so they would not be as impacted by drought as Cowra, Cabonne or Weddin LGAs, 'Agriculture, forestry and fishing' is still the top industry of employment for the LGA.

Impacts

Impacts of drought can be felt across many communities. Some of these impacts, confirmed through the stakeholder consultation, relevant to the Blayney LGA include:

- Increased financial stress for agricultural support businesses and small businesses within the LGA due to reduced discretionary spending and decreased cash flow through the community.
- Reduction in primary production incomes and the associated financial and mental stress on farmers.
- Declining quality of livestock and crops leading to emotional and financial stress.
- Children impacted by the stress, interruptions to their education and sport.
- Stress and fatigue associated with making difficult decisions and trying to anticipate how long the drought will last.
- Some landholders are unable to maintain their weed and pest management therefore increasing hazards to others.
- Reduced access to water for agricultural businesses to support livestock and cropping; decreased grain output puts pressure on the supply chain impacting the manufacturing industry in the area (for example, Nestle).
- Nestle note that when grain availability decreases, prices increase and impact the overall profitability of the operation. The impact of drought on grain quality results in increased levels of micro toxins and lower quality outputs.
- Cadia noted that under drought conditions they had reduced water availability and therefore had to diversify their sources of water and alter their operations to adjust to these circumstances (e.g., load shed- don't run certain pumps).
- Increased dust from other industries that would usually utilise water for dust suppression which increases air pollution.
- Decreased availability of water impacts mining operations leading to reduced economic outputs for the LGA.
- Water quality issues created from increased utilisation of groundwater during drought which has the potential to increase the likelihood for contamination and/or decreased water quality.
- Increased feelings of social isolation for several groups within the community in particular the aged population. Often those working in adjacent agricultural industries and services become pseudo counsellors.
- Reduction in visitation as people not wanting to visit (aesthetics) as well as not wanting to use up sparse water.



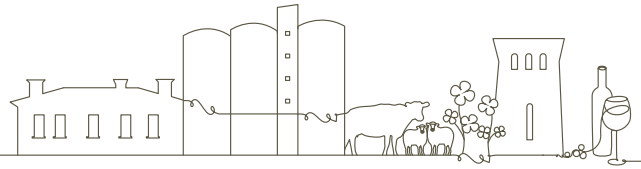
4.2.3. Cabonne LGA Snapshot

Engagement with the Cabonne LGA has been challenging. The communities within the LGA are widely spread out and unreliable telecommunications services reduce the ability to attend virtual and online workshops. The community's resilience has been tested in recent years with a number of consecutive major flooding events that severely impacted numerous communities within the LGA. Coupled with earlier years of COVID 19 and drought recovery, the community is showing real signs of fatigue in discussing natural disasters.

Impacts

Impacts of drought can be felt across many communities. Some of these impacts, confirmed through the stakeholder consultation, relevant to the Cabonne LGA include:

- Drought reduces the amount and quality of agricultural product available which impacts prices and makes it hard to compete on international markets. It also means having to access feed from further distances away which increases costs.
- Reduced cashflow and discretionary spending within the community
- Decreased morale due to the economic and environmental downturn in drought conditions.
- Not many businesses are prepared for drought and there is limited financial support for businesses outside of agriculture during drought periods. There is financial stress on businesses from reduced spending.
- The Manildra Group noted they had to change their buying pattern which increased the cost of freight (buying from Victoria and South Australia instead of NSW). Grain was also more expensive so overall production costs increased. One of their plants (out of region) had to run on imported grain for the first time.
- A loss of skilled workers in the community where primary producers can't maintain their workforce.
- Farms have become bigger as drought forces some off the land; there are more large agricultural corporations. This negatively impacts the number of people staying in the region, especially young labour force and participation in schools and involvement in the community.
- Downturn in tourism as the area is not as picturesque to visit (browning off from reduced water availability).
- Increased presence of wildlife and potential for injury as native animals move closer into towns. Wildlife increases competition for food and causes damage by reducing ground cover, especially in farming areas.
- Increased instances of disease and increase in feral animals which impacts native wildlife and primary producers.
- Reduction in fauna and flora in the regions, reduction in groundcover, increasing erosion and dust issues. Additional weed problems post drought.
- Increased threat from other natural disasters e.g., bushfires- large fire on Mount Canobolas in 2018.
- Increased anxiety in the community due to water security concerns.
- Increases in isolation due to reduced social gatherings and recreation opportunities. This leads to greater mental health impacts.
- Supporting those in crisis due to drought takes its toll on those providing the support.
- A reduction in the numbers of people volunteering.
- Usually primary producers are prepared for a few months of drought but not a few years of drought. Impacts vary greatly between farms.
- Maintenance of local assets is reduced due to lack of water. Damage to buildings e.g. clay cracking.



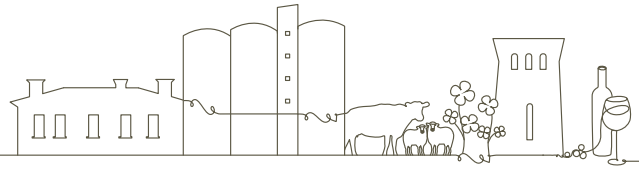
4.2.4. Cowra LGA Snapshot

The Cowra LGA has a PDI ranking that sits in the mid-range compared to the other LGAs in this Plan. It has a relatively high economic diversity score (0.51) but a fairly low SEIFA score. Meaning that whilst there is less reliance on agriculture than other regions there is a high level of disadvantage within the community. In its most recent Regional Economic Development Strategy Cowra has continued to highlight the need for critical enabling infrastructure to assist with business expansion and attraction.

Impacts

Impacts of drought can be felt across many communities. Some of these impacts, confirmed through the stakeholder consultation, relevant to the Cabonne LGA include:

- Uncertainty around the length of the drought, when the drought will end, this added to the difficulty and timeliness of making business decisions i.e. when to sell stock, how long to feed and buy fodder for which increased mental stress.
- Agricultural businesses can become 'credit' suppliers for primary producers, there is increased demand on the resources of agricultural support industries during drought.
- Reduced discretionary spending by the agricultural community meant that less money was spent in the local economy.
- Increased difficulty in obtaining further credit through traditional channels for example, banks.
- Decline in the environment leads to a reduction in tourism. This can also impact on mental health at the distress of seeing such as decline.
- Decrease in mental and physical health (increased stress due to work imbalance and putting off health appointments).
- Increased stress on water infrastructure.
- Reduction in population (due to drought) often leads to a reduction in services and funding, leading to issues with maintaining key infrastructure.



4.2.5. Orange LGA Snapshot

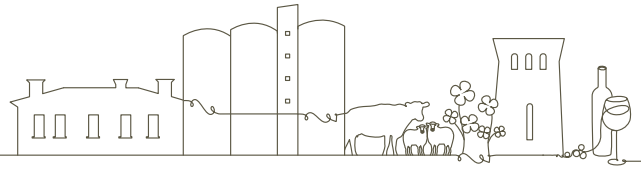
As established earlier in the Plan, the Orange LGA has a relatively low reliance on agriculture with a PDI of 0.03. Large industries, educational providers, health and government departments assist with diversifying the economy base, Orange scored a high 0.85 regarding economic diversity.

A key issue for the community is reliable water security that can keep pace with the region's population growth and support new industry.

Impacts

Impacts of drought can be felt across many communities. Some of these impacts, confirmed through the stakeholder consultation, relevant to the Orange LGA include:

- Less discretionary spending in the region, reduced tourism, resulting in impacts on businesses and the local economy.
- Increase in pressure on the employment markets and housing in Orange as those from smaller centres move to the region seeking employment and/or women from farming families return to work. This often occurs at the same time there is reduced confidence in hiring.
- Decrease in mental and physical health (increased stress and putting off health appointments); greater pressure on health services due to increasing demand.
- Increasing social dislocation through isolation, declining mental health, and lower participation in sport and recreation, and social activities.
- Reduced access to water and heavy water restrictions impacted businesses and the community. There were high costs associated with purchasing water entitlements. Also decreases in air quality due to dust.
- Primary producers move back to standard agricultural practices where they might have previously adopted more innovative and newer practices.
- Mental anguish of seeing the environment deteriorate as greenspaces dry off and gardens and lawns decline.
- Rising economic inequality as drought impacts citizens differently.



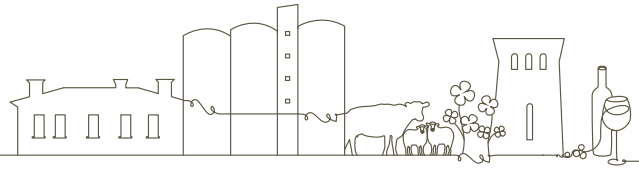
4.2.6. Weddin LGA Snapshot

Weddin LGA is characterised by a high reliance on agriculture meaning that the communities feel the effects of drought quite acutely when they occur. This is evident in the comparatively high PDI score of 0.75 and economic diversity score of 0.19 (indicating low diversity) (refer to Table 1). Weddin has been challenged in recent years through declining services to support health, aged care (the Shire has an ageing population with a median age of 52) and lack of housing supply. Drought has impacted the mental health of various groups within the community and highlighted the urgent need for an increase in resources in this area and the need for continuity of care. Despite these challenges, visitors to the region often remark how friendly the locals are and how welcome they felt when visiting.

Impacts

Impacts of drought can be felt across many communities. Some of these impacts, confirmed through the stakeholder consultation, relevant to the Weddin LGA include:

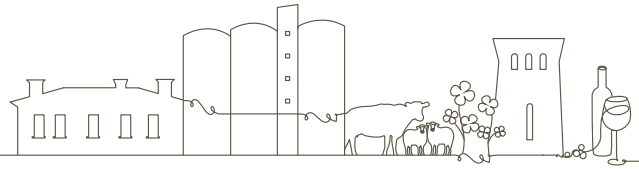
- Corporate agriculture has impacted the magnitude of drought as stakeholders reported the large agricultural businesses contributed less to the local economy and decreased the region's ability to respond to drought.
- Reduced income from primary production activities especially where drought is prolonged. This adds financial and mental hardship and the impacts spending through to the local community.
- Reductions in tourism as tourists are less likely to travel.
- Shortage of mental health services which can be difficult to access.
- Difficulties in maintaining and retaining skilled labour associated with agriculture when the industry contracts in drought.
- Children have felt the impacts of drought through greater visibility and exposure to financial stress and social isolation that come from living in drought and having less access to water and other resources.
- Large disparity in the impacts of drought amongst the region due to the differences in socioeconomic balance of the community.
- There are major water security concerns in some villages, for example, in Caragabal in the last drought, children weren't able to flush the toilet at school (the Caragabal village has no access to potable water).



4.3. Key themes

Consultation was undertaken in the LGAs of Central West which provided clear insights into how previous droughts have impacted the community and the issues faced. Some key themes emerged; these are presented below with an overview of the main comments heard.

Key themes	Responses
Diverse and resilient agricultural businesses and regional economies	Economic diversification: Investment in industries and businesses beyond agriculture that support the local community is a priority, whilst still considering opportunities to value-add to the agricultural sector through enhanced manufacturing. Continuing to attract investment in a range of services and industries, including tourism, that allow sustainability grow and increase employment opportunities will assist with building resilience into the local economy. Collaborative efforts: Partnerships which encourage businesses from within the region to share, learn and mentor and provides a network to discuss common challenges. Re-investing locally: Increasing investment such as discretionary spending into the region instead of out-migration of funds will help support the local economy. Use of local service providers for events such as community festivals, agricultural shows and markets is vital. Infrastructure: Needs to support innovative industries and businesses to thrive.
Protection of the Natural and Built Environment	Promote natural assets: The regions natural assets should be promoted to help enhance tourism prospects and attract people to live and stay. These assets need to be maintained and protected. Sustainable resource use: Continued education on water efficiency measures and sharing of learnings, best practice and innovations between LGAs. This will help maintain stores and ensure adequate water for community, industry and the environment.
Governance - Leadership and Collaboration	Coordination: Improved and clearer access and information regarding drought information and assistance services available. It was highlighted that there are numerous services available but it isn't easy to navigate to which is appropriate for the individual's circumstances. Governance systems: Improved coordination across all three levels of government and between LGAs is required to ensure water security, population retention and diverse employment opportunities. Local knowledge: Recognising the importance of local, regional and First Nations knowledge and experience when developing solutions.
Vibrant, connected, and supported communities	Connected: Digital connectivity and improving the ability to work remotely will assist with attracting and retaining people in the region. Assistance and/or programs to assist elderly/ culturally and linguistically diverse people/ those with accessibility issues will improve overall community cohesion and wellbeing. Engaged: Building volunteer numbers is an ongoing challenge. Volunteers are relied on for organising and delivering a number of community events. Having appropriate supports is important. Services: Accessible mental health services are seen as a high priority. As noted in the case studies, a number of initiatives have been founded with the aim of improving community cohesion and mental health overall. Additionally, adequate general health services, education opportunities and energy and water connections are essential for ensuring the aging population is cared for and for attracting young people/families to the area.
Infrastructure – built assets and technology	Freight networks: Ensuring the road, rail and air infrastructure supports the region's industry is important for growth and expansion and retaining local employees. Supporting Technology: Improved telecommunications is vital for business and industry growth and to attract people to want to live and stay and support the uptake of new technologies. Water Infrastructure: Supporting enhancements to major water infrastructure projects (pipelines) is essential to help build resilience to droughts.



Based on the valuable insights gathered from stakeholder engagement, it is evident that the communities' future vision revolves around fostering a diversified and resilient economy, continuing to improve water security, ensuring appropriate services are accessible, and there is improved coordination and learning at all levels and across sectors. These insights helped to shape the actions detailed in Section 5.

Given the diversity of the communities included in this plan a brief snapshot of each LGA has been developed to provide greater depth and understanding of each community through their own words and feedback provided during engagement activities.

4.4. Initiatives refinement

The investment logic from the QLD Business Case Development Framework was used as a means to refine the options for inclusion in the plan. This process included:

1. Development of a problem statement

2. A series of key questions as summarised below

3. Assessment

4. Validation

4.4.1. Problem Statement

The Central West regional economy will continue to be impacted by droughts, which are predicted to become more frequent and severe into the future. The five Councils should work together to develop an RDRP to identify the steps which communities should take to mitigate these impacts. The RDRP should be actionable and relevant to individual communities.

4.4.2. Key Questions

- Impact: How are Central West impacted by Drought? Which impacts are most acute?
- Actions: What has worked well in the past? What did not work well? What actions or initiatives could local government (or others) support to build the region's drought resilience?
  - Concept: What is the anticipated scope of the identified action?
  - Benefit: How will the action benefit the region?
- Prioritise: How feasible is the action and is there a level of shovel-readiness? Do Councils' have the capacity and influence to undertake the action?

4.4.3. Assessment

Through the SRGs, impacts of drought were discussed and confirmed. Differences between LGAs are noted in Section 5. Idea ideation took place in the first workshop. These initial ideas were collated and arranged by theme to be further discussed and developed in the second workshop. As the final task in the second workshop, participants were able to prioritise the actions most relevant to their LGA. This provided insights into the community's greatest concerns and their impression on what would help to build resilience. Following community consultation, the ideas and initiatives from both the regional literature and consultation were collated.

An initial assessment was undertaken to identify which actions had the greatest expected benefits (i.e. benefitted the most amount of people rather than a minority) and which Council had influence to implement (Figure 39). In this way, each initiative had a score which enabled the prioritisation of ideas.

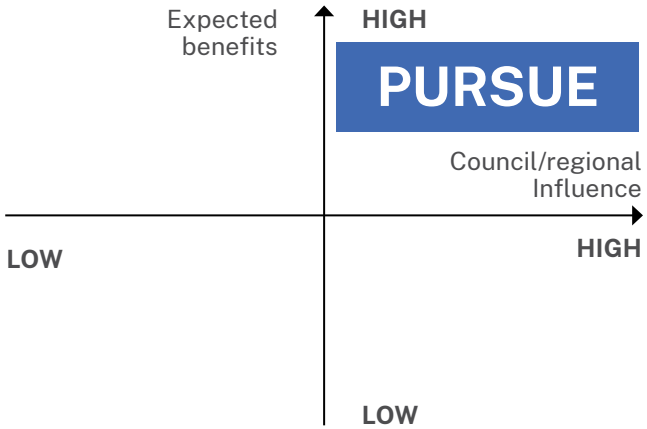


Figure 40 Assessment Matrix

4.4.4. Validation

Following the initial assessment, several questions were considered to further refine the initiatives and prioritise them.

- What is the impact of the action/ does it increase resilience (in respect with the resilience framework and biggest drought impacts identified)?
- Beneficiaries – what are and who receives the expected benefits of the action?
- Does the identified action/initiative align with Councils' general strategic direction?
- Are Council able to influence the action (via the plan)?
- Ease of implementation – is there a need for significant regulatory, political or legal changes (how shovel-ready is it)?
- Timeliness – How long will the action take to complete?
- Financial – Is there funding available and what is the cost? What is the source of funding and who will pay?

05

Drought Resilience Actions

5. Drought Resilience Actions

The themes, actions and initiatives detailed in this plan have been captured from conversations with the community, local knowledge of the region and policy, planning documents and programs that have been developed through various organisations at a Commonwealth, State and local level.

5.1. What has already been done to build drought resilience

Throughout the years extreme weather events, including droughts, have driven the communities of the Central West to take action to improve resilience to these events. The case studies in section 4 of this plan highlight how the community have responded to drought and built their resilience.

In addition to this, the NSW and Commonwealth Governments have undertaken significant effort to increase resilience to drought. A sample of the programs and/or plans in place are listed as follows:

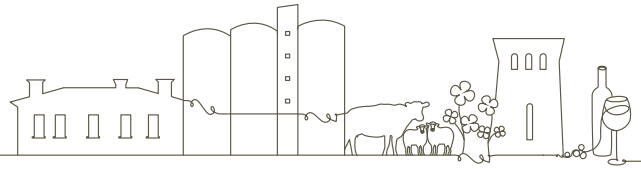
- Commonwealth Drought Resilience Research and Adoption Program which has five components that focus on with farmers and their rural and regional communities to prepare for drought (DAFF 2024a).
- Rural Assistance Authority (RAA) offering a range of loans, grants, advice and assistance, for example, Farm Debt Mediation to support both preparedness and crisis.
- RFCS provides free and independent financial counselling to eligible businesses experiencing, or at risk of, financial hardship (DAFF, 2024b).
- DPIRD is home the Drought Hub which houses a range of information applicable to primary producers to assist with drought along with providing extension and adoption services.
- LLS Drought Adoption Officers have been strategically located across the state to assist landholders with drought planning and preparedness extension services.
- DPIRD has supported local Councils and communities to develop Regional Economic Development Strategies which include information on strategies and enabling actions to guide and support economic development priorities for each region.
- NSW DCCEEW – Regional water strategies for both the Macquarie-Castlereagh and Lachlan Valley's have identified focus areas for improvements to water security in town water supplies. DCCEEW offer a range of other supports and programs such as Safe and Secure Water and Town Water Risk Reduction Program which are aimed at addressing the main risks to regional water safety and security.
- Rural Development Corporations (RDCs) exist for the agricultural commodities and house experience in research, development and extension activities to innovative agriculture.

The need, the action and the expected outcomes are provided, along with how these contribute to building resilience and the parties responsible for action(s). Additional details regarding assumptions and metrics to measure progress towards these actions are provided in this section.

5.2. Opportunities tested

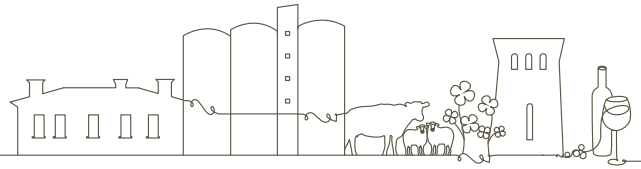
From the consultation process a long list of ideas was compiled from the community on how impacts of past droughts had been lessened and what had potential to lessen impacts in future droughts. The long list includes of absorptive, adaptive and transformational resilience actions, tested through the co-design process, is presented in Table 13 below.

This Plan seeks to capitalise on this previous work and ideas and support actions that will benefit the broader region.



Social	Economic	Environment
• Impacts on mental health in particular for primary producers but also including small business owners and communities. • Increase in stress related diseases such as PTSD impacts on children's mental health challenges in accessing mental health services reduced attendance at school stress to the social connectedness of communities reduction and increased stress on the volunteering community reduction in local services from prolonged drought. • Anxiety, distress and unrest amongst the first nations community. • Women's roles within the community change - they need to seek income away from the farm or business venture to provide alternate financial support or they need to forego this alternate income to provide cost saving labour in their agricultural/small business. • Reductions in the maintenance of infrastructure as cashflow is reduced. • Climate change exacerbating drought impacts on human health, including water storage facilities such as dams necessary to manage droughts, at a higher risk of bacterial and algae growth given warmer waters in storage facilities such as dams which can increase the risk of bacterial and algae growth.	• Reduced cashflow in local communities from reduced spending by the agricultural community. • Reduced spending on discretionary non-essential services. • Loss of businesses, workers, and families from the community from prolonged drought. • Reductions in tourism to retail and food businesses and smaller centres that don't have large tourist attractions. • Reduction in business and investor confidence. • Financial stress on agricultural and regional businesses through decreased production, reduced incomes, increased expenditure, and increasing debt levels. • Reduced business confidence for investors. • Critical labour shortages post-drought in both agriculture and broader industries. • The burden of financially recovering from previous droughts limits some businesses from taking advantage of non-drought conditions, restricting their ability to improve resilience for the future. • Reduced cropping yield. • Influence domestic food prices and export market earnings. • Reduction in labour pool - required to move to secure new employment. • Impact of stock losses through sale at low prices, loss of breeding and production	• Reduced groundcover (tree die-back), pasture and topsoil which exacerbates wind and rain related soil erosion. • Greater habitation of some animals into regional centres e.g. kangaroos. • Reduced water availability to both agriculture and the community. Especially those businesses without a permanent water supply. • Concerns with the ability to gain access to water (equity). • Water quality issues e.g. salinity. • Threat of other natural disasters such as bushfire and dust storms. • Reduced access to water for the environment. • Impacts to culturally significant sites for First Nations Peoples. • Post-drought, farmers can be slow to restock due to the need to give pastures time to recover and limited access to capital. • Decline in water bird, fish, and aquatic plant populations, as well as decreases in terrestrial plant and animal populations • Drought has negative environmental changes that accumulate over time. Climate change exacerbates land degradation, creating a reinforcing feedback loop between climate change, land degradation and drought. • Risks of parasites and worm infestations. A number of conditions occur more commonly when drought-feeding, especially when livestock are congregated on small areas due to drought-feeding situations. • Look at opportunities to minimise evaporation from waterbodies and evapotranspiration from plants, overall maintaining the availability of surface water. • Changes in climate patterns such as El Nino and the Indian Ocean Dipole, will affect the frequency and magnitude of rainfall events over NSW.

Table 13 Long list of opportunities tested during the co-design process with SRGs



5.3. Priority actions

To meet the objectives of the Plan, actions have been developed under the five themes (with accompanying sub-themes) identified throughout this Plan.

Through the SRG's and one to one meeting with stakeholders' data was gathered on:

1. **What was working well to respond to drought,**
2. **What was not working well, and**
3. **What needed to change.**

This process helped to identify and focus the idea development on existing measures that the community valued, those interventions that didn't support resilience and those that existed and either needed to be changed because a component of the system wasn't working or there is a need that isn't being met e.g there is drought information available however the gap/missing element is that there was a lack of awareness about where to find this information therefore how can the plan address this gap.

The pathways to increasing resilience are based on the community response in identifying their highest vulnerabilities to drought, their greatest source of 'pain' or where they have identified that the market is failing. This community voice is echoed in the regional data highlighted in section 2 of this Plan.

The actions have been characterised as absorptive, adaptive and transformative. Achieving a level of resilience will be determined by many factors including the ability to influence behaviour change and participate in resilience initiatives. Meaning that actions can have differing levels of impact depending on the level of uptake by the individual.

A range of resilience levels are indicated across several actions where they level of uptake of the activity can be variable an example of this could be extension focused on improving soil quality and pest management. Some participants will learn some new skills that they can moderately incorporate into their business that will help through the next drought whilst other primary producers may have be able to incorporate more components of the extension work into their business to achieve adaptive change whilst other producers are able to connect with other complimentary programs that have a more transformative impact on their business. Much of this variance in resilience levels is down to addressing the barriers to change.

Actions have been categorised as absorptive where an intervention is likely to reduce the impact of drought. This assumes that current resilience levels are maintained and through extension of the activity a greater number of community members can participate.

Actions are classified as adaptive where the activity supports system modification or change that if adopted will increase overall responsiveness to drought through better preparedness and planning.

Transformative change is identified where there is a complete redesign of the system.

Each theme provides a detailed need for the resilience action, specific and prioritised actions, the resilience frameworks that applies to each theme or sub-theme and the delivery model that includes a lead agency and potential partners.

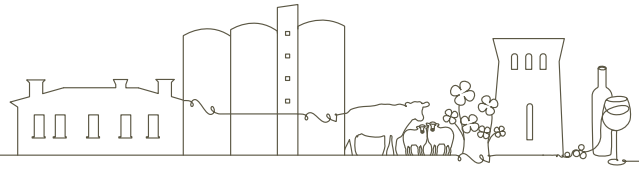
The Plan actions have been discussed with some delivery partners to canvas their willingness to lead and support the implementation of this Plan. Many of these responses were provided on a local level and signified a real desire to make changes for the benefit of the region's communities. Further acceptance testing would be required to gain complete consensus with the State and Commonwealth Government and delivery partners where significant resources and funding are identified.

5.4. Theory of Change

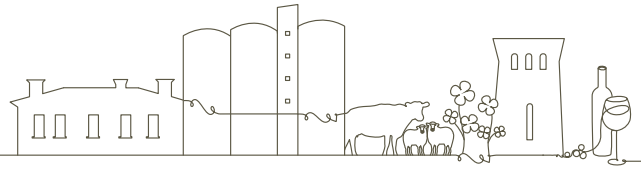
The FDF aims to enhance the public good by building drought resilience in Australia's agricultural sector, the agricultural landscape, and communities (DAWE, 2020). This RDRP has incorporated the three types of resilience (environment, social and economic) into each of the drought resilience actions considered as part of the process.

The theory of change used in this RDRP to investigate the ways in which economic, environmental and social resilience can contribute to the Central West vision for drought resilience is outlined in Table 14 below. Using the FDF model (DAWE, 2020), the table provides a more explicit theory of change demonstrating the link between each step in the process.

To recap, the Plan's vision is **"Our vision is to create resilient, healthy, and prosperous communities who thrive through the challenges of drought. We wish to be a liveable, connected, and inclusive rural region. We look to prioritise innovation that helps secure our natural resources and leads to assured and flexible employment opportunities"** and defines the current state of the Region's resilience and what needs to change?



If (you do this)	Then	Has the Impact of	To create transformational change	Contributes to the vision
Economic Resilience				
If there is more drought resilient Research, Development, Extension and Adoption and new technologies are developed and made more accessible	Then more primary producers will adopt new technologies and production techniques that allow them to better respond to drought. Then there is increased ability to businesses to prepare, plan for drought.	Promoting regional businesses that are self-reliant, productive, innovative and profitable.	Healthy diversified businesses and industry that interact with and contribute to a complex and wider economy.	Resilient, healthy, and prosperous communities who thrive through the challenges of drought. Who are liveable, connected, and inclusive rural region.
If there is greater access and awareness of data information and early warning indicators for businesses and communities	Then there is an increased ability for businesses and communities to manage and assess risk and install timely interventions.	Providing varied regional employment opportunities that meet the needs of the region and its residents.		That prioritise innovation that helps secure natural resources and leads to assured and flexible employment opportunities.
If businesses within the community have increased awareness and access to business planning and risk management expertise	The businesses will be better prepared to manage, respond and recover from drought reducing the financial exposure to drought.			
If communities can diversify their economies to include industries that provide greater sources of income.	Then there will be less reliance on agriculture, providing more diverse employment opportunities, filling labour shortages, creating more diverse communities that are more able to withstand the economic pressures of drought.			
Environmental resilience				
If local governments, businesses and communities are better able to understand their natural capital and increased awareness of best practice techniques	Then they will better manage natural resources through improved landscapes which produce better environmental outcomes	Regional landscapes that are healthy, sustainable and functioning.	Environmental management is connected across landscapes with communities, governments, primary producers and other stakeholders creating diverse systems that are responsive.	
If governments are better able to manage water resources through new and innovative practices, appropriate infrastructure and increased collaboration and information sharing.	Then they can reduce the impacts of drought and produce better environmental outcomes.	Regional infrastructure that is reliable and fit for future community needs.		
If governments are better able to manage and develop reliable and appropriate climate adapted infrastructure through new and innovative practices, increased collaboration and information sharing.	Then councils can reduce climate vulnerable assets and provide better environmental outcomes.			
If governments and communities are better able to share information and gain knowledge on innovative environmental practices.	Then communities will be more self-empowered to manage their own natural resources.			



If (you do this)	Then	Has the Impact of	To create transformational change	Contributes to the vision
Social Resilience				
If community leaders exercise their leadership skills confidently and if community members participate in social and professional community networks and interagency partnerships.	Then there will be greater connectedness, purpose and stronger social capital that supports drought planning and efforts to increase resilience.	Communities that are resourceful, adaptable and thriving.	Communities that respond to drought cohesively and effectively drawing on the social capital, collective preparedness and inclusive community networks.	
If information and knowledge on drought preparation and planning is shared in communities and led by community leaders.	Then there will be greater planning and preparedness for drought in new and innovative ways.			
If community leaders understand who forms the basis of their communities and can incorporate this knowledge into their development of services and infrastructure.	Then services and infrastructure are adapted to suit those most vulnerable to drought and changing climate conditions	Communities that are inclusive and whose needs are understood.		
If community leaders can improve the access to mental health services and communities can improve their awareness of the importance of good mental health.	Then there can better management of the risk factors of mental health and increased utilisation of services which can produce better health outcomes.	Communities that are connected and healthy.		
If communities can improve collaboration, knowledge sharing education and training opportunities.	Then there will be greater connectedness, purpose and stronger social capital that supports drought planning and efforts to increase resilience.			

Table 14 Theory of change

Theme 1:

The Economy – Diverse and resilient regional economies and agricultural businesses

The LGAs of the Central West expressed a desire for their communities to have a diverse range of industry and services that meet the community need and reduce the impacts of drought. Some LGAs are heavily reliant on agriculture as evidenced earlier in this Plan and expressed a desire for both increased diversity in the local economy and in the agricultural sector. The importance of attracting investment to allow for sustainable growth and increasing employment opportunities across a range of services and industries is recognised. Ensuring appropriate infrastructure is in place to support this growth is also key and actions associated with this are outlined in Theme 5.

Program logic

Vision: Our vision is to create resilient, healthy, and prosperous communities who thrive through the challenges of drought. We wish to be a liveable, connected, and inclusive rural region. We look to prioritise innovation that helps secure our natural resources and leads to assured and flexible employment opportunities.

Impact: Regional businesses that are self-reliant, productive and profitable and well prepared for drought, and

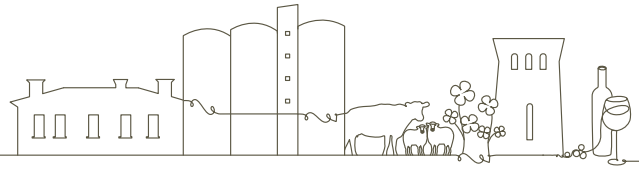
Regional communities that are well connected, resourceful and adaptable. That provide opportunities for members to live, grow and thrive.

Outcomes: More regional businesses that are prepared for drought and better able to manage risk, creation of networks and social connectedness through bringing together likeminded people to work together to proactively respond to drought, provides absorptive assistance that will allow businesses to weather the financial impact of drought and reduces unemployment in the region during enduring droughts, increasing knowledge and skills across regional businesses and allows better planning for drought, providing education and training to build capacity in the region to respond to and recover from drought, builds new skills and capacity that support businesses to better plan, manage and adapt businesses to drought, increasing the education and awareness of innovative practices that can be adopted through planning to provide better environmental outcomes (reduced emissions), promotes increased collaboration, networking and social connectedness and empowering communities to work together to solve problems on varying scales that suit their communities' resources, increases the number of agricultural businesses adopting innovative production technologies, improved environmental outcomes from adopting agricultural practices that are less impactful on the environment, the volume and adoption of relevant R&D increases.

Activities: Business program with multi-faceted offerings including crisis/emergency offerings/incentives to retain workforce/education and skills building/mentoring and learning opportunities. Increase Business and Economic Development activity to support diversification, increased coordination and promotion of the region's tourism, cross collaboration across LGA's, promotion and adoption of innovative and new technologies, continued investment in R&D, improved information and timeliness of data.

Stakeholders: Regional communities, Business NSW, Business Chambers of Commerce, Regional Development Australia, Business Education Program providers, Central NSW BizHQ, Rural Financial Counselling, Consortium of Local Councils, State Government (including DPIRD), Business owners, Central NSW Joint Organisation, local event companies. Local Land Services / Research and Development Corporations NSW Farmers Association, IT providers, Southern NSW Innovation Hub, Australian Climate Service, National Field Days, private and not-for-profit researchers (e.g, FarmLink) and other private extension and adoption providers.

Programs and Plans: Regional Economic Development Strategies Cowra, Orange/ Blayney and Cabonne and Southern West Slopes, Local Economic Development Strategies - Local Lands Services Drought Adoption Officers, Young Farmer Business Program, Farm Business Resilience Program, Saving our Soils During Drought, Carbon and emissions, rural financial counselling service, Rural Assistance Authority, NSW Farmers Federation Policy, National Agricultural Innovation Agenda, National Primary Industries Research Development & Extension Framework



Sub-theme:

Economic support and education

Insights from consultation and the need

The region's businesses especially those in highly reliant agricultural regions identified how impacted they are by drought and the challenges this creates for the broader business community. Improving the access to education and opportunities that help build business skills including financial literacy and business mentoring are critical to building drought resilience. There's a need for more streamlined support systems and resources that are easy to navigate. Early education and training in digital and business skills are essential to help businesses diversify income streams and manage resources effectively during droughts.

Actions

Activity		Resilience Type
1.1	Advocate for the development of a State-wide Business Drought Resilience Program that supports businesses outside the current agricultural and agricultural service businesses model.	Adaptive when realised
1.2	The business program should include crisis/emergency offerings similar to primary producers including financial support, extension of financial counselling and advice, low interest loans that support areas such as digital resilience and built infrastructure along with tax incentives.	Absorptive to Adaptive
1.3	The business program should include incentives for regional businesses to support them in maintaining their workforce throughout drought.	Absorptive
1.4	Incentivise and promote small business education programs to help business owners prepare their businesses for drought and increase business skills that allow them to better plan for and manage risk. Advocate for increased financial support and resources to NSW Business Chambers to assist them in increased opportunities that build skills to meet their community's needs.	Adaptive
1.5	Provide education to businesses to adapt workplaces to become more efficient through energy use, climate adaptation and design.	Absorptive to Adaptive
1.6	Create mentorship opportunities for small business to learn from other business owners in their LGA and across the region. In some of the smaller, more informal business networks, this could be supported by Councils providing a location for likeminded businesspeople (across all industries) to come together and discuss business challenges/opportunities where it has been challenging to formalise a business network.	Adaptive

Sub-theme:

Economic support and education

Resilience framework

Resilience Framework principles that apply:

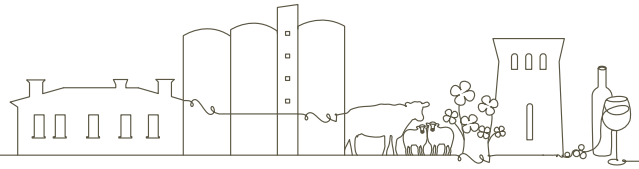
Absorptive	The incentive components of the business program will provide temporary financial relief to support businesses through the immediate drought.
Adaptive	Gaining new skills and knowledge can assist in preparing and adapting businesses for future droughts.
Transformative	Implementing the actions contained in the Economic Development Strategies provide transformative change. Bringing new industry, infrastructure and services to the region allows for new and expanded businesses and employment opportunities.

Delivery model

Suggested lead agency	Business NSW
Potential delivery partners	Business Chambers of Commerce, Regional Development Australia, Business Education Program providers, Central NSW BizHQ, Rural Financial Counselling, Consortium of Local Councils, State Government (including DPIRD, Business owners, Central NSW Joint Organisation, local event companies.
Timeframes	Long term: 5-10 years
Cost estimates	$$$ Significant Financial Support Required

Key outcomes

- Creation of networks and social connectedness through bringing together likeminded people to work together to proactively respond to drought.
- Provides absorptive assistance that will allow businesses to better weather the financial impact of drought.
- Provides absorptive assistance that will allow businesses to weather the financial impact of drought and reduces unemployment in the region.
- Increasing knowledge and skills allows better planning for drought.
- Providing education and training to build capacity in the region to respond to and recover from drought.
- Builds new skills and capacity that support businesses to better plan, manage and adapt businesses to drought.
- Increasing the education and awareness of innovative practices that can be adopted through planning to provide better environmental outcomes (reduced emissions).
- Promotes increased collaboration, networking and social connectedness and empowering communities to work together to solve problems on varying scales that suit their communities' resources.



Sub-theme:

Economic diversity and development

Insights from consultation and the need

Many communities identified having a strong agricultural sector as being important to the prosperity of their LGA. Diversifying local economies reduces this reliance however further support is needed to attract other industries to the region. While initiatives such as agri-tourism and business diversification have been beneficial, comprehensive economic development plans focusing on bringing in new industries and infrastructure are crucial to strengthen regional resilience.

Actions

Activity		Resilience Type
1.7	The consortium of Councils to continue to implement the Economic Development Strategies for each LGA. These plans have highlighted the specific and detailed needs of the communities on both a regional and LGA level. Where there are synergies across the various Economic Development Strategies the LGAs should utilise the Central Joint Organisation to progress the action(s). To support the continuous improvement of these strategies a Business Community Survey should be developed as a baseline for each LGA and identifies business attitudes/needs/sentiment that will assist in informing future refinement and development of activities.	Adaptive and Transformative
1.8	Investigate opportunities to promote and coordinate regional tourism across the LGAs, collaborating to benefit from events held in other LGAs. Increase the coordination and promotion of local events between LGAs. Some of the smaller LGAs would benefit from Council taking a more active role in promoting and coordinating the information on tourist events. For example, developing a calendar of events, and a 'what to do and see' for the area which includes retail business and attractions.	Absorptive

Sub-theme:

Economic diversity and development

Resilience framework

Resilience Framework principles that apply:

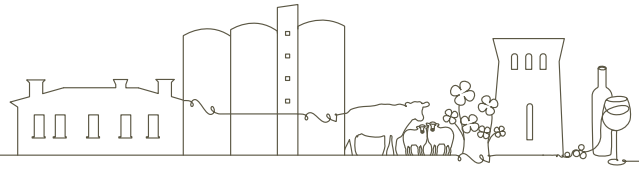
Absorptive	Increased tourism would provide an alternative economic source to diversify the local economy during drought.
Transformative	Implementing the actions contained in the Economic Development Strategies provide transformative change. Bringing new industry, infrastructure and services to the region allows for new and expanded businesses and employment opportunities.

Delivery model

Suggested lead agency	Consortium of Local Councils / Destination NSW
Potential delivery partners	DPIRD, NSW Government, RDA, Central NSW Joint Organisation, media, private tourist operators and providers and not-for-profits in the region including Orange360.
Timeframes	Long term: 5-10 years
Cost estimates	$$$ Significant Financial Support Required

Key outcomes

- A robust regional economy that is less impacted by drought as existing service providers are able to adapt and transformative new industries and infrastructure are created.
- Creates new sources of income and employment opportunities which encourage population migration.
- Reduced disruption and recovery time from the impacts of drought.
- To create greater diversity of employment opportunities within the region.
- Creates a diverse and more inclusive community that supports population growth.



Sub-theme:
Agriculture

Insights from consultation and the need

Agriculture is a key source of income and employment for many of the LGAs within this plan. Resilience is considered primarily through improving diversification in agriculture that supports new innovation and technology which may enable transformative change. Primary producers have made significant improvements in water efficiency and land management practices, but ongoing support in adopting innovative farming techniques, new technologies and improved water infrastructure/ security is required to enhance long-term agricultural resilience.

Actions

Activity		Resilience Type
1.9	The consortium of Councils to continue to implement the Economic Development Strategies for each LGA. These plans have highlighted the specific and detailed needs of the communities on both a regional and LGA level. Where there are synergies across the various Economic Development Strategies the LGAs should utilise the Central Joint Organisation to progress the action(s). To support the continuous improvement of these strategies a Business Community Survey should be developed as a baseline for each LGA and identifies business attitudes/needs/sentiment that will assist in informing future refinement and development of activities.	Absorptive, Adaptive and Transformative
1.10	Investigate opportunities to promote and coordinate regional tourism across the LGAs, collaborating to benefit from events held in other LGAs. Increase the coordination and promotion of local events between LGAs. Some of the smaller LGAs would benefit from Council taking a more active role in promoting and coordinating the information on tourist events. For example, developing a calendar of events, and a 'what to do and see' for the area which includes retail business and attractions.	Absorptive, Adaptive and Transformative
1.11	Support and facilitate capability building to enable producers to take advantage of alternative income streams through natural capital accounting and valuing ecosystem services such as biodiversity and carbon.	Absorptive, Adaptive
1.12	Increasing the awareness and understanding of climate data and early warning indicators to support improved decision-making.	Absorptive, Adaptive
1.13	Increased awareness and information dissemination of Commonwealth and State Government Programs that assist with the purchase of drought resilient and emergency infrastructure including water and grain storage and support services.	Absorptive, Adaptive

Sub-theme:
Agriculture

Resilience framework

Resilience Framework principles that apply:

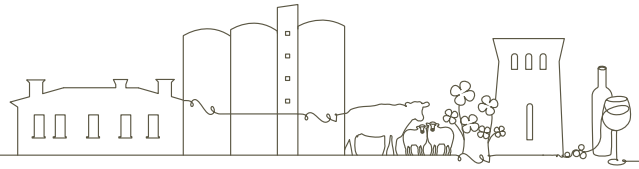
Absorptive	Uptake of natural capital opportunities act to improve the environmental outcomes from farms and diversify primary production incomes.
Adaptive	Education and increased awareness allows users to make adaptive change to existing systems.
Transformative	Business transformation from the adoption of new agritech, value adding opportunities and natural capital

Delivery model

Suggested lead agency	Local Land Services / Research and Development Corporations.
Potential delivery partners	NSW Farmers Association, IT providers, Southern NSW Innovation Hub, DPIRD, Australian Climate Service, National Field Days, private and not-for-profit researchers (e.g, FarmLink) and other private extension and adoption providers
Timeframes	Medium term: 3-4 years
Cost estimates	$$ Additional Resources Required

Key outcomes

- Increased R&D into innovative drought resilient production techniques and practices.
- This will allow on-going R&D into innovative techniques that will improve drought resilience and increase adaptive capacity through providing practical production solutions.
- Increased awareness, knowledge and skills on new production practices that depending on the level of adoption can reduce the impact of agriculture on the natural environment. The degree to which this knowledge is incorporated into agricultural systems will have improve resilience on varying levels.
- Increased awareness and education on the potential for alternate income streams from utilising agricultural land that also provide more favourable environmental impacts.
- Increased awareness and knowledge on climate data that can be utilise to prepare for and manage risk prior to and throughout drought.
- Increase the awareness of existing absorptive and adaptive drought measures to promote an increase in uptake. Increased adoption of infrastructure will improve drought preparedness.
- Continue to invest in new practices and innovations that allow agriculture to better respond and recover from drought.
- Maintain the pace of current drought tolerant systems
- Build capacity in more agricultural businesses to respond to changing climatic conditions.
- Allows agricultural businesses to improve preparedness for drought and mitigation of risk.
- Supports increased uptake of infrastructure that supports increased self-reliance and preparedness in agricultural businesses
- Better evidenced based decision making on business management and production.



Theme 2:

The Environment – Protection of the Natural and Built Environment

This theme is focussed on protecting and conserving the natural environment whilst managing natural hazard impacts and promoting renewable energy industry and climate change adaptation. Provision of quality, secure water is a high priority for many of the LGAs.

Program logic

Vision: Our vision is to create resilient, healthy, and prosperous communities who thrive through the challenges of drought. We wish to be a liveable, connected, and inclusive rural region. We look to prioritise innovation that helps secure our natural resources and leads to assured and flexible employment opportunities.

Impact: Regional landscapes that are functional and sustainable with healthy natural capital and better able to recover from disturbances.

Regional economies that are stable and support key industries.

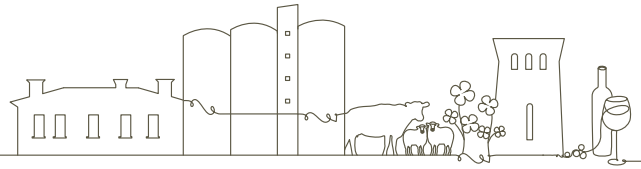
Communities that are self-empowered to manage their own natural resources and are inclusive and whose needs are understood.

Outcomes: Increases engagement communities in conservation efforts, promotes local and regional alliances to work together to build capacity and learn from each other, promotes longer-term opportunities that increase the efficiency of water use, integrates local and indigenous knowledge into conservation practices, increased planning and adaptation to the changing climate.

Activities/Actions: adopt more drought tolerant plants and gardens, information, knowledge and education building, , provide education and awareness on efficient water use, retaining water and re-hydrating the landscape, innovative ways to provide education, implement current strategies for climate adaptation and renewable energy, adapting to climate via innovative design measures, First Nations Peoples knowledge water and environmental management.

Stakeholders: Consortium of Local Councils, Central Tablelands Water, NSW DCCEEW, local gardening providers and nurseries, architects and building designers, NSW Government, consultants and adaptation specialists, community, researchers and scientists, Schools, Innovation Hubs, LLS, DPIRD, First Nations peoples, WaterNSW, Central West Council Environmental & Waterway Alliance, Environmental Watering Advisory Group

Programs: Central West and Orana Regional Plan 2041, Central NSW JO Water Advocacy Plan, Blayney Shire Community Strategic Plan 2022-2032, Cabonne Community Strategic Plan 2022-2032, Cowra Shire Council Community Strategic Plan 2017-2036, Orange City Council Community Strategic Plan 2022-2032 Macquarie-Castlereagh Regional Water Strategy 2023, Lachlan (draft) Regional Water Strategy 2023, Weddin 2027 Community Strategic Plan, Future Drought Fund - Drought Resilient Soils and Landscapes grants, NSW Landcare Enabling Program 2023-2027



Theme 2:

The Environment – Protection of the Natural and Built Environment

Insights from consultation and the need

Efforts to protect both the natural and built environment are seen as crucial for long-term resilience to drought. Communities highlighted the importance of managing water resources effectively, including improving water infrastructure and promoting sustainable land management practices. There's a growing need to incorporate climate change adaptation strategies, such as drought-tolerant plantings and landscape hydration initiatives, to preserve ecosystems and reduce the impact on built environments. Increasing public awareness about sustainable practices in both urban and rural settings is necessary to preserve the environment during droughts. Many of the LGA's across the Plan area were keen to explore how their communities on an individual level could contribute to improved environmental outcomes through practice change.

Actions

Activity		Resilience Type
2.1	When opportunities arise, convert public greenspaces to more drought tolerant plants and gardens, suited to the climate and that utilise less water.	Absorptive, Adaptive
2.2	Provide education and awareness to the community on: efficient water use, suitable plantings and grasses for local gardens, and watering practices to maximise efficient water absorption, as well as how to protect and maintain groundcover to reduce the likelihood of soil erosion. Provide education regarding the use of greywater and suitable reuse. Provide information and education to the community and primary producers on how to retain water in the landscape and how to re-hydrate the landscape.	Absorptive, Adaptive and Transformative
2.3	Where available, utilise recycled water to maintain local greenspaces and maintaining infrastructure. Where recycled sources are in excess of need, investigate options for other users who may be able to use recycled water, to reduce the burden on the potable system.	Absorptive, Adaptive and Transformative
2.4	Incorporate First Nations people's knowledge and engage them in decision-making process concerning water and environmental management (refer to Regional Water Strategies).	Adaptive
2.5	Advocate for improved housing design and landscaping requirements which reduce water use and improve energy efficiency of homes.	Adaptive to Transformative
2.6	Councils to continue to plan and implement their climate change (adaption and mitigation) strategies and management plans. Adaptation strategies are focussed on adapting to the projected changes whereas mitigation strategies aim to reduce the emissions and therefore degree of changes expected.	Adaptive to Transformative
2.7	Councils to develop (where appropriate) and implement renewable energy expansion and/or energy efficiency/ net-zero emissions programs and strategies.	Adaptive and Transformative

Theme 2:

The Environment – Protection of the Natural and Built Environment

Resilience framework

Resilience Framework principles that apply:

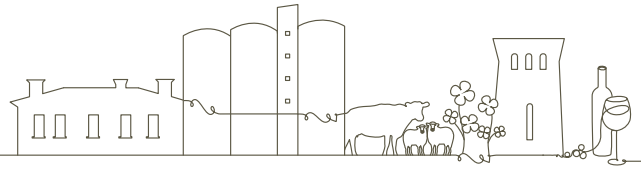
Absorptive	Measures that reduce the reliance and increase the extension of natural resources, through reduced water use and lessen the impact of drought.
Adaptive	Considers new information, education and awareness are providing opportunities to modify existing practices and systems in response to drought.
Transformative	The development of new and innovative technologies, practices and changing infrastructure and operations creates more impactful and revolutionary change.

Delivery model

Suggested lead agency	Consortium of Local Councils.
Potential delivery partners	Central Tablelands Water, NSW DCCEEW, local gardening providers and nurseries, architects and building designers, NSW Government, consultants and adaptation specialists, community, researchers and scientists, Schools, Innovation Hubs, LLS, DPIRD, First Nations peoples, WaterNSW, Central West Council Environmental & Waterway Alliance, Environmental Watering Advisory Group
Timeframes	Medium term: 3-4 years
Cost estimates	$$ Additional Resources Required

Key outcomes

- Increases engagement communities in conservation efforts
- Promotes local and regional alliances to work together to build capacity and learn from each other.
- Promotes longer-term opportunities that increase the efficiency of water use (recycling).
- Integrates local and indigenous knowledge into conservation practices.
- Increased planning and adaptation to the changing climate.



Theme 3:

Governance – Leadership and Collaboration

Seeking a strong, transparent, and accountable leadership, community involvement and engagement in the decision-making process, investing in the development of future leaders and improving community ownership and cohesion. Many stakeholders look to Councils for assistance (information and guidance) during droughts.

Program logic

Vision: Our vision is to create resilient, healthy, and prosperous communities who thrive through the challenges of drought. We wish to be a liveable, connected, and inclusive rural region. We look to prioritise innovation that helps secure our natural resources and leads to assured and flexible employment opportunities

Impact: Communities that are resourceful, adaptable and thriving. Communities that are inclusive and whose needs are understood.

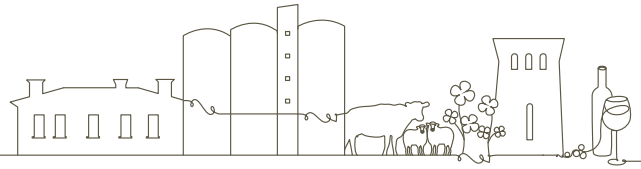
Communities that are connected and healthy with increased social capital.

Outcomes: increased collaboration between partner agencies, timelier interventions, builds shared knowledge of agency responsibilities, builds local capacity, increased cohesion across agencies through improved relationships, and inspires innovative solutions to local challenges, encourages self-organisation and increases empowerment of communities, fosters diversity and inclusivity to improve innovation and quicker adaption, progresses the regions identified issues, utilises the capacity of the JO to deliver for the broader region, seeks to address the gaps in current resilience measures, promotes better evidenced/data based decision making, knowledge and information for risk management and drought preparedness, assists with building climate knowledge, greater access to drought information, enhanced connectivity and communication from more coordinated approach to drought information.

Activities: leverage and build existing networks, mapping of organisational relationships, increased coordination or information sharing and distribution, improved collaboration and drought preparedness, increased access to data and information, build local capacity to respond, improved information and knowledge, extending and building on the resilience needs already identified through advocacy.

Stakeholders: Consortium of Councils, DPIRD, LLS, Rural Financial Counselling, RRA, WaterNSW, (NSW) DCCEEW, NSW Government, Local Health District and Primary Health Network, Bureau of Meteorology, Not for Profits e.g. Salvation Army, Australian Climate Service, Central NSW Joint Organisation, NSW Farmers Association.

Programs: Central West and Orana Regional Plan 2041, Centroc (2018) Drought Issues Paper, Climate Services for Agriculture FDF program



Theme 3:

Governance – Leadership and Collaboration

Insights from consultation and the need

Strong leadership and collaboration between local councils, community groups, and government agencies are essential for building resilience to drought. Many expressed the need for better coordination and communication across different levels of government to streamline drought response efforts. There's also a need for more collaborative planning that involves stakeholders from diverse sectors, ensuring local knowledge and expertise are included in decision-making processes. Establishing clear leadership roles and fostering partnerships between governments, industries, and communities would assist in enhancing the region's capacity to respond proactively to drought-related challenges.

Actions

Activity		Resilience Type
3.1	Leverage existing networks established for the coordination of natural disasters to discuss climatic conditions, potential drought responses, new products, services and information generated by each of the services. This will allow participants to maintain an up-to-date knowledge of 'who is doing what' or 'who's who'. This will create a clear picture of which organisations are providing different services. Mapping of these relationships reduces confusion about where to access support, the referrals processes, and easier identification of gaps that need to be addressed to further support recovery in communities. The future Disaster Adaption Plans, required by the NSW Reconstruction Authority to be developed, provide an opportunity for each Council area and the Central West region to identify if any additional resources are needed for coordination or information sharing and distribution during challenging times.	Absorptive to Adaptive
3.2	Progress drought issues identified in the Centroc (2018) Drought Issues Paper which references key drought issues for the region that require further investigation and action. Some of the focus areas are drought assistance programs for business, improved coordination of drought assistance, drought preparedness, water management/infrastructure and improved collaboration with other agencies and health impacts of drought.	Adaptive to Transformative
3.3	Promote access to early warning information and data that allows intervention services to commence and communities and agencies to be alerted to the changing climatic conditions, and consider their response. This action is partly completed via the Climate Services for Agriculture FDF program and work between the Southern NSW Innovation Hub and partner universities on early insights dashboard. This may be a dedicated person who would provide and interpret climate data and outline relevance within the local context.	Absorptive, Adaptive
3.4	Advocate for improved processes regarding applying for support, increased equity across drought areas, as drought does not stop at a LGA area, and reduced red tape throughout application process.	Absorptive
3.5	Create a dedicated drought page on Council's website that provides an avenue to access locally based drought information from other agencies. This should include references to: DPIRD's drought hub, rural financial counselling service, mental health resources, business support and Bureau of Meteorology climate and rainfall data and other early warning indicator data.	Absorptive, Adaptive

Theme 3:

Governance – Leadership and Collaboration

Resilience framework

Resilience Framework principles that apply:

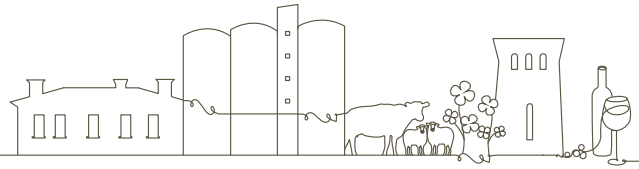
Absorptive	Early intervention allows for improved ability to prepare for and absorb the impacts.
Adaptive	Early indicator of changes provides warning/lead time for system adaptation.
Transformative	The ability to deliver system change identified in Centroc (2018) Drought Issues Paper will create large scale change for the region.

Delivery model

Suggested lead agency	Various
Potential delivery partners	Consortium of Councils, DPIRD, LLS, Rural Financial Counselling, RRA, WaterNSW, (NSW) DCCEEW, NSW Government, Local Health District and Primary Health Network, Bureau of Meteorology, Not for Profits e.g. Salvation Army, Australian Climate Service, Central NSW Joint Organisation, NSW Farmers Association.
Timeframes	Long term: 5-10 years
Cost estimates	$$$ Significant Financial Support Required

Key outcomes

- Supports increased collaboration between partner agencies responsible for drought.
- Allows timelier intervention of resources from certain areas when required.
- Builds shared knowledge of agency responsibilities and allows identification of gaps and potential options to address these challenges.
- Builds local capacity to respond on a local level.
- Increased cohesion across agencies through improved relationships.
- Helps build relationships and inspire innovative solutions to local challenges
- Encourages self-organisation and increases empowerment of communities to deliver solutions.
- Fosters diversity and inclusivity through leveraging existing networks across multiple organisations to improve innovation and quicker adaption.
- Progresses the regions identified issues.
- Utilises the capacity of the JO to deliver for the broader region.
- Seeks to address the gaps in current resilience measures.
- Promotes better evidenced/data based decision making.
- Provides knowledge and information for risk management and drought preparedness.
- Assists with building local capacity and climate knowledge.
- Allows timelier access to relevant critical supports that can help alleviate economic and social pressures of drought.
- Builds and fosters trust through improved communication and accountability.
- Expands on local knowledge of drought resources that can be accessed to assist with preparedness for drought as well as management and recovery.
- Provides a consolidation of drought resources that provide access to information and services that can assist with improving resilience.
- Provides greater access to drought information that allows users to be self empowered in seeking further services.
- Enhanced connectivity and communication from more coordinated approach to drought information.



Theme 4:

Community – Vibrant, connected, and supported communities

Services that support a healthy, active, inclusive and liveable community with good governance and strong sense of shared responsibility. Community and social bonds are a keystone to getting people through tough times.

Program logic

Vision: Our vision is to create resilient, healthy, and prosperous communities who thrive through the challenges of drought. We wish to be a liveable, connected, and inclusive rural region. We look to prioritise innovation that helps secure our natural resources and leads to assured and flexible employment opportunities

Impact: Regional communities work together in trusted relationships, they are self-empowered and well connected.

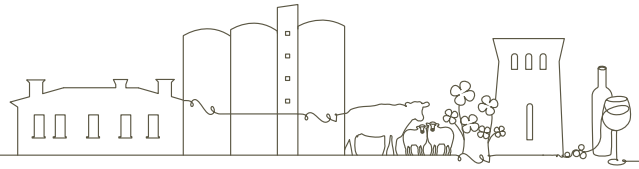
Regional communities that are resourceful, adaptable and thriving.

Outcomes: self-organisation and community empowerment, improves social networks and preparedness, opportunities for communities to invest in resilience building activities, training and education that will benefit other segments of the community, increasing knowledge and education in mental health provides opportunities to intervene earlier, creates increased cohesion and belonging through supportive networks and in the longer-term healthier stronger communities, improves coordination and resources of existing activities that maybe operating in isolation, improves the accessibility and potential uptake of mental health services, seeks to identify services that meet the specific needs of the community and take into account the nuances of each region and its population, increases coordination and awareness of the existing health resources available, seeks to foster diversity and inclusivity in developing new services to support good mental health, seeks to promote redundancy through building access to mental health services through a range of avenues, increased relationships and community knowledge, investment in social capital through increased opportunities for leadership training.

Activities: Develop Local Resilience Community Funds, opportunities for mental health training, community resilience and leadership training, increased access to mental health services, increased awareness and, incentives to support trainees and upskilling programs. matrix of skills required in each community against those people looking for employment, decentralise training and deliver local options so that participants can stay and learn in their communities. Partnerships with universities or other training providers may assist with obtaining local providers, retraining options for those in agriculturally reliant communities, Improve digital literacy

Stakeholders: Community, Consortium of Councils, Local health district, training providers in mental health and resilience NSW Health – Local Health District and Primary Health Network local health providers, not for profits e.g., Rural Doctors Network, researchers/universities, education providers e.g. schools, Local community groups (Mens/ Womens Sheds, Lions Clubs, Progress Associations, etc.), LLS, NSW Rural Fire Service (RFS) brigades. Local employers, TAFE, NSW Department of Education, Group and local registered training organisations, Private education providers, Business Chambers of Commerce, Central NSW BizHQ, Regional Development Australia, digital skills providers e.g. nbn Local, NSW Government, Central NSW Joint Organisation.

Programs: Central West and Orana Regional Plan 2041, Cabonne Community Strategic Plan 2022-2032, Cowra Shire Council Community Strategic Plan 2017-2036, Orange City Council Community Strategic Plan 2022-2032, Weddin 2027 Community Strategic Plan, NSW Central West Food and Fibre Strategy



Sub-theme:
Social connection

Insights from consultation and the need

Drought can be particularly isolating for certain demographics within the community. The longevity and severity of the drought can exacerbate this impact. The importance of supporting community events and gatherings is vital for maintaining social cohesion. Continued support for community-driven social programs and strategies to engage more volunteers are necessary. Informal gatherings that foster social bonds are also essential for community well-being during difficult times.

Actions

Activity		Resilience Type
4.1	Investigate the options to develop Local Resilience Community Funds that sit within and are administered by the community. These would support social resilience and increase self-reliance through: • One-off contributions for new events or for existing events that need support to continue during the drought, for example, cul-de-sac parties. • Provide opportunities for community members to apply for or be offered mental health training to be able to support others within their community through drought. • Community Resilience training which focuses on providing skills and training to support those in leadership roles or recognised as leaders within the community. • Community events where mental health services can be accessed in a range of formal and informal channels. Similar community-built funds exist amongst other communities including Upper Lachlan and Crookwell which provide a model as to how to establish this kind of fund. Having established, community-built funds in place provides an opportunity to build resilience skills prior to drought events.	Absorptive

Sub-theme:
Social connection

Resilience framework

Resilience Framework principles that apply:

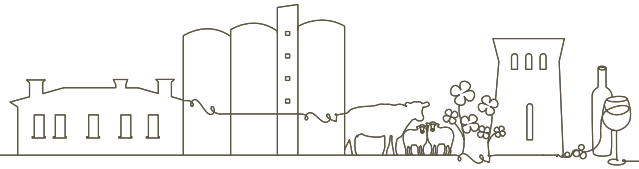
Absorptive	Allows communities to absorb the impacts of droughts by supporting strengthening social connection.

Delivery model

Suggested lead agency	Community
Potential delivery partners	Consortium of Councils, Local health district, training providers in mental health and resilience.
Timeframes	Medium term: 3-4 years
Cost estimates	$$ Additional Resources Required

Key outcomes

- Seeks to encourage self-organisation and community empowerment
- Improves social networks and preparedness.
- Provides opportunities for communities to invest in resilience building activities, training and education that will flow through to other segments of the community as more of the community adopt these techniques.
- Increasing knowledge and education in mental health provides opportunities to intervene earlier, creates increased cohesion and belonging through supportive networks and in the longer-term healthier stronger communities.
- Improves coordination and resources of existing activities that maybe operating in isolation
- Improves the accessibility and potential uptake of mental health services.
- Seeks to encourage self-organisation and community empowerment
- Improves social networks and preparedness.



Sub-theme:
Mental Health

Insights from consultation and the need

Mental health was identified as a key impact of drought across all LGAs. The key challenges in this area were sighted as there being insufficient resources to meet the community needs, as resources are often not available in a timely manner or are hard to access and don't necessarily meet the needs of regional and rural communities. Innovative solutions, such as peer support networks and mental health first aid training can provide critical early intervention. Raising awareness and reducing the stigma around mental health are key to building stronger, more resilient communities.

Actions

Activity		Resilience Type
4.2	Investigate alternative mental health services that meet the needs of people living in rural and remote communities and how these services might be made easier and timelier to access. This may include expansion of the peer worker model adopted by Local Health District during the last drought and opportunities through the education system that support youth mental health.	Absorptive and Transformative
4.3	Identify a suitable organisation to identify, maintain and publish details of all the mental health services available in the region and what they offer.	Absorptive
4.4	Increased access to mental health first aid and training and support programs that focus on maintaining and building good mental health in everyday life. This would include promotion of existing programs/ support such as the Rural Adversity Mental Health Program. As well as increasing resilience and leadership skills training delivered to the region's youth.	Absorptive. Adaptive

Sub-theme:
Mental Health

Resilience framework

Resilience Framework principles that apply:

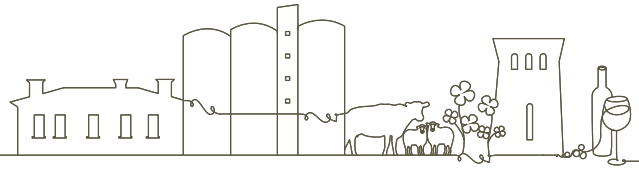
Absorptive	Training and education provide the ability to absorb the stresses associated with drought.
Transformative	Creating a new system to deliver these services.

Delivery model

Suggested lead agency	NSW Health – Local Health District and Primary Health Network.
Potential delivery partners	Consortium of local Councils, local health providers, not for profits e.g., Rural Doctors Network, researchers/ universities, education providers e.g. schools, Local community groups (Mens/ Womens Sheds, Lions Clubs, Progress Associations, etc.), LLS, NSW Rural Fire Service (RFS) brigades.
Timeframes	Long term: 5-10 years
Cost estimates	$$$ Significant Financial Support Required

Key outcomes

- Seeks to identify services that meet the specific needs of the community and take into account the nuances of each region and its population.
- Increases coordination and awareness of the existing health resources available.
- Promotes self-empowerment as communities are able to access the services they feel best meet their needs.
- Seeks to foster diversity and inclusivity in developing new services to support good mental health.
- Seeks to promote redundancy through building access to mental health services through a range of avenues.



Sub-theme:
Education and training

Insights from consultation and the need

To create resilient communities, residents require the skills, knowledge, training and resources to support them to be able to stay and live in their communities and create lives with purpose and meaning that also contribute to the economy. There's a clear need for more accessible education and training opportunities, especially in areas that meet the community need, diversify skills in the agricultural sectors, build resilience and address climate risk assessment. Localised educational programs targeting both primary producers and small business owners, as well as youth, are essential to equip communities with the skills needed for long-term drought resilience.

Actions

Activity		Resilience Type
4.5	On a LGA level utilise the Registered Training Organisations to create a matrix of skills required in each community against those people looking for retraining to ensure that there is alignment between the two.	Adaptive
4.6	Investigate options to decentralise training and deliver local options so that participants can stay and learn in their communities. Partnerships with universities or other training providers may assist with obtaining local providers.	Adaptive
4.7	Deliver timely retraining options for those in agriculturally reliant communities that may be stepping away from agriculture (due to drought) to avoid the likelihood of having these people leave the area.	Absorptive to Adaptive
4.8	Council to support RDA and other agencies such as Country Women's Association (CWA) to promote and work with local digital literacy providers e.g. National Broadband Network (nbn) Local, to rollout courses or programs to improve these skills.	Absorptive to Adaptive

Sub-theme:
Education and training

Resilience framework

Resilience Framework principles that apply:

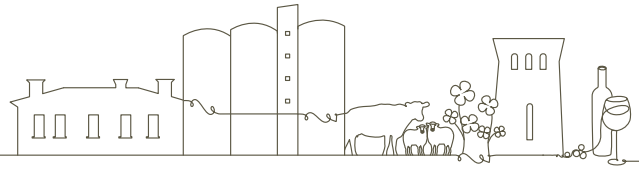
Absorptive	Resilience and leadership training will improve absorptive capacity
Adaptive	Retraining for displaced workers and trainees allows them to adapt to new circumstances with new skill development

Delivery model

Suggested lead agency	Various
Potential delivery partners	Local employers, TAFE, NSW Department of Education, Group and local registered training organisations, Private education providers, Business Chambers of Commerce, Central NSW BizHQ, Regional Development Australia, digital skills providers e.g. nbn Local, NSW Government, Consortium of Local Councils, Central NSW Joint Organisation.
Timeframes	Long term: 5-10 years
Cost estimates	$$$ Significant Financial Support Required

Key outcomes

- Increased relationships and community knowledge.
- Empowered community members through training and education
- Investment in social capital through increased opportunities for leadership training.



Theme 5:

Infrastructure – Built assets and technology

Transport and infrastructure that supports and links the region and provides connectivity is paramount to creating liveable communities and supporting businesses and industry to diversify and grow. There are a several renewable energy zones proposed within and around the Central West which may assist with diversifying the economy as well as attracting new residents and providing new job opportunities. Major infrastructure projects also bring increased funding for services. It is vital that infrastructure and services can support the communities needs and are implemented with a sense of urgency.

Program logic

Vision: Our vision is to create resilient, healthy, and prosperous communities who thrive through the challenges of drought. We wish to be a liveable, connected, and inclusive rural region. We look to prioritise innovation that helps secure our natural resources and leads to assured and flexible employment opportunities

Impact: Regional infrastructure that is reliable and fit for future community needs.

Outcomes: Increased reliability in regional assets when responding to drought, Improved cross-sector collaboration amongst agencies and communities, enhanced connectivity and communication through improved collaboration, develops a culture of trust amongst agencies and communities

Activities: Advocate for improved transport services, increased and reliable telecommunications, digital plan that identifies better connectivity and/or digital literacy, planning and repurposing of existing infrastructure and new climate adapted infrastructure.

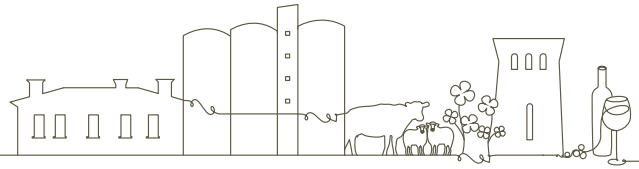
Stakeholders: Consortium of local Councils, Central Tablelands Water, NSW DCCEEW, WaterNSW, Australian Government, Central NSW Joint Organisation, Murray-Darling Basin Authority. NSW Government (including Transport for NSW), Telecommunications providers, RDA, nbn Local, local businesses, NSW Farmers Association

Programs: Central NSW JO Water Advocacy Plan, Central West and Orana Regional Plan 2041, Blayney Shire Community Strategic Plan 2022-2032

Orange, Blayney and Cabonne REDS- 2023 Update, South West Slopes REDS- 2023 Update, Macquarie-Castlereagh Regional Water Strategy 2023

Lachlan (draft) Regional Water Strategy 2023, NSW Central West Food and Fibre Strategy, Orange City Council Community Strategic Plan 2022-2032, Weddin 2027 Community Strategic Plan, Cowra Shire Council Community Strategic Plan 2017-2036, Blayney Shire Community Strategic Plan 2022-2032 , Cabonne Community Strategic Plan 2022-2032, Central NSW Joint Organisation Transport Infrastructure Advocacy Plan (2024)

Future Transport 2056 Central West and Orana Regional Transport Plan



Sub-theme:
Water

Insights from consultation and the need

The regions water resources were discussed throughout the Plan's entirety ensuring water security and improving water management infrastructure are essential for building resilience to drought in this region and this is supported by the significant effort of the Consortia of Councils and the Central West JO. Expanding and building water infrastructure that meet the needs of the region's industry and community needs along with educating the public on water-saving techniques are all necessary steps to secure reliable water access for both agricultural and urban areas.

Actions

Activity		Resilience Type
5.1	Continue to support and progress water security investigations identified in the following reports that benefit the region including: • Lachlan Macquarie Drought Study (2017) • Central West Joint Organisation Water Security Study (2009) which includes interventions that focus on demand management and water conservation, investigation of infrastructure that will improve water security in the region and recognise the changing climate conditions. • Belubula Water Security Project Progress investigations into improved water security including the final Business Case into the augmentation of Lake Rowlands • Sub-Regional Town Water Strategy is being developed by Orange City Council, Cabonne Shire Council and Central Tablelands Water that covers their areas of operation in the upper Macquarie Valley. It includes strategies that encompass existing and proposed pipeline links between the towns of Manildra, Orange and Molong (and adjacent areas). Linking these existing town water supply schemes can provide shared benefits and improve the drought resilience of the individual town water supply schemes. Continue to support the State Government on the implementation of solutions identified with the regional water strategies of Macquarie-Castlereagh and the Draft Lachlan Water Strategy including improvements to town water security.	Absorptive, Adaptive and Transformative (dependent on the level of implementation)
5.2	Continue to investigate options through NSW DCCEEW to upgrade, extend and replace water treatment facilities to provide improved water quality and extend the use of water recycling to maintain Council owned services, for example, parks, gardens throughout droughts.	Adaptive and Transformative

Sub-theme:
Water

Actions

Activity		Resilience Type
5.3	Continued work with NSW DCCEEW that supports regional water issues and specific LGA challenges. This may include investigations into the extension of recycled water use to assist in reducing potable water demand and for use in the construction industry so that works can continue during drought or expansion of the Regional Water Loss Management Hub Pilot project which is focused on reducing water use through water loss management leading to an ongoing and self-sustaining program of improving practice in water loss management with a focus on pressure management.	Adaptive to Transformative
5.4	Continued advocacy for greater recognition of town water supply in the Basin Plan and to reduce red tape associated with improving water security. This advocacy can be progressed through the 2026 Basin Plan Review.	Absorptive
5.5	Continue to advocate for greater sharing of water data across all levels of government to assist in improved evidence-based decision making.	Absorptive and Adaptive
5.6	Advocate for and support increased collaboration across all levels of government on water policy and security that support regional water supplies with recognition of local experience and capability in delivering solutions.	Absorptive and Adaptive

Sub-theme:
Water

Resilience framework

Resilience Framework principles that apply:

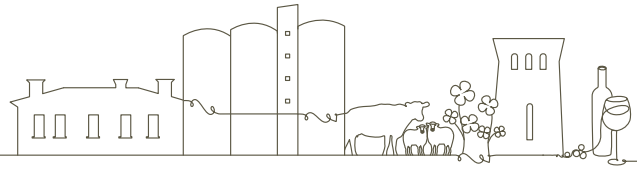
Absorptive	Increased water supply capacity provides greater resistance during drought, potentially delaying the need to move to higher water restrictions.
Adaptive	Upgrades and other improvements are adaptive measures to deal with future climate changes and uncertainty.
Transformative	New and improved water infrastructure options and methods of operating will create a transformation within the system.

Delivery model

Suggested lead agency	Consortium of Councils and Central NSW JO
Potential delivery partners	Consortium of local Councils, Central Tablelands Water, NSW DCCEEW, WaterNSW, Australian Government, NSW Government, Central NSW JO, Murray-Darling Basin Authority.
Timeframes	Long term: 5-10 years
Cost estimates	$$$ Significant Financial Support Required

Key outcomes

- Increased reliability of regional assets when responding to drought.
- Improved cross-sector collaboration amongst agencies and communities
- Enhanced connectivity and communication through improved collaboration.
- Develops a culture of trust amongst agencies and communities



Sub-theme:
Enabling infrastructure

Insights from consultation and the need

Communities sighted the importance of enabling infrastructure to underpin many of the other plan actions occurring. Upgraded and fit for purpose infrastructure, including transport networks and digital connectivity, is crucial for supporting regional economic growth and diversification. Better access to technology and reliable communication systems will enable communities to attract new businesses, improving long-term drought resilience and economic stability.

Actions

Activity		Resilience Type
5.7	Advocate for improved transport services (enabling infrastructure) including rail, road and air network upgrades that make it possible for existing local businesses to grow and to attract new people and businesses to the region.	Transformative where realised
5.8	Advocate for increased and reliable telecommunications services to assist businesses (including primary producers) within the region increasing their digital footprint and adopting new technologies.	Transformative where realised
5.9	Where appropriate, support the repurposing of existing infrastructure to attract new businesses to the region.	Adaptive

Sub-theme:
Enabling infrastructure

Resilience framework

Resilience Framework principles that apply:

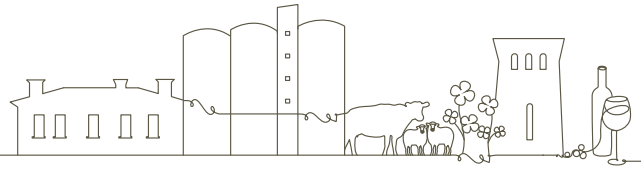
Adaptive	Repurposing existing infrastructure is an adaptive measure bringing benefit to both community and the economy.
Transformative	New and improved infrastructure creates a transformation within the system which improves service provision and builds economic and social resilience.

Delivery model

Suggested lead agency	Consortium of local Councils.
Potential delivery partners	NSW Government (including Transport for NSW), Australian Government, Telecommunications providers, RDA, nbn Local, Central NSW Joint Organisation, local businesses, NSW Farmers Association.
Timeframes	Long term: 5-10 years
Cost estimates	$$$ Significant Financial Support Required

Key outcomes

- Sustainable infrastructure that is climate adapted and minimises disruption.
- Increased digital access supports improved communication, information sharing and access to services including uptake of technological services.



5.5. Monitoring, Evaluation and Learning

To drive improved drought resilience in the region, this plan has identified the steps required for change to meet the needs of the region. These include the identified priority and related actions to be implemented; the outcomes that could be achieved as a result, and specifically how each would relate to building resilience. The plan also includes steps required to implement the change, and identifies a delivery model to do so.

To ensure this Plan delivers on the actions identified, a Monitoring, Evaluation Learning (MEL) Framework should be adopted to ensure transparency, adaptive management, and long-term implementation. The FDF MEL Framework will be used to assess the effectiveness of implementing this Plan (DAWE, 2020).

The MEL framework listed in Figure 40 links to four major activities of impact, rationale, outputs and outcomes.

The drought impacts have been identified in Section 3.7 and LGA-specific impacts are presented in the LGA snapshots. These drove the development of the actions (Section 5.3). The themes in Section 5 outline, for each action, what strategic priorities they align to (Social, Economic, Environmental), how they build resilience, the intended outcomes, the implementation steps, parties involved, estimated magnitude of cost, timeframe for implementation, and suggested evaluation metrics.

The five Councils working together with delivery partners including NSW State Government, not-for profit organisations, industry and community organisations will need to collaborate on the implementation of this Plan.

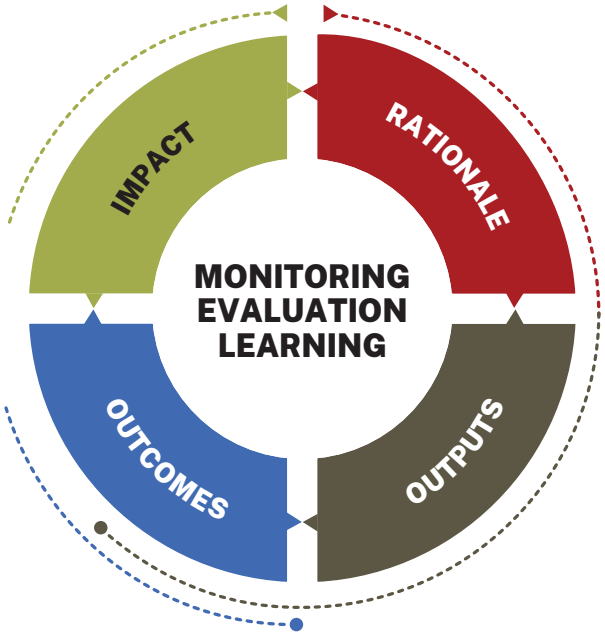


Figure 40 Future Drought Fund MEL Framework

The Councils have been nominated as the lead agency for the delivery of some actions within this plan. This is due to both the allocation of implementation funding via the FDF and the ability of Councils to lead and advocate for the resilience needs of their communities. However, it is expected that many of the initiatives will be delivered as a collaborative effort.

The net has been cast wide to identify delivery partners for the actions have been identified where the action aligns and compliments their current responsibilities, area of interest or where they are best placed to lead an action because of their geographic alignment to the region or a previous working model.

On a local level the stakeholders who represented potential delivery partners were encouraged by the Plan actions. Those delivery partners with a larger service footprint such as the Central NSW JO would appreciate greater visibility in how actions in these Plans align to those in surrounding areas.

Where plan actions aligned with State and Commonwealth Government strategies delivery partners expressed a greater level of interested as they could more clearly understand their role.

A certain level of hesitancy was expressed by delivery partners where they anticipated a greater demand on their time or there is an identified need for financial resources to deliver plan outcomes.

This plan does not create a responsibility on delivery partners to providing resources or funding.

Initial Plan measures of success have been identified for the first year of the plan (see Table 15). This establishes a starting point to measure the effectiveness and progress of each of the actions.

When identifying the measures of success for each of the actions, the metrics should, where possible, have quantifiable terms to enable data to be gathered to support a clear monitoring and review process. Ideally, they should follow the SMART criteria: Specific, Measurable, Achievable, Relevant and Time-bound.

Where possible, metrics have been adopted from existing data and systems such as the Australian Bureau of Statistics, census data and existing reporting that could be obtained through Council. The metrics would need to be monitored and reported to establish a baseline level with future years measures of success and metrics to be identified.

For practical implementation of the RDRP to occur a detailed implementation plan should be developed in conjunction with action leads and key project partners ensuring there is good representation of local representatives across a range of demographics and from each of the LGA's to capture local nuances, knowledge and understanding to the delivery of actions. The implementation plan should allow flexibility for leads to adapt and pivot implementation as needed.

Critical to regional-level monitoring of, and improvement to, the Plan, an on-going project control group comprising of the five Councils with external stakeholders as needed will be required. This group would have the role of initiating actions in line with the plan, reviewing progress against the plan objectives and overseeing implementation. The PCG will continue to meet regularly to oversee the first phase of the Plan's implementation.

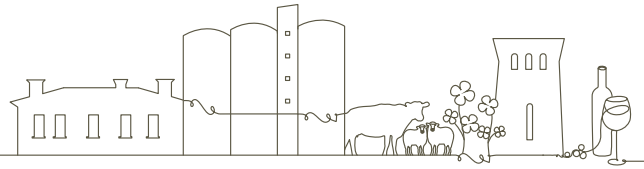
The Plan is a snapshot in time and requires regular update to ensure the overall actions still align with the region's requirements. A short progress review should be published annually as part of the individual Councils Annual Report (as part of their Integrated Planning and Reporting (IP&R) processes), highlighting any issues in implementation, and reporting using the metrics described. A review and update of plan should be scheduled every 4 years (to align with IP&R updates).

This should include community consultation to ensure the needs, actions and outcomes are still relevant and to ensure local ownership of the plan. The consortium of Councils/ PCG will continue to meet bi-annually to assess plan progress. This may include inviting other stakeholders and delivery partners to provide progress updates. Aside from this, the consortium of Councils would be involved in other implementation groups for specific actions.

Additionally, using the Central NSW Joint Organisation, this consortium of Councils along with the other two RDRP's that cover the Central West should be reviewed in parallel to ensure where there are common actions they can be progressed in parallel.

Some of the key parameters assumed in the implementation of the plan include:

- Effective cooperation between delivery partners.
- Capacity of the consortium of local Councils to lead and coordinate other stakeholders.
- Capacity and engagement of other stakeholders to lead and coordinate actions where required.
- Capacity of other stakeholders and the community to participate and actively engage in implementation activities.
- The ability to record and share plan outcomes.
- The integration of the Plan with other local planning activities.
- Stakeholders' willingness to share knowledge and work with each other.
- On-going funding to support implementation of plan actions.
- The remit of delivery partners/stakeholders will not fundamentally change.
- Implementation targets past the short-term can be defined and agreed.
- That the region is not moving directly into another drought and has some lead time to commence plan activities.
- Other agencies continue to deliver drought work that is being leveraged as a part of this plan.
- Some of the longer-term factors that may impact plan outcomes include:
- Ability to effect meaningful and longer-term behaviour change.
- Legislative and regulatory change required to implement the actions.
- Regular review and update of the plan.



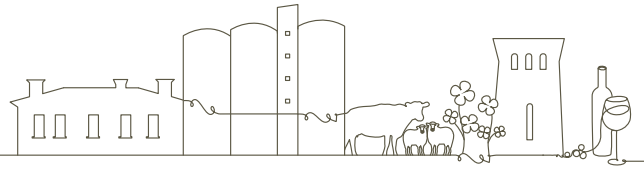
5.5.1. Monitoring progress and plan outcomes

The following table outlines the actions alignment to the FDF MEL Framework. Additional details regarding lead agency, partners and measures of success can be found in Table 14 highlights the indicators/ metrics to be used in the short-term. Further expansion of the metrics and indicators for medium to long-term actions will need to be addressed in future Plan evaluations and/or revisions.

Theme	FDF outcome / priority alignment	Metric	Timing
Theme 1 – The Economy – Diverse and resilient regional economies and agricultural businesses Economic support and education	**Stronger connectedness and greater social capital within communities, contributing to wellbeing and security.** • Businesses have improved access to new and existing knowledge and technology to enable more effective responses to risks such as drought. • Businesses engage in strategic business planning and risk assessment. • Businesses better understand their resilience to drought. • Businesses have built skills in business planning, financial and risk management. • Businesses identify and adopt innovative and transformative ways to build drought resilience • The number of, and participation in, local networks and programs to enhance drought resilience increases. • Communities share knowledge, collaborate and partner more often to build drought resilience.	At least one cross-LGA business workshopping session held to inform the scope of services and suppliers.	Short term
		Development of package of services/suppliers. (Business case presented)	Medium
		Business case for State-wide Business Drought Resilience Program underway/ completed.	Long term to deliver and implement
Theme 1 – The Economy – Diverse and resilient regional economies and agricultural businesses Economic diversity and development	**Stronger connectedness and greater social capital within communities, contributing to wellbeing and security.** **Communities implement transformative activities that improve their resilience to drought.** • Businesses better understand their resilience to drought. • More innovative approaches and technologies for drought resilience are being developed and adopted. • The number of, and participation in, local networks and programs to enhance drought resilience increases. • Improved access to, and greater utilisation of community infrastructure. • Communities share knowledge, collaborate and partner with government more often to build drought resilience.	At least two cross-LGA meetings between economic development officers (or similar role). Baseline Business community survey	Short-term
		Progress against Regional Economic Development Strategies and local economic development to be evaluated by NSW Government (through reporting)	On-going reporting against implementation

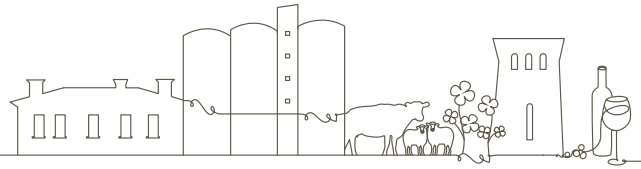
Theme	FDF outcome / priority alignment	Metric	Timing
Theme 1 – The Economy – Diverse and resilient regional economies and agricultural businesses Agriculture	• More primary producers adopt transformative strategies and technologies to reduce financial exposure to drought. • More primary producers preserve natural capital while also improving productivity and profitability. • More primary producers adopt whole-of-system approaches to natural resource management (NRM) to improve the natural resource base, for long-term productivity and landscape health. • New partnerships are formed to fund and undertake drought resilience RD&E. • The volume and adoption of relevant drought resilience RD&E increases. • Primary producers and businesses have improved access to new and existing knowledge and technology to enable more effective responses to risks such as drought. • More primary producers incorporate NRM philosophies and approaches in business planning and risk assessment to better manage their natural resources through drought. • More primary producers and businesses make greater use of data to better understand their farm business' level of drought resilience and make business decisions. • Relevant and reliable climate data are available and used for decision-making. • NRM related RDE&A outputs are relevant and tailored. • Communities' and farm businesses' engagement and collaboration with NRM bodies increases. • Primary producers' awareness of new and existing NRM practices is increased, and lessons from experimentation are shared. • More primary producers and agricultural communities experiment with adaptive or transformative NRM practices and systems.	Attendance at extension workshops and engagement with drought adoption officers increases. Increased reporting of adoption via relevant extension providers.	This is medium term/ ongoing.

Theme	FDF outcome / priority alignment	Metric	Timing
Theme 2 – The Environment – Protection of the Natural and Built Environment	• Communities implement transformative activities that improve their resilience to drought. • More primary producers incorporate NRM philosophies and approaches in business planning and risk assessment to better manage their natural resources through drought. • More innovative approaches and technologies for drought resilience are being developed and adopted. • Communities' and farm businesses' engagement and collaboration with NRM bodies increases. • Primary producers' awareness of new and existing NRM practices is increased, and lessons from experimentation are shared. • More primary producers and agricultural communities experiment with adaptive or transformative NRM practices and systems. • Communities proactively plan/prepare for drought, using collaboration and innovation.	Monitoring water use data collected by Councils/ surveys on behaviour change Progress against climate change related plans and strategies communicated. Progress against Regional Water Strategies communicated.	Short-term and on-going reporting On-going reporting and delivered in the longer-term On-going reporting and delivered in the longer-term
Theme 3 – Governance - Leadership and Collaboration	• Stronger connectedness and greater social capital within communities, contributing to wellbeing and security. **Communities implement transformative activities that improve their resilience to drought.** • Relevant and reliable climate data are available, and used for decision-making. • Partnerships and engagement is built between stakeholders managing natural resources. • The number of, and participation in, local networks and programs to enhance drought resilience increases. • Communities share knowledge, collaborate and partner with government more often to build drought resilience. • Communities build their local leadership, networks and social support. • Communities proactively plan/prepare for drought, using collaboration and innovation.	Webpage established on each Council website to host drought information.	Initial implementation and/ or planning may be short-medium term and ongoing actions.
Theme 4 – Community - Vibrant, connected, and supported communities Social Connection	**Stronger connectedness and greater social capital within communities, contributing to wellbeing and security.** • The number of, and participation in, local networks and programs to enhance drought resilience increases. • Communities learn from and share innovative ways to build drought resilience. • Communities build their local leadership, networks and social support.	Discussions with other regions on resilience fund completed. Reporting by service providers on service/ training uptake	Medium term to establish, then ongoing. Medium term to establish and ongoing.



Theme	FDF outcome / priority alignment	Metric	Timing
Theme 4 – Community - Vibrant, connected, and supported communities Mental Health	**Stronger connectedness and greater social capital within communities, contributing to wellbeing and security.** • Communities implement transformative activities that improve their resilience to drought. • Communities build their local leadership, networks and social support.	Service providers identified to publish resources and completion of gap analysis started.	Short-medium term to establish, then ongoing.
Theme 4 – Community - Vibrant, connected, and supported communities Education and Training	**Stronger connectedness and greater social capital within communities, contributing to wellbeing and security.** • Communities build their local leadership, networks and social support. • Primary producers and businesses have built skills in business planning, financial and risk management.	Skills matrix initiated.	Short-medium term to establish, then ongoing.
Theme 5 – Infrastructure – built assets and technology Water	**Communities implement transformative activities that improve their resilience to drought**. • Primary producers and businesses better understand their resilience to drought. • Improved collaboration between NRM bodies, governments, communities and primary producers. • Communities proactively plan/prepare for drought, using collaboration and innovation. • Better use of research and co-design processes to develop NRM activities that directly address regional priorities. • Improved access to, and greater utilisation of community infrastructure. • Communities share knowledge, collaborate and partner with government more often to build drought resilience. • Community leaders and networks have stronger capability to undertake strategic drought resilience planning. • Communities use best practice data and information to better understand their resilience to drought, and plan for resilience to drought.	Progress against existing plans/ strategies communicated.	Some actions are short term to implement but most are long term and require significant funding (infrastructure changes).
Theme 5 – Infrastructure – built assets and technology Enabling infrastructure	**Stronger connectedness and greater social capital within communities, contributing to wellbeing and security.** **Communities implement transformative activities that improve their resilience to drought.** • Improved access to, and greater utilisation of community infrastructure. • Communities share knowledge, collaborate and partner with government more often to build drought resilience.	Progress against existing plans/ strategies communicated.	Short term to enact but ongoing.

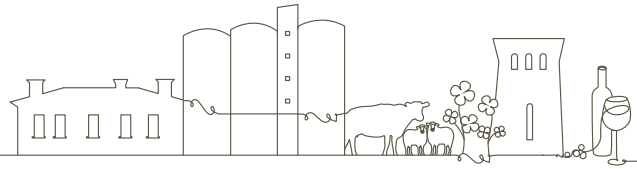
Table 15 Initial MEL framework



5.5.2. Action Implementation

Table 16 has been created to adapt the information from Appendix B and Table 16-18 to illustrates the staging of implementation of Plan actions. Detailed implementation steps can still be found in the Appendix/

Theme	Action
Economy	1.6 Create mentorship opportunities and enhanced business networks.
	1.7 Develop a Community Business Survey to baseline and inform future needs of the REDS and Local Economic Development Strategies and business community sentiment/ needs/attitudes
	1.8 For smaller councils with less structured tourism programs - develop a calendar of future tourism events/local attractions/service providers
	1.8 Continue to support and promote innovation in research and development and extension activities
	1.9 Map the barriers and challenges to improving adoption to R&D, Seek to identify the key drivers of resistance/challenges to adoption.
	1.12 Increasing the awareness and understanding of climate data and early warning indicators to improve decision-making.
	1.13 increasing the awareness and information dissemination of Commonwealth and State Government Programs that assist with the purchase of drought resilient and emergency infrastructure including water and grain storage and support services
Environment	2.1 Through local council asset/maintenance planning cycle integrate future inclusion of drought tolerant gardens/plantings.
	2.2 Scope a program for how local councils can deliver awareness, education and information on water efficiency, sustainability identified in Theme 2 including local partners who can support the delivery of education, awareness and best practice.
	2.3 utilise recycled water to maintain local greenspaces and maintaining infrastructure
	2.4 Through the revision of existing local water strategies seek to broaden engagement to incorporate First Nations Peoples knowledge water and environmental management.
	2.5 Advocate for improved housing design and landscaping requirements which reduce water use and improve energy efficiency of homes.
Governance	3.1 Identification and formalise existing regional networks established for the coordination of natural disasters.
	3.1 Investigate opportunities through the Disaster Adaptation Plans to engage local resources to support drought response.
	3.1 Map of existing roles and responsibilities of drought agencies
	3.2 Continued advocacy of drought issues identified in Centroc (2018) Drought issues Paper
	3.3 Increase access to early warning information and data through councils website and through improved promotion of available information
	3.4 Continued advocacy for simplified processes to access drought support.
	3.5 Create a dedicated drought page on Council's website

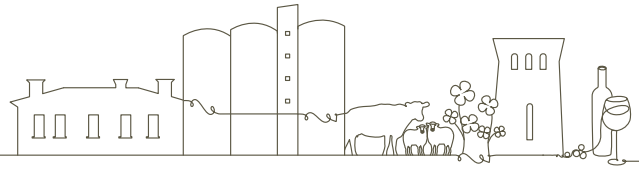


Community	4.1 Investigate the options to develop Local Resilience Community Funds that sit within and are administered by the community.
	4.2 Investigate regional and state organisations who are working on mental health services for region communities and options to participate.
	4.3 Publish details of all the mental health services available in the region
	4.4 Increased access to mental health first aid and training and support programs and Increase resilience and leadership skills training.
	4.5 Develop a skills matrix that supports the identified skills in the region.
	4.8 Investigate partnerships and implement programs to promote and work with local digital literacy
Infrastructure	5.3 Continue to work with NSW DCCEEW on the Regional Water Loss Management Hub Pilot to create an expanded and enduring program.
	5.4 Continued advocacy for greater recognition of town water supply in the Basin Plan through the 2026 Basin Plan Review.

Table 16 Short term actions (1-2 years)

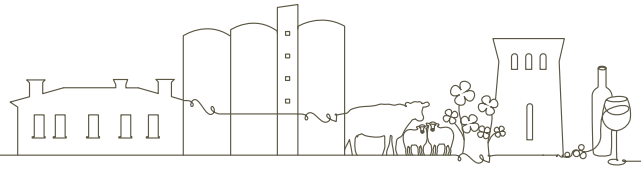
Theme	Action
Economy	Preparation of Business Case/further investigations for Business Drought Resilience Program.
	1.6 Continuing implementation of Regional/Local Economic Development Strategies
	1.9 Implement strategies that will assist in mitigating the behaviour change required to increase the adoption of agricultural technologies and production techniques.
	1.9 Continue to extend and adopt agricultural innovation.
Environment	2.1 Realise increased increasing drought tolerant greenspaces
	2.2 Package of water efficiency, innovative hydration techniques and best practice of environmentally friendly information is fully implemented
	2.3 Investigate options for other water users who may be able to use surplus recycled water.
	2.5 Identified local scale changes that can be made to planning instruments to encourage climate adapted design and landscaping.
	2.6 Councils to continue to plan and implement their climate change (adaption) strategies.
	2.7 Councils to continue to plan and implement renewable energy expansion and/or energy efficiency/ net-zero emissions programs and strategies
Community	4.2 Investigate/define the mental health service need for the region
	4.4 Increased access to mental health first aid and training and support programs.
	4.6 Investigate options to decentralise training and deliver local options so that participants can stay and learn in their communities.
	4.7 Deliver timely retraining options for those in agriculturally reliant communities.
	5.1 Progress water security investigation - Belubula Water Security Project
	5.2 Continue to investigate options through NSW DCCEEW to upgrade regional water infrastructure.
	5.3 Continued work with NSW DCCEEW that supports regional water issues – realisation of new opportunities
	5.5 Continue to advocate for greater sharing of water data across all levels of government to improve decision making.
	5.6 Advocate for improved collaboration across all levels of government on water policy and security that support regional water supplies.
	5.9 Investigate options of repurposing of existing infrastructure

Table 17 Medium term (3-4 years)

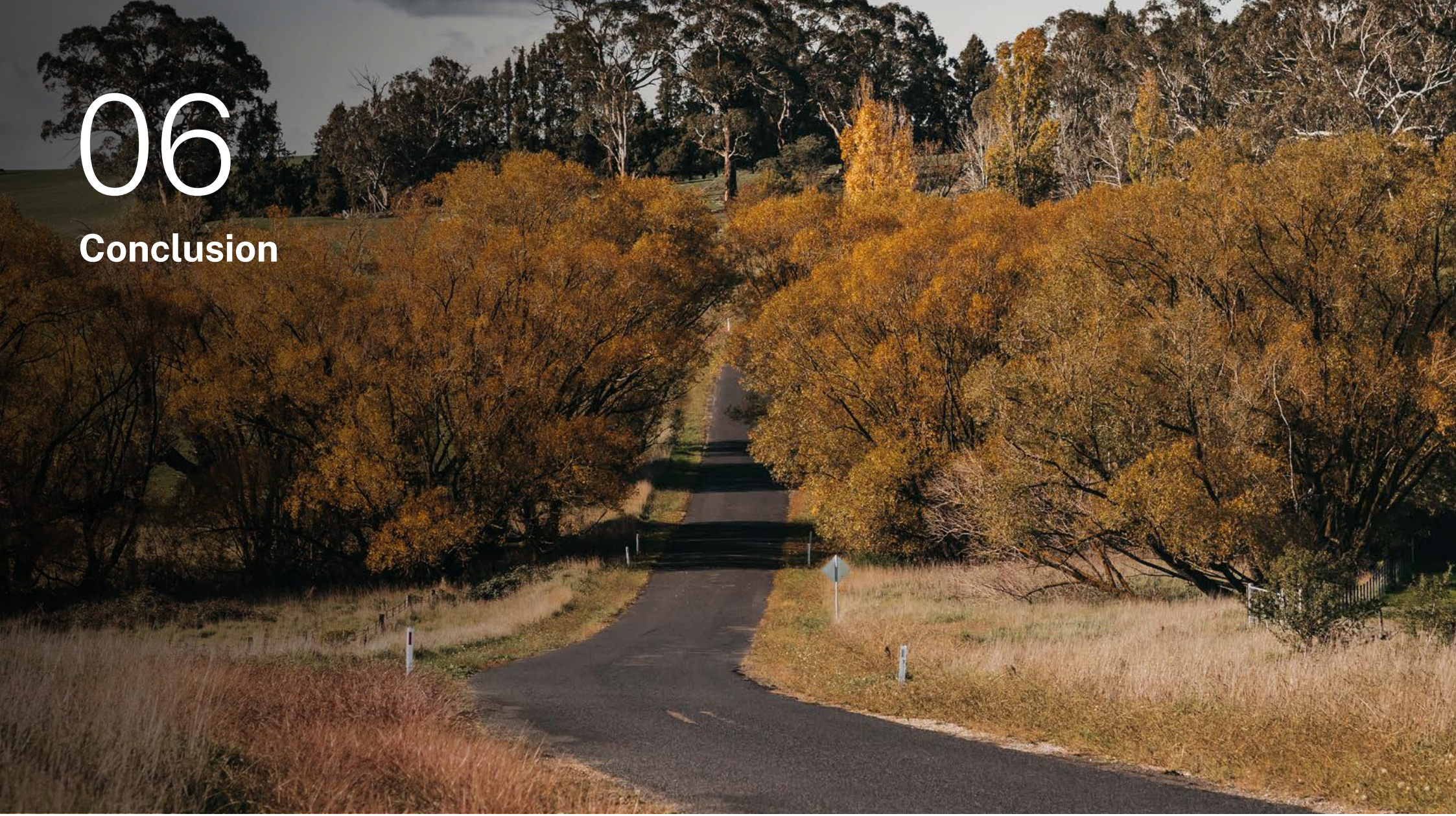


Theme	Action
Economy	1.1 State-wide Business Drought Resilience Program that supports businesses outside the current agricultural and agricultural service businesses model.
	1.6 The consortium of Councils implement and refine the Economic Development Strategies for each LGA.
	1.9 Continue to invest in innovative R&D that supports agricultural production
Environment	2.5 Evidence improved housing design and landscaping requirements which reduce water use and improve energy efficiency of homes.
Governance	3.2 Progress drought issues identified in the Centroc (2018) Drought Issues Paper
Community	4.2 Be able to evidence improved mental health services for the region
Infrastructure	5.1 Progress water security investigations including Lachlan Macquarie Drought Study (2017), Central West Joint Organisation Water Security Study (2009), and Sub-Regional Town Water Strategy.
	5.1 Continue to support the NSW Government with the implementation of solutions identified with the regional water strategies of Macquarie-Castlereagh and the Draft Lachlan Water Strategy including improvements to town water security
	5.2 Continue to investigate options through NSW DCCEEW to upgrade regional water infrastructure.
	5.3 Continued work with NSW DCCEEW that supports addressing regional water issues.
	5.5 Continue to advocate for greater sharing of water data across all levels of government to improve decision making.
	5.6 Advocate for improved collaboration across all levels of government on water policy and security that support regional water supplies.
	5.7 Advocate for improved transport services including rail, road and air network upgrades
	5.9 Advocate for increased and reliable telecommunications services to assist businesses within the region increasing their digital footprint and adopting new technologies.

Table 18 Long term (5-10 years)



06
Conclusion



6. Conclusion

This Plan has been developed by and for the communities of Central West. The Plan is an important step in voicing the areas of focus and the actions the community seeks to undertake in order to move them towards improved drought resilience.

This Plan is a snapshot in time and reflects the key areas of importance to the community. These areas of focus are not static and will require regular review and update.

The Plan contains a series of actions, some of which can be funded through the FDF implementation funding and some that will require alternate funding channels to be identified and obtained. These actions capitalise on earlier efforts made by the community to improve its response to drought.

While this Plan has been designed with the Consortium of Councils being the main leader of actions to ensure the plan is actionable, to fully implement the Plan, Central West Councils will require both a collaborative effort with all levels of government, the regions industry, not-for-profit organisations, and the community, to be partners in the delivery of the actions.

The Central West RDRP provides a pathway to develop and build drought resilience into regional NSW.

07

Reference List and Appendices

Reference List

Note: all case studies were developed in conjunction with information provided by members of the five LGAs and some publicly available information.

ABARES (Australian Bureau of Agricultural and Resource Economics and Sciences). 2020. Measuring drought risk – The exposure and sensitivity of Australian farms to drought. Department of Agriculture, Water and the Environment. Australian Government. https://daff.ent.sirsidynix.net.au/client/en_AU/search/asset/1030903/0

ABARES (Australian Bureau of Agricultural and Resource Economics and Sciences). 2022. Community Vulnerability and resilience to drought index – stage 1. Department of Agriculture, Fisheries and Forestry, Australian Government. https://view.officeapps.live.com/op/view.aspx?src=https%3A%2F%2Fdaff.ent.sirsidynix.net.au%2Fclient%2Fen_AU%2Fsearch%2Fasset%2F1034241%2F1&wdOrigin=BROWSELINK

ABARES (Australian Bureau of Agricultural and Resource Economics and Sciences). n.d.a. Farm Data Portal – Beta. Department of Agriculture, Fisheries and Forestry. The Australian Government. Accessed May 16, 2024. https://www.agriculture.gov.au/abares/data/farm-data-portal

ABARES (Australian Bureau of Agricultural and Resource Economics). n.d.b Climate and Drought. Department of Agriculture, Fisheries and Forestry. The Australian Government. https://www.agriculture.gov.au/abares/research-topics/climate

ABS (Australian Bureau of Statistics). 2021a. Data by Region. ABS. https://dbr.abs.gov.au/index.html

ABS (Australian Bureau of Statistics). 2021b. Socio-Economic Indexes for Areas (SEIFA), Australia. ABS. https://www.abs.gov.au/statistics/people/people-and-communities/socio-economic-indexes-areas-seifa-australia/latest-release

ABS (Australian Bureau of Statistics). 2021c. 2021 Australia, Census All persons QuickStats. ABS. https://www.abs.gov.au/census/find-census-data/quickstats/2021/AUS

ABS (Australian Bureau of Statistics). 2022a. Value of Agricultural Commodities Produced, Australia, 2020-21. ABS. https://www.abs.gov.au/statistics/industry/agriculture/value-agricultural-commodities-produced-australia/2020-21#data-downloads

ABS (Australian Bureau of Statistics). 2022b. Agricultural Commodities, Australia, 2020-21. ABS. https://www.abs.gov.au/statistics/industry/agriculture/agricultural-commodities-australia/2020-21

Abunyewah, M., Byrne, M. K., Keane, C. A., and Bressington, D. 2023. Developing Psychological Resilience to the Impact of Drought. International Journal of Environmental Research and Public Health, 20 (4): 3465. https://www.mdpi.com/1660-4601/20/4/3465

AdaptNSW. 2024a. Climate Change Impacts on agriculture. NSW Government. https://www.climatechange.environment.nsw.gov.au/impacts-climate-change/agriculture#:~:text=Warmer%20temperatures%20are%20contributing%20to%20longer%20droughts%20and,decreasing%20production%20and%20making%20animal%20welfare%20an%20issue.

AdaptNSW. 2024b. Climate Change Impacts on Drought. NSW Government. https://www.climatechange.environment.nsw.gov.au/impacts-climate-change/weather-and-oceans/drought

AdaptNSW. 2024c. Climate Change Impacts on our Water Resources. NSW Government. https://www.climatechange.environment.nsw.gov.au/impacts-climate-change/water-resources

AIHW (Australian Institute of Health and Welfare). 2024a. "My Hospitals: My Local Area". Australian Government. https://www.aihw.gov.au/reports-data/myhospitals/my-local-area

AIHW (Australian Institute of Health and Welfare). 2024b. Hospital: Orange Health Service. Version 2024051602. Canberra: AIHW. https://www.aihw.gov.au/reports-data/myhospitals/hospital/h0214

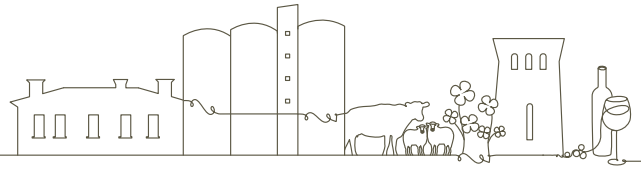
Arts Out West NSW. 2023. "CASP Stories: Light up the night in Grenfell." Arts Out West NSW. https://artsoutwest.org.au/casp-stories-light-up-the-night-in-grenfell/

Australian Government. 2023. Small Area Labour Markets, September Quarter 2023. Jobs and Skills Australia. https://www.jobsandskills.gov.au/data/small-area-labour-markets

Australian Schools Directory. 2024. "Schools in NSW". Future Media Group Pty Ltd. https://www.australianschoolsdirectory.com.au/schools-in-nsw

Australian Silo Art Trail. n.d. "Grenfell Silo Art - NSW." Australian Silo Art Trail. Accessed May 28, 2024. https://www.australiansiloarttrail.com/grenfell

Baguley, Darren. 2021. "Smart farms of the future." The Farmer. March 29, 2021. https://thefarmermagazine.com.au/smart-farms-of-the-future-in-nsw-farmers-magazine/



Barker, S. 2023. NSW Gov Delivers $6.2M Investment for Regional Water Infrastructure. Utility Magazine. https://utilitymagazine.com.au/nsw-gov-delivers-6-2m-investment-for-regional-water-infrastructure/

Beard, G., Chandler, E., Watkins, A., Jones, D. 2011. How does the 2010–11 La Niña compare with past La Niña events. Bulletin of the Australian Meteorological and Oceanographic Society, 24, 17-20

Béné. C., Wood, R. G., Newsham, A., Davis, M. 2012. Resilience: New Utopia or New Tyranny? Reflection about the Potential Limits of the Concept of Resilience in Relation to Vulnerability Reduction Programmes. IDS Working Papers, 2012: 1-61. https://doi.org/10.1111/j.2040-0209.2012.00405.x

Blayney Shire Council. n.d. Home. NSW Government. https://www.blayney.nsw.gov.au/

Blayney Shire Council. 2020. Blayney Showground and Equestrian Sports Facilities Strategic Plan 2020-2025. https://www.blayney.nsw.gov.au/ArticleDocuments/963/Blayney%20Showground%20Strategic%20Plan%2020-25.pdf.aspx

Blayney Shire Council. 2021. "Village Bores." Blayney Shire Council. https://www.blayney.nsw.gov.au/environment/water-and-wastewater/village-bores

BoM (Bureau of Meteorology). 2024a. Drought Knowledge Centre. The Australian Government. http://www.bom.gov.au/climate/drought/knowledge-centre/

BoM (Bureau of Meteorology). 2024b. Weather Station Directory - Orange Agricultural Institute. The Australian Government. https://reg.bom.gov.au/climate/data/stations/

BoM. n.d. Climate Data Online. Australian Government. Accessed May 16, 2024. http://www.bom.gov.au/climate/data/

Breakout River. 2014. "About Us". Accessed June 15, 2024. https://www.breakoutriver.com.au/about.html

Bromar Engineering. n.d. "About". Accessed May 21, 2024. https://www.bromarengineering.com.au/about

Brumby Aircrafts Australia. 2024. "Brumby Aircraft Australia". https://www.brumbyaircraft.com.au/

Cabonne Council. 2023. NSW Government. Cabonne Council Annual Report 2022-23. https://www.cabonne.nsw.gov.au/Council/Business-Papers-Reports-Policies-and-Publications/Reports

Cabonne Council. n.d. Home. NSW Government. https://www.cabonne.nsw.gov.au/Home

Canowindra International Balloon Challenge. n.d. "Cabonne Community Balloon Glow". Accessed May 28, 2024. https://www.canowindrachallenge.org.au/cabonne-community-balloon-glow/

Canowindra Phoenix. 2024. "Recovery and Resilience Workshop Come to Canowindra." January 18, 2024. https://www.canowindraphoenix.com.au/recovery-and-resilience-workshop-comes-to-canowindra/

Centroc (Central NSW Region of Councils). 2018. Drought issues paper. The Western Research Institute (WIR) for Centroc. https://www.centraljo.nsw.gov.au/content/uploads/Centroc-drought-issues-paper-FINAL.pdf

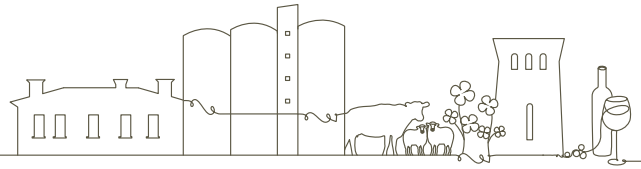
Cianconi, P., Betro, S., and Janiri, L. 2020. The impact of climate change on Mental Health: A Systematic Descriptive Review. Frontiers in Psychiatry, 2020: 11. https://www.frontiersin.org/journals/psychiatry/articles/10.3389/fpsyt.2020.00074/full

City of Sydney. 2018. Resilient Sydney: A Strategy for City Resilience 2018. https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&ved=2ahUKEwjwz_Lz87WCAxW0jVYBHQPuBiUQFnoECBUQAQ&url=https%3A%2F%2Fwww.cityofsydney.nsw.gov.au%2F-%2Fmedia%2Fcorporate%2Ffiles%2F2020-07-migrated%2Ffiles_r%2Fresilient-sydney-a-strategy-for-city-resilience-2018.pdf%3Fdownload%3Dtrue&usg=AOvVaw1KJSxbVwMgn4YIZb9Hqs7T&opi=89978449

Climate Council. 2018. Factsheet: Climate Change and Drought. Climate Council of Australia Limited. https://www.climatecouncil.org.au/wp-content/uploads/2018/06/CC_MVSA0146-Fact-Sheet-Drought_V2-FA_High-Res_Single-Pages.pdf

COAG (Council of Australian Governments). 2011. National Strategy for Disaster Resilience: Building the resilience of our nation to disasters. Commonwealth of Australia. https://knowledge.aidr.org.au/media/2153/nationalstrategyfordisasterresilience.pdf

Conlon, Fiona. 2021. Central Tablelands Water: Water Supply Development Servicing Plan 2021. Atom Consulting and Fiona Conlon Water Asset Management Pty Ltd. https://www.ctw.nsw.gov.au/wp-content/uploads/2021/07/Central-Tablelands-Water-DSP-adopted-at-Council-Meeting-16-06-2021.pdf



Conron Stockcrete. 2024. “About”. Accessed May 21, 2024. https://conronstockcrete.com.au/pages/about

CRC (Cooperative Research Centre). 2018. Orange Stormwater to Potable: Building urban water supply diversity. https://watersensitivecities.org.au/wp-content/uploads/2018/05/Orange-stormwater-to-potable-Case-Study-180503-V8_WEB.pdf

Council Communications, 2019. Orange can handle growth, despite the drought. Orange City Council. Orange can handle growth, despite the drought - Orange City Council (nsw.gov.au)

CEF (Country Education Foundation of Australia). n.d. “About CEF”. Accessed April 25, 2024. https://cef.org.au/

Cowra Uniting Church. n.d. "Cowra Uniting Church Food Hall." Accessed May 28, 2024. https://cowra.uca.org.au/food-hall/

Cowra Council. n.d. Home. NSW Government. https://www.cowracouncil.com.au/Cowra-Council-Home

Cowra Council. 2023. "Business Resilience Session at Club Cowra on October 25." Media Release, October 10, 2023. https://www.cowracouncil.com.au/News/Latest-News-and-Media-Releases/Business-Resilience-Session-at-Club-Cowra-on-October-25

Cowra Shire Council. 2021. “NSW Critical Drought Initiative Cowra Drought Water Security Project – Project Plan/Business Case.” DWS088. Version 3.

CSIRO and BoM (Commonwealth Scientific and Industrial Research and Bureau of Meteorology). 2018. State of the Climate 2018. The Australian Government. http://www.bom.gov.au/state-of-the-climate/State-of-the-Climate-2018.pdf

CSIRO and BoM (Commonwealth Scientific and Industrial Research and Bureau of Bureau of Meteorology). 2022. State of the Climate 2022. The Australian Government. http://www.bom.gov.au/state-of-the-climate/2022/documents/2022-state-of-the-climate-web.pdf

CTW (Central Tablelands Water). 2018. Draft Asset Management Plan – April 2018. NSW Government. https://www.ctw.nsw.gov.au/Documents/IPR/Draft%20CTW%20Asset%20Management%20Plan%20-%20April%202018%20V1.pdf

CTW (Central Tablelands Water). 2019. “Home”. NSW Government. https://www.ctw.nsw.gov.au/about-us/who-we-are/

CTW (Central Tablelands Water). 2020. Level 5 Water Restrictions from 5 April 2020. NSW Government. https://www.ctw.nsw.gov.au/wp-content/uploads/2020/03/Media-Release-Level-5-Water-Restrictions-30-3-20.pdf

CTW (Central Tablelands Water). 2024. “Lake Rowlands Augmentation final business case to proceed.” Media Release. March 5, 2024. https://www.ctw.nsw.gov.au/wp-content/uploads/2024/03/Media-Release-Lake-Rowlands-Augmentation-BWSP-final-business-case-5-3-24-website.pdf

Culture maps for Central NSW. 2023. Aboriginal experiences map https://centralnsw.com/view-all-maps/aboriginal-experiences-map/

DAFF (Department of Agriculture, Fisheries and Forestry). 2024a. Future Drought Fund. The Australian Government. https://www.agriculture.gov.au/agriculture-land/farm-food-drought/drought/future-drought-fund?utm_campaign=website&utm_medium=email&utm_source=ehq_newsletter#drought-resilience-funding-plan

DAFF (Department of Agriculture, Fisheries and Forestry). 2024b. Rural Financial Counselling Service (RFCS). The Australian Government. Canberra. https://www.agriculture.gov.au/agriculture-land/farm-food-drought/drought/rural-financial-counselling-service

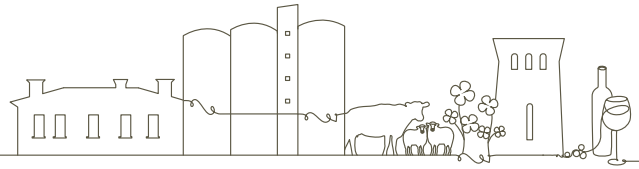
DAFF (Department of Agriculture, Fisheries and Forestry). 2024c. Climate Services for Agriculture. The Australian Government. https://www.agriculture.gov.au/agriculture-land/farm-food-drought/drought/future-drought-fund/climate-services

DAFF and ABARES (Department of Agriculture, Fisheries and Forestry and Australian Bureau of Agricultural and Resource Economics). 2023. Drought Resilience. The Australian Government. https://www.agriculture.gov.au/abares/research-topics/climate/drought/resilience

DAWE (Department of Agriculture, Water, and the Environment). 2020. Future Drought Fund: Monitoring, Evaluation and Learning Framework. Australian Government. https://www.agriculture.gov.au/sites/default/files/documents/mel-framework.pdf

DAWE (Department of Agriculture, Water, and the Environment). 2021. National Climate Resilience and Adaption Strategy 2021-2025. Australian Government. https://www.dcceew.gov.au/sites/default/files/documents/national-climate-resilience-and-adaptation-strategy.pdf

Delta Agriculture. n.d. Delta Agribusiness Group. Accessed May 15, 2024. https://www.deltaag.com.au/



Department of Agriculture. 2019. Australian Government Drought Response, Resilience and Preparedness Plan. Australian Government. https://www.agriculture.gov.au/sites/default/files/documents/aust-govt-drought-response-plan_0.pdf

Department of Climate Change, Energy, the Environment and Water, n.d., Groundwater Quality, https://www.dpie.nsw.gov.au/water/our-work/science-data-and-modelling/groundwater-management-and-science/groundwater-quality

Department of Climate Change, Energy, the Environment and Water, n.d., Groundwater Vulnerability: Lachlan Catchment, https://www.dpie.nsw.gov.au/__data/assets/pdf_file/0007/151765/Lachlan-vulnerability-map.pdf

DPE (Department of Planning and Environment). 2023a. Draft Regional Water Strategy: Lachlan: Shortlisted Actions – Executive Summary. NSW Government. https://water.dpie.nsw.gov.au/__data/assets/pdf_file/0005/582863/lachlan-rws-executive-summary.pdf

DPE (Department of Planning and Environment). 2023b. Regional Water Strategy: Macquarie-Castlereagh – Executive Summary. NSW Government. https://water.dpie.nsw.gov.au/__data/assets/pdf_file/0008/586817/macquarie-castlereagh-rws-executive-summary-final.pdf

DPI (NSW Department of Primary Industries). n.d.a. "Cowra Agricultural Research and Advisory Station". NSW Government. https://www.dpi.nsw.gov.au/about-us/science-and-research_old/centres/cowra

DPI (NSW Department of Primary Industries). n.d.b "Local office contacts". NSW Government. https://www.dpi.nsw.gov.au/contact-us/local-office

DPI (NSW Department of Primary Industries). n.d.c. "Enhanced Drought Information System (EDIS): Combined Drought Indicator". NSW Government. Accessed 16 May 2024. https://edis.dpi.nsw.gov.au/

DPI (NSW Department of Primary Industries). n.d.d. "Agtech Pilot Farm Blayney." NSW Government. https://www.dpi.nsw.gov.au/dpi/climate/farms-of-the-future/agtech-pilot-farm-blayney

DPIE (Department of Planning, Industry and Environment). 2021. "Resilience outcomes for the planning system". NSW Government. https://www.planning.nsw.gov.au/sites/default/files/2023-03/resilience-outcomes-for-the-planning-system.pdf

DRNSW (Department of Regional New South Wales). 2022a. Future Ready Regions 2023 Update. Online: NSW Government. https://www.nsw.gov.au/sites/default/files/2022-12/Regional%20Drought%20Resilience%20Planning%20Program%20Guidelines.pdf

DRNSW (Department of Regional NSW). 2022b. Regional NSW Investment Attraction Strategy 2022-2027. https://www.nsw.gov.au/sites/default/files/2023-05/RNSW%20Investment%20Attraction%20booklet_v30_accessible.pdf

DRNSW (Department of Regional NSW). 2023a. Orange, Blayney and Cabonne Regional Economic Development Strategy - 2023 Update. NSW Government. https://www.nsw.gov.au/sites/default/files/2023-03/Orange-Blayney-and-Cabonne-REDS-2023-Update.pdf

DRNSW (Department of Regional NSW). 2023b. Cowra Regional Economic Development Strategy - 2023 Update. NSW Government. https://www.cowracouncil.com.au/files/assets/public/v/1/business/economic-development/cowra-reds-2023-update.pdf

DRNSW (Department of Regional NSW). 2023c. South West Slopes Regional Economic Development Strategy – 2023 Update. NSW Government. https://www.nsw.gov.au/sites/default/files/2023-03/South-West-Slopes-REDS-2023-Update.pdf

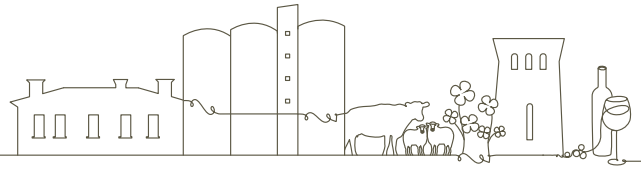
Ekström, M., Abbs, D., Bhend, J., Chiew, F., Kirono, D., Lucas, C., McInnes, K., Moise, A., Mpelasoka, F., Leanne, W., Whetton, P. 2015. Central Slopes Cluster Report, Climate Change in Australia: Projections for Australia's Natural Resource Management Regions. CSIRO and the Bureau of Meteorology. https://www.climatechangeinaustralia.gov.au/media/ccia/2.2/cms_page_media/168/CENTRAL_SLOPES_CLUSTER_REPORT_1.pdf

Evolution Mining. 2024. "Cowal". https://evolutionmining.com.au/cowal/

Folke, C., Carpenter, S.R., Walker, B., Scheffer, M., Chapin, T., Rockström, J. 2010. "Resilience Thinking: integrating resilience, adaptability and transformability". Ecology and Society. 15(4): 20. https://www.jstor.org/stable/26268226

Forbes Advocate. 2023. "Woodfired Eugowra will be bigger, better than ever." Forbes Advocate, August 1, 2023. https://www.forbesadvocate.com.au/story/8284993/woodfired-eugowra-will-be-bigger-better-than-ever/

Geolyse. 2017. "Lachlan Macquarie Drought Study". Town Water Supplies. Draft. Reference supplied by NSW DCCEEW.



Review of Environmental Factors: Central Tablelands Regional Water Security Pipeline Project. Orange City Council and CTW (Central Tablelands Water). https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&cad=rja&uact=8&ved=2ahUKEwil3ZDDm6WGAxUjSWwGHY_HBiUQFnoECA4QAQ&url=https%3A%2F%2Fyoursay.orange.nsw.gov.au%2F15610%2Fwidgets%2F101858%2Fdocuments%2F73486&usg=AOvVaw3tPT7DBeq7-RwnlVO_iEIe&cshid=1716516850463255&opi=89978449

Greet, N., Barnes, P., Borzycki, A., and Blackburn, J. 2021. A National Resilience Framework for Australia. Global Access Partners Pty Ltd, Institute for Integrated Economic Research Australia Ltd. Australia. https://globalaccesspartners.org/GAP_IIERA_NationalResilienceFramework_Report_July21.pdf

Grenfell Commodities. 2024. "Home". Accessed May 21, 2024. https://www.grenfellcomm.com.au/

Haider, L.J. and Cleaver, F. 2023. "Capacities for resilience: persisting, adapting and transforming through bricolage." Ecosystems and People, 19(1): 15. https://doi.org/10.1080/26395916.2023.2240434

Hospitals Accommodation. 2024. "Orange Health Service Accommodation Western NSW". Hospitals Accommodation. https://www.hospitalsaccommodation.com/western-nsw/orange-health-service.php

Hughes, N., Galeano, D., Hatfield-Doggs, S. (2019). The Analysis of The effects of Drought and Climate Variability on Australian Farms. ABARES Insights. https://www.agriculture.gov.au/sites/default/files/documents/EffectsOfDroughtAndClimateVariabilityOnAustralianFarms_v1.0.0.pdf

Iberdrola Australia. n.d. Flyers Creek Wind Farm. https://www.infigenenergy.com/our-assets/owned-renewable-energy-assets/flyers-creek-wind-farm

Indigenous Cultural Adventures. n.d. "Our Story." Accessed April 18, 2024. https://www.indigenousculturaladventures.com.au/

Infrastructure Australia. 2022. Resilience Principles Infrastructure Australia's Approach to Resilience. The Australian Government. https://www.infrastructureaustralia.gov.au/sites/default/files/2022-06/Resilience%20Principles%20-%20Infrastructure%20Australia%27s%20approach%20to%20resilience.pdf

KB5Fitness. n.d. " Welcome to KB5itness." KB5Fitness. Accessed April 16, 2024. https://kb5fitness.com.au/

Kirono, D.G.C., Round, V., Heady, C., Chiew, F.H.S, Osbrough, S. 2020. "Drought projections for Australia: Updated results and analysis of model simulations". Weather and climate extremes. 30. https://www.sciencedirect.com/science/article/pii/S2212094720300645

Lester, L., Flatau, P., and Kyron, M. 2022. Understanding the Social Impacts of Drought. Perth: The University of Western Australia. Understanding-the-Social-Impacts-of-Drought-UWA.pdf (gsdc.wa.gov.au)

LLS (Local Land Services). 2021. "The Podcast sharing local farmers' stories for 12 months." NSW Government. https://www.lls.nsw.gov.au/what-we-do/news-and-events/news/cw-news/2021/the-podcast-sharing-local-farmers-stories-for-12-months

LLS (Local Land Services). n.d. "Saving our soils during drought." NSW Government. https://www.lls.nsw.gov.au/what-we-do/our-major-projects/saving-our-soils

Manildra Group. n.d. "Manildra Group". Accessed May 13, 2024. https://www.manildra.com.au/

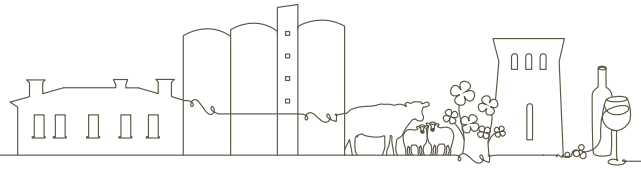
Maru, Y., T., Sparrow, A., Butler, J., R, A., Banerjee, O., Ison, R., Hall, A., Carberry, P. 2018. Towards Appropriate Mainstreaming of "Theory of Change" Approaches into Agricultural Research for Development: Challenges and Opportunities. Agricultural Systems 165: pp.344-353. https://doi.org/10.1016/j.agsy.2018.04.010 https://www.sciencedirect.com/science/article/abs/pii/S0308521X17310053

Masson-Delmotte, V., Zhai, P., Portner, H., Roberts, D., Skea, J., Calvo Buendia, E., Shukla, P., Slade, R., Connors, S., van Diemen, R., Ferrat, M., Haughey, E., Luz, S., Neogi, S., Pathak, M.,Petzold, J., Portugal Pereira, J., Vyas, P., Huntley, E., Kissick, K., Belkacemi, M., Malley, J.,. 2019. Climate Change and Land. IPCC. https://www.ipcc.ch/site/assets/uploads/2019/11/SRCCL-Full-Report-Compiled-191128.pdf

McIver, Ellen. 2023. "Workshops for mental health resilience in the bush." The Farmer, November 13, 2023. https://thefarmermagazine.com.au/farmers-helping-our-own/

McPhillamys Gold Project. n.d. McPhillamys Gold Project. https://mcphillamysgold.com/

Morse, James and Sal. 2020. "Cracking the Morse code: Balancing recovery, production and profit in a cattle enterprise." Seeds for Success. Audio Podcast. https://podtail.com/podcast/seeds-for-success/cracking-the-morse-code-balancing-recovery-product/



My Climate View. 2023. Your Location. Your Commodity. Your Climate View. Department of Agriculture, Fisheries and Forestry. Future Drought Fund. Commonwealth Scientific and Industrial Research and Bureau of Meteorology. https://myclimateview.com.au/about

NASA (National Aeronautics and Space Administration). 2024. The Effects of Climate Change. https://science.nasa.gov/climate-change/effects/

National Climate Centre and Bureau of Meteorology (BoM). 2012. Australia's Wettest Two-Year Period on Record; 2010–2011. Special Climate Statement 38. http://www.bom.gov.au/climate/current/statements/scs38.pdf

National Digital Inclusion Map, 2020, The national picture (digitalinclusionindex.org.au)

NationalMap. n.d. "NationalMap". Australian Government. https://nationalmap.gov.au/

Nelson, Donald, R. 2011. "Adaptation and Resilience: responding to a changing climate." WIREs Climate Change, 2: 113-120. https://doi.org/10.1002/wcc.91

Nestle. 2022. "Nestle Purina unveils $90m expansion of Blayney factory". Nestle Australia. https://www.nestle.com.au/en/media/news/purina-blayney-factory

Newmont Corporation. 2023. 2023 Annual Report. Denver, Colorado, USA. https://s24.q4cdn.com/382246808/files/doc_financials/2023/ar/newmont-2023-annual-report.pdf

NHPC (The Newell Highway Promotions Committee). 2024. "Newell Highway". Accessed May 21, 2024. https://www.newellhighway.org.au/route39/about/

NSW Business Chamber. 2018. Drought Survey August 2018. https://businessnsw-qa.nswbc.com.au/content/dam/nswbc/businessnsw/pdf/Drought-Survey-2018-Report-Final_1.pdf?icid=member-plus-landing-page

NSW Government. 2021. Central West and Orana Climate change snapshot. Office of Environment and Heritage. https://www.climatechange.environment.nsw.gov.au/sites/default/files/2021-06/Central%20West%20and%20Orana%20climate%20change%20snapshot_1.pdf?la=en&hash=20005FFCABC0DED0A8BF69D0C86C7387499C5E81

NSW Government. 2022. Central West and Orana Regional Plan 2041. https://www.planning.nsw.gov.au/plans-for-your-area/regional-plans/central-west-and-orana-regional-plan-2041

NSW Government. 2024a. Drought, floods and extreme events. Department of Planning, Housing, and Infrastructure. https://water.dpie.nsw.gov.au/our-work/allocations-availability/drought-and-floods

NSW Government. 2024b. "Our Communities: Orange". NSW Government. https://www.nsw.gov.au/departments-and-agencies/wnswlhd/careers/our-communities/orange

Orange City Council. n.d.a. Home. NSW Government. https://www.orange.nsw.gov.au/

Orange City Council. n.d.b. "Stormwater Harvesting." Orange City Council. Accessed May 1, 2024. https://www.orange.nsw.gov.au/water/stormwater/

Productivity Commission. 2009. Inquiry into Government drought support. Australian Government. https://www.pc.gov.au/inquiries/completed/drought/pdf/drought-support-draft.pdf

RDA (Regional Development Australia) Central West. 2021. Weddin LGA Economic Snapshot. Australian Government. https://rdacentralwest.org.au/wp-content/uploads/2022/01/Weddin-Shire-Council.pdf

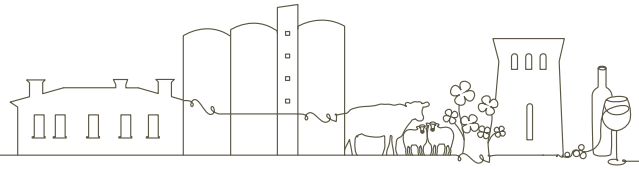
Reisinger, A., Garschagen, M., Pathak, M., Poloczanska, E., van Aalst, M., Ruane, A., C., Howden, M., Hurlbert, M., Mintenbeck, K., Pedace, R., Corradi, M., R., Viner, D., Vera, C., Kreibiehl, S., O'Neill, B., Pörtner, H., Sillmann, J., Jones, R., Ranasinghe, R. 2020. The Concept of Risk in the IPCC Sixth Assessment Report: A Summary of Cross-Working Group Discussions. Intergovernmental Panel on Climate Change (IPCC), Geneva, Switzerland. pp15. https://www.ipcc.ch/site/assets/uploads/2021/02/Risk-guidance-FINAL_15Feb2021.pdf

Regional Development Australia. n.d. "Central West Inspired Women." Australian Government. Accessed April 16, 2024. https://rdacentralwest.org.au/projects/central-west-inspired-women-2024/

REROC (Riverina Eastern Regional Organisation of Councils). n.d. Projects. https://reroc.com.au/projects

Rotary International. n.d. "Welcome to the Rotary Club of Blayney". Accessed May 28 2024. https://portal.clubrunner.ca/8211

Shirdelmoghanloo, H., Kefei, C., Blakely, P., H., Angessa, T., T., Westcott, S., Khan, H., A., Hill, C., B., Li, C. 2022. Grain Filling Rate Improves Physical Grain Quality in Barley Under Hear Stress Conditions During the Grain Filling Period. Frontiers in Plant Science. 13. 1664-462X. 10.3389/fpls.2022.858652



Simonsen, S., Biggs, r., Schlüter, M., Schoon, M., Bohensky, E., Cundill, G., Dakos, V., Daw, T., Kotschy, K., Leitch, A., Quinlan, A., Peterson, G., Moberg, F. n.d. Applying Resilience Thinking: Seven Principles for Building Resilience in Social-Ecological Systems. Stockholm Resilience Centre. Stockholm University. https://www.stockholmresilience.org/download/18.10119fc11455d3c557d6928/1459560241272/SRC+Applying+Resilience+final.pdf

Southern NSW Innovation Hub. 2022. Baselining Drought: Developing a baseline understanding of farmer and community perceptions of drought. David Brown Consulting for Southern NSW Drought Resilience Hub. https://cdn.csu.edu.au/__data/assets/pdf_file/0004/4258885/Baselining-Drought-FINAL.pdf

Steffen, W. 2015. Thirsty Country: Climate Change and Drought in Australia. Climate Council. https://www.climatecouncil.org.au/uploads/37d4a0d2a372656332d75d0163d9e8b8.pdf

TAFE NSW. 2024. "Locations". NSW Government. https://www.tafensw.edu.au/locations

Taylor, B., Walton, A., Loechel, B., Measham, T. & Fleming, D. 2017. Strategic foresight for regional Australia: Megatrends, scenarios and implications. Canberra: CSIRO and the Australian Government Department of Infrastructure, Regional Development and Cities, Australia

Telstra. n.d.a. "Our coverage maps". https://www.telstra.com.au/coverage-networks/our-coverage

Telstra. n.d.b. "Mobile Black Spot Program". https://www.telstra.com.au/coverage-networks/mobile-black-spot-program

Think.Orange Region. 2019. Economic Profile. NSW Government, Orange City Council, Blayney Shire Council, Cabonne Shire Council. https://thinkorangeregion.com.au/think-invest/

Timbal, B., Abbs, D., Bhend, J., Chiew, F., Church, J., Ekström, M., Kirono, D., Lenton, A., Lucas, C., McInnes, K., Moise, A., Monselesan, D., Mpelasoka, F., Webb, L., Whetton, P. 2015. Murray Basin Cluster Report, Climate Change in Australia Projections for Australia's Natural Resource Management Regions. CSIRO and Bureau of Meteorology. Australia. https://www.climatechangeinaustralia.gov.au/media/ccia/2.2/cms_page_media/168/MURRAY_BASIN_CLUSTER_REPORT_1.pdf

Transport for NSW. 2023. Regional trains and coaches. NSW Government. https://transportnsw.info/document/1447/Regional-trains-coaches-network-map.pdf

Verto. 2024. "Our Heritage". Verto. https://www.verto.org.au/about-us/our-heritage

Walker, B. 2020. Resilience: what it is and is not. Ecology and Society, 25.

Walker, B., Holling, C., S., Carpenter, S., R., Kinzig, A., P. 2004. Resilience, Adaptability and Transformability in Social-Ecological systems. Ecology and Society, 9. [25]. https://www.researchgate.net/publication/42764046_Resilience_Adaptability_and_Transformability_in_Social-Ecological_Systems http://dx.doi.org/10.5751/ES-00650-090205

Walker, G., R., Crosbie, R., S., Chiew, F., H., S., Peeters, L., Evans, R. 2021. Groundwater Impacts and Management under a Drying Climate in Southern Australia. Water. 2021; 13(24):3588. https://doi.org/10.3390/w13243588

We are Explorers. 2023. "Indigenous Cultural Adventures Orange - Exploring Aboriginal Culture on Wiradjuri Country." https://weareexplorers.co/indigenous-cultural-adventures-orange/

Weddin Community Native Nursery. n.d. "Volunteering." Weddin Community Native Nursery. Accessed April 18, 2024. https://www.weddinnativenursery.com/volunteering

Weddin Landcare. n.d. "Ooma Creek Tributary Riparian Restoration Project." Weddin Landcare. Accessed April 18, 2024. https://weddinlandcare.com.au/ooma-creek-tributary-riparian-restoration-project/

Weddin Mountain Muster Grenfell. n.d. "About". Accessed April 23, 2024. https://www.weddinmountainmuster.com.au/

Weddin Shire Council. 2023. Annual Report 2022-23. https://www.weddin.nsw.gov.au/Council/Integrated-Planning-and-Reporting/Reports

Weddin Shire Council. n.d.a Home. NSW Government. https://www.weddin.nsw.gov.au/Home

Weddin Shire Council. n.d.b. Weddin 2027: 2017-2027 Community Strategic Plan Bringing Us Together. https://www.weddin.nsw.gov.au/files/assets/public/v/1/council/plans-strategies-amp-reports/ipr/csp/community-strategic-plan-2017-2027.pdf

Whetton, P., Ekström, M., Gerbing, C., Grose, M., R, Bhend, J., Webb, L., Risbey, J., Holper, P., Clarke, J., M., Hennessy, K., J. 2015. Climate Change in Australia Information for Australia's Natural Resource Management Regions: Technical Report. Commonwealth Scientific and Industrial Research Organisation (CSIRO) and Bureau of Meteorology (BoM). https://www.researchgate.net/publication/275340315_CSIRO_and_Bureau_of_Meteorology_2015_Climate_Change_in_Australia_Information_for_Australia's_Natural_Resource_Management_Regions_Technical_Report_CSIRO_and_Bureau_of_Meteorology_Australia_222_pages_ht#full-text

Wise, R., M., Fazey, I., Stafford Smith, M., Park, S., E., Eakin, H., C., Archer Van Garderen, E., R., M., Campbell, B. 2014. Reconceptualizing adaptation to climate change as part of pathways of change and response. Global Environmental Change. 28. pp. 325-336. https://research.fit.edu/media/site-specific/researchfitedu/coast-climate-adaptation-library/australia-amp-new-zealand/australia-national/Wise-et-al.--2014.--Reconceptualising-Adaptation-to-CC.pdf

Appendix A

What we heard – summary

Blayney LGA – what we heard

What worked well

Blayney stakeholders identified many initiatives that worked well throughout the last drought. The information provided by Local Land Services on drought and lot feeding was praised, as well as workshops by the Southern NSW Innovation Hub.

Events and programs that supported rural communities such as local shows and Buy from the Bush boosted both the social and economic resilience of the community. A fundraiser was used to fund a Financial Advisor for the region. The recent formation of the Blayney Chamber of Commerce will be a great pathway to increase economic resilience in the community by providing an opportunity for local businesses to come together and learn from each other.

Having both Nestle Purina and Cadia gold mine located in the LGA has provided an opportunity for the farming community to seek off-farm income. A recent $100 million upgrade to the Nestle factory improved automation but also improved job security for those employed which is a form of drought-proofing the local economy. Additionally, Cadia has done a lot of work to improve its drought resilience, meaning they weren't as affected in the last drought. This work included diversified water production and using long-term water forecasting/modelling (more robust modelling with longer outlook that considers droughts). They have also improved their recovery and reuse of water onsite.

What hasn't worked well or needs to improve

Grants are welcomed however there are sometimes challenges with the process of application. Drafting grant applications can become onerous on communities with limited time or suitable resources to assist, which in turn means that these lifelines are not accessed. What is rarely factored in by communities is the administrative time associated with grants and back-dating subsidies that businesses have to absorb. Once this is fully understood, the process of grant application can prove 'too hard' for a community.

For some, Rural Financial Counselling is seen as a last resort rather than a tool to help early-on; this perception needs to change from welfare to investment. Often-times those employed in adjacent agricultural services (for example, agronomists) serve as counsellors to producers. Additionally, there are usually a lot of resources that could be accessed but the information is overwhelming or disjointed, making it hard for people to understand what supports are available.

Consultation indicated that improving the understanding of climate predictions and interpreting risk is required for the community along with presenting complex information in simple terms would be crucial for improving decision making.

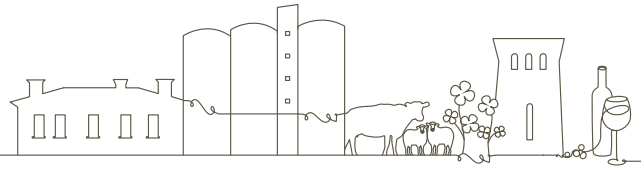
At times it is challenging to engage volunteers and community events are then cancelled; other times there is poor attendance at events. Reverting back to paper communications for community or Council events, distributed through rates notices, may improve the attendance.

There was suggestion of creating a community rehabilitation fund to help with response and recovery. Funds could be built up during non-drought periods through rates and industry operation fees and then funds able to be used when certain triggers are met. The media sensationalising drought has negative impacts on the community and reduces tourism.

What needs to happen / ideas?

The Blayney LGA highlighted that resilience could be improved through:

- Increased support for the newly formed Blayney Business Chamber, this may be forming an alliance with more established chambers in surrounding LGAs to learn and share. The chamber is likely to focus on business mentoring and coaching, group workshops for business owners and advocating for inclusive support.
- Provide targeted financial, digital, and business mentoring and coaching early for both farmers and other business owners. This action could be supported through the business chamber for small business and existing channels for agriculture. It is noted that DPIRD already runs a farm business coaching program.
- New and innovative ways to provide mental health support e.g., buddy programs. Have mental health first aid training in businesses/ training available.
- Further investigations to secure urban potable water through water infrastructure improvements (increasing capacity of Lake Rowlands, extend pipeline network between towns/villages in the region, investigate and extend use of treated sewage



on sporting grounds and parks). Council to advocate for the progress of the Belubula Water Security Project which includes investigations into the pipeline between Lake Rowlands and Carcoar Dam.

- Investigation of post mining opportunities for the McPhillamys Gold Project site that provide the Blayney Shire and wider region with a long lasting positive economic legacy e.g., ensuring re-purposing and/or reuse of infrastructure.
- Invest in new and existing events that provide an opportunity for the community to come together.
- Creating tourism and agri-tourism opportunities for the region.
- Build local council's emergency response capacity and conduct contingency planning to help support the community.

Cabonne LGA – what we heard

What worked well

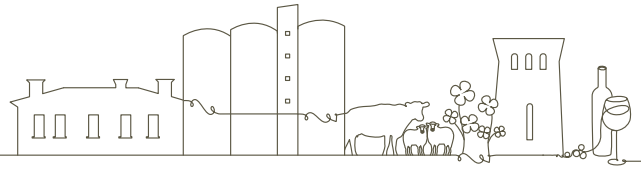
The following actions and initiatives were identified by stakeholders as beneficial during previous droughts:

- Diversifying business helps reduce the impacts of drought.
- Local dairy farms have improved water efficiency through increasing innovation.
- Increasing shade and on-farm water infrastructure improves animal welfare and reduces water loss. Reducing stock numbers and using rotational and pro-grazing methods help maintain ground cover
- Community events, especially community meals, helped bring people together and divert attention from drought e.g. Farm family gatherings (State Government funded) bought people together for social dinners, sometimes with a speaker and were well supported by the community.
- There are a number of places where farmers can turn to for guidance, reassurance, mental health, someone to talk to e.g. Men's Shed.
- Seed funding is helpful to get some local community events off the ground.
- Local Landcare have improved Molong Creek flows by removal of willows (replacing with native vegetation).
- Primary producers have become much better at managing groundcover and preserving resources through drought due to improved management practices.
- There has been an increase in the number of specialists and technical advisers who can help with drought preparedness.
- What hasn't worked well or needs to improve
- The Cabonne LGA stakeholders identified several challenges to increasing resilience to drought including:
- Management of water needs to be improved and we need to be smarter about what irrigation water is used for.
- Ensuring that environmental flows continue even through drought.
- State Government grants can produce unintended impacts. Some (out of region) farmers can make money (depending on if they are filling a gap in the market e.g. supplying fodder).
- Less help from banks as credit is harder to obtain.
- Need to deliver water efficiency education early and Council to provide marketing and promotion.
- Council is looked at to help direct the community to support services for drought. Stakeholders would like to see this role expanded.
- Engagement on the communities needs across the LGA need to be improved.
- Where drought support measures include financial or material products, suppliers should be encouraged to buy or source locally to help support the regional economy.
- Improved infrastructure that is more resilient to the impacts of a changing climate and suitable for the communities needs.

What needs to happen / ideas?

Cabonne LGA highlighted that resilience could be improved through a number of actions outlined below.

- Encourage diverse industry and business, promote region as an option for larger companies and employers to base themselves. This will assist with moving away from the region's reliance on agriculture.
- Improved equity in drought support, importantly improving access to training and support for businesses.
- The Manildra Group cited a bulk unloading facility and increased stockpiling would allow them to bring in other feedstock for locals.
- Build an emotional link between the city and farming communities; consider sister city/ farm to fork pathways to encourage connections. This also involves positive story-telling.
- Workshops from LLS on nutritional requirements for animals
- Increase Council assistance with accessing grants and funding.
- Increased training should be provided across the community in innovative practices.
- Encourage people to move and stay in the area. This should include initiatives to retain youth in the community.
- Increase the flexibility to work from home to attract more people to live in the area. Improved accuracy of long term weather forecasts to enable producers to better plan for changing conditions.
- Improvements to water infrastructure and security to conserve the water in the region. This includes:
  - Molong Town Water Security Strategy
  - Sub-regional Water Security Project
  - Belubula Water Security Project
  - Water harvesting (Orange- out of region)
  - Landscape re-hydration strategies- LLS and other agencies to conduct workshops



- Better utilisation and understanding of groundwater.
- Diversification of tourism, include agri-tourism, glamping, etc. Also improving access via infrastructure re-purposing/ upgrades e.g. including cycleways when building roads and repurposing infrastructure like closed railways as walking/ riding/ cycleways to target recreational tourism.
- Increased support for mental health and financial counselling within the region.
- Continue events that bring community together and provide a social outlet. These need to be a mix of formal and informal gatherings. These events help build resilience, adaptability and improve mental health. Council may be able to provide support by making Council facilities available for events and/or providing a package of information that helps people understand the process and requirements for hosting an event.
- Council and community to implement drought tolerant street plantings/ landscaping.
- Encourage sustainability in households e.g. water tanks.
- Celebration and recognition of volunteers in community organisations to encourage volunteering.
- Additional support for local sporting clubs/ facilities as social hubs.
- Recognition that communities and Councils can only do so much to support the community during drought events, especially prolonged periods, and therefore State and Federal intervention is required.
- Increased tax incentives for fodder and water conservation activities.

Cowra LGA – what we heard

What worked well

Initiatives identified as being valuable for the community included the information and support provided by DPIRD /LLS. Additionally, funding that subsidised silos and water infrastructure assisted primary producers. Rural Financial Counselling is also seen as very beneficial. Tourism which promoted and engaged with agriculture like the hay bale art, silo art and campaigns like #buyfromthebush are looked on favourably by the community. Council also worked with the Business Chamber to help provide training and support to local businesses with moderate uptake.

What hasn't worked well or needs to improve

The Cowra LGA cited the need to have better media messaging around drought that didn't negatively impact agriculture, communities and tourism.

It was noted that there is a need to reduce red tape around grants, land development activities that support economic diversification, securing oversees workers and applying for drought related programs and support such as low interest loans and freight subsidies.

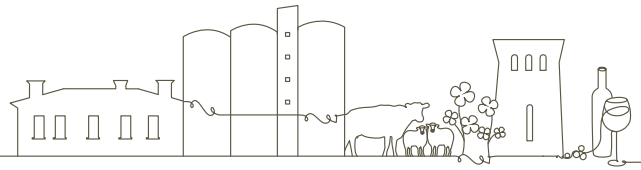
Cash cards were used with some success in the last drought however there needs to be more structure to the program to ensure the money says within the local economy.

Improvements in coordination between drought support agencies and improved accuracy of drought indicators are needed.

What needs to happen / ideas?

Cowra LGA highlighted that resilience could be improved through a number of mechanisms outlined below.

- Mentorship program for businesses that includes the following aspects of business ownership:
  - Understanding the fundamentals of business, for example, profit/loss, gross margins
  - Grants for digital improvements, for example, website improvement that were administered by Bus HQ – Consultancy arm of Business NSW – has previously provided
  - Digital education to support businesses moving onto an online platform to combat the reduced numbers of visitors to the region.
- Help for newcomers entering the agricultural industry (address barriers to entry into agriculture).
- Development of pathways to industrial agriculture (protected cropping, feed lotting, meat processing), value-adding and regenerative practices (circular economic farming).
- Improve communication of what's on in the community and between LGA's (regarding events)
- Reduce red-tape/improving the application processes associated with development, business diversification and expansion in the region.
- Changes to land zoning to support industrial development and attract people/ business/ industry to the community.
- Improve freight logistics including improving roads, rail and air, to make the region more attractive for individuals and businesses.
- Increasing mental health literacy through early intervention and removing stigma. This may include:
  - Connectivity/understanding of access pathways to resources/support.
  - Increasing self-care literacy.
- Improve liveability to attract people to the area; address housing, health, telecommunication, and connectivity issues.
- Re-invigorate the main street- repurpose existing buildings to make it more attractive for tourists. Incentivise absentee landlords with retail premises in the community to consider repurposing of their premises to make them more attractive for new businesses. Development of a CBD activation Strategy would assist in building the resilience of retail businesses of Cowra.
- Improve tourism offerings to increase the number of people that choose to stay in Cowra.
- Work with media outlets to encourage positive drought messaging and promotion of the region that encourages tourism. Build on positives- Cowra as "Head of Lachlan Valley."
- Improve recreational offerings including access to walking tracks and utilisation of the Lachlan River. Investigate opportunities to learn from First Nations Peoples and integrate this into recreation/ tourism offerings.
- A local person who acts as a Coordination of information to improve understanding of different support services and funding options.
- Support for youth to stay, learn and work in the community through TAFE, university and trade opportunities offered locally.
- Advocacy for local resource management skills and trade education.
- Look at ways to improve the outcomes for vulnerable groups throughout drought.



Orange LGA – what we heard

What worked well

The stakeholder engagement confirmed that some of the following initiatives have supported the region's / Orange's ability to absorb the shock of drought:

- On-going water education and awareness assisted the Orange community to implement efficient water use techniques and reduce their water usage as required to make sure they didn't run out of water during the last drought (see case study). Council should help surrounding Councils to implement similar education and water saving programs in their LGAs.
- Council support and hosting of community events like Day on the Green, especially events designed to connect people who may not otherwise interact improves social cohesion and bridges the divide between town and rural residents (silos).
- Campaigns such as #buyfromthebush brought a positive focus to regional businesses and the successful crafting of the messaging encourages the financial support of the regional retail communities, helping re-invigorate the local economy.
- Rural Financial Counselling and the support from this service and other agribusiness consultants to assist their clients in approaching their financial institutions around additional funding was sighted as beneficial and something that should continue.
- Local Not-for-Profit Groups such as Men's/Women's Shed, Salvation Army, Lions Clubs, amongst others, were sighted as providing valuable support for at-risk and in-need community members.
- Employers adapting compassionately to assist employees (see case study).
- Orange City Council were praised for their approach to
  - Supporting of programs and events
  - Positive and proactive messaging and communications on water and drought related issues
  - Long-term planning for future water security needs, and
  - Ability to support other smaller communities.

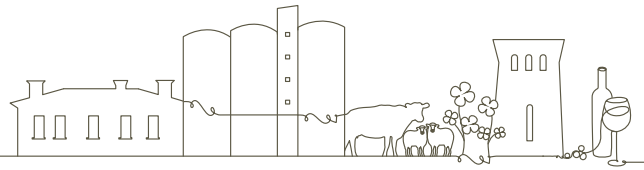
What hasn't worked well or needs to improve

The Orange community identified several challenges to increasing resilience to drought including:

- The need to reduce bureaucracy and increase the speed at which support services are available within communities.
- Unrealistic delivery timeframes associated with State funding, sometimes issues with finding trades and suppliers.
- The messaging around drought preparedness and support needs to be reconsidered to remove the stigma attached to handouts and welfare.
- Over-reliance on community good will and volunteers.
- Uncoordinated delivery of support services increases stress.
- Short-term work contracts leading to feelings of job instability and reduced security.
- Work with media outlets to encourage constructive journalism/ storytelling rather than images and stories that discourage tourists.

What needs to happen / ideas?

- Increasing the research, understanding and awareness of information and datasets that support early drought intervention actions by all levels of government and messaging that allows local industry, business and community to respond (triggers for action captured in a plan).
- Improved climate modelling that is delivered by an identified credible/local body who can provide localised insight into a wider Bureau forecasting and trends.
- Improved environmental resilience: drought tolerant plantings by Council and prioritised maintenance of green spaces; increase community knowledge of the application of water to grow and maintain gardens; education around how to retain water in dams and in our landscapes and soils.
- Advocate for greater collaboration across the three levels of government to address water security.
- Continue to progress water security measures:
  - Extend the stormwater harvesting scheme (gain state approvals for stage 2- ongoing). Encourage surrounding Councils to implement similar schemes, provide education and advice as required.
  - Support and advocate for improvements to Lake Rowlands
  - Pilot recycled water plant
- Economic diversification activities that focus outside of the areas of mining, food and wine (for example market new sporting complex to surrounding Councils), investment in tourism facilities and events (for example camping amenities) and support the growth of agri-tourism.



- Coordination of services to provide clearer messaging and communication on the resources, information, support and funding that can be accessed. For example, a drought officer that serves as a permanent support that links to other services. There may need to be a trigger point for employment to commence.
- Advocate for small business support during droughts.
- Business chamber to support greater levels of mentorship and education for small businesses.
- Increasing the understanding of mental health through:
  - Early intervention and removing stigma
  - Connectivity and understanding of access pathways to support
  - A platform that identifies all available mental health services
- Preserving neighbourhoods and the sense of micro-communities as Orange's population continues to grow, for example local cul de-sac parties.
- Council continues to support and host community events to bring the community together and provide something for people to look forward to in difficult times.

Weddin LGA – what we heard

What worked well

Events that brought the community together were well received and many of the volunteers that support these events have diverse interests and supported multiple community organisations. The silo art and work towards 'lighting' of the silos and other main street businesses, as well as the re-invigoration of the main street has added to the appeal of the Grenfell community. In the millennial drought, TAFE ran subsidised training for 18 farmers to upskill and re-train off-farm to diversify their income. This was highly successful.

What hasn't worked well or needs to improve

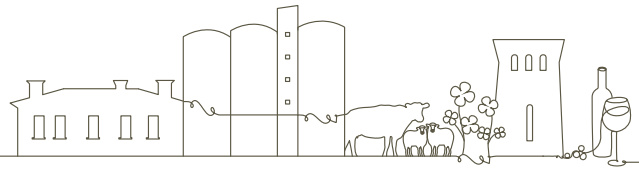
Some of the challenges the community face in increasing resilience include how to attract new people and families to the region and work to retain or attract younger generations back to the area. Corporate agriculture results in less families, that means fewer children in schools and therefore the schools become less viable which in turn makes it hard to attract new families. Housing issues were also noted with current land zoning seen as prohibitive to investment and building. There is also concern over the lack of general practice doctors and mental health support. Lack of adequate health services makes it difficult to attract newcomers to move to the area. There are some issues around opening hours of shops in terms of servicing tourists. It is also difficult to attract volunteers when many people are time poor and concerned about taking on a formal role within a committee.

It was noted that sometimes drought subsides don't always work as intended or there are unintended circumstances. An example was given where different states have different supports in place that actually make it more difficult to sell fodder as producers are competing with subsidised fodder. It is often hard for the community to navigate what supports are available. The need for financial drought support to recognise small businesses outside of agriculture was also highlighted. There are no forums for the business community to come together to solve problems and collectively support business and tourism. Assistance with navigating and reducing red tape for business and organisations when trying to secure overseas workers, grant funding and attracting new services and development were also emphasised. There is a need to change attitudes to preparedness for drought, increase sharing and encourage adoption of innovative primary production techniques.

What needs to happen / ideas?

The communities of Weddin Shire highlighted the following key areas where they felt action was required:

- Improving the water supply and security across the LGA communities, villages and industries, in particular the village of Caragabal. This needs to be coupled with activities that represent education and awareness of efficient water use and investigation of water harvesting.
- Greater coordination and promotion of the tourist attractions, events, accommodations and retail offering in the LGA. Look at ways to capitalise on tourism associated with events in neighbouring LGAs such as the Elvis festival and Grazing Down the Lachlan which attracts a lot of tourists.
- Promotion of success stories in the community newsletter and a welcome pack for new residents that promotes existing services available would help to retain people.
- Consider options for a cultural centre close to the Grenfell main street and beautification of old main street that enhance the regions cultural and heritage features. Seek ways to improve tourist mobility around town and make the local villages more attractive for visitors.
- Improved access to health and mental health services that meet the needs of the community. Greater mental health assistance is required. There is now only one doctor in the community who, aside from providing GP services, is also looked at to support the community's mental health. Rural Chaplains have recently been established in Young by the Salvation Army to support community mental health however more assistance is required to meet the need. Locums have also come to assist but unable to alleviate the issue and another doctor is required.
- To assist with the housing issues, investigate options to reinvigorate the unused houses on agricultural properties as both a solution to the housing shortage, and possible accommodation for tourism and investigate options of homestays to support travellers to the region requiring accommodation.
- Developing a connected business community. Attempts at a formalised group or chamber in the past have not endured. An option could be for Council to provide a space for the business community to gather and discuss their experiences and organise 'guest speakers' for some of the gatherings.
- Increased support for grant writing and administration.
- Resilience training for community leaders, encouraging youth to be involved and succession planning for community groups.
- Look at partnering with universities to have health staff train in the region. This would help fill the shortfall in health services in the region.
- Adapting to a changing climate by changing ways of working and work hours.



- Community greening projects looking into composting, water tanks and waterwise designs.
- Incorporate local indigenous knowledge into water and environmental management.
- Increase digital resilience by delivering and advocating for reliable technology and connection to the outside world (access). This needs to be supported by providing education (namely to the ageing population to ensure they are able to connect in a secure way), upskilling (improving digital literacy), and promotion of remote working. Currently lack of digital connectivity in the region is prohibitive to the adoption of agtech that would assist with automation of farming practices that have the potential to increase yields and productivity.
- Improve the community and school population (resilience) by attracting non-primary production families to the area from surrounding industry (for example, Solar Farm, Lake Cowal mine) and also from further afield for a tree-change. Strategies might include:
  - targeted marketing to attract those leaving the cities for rural areas
  - incentives for these people to move to Weddin Shire

Appendix B

Central West RDRP Action Plan

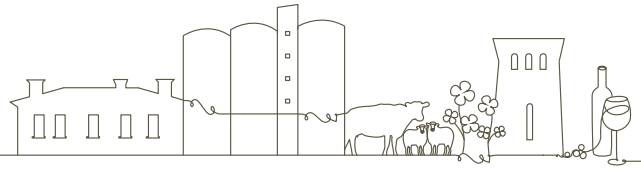
Priority 1

Central West Plan Themes	Action number	Action trigger	Implementation steps	Suggested Lead	Consortia anticipated role	Cost	Timeframe
Theme 1	**1.1 - 1.5**	Organisation of lead and partner agencies will need to occur, understanding what if any progress can be made within existing resourcing - otherwise requires additional resources and dedicated funding to initiate.	Consult and engage with regional businesses to scope / verify the services required to increase resilience (preparedness and support services) and increase adaptive capacity. Develop the package of services and suppliers who can support delivery. Present to NSW Government with a view of obtaining funding for a further investigations / business case / establishment of service.	Business NSW	Consortium of Local Council's can provide input to the development of the program through communication of local / community needs.	**$$$**	5–10
Theme 1	**1.7**	Individual councils may consider the need for future community engagement, survey and studies that need to be conducted to inform their future decisions. Overall progress towards implementation is driven more through access to funding on a state and federal level.	1. Conduct a Business Community Survey across the region as a sense and pulse check to collect information on current business attitudes / sentiment to inform future iterations Economic Development Strategies. 2. Continue to implement Economic Development Strategies. Local Economic Development officers at Councils continue to progress activities and programs that support the implementation of these strategies. Including cross collaboration across the LGA's. The consortium of Councils and the Central NSW Joint Organisation should continue to explore partnerships and opportunities through Department of Regional NSW that support economic diversity and regional development (future development opportunities). Further investigation through engagement and research may need to be conducted on a local level to inform future developments	Consortium of Local Councils	Consortium of Councils can continue to work through their existing channels on local and regional development.	**$$**	5–10

Central West Plan Themes	Action number	Action trigger	Implementation steps	Suggested Lead	Consortia anticipated role	Cost	Timeframe
Theme 1	**1.8**	The availability of Council and partner resources will determine action initiation. Some activities can be funded through existing organisational resources, this will be dependent on the scale. FRRR may provide funding opportunities for local level tourism events.	Councils to develop and refine plans for how they will work with local communities to better support the tourism opportunities within the region. This may include for some of the smaller community engaging a third party to assist them in developing promotional material, website development and calendars of events. Where tourism promoters such as Orange360 exist the council much of the promotion and event development is already managed. Councils without these resources should investigate the opportunity to take a more active role in the coordination and promotion of local events. Councils to engage with tourism providers such as Orange360 to help with promotion and event development. Economic development officers / community engagement officers from each LGA to engage with each other on a regular (quarterly?) basis to discuss events and cross promotion. Councils to consider a page on their website and / or brochure that promotes local retailers / businesses and events that is regularly updated. Engage with local media outlets to promote good news stories and reduce the amount of negative stories about drought. During planning processes (e.g. IP&R), consider any additional infrastructure required to improve tourism numbers and / or any buildings / infrastructure that could be repurposed. Support visitor economy businesses to adapt, recover and flourish by providing a comprehensive suite of grants, training and business advice programs delivered through a new one-stop shop.	Consortium of Local Councils / Destination NSW	Consortium of Councils would have a varying role across each of the LGA;s. Where the tourism sector is less formalised Council may need to take more of a lead role. Councils may wish to engage an external provider to assist in development of promotional material, website development, calendar of events where the need arises. This could be funded from implementation funding.	**$$**	3–4
Theme 1	**1.9-1.13**	Extension and adoption activities are currently undertaken across a range of platforms on both a local and regional level. Additional investigation is required to be better able to support local extension providers to change behaviour to increase this uptake.	Map the barriers and challenges to improving adoption to R&D. Seek to identify the key drivers of this resistance. Identify strategies and resources to address the behaviour change and need. Focus on Implementing those strategies including working with willing adopters to showcase and share knowledge to promote uptake.	Local Land Services / Rural and Development Corporations' (initiators of most extension programs)	N / A	**$$**	3–4

Central West Plan Themes	Action number	Action trigger	Implementation steps	Suggested Lead	Consortia anticipated role	Cost	Timeframe
Theme 3	3.2	Changing climate conditions are likely to bring focus to progress / implementation of this action.	Seek approvals and / or funding to continue implementation or business case development / further investigations. Including undertaking any further studies which may inform progression of drought priorities.	Central NSW Joint Organisation	Consortium of Councils would continue to support the Central West JO with information, contribution to submission and advocacy where required.	$$$	5–10
Theme 4	4.1	Initiation and endurance of this action will need to be driven by community willingness. Funding opportunity for Foundation Rural Regional Renewal - Community Fundraising.	Collaborate with other regions such as Upper Lachlan Foundation and Crookwell community trust to define the most appropriate model. Consortium of Council may establish a community meeting and invite existing funds to present to the community on how their fund works. Progression of the action would be reliant on identification of interested community groups agreeing to step forward and lead. Could utilise implementation funding to establish a base investment.	Community / Community not-for-profit	Consortium of Councils role could extend to creating connections with other LGA's who have a community funds (inviting funds to brief community).	$$	3–4
Theme 4	4.2	Formation of the community drought networks in action 3.1 could provide a catalyst to initiate this action. Noting implementation will require identification of further funding avenues.	Investigate if other regional / state organisations are investigating alternate mental health services and what options there are to participate. Investigate the services required across the LGA through consultation with delivery partners and community members. Councils maybe able to inform the initiative through conducting a community health survey may help understand and shape the services required. This would then require funding and investment in additional resources to implement.	NSW Health – Local Health District and Primary Health Network	Consortium of Councils would be able to talk to the community voice, this may help to identifying other local stakeholders.	$$$	5–10
Theme 5	5.1	Much of this work is dependent on funding to complete and implement further investigations and solutions. Other agencies to continue to progress strategies that are aligned to local and regionally driven studies.	Seek approvals and / or funding to continue implementation or business case development / further investigations. Councils may seek to undertake additional investigation to inform and refine future water supply options.	Central Tablelands Water / Consortium of Local Councils	The consortium of Councils and the Central NSW JO would continue to investigate and advocate for suitable water security solutions for their communities.	$$$	5–10

Central West Plan Themes	Action number	Action trigger	Implementation steps	Suggested Lead	Consortia anticipated role	Cost	Timeframe
Theme 5	**5.1**	Progression of implementation of these strategies by other partners agencies will be critical.	Existing implementation plans in place and under development through NSW DCCEEW.	Consortium of Local Councils	Consortium of Councils are engaged under the existing implementation arrangements for these strategies.	**$$$**	5–10
Theme 5	**5.4**	This action will be triggered by future work on local and regional water strategies or progress on other water security studies.	1)Continue advocacy on the importance of having close collaboration. 2)Continue to develop and maintain good working relationships with state and commonwealth agencies. 3) Delivery partners may seek to use the upcoming Basin Plan Review as opportunity to extend this collaboration.	Consortium of Local Councils, Central NSW Joint Organisation	Consortium of Councils seek to express the views of the benefits of shared data and improved decision making on a local level.	**$**	1–2
Theme 5	**5.5**	Councils may wish to dedicate some of their implementation funding to further investigations / studies to inform these water supply challenges.	– Continue to work with DCCEEW to identify and investigate opportunities for improvements in recycled water (identified as one area for further investigation under the Macquarie-Castlereagh regional water strategy). – Continue to actively engage with the NSW DCCEEW programs that support increased training and education, innovative ways to operate. – Continue to develop and refine Integrated Water Cycle Management Strategies (IWCM) enhance their ability to deliver safe, reliable, and efficient water services while addressing broader environmental and community goals. – Noting that implementation of new and upgraded recycled water infrastructure would be a medium to long-term to deliver. Individual Councils will have specific needs and may seek to undertake further investigation to inform what further activities with NSW DCCEEW may include.	Consortium of Local Councils, Central NSW Joint Organisation,	Each LGA will have specific water supply issues to address. Continue to work with the Central NSW JO.	**$**	1–2
Theme 5	**5.7**	Renewal / revision of REDS and other DPIRD studies and investments are likely to be the trigger for this action.	Implementation is detailed in Regional Economic Development Strategies and Central NSW Joint Organisation Transport Infrastructure Advocacy Plan (2024). Individual councils may seek opportunities to more thoroughly inform components of better rail, road and air services through engaging further research .	Consortium of Local Councils, Central NSW Joint Organisation,	Consortium of Councils will continue to advocate for improved infrastructure in conjunction with other partners such as RDA and Central NSW JO.	**$**	5–10



Central West Plan Themes	Action number	Action trigger	Implementation steps	Suggested Lead	Consortia anticipated role	Cost	Timeframe
Theme 5	**5.8**	Renewal / revision of REDS and other DPIRD studies and investments are likely to be the trigger for this action.	Councils to work with partners (nbn local / RDA) to develop a digital plan that identifies areas within the region that require better connectivity and / or digital literacy. Councils may wish to undertake additional studies into inform future focus areas in telecommunications. Use these outputs to influence via established advocacy channels.	Consortium of Local Councils, Central NSW Joint Organisation	Consortium of Councils would continue to work with the Central NSW JO	**$**	5–10

Priority 2

Central West Plan Themes	Action number	Action trigger	Implementation steps	Suggested Lead	Consortia anticipated role	Cost	Timeframe
Theme 2	**2.4**	Review of existing environmental and water related policies and creation of new programs / plans / policies will drive the initiation of this action.	Both local and regional environmental and water agencies have, and continue to, engage with First Nations Peoples on these matters. Regional Water Strategies have a key priority in First Nations Water Actions that should continue to be implemented. Consortium of Local Councils should seek to include First Nations engagement on a local level when undertaking new projects / updating policies and strategies.	Consortium of Local Councils	When reviewing water and environmental plans the consortium of councils can consider how to include First Nations people into the development, implementation and review of policies, plans and programs.	**$**	3–4
Theme 3	**3.1**	There is unlikely to be impetus for this action to be initiated until there is an emerging drought / changing climate conditions.	1) Identification and formation of members of the regions drought network. 2) Formation of a standard agenda and terms of reference and regular meeting cycle of participants. 3) The working group through its meetings should seek to map the roles and responsibilities of its members. 4) Councils should investigate the opportunity to available of resourcing through their Disaster Adaptation Plans which may support them to undertake some of these activities.	DPIRD	Consortium of Councils would participate in the groups meetings and be able to represent the community voice. Councils could look to support the meetings through existing resources e.g. water operations.	**$**	1–2

Central West Plan Themes	Action number	Action trigger	Implementation steps	Suggested Lead	Consortia anticipated role	Cost	Timeframe
Theme 3	**3.3**	Reliance on additional resources / funding to be available to establish this function.	1) Investigate and advocate for additional local resources that can translate and promote climate data through a local lens to help improve drought preparedness (Disaster Adaptation Plans) 2) Work with agencies such as the Australian Climate Service, Bureau and Southern Innovation Hub to obtain up to date data and predictions and interpret these for local conditions.	DPIRD	Consortium of Councils can support this through investigation of resourcing (via Disaster Adaptation Plans).	**$$**	1–2
Theme 3	**3.5**	Reliance on additional resources / funding to be available to establish this function.	1) Use outputs from Action 3.1 2) Develop a Drought Communication Plan 3) Create webpage with links to drought resources 4) Identify opportunities to promote / share this information with various sectors of the community. E.g. newsletters 5) Regularly review to ensure currency of information and effectiveness of Plan.	Consortium of Local Councils	The Consortium of Councils are often looked during drought for messaging, information and advice.	**$**	1–2
Theme 4	**4.3**	Formation of the community drought networks in action 3.1 could provide a catalyst to initiate this action	1) Through consultation with local delivery partners, identify the appropriate organisation that has the ability to host information on mental health support services. 2) This organisation should seek to maintain and publish a database of available resources that the local region can utilise for various purposes e.g. crisis support, resilience etc 3) The opportunity to provide information would need to be promoted via an expression of interest and canvassing of suppliers. 4) The publishing of this information should provide an option for providers to register and update their details. 5) Councils are able to promote this information through newsletters and communication. Utilise local community groups to help dispense information and where to access support services. These groups may be leveraged to pulse-check the communities resilience and mental health. 6) Database will need to be maintained regularly.	NSW Health – Local Health District and Primary Health Network	Consortium of Councils would speak to the community need and may assist with identifying other local stakeholders.	**$**	1–2

Central West Plan Themes	Action number	Action trigger	Implementation steps	Suggested Lead	Consortia anticipated role	Cost	Timeframe
Theme 4	4.4	The lead agencies will be contingent on developing enduring services to support the community. Foundation of Rural, Regional Renewal may provide funding opportunities for individualised local level training programs.	1) Utilising the information collected in action 4.3 and in collaboration with delivery partners seek to run a series of information sessions across the LGA that promote the services available. 2) When promoting the event seek to include a diverse range of community members from not for profits such as Lions Club & Salvation Army, education providers and those most vulnerable in the community. Along with those organisations that might view the training as a sponsorship opportunity that would benefit the community. 3) Look to hold the event annually to update the community on new providers / services and consider a range of methods to communicate this information to the broader community.	NSW Health – Local Health District and Primary Health Network	Consortium of Councils would speak to the community need and may assist with identifying other local stakeholders. On a local level Councils could provide guidance on grant funding that can be applied for local organisations such as Salvation Army and CWA to apply for funding to build resilience and mental health skiLocal Land Services in the community along with promotion and communication of events.	$$	1–2
Theme 4	4.8	Informed by the development of a digital literacy plan. Potential funding opportunities through the Foundation for Rural Regional Renewal (FRRR)	Identify a local provider who can deliver digital literacy program. Canvas interested local not for profit organisations and community members. Deliver local training and education.	Consortium of Local Councils	Consortium of Councils would be able to lead this action to coordinate local resources to deliver the program.	$	1–2
Theme 5	5.6	Councils may wish to dedicate some of their implementation funding to further investigations / studies to inform these water supply challenges. E.g. dams safety upgrades	Continue to identify and progress opportunities that can be funded through National Water Grid and Safe and Secure Water Program. Individual Councils will have specific needs around water quality, infrastructure. Councils may seek to undertake further investigation to inform what further activities with NSW DCCEEW may include.	Consortium of Local Councils	Each LGA will have specific water supply issues to address. Continue to work with their Central NSW JO.	$$$	5–10

Priority 3

Central West Plan Themes	Action number	Action trigger	Implementation steps	Suggested Lead	Consortia anticipated role	Cost	Timeframe
Theme 1	**1.6**	From existing resources within Business Chambers and Local Councils.	1. Each local business chamber to identify and map its existing mentor / mentee relationships / opportunities. 2. Cross LGA chambers to meet and discuss opportunities to mentor / mentee across LGA's and collaborate on mutual programs / share resources. 3. Meetings should be regular to capture new opportunities. LGA's without formalised / or newly formalised business networks could support this through. 1. expression of interest to identify level of potential participation. 2. Create a calendar of meeting dates 3. Utilise council facilities to provide a meeting location.	Business Chambers and Consortium of Local Councils	Consortium of Councils role will be dependent on the strength of the business community. Some Councils will need to take a more active role in the action to promote and drive mentoring opportunities and business networks.	**$**	1–2
Theme 2	**2.1, 2.2, 2.5, 2.6, 2.7**	Action can be aligned to the planning and reporting timeframes associated with these activities. Full / further implementation of strategies would be contingent on further resources. Funding for components of the action e.g. development of a community garden to showcase practices may attract funding from Foundation Rural Regional Renewal (FRRR)	Incorporate more drought tolerant parks through cyclical asset and maintenance planning and upgrade / renewal. Expand existing water awareness and education activities to include information on efficient watering and garden practices including how to build a drought tolerant garden. Consider options for online information and workshops / field days with local providers for demonstrations. Prioritise use of recycled water to supply council owned assets. Councils to advocate to improved building standards when updates to policy occur and encourage / reward developers for 'greener' design. Orange to continue to expand the recycled water residential network as appropriate. Councils to develop a climate change policy (if none is in place) to guide their approach to climate adaptation / mitigation. Councils to implement actions within their associated strategies / plans.	Consortium of Local Councils	The Consortium of Councils would through normal business activities be able to consider through future planning, development applications, asset and maintenance how to incorporate several of the activities. Some of the consortium have climate adaptation strategies	**$$**	3–4

Central West Plan Themes	Action number	Action trigger	Implementation steps	Suggested Lead	Consortia anticipated role	Cost	Timeframe
Theme 2	2.3	This action would occur as a part of the previous action 2.2.	1. Identify scope of information and education to be provided. 2. Confirm delivery partners - including Mulloon institute 3. Formats and program to deliver information and education e.g. workshops / demonstrations / showcasing of best practice. 4. Review and reset every 1-2 years	Local Land Services / DPIRD	The Consortium of Councils could consider how to integrate this information into the planning of the education and awareness in the earlier action.	$	3–4
Theme 3	3.4	This is an on-going action that will be led by NFA and can be supported by Councils. It is likely to gain more traction during periods of greater climate variability.	Continue to utilise existing advocacy channels.	NSW Farmers Association	Consortium of Councils would speak to and support the community voice.	$	3–4
Theme 4	4.5	This could be funded through implementation funding. Alternatively identified RTO maybe able to investigate funding opportunities.	1) Across the delivery partners identify a local RTO that is best placed to lead the development of a gaps analysis / skiLocal Land Services matrix that informs future education and training opportunities. 2) Run a series of workshops with local businesses, industry and retailers, Councils to understand the skiLocal Land Services they require for unfilled roles now and into the future. 3) Engage with the community – including school leavers, those looking to retrain, the unemployed on what skiLocal Land Services / education they have or are planning to acquire. 4) Upon identification of the gaps investigate opportunities to meet the required changes through alternate training course and education that support local employment needs.	Central NSW Joint Organisation and Local Registered Training Organisations	Consortium of Councils would be best placed to identify a lead / key RTO for their area and provide oversight to the plan action. Councils may seek to undertake this individually to account for the nuance in location. Would be contingent on identification of funding.	$	1–2
Theme 4	4.6	Councils may seek to undertake training identification individually to account for the nuance in location. Would be contingent on identification of funding.	Training providers to seek to improve localised training options.	TAFE / NSW Department of Education / Group and local training organisations / Private education providers	Consortium of Councils would be best placed to identify a lead / key RTO for their area and provide oversight to the plan action.	$$	3–4

Central West Plan Themes	Action number	Action trigger	Implementation steps	Suggested Lead	Consortia anticipated role	Cost	Timeframe
Theme 4	4.7	Consortium of Councils are well positioned to work with RTO's to identify future funding / grants. Dependent on external funding becoming available.	Through the development of the development of the gap analysis / skiLocal Land Services matrix discussed earlier. Engage with current primary producers to gain an understanding of the general skiLocal Land Services base. Including this information may assist in designing future pathways to retrain, funding / grant opportunities and potential partnerships to deliver training.	Local RTO within each LGA	Consortium of Councils would speak to the community need, may have staff who can provide grant advice, promotion of the activity.	$$	3–4
Theme 5	5.2	Timeframes for the Basin Plan Review will create the impetus for this action. Implementation funding could be allocated to support and inform the regions submission.	1) Working with the Central NSW JO and the broader LGA's that make up the regions footprint. 2) The region can continue to position itself now to make submission to the Basin Plan Review 2026. 3) In positioning to make this submission stakeholders can give consideration to other partners they may wish to collaborate with the develop and inform their submission. This may include other regional stakeholder groups or technical studies / resources.	Central NSW Joint Organisation	Consortium of Councils seek to express the views (environmental, social and economic) on the impact of the Basin Plan.	$	1–2
Theme 5	5.3	On-going likely to be more prevalent in preparing for the Basin Plan submission and future water studies.	Continue to implement the NSW Open Data Policy which is focused on making more data available to the public, research, business and industry.	Consortium of Local Councils, Central NSW Joint Organisation	Consortium of Councils seek to express the views of the benefits of shared data and improved decision making.	$	1–2
Theme 5	5.9	Reliant on the identification of additional resources / implementation funding to complete the audit if consortium can not support. Implementation would require in-kind contribution from local communities through labour, materials, grants etc not for profit organisations may be able to apply for grant funding.	Identify existing infrastructure which is available to be repurposed. Work with other agencies and businesses to consolidate use of infrastructure. This could be an initial audit or expression of interest to identify unused buildings that could be repurposed for business or housing. Consortium maybe positioned to undertake the audit themselves. Upon completion of the audit, develop a plan with local communities and businesses to identify and prioritise opportunities that can be progressed.	Consortium of Local Councils	Consortium of Councils could lead exploration / audit of potential buildings / formation of local partnerships. The consortium would also be able to provide guidance on planning considerations and grant opportunities.	$$$	3–4

Key:

Themes:

Theme 1 - The Economy: Diverse and resilient agricultural businesses and regional economies

Theme 2 - The Environment: Protection of the Natural and Built Environment

Theme 3 - Governance: Leadership and Collaboration

Theme 4 - Community: Vibrant, connected, and supported communities

Theme 5 - Infrastructure: built assets and technology

Cost:

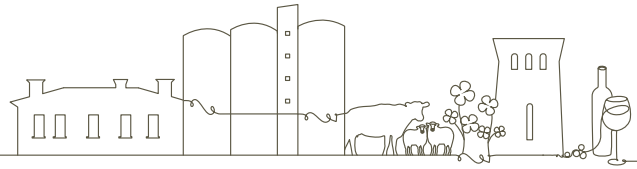
$	Existing Resources available from Stakeholders and Partners
$$	Additional Resources Required
$$$	Significant Financial Support Required from Stakeholders and Partners

Timeframe:

Short term: 1-2 years

Medium term: 3-4 years

Long term: 5-10 years



Appendix C

Future Plan Updates

CSIRO reviewed this initial plan. There were a number of suggestions for changes/ updates for future plan revision. To ensure these are considered in the next revision, a summary is listed below.

1. Future plan updates could revise the vision, actions, and outcomes to better reflect the interests of those who may be particularly vulnerable to drought.
2. Future plan updates could ensure that stakeholder needs continue to be reflected by maintaining and, where possible, expanding the level of active and direct stakeholder participation during the plan's ongoing implementation.
3. Future plan updates could provide more information about each collaboration and partnership. A table summarising the main purposes of each collaboration or partnership, its joint activities, and some measures of its quality could be incorporated into the plan as a monitoring, evaluation and learning (MEL) activity.
4. Future plan updates would benefit from clearer articulation of a structured learning process across its various components. This could build on the vision for learning across all levels and sectors and could be connected to, and consistent with, the MEL framework. In particular, this could involve specifying governance arrangements for implementing the MEL framework and assigning responsibilities to partners in plan implementation.
5. Future plan updates would benefit from a more nuanced interpretation and use of adaptive governance principles. Doing so would be advantageous for building additional spare capacities, and creating flexibility in decision-making to build the resilience of the region to drought and related stresses and shocks.
6. Additionally, future plan updates could also better articulate what next steps will be carried out by whom to develop more detailed governance arrangements for plan implementation. In this way, future plan updates will be able to report on how principles of ongoing learning and adaptive governance are being implemented in practice.
7. Future plan updates could include further analysis of the links between other plans and policies, and their implications for understanding and contributing to the region's resilience. Specific details could be provided about how the plan will complement existing plans and policies to build resilience.
8. Future plan updates could further explore and verify identified cause-and-effect relationships, with a view to characterising any feedback loops (e.g. vicious cycles such as poverty traps) and thresholds (e.g. critical production levels below which processing facilities become non viable) that make it more difficult to recover from drought. This is particularly relevant when assessing potential actions for building drought resilience for more vulnerable areas or segments of the community.
9. Future plan updates could conduct a more thorough resilience assessment that covers economic, social, cultural and environmental dimensions. It could also extend the current impact and vulnerability assessment by explicitly considering the capacities (anticipatory, absorptive, adaptive and transformative) of the region's different sectors and community segments to drought and related stresses and shocks.
10. Future plan updates could develop a suite of plausible future scenarios through a participatory process and consider a mix of livelihoods and sectors, including those that rely less on agriculture and water. The participatory scenario development process and its outcomes could inform active learning and adaptive governance for future updates of the plan and its implementation.
11. Future plan updates could more clearly outline how the proposed options increase reserves, and create spare capacity and response options. Ideally, this should be informed by a resilience assessment of the current state of reserves, spare capacity and economic diversification. Future plan updates could also provide more explicit descriptions of what external support is required for successful implementation.
12. Future plan updates could identify more opportunities for innovation that support adaptation and transformation in the region. At present, actions are described in general terms that may provide opportunities for innovation, however more specific details would make the extent of innovation clearer.
13. Future plan updates could provide more supporting assessment of how proposed actions are expected to contribute to resilience-building goals.
14. Future plan updates could further develop the MEL framework to be informed by a well-articulated theory of change, with logical priorities and actions linked to the envisioned outcomes, including identifying the associated monitoring roles and responsibilities.