Temora and Bland Shire Councils

Temora and Bland Shires Drought Resilience Plan

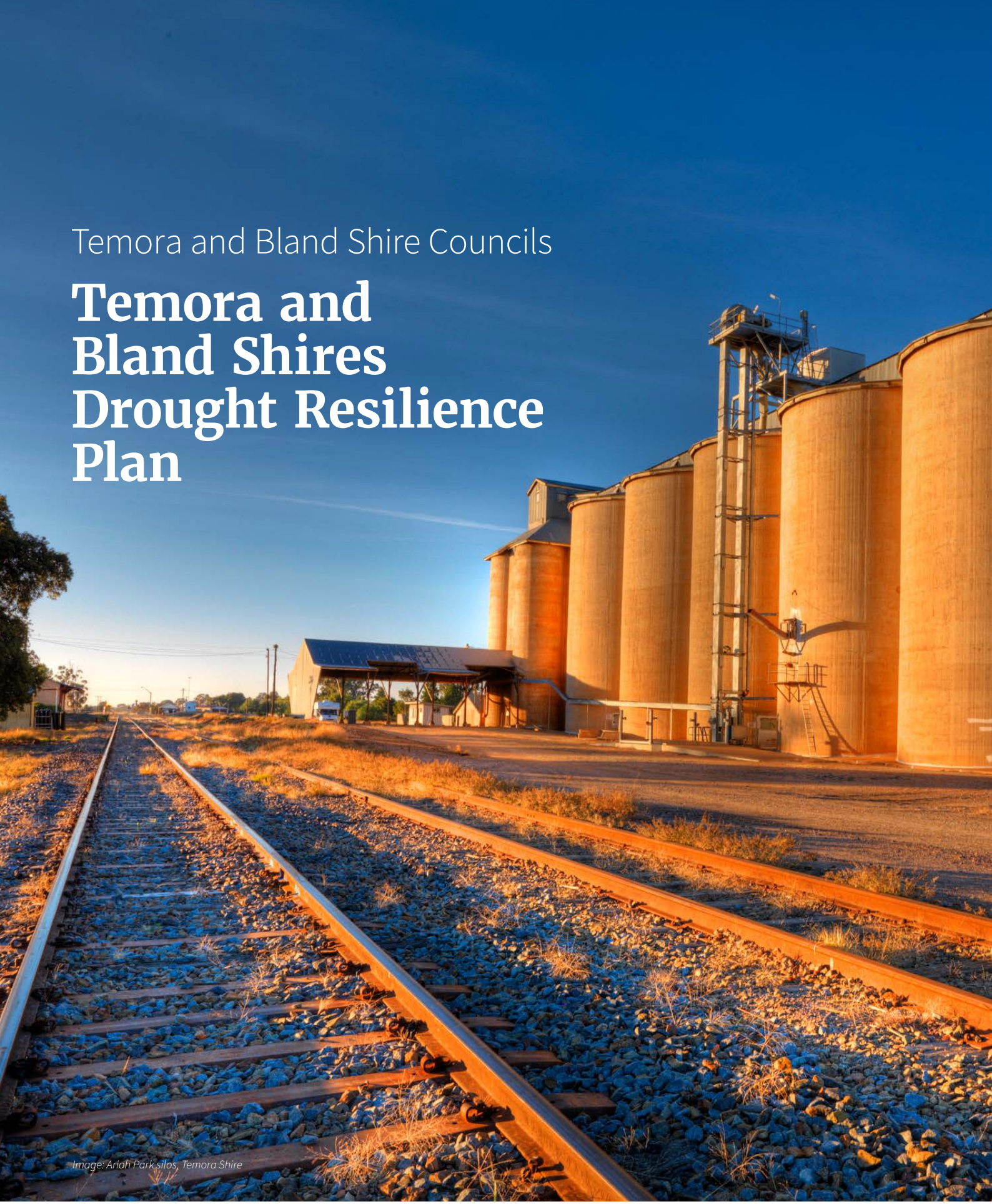

Image: Ariah Park silos, Temora Shire

TEMORA
The Friendly Shire

BLAND SHIRE COUNCIL
west wyalong

Acknowledgement of Country

We pay respect to the Wiradjuri people as the Traditional Custodians and First Peoples of the Temora and Bland Shire lands, and we acknowledge their continued connection to their country and culture.

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Glossary of Key Terms

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.[1]

Adaptive capacity

The ability of individuals and groups to adjust and respond to environmental and socioeconomic changes.[2]

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.

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.[3]

Economic resilience

The ability of the economy to absorb the economic impact of shocks and stressors without changing the economic status or outcomes.[4]

Environmental resilience

The ability of the natural environment to cope with a diverse range of shocks and stressors while maintaining natural processes and ecosystem service.[5]

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.[6]

Intervention options

Alternative or complementary actions, projects, programs, policies, initiatives and investments that are planned to bring about change in the system.

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.

Resilience

The ability of a system to absorb a disturbance and reorganise so as to maintain the existing functions, structure, and feedback.[7] Also see general resilience, specified resilience, economic resilience, environmental resilience, and social resilience.

Risk

The potential for adverse consequences for human or ecological systems, recognising the diversity of values and objectives associated with such systems.[8]

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'.[9]

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.[10]

Standard Precipitation Index

A simple measure of drought (and also of very wet conditions) and is based solely on the accumulated precipitation for a given time period (e.g. over the last 30 or 60 days), compared with the long-term average precipitation for that period.

Stressor

An event that occurs gradually over a timeframe that causes an adverse effect, e.g. drought.[11]

Systems

The interaction of processes, networks, and inter-dependencies across a complex 'whole'.

Trends

Major global or regional influences that have driven change in the past and are expected to shape change into the future.[12]

Image: Sheep grazing, Bland Shire

Key Abbreviations

ABS	Australian Bureau of Statistics
BoM	Bureau of Meteorology
BSC	Bland Shire Council
CDI	Combined Drought Indicator
CSIRO	Commonwealth Scientific and Industrial Research Organisation
DDI	Drought Direction Index
DPI	Department of Primary Industries
FDF	Future Drought Fund
FFDI	Forest Fire Danger Index
GDP	Gross Domestic Product
HR	Human Resource
IAP2	International Association of Public Participation
IPCC	Intergovernmental Panel on Climate Change
KPI	Key Performance Indicator
LALC	Local Aboriginal Land Council
LGA	Local Government Area
MEL	Monitoring, Evaluation, and Learning
MIS	Management Information System
NSW	New South Wales
PCG	Project Control Group
RAPTA	Resilience, Adaptation Pathways, and Transformation Assessment
RCP	Representative Concentration Pathway
RDA	Regional Development Australia
RDR Plan	Regional Drought Resilience Plan
REDS	Regional Economic Development Strategy
RFQ	Request For Quote
SEIFA	Socio-Economic Indexes for Areas
SDG	Sustainable Development Goal
TEC	Threatened Ecological Community
TSC	Temora Shire Council
°C	Degrees Celsius
%	Percentage

01 Introduction

Drought is omnipresent and affects a larger proportion of the world-wide population than any other natural disaster. The difficulty in predicting future droughts results from the lack of understanding around the contributing physical factors, including those of climate change.

A key differentiator in predicting a drought hazard, compared to another natural hazard, is the lack of warning as to the duration, severity, and extent of a drought event. Droughts are chronic stress with no distinct beginning or set tipping point, meaning the opportunity for implementing mitigation and adaptation is often missed.

Over the years, the frequency and intensity of drought events have significantly increased, affecting communities and economies in ways that extend far beyond the immediate impact on major industries, such as agriculture. While drought may traditionally be viewed as an issue removed from wider society, largely as an “on-farm” issue, its ripple effects span across various sectors—from water supply to energy production, and from public health to local businesses. Given this broad scope, an inclusive, cross-sectoral approach is essential for enhancing a community’s resilience against the increasing threat of drought.

The Regional Drought Resilience Plan (RDR Plan) aims to shift the focus and paradigm to encapsulate a ‘whole-of-community’ and ‘whole-of-economy’ perspective. The objective is to encourage behavioural and cultural shifts to foster a collective awareness and understanding of shared responsibility surrounding drought resilience. By adopting this community-led inclusive strategy, the RDR Plan positions itself as a comprehensive roadmap that outlines context and community-driven strategies, and actionable plans to equip regions with the tools they need to plan for, respond to and recover from drought impacts effectively. This document serves as part of a suite of guidance documents that aim to provide stakeholders with the knowledge and tools to support the building of drought-resilient communities and economies.

Image: Canola Fields (supplied by WSP)

Temora and Bland Shire Regional Map

Bland Shire[13]

Traditional Owners:

Wiradjuri

Townships:

Barmedman, Mirrool, Naradhan, Tallimba, Ungarie, Weethalle, West Wyalong, Wyalong

Area:

8,560 km²

Population:

5,547 people

(2,790 male, 2,758 female)

Temora Shire[14]

Traditional Owners:

Wiradjuri

Townships:

Temora, Ariah Park, Springdale

Area:

2,802 km²

Population:

6,034 people

(2,948 male, 3,085 female)

Vision, Goals, and Outcomes

Vision

In Temora and Bland, we envision a vibrant community, fortified by resilience, compassion, and unity.

Our journey towards drought resilience is a product of our strong community spirit. By embodying our unwavering investment and commitment to each other, we will leverage existing social connections and strengths to adapt to future changes.

We will be a region that fosters data-driven economic diversity, becoming a thriving destination of choice for new skilled residents. By embedding physical and mental resilience across generations now and in the future, we will cultivate a sense of comradery to sustain us through each new challenge we face. By planning for the dry times ahead, we will remain a viable local economy. By embracing these values, we strive to economically, socially and environmentally prosper amidst adversity and droughts. Together, we will forge a more resilient future.

Economic

Strategic **Priorities**

Generating economic diversification and strengthening existing businesses and industry to bolster economic stability in times of drought.

Resilience **Goals**

- Diversify our local economy.
- Embed resilience-driven decision making in existing industries.
- Improve cooperation between residents, businesses, and industries.
- Provide financial tools that help meet needs in a changing world.
- Encourage community-based initiatives that contribute to economic prosperity.
- Improve the look and feel of our region to attract workforce, visitation and spending.

Environmental

Strategic **Priorities**

Improving awareness of the processes that underpin our unique landscapes and implementing initiatives to ensure they remain healthy and resilient.

Resilience **Goals**

- Improve environmental resilience through grass roots initiatives.
- Foster awareness of the water cycle and climate impacts across all age groups.
- More efficient water use through improved irrigation infrastructure.
- Invest in sustainable and innovative farming and agribusiness practices.
- Protect, preserve, and enhance our region's unique landscape and green spaces.

Social

Strategic **Priorities**

Create equitable and accessible resources that leverage our strong community spirit, so we are mentally and socially resilient through times of hardship.

Resilience **Goals**

- Invest in our strengths as a small and connected community.
- Build capacity amongst community groups and organisations, enabling ownership across drought resilience.
- Improve understanding of services available and how to access them.
- Support a prosperous and secure community that hosts a diverse range of people.
- Ensure a diverse range of support services that cater to all genders, ages and cultural backgrounds.

Long Term Outcomes

- There is a common understanding and a shared vision in the region to manage drought risks and build community drought resilience.
- The region works collectively and in partnerships to build drought resilience across three main pillars.
- Measures are implemented to limit impacts of drought and better respond to drought.
- Stakeholders and communities actively share knowledge and take actions contributing towards drought resilience.

Image: Old Gold Mine Workings, Bland Shire

02

Drought Resilience at a Glance

Simply, drought means acute water shortage. According to the Bureau of Meteorology (BoM), drought is a prolonged, abnormally dry period when the amount of available water is insufficient to meet our normal use.[15]

However, no universal definition of drought exists, meaning it is difficult to understand drought characteristics across time and space (Figure 2.1). Droughts can be exacerbated by low soil moisture, a low water table and high rates of evaporation. They can be as short as a single season; however 'megadroughts' can persist for decades (more than 30 years).[16]

Droughts are a feature of all climates and are defined based on the long-term average climate of a given region. Droughts have different prevailing effects depending on the system being analysed including social, environmental, meteorological, and hydrological.

Figure 2.1: Types of droughts and their definitions[17]

Type of Drought	Description
Meteorological	A period of months or years with a no precipitation or climatological water balance rain. It is often accompanied by above average temperatures and precedes and causes other types of droughts. The climate change projections for droughts in Australia are based on a measure of meteorological drought - the Standardised Precipitation Index. Meteorological drought is caused by persistent changes in weather patterns, often triggered by irregular sea surface temperatures. Localised conditions such as reduced evaporation and low humidity due to dry soils and high air temperatures often enhance atmospheric conditions.
Soil moisture (agricultural)	A period of reduced soil moisture resulting from below average rainfall, less frequent rain events or above normal evaporation, impacting particularly on agricultural systems.
Hydrological	When river flows and water storages in aquifers, lakes or reservoirs fall below long-term levels. Hydrological drought develops more slowly because it involves stored water that is depleted but not replenished.
Socio-economic	A measure of drought that considers the supply and demand of economic goods (e.g., water, lucerne hay) with elements of meteorological, hydrological, and agricultural drought. This is different from the three other drought types as it measures the implications of drought on the supply and demand of goods and the associated impacts to society.

Droughts have always been part of the region's history. In fact, severe drought affects some parts of Australia on average, once every 18 years.[18] This is expected to worsen according to the current climate change trajectory with drought expected to increase in frequency,intensity and duration.[19] Climate projections suggest that Temora and Bland Local Government Areas (LGAs) will not avoid the drought predictions (see Figure 2.2).

Figure 2.2: Climate Projections for Temora and Bland for 2090 timeline

Temperature over 35°C
+81.73 days

Rainfall below 10th percentile
+1.70 days

Severe Fire Danger
+7.6 days

Persistent drought is likely to cause a shift in the relationship between communities and the land on which they live, forcing them to re-configure their living standards to accommodate the reality of lower water availability. The economic, social, and environmental impacts of drought can be far reaching and interconnected. Water intensive industries like agriculture – a primary industry for the region – may see drastic shifts in productivity and even face the prospect of relocating or closing down entirely. Drought can also impact human and environmental health in many ways including decreased drinking water quality, which is an indicator of poor river health, in turn causing increased rates of illness in residents. Similarly, economic decline from drought impacted industries can cause financial stress and negative mental health outcomes.

In 2020, The Australian Government established the Future Drought Fund (FDF) to provide secure, continuous funding for drought resilience initiatives. Through the FDF, the Australian Government is working with state and territory governments to support regions in developing RDR Plans to prepare for and manage future drought risks.

This RDR Plan uses desktop research and community feedback gained through a series of engagement sessions, to set out six actions to strengthen the region's drought resilience. The actions within this RDR Plan are intended to support the community to prepare for and mange future drought risks, responding to the challenges and opportunities within the region, as highlighted by the community.

Image: Crop harvesting, Bland Shire

The Process Overview

Figure 2.3 Temora Bland Shires RDR Plan Process at a glance

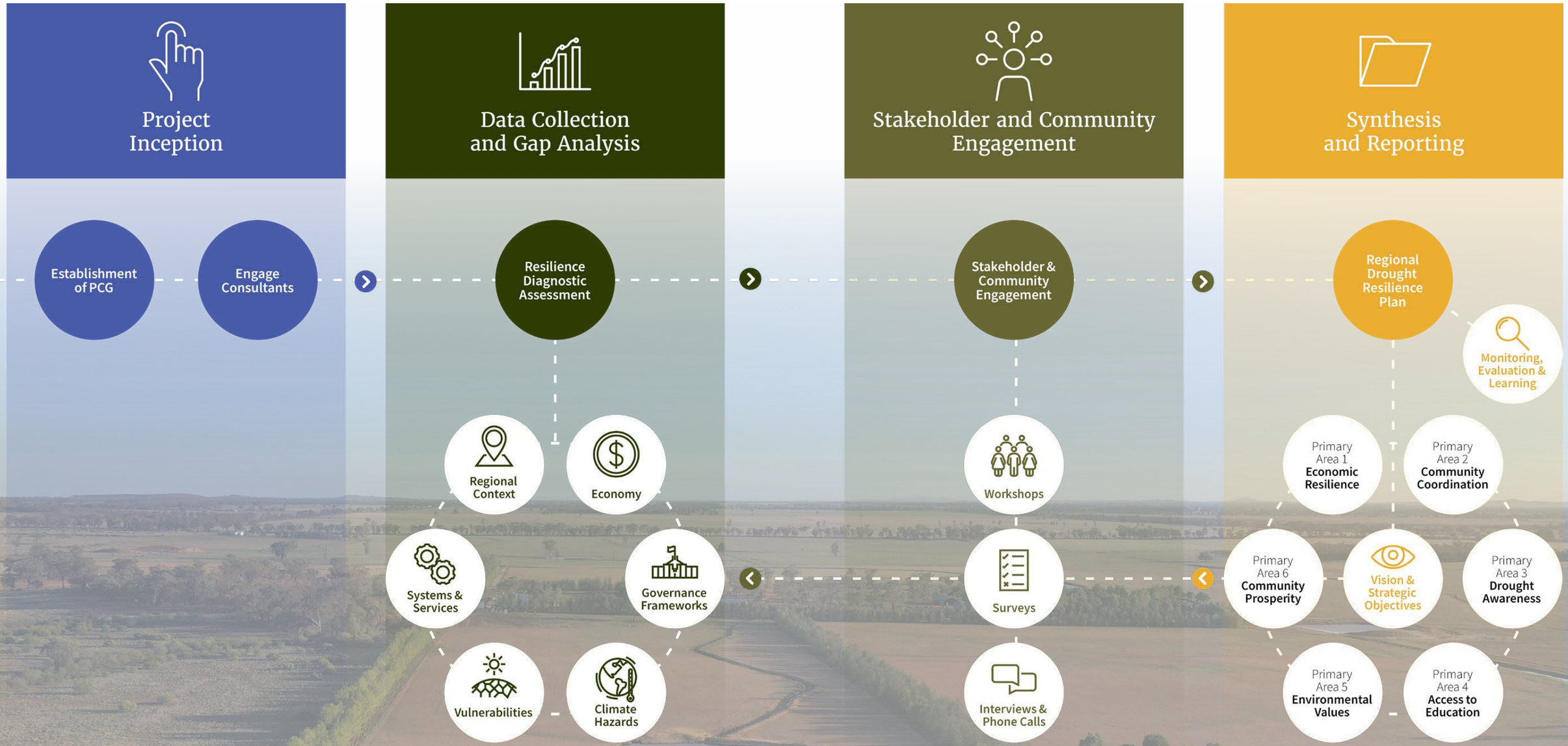


Image: Rural Scene, Bland Shire

03

A Plan for Drought Resilience

Of all of the climate and weather-related conditions that affect Australia, drought is often the most challenging. New South Wales (NSW) is prone to periods of persistent drought, with downward trends in rainfall and streamflow documented.

Drought is a defining feature of the climatic cycle of the Australian landscape with a large part of this owing to our geography. Our continent spans the latitudes of the subtropical high-pressure belt. 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. 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. 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. Droughts are challenging times, not just at the farm gate but for entire communities and regions.

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.

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.

The Regional Drought Resilience Planning program is one of the five focus areas of the Commonwealth Government's Future Drought Fund. These plans focus on innovative ways to build regional drought resilience, taking steps to plan now to stem the impact of future drought on our region.

The NSW Regional Drought Resilience Planning program is jointly funded through the Australian Government's Future Drought Fund and the NSW Government, supporting local governments to work together regionally to plan for drought resilience proactively and pragmatically.

Image: Wool classing, Ariah Park Agricultural Show, Temora Shire

Objectives

The objectives of the FDF Agreement on which this Plan is built, are to grow self-reliance and performance of the agricultural sector, improve the natural capital of agricultural landscapes for better environmental outcomes, and strengthen the wellbeing and social capital of rural, regional and remote communities. As such, the objectives of this RDR Plan will reflect the intent of the FDF Agreement, address the needs of our own community in the face of drought, leveraging the opportunities available to improve community resilience to drought (Figure 3.1).

Figure 3.1: What we heard

Challenges

1. Health services and **hospital capacity.**
2. Industry and **economic dependency.**
3. Substantial stigma around **mental health.**
4. Housing **rental market** challenges.
5. Degradation of regional **land and water value.**
6. Lack of historic and current **data collection** practice.
7. **Skills shortages** across social and health care, and agriculture.
8. **Ageing population** and increasing isolation.
9. **Water supply** redundancy.

Opportunities

1. Track **spend data** to evaluate and inform future decision-making.
2. Build on strong sense of **community spirit** to improve social capacity and connection.
3. Prioritise **green spaces** to provide visual and mental reprieve.
4. Strengthen **volunteer groups** to continue community support.
5. Empowering the **ageing population.**
6. Utilise **transport connections** to improve access and regional spending.
7. Leverage The **Resilience Project** for wide-scale school-based education.

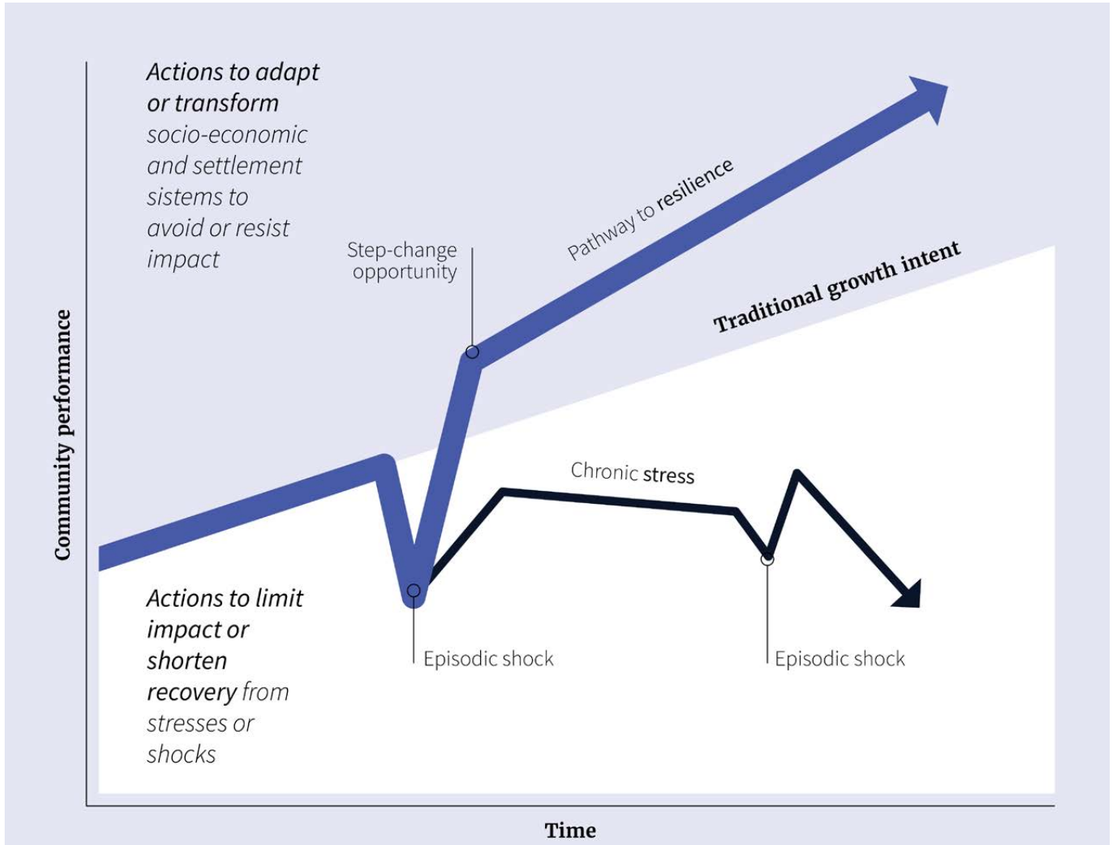
Image: Sunrise (supplied by WSP)

Expected Benefits

This Regional Drought Resilience Plan focuses on providing specific actions to help communities become more prepared for, and resilient to, the impacts of drought. The expected benefits of these actions are underpinned by the ability to absorb, adapt to, or transform, to deal with the stresses of drought.

The actions outlined in this Plan provide a blueprint for our region to continue to improve drought resilience for years to come. Further implementation funding will become available across Australia under the Commonwealth Government's FDF, ensuring these actions can be brought to fruition.

Figure 3.2: Improving our prosperity through resilience (adapted from Joseph Fiksel)



Strategic Alignment

The FDF seeks to enhance the public good by building drought resilience in Australia's agricultural sector including the landscapes and surrounding communities on which they are built. The intent of its eight interrelated foundational programs is to have an innovative and persevering 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.

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

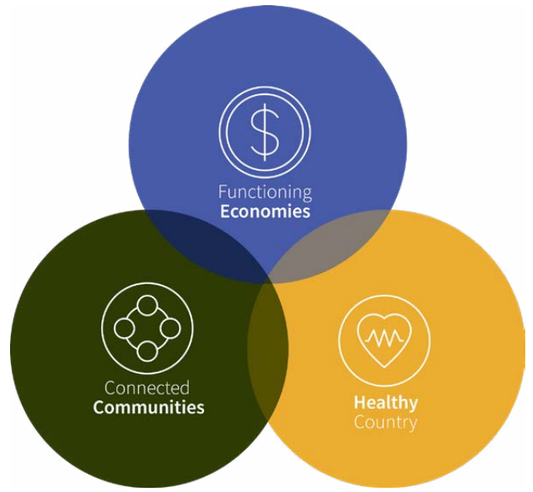
- Economic resilience for an innovative and profitable agricultural sector.
- Environmental resilience for sustainable and improved functioning of farming landscapes.
- Social resilience for resourceful and adaptable communities.

The RDR Plans focus on the community as a system where economic, built, environmental and social capacity to endure, respond and evolve through drought are enhanced.

The 20-Year Economic Vision for Regional NSW was released in 2018. This strategy sets out the NSW Government's priorities and plans to achieve long-term social and economic success for regional communities across the state.

Other key strategies with strong linkages and relationships to matters of drought resilience include the Regional Economic Development Strategies (REDS) and NSW State and Regional Water Strategies. Key tools which support the delivery of the NSW Government's vision for drought ready regions include:

- The Australian Government's Drought Resilience Adoption and Innovation Hubs (including Charles Sturt University) in southern NSW.
- NSW Government Department of Primary Industries DroughtHub, an online drought assistance and information portal for NSW primary producers.
- NSW Government AdaptNSW website, to inform and empower communities, businesses, households, and government to adapt to climate change.



With a focus on drought readiness and economic diversity, the strategy provides a framework to help regional communities prepare for drought. The RDR Plan promotes strong, diversified regional economies, future-ready primary industries, and stronger communities.

The strategy includes 14 specific actions across three key areas of commitment:

- Sustainable, secure, and healthy water resources through six actions for more efficient and coordinated water resources which support the NSW Water Strategy.
- Stronger primary industries prepared for drought through five actions for accelerated innovation, information systems and diversification.
- Stronger communities and diverse regional economies through three actions supporting community resilience which include this RDR Plan.

04

About this Regional Drought Resilience Plan

This Temora and Bland RDR Plan is a collaboration between Temora Shire Council (TSC) and Bland Shire Council (BSC).

This Temora and Bland RDR Plan is a collaboration between TSC and BSC. The RDR Plan is designed to strengthen the capacities of residents, communities, institutions, businesses, and systems to better withstand the economic, environmental, and social challenges stemming from droughts. Creating a resilient region will help us not only prepare for drought but also enable us to grow, thrive, and prosper during drought and beyond.

By investing in resilience now, the region stands to benefit in good times as well as bad.

Most crucially, the RDR Plan is **community owned and driven**, co-designed with community leaders, community members, local businesses, and organisations. This provides a foundation for the RDR Plan targeted at minimising future impacts while leveraging opportunities to strengthen community resilience.

Image: FarmLink employee checking crop trials, Temora Shire

Purpose of the Plan

The Temora and Bland RDR Plan provides guidance to help our region better plan for and become more resilient to the impacts of drought over time. It has been developed in a collaborative, partnership approach, drawing on locally led inputs drawn from those who live and work in the region.

The purpose and aims of this Plan are outlined in Table 4.1.

Table 4.1: Purpose and Aims of the RDR Plan

Purpose of the RDR Plan Program	**Aims** of this RDR Plan
Create opportunities for the community to connect and build social capital to **improve mental resilience and community well-being.**	Create **stronger community networks, connections, and relationships** so we can lean on each other in times of need.
Diversify the regional economy to **improve economic resilience** before, during, and after drought.	Improve our **understanding of the region's water systems** and what that means for drought resilience.
Improve data access and transparency so the community can make the right decisions on water.	Facilitate a **mentally and emotionally resilient community** with skills to face challenges such as drought.
Leverage the existing microcosm of systems and services to **build better social, economic, and environmental resilience to drought.**	Provide clear **pathways and opportunities for the community to improve their financial prospects** during times of economic downturn.
Empower the community with the right knowledge to access the services they need, when they need it.	Implement tangible steps towards a more **diverse, connected, vibrant, and prosperous community.**

Image: Temora CBD, Temora Shire

The Process in Detail

Figure 4.1: The Drought Resilience Planning Process in Detail

Pre-Planning
(Setting Project Foundations)

- **Establish Project Control Group** (representatives from Temora and Bland Shire Councils and Regional NSW).
- Engage with **Subject Matter Experts.**
- **Resilience Assessment** (local strategic context, environmental, social and economic drought impacts, drought projections, challenges and opportunities).
- **Stakeholder & Community Engagement Plan** (key stakeholders and demographics and how to involve them).
- **Have Your Say Survey** (generating project interest and ground-truthing desktop study).

Round 1 Engagement
(Challenges and Opportunities)

- **Where:** Temora, West Wyalong, Ariah Park, Ungarie.
- **Who:** Community Members, Stakeholders, Representatives from Key Organisations.
- **What:** Workshops, Street Talks, Phone Interviews.
- **How:** Group discussions on Drought Impacts, Community Strengths, Existing Services, and Ideas for Action.

Themes
(Where to focus effort)

- Diversified **Economy.**
- **Mental Health.**
- **Social Connectedness.**
- **Financial Planning.**
- **Water** Access and Supply.
- **Environment** and Land Management.
- **Workforce and Traineeships.**

Round 2 Engagement
(Solutions for the Future)

- **Where:** West Wyalong, Temora.
- **Who:** Key stakeholders able to deliver or support actions.
- **What:** Workshops with stakeholders clustered by theme.
- **How:** Facilitated discussions
  - Review of ideas from Round 1.
  - Additional ideas.
  - Idea evaluation (effectiveness, feasibility, value for money, addressing root cause, capacity to deliver, avoid duplication of effort).

Outcomes
(How to get there)

- Plan **Objectives.**
- Action **Shortlist.**
- Supporting **Actions.**
- **Next Steps.**

Round 3 Engagement
(Action detail)

- Action **rationale.**
- **Implementation** steps.
- High-level **cost estimates.**
- Action **lead** and stakeholders.
- Action **KPIs** and evaluation.
- **Supporting actions** and next steps.

Synthesis
(The RDR Plan)

- **Vision, Goals,** and **Outcomes.**
- **Actions** under Economic, Social and Environmental Pillars.
- **Monitoring, evaluation,** and **learning.**

Image: Rural Scene, Bland Shire

Describing the system

Through desktop research, the key features of the region have been identified and described. Using available information from the BoM, ID Community, Census and ABS data, Council data, and pertinent local plans, a synthesised Resilience Diagnostic Assessment, was developed, highlighting key characteristics of our economy, social, and environmental sectors. This technical study fleshed out our existing baseline from which we can build drought resilience.

Exploring scenarios

To understand what drought holds for our region in the future, the climate modelling was undertaken to build upon thea Resilience Diagnostic Assessment. Using high emission climate scenarios (particularly Representative Concentration Pathway (RCP) 8.5), data was analysed to explore climate projections for of our region. Existing and projected (for 2050 and 2090) conditions for temperature, rainfall, and bushfire danger allowed us to paint a picture of possible drought situations ahead of us. Regionally specific data was drawn upon to provide locally relevant impacts and understanding for Temora and Bland, seeking to see events through the eyes of our community.

Analysing the system

Using these climate scenarios, each system within our region was explored, examining how it could be impacted by drought. We didn't just rely on numbers and datasets, but leaned on local stories and research to uncover historic impacts across social, cultural, economic, and environmental spheres. This took a broad view, considering how different stressors could interact and amplify each other and defined a number of feedback loops within the landscape of the region. This information was used to develop a preliminary understanding of the challenges facing the region, and opportunities available surrounding drought resilience.

Scoping and goal setting

Using community and stakeholder engagement, this step involved building upon the challenges and opportunities identified, in addition to understand what a drought resilient region might look like. This involved three rounds of community and stakeholder engagement, in addition to a 'Have Your Say Survey', further detailed in *Our Partners* (page 25). Using the 'Have Your Say' survey, insight on key visions for a drought resilient region helped to capture the region's goals in three to four words. Integrating ideas from community and Council enabled the crafting of a vision and goals aligning with values and characteristics of the region.

Community input was sought in the first round of engagement to refine the understanding of past drought impacts, capture all current actions, supports, services and the challenges from a community's perspective. These were captured within the Resilience Diagnostic Assessment.

Stakeholder mapping and engagement

Our community was critical in the development of this RDR Plan. To obtain a diverse range of stakeholders across the community to inform better preparation, response, and recovery in a collaborative manner, mapping exercises were undertaken.

Using databases and research provided by council, stakeholders were contacted and recruited across key industries including (but not exhaustive):

- Education (Primary and High schools including Principals, careers advisers and counsellors).
- Agriculture (local farmers, farm equipment suppliers and service agents, research organisations).
- Environment (Landcare, Goldenfields Water).
- Health (State and Federal health service providers, aged care, community services and mental health advocates).
- Businesses (retailers, professional advisors, and main street businesses).
- Community groups (sporting, philanthropic, hobbies).

Gathered in workshops, the community took the lead, making sure all voices were heard. Following the principles of inclusivity, accessibility, long-term horizon planning, and transparency, building stakeholder influence and relationships to the RDR Plan, this facilitated community buy-in. Using the IAP2 Framework, workshops were collaborative in nature, with individuals empowered to lead and own actions fleshed out (further detailed in Section 4.4). This made sure that everyone contributed to shaping our plan.

Key Areas of Concern

- **Social Connectiveness**
- **Economic Diversification**
- **Environment and Land Management**
- **Mental Health**
- **Workforce / Traineeships**
- **Water**
- **Financial Planning**

Imagining change

This plan went beyond the collection of data and required the community to imagine a better future. Round one of community engagement was used to encourage community ideation as a basis for action identification and 'blue-sky' thinking. This was done through their expression of opportunities and possible actions in the future. Key themes and ideas were continuously raised across the region, with themes naturally falling into several areas including business resilience, community connection, economic diversification, and mental health.

Generating options

Based on the outcomes of first round of community engagement, ideas were vast and broad, creating significant opportunities for potential change. Actions were evaluated and condensed into a long list, ranging from creating easier access to drought subsidies and activities to reduce social isolation and promote social interaction. These were sorted into themes of social connection, economic diversification, environment and land management, water, financial planning, workforce development, and mental health.

Sequencing pathways

To move forward, a clear path had to be set. To maintain trust and transparency across the development of the RDR Plan, actions and ideas generated from the first round of engagement were presented back to collaborators and community members in the second round of engagement. Engagement workshops were structured around the key themes listed in *Our Partners* (page 25). Stakeholders from a broad cross section of backgrounds were invited to specific workshops based on their area of expertise or community involvement.

The intended outcome of this engagement was to review the ideas already generated and identify additional options. In some instances, ideas suggested during round one was identified as already being undertaken by entities or agencies. This prompted discussions to explore the disconnect between service provision, and awareness and uptake by the intended audience. Options were discussed in a round-table forum, exploring considerations such as effectiveness, feasibility, cost, need, likely action owner, implementation steps and applicability across both LGAs. The result was a short-list of actions to be detailed within the plan, alongside the identification of owners for each action.

Implementing pathways

Finally, goals and actions must be implemented to achieve benefits. Applying lessons learned, the final round of engagement involved workshops which were held with self-identified action owners and relevant stakeholders to flesh out and develop implementation steps for each action. These workshops were designed to encourage conversations around practical implementation steps, and to encourage buy-in. By prioritising the effectiveness of actions in addressing the resilience challenges identified in prior workshops, each action was set up for success, creating a level of accountability.

Monitoring and evaluation processes were developed in alignment with actions to foster continuous innovation and learning through intentional capacity building and education, equipping ourselves with knowledge and drought awareness for the future.

Key Inputs

Table 4.2 is a summary of the key inputs for the RDR Plan which are based on existing bodies of work spanning governance and leadership, primary production, economic, social, demographics, infrastructure, land use, climate change and other scientific studies and research.

Table 4.2: Regional Drought Resilience Plan Key Inputs

Level	Plan
National	• Australian Government Drought Response, Resilience, and Preparedness Plan 2019. • National Drought Agreement 2018. • CSIRO Drought Resilience Mission – progress update 2022.
State	• NSW Water Strategy 2021. • NSW Extreme Events Policy 2018. • 20-year Economic Vision for Regional NSW 2018. • Department of Primary Industries (DPI) Managing Drought Plan 2019.
Regional	• Riverina Murray Regional Plan. • Murray Darling Basin Plan. • Southwest Slopes Regional Economic Development Strategy 2023 Update. • Farming Systems Group Alliance (FGSA) Community Engagement Report, Southern NSW Drought Innovation Hub.
Local	• Bland Shire Council Adverse Event Plan. • Bland Shire Council Combined Delivery Program and Operational Plan. • Bland Shire Council Community Strategic Plan. • Bland Shire Council Housing Strategy. • Confidential Draft Temora Local Housing. • Draft Temora Shire Council Economic Development Strategy. • Goldenfields Water - Business Activity Strategic Plan. • Goldenfields Water Deliver Program and Operational Plan (2022-2026). • Temora Shire Adverse Events Plan Final. • Temora Shire Council Community Strategic Plan Towards. • Temora Shire Local Strategic Planning Statement 2020. • Temora Workforce Futures Study 2018-2019. • Housing and Planning for Expansion Temora Shire (presentation dated 1st August 2023).

Our Partners

This RDR Plan was developed by the Bland and Temora Shire Councils through an understanding of the unique challenges facing our region and gathering input from a wide range of key stakeholders from our community. A dedicated and thoughtful engagement approach was undertaken to connect with the community including interviews, phone calls, surveys, workshops, and one-on-one meetings. From our engagement, we understand that our existing community resilience rests upon strong primary industries, established agricultural supply chain sectors, local businesses, relevant local governments, as well as community organisations and service providers. However, we also understand there is still much to be done in the eyes if the community, and as such, the intent of this RDR Plan is to be led and driven by our communities.

More than 150 community members were engaged to make sure this RDR Plan was community-lead and focussed. From the flat plains of West Wyalong to the fertile agricultural plains and expansive skies of Temora, we spoke with graziers, health providers, support services, local business owners, community organisations and more about their drought journey, and the drought journey of the region Many of them shared their stories of hardship, community spirit and perseverance in the face of drought and how, as a community, we can plan for a more resilient future.

While the focal point of this engagement was targeted workshops and surveys, we also conducted informal engagement with a broad cross-section of the community, which provided critical insight into local challenges, opportunities, and potential solutions for drought resilience. Figure 4.2 provides an overview of the community and stakeholder engagement undertaken, with the Stakeholder and Community Engagement Outcomes Report providing a more detailed overview of the engagement outcomes.

The four main principles that underpinned our engagement strategy for the RDR Plan are:

1. **Inclusivity:** consult with a diverse range of stakeholders and c ommunity representatives to capture a range of local needs, interests, capacity and co-design recommendations for opportunities and actions.
2. **Accessibility:** facilitate equitable representation of susceptible communities, including those living with disabilities, women, youth, and the elderly
3. **Long-term horizon planning:** facilitate community discussions that focus on sustainable actions that can deliver long-term enduring outcomes.
4. **Transparency:** use engagement techniques and reporting frameworks that foster openness and trust.

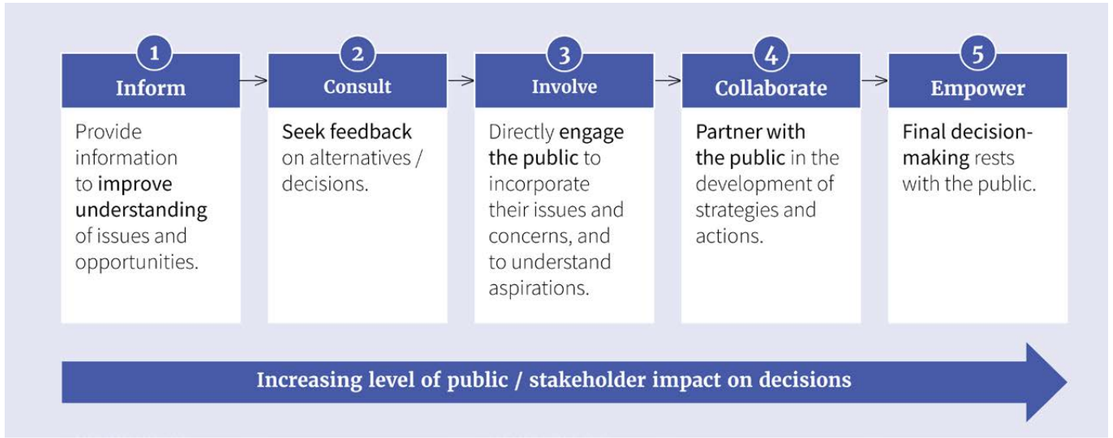
The objectives of our engagement from the outset were:

- Foster **co-designed, community-led** planning and collective ownership of the resulting plan to leverage existing strategic planning and avoid duplication of effort,
- Recognise the **diversity of people, businesses and landscapes** involved in agricultural production, including Indigenous groups and landholders, and,
- Harness diverse **region-specific knowledge** and skills for a triple-bottom-line approach.[20]

Our engagement strategy for the RDR Plan was also informed by the internationally recognised approach developed by the International Association of Public Participation (IAP2), depicted in Figure 4.1. As far as reasonably practicable, this process sought to engage with community and stakeholders at the collaborate and empower end of the spectrum.

Image: Long road, Bland Shire

Figure 4.2: IAP2 Framework



Source: International Association for Public Participation

Image: Mirool sunset, Bland Shire

Figure 4.3: Engagement outcomes

Workshops

11 workshops
67 participants

Locations: Ariah Park, Temora, Ungarie, West Wyalong

- Aged Care Service Provider
- Agricultural Products and Service providers
- Allied Health Professionals
- Business Concierge NSW
- Community Health Nurse
- Council Staff*
- Councillors
- Department of Education
- FarmLink Research
- Goldenfields Water
- Landcare
- Mental Health Advocate
- Murrumbidgee Local Health District.
- NSW Health Temora Mental Health & Drug and Alcohol Service
- Open Minds Brighter Futures
- Pinnacle Community Services
- Primary Health Network
- Real Estate
- Regional Development Australia (Riverina)
- Retired Professionals (teachers, nurses, retailers)
- Rotary Club
- Salvation Army / Rural Chaplains
- Services Australia
- Small Business Owners
- Temora Anzac Motor Club
- Temora Aviation Museum
- Temora Community Healthcare Centre
- Temora Golf Club
- Temora High School
- Temora Public School
- Temora Youth Careers Network
- Training Services Australia
- University of the Third Age
- Workforce Australia

** Town planner, youth development officer, parks and gardens, water, community development, economic development)*

Surveys

36 participants

Temora and Bland Shire residents

Interviews

26 participants

- Livestock and Property Agent
- Motelier
- Real Estate Agent
- Retail Workers
- Retired Farmers
- Retired Professionals
- RFS Volunteers and Paid Staff
- Rotary Members
- Self-Employed Residents
- Small Business Owners
- Tradespersons (Mechanic and Electrician)

Phone Conversations

19 participants

- Accountant
- Agricultural Farming Machinery
- Allied Health Professional
- Bank Manager
- Charles Sturt University Drought Hub
- FarmLink (Farming Services Group)
- Farmers
- Financial Planner
- Lions Club
- Mental Health Advocate
- NSW Health Temora Mental Health & Drug and Alcohol Service
- Pinnacle Community Services
- Solicitor
- Small Business Owners
- Temora Aviation Museum
- Temora Community Centre
- Temora High School
- Temora Primary School
- Volunteers

Image: Spitfire parked at Temora Airport - Temora Aviation Museum Temora Shire

05
System Analysis

Regional Profile

Our region rests on the traditional lands of the Wiradjuri people, the largest language group in NSW and largest Aboriginal group in central NSW.[21] Wiradjuri means "people of the three rivers" (Lachlan, Macquarie, and Murrumbidgee).[22] Across the two LGAs, our region spans a total area of approximately 11,3062 km² (see Figure 5.1) and is home to 11,581 people.

Although our region is primarily known for agriculture, located within the southwestern slope's bioregion, a sub-humid climate with hot summers and distributed rainfall (with higher rainfall in the east, and less rainfall in the west), the LGAs of Temora and Bland lend themselves to nature-based visitor economies.[23] This is particularly accentuated by their presence within proximity to large floodplains and river valleys like the Lachlan, Murray, and Murrumbidgee.

Environmental Profile

Bland Shire contains several threatened ecological communities, over 40 threatened species and 13 migratory species crucial for preserving biodiversity, including the Grey Box Grassy Woodlands, Derived Native Grasslands of South-eastern Australia, the critically endangered Regent Honeyeater, Malleefowl, and the Swift Parrot. Alongside our national parks and nature reserves, these values create critical refuges conserving our local environment. Lake Cowal/Wilbertroy Wetlands and Yarran Swamp are nationally important wetlands found within the LGA.[24] Our waterways also offer important homes to many fish communities and recreational benefits such as bird watching and fishing.

Temora is characterised by rolling landscapes, hills, and rural farmland. With a number of unique environmental assets, we boast a mix of farming practices, cropping and livestock grazing, alongside native vegetation protected within nature reserves. Although we have no significant water bodies or major rivers, we support 42 threatened within the area (including the Growling Grass Frog and Major Mitchell's Cockatoo) and 11 migratory species adding to our ecological diversity.

Figure 5.1: Our Region

11,581 people

Temora Shire

Area:
2,802 km²

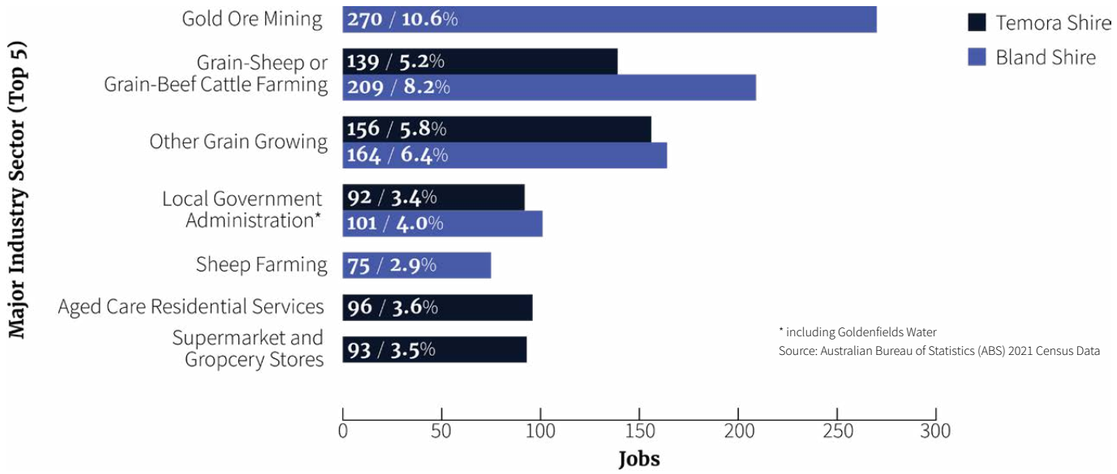
Townships:
Temora, Ariah Park, Springdale

Bland Shire

Area:
8,560 km²

Townships:
Barmedman, Mirrool, Naradhan, Tallimba, Ungarie, Weethalle, West Wyalong, Wyalong

Figure 5.2: Industry and Employment statistics



Economic Profile

Our region is strongly reliant on agriculture and related manufacturing for economic development.[25] Sheep, beef cattle, grain farming, meat and meat manufacturing, metal ore mining, and tourism are key industries in the region. Health care and social assistance are the second largest employing sector, largely due to the ageing population of both LGAs. Although we have lower than average unemployment rates (~2.9% compared to the NSW average, 4.9%), ageing populations will likely contribute to employment and skills shortages in the future.[26] These sectors are both an asset and a vulnerability during periods of drought.

Bland is the highest self-contained employment LGA within the southwest slopes.[27] Whilst providing significant economic advantages to the LGA, this can create vulnerabilities during drought due to an overreliance on local economic, agricultural, and social output. The Gross Regional Product of Bland Shire is $433.09 million,[28] with major employers including Evolution Mining, Pace Farm, AWB, and Bland Shire Council.[29]

The Gross Regional Product of Temora Shire is $410.81 million,[30] employing 2,764 people (as of 2021),[31] Major employers include Temora Shire Council, Woolworths Temora, Whiddon Group, Altora Ag, Goldenfields Water, Teyes Australia, Intersales, Department of Health, Department of Education and Access Recycling. Despite limited economic diversification, these major employers are likely to withstand drought-events, creating a level of employment certainty and income during times of stress.

Social Profile

Figure 5.3 provides an overview of demographic statistics for Temora and Bland. Across the region, key vulnerabilities which may exacerbate the impacts of drought include socio-economic status, population age and income. The region has disproportionately high retirement-aged individuals compared to the NSW state average. This correlates with a lower proportion of working-aged individuals (15–49 year olds), also contributing to generalised drought-vulnerability For Temora, a lower socio-economic index than NSW is reported due to the proportion of people over the age of 75 years, a high proportion of the LGA with an income lower than $1,000/week, a high number of pension concession card holders, and several people without access to internet compared to the state and region.

Conversely, the Bland LGA is an area of comparative advantage. The higher income, and mining presence within the community provides some assurance and economic stability during drought. This allows for agricultural-diversification and portfolio assets for farmers etc as crop/livestock yields lower. To note, the average income within Bland remains $10,000 below the median income for wider NSW.

These factors were a key considering in developing a collaborative and interconnected regional approach to build drought resilience.

Figure 5.3: Population Demographics

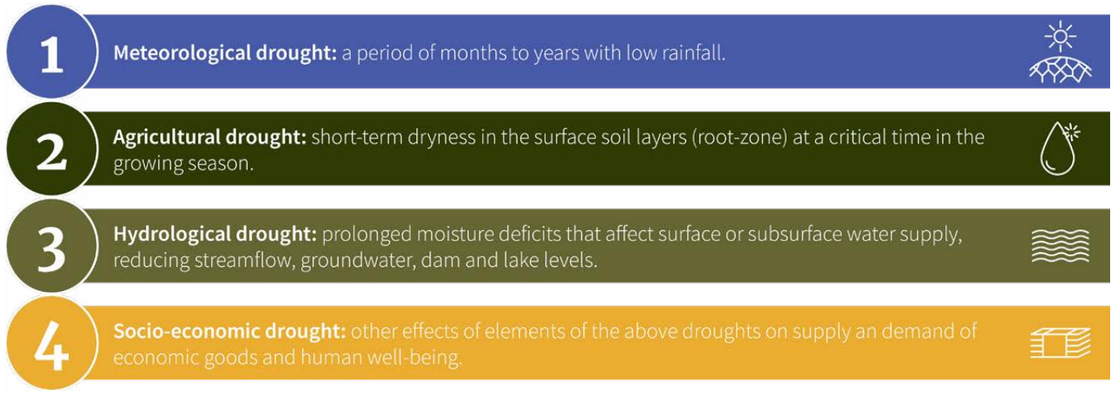
Demographic / Statistic	Temora [32]	Bland [33]	NSW Average
Population	**6,034** people	**5,547** people	-
Indigenous status	**3.4** %	**6.6** %	**3.4** %
Median age	**47** years	**43** years	**39** years
Indigenous Median age	**22** years	**22** years	**23** years
Population 15–49 year-olds	**34.4** %	**37.3** %	**46.1** %
Socio-Economic Indexes for Areas (IRSAD scale 1-5) [34]	**2** (1 is most disadvantaged)	**4** (1 is most disadvantaged)	- (1 is most disadvantaged)
Median weekly income (household)	$ **1,165**	$ **1,326**	$ **1,829**
Indigenous median weekly income (household)	$ **1,199**	$ **1,327**	$ **1,558**
Unemployment rate	**2.9** %	**2.9** %	**4.9** %
Indigenous unemployment rate [35]	**9.4** %	**9.4** %	**9.8** %
Population with long-term health condition	**39.4** %	**33.2** %	**30.9** %
Volunteers	**25.2** %	**24.2** %	**13.0** %

Our History of Drought Impacts

Drought as a natural hazard is pervasive, recurring, and distressing. It is difficult to determine a start or end, and when the landscape has recovered. As for other disasters, they are difficult to predict or compare with differences in seasonality, extent, duration, severity, among other variables all contributing to the drought experience.

Australia has highly variable rainfall records and in contrast also has highly variable periods of low rainfall. The BoM has four definitions of drought, which are meteorological, agricultural, hydrological, and socio-economic (Figure 5.4).

Figure 5.4: Types of droughts



Source: Bureau of Meteorology

Drought Monitoring in NSW

The Enhanced Drought Information System (EDIS) is a publicly available drought monitoring tool that monitors seasonal conditions across NSW. EDIS was launched in March 2018 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. A key feature of EDIS is the development of the NSW DPI Combined Drought Indicator (CDI).

The CDI integrates a range of data and model outputs in a framework that is useful for decision makers. It combines meteorological, hydrological, and agronomic definitions of drought (above) using indexes for rainfall, soil and water and plant growth. 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.

Stages of Drought

Used together, the indexes of the EDIS indicate the stage of drought.

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 category and into Intense Drought (Figure 5.5).

Complementing the stages is detailed information on:

1. A technical and on-the-ground description of typical field conditions.
2. A suggested on-farm response.
3. A suggested advisory or policy response.

Figure 5.5: Stages of drought in NSW

1. **Non drought phase:** At least one indicator is above the 50th percentile.
2. **Recovering phase:** All indicators are below the 50th percentile but above the 30th percentile.
3. **Drought affected (weakening) phase:** At least one indicator is below the 30th percentile and the rainfall trend is positive over the past 90 days.
4. **Drought affected (intensifying) phase:** At least one indicator is below the 30th percentile and the rainfall trend is negative over the past 90 days.
5. **Drought phase:** At least one indicator is below the 5th percentile.
6. **Intense drought phase:** All three indicators (rainfall, soil water, plant growth) are below the 5th percentile.

Source: EDIS

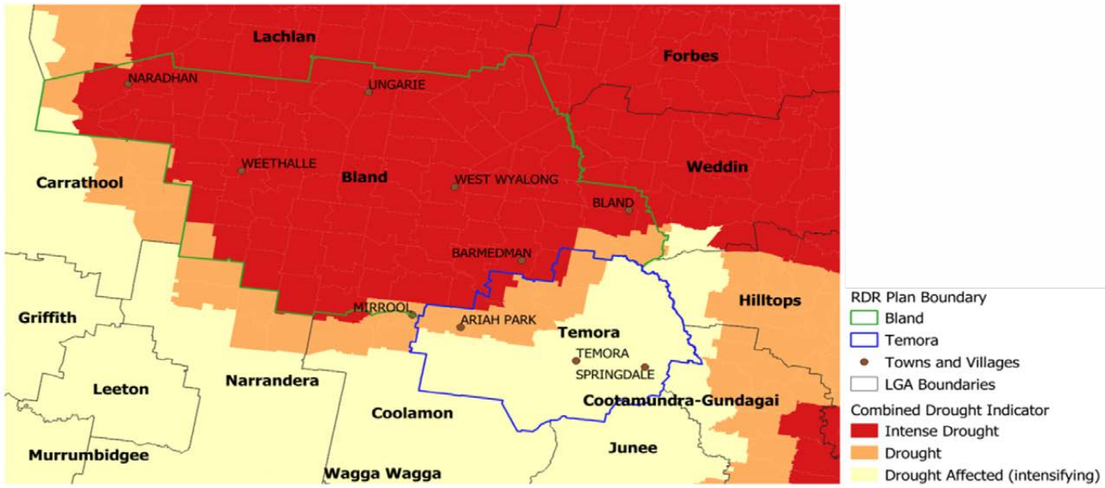
The Regional Drought Context

The geological landscape of Australia makes it prone to experiencing extreme weather events including extended periods of meteorological and hydrological drought.[36] Historically, Australia has experienced drought about once every 18 years with periods in between ranging from four to 38 years.[37] Impacts from the two most recent and severe droughts are listed below.

For Temora and Bland Shire Council areas, there is limited statistical information on the specific impacts of droughts experienced, particularly surrounding economic, environmental, and social reporting on impacts during these periods.

The occurrence of historic drought events and the impacts they have had in Australia, and more specifically the NSW region, has been discussed below. Where available, reported impacts to Temora and Bland LGAs have been documented. There is considerable variation in how drought impacts and affects residents of the region. For those grazing livestock, the impacts could be immediate. A lack of feed may prompt graziers to consider selling off livestock. At other times, livestock retain their prices. This variability is difficult to predict and plan for.

Figure 5.6: NSW Combined Drought Indicator to 31 December 2019 (Temora and Bland LGAs)



Source: DPI, 2023

Image: West Wyalong mural, Bland Shire (supplied by WSP Australia)

Historic Droughts in NSW

Mid 2017-2020

Australia experienced a severe drought from 2017 to 2020, affecting the entirety of NSW. This drought was the driest period on record for any 36-month period, with rainfall 170mm less than the next driest period recorded during the Federation Drought (1895-1903).[38] Regionally, average yearly rainfall (544.3mm) dropped to between 332 and 480mm/year.[39] The drought and subsequent bushfires had substantial economic losses, with NSW's GDP declining by 1.1% (~$6.9 billion) in 2018-19 and a further 1.6% (~$10.2 billion) in 2019-20, particularly impacting the agricultural sector.[40]

Nationally, over 3 million hectares of conservation land and over 820,000 ha of agricultural land in south-eastern Australia was impacted. This resulted in tree dieback and plant resources, with negative effects on kangaroo populations. Many towns and industries faced water shortages, and in some areas of the South West Slopes, people needed support.

Millennium Drought (1997-2009)

The Millennium Drought severely affected southeast and southwestern Australia, including the Murray-Darling Basin and southern cropping zones. All of NSW experienced below average rainfall from 2002 to 2003. This was the first drought considered to be aggravated by climate change, with higher-than-average annual temperatures recorded across the Murray Darling Basin between 2005 and 2009.

Poor cropping and harvest outputs cost the Temora economy at least $100 million.[41] Ariah Park faced losing essential services (petrol and ATM outlet). In Bland, seven years of negative cash-flows occurred due to crop failures, stock maintenance, and increased input costs. Prolonged drought led to a decline in employment and population, with corporate farming practices reducing economic activity in affected areas.

Drought over the years

1997-2009
- *$100 million* lost from Temora's economy
- *7 years* negative cash-flows for Bland

2017-2020
- *3 million ha* conservation land impacted (nationally)
- *820,000 ha* agricultural land impacted (nationally)

2018-19
- *$6.9 billion* lost (nationally)

2019-20
- *$10.2 billion* lost (nationally)

> "[Corporates] bought up 100 farms in the Millennium Drought … we lost both our Catholic High Schools, although Temora fought really hard to get theirs back.
>
> Ariah Park has 150 kids in the local school, but in Ardlethan where the corporates bought up many farms, there are just 50 kids, yet the district is the same size."

Local stories

Livestock prices have dropped, making it costly to maintain or sell animals, leaving graziers in a no-win situation. Many could not afford to pay for feed, nor sell them off. In these circumstances, some opt to shoot and bury their stock, a ***'heartbreaking and demoralising'*** thing to do. Stock impacts were seen as particularly impactful on children as ***'kids don't like seeing stock die'***.

For those in mixed enterprises, there is an opportunity to retain some of their grain harvest to buffer their operation against drought. The effectiveness was dependent on the length of drought, the storage infrastructure on farm, associated opportunity costs (sell or store) and personal preferences.

One tradesperson explained their strategy as this:
"when the next drought hits, we will leave town and go to the coast. Whilst there will be more competition, we will still get work to keep us going. Then when the drought breaks, we will return, as the housing is cheaper, and the work out here is guaranteed [due to limited competition]".

As financial constraints worsen, **farmers reduce their travel**, to activities such as children's sporting events, visiting elderly relatives, attending social functions or other activities which would otherwise provide an opportunity to get off farm, socialise and relax. ***"People can't afford the $20 in fuel."***

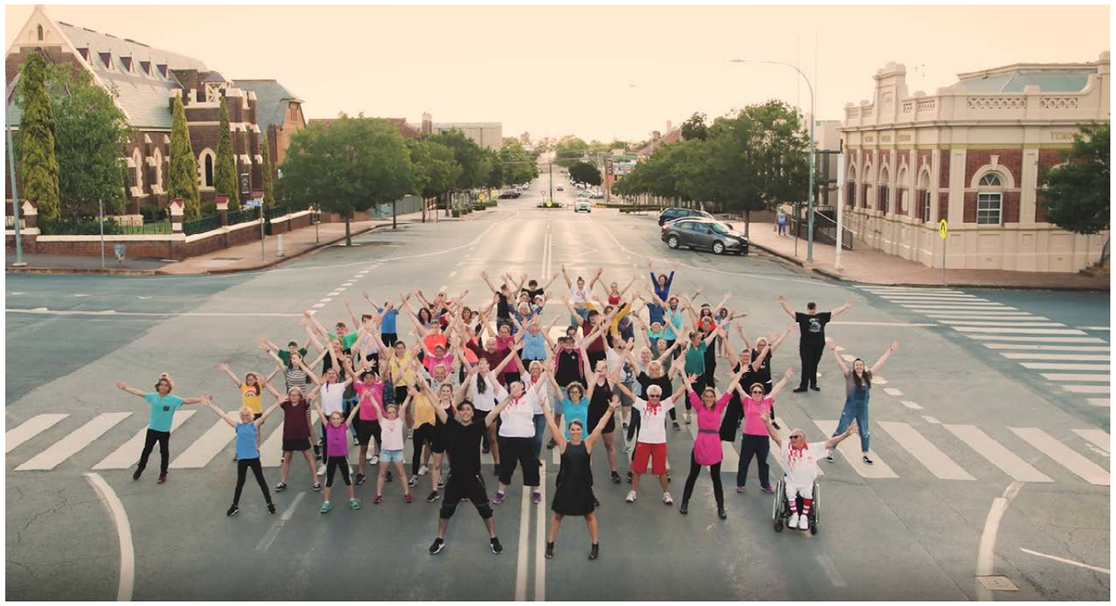


Image: Community in the street, Temora

Future Drought Projections and Impacts

Drought and climate change

Climate change has increased temperatures, resulting in drier conditions and intensified droughts.[42] Global temperatures have increased by 1.15°C since pre-industrial levels at a rate of 0.2°C per decade.[43,44] Regions experiencing increased temperatures and aridity often experience intensified drought conditions. It is predicted drought days will increase by more than 20% by 2080 and the proportion of exposure to drought will increase by 9-17% by 2030 and 50-90% by 2080 (globally).[45] Winter and spring rainfall is projected to decrease by approximately 15% by 2030, and a further 20-30% by 2100, depending on the RCP scenario.[46]

In Australia, climate change has shifted weather patterns southward, causing a 15% decrease in late autumn and early winter rainfall since the 1970s.[47]

By the late 21st century there could be a 50% reduction in autumn and winter precipitation.[48] These changes have intensified recent droughts, notably the Millennium Drought in the late 20th and 21st century, which have been severe compared to those experienced in the preceding 400 years.[49] Weather projections using an RCP 8.5 pathway predict average Australian temperatures will increase. The BoM have also declared El Nino underway, expected to continue until at least the end of the summer 2023-24.[50]

This means warmer, drier conditions will over spring and summer. This also increases fire danger in south-eastern Australia. As of October 2023, 31.7% of NSW is drought affected, in drought, or experiencing intense drought conditions.[51]

Table 5.1: 50th Percentile Climate Projections for West Wyalong[52]

Temperature	Baseline	2050 (RCP 8.5)	2090 (RCP 8.5)
Number of days per year over 35˚C (days)	29.90	53.74	81.73
Number of days per year over 40˚C (days)	3.90	12.63	27.03
Rainfall	**Baseline**	**2050** (RCP 8.5)	**2090** (RCP 8.5)
Average rainfall days above the 99.9th percentile*	0.72	w0.80	1.02
Average days per year below the 10th percentile**	1.41	1.59	1.70
Extreme Weather	**Baseline** (1995)	**2030** (RCP 8.5)	**2090** (RCP 8.5)
Number of Severe Fire Danger Days (FFDI>50)	3.6	4.6	7.6
Cumulative FFDI (for one year) (ΣFFDI)[53] ***	3599	3896	4948

* *"The number of days where the total rainfall is greater than the historic 99.9th percentile were tallied in both the historic and projected future 30-year daily time-series."*

** *"The number of months falling below the historic 10th percentile (sometimes referred to as "decile 1") rainfall total was counted in both the historic and projected future 30-year monthly time-series."*

*** *Data extracted from Murray Basin CSIRO Cluster Report, based on Wagga Wagga data (the closest available data set) and the CESM model.*

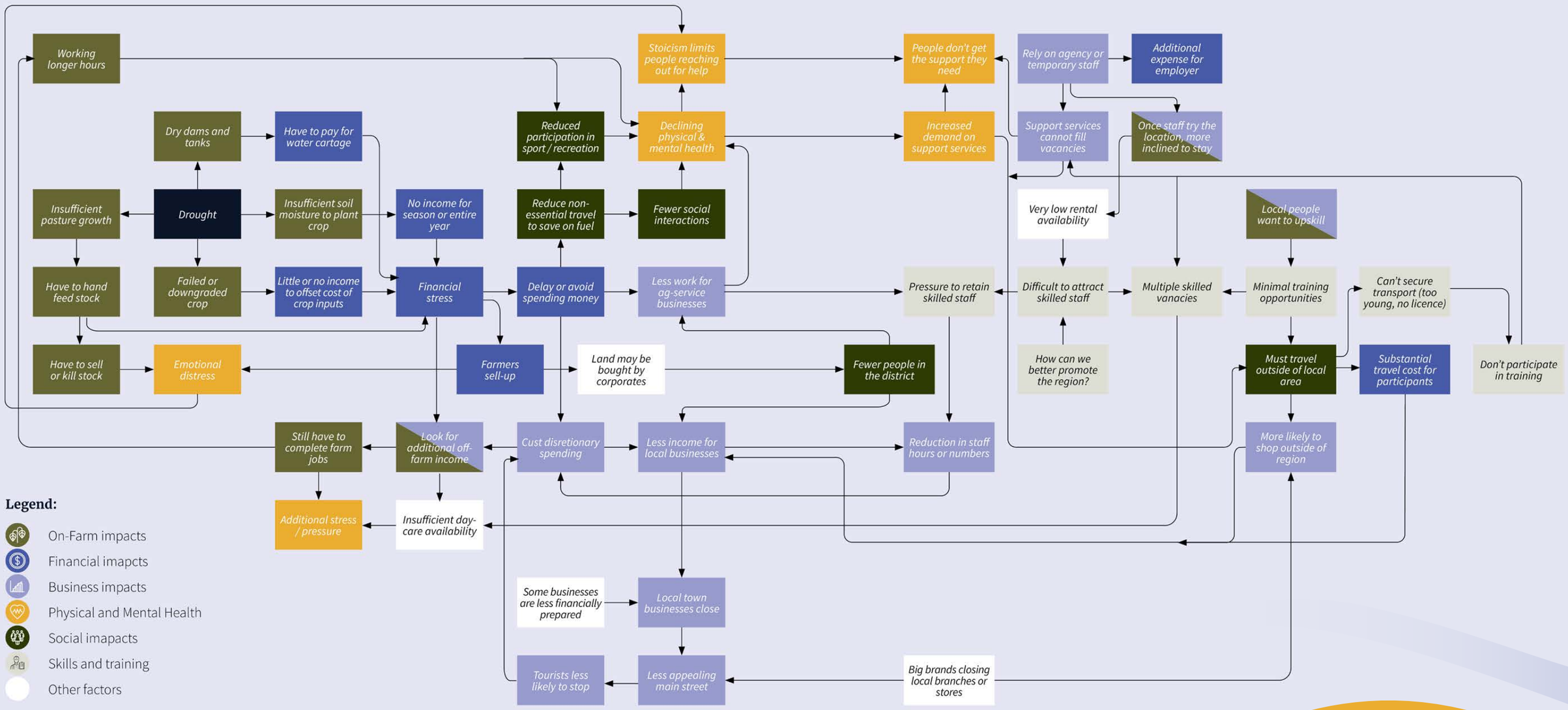
Table 5.2: Impacts of Drought

Economic	Social	Environmental
• Impacts to successful **farming** practices. • **Financial losses** through landscape destruction. • Annual **production** losses. • Impacts to region's **GDP.** • Increased **infrastructure maintenance** and service costs. • Increased **animal care** costs. • Increased **unemployment** across agricultural and mining sectors. • Flow on impacts to increased **product and commodity prices**. • Impacts to **family income.** • Reduced **visitation** and impacts to tourism industry. • Reduced **property value** (private and public). • Reduced **community spending.**	• Adverse **physical health** impacts. • Increased risk of **mental health** issues (including suicide). • Potential increase in **substance abuse.** • Lower **levels of service** (health care, education etc.). • Decline in **service quality.** • Reduced **social connection.** • **Isolation.** • **Trauma.** • **Cultural stress.** • Compromised **water quality.** • **Dust inhalation** risk. • Strain on **healthcare system.** • Disproportionate impacts to **lower socio-economic population.** • Forced **migration.**	• Reduced **soil quality.** • **Vegetation deterioration** and death. • Accelerated **land degradation** • Reduced **land fertility.** • Dry landscape and **desertification.** • Intense **heat.** • Increased **bushfire risk.** • Reduced **soil moisture.** • Impacts to **animal health.** • Reduced **rainfall .** • Reduced **food and water** supplies . • Reduced **habitat** availability . • **Species loss** and extinction. • Altered **species migration** patterns. • Reduced **freshwater quality** (surface and subsurface). • **Amenity** loss.

Image: Truck driving on dusty road, Bland Shire

Figure 5.1 shows the cause and effects associated with drought, within multiple systems and sub-systems, such as agriculture, business, and community. For simplicity, a selection of drought impacts and how they propagate through the region is shown, starting from the upper left of the image. The interaction with underlying stressors such as a lack of skilled workers, limited local training, and low rental vacancies are shown on the right-hand side. The feedback loops shown here highlight the complexity and interconnectedness of drought across multiple sectors and systems. This systems analysis informed intervention development and action pathways to build resilience benefits in the region.

Figure 5.1: Drought: Impacts, Interactions and Feedbacks



Resilience Challenges

Mental Health

Whilst the situation is improving, with more people, more willing to speak publicly about their mental health struggles, there is still a substantial 'stoicism' barrier. "It's acceptable to put your [bank] loan on hold but not ask for help with your mental health". Younger farmers, carrying higher debt loads, face more severe mental health risks, particularly in maintaining a 'positive' appearance on social media.

To add to this, drought impacts are occurring in the context of compounding or consecutive disasters. The region has experienced drought, mouse-plagues, dust-storms, covid and floods in recent years. These events reduce the ability of certain businesses or sectors to offset drought impacts. Further, mechanisms to mitigate drought are becoming less effective, with rising costs for crop insurance and the need to insure a larger proportion of the farming enterprise due to longer droughts and fewer good years.

Industry and Economic Dependency

The region heavily relies on agriculture and related services, which are sensitive to drought. For livestock grazing, a lack of feed may prompt graziers to consider selling off livestock. In previous droughts, there has been significant variability in livestock prices which is difficult to predict or plan for.

This can create financial distress and impacts to mental health and wellbeing. Once farmers experience a loss in income, the impacts start to propagate through the wider community and regional economy. Non-essential machinery or vehicle maintenance may be put on hold, investment in new infrastructure may cease and other discretionary spending will be wound back. Local businesses providing these services will then experience a decline in their trade. It was often noted, that whilst farmers have access to drought assistance packages, local businesses, who are solely or heavily dependent upon agriculture, do not.

Image: 'HOPE' illuminated sign, Bland Shire

Water supply Redundancy

Unlike other regional NSW towns which have experienced stringent water restrictions or faced Day Zero predictions, our region primarily relies on water supplied by Goldenfields Water Authority. This has created two vastly different daily experiences of water supply during drought. For those residents connected to the reticulated system, water is available and requires little behavioural change. Meanwhile droughts often last longer than on-farm water storage provides, with no local potable water storage infrastructure available.[54]

Water must be carted for use within the home, as well as for stock watering, crop spraying and other activities. Challenges include compounding hire costs of the tanker and fuel and difficulty securing a tanker for deliveries. To add to this, the region does not have access to a compliant potable water tanker which can meet the regulatory health and safety requirements for delivering potable water.

Lack of Historic Data

Our region lacks historic impacts across social, economic, and environmental systems. This creates planning challenges. Without a clear understanding of financial loss (at scale), the behavioural response to drought, a measurable indication of the impact on the community, and documented evidence of environmental degradation, it is difficult to identify critical sensitivities. The quality of long-range forecasts also affects farm decisions. For example, drought conditions for Temora and Bland Shires are typically based on the rain data recorded at the Temora Airport, in comparison to long-term averages. This is unlikely to be representative of the whole LGA and the assumption that rainfall at Temora Airport is indicative of drought conditions across the Shire may not be true (the western most boundary of Temora LGA is 39km from the Temora Airport).

Ageing Population

The mean age of Temora and Bland is increasing and is expected to continue. This is particularly expected within town centres where migration from retired farmers and elderly from rural properties occurs.[55] For a variety of reasons, young people are moving away from the region. Some find droughts a reality check and decide to seek employment elsewhere. For others, a lack of education, training or employment opportunities see them moving elsewhere, which is further exacerbated during drought. This factor adds to the strain on the healthcare systems with an increasing population utilising medical support.

A Lack of Available Housing

With limited rental properties, or places to buy was constraining the ability of the region to attract new people. It was observed that there were very few places for sale in Temora, but plenty of homes sitting vacant.

Skills Shortage

Limitations to education and employment opportunities add to skills shortages in the region.

These have been particularly noted in healthcare, which is a concern given the ageing population within the region. Skills shortages are likely linked to the constraint within the region surrounding housing availability and vacancies, particularly in West Wyalong due to lack of development and other pressures.

The Sustainable Development Goals (SDGs), adopted by the United Nations in 2015 as a universal framework and blueprint to achieve a resilient and sustainability future for all, have been widely adopted within the global community to guide the sustainable development process across all pillars environment, social, and economic. SDGs have been utilised throughout this RDR Plan to demonstrate the linkages between the region challenges, opportunities, actions, and the resilience and sustainable future pathways.
Read more: https://sdgs.un.org/goals

Resilience Opportunities

Transport Connectivity

Temora and Bland both have well connected transport networks with the surrounding region. The network of highways intersecting West Wyalong strengthened by the implementation of Inland Rail will provide diversification and additional support for freight, potentially improving outcomes for certain sectors or businesses within the region. Alongside the airports within the region, the transport network provides connectivity for both industry growth and support for critical healthcare and disaster response services.

Service Availability

Building regional drought resilience can be realised by ensuring that those dealing with drought related financial stress are able to access assistance with minimal barriers to entry. The *Have your say survey* found that the majority of respondents experienced barriers in accessing support due to a lack of awareness of the services available.[56] Priorities with Temora and Bland include promote the availability of government support, in addition to connecting community members to local services through community centres and Council websites.[57]

Empower Ageing Population

To support an ageing population, it is critical that they connected with others in the community and feel confident to ask for assistance during period of drought related hardship. Improving the involvement of community in decision making may help strengthen this connection, in addition to connecting locals to services through the community centre and Council websites.[58] Further, priorities to improve accessibility and availability of physical and mental health services, including for the elderly, can help support the adaptive capacity and economic health of the region.[59,60]

Green Spaces

The region has a focus on rivers and riverine corridors as places for cultural connection, recreation, conservation, and economic activity.[61] The Temora Shire Council Community Strategic Plan details actions to improve environmental conditions to support agriculture, conserving water resources, creating more open spaces for leisure and leaning on the benefits of tourism.[62]

Community Connection

As a region that has had significant droughts in the past, the community has the means to prepare and adapt for drought in a number of ways. The region has as strong community spirit and a shared sense of hardship which means everyone knows what everyone is going through. There is an opportunity to leverage this strong sense to community spirit through the presence of multiple social 'groups', volunteer community and a solid baseline of cultural activities. Actions to build support community connection involves identifying funding opportunities to achieve community goals and supporting groups that build social inclusion will help build a sense of connectedness, not only for the elderly, but the wider region.[63]

Build Social Capacity

Improving the understanding of the impacts of drought and the capacity of the community to respond to this impact has been noted as a priority in the Temora Shire Adverse Events Plan in addition to the Bland Shire Council Combined Delivery Program and Operational Plan.[64,65] Temora's Resilience Project which is providing embedded and wrap around personal resilience training and support, so students and the community can have the tools to be resilient all the time. Project is delivering concrete results. With a $20 per child, and $3500 licence fee, some external support (grant funding) is necessary.

Upskilling and Attracting New Residents

To address the noted skills shortage, Temora and Bland have set out a number of priorities, including providing opportunities for local education, as detailed in the Temora Shire Council Community Strategic Plan.[66] The plan includes actions such as supporting scholarships for education, promoting training opportunities for on and off farm skills, provision of affordable housing, more open spaces for leisure, and sustainable planning to support business and industry growth, to attract more people and improve the availability of skills. The Temora Shire Council Economic Development Strategy also seeks to retain services in town and help to upskill local businesses to attract new residents.[67] The Bland Shire Council Delivery Program and Operational Plan is in alignment with this, prioritising the identification of businesses to relocate to the Shire, implementing land zoning to support business and industry growth and fostering opportunities for education.[68]

Image: Embrace Festival - Multicultural event - Aboriginal smoking ceremony - Temora Railway Precinct, Temora Shire

06

Our Drought Resilience Journey

The Program Logic in Figure 6.1 describes our drought resilience journey. This starts from a shared vision and strategic objectives and goals to arriving at specific actions and the desired short-term and long-term outcomes.

Figure 6.1: RDR Plan Program Logic

Vision

In Temora and Bland, we envision **a vibrant community, fortified by resilience, compassion, and unity.** Our journey towards drought resilience is a product of our strong community spirit. By embodying our unwavering investment and commitment to each other, we will leverage existing social connections and strengths to adapt to future changes. We will be a region that fosters data -driven economic diversity, becoming a thriving destinat ion of choice for new skilled res.idents. By embedding physical and mental resi lience across generations now and in the future, we will cultivate a sense of comradery to sustain us through each new challenge we face. By planning for the dry times ahead, we will remain a viable loca l economy. By embrilcing these values, we strive to economically, socially and environmentally prosper amidst adversity and droughts. Together, we will forge a more resilient future.

To bridge our vision with actionable steps, three strategic areas across the **economic**, **environmental**, and **social spheres of influence** were prioritised:

Strategic Priorities

Economic	Environmental	Social
Generating economic diversification and strengthening existing businesses andindustry to bolster economic stability in times of drought.	Improving awareness of the processes that underpin our unique landscapes and implementing initiatives to ensure they remain healthy and resilient.	Create equitable and accessible re sources that leverage our strong community spirit, so we are mentally and socially resil ient through times of hardship.

In order to achieve strategic priorities, **specific goals** were co-identified with regional community:

Goals

Economic Resilience	Environmental Resilience	Social Resilience
• Embed resilience-driven decision making in existi ng industries. • Improve cooperation between res idents, bus inesses, and industries. • Provide financial tools that help meet needs in a changing world. • Encourage community-based initiatives that contribute to economic prosperity. • Diversify our local economy th rough attracting new talents, visitors and new type of incomes.	• Improve environmental re silience through grass roots initiatives. • Foster awareness of the water cycle and climate impacts across all age groups. • More efficient water use through improved irrigation infrastructure. • Invest in sustainable and innovative farming and agribusiness practices. • Protect, preserve and enhance our region's unique landscape and green spaces	• Invest in our strengths as a small and connected community. • Build capacity amongst community groups and organisations, enabling owners hip across drought resilience. • Improve understanding of services available and how to access them. • Support a prosperous and secu re community that hosts a diverse range of people. • Ensure a diverse range of support services that cater to all genders, ages and cultural backgrounds

Priority actions were co-designed with key stakeholder and community to ensure the region achieve above identified goals:

Actions

- Enable economic growth and diversification by bringing vacant houses onto the rental market.
- Enable the provision of targeted drought relief through spend data analysis and associated communications.
- Strengthen the capacity of community groups to deliver social connection activities.
- Improve community-wide well-being through the resilience project.
- Enabling economic growth and diversification through scoping the provision of human resource management support to local bus inesses.
- Maintaining open green space amenity through improved water efficiency.

Through the implementation of each action, it is expected that the RDR Plan will generate **short•term outcomes** that demonstrate progress towards our vision, strategic priorities, and goals. It is anticipated that the above actions will produce the following **economic**, **environmental**, and **social resilience outcomes** within our community:

Short Term Outcomes (≤ 4 years)

Economic Resilience	Environmental Resilience	Social Resilience
• Increased money flowing through the local economy from the rental income and from new residents who live local and buy local. • Increased capacity for existing and new businesses & major infrastructure projects to attract skilled workers, strengthening and diversifying the economy. • Thriving businesses who are well supported will have improved capacity to adapt to economic changes brought about by drought cond itions, floods, or other events. This paves the way for diversification of the economy through the attraction of non-agriculture-based businesses. • Business owners actively pursue opponunities to increase financial security of their business pre-, during, and post-drought.	• Maintaining the amenity and performance of recreational and public open space will enable residents to undertake activities which are beneficial for their physical and mental wellbeing. • Improving water efficiency will reduce the reliance on non-potable and potable water supplies from the regions' water storage dams and aquifers. • Maintaining the visual appearance of towns and villages, particularly during drought, Is a key element in sustaining tourism spend within the region.	• More people and families living in the area add ing numbers to local schools, sporting teams and clubs. • Greater capacity to attract staff for community support roles such as aged care, healthcare, and childcare. • Maximal use of current housing stock and improved visual amenity with once vacant homes now being actively cared for. • Building individual resilience has improved the resilience of families, school communities and the wider community. • Community groups have achieved their potential to support and deliver social connection activities:, thus reducing social isolation and opportunities for people to improve their physical, mental, and spiritual wellbeing.

Attaining our **long-term outcomes** hinges on the successful execution of each action, accumulating our short-term outcome success, and thereby achieving our strategic priorities and goals:

Long Term Outcomes (> 4 years)

- There is a common understanding and a shared vision in the region to manage drought risks and build community drought resilience.
- The region works collectively and in partnerships to build drought resilience across three main pillars.
- Measures are implemented to limit impacts of drought and better respond to drought.
- Stakeho lders and communities actively share knowledge and take actions contributing towards drought resilience.
- Diversify our local economy.

Monitoring, Evaluation and Learning

To ensure our journey towards long-term outcomes remains on track, adaptable, and achievable, we will employ robust monitori ng, evaluation, and learning mechanisms. This will provide valuable insights to refine our strategy and approaches to best suit our community and needs as required.

Image: Canola Fields (supplied by WSP)

Action Pathway

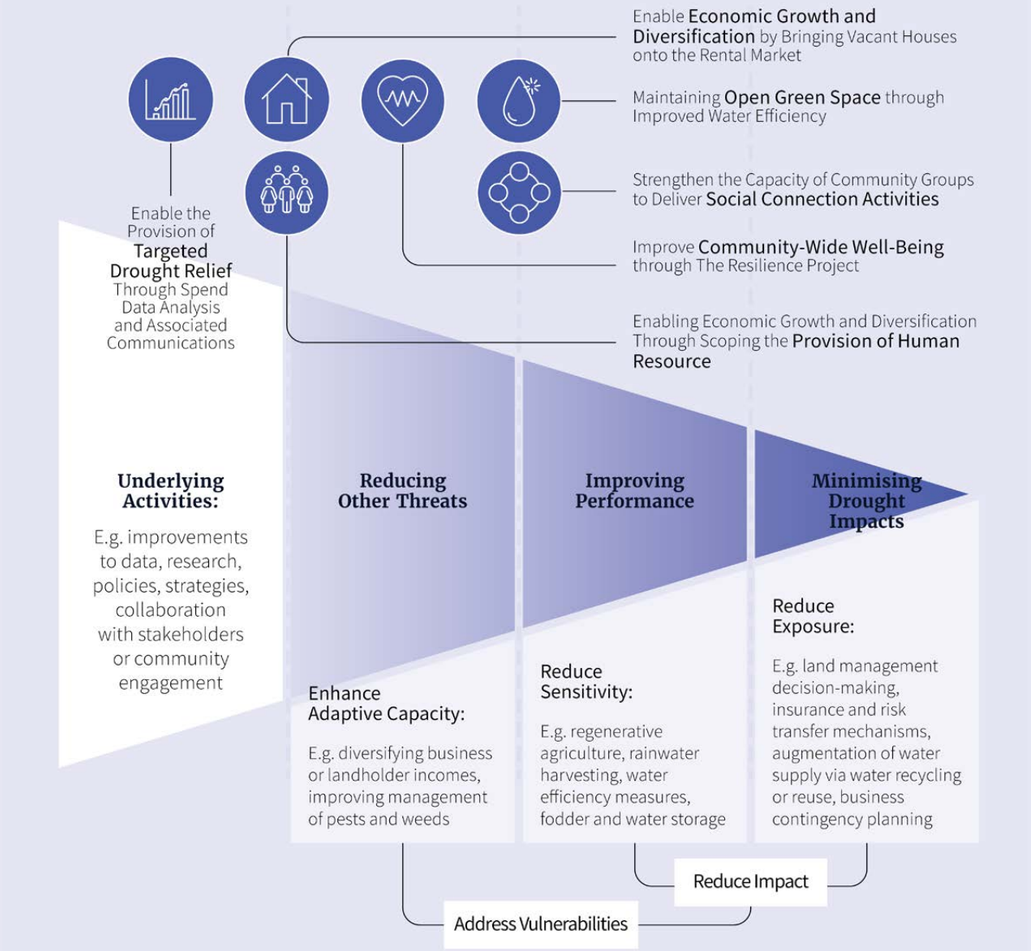
Figure 6.2 demonstrates how the priority actions of this RDR Plan locate on the impact pathway spectrum.

The impact pathway spectrum represents different activities that may help build resilience to drought in the region and range from supporting or underpinning activities, enhancing adaptive capacity, improving performance and reducing exposure. The actions developed in this Plan seek to provide a comprehensive approach to address drought vulnerabilities and reduce drought impacts. These actions were developed, evaluated and prioritised during stakeholder and community engagement program using the approaches discussed in sequencing pathways and implementing pathways (page 23).

In subsequent sections, action plans for the six actions developed, are documented and include information to support funding endeavours, and recommendations for implementation. This includes action rationale, high-level estimated costs and implementation timeframes, implementation steps, potential benefits and supporting actions. Note that the information provided within action plans, particularly timeframes and costs, are intended as preliminary estimates, to be further developed in subsequent phases following the completion of this RDR Plan. Implementation of the actions outlined within this plan are dependent on Council's available resources and external funding support. Additional external funding support is critical prior to the implementation of many of the initiatives defined within this RDR Plan.

Figure 6.2 Temora and Bland response to Drought Resilience (Impact Pathway Spectrum)

Adapted from the National Environmental Science Program, Climate Systems, Interventions for Biodiversity Conservation



Action Strategic Alignment

Table 6.1 demonstrates the linkages between actions and the existing integrated and strategic planning programs and initiatives at a local, regional, state, national, and international scale.

Table 6.1: Action Strategic Alignment

Strategic Planning Program / Initiative	Enable Economic Growth and Diversification by Bringing Vacant Houses onto the Rental Market	Enable the Provision of Targeted Drought Relief Through Spend Data Analysis and Associated Communications	Enabling Economic Growth and Diversification Through Scoping the Provision of HRM Support to Local Businesses	Strengthen the Capacity of Community Groups to Deliver Social Connection Activities	Improve Community-Wide Well-Being Through the Resilience Project	Maintaining Open Green Space Amenity Through Improved Water Efficiency
Temora Local Housing Strategy (2022-2042) (Draft)	●					
Bland Shire Housing Strategy	●					
Temora Shire Council Economic Development Strategy 2020 (Draft)	●	●	●			
Temora Shire Community Strategic Plan Towards 2035				●	●	●
Bland Shire Council Community Strategic Plan		●	●	●	●	●
Bland Shire Council Community Engagement Strategy	●	●	●	●	●	●
Bland Shire Council Adverse Event Plan			●			●
Bland Shire Council Local Strategic Planning Statement	●					●
Bland Shire Council Combined Delivery Program and Operational Plan			●			●
Goldenfields Water – Business Activity Strategic Plan (2022-2023)		●	●			
Goldenfields Water Delivery Program and Operational Plan (2022-2026)		●				
Temora Shire Adverse Events Plan		●	●			●
Temora Shire Local Strategic Planning Statement 2020	●	●				●
Temora Workforce Futures Study (2018-2019)	●	●	●			
Temora Business Human Resources Needs Assessment 2023		●	●			

Strategic Planning Program / Initiative	Enable Economic Growth and Diversification by Bringing Vacant Houses onto the Rental Market	Enable the Provision of Targeted Drought Relief Through Spend Data Analysis and Associated Communications	Enabling Economic Growth and Diversification Through Scoping the Provision of HRM Support to Local Businesses	Strengthen the Capacity of Community Groups to Deliver Social Connection Activities	Improve Community-Wide Well-Being Through the Resilience Project	Maintaining Open Green Space Amenity Through Improved Water Efficiency
South West Slopes Regional Economic Development Strategy 2023 Update	●	●	●			
Riverina Murray Regional Plan 2041	●	●	●			
Riverina Murray Destination Management Plan 2022-2030		●	●			
Farming Systems Group Alliance (FSGA) Community Engagement Report 2022, Southern NSW Drought Innovation Hub		●	●	●	●	
REROC Eastern Riverina Regional Housing Strategy 2021	●					
20-year Economic Vision for Regional NSW 2018	●	●	●			
NSW Water Strategy 2021			●	●	●	●
Murrumbidgee Regional Water Strategy						●
NSW Murray and Murrumbidgee Regional Water Strategies 2022					●	●
NSW Community Resilience and Response Plan				●	●	
NSW Extreme Events Policy 2018		●			●	●
DPI Management Drought Guide - Ninth Edition: 2019		●	●	●	●	
Australian Government Drought Response, Resilience, and Preparedness Plan 2019		●	●		●	
National Drought Agreement 2018		●	●	●	●	
CSIRO Drought Resilience Mission – Progress Update 2022		●	●	●	●	●

Strategic Planning Program / Initiative UN Sustainable Development Goal:	Enable Economic Growth and Diversification by Bringing Vacant Houses onto the Rental Market	Enable the Provision of Targeted Drought Relief Through Spend Data Analysis and Associated Communications	Enabling Economic Growth and Diversification Through Scoping the Provision of HRM Support to Local Businesses	Strengthen the Capacity of Community Groups to Deliver Social Connection Activities	Improve Community-Wide Well-Being Through the Resilience Project	Maintaining Open Green Space Amenity Through Improved Water Efficiency
Goal 1 – No Poverty						
Goal 2 – Zero Hunger						
Goal 3 – Good Health and Wellbeing				●	●	●
Goal 4 – Quality Education				●	●	
Goal 5 – Gender Equality				●	●	
Goal 6 – Clean Water and Sanitation						●
Goal 7 – Affordable and Clean Energy						
Goal 8 – Decent Work and Economic Growth	●	●	●			
Goal 9 – Industry, Innovation, and Infrastructure	●	●	●			
Goal 10 – Reduced Inequalities			●	●	●	
Goal 11 – Sustainable Communities	●	●	●	●	●	●
Goal 12 – Responsible Construction and Production						
Goal 13 – Climate Action						●
Goal 14 – Life Below Water						
Goal 15 – Life on Land						●
Goal 16 – Peace, Justice, and Strong Institutions		●				
Goal 17 – Partnerships for the Goals			●	●	●	

Actions have been developed to align with the three pillars of resilience, economic, environmental, and social. Sustainable Development Goals (SDGs) have been adopted by the United Nations align with these pillars, acting as a blueprint for peace and prosperity across our planet and people both now and into the future. For homogeneity, challenges, opportunities, and actions have been linked to key SDGs to demonstrate the linkages throughout this RDR Plan.

Enable Economic Growth and Diversification By Bringing Vacant Houses onto the Rental Market

Spheres

Economic Social

SDG Alignment

Rationale

When drought conditions affect the region, the spending from agricultural activities is reduced, leading to substantial flow-on reductions in the local economic activity. To address this, there is a strong desire to diversify the local economy and attract expanded or new employment sectors which are less dependent on agriculture. The region would also like to capitalise on major infrastructure developments within the wider region such as renewable energy and Inland Rail. However, multiple industries including agricultural service providers, aged care, health and childcare, and local government often can't fill their existing vacancies due to workforce shortages. Attracting staff is a multi-faceted challenge. In many instances a suitable candidate is identified who would need to relocate to the area to fill the role. With minimal houses available for rent, prospective employees can be deterred or will choose to accept the role but live elsewhere, therefore reducing the local economic impact of their employment.

Despite a consistently low rental vacancy rate of less than 0.5% across both shires, there is evidence to suggest that there are a significant number of unoccupied homes in the district. A number of perceived or real barriers exist for these homeowners in making them available for rent. For some, they may be concerned about losing their pension or tenants damaging the property. In some cases, the residence may need a few repairs, whilst for others, the previous occupants may now be living in aged care homes or have passed away. Each of these challenges can be overcome with access to the right advice, support, and follow-up. This can be complemented by putting a face and story to potential future renters, the roles they would be filling, and explaining the benefits they bring to the district. For hard-to-fill vacancies such as aged care or mental health, there is evidence to suggest that once newcomers have experienced the local lifestyle, they are more likely to consider moving to the district long-term. Similarly, renting first allows new residents to try before they buy. Every extra property made available can enable a new person or family to move to the district, bolstering school numbers, players in sporting teams, and money spent in local businesses.

Greater housing availability will also reduce the upward pressure on housing costs and associated cost-of-living pressures felt by existing residents. By bringing more money into the local economy, businesses will benefit from the opportunity to thrive during the good times, to help them ride-out the downturn during drought.

This action is a first step, with further work required to continue to build on programs (e.g., Country Change) that promote the district to future residents from metropolitan or other regional areas. In the medium to long-term, these steps will reduce some of the underlying challenges, and will progressively facilitate a modification of the system towards a diverse economy which is resilient to drought.

Timeframe

3 months

Estimated Costs

$20,000

Action Owner

Temora and Bland Shire Councils

Stakeholders

- Employers with staff vacancies.
- Real estate agents.
- Providers of expert advice (financial planning, wills and probate, real estate).
- Providers of property maintenance and repair services.
- Aged care homes (given some vacant homes will be associated with local residents moving into aged care).
- Goldenfields Water County Council.

Steps for Implementation

1. Recruit third-party contractor who would be employed by responsible for steps 2 – 8.
2. Match low/no water use houses with Council datasets.
3. Ride-along with Council waste collectors to confirm vacant houses.
4. Resulting database of vacant homes would remain the property of the respective Councils and would not be made available to third parties.
5. Develop tailored letter which each Shire which can be sent to ratepayers of vacant houses.
6. Send letter to identified vacant homes.
7. Conduct media campaign timed to the issue of letters to build momentum and bring a face to the issue.
8. Identify method to conduct follow-up with ratepayers (e.g., telephone call from Council representative).
9. Draft report on key findings and recommendations for further action.

KPIs

- Number of vacant homes identified (per Shire).
- Creation of a vacant-home ratepayer letter.
- Number of letters sent to ratepayers.
- Number of information sessions hosted and participant numbers.
- Number and nature of media campaign elements utilised.
- Number of ratepayers participating in follow-up support services.
- Number of vacant homeowners linked with businesses seeking accommodation for employees.

Resilience Dividend

Social

- More people and families living in the area adding numbers to local schools, sporting teams and clubs. Greater capacity to attract staff for community support roles such as aged care, health, and childcare.

Economic

- Increase in money flowing through the local economy from the rental income and from new residents who live local and buy local.
- Increased capacity for existing and new businesses & major infrastructure projects to attract skilled workers, strengthening and diversifying the economy.

Environmental

- Maximal use of current housing stock and improved visual amenity with once vacant homes now being actively cared for.

Supporting Actions

Real Estate Agents

- Include 'rental wanted' advertisements within their existing advertising strategies. Participate pro-bono in information sessions.

Employers

- Participate in media campaign elements to build awareness of the link between a lack of rental vacancies and recruitment challenges for their business, and the co-benefit of bringing new people to the district. Provide rental guarantees for employees to reassure cautious landlords.

Goldenfields Water County Council

- Provide local Councils access to low/no water usage residence data for investigation.

Next Steps

1. Develop materials and systems to assist and improve the capacity of local businesses to advertise and target employment vacancies beyond the region, to improve the viability of businesses and further bolster spending in the local economy.
2. Advocate for delivery of Tafe NSW courses within the Shires to reduce barriers for local residents in upskilling so they can fill vacancies in critical services (aged care, child-care, health) which are key to supporting a healthy and resilient community.
3. Implement the recommendations of the HR Needs Assessment to further improve the underlying viability and resilience of local businesses.
4. Investigate and support actions that increase both temporary and permanent housing stock.

Enable the Provision of Targeted Drought Relief Through Spend Data Analysis and Associated Communications

Spheres

Economic

SDG Alignment

Rationale

Access to quality data is key to developing robust policies, plans and actions to systematically address the challenges drought poses within our district and identify sources of drought-independent or drought-resilient spending. Whilst long-standing businesses can look to their historical cash flows to assess drought impacts, they are unlikely to share this information publicly. Some businesses have commenced operations since the last drought and may lack insights into how and when drought will affect their business performance. We also know that many of our businesses are family affairs without access to dedicated accountants or financial managers with the time to delve into the data and identify these impacts. What is needed is real-time aggregated data at the sector, town, and district level to better target business support at the right time to the right sector and improve drought impact awareness in our business community.

This action will facilitate access to a spend-data subscription service for the two LGAs and associated analysis. The subscription (depending on the service provider) is usually acquired on a yearly basis with some access to previous year(s) of data. Depending on timing, this may cover our district pre-, during or post-drought. This will provide information on the local economy and structure, including trends, to answer key questions: how much did our economy and each sector change during the period? How is this related to the broader economy, our industry mix, and local or regional factors? How quickly does economic spending change, where are these impacts concentrated, and how does a change in one industry sector affect other sectors? Are there key events which trigger a change in spending? How many visitors are coming to the district, how long do they stay, what are their spending patterns, and where are they coming from? Is our district attracting spending from other regional areas including through a seasonal population, and if so, where from and in what sectors?

By quantifying our dependence and susceptibility to drought impacts at various scales, we can better target our efforts and advocate for investment. Where and when should support be targeted to improve drought resilience? Are there particular regions or sectors which exhibit positive-growth potential which we can leverage to diversify our economy? How can we optimise and improve our tourism offerings?

A key element to the success of this action will be in sharing the insights with local businesses, sectors, and stakeholders. It is envisaged that the data will also be a key tool for advocacy work with decision-makers at regional, State and Federal levels. A minimum timeframe of 15 months has been set to allow for a one-year subscription and an additional 3-months of analysis, reporting and sharing. Ideally a two-year subscription would allow for seasonal differences to be identified which are associated with the regions winter-cropping agricultural system, with the estimated costs provided for a two-year subscription.

By facilitating access to data driven insights, this action seeks to transform the approach taken by our business community in the financial management of their operations before, during and after drought. The data will underpin ongoing and future work to modify and enhance the economic diversity of our region.

Timeframe

15 – 27 months

Estimated Costs

- Two-year Spend Data Subscription: $45,000
- Data analysis, insights and sharing sessions: $55,000

Action Owner

Temora and Bland Shire Councils

Stakeholders

- Temora Business Enterprise Group and Business West Wyalong.
- Local and Regional Businesses.
- Local and Regional Tourism bodies and enterprises.
- Regional Australia Institute.
- Regional Development Australia - Riverina.

Steps for Implementation:

1. Establish an economic spend data working group comprising representatives from Council, the local business community, and other relevant stakeholders to establish goals, outputs, and desired outcomes.
2. Evaluate spend data service providers to identify provider with the ‘best fit’ for the items developed in Step 1.
3. Develop and release a request for quote for a person or entity to conduct the required data analytics and to facilitate data insights (as per steps 4-6).
4. Develop templates to store, analyse and graphically represent spend data for use during and post-project.
5. Conduct data analysis and identify relevant insights in line with items developed in Step 1.
6. Share data with internal Council teams, local and regional businesses, tourism-related entities, business chambers and other relevant stakeholders.
7. Spend data committee close out the project by developing recommendations for next steps.

KPIs

- Number and type of economic metrics provided as outputs.
- Number of drought-impact propagation pathways, thresholds, and timeframes identified at sector, township and LGA level.
- Number and type of data-insight sharing activities carried out (e.g., information sessions, newsletters, webinars).
- Number of businesses and sectors participating in data-insight sharing activities.
- Number of Council strategies, plans and advocacy activities which utilise the project outputs (long-term KPI).
- Number and type of drought relief activities instigated as a result of spend data analysis and associated communications.

Resilience Dividend

Social

- Understanding when, where and how drought impacts the local economy, to understand how individuals, families and communities will be affected, and hence, where support should be prioritised.

Economic

- Knowing where to target and prioritise resources in relation to economic diversification and drought-resilience support.

Supporting Actions

Local Business Chambers

- Promote participation and utilisation of data insights with their membership. Leverage data insights to advocate for local and regional investment.

Temora and Bland Shire Councils

- Actively share data and insights (during and post project) with local and regional Stakeholders. Identify, promote, and liaise with business support services, such as Service NSW Business Concierge, to facilitate businesses improving their resilience.

Next Steps

1. Identify the most appropriate and effective mechanisms for improving the drought-resilience of local businesses and sectors.
2. Leverage insights to diversify the local economy and optimise local economic strategic planning.
3. Leverage insights to optimise local and regional tourism strategies and planning.
4. Support measures to improve career pathways including access to vocational and tertiary education for residents as a means of growing and retaining local talent.

Enable Economic Growth and Diversification Through Scoping the Provision of Human Resource Management Support to Local Businesses

Spheres

Economic

SDG Alignment

Rationale

During the development of this Plan, the drought preparedness of main street businesses was explored through interviews and main-street conversations. In both Temora and Bland Shires, it was apparent that many retailers had opened since the last drought and had not turned their attention to future drought impacts or how to prepare their businesses. These small business owners are predominantly run by one or two people who typically spend their entire working day involved in the day-to-day operations. This limits the time available to develop their business skills, optimise their business operations or plan for the future. Inefficiencies were also identified in local people obtaining access to necessary training, such as first aid courses or other certifications required for the operation of their business. Businesses of all sizes are further hampered by their ability to attract staff for skilled, trade, managerial or professional vacancies.

These findings are consistent with the outcomes of the Temora Business Human Resources Needs Assessment review. This was undertaken by Temora Shire Council and Temora Business Enterprise Group in 2023, with funding provided by the NSW Growing Regions of Welcome program. The Needs Assessment identified that businesses were unable to meet operational demands or implement growth plans due to challenges in workforce attraction and retention. That is, local small and medium sized businesses are (on average) surviving, not thriving. When drought conditions inevitably affect the region, these existing constraints will further hamper their ability to be resilient and remain viable through any economic downturn. Furthermore, for any strategies designed to diversify the agricultural-based economy to be effective, workforce shortages for existing businesses need to be addressed first, i.e., why attract more businesses when there aren't enough workers for the existing businesses?

The top three recommendations of the review were:

1. Secure suitable independent human resource expertise and implementation services,
2. Establish a one-stop-shop for local businesses to provide scalable access to HR services and support, including meeting a range of common training and other needs collaboratively and cost effectively, and
3. Create integrated and formalised pathways to link youth and local citizens with government programs, further education, professional development, and employment opportunities.

Operationalising these recommendations can be achieved through a variety of models. For example, attracting an independent human resource business to the region, or creating a cooperative where businesses pool their resources to employ a shared human resource professional. However, it is unclear which model would be the most effective or viable in the local region. This project would seek to scope out the options available for securing HR support, determine how each option could be funded initially and on a long-term basis, and how to initiate the delivery of the preferred HR support model. Engaging with local businesses and discussing the strengths and weaknesses of the different approaches, the willingness of businesses to pay for these services, and the level of support required would be key inputs into the decision-making. It is envisaged that this scoping study would provide the necessary evidence base to inform the implementation of the preferred HR support service model.

Ultimately, this project will transform our approach to human resource management, from one in which all the actors are operating in isolation, to one where we leverage collective, coordinated and integrated action.

Timeframe	Estimated Costs
3 – 6 months	$20,000 - $30,000

Action Owner

Temora and Bland Shire Councils in conjunction with Temora Business Enterprise Group and Business West Wyalong.

Stakeholders

- Local small and medium businesses.
- Service NSW for Business.
- Training Services NSW.
- TAFE NSW.
- Workforce Australia.
- Dept Regional NSW.
- Regional Development Australia (RDA) Riverina.
- Local High Schools.
- Temora Business Enterprise Group / Business West Wyalong.

Steps for Implementation

1. Develop and issue a Request for Quote (RFQ) for the scoping study.
2. Recruit a contractor for the scoping study to complete steps 3 to 8.
3. Review the findings of the Temora HR Needs Assessment.
4. Identify a short-list of models capable of addressing recommendations 1 to 3 of the Temora HR Needs Assessment.
5. Conduct engagement with businesses in the Temora and Bland Shires to gauge support for each of the short-listed models, their willingness to pay and required level of HR support.
6. Evaluate the challenges and enablers of the potential models including how the model would be funded.
7. Identify next steps and recommendations for the preferred option including cost and funding options.
8. Detail a pathway to implementation for the preferred option.

KPIs

- Number of businesses engaged.
- Number of models identified and evaluated.
- Identification of a preferred option.

Resilience Dividend

Economic

- Thriving businesses who are well supported will have improved capacity to adapt to economic changes brought about by drought conditions, floods, or other events. Paves the way for diversification of the economy through the attraction of non-agriculture-based businesses.

Supporting Actions

Temora and Bland Shire Councils

Service NSW for Business

- The respective Shire Councils and business chambers work with Service NSW for Business to facilitate in-person access to Business Concierge's support services. It is envisaged this would involve Business Concierge staff attending local businesses in a staged process to build rapport with business owners, create awareness of their services, prompt businesses to assess their business' financial resilience and ultimately to utilise available support from the Business Concierge and advisory services from Business Connect.

RDA Riverina

- Work together to improve the business community's awareness and utilisation of the RDA Riverina Grow Our Own program.

High Schools and Employment service providers

- Continue collaborating to identify solutions which would facilitate TAFE NSW (or other training providers) providing vocational training within the Temora and Bland Shire Councils areas. This is particularly the case for areas exhibiting a current skills shortage such as health-, aged- and childcare positions, which have the added benefit of being relatively immune from drought impacts, and in relation to childcare, are a key enabler for farming families to diversifying their income.

Next Steps

1. Seek funding or other necessary support to facilitate the implementation of the preferred pathway identified in this project for providing HR support.
2. Continue to seek funding and/or support to address other challenges constraining the performance of small and medium enterprises in the region.
3. Enhance materials and systems to support local businesses to effectively advertise vacancies beyond the region, such as RDA Riverina's Jobs Riverina Murray website, and encourage people to relocate to the region for short and long-term employment through continued participation in the RDA Riverina Country Change program and the Regional Australia Institute's Move to More campaign. This includes steps to make the region more welcoming and attractive to people from diverse backgrounds, such as the NSW Growing Regions of Welcome program.

Temora and Bland Shires Drought Resilience Plan

Strengthen the Capacity of Community Groups to Deliver Social Connection Activities

Spheres

Social

SDG Alignment

Rationale

The region benefits from high rates of volunteerism, with a diverse range of community groups providing a solid base of social capital. These groups provide opportunities for town and rural residents to interact socially in sporting, cultural, hobby, or intellectual endeavours. Social connection was a recurring theme in the engagement conducted for this Plan. Community activities are key to encouraging socialisation, reducing sense of isolation, and providing outlets for connection, relaxation, learning of new skills or entertainment. In turn, this supports the mental health and resilience of individuals, and is particularly important during times of adversity, such as droughts. The feedback highlighted the importance of enhancing the resilience and vitality of community groups in good times, ensuring their readiness to serve as a support system during periods of drought or other natural disasters.

Community group representatives identified multiple challenges, which may be targeted to support their resilience. For example, the promotion of groups and activities can be difficult. Often, different groups find themselves vying for the same audience for events organised or aren't reaching their full potential in terms of membership and participation. For newcomers to the community, establishing new social connections can be daunting, with no centralised resource to explore what groups exist. Additionally, there is a need for assistance or development of a streamlined approach to access essential resources such as training, insurance, grants, and other administrative activities.

Within both Councils, limited resources mean it is difficult to deliver the necessary support and engagement with community groups. While the staff express a desire to develop a comprehensive catalogue of community groups, including their mandates and contact details, the considerable time investment required is beyond their staffing capacity. The introduction of a volunteer coordinator position could address this gap, facilitating the development of contact lists and serving as a platform to share knowledge, experiences, and ideas, ultimately enhancing the skillsets of volunteers.

By monitoring social media and leveraging their existing network, the coordinator could establish more robust mechanisms to promote events, championing the respective Council events' pages as the primary hub for community happenings.

The envisioned outcome of this project includes the creation of databases, systems and processes which could then be maintained by existing Council staff. The project would also act as a pilot or proof of concept, to explore the value of incorporating a volunteer coordinator role long-term.

This action seeks to modify our existing approaches, optimising how we support, coordinate, and integrate our volunteers, community groups and events to achieve a socially cohesive community.

Timeframe

3 – 6 months

Estimated Costs

$40,000 (3 months) or $65,000 (6 months)

Action Owner

Temora and Bland Shire Councils

Stakeholders

- Local Community Groups.
- All residents.

Steps for Implementation

1. Develop and issue a Request for Quote (RFQ) for a 2-day per week role in each LGA.
2. Recruit a contractor for the coordinator role (in each LGA) to complete steps 3 to 11, noting that local knowledge and existing community connections will be a key quality of the successful candidates.
3. Map existing community groups and points of contact.

Steps for Implementation *continued*

4. Contact all community groups and gather data on core objectives, target audience, membership, frequency of activities, current challenges, training needs, and other support required.
5. Evaluate needs across community groups to establish core training opportunities in the region.
6. Coordinate (where possible) training providers suitable to deliver required training within the LGAs.
7. Develop supporting templates, checklists, and tools in response to community group needs (for example, a list of insurance providers, and how-to-guide for successful grant writing).
8. Monitor social media to identify local events, and cross promote on Council's event pages and to other community groups to increase visibility and participation.
9. Establish an online community directory which include an avenue for community groups to easily have events listed and promoted.
10. Develop a short resource, such as an ideas list, to encourage community members to host their own social gatherings with friends, family, or neighbours.
11. Conduct a hand-over of project elements with Council staff to allow the project collateral, systems, and processes to be integrated and utilised on an ongoing basis.
12. Conduct a project completion survey with community groups to identify next steps and inform recommendations for the future.

KPIs

- Number of community groups identified and included in the contact register.
- Number of training activities co-ordinated.
- Proportion of templates, checklists, tools, and resources developed to address community group needs.
- Establishment of the online community directory.
- Number of community events advertised on the Council events page (per month).

Resilience Dividend

Social

Supporting community groups to achieve their potential will enable them to support and deliver social connection activities thus reducing social isolation and opportunities for people to improve their physical, mental, and spiritual wellbeing.

Supporting Actions

Temora and Bland Shire Councils

- Continue advocating for support of local community groups, including securing grant funding for facility upgrades and to facilitate community events. Continue to promote community activities via Council communication channels.

Community

- Recognise their role, capability and capacity in building and maintaining social connections by hosting small-scale get togethers for their friends, neighbours, or local community.

Next Steps

1. Assess the effectiveness of the role and consider whether there is sufficient funding and support to adopt the role as a permanent position in each Council.
2. Consider establishing a social media campaign (such as a hashtag and associated printed social media selfie-frames), to allow local community groups and individuals to promote and share their social connections activities. This would help build a movement where social connection is celebrated, ideas shared, and individuals are encouraged to take part.
3. Assess the feasibility, suitability, public support, and project owner for a monthly 'community champion' promotion, which seeks nominations from a set number of different community groups each month (perhaps 10-12) for someone who has shown the values of community spirit, helping one and other or going the extra mile. Such a program would have a triple-benefit of publicising good news stories, promoting the community groups in operation in the region, and raising awareness that small acts by many individuals are the foundations of a resilient and thriving community.
4. In conjunction with the 'community champion' promotion, showcase one mental health-related service provider (could be school counsellors, the Primary Health Network, Temora Community Centre etc) each month to improve community awareness of available services and reduce stigma associated with reaching out for assistance. This would be promoted on social media, radio, newspaper, and other avenues to build awareness .
5. Promote funding opportunities to community groups that are aimed at delivering activities that build social connection and resilience.

Temora and Bland Shires Drought Resilience Plan

Improve Community-Wide Well-Being Through The Resilience Project

Spheres

Social

SDG Alignment

Rationale

There are a multitude of entities providing mental health support services in the district. These services often face resource constraints such as shortage of staff, and over-stretched employees, particularly when drought conditions are experienced. A further challenge is the stoicism displayed by many farmers and local residents who are reluctant to reach out for support during the difficult times. School aged children were identified during engagement as being more receptive to engaging in programs and activities which foster wellbeing and can act as a conduit in sharing this knowledge and promoting change within their families, friends, and social circles.

'The Resilience Project' was adopted in 2023 by a few schools in the Temora LGA including Temora Public and High schools, Ariah Park Central School, Temora West, and St Annes Central School. It is a universal support system which equips children with skills to face adversity in all areas, including drought-related matters. It is an evidence-based program which promotes a whole of school approach to embed behavioural change amongst students, teachers, and their families. Impact surveys conducted by these schools indicate the program is already seeing positive improvements in children's emotional, social, and physical wellbeing. These results echo research conducted by the Universities of Adelaide and Melbourne into the program's effectiveness. Anticipated benefits of this project include improved confidence and self-esteem, more supportive classroom environments, improved relationships at school and home, and improved knowledge and ability to express emotions.

A wider benefit of the project is the ability to develop a shared common language of gratitude, empathy, and mindfulness amongst the community. This will contribute to a more resilient community which is better placed to deal with the challenges associated with drought and other shocks and stresses. The project aims to leverage existing initiatives and will be seeking to establish the program in five schools in the Temora Shire, and in nine schools in Bland Shire. A mix of primary, central, and high schools from both the main townships and the outer lying villages will be considered for participation. The future goal of the program is to be rolled out beyond the school environment into early learning centres, community organisations, sporting clubs and businesses. This will create a common language around wellbeing and help to ensure that a wider range of community members have the skills to deal with difficult times before they hit.

This action aims to transform the Temora and Bland region by building a new generation of young resilient residents. This is expected to have ripple effects across the communities as school children bring their learnings to friends and family, improving everyone's coping capacity during tough circumstances.

Timeframe

12 months

Estimated Costs

$100,000 - $120,000

Action Owner

Temora and Bland Shire Councils in conjunction with participating schools.

Stakeholders

- Public, Central, Catholic and High Schools.
- Sporting clubs and community organisations.
- Businesses and the Business Chambers.
- Mental health service providers.
- Officer of regional Youth.

Steps for Implementation

1. Establish a Resilience Project working group with representatives from Temora and Bland Shire Councils and participating schools to manage the project administration and management.
2. Confirm program cost and potential co-contribution from schools.
3. Implement 'The Resilience Project' pulse survey to establish a baseline of well-being from which changes can be measured through the project. Schools and teaching staff to monitor project progression, identify lessons learnt and capture data on project impact.
4. Identify local champions and mental health advocates to support program launch.
5. Develop a communications campaign to accompany program launch leveraging local media entities and school communication channels.
6. Conduct a community launch event in both Shires and participating schools and the wider community, including sporting clubs, community groups and businesses.
7. Incorporate Resilience Project program activities into each school's program.
8. Monitor project using regular student surveys.
9. Promote project successes with local community, nearby regions and within the education space as deemed prudent.
10. Investigate local sponsorship and other avenues to support long-term funding of project.

KPIs

- Number of schools and students participating in program.
- Percentage of schools in each LGA participating in program.
- Launch event held in each LGA.
- Number of media stories generated by or related to the project.
- Number of inquiries from external entities seeking information about the project.
- Changes in student wellbeing metrics (in comparison with State average) and over-time.

Resilience Dividend

Social

- Building individual resilience will improve the resilience of families, school communities and the wider community.

Supporting Actions

Temora and Bland Shire Councils

- Continue to collaborate with the Murrumbidgee Primary Health Network and the Murrumbidgee Local Health District through the Rural Adversity Mental Health Program to facilitate access to mental health support programs and training.
- Continue providing opportunities for their staff to participate in mental health first aid training, use Council communication channels to promote the project, and share learnings with other regional Councils.

Next Steps

1. Attract interest from a university research program to track and evaluate the program's effectiveness in addressing mental health and wellbeing challenges brought on by drought in agriculturally dependent communities.
2. Expand the program to include early learning centres, community organisations, sporting clubs and businesses.

Maintaining Open Green Space Amenity Through Improved Water Efficiency

Spheres

Environmental Social

SDG Alignment

Rationale

Both Temora and Bland Shires are well provisioned with sporting fields, playgrounds, parks, and gardens. These spaces are utilised by residents of all ages with a broad range of activities undertaken such as weekend sport, picnics, children's play outings and outdoor relaxation. The utilisation of these spaces produces physical benefits for the community through formal and informal exercise and improved mental wellbeing from outdoor immersion and social interaction. Additionally, green spaces offer aesthetic value for our towns and villages, being enjoyed by residents and visitors alike. Ensuring their quality and condition is sustained in drought conditions is also important.

Throughout our history, we have been a leader in the early adoption of stormwater harvesting and water recycling technologies. This proactive approach has positioned us as sustainability leaders, in addition to diminishing our dependence on potable water. By securing an alternative water source, we have been able to preserve the open spaces that define our region's landscape. In the face of escalating variability in our weather patterns it is important we optimise our water efficiency strategies, particularly in times of drought. Advances in irrigation equipment present an opportunity for our region to review our current approaches and identify ways of achieving more with less water.

With a plan for the future, and as funds become available, we have the potential to elevate our operations through upgrading our irrigation equipment and watering regimes for our public open spaces. This approach aims not only to enhance our overall efficiency, but also deliver the high-quality open spaces our communities both expect and value.

Upon successful implementation of this project in the Bland Shire Council, the valuable insights and recommendations gleaned can be shared with the Temora Shire Council, fostering a collaborative spirit, and ensuring a broader impact across our region. Through this effort, we aim to not only fortify our own sustainability practices but also contribute to the collective resilience of neighbouring communities.

This action will allow our Councils to modify their approach to water usage in our valued community infrastructure, allowing us to do more with less.

Timeframe

3 months

Estimated Costs

$35,000

Action Owner

Bland Shire Council

Stakeholders

- Sporting Teams.
- Recreational Facility User Groups.
- Goldenfields Water County Council.
- Temora Shire Council.

Steps for Implementation

1. Develop and issue a RFQ for a third-party contractor, preferably a local or regionally based irrigation service provider, who would complete steps 2 to 4.
2. Audit irrigation infrastructure across Bland Shire Council's portfolio.
3. Assess facility hierarchy and current irrigation approach to identify opportunities to optimise irrigation regime.
4. Provide recommendations for:
    a. fixtures and fittings upgrades including costs (equipment and installation) per facility.
    b. need for rain / moisture sensors.
    c. optimisation of irrigation frequency.
    d. prioritisation of upgrades.
    e. estimate of likely water and energy savings per facility.
5. Share findings with Temora Shire Council.

KPIs

- Number of facilities reviewed.
- Water and energy savings identified.
- Sharing of findings with Temora Shire Council.

Resilience Dividend

Social

- Maintaining the amenity and performance of recreational and public open space will enable residents to undertake activities which are beneficial for their physical and mental wellbeing.

Environmental

- Improving water efficiency will reduce the reliance on non-potable and potable water supplies from the regions' water storage dams and aquifers.

Economic

- Maintaining the visual appearance of towns and villages, particularly during drought, is a key element in sustaining tourism spend within the region.

Supporting Actions

Council and Goldenfields Water County Council

- Cross-promote the use of the Goldenfields Water App to identify leaks to reduce water consumption and unexpectedly high-water bills which contribute to cost of living pressures.
- Councils to promote water saving mechanisms and process to the community through traditional and social media posts.

Next Steps

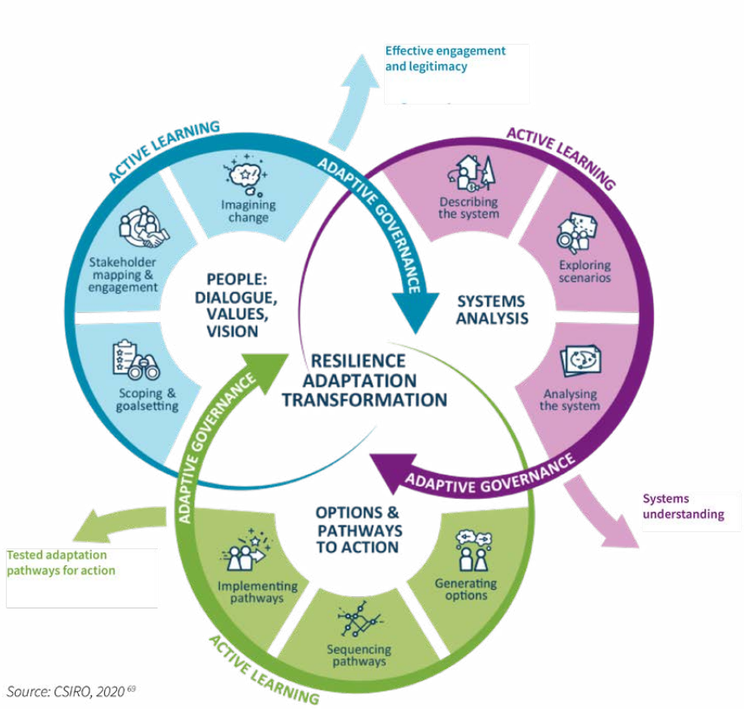
1. In conjunction with the planned revitalisation strategies for the town centres of Temora and West Wyalong, identify and implement methods to reduce heat and improve visual amenity to encourage visitation and spend, particularly during drought conditions, when the surrounding region is hot, dry, and dusty.
2. Leverage existing agricultural research organisations, such as the Temora Agricultural Innovation Centre, FarmLink Research, Landcare, Local Land Services, and the Charles Sturt University Southern Drought Hub, to identify and foster more widespread implementation of drought-resilient farming methods such as drought containment feedlots, fodder storage, and optimising rainfall infiltration into soils. Demonstration sites and financial mechanisms (grants, tax incentives, rebates, or subsidies) were identified as options to improve knowledge and reduce the financial considerations which are often the key barrier to convert intention into implementation.
3. Advocate for improved data availability to provide landholders with higher quality information upon which to base their farm management decisions, noting that the region is on the outer-limits of the Bureau of Meteorology radars at Yeoval, Hillston and Wagga Wagga, and rainfall varies substantially from the south-east to the north-west, such that rainfall recorded at Temora and West Wyalong weather observation stations is often not representative of the on-ground conditions experienced. A network of soil moisture sensors with publicly available data, being one option to reduce these data limitations.

07

Monitoring, Evaluation, and Learning

Monitoring, Evaluation, and Learning (MEL) is a core part underpinning the implementation of the RDR Plan, ensuring effective program delivery, transparency, adaptive management, and long-term sustainability (see Program Logic in Figure 6.1). To be most effective, MEL processes are embedded into the RDR Plan program governance model and into every phase of the program. Given Councils are resource constrained, implementation of the RDR Plan actions will be incorporated and completed as part of Councils Integrated Planning and Reporting (IPR) framework and the Community Strategic Plan. This will be regularly reviewed and updated by the regional Consortia of local governments and implementation partners to reflect changes and allow for active learning and adaptive governance to best monitor and evaluate the performance of the RDR Plan pathways and actions, following the RAPTA guide (see Figure 7.1). Delivery of MEL processes will also be considered as part of planning for the implementation of the Plan. Timeframes for the delivery of MEL will be integrated throughout the implementation phase and beyond.

Figure 7.1 Resilience, Adaptation Pathways and Transformation Approach (RAPTA)



Source: CSIRO, 2020 [63]

The core components of the RDR Plan's MEL framework are:

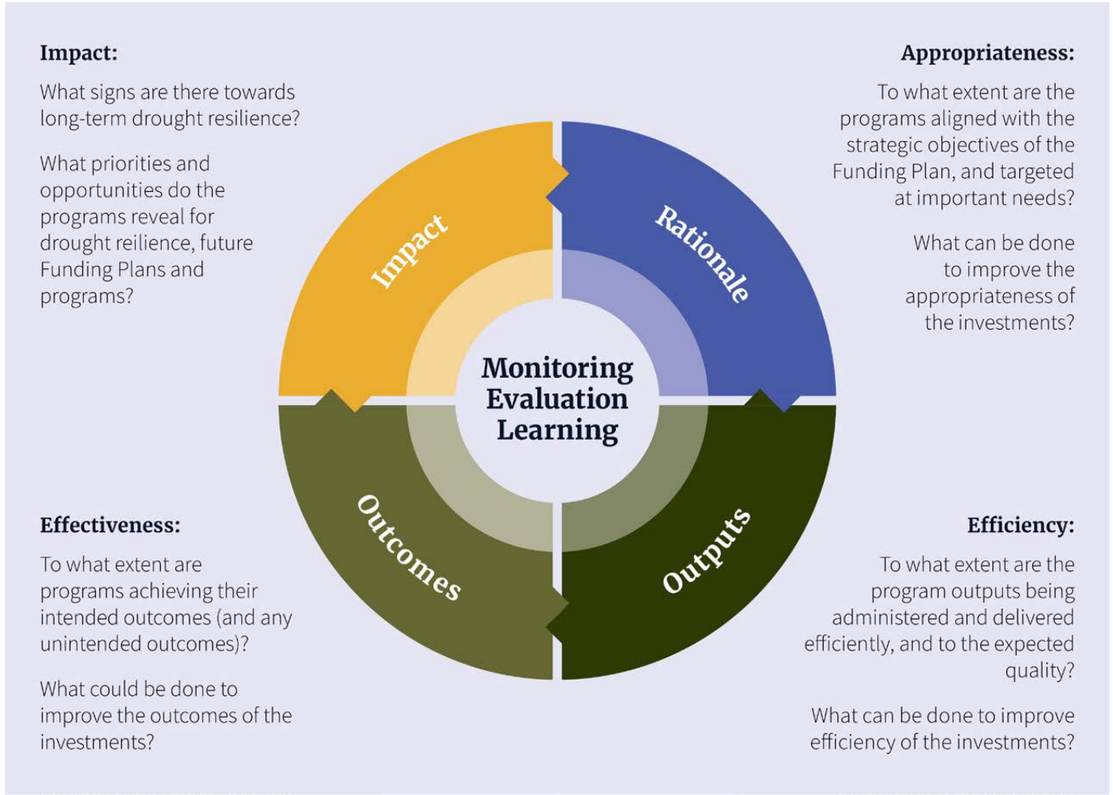
What the Plan intends to achieve

The Program Logic (page 9) describes the goals and strategic objectives and what the Plan hopes to achieve over short, medium, and long term.

MEL scope and approaches

MEL scope and approaches, adopted from the FDF's Monitoring, Evaluation and Learning Framework 2020 (as shown in Figure 7.2), help to ensure the region's ongoing commitment to strengthening drought preparedness and resilience.

Figure 7.2 Monitoring, Evaluation, and Learning Scope



Source: Future Drought Fund. 2020 [69]

How the progress of the Plan will be tracked

Key evaluation questions:

- To what extent has the Plan been implemented and has impacted on the regional stakeholders and communities to strengthening drought preparedness and resilience? (intended and unintended, positive, and negative outcomes)?
- How is economic, environmental, and social drought resilience changing (or not) in the region, in which locations, how and why?
- To what extent do the outcomes achieved by the Plan align with improvements in overall drought resilience in the region?
- What future priorities and opportunities are revealed by overall trends in drought resilience and/or by the outcomes of the Plan?
- What priorities and lessons can be drawn to improve the appropriateness, efficiency, or effectiveness of future Plan implementation so that they make the best possible contribution to the Plan's goals and strategic objectives?

Indicators for regular monitoring:

Table 7.1 below provide specific indicators for regular monitoring of the Plan based on the relevant FDF MEL framework indicators and the actions developed in this RDR Plan. Each action has a set of specific Key Performance Indicators (KPIs), which can also be used for regular monitoring and evaluating.

Table 7.1: Indicators for regular monitoring of the RDR Plan

Intermediate outcomes of the Plan (1-4 years)

FDF High-level Indicators	Specific RDR Plan Indicators	Evaluation Approach
Agricultural businesses are self-reliant, productive, and profitable (economic resilience).	• Increased in money flowing through the local economy from the rental income and from new residents who live local and buy local. • Increased capacity for existing and new businesses & major infrastructure projects to attract skilled workers, strengthening and diversifying the economy. • Thriving businesses who are well supported will have improved capacity to adapt to economic changes brought about by drought conditions, floods, or other events. Paves the way for diversification of the economy through the attraction of non-agriculture-based businesses. • Business owners actively pursue opportunities to increase financial security of their business pre-, during, and post-drought.	• Monitor ongoing business cash flow, with learning from previous droughts implemented into management plans. • Economic metrics quarterly or annually report. • Employment rate report. • Bi-annually business surveys. • Evaluation of previous lessons learned. • Stakeholder interviews and surveys.
Agricultural landscapes are functional and sustainable, with healthy natural capital (environmental resilience).	• Maintaining the amenity and performance of recreational and public open space will enable residents to undertake activities which are beneficial for their physical and mental wellbeing. • Improving water efficiency will reduce the reliance on non-potable and potable water supplies from the regions' water storage dams and aquifers. • Maintaining the visual appearance of towns and villages, particularly during drought, is a key element in sustaining tourism spend within the region.	• Monitor ongoing water usage, annual reporting, and tracking. • Monitor outdoor activities of residents in public open spaces. • Tourist inbound report. • Stakeholder interviews and surveys.

Agricultural communities are resourceful, adaptable, and thriving (social resilience).	• More people and families living in the area adding numbers to local schools, sporting teams and clubs. Greater capacity to attract staff for community support roles such as aged care, health, and childcare.
	• Maximal use of current housing stock and improved visual amenity with once vacant homes now being actively cared for.
	• Building individual resilience has improved the resilience of families, school communities and the wider community.
	• Community groups has achieved their potential to support and deliver social connection activities thus reducing social isolation and opportunities for people to improve their physical, mental, and spiritual wellbeing.
		• Annual reporting and review of plan implementation, barriers, and opportunities, making changes to the RDR Plan as necessary to meet the regional needs of communities.
		• Stakeholder and community interviews and surveys.
		• Key questions to ask include:
		  • How confident are the community's necessary skills and resources to face drought and make necessary changes?
		  • How invested are they in implementing the RDR Plan?
		  • What actions or decisions have been directly initiated as a result of the RDR Plan?

Long-term outcomes (4+ years)

FDF High-level Indicators	Specific RDR Plan Indicators	Evaluation Approach

Stronger connectedness and greater social capital within communities, contributing to wellbeing and security.
 	
Communities implement transformative activities that improve their resilience to drought.
 	
More primary producers preserve natural capital while also improving productivity and profitability.
	• There is a common understanding and a shared vision in the region to manage drought risks and build community drought resilience.
	• The region works collectively and in partnerships to build drought resilience across three main pillars.
	• Measures are implemented to limit impacts of drought and better respond to drought.
	• Stakeholders and communities actively share knowledge and take actions contributing towards drought resilience.
		• An on-going regional oversight committee comprising of the Plan's owners and key stakeholder representatives/implementation partners is critical.
		• This committee would have the role of initiating actions in line with the Plan, reviewing progress against the Plan objectives and reflecting changes to the Plan as needed to maintain its relevance and usefulness.
		• Monitoring and evaluation activities should be taken at regional level by this committee, which include:
		  • Monitoring and reporting of regional level indicators that are captured as part of Local Government surveillance, surveys, and annual reporting.
		  • Records of case studies demonstrate changes as a result of actions taken from the implementation of the Plan

Tools to support regular data collection on the indicators

Key data sources for the Plan regular monitoring approach are outlined in Table 7.2 below:

Table 7.2: RDR Plan Key Data sources

Data Source/Tool	Description	Frequency of Collection	Data Availability
Implementation partners and stakeholders end of program evaluation completed online and capture in Management Information System (MIS).	At the end of each program/action, request feedback from stakeholders and implementation partners.	End of program or project.	Continuous and ongoing.
MIS.	Stores and enables analysis of basic information on participate stakeholders and community group members.	Ongoing.	Real-time.
Media monitoring and media analytics.	**Monitoring:** To capture stories that are profiled in the media about region drought resilience and relevant actions. **Analytics**: To capture insights about social media sites including engagement, reach, content performance, reactions, audience demographics.	Monthly.	Available in local media for social and online media.
Community surveys.	Online or hard copy surveys sent to stakeholders and communities to gather feedback on the Plan effectiveness.	Annually.	Annually, one month after survey closes.
Monitoring visits.	Targeted monitoring visits to interview relevant stakeholders and communities to gather feedback in written report to support data assurance.	Bi-annually.	One month after monitoring visit.
Case studies of changes.	Recording case studies of changes made and benefits evident as a result of actions taken from the implementation of the Plan.	Annual.	Annually.

Evaluative activities to provide a deeper understanding of aspects of the program

The design and delivery of all MEL activities are informed by following principles:

1. Utilisation-focused
2. Cost-effectiveness
3. Fit-for-purpose
4. Transparent & accountable
5. Realistic
6. Flexible

MEL roles and responsibilities

The Project Control Group (PCG) developed during RDR Plan development phases will continue their terms of reference, operating as a reference governance structure overseeing the RDR Plan implementation and ongoing development. The PCG consists of:

- Department of Regional NSW – Strategy & Policy
- Temora Shire Council
- Bland Shire Council
- Any other individual selected by the PCG.

Through the PCG and Council consortia, continued monitoring, evaluation, and learning responsibilities will be shared.

The PCG will continue to function, working to secure the goals of the RDR Plan and work to facilitate the realisation of noted actions. Reporting, accountability, learning, and management needs for the RDR Plan will be managed by the PCG.

The key risks to the implementation of the RDR Plan and MEL process

Following assumptions were identified, based on the FDF MEL framework for the RDR Plan,[70] to be effectively implemented. These assumptions will need to be reviewed and updated during the implementation phase to reflect changes and new interventions can be designed.

Image: Temora Flour Mill, Temora Shire

08
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