TAMWORTH REGIONAL COUNCIL

& WALCHA COUNCIL

REGIONAL DROUGHT RESILIENCE PLAN

Australian Government

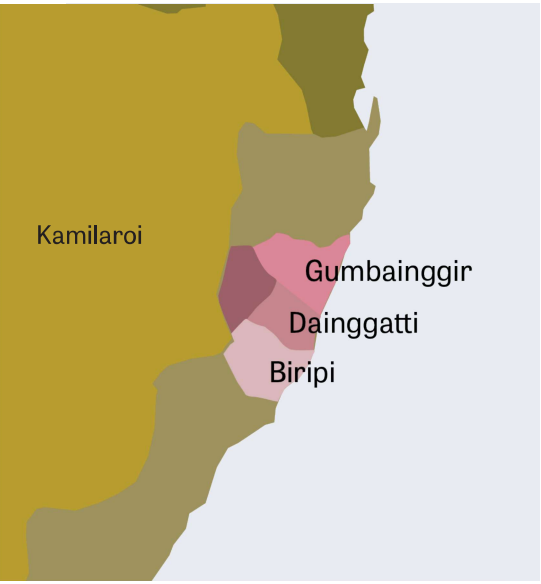
Future Drought Fund

NSW

Tamworth Regional Council

Walcha Council

We acknowledge the Gamilaraay/Kamilaroi/Gomeroi people as the traditional custodians of the Liverpool Plains and the land encompassing Northwestern New South Wales. We also acknowledge the Dunghutti people as the traditional custodians of the New England tablelands around Walcha.



Indigenous people have occupied the Country around Tamworth Regional Council and Walcha Council Local Government Areas for 40,000 – 60,000 years, adapting to live on the driest inhabited continent on Earth through a deep connection with water.

The Gamilaraay/Kamilaroi/Gomeroi people are interconnected with water, especially the Peel River in the North West plains, and use cultural flows[1] to maintain spiritual connection, service traditions and practice storytelling. The Dunghutti people were nomadic, moving around depending on the season, often retreating back to the rivers and gorges of the New England Tablelands and using the MacDonald River during winter when fish were plentiful.

Totems are also a very important Aboriginal identity, and evidence of these can be seen across both Nations. Every indigenous child is assigned a totem at birth which remains with them for life. Links between the spiritual world (creation time) and the living world are associated with totems which are passed down from mother or father, given a spiritual sign linked to the spirit of the ancestor that the totem represents. Kamilaroi totems include Dilby the Crow and Kapthin the Eagle (see Image 1 below). The Iwata or Echidna is said the be the totem of the Dunghutti people (see Image 2 below).

Image 1: 10 Aboriginal totems handcrafted in Gunnedah Shire by local artists in 2012 in remembrance of significant people, dreamtime legend and customs of the Kamilaroi tribe.

Image 2: Dunghutti totem of an Echidna, created by the Community Arts Project with local artist late Jeremy Rudge and Indigenous students from Clontarf Academy and Minimbah School.

Source: Monument Australia, 2012 (Left)
Armidale Community Garden, Unknown date (Right)

1. Cultural flows are water entitlements that are legally owned and managed by First Nations to improve the spiritual, cultural, environmental, social and economic conditions of these Nations.

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Disclaimer

While every care has been taken in preparing this publication, the State of New South Wales, Tamworth Regional Council and Walcha Council accepts no responsibility for decisions or actions taken as a result of any data, information, statement or advice, expressed or implied, contained within. To the best of our knowledge, the content was correct at the time of publishing.

Further, any and all actions identified within this plan for further consideration and implementation are subject to securing external funding for Council facilitation.

This project received funding from the Australian Government's Future Drought Fund.

SOURCE: LIZA KIRTON

A LETTER FROM YOUR MAYORS

The Tamworth and Walcha Local Government Areas (LGA) have been severely affected by drought in recent years. While the response to these droughts from the people in our region has shown great resilience and strength of character in their response, future changes in climate will put further stress on our community. Our businesses and community members are aware of the enormity of these challenges and have actively expressed their desire for a more coordinated response to planning and preparedness for these events.

This Regional Drought Resilience Plan (RDRP) sets out the first resilience plan for our region. It is a joint project between Tamworth Regional Council and Walcha Council intended to address ways to effectively plan and prepare for future droughts as a proactive means to reducing the impacts of drought on our livelihoods. The RDRP provides a roadmap for drought planning, preparedness, response and recovery for our regions and lays out initiatives that could contribute to the resilience of our region. We thank the members of our community who contributed in its development and engaged with us. We will soon be seeking further community interest for the development and uptake of some of the recommended actions.

Implementation of the flagship and aspirational recommendations within this RDRP will bolster the capacity for our communities to respond locally to drought, provide greater accessibility to financial and mental health support for those impacted. It also highlights areas for further research to understand the localised impacts of drought and will foster greater collaboration between local organisations to share knowledge and water-wise practices to prevent serious impacts of drought in the future.

Over the coming years and when funding becomes available, we will start to implement the recommendations of this RDRP across our region - but this is just the beginning. Our region requires a new way of thinking and we share a responsibility to embrace this change together. We must dare to take alternative paths and be emboldened to experiment. We ask everyone in the Tamworth and Walcha region to join us on this journey.

Signature

Russell Webb
Tamworth Region Mayor

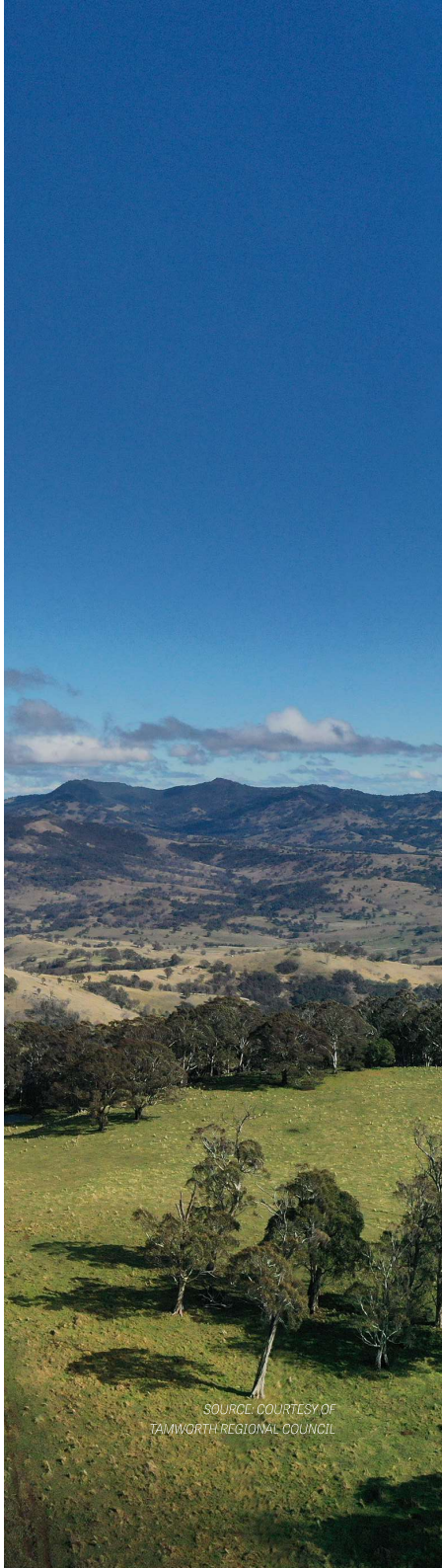
Signature

Eric Noakes
Mayor, Walcha Council

KEY ABBREVIATIONS

The following table outlines the abbreviations used in this Regional Drought Resilience Plan

ACC	Australian Agricultural Company
ABS	Australian Bureau of Statistics
BoM	Bureau of Meteorology
DRR	Disaster Risk Recovery
DI	Drought Indicator
EPA	Environmental Protection Authority
GDP	Gross Domestic Product
GHG	Greenhouse Gas Emissions
GIS	Geographic Information Systems
KPI	Key Performance Indicators
IPCC	Intergovernmental Panel on Climate Change
LGA	Local Government Area
NSW	New South Wales
RDRP	Regional Drought Resilience Plan
RCP	Representative Concentration Pathway



SOURCE: COURTESY OF TAMWORTH REGIONAL COUNCIL

KEY TERMS

The following table outlines the key terms used in this Regional Drought Resilience Plan

Hazard, exposure, vulnerability and resilience	Terms commonly used among practitioners in the disaster and risk management and climate resilience communities; however, they can have different interpretations. This report uses definitions provided by the Intergovernmental Panel on Climate Change (IPCC) and, when applicable, the United Nations International Strategy for Disaster Reduction (UNISDR).
Adaptation	In human systems, the process of adjustment to actual or expected climate and its effects, in order to moderate harm or exploit beneficial opportunities. In natural systems, the process of adjustment to actual climate and its effects (human intervention may facilitate adjustment to expected climate) (IPCC, 2022).
Adaptive capacity	The ability of a system to adjust to climate change (including climate variability and extremes) to moderate potential damages, take advantage of opportunities or cope with the consequences (IPCC, 2022).
Climate change	Large-scale, long-term shift in the planet's weather patterns and average temperatures (Met Office UK, 2022).
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 (Bureau of Meteorology, 2022).
Economic resilience	The ability of the economy to absorb the economic impact of shocks and stressors without changing the economic status or outcomes (CSIRO, 2021).
Environmental resilience	The ability of the natural environment to cope with a diverse range of shocks and stressors while maintaining natural processes and ecosystem services (CSIRO, 2021).
Governance	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 (CSIRO, 2021).
Hazard	The potential occurrence of a natural or human-induced physical event or trend that may cause loss of life, injury, or other health impacts, as well as damage and loss to property, infrastructure, livelihoods, service provision, ecosystems and environmental resources (IPCC, 2022).
Intervention options	Alternative or complementary actions, projects, programs, policies, initiatives and investments that are planned to bring about change in the system (O'Connell, et al., 2019).
Local Knowledge	Local knowledge and First Nations knowledge incorporates elements of lived experience within a landscape, bearing witness to the operation of systems. It includes aspects of people, landscape, culture – how people interact with surroundings and as part of communities and processes.
Preparation	Action to prepare for and protect against natural hazards and reduce impacts when events occur.
Prevention	Action to understand and mitigate natural hazard risk.
Recovery	Action to assist communities, organisations and other stakeholders to recover from natural hazards and reduce future risk.
Resilience	The ability of a system to absorb a disturbance and reorganise so as to maintain the existing functions, structure and feedbacks (Walker, et al., 2004).
Risk	The potential for adverse consequences for human or ecological systems, recognising the diversity of values and objectives associated with such systems (IPCC, 2022).
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.
Social Resilience	The ability of human society to cope with a diverse range of shocks and stressors while maintaining existing social and community functions (CSIRO, 2021).
Standardised Precipitation Index	Uses precipitation only; can characterise drought or abnormal wetness at different time scales which correspond with the time availability of different water resources (e.g. soil moisture, snowpack, groundwater, river discharge and reservoir storage). (National Centre for Atmospheric Research, 2020).
Stressor	An event that occurs gradually over a timeframe that causes an adverse effect (IPCC, 2022).
Succession planning	The term succession planning refers to a business strategy companies use to pass leadership roles down to another employee or group of employees. Succession planning ensures that businesses continue to run smoothly and without interruption, after important people move on to new opportunities, retire, or pass away (Investopedia, 2022).
Systems	The interaction of processes, networks and interdependencies across a complex 'whole'.
Vulnerability	The propensity or predisposition to be adversely affected by hazards. Vulnerability encompasses multiple elements including exposure to risk, sensitivity or susceptibility to harm, and differential patterns of capacities to cope and adapt.
Water Sensitive Urban Design	The integration of urban planning with the management, protection and conservation of the urban water cycle that ensures urban water management is sensitive to natural hydrological and ecological cycles. Water sensitive urban design seeks to achieve better urban water management outcomes through implementation of the following objectives. (National Water Initiative, 2022)

BACKGROUND AND CONTEXT

Our Regional Drought Resilience Plan (RDRP) is designed to strengthen the capacities of residents, communities, institutions, businesses and systems to better withstand the impacts of drought. A **resilient region** is not only prepared for drought but is also able to respond in a way that will make the area grow and thrive afterwards. By investing in resilience now, the region stands to benefit in good times as well as bad.

The intent of this plan is to support our region's community in proposing specific, practical ways to build regional drought resilience. It identifies community-led and council-facilitated actions to achieve the strategic objectives identified. It also demonstrates the **estimated** amount of time and resources required for future funding of each action, to achieve outcomes in each of the priority areas.

The planning process includes stakeholder engagement, resource inventory reviews, vulnerability assessments, identification of monitoring and resource needs, public awareness and education programs, and periodic plan revisions.

The development of the RDRP was guided by the Project Control Group, comprised of Tamworth Regional Council, Walcha Council, Department of Regional NSW and WSP Australia.

The RDRP is **community owned and driven**, developed in collaboration with community leaders, community members, local businesses and organisations. In June and July 2022, more than 200 community members were engaged, and their feedback is reflected in the RDRP. The team researched the challenges facing Tamworth Regional Council and Walcha Council Local Government Areas (herein referred to as 'our region'), gathered input from a wide range of stakeholders and consulted with residents through interviews, phone calls, surveys, workshops and meetings.

RDRP AIMS

- Tell the unique story of drought resilience in our region
- Focus on identification of actions that may be implemented to bolster drought resilience in our region
- Deliver a clear and useable/relevant/practical RDRP to further strengthen drought resilience for our region

RDRP GOALS

- Identify and plan for the impacts of drought
- Be in a stronger position to adapt to changes and take advantage of opportunities as they arise
- Build economic, environmental and social resilience in communities to future droughts
- Learn from each other and sharing knowledge on what is and is not working
- Form stronger connections and relationships within and between regions
- Have access to best practice data and information to make better decisions
- Improve natural resource management across the region

REGIONAL CONTEXT

TAMWORTH

Tamworth Regional LGA:

- **Population :** **2016:** 77, 029 **2021:** 63, 070, inclusive of:
  - Nundle: **2016:** 496 **2021:** 482
  - Barraba: **2016:** 1, 410 **2021:** 1, 329
  - Manilla: **2016:** 2, 550, **2021:** 2. 386
- **Median age: 2016:** 40 **2021:** 39
- **Indigenous population:** **2016:** 8, 098 **2021:** 8, 032
- **Median household income:** **2016:** $1, 177 **2021:** $1, 416
- **Primary industries of employment:** **2016:** Health, Cattle farming, Education, Supermarkets
- **Traditional Owners:** Gomeroi/Kamilaroi/Gamilaraay/ Kamilaraay

WALCHA

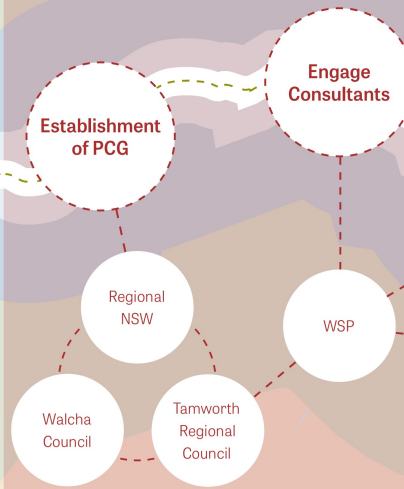
Walcha LGA

- **Population:** **2016:** 3, 092 **2021:** 3, 016
- **Median age:** **2016:** 48 **2021:** 50
- **Indigenous population:** **2016:** 184 **2021:** 201
- **Median household income:** **2016:** $1, 054 **2021:** $1, 224
- **Primary industries of employment:** **2016:** Cattle farming, Sheep farming, Government administration, Supermarkets
- **Traditional Owners:** Djangadi/Dunghutti/Danghatti

THE DROUGHT RESILIENCE JOURNEY

Project Inception

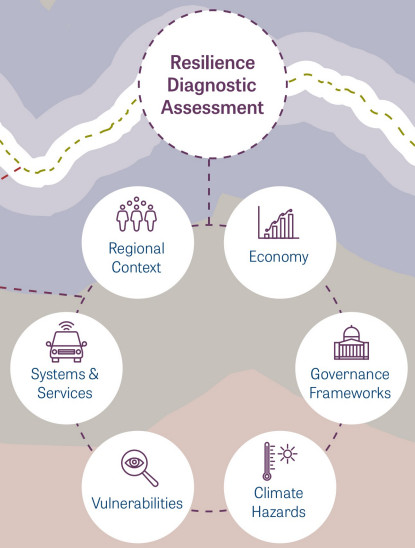
A Project Control Group was established to oversee the project, with representatives from both Council's and Regional NSW. Consultants were engaged to provide technical expertise in resilience planning, and to coordinate the engagement with community.



Outcomes:
Nominated representatives from interested parties and engagement with expert consultant group.

Data Collection and Gap Analysis

A desktop study of available literature on drought impacts to the region was undertaken, with critical information collated by the consultants to identify previously impacted areas and define what drought resilience may look like for the region.



Outcomes:
Nominated representatives from interested parties and engagement with expert consultant group.

Stakeholder Engagement

Community were invited to share their personal experiences through drought. Feedback was sought on programs, events, organisations, and individuals who had previously demonstrated resilience in the region. Suggested actions for identifying and prioritising ways to bolster resilience were captured from the community.

Outcomes:
Over 222 suggested actions to bolster capacity in the region, to plan and prepare for, respond to, and overcome the impacts of drought.

Synthesis and Reporting

Suggestions from community were collated into themes, to develop a community vision for drought resilience. Priority areas and objectives were developed alongside identified actions to achieve the vision. Many of these actions were suggested by, or co-developed with community members and organisations.

Outcomes:
A distilled action list of 21 priority actions in six priority areas, mapped to existing stakeholder groups and organisations, with indicative costs to deliver these actions and key performance indicators for delivery.

DROUGHT RESILIENCE AT A GLANCE

IMAGE: TRUE BORN NATIVE MAN, BY NIGEL WHITE

DROUGHT RESILIENCE AT A GLANCE

Droughts have always been part of our history. In fact, Australia has experienced a drought on average once every 18 years. This is expected to worsen according to the current climate change trajectory (Climate Change in Australia, 2015), with drought expected to increase in frequency but also intensity and duration. Persistent drought is likely to cause a shift in the relationship between communities and the land they live on, 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, which is a primary industry for our 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 poorer 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 perverse 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 Regional Drought Resilience Plans to prepare for and manage future drought risks. In response, the NSW Government developed the Future Ready Regions Strategy to drive coordinated preparedness actions across the state. Additional investment was made in the Regional Drought Resilience Planning program, to support councils and their communities to plan for drought

WHAT IS A 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 (National Integrated Drought Information System, n.d.). However, no unique definition exists, meaning it is difficult to understand drought characteristics across time and space. 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 mega-droughts can persist for decades. They are a feature of all climates and are defined based on the long-term average climate of a given region. Droughts will have different prevailing effects on the hydrological system depending on the system being analysed including social, environmental, meteorological and hydrological.

REGIONAL **DROUGHT RESILIENCE** PLAN

TYPES OF DROUGHTS AND THEIR DEFINITION

1 METEROLOGICAL DROUGHT

This refers to 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 projects 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.

2 SOIL MOISTURE (AGRICULTURAL) DROUGHT

Is a period of reduced soil moisture resulting from below average rainfall, less frequent rain events or above normal evaporation, impacting particularly on agricultural systems.

3 HYDROLOGICAL DROUGHT

Is when river stream flow 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. Time-series of these variables are used to analyse the occurrence, duration and severity of hydrological droughts.

4 SOCIOECONOMIC DROUGHT

Is 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.

Sourced from: National Drought Mitigation Centre, 2022

DROUGHT INDICATORS

Through drought resilience planning it is critical to understand the different factors or 'indicators' contributing to how a drought persists in a given region. If we are able to understand how a drought works, then we will be able to understand how best to deal with and respond to a drought. The primary indicators of a drought are shown in Appendix A. These variables range from Frequency to Endpoint and have been considered through the development of this RDRP.

A COMMUNITY DRIVEN APPROACH

This RDRP was developed by researching the challenges facing our region, gathering input from a wide range of stakeholders and convening residents through interviews, phone calls, surveys, workshops and one-on-one meetings. More than 200 community members were engaged to support the strategy development, many of them sharing their stories 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, a broad cross section of the community provided insight into local challenges, programs and potential solutions. From the undulating highfields of Walcha LGA, to the sprawling plains of Tamworth LGA and the Peel Valley, we spoke with graziers, health providers, support services, community organisations, local government agencies and more about their drought journey, and the drought journey of the region.

"There's a very different language for those west of the Great Divide. There's a different language and way of approaching people in the bush and you need people who can walk up and start building rapport."

– Rural Recovery Office

The input of community members was used to build a shared understanding of local strengths and challenges within the community and wider region. This was done by discussing personal drought experiences, in addition to what has worked in the past and what could be improved in the future. Alongside further engagement, grass-roots community initiatives were identified for drought preparation, response and recovery.

Strategic goals and vision statements, discussed during engagement and agreed on as a group, were used to support decisions around the list of priority actions provided to Council, and State and Federal Governments, in the development of this Plan.

The involvement of the wider community was used to ensure the plan supports community understanding and ownership of actions to address resilience.

Organisations Engaged:

- Tamworth Regional Council
- Walcha Council
- Rural Financial Counselling Service
- National Emergency Management Agency (NEMA)
- NSW Resilience Authority
- WaterNSW
- Department of Primary Industries NSW
- Local Land Services
- Forestry Corporation of NSW
- NSW Farmers' Association
- Walcha Dairy
- Local stock producers and farmers
- Landcare
- Rotary Club Walcha
- Rural Fire Fighters
- Walcha Central Parents and Citizens
- St Patricks Walcha Parents and Friends
- Tamworth Regional Residents and Ratepayers Association
- Local hall committees
- Tamworth Water Security Alliance
- Parents and Friends for Climate Change
- Local bushfire brigades
- NSW Irrigators Council
- Peel Customer Advisory Group
- Tamworth Bird Watchers
- Tamworth Landcare
- Rural Adversity Mental Health Program

Groups Interviewed:

- Tamworth Local Aboriginal Land Council
- NSW Aboriginal Land Council
- Tamworth Business Chamber
- Country Women's Association Tamworth
- Country Women's Association Walcha
- New England Family Support
- Tamworth Family Support Services
- Rural Aid
- Drought Resilience Adoption and Innovation Hub
- Local stock producers

Groups Surveyed:

- NSW Health
- Rural Fire Service
- OzFish
- Quota International of Walcha
- Local stock producers and farmers
- Country Women's Association Tamworth
- Lions Club
- St Patricks Walcha Parents and Friends
- Betts Transport
- Walcha Vet Supplies
- Tamworth Community Organic Garden Group
- Healthwise

Individuals and Organisations Consulted:

- Federal and state government agencies
- Local Aboriginal Land Councils
- Agricultural bodies
- Stock producers and farmers
- Landcare organisations
- Local businesses
- Community-based organisations and committees
- Environmental and water conservation groups
- Physical and mental health representatives

Number of Stakeholder Groups Consulted:

- Federal Government: 6
- State Government: 15
- Local Government: 24
- First Nations: 3
- Agriculture: 18
- Community Organisation: 45
- Business: 11
- Water and Environment: 20
- Health: 10
- Community: 4

BUILDING ON WORK FROM OTHERS

BUILDING ON WORK FROM OTHERS

From Federal, to State, to local level, there has been centuries of efforts of people working to build drought resilience. Traditional Owners of these lands have been developing approaches to drought resilience for even longer.

Through the development of the RDRP, we have learned about the extraordinary efforts of government and local communities, including existing plans, programmes and projects designed to help withstand the impacts of droughts. Building on this great work, the RDRP focuses on the community as a system where capacity to endure, respond and evolve through drought are enhanced.

The 20-Year Economic Vision for Regional NSW was released in 2018, beneath which sits the Future Ready Regions Strategy. 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. With a focus on drought readiness and economic diversity, the strategy provides a framework to help regional communities prepare for drought. It promotes strong and 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 the RDRPs.

Other key strategies with strong linkages and relationships to matters of drought resilience include the Regional Economic Development Strategies and NSW State and Regional Water Strategies.

Key tools that 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, and
- NSW Government's *DroughtHub*, an online drought assistance and information portal for NSW primary producers.

	2022	2026	2030	2034	2038	Link to Actions
Australian Government Drought response, resilience, and Preparedness Plan 2019						1.2 1.3 1.4 2.1 2.3 2.4 5.1 6.1 6.2
National Drought Agreement 2018						1.2 1.3 1.4 2.1 2.3 2.4 6.1 6.3
CSIRO Drought Resilience Mission – progress update 2022						1.2 1.3 2.1 3.1 4.2 5.1
20-year Economic Vision for Regional NSW 2018						1.2 1.3 2.1 4.2 5.1 6.1 6.2
NSW Water Strategy 2021						1.2 1.3 2.1 2.4 3.1 4.1 4.2 4.3
DPIE Managing Drought Plan 2019						2.1 3.3
NSW Extreme Events Policy 2018						2.1 3.3
Lower Northwest Regional Economic Development Strategy 2018-2022						1.2 1.3 1.4 4.2 4.3
Future Ready Regions 2022z						1.2 1.4 3.3 5.1 6.2 6.3
Tamworth Regional Council Drought Management Plan 2015/2016						2.1 2.4 3.3 3.4 5.2 5.2
Tamworth Regional Council Demand Management plan 2015/2016						3.4 3.6 4.2 4.3 5.1 5.2
Tamworth Emergency Water Supply Plan 2020						5.2
Southern New England High Country regional Economic development Strategy (2018–2022)						1.2 1.3 1.4 2.3 4.2 4.3
Tamworth Regional Council Local Strategic Planning Statement 2020						1.4 2.2 3.1 3.3 4.2 5.1
Tamworth Regional Council Keychange Community Strategic Plan 2017–2027						1.2 1.4 3.5 4.2
Walcha Local Strategic Planning Statement 2036						1.1 1.2 2.1 2.2
Walcha Council Adverse Event Plan 2021						1.1 1.2 1.3 3.4 6.1 6.3
Walcha Community Strategic Plan 2022–2032*						1.2 1.4 2.2 2.4 6.1
Namoi Regional Water Strategy Draft 2021*						2.1 3.1 4.1 5.1

ABORIGINAL PEOPLE'S CONNECTION TO WATER

Learnings from across Australia

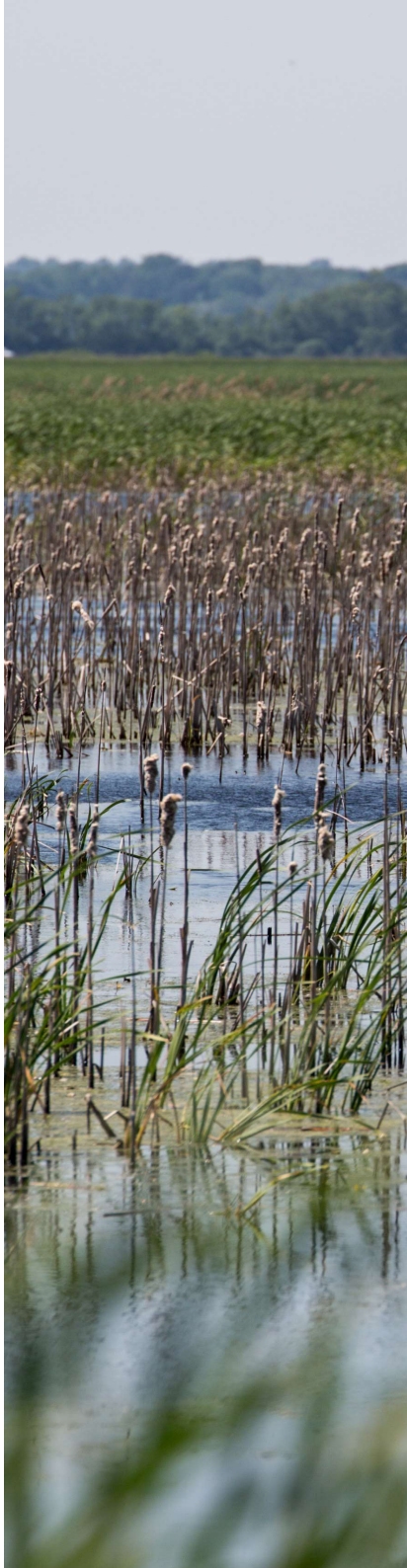
Water is essential to life on earth and is inseparable from our society and economy - culture, agriculture, energy and transport are all interdependent on water. In both Indigenous and non-Indigenous communities, water has great significance and importance. Non-indigenous Peoples typically consider the significance of water from a spiritual, natural resource, and economic value perspective. For Indigenous communities, fresh water (inland waters, rivers, wetlands, islands, reefs, sand bars, sea grass beds, as well as the sea) is seen as an integral and inseparable part of their culture. They use water for drinking, fishing and washing, and also considered rivers and billabongs as important locations for knowledge sharing and cultural knowledge transfer through storytelling (The University of Melbourne, n.d.). As such, water, and its many interrelated elements, is key to Indigenous communities' social and emotional wellbeing as well as the foundation for an active and resilient culture (Human Rights and Equal Opportunity Commission, 2009).

This cultural significance of water is recorded in Dreaming stories from across Australia. Many Dreaming stories include the role that spirits played in creating water sources like rivers, creeks, rock wells, lakes, lagoons, seas, and springs. The stories also tell of the active role of ancestral spirits and creation beings in the ongoing supply and control of these water supplies, and community elders have memorised the locations and geographical sequences or chain of water sources and shared these with future generations (Bayley, 1999). The First Peoples' Water Engagement Council's advice to the National Water Commission (FPWEC, 2012c) states that 'water is central to life and is connected to all things. It is sacred to Australia's First Peoples, essential to their identity and must be respected for its spiritual significance and its life-giving properties.'

Despite the widespread recognition of the cultural significance of water for Indigenous communities, their legal water rights remain limited and are inadequately recognised (Human Rights and Equal Opportunity Commission, 2009). Further, the National Water Commission's biennial assessment of progress in the implementation of the National Water Initiative, released in 2009, reported that 'it is rare for Indigenous water requirements to be explicitly included in water plans, and most jurisdictions are not yet engaging Indigenous people effectively in water planning processes' (Australian Department of Agriculture, Water and the Environment, 2009).

The lack of Indigenous water rights and limited inclusion of Indigenous water requirements in Australian law and policy can be linked to the fundamental differences in how water is valued in Indigenous and non-Indigenous communities. Australian land management laws and management plans typically distinguish water and land into distinct categories, focussing on the economics and the value of water. This leads to water being managed as a commodity and sold to industry, impacting Indigenous Peoples' access to diverse and interrelated water systems as relevant to their culture.

Across the country, governments are increasingly moving towards recognising Indigenous connection to water by looking for opportunities to increase the communities' access to water and encouraging Indigenous participation in water management planning and practice.



HOW DOES DROUGHT AFFECT YOU?

PAST DROUGHTS

Droughts are difficult to predict with contributing variables including seasonality, extent, duration and severity. Across Australian history, numerous drought events have occurred (Australian Bureau of Statistics, 1988). In our region, the effects of these droughts have been felt across the environment, economy, and society. The Commonwealth Bank estimated a 0.75% ($14 billion) loss in GDP due to the most recent drought. An estimated 25% rise in household credit default rates and an 88% decline in farm cash income also resulted in 2019-20 compared to 2017-18 (NSW Government, 2022).

For internal Council finances, economic stressors can be felt due to revenue losses from reduced water consumption. Further, increased spending from investigation, implementation and running of backup and emergency supply options is often necessary during droughts which cause further financial strain on local governments (Tamworth Regional Council, 2016).

It is estimated that over three million hectares of conservation land with over 820,000ha of agricultural land in south-eastern Australia, was impacted directly or indirectly by droughts between 2017 and 2019. Droughts significantly alter the ecological landscape of an area, leading to land degradation. The dried vegetation and intense heat, often associated with drought, can trigger wildfires to occur which impacts plant and animal life (World Atlas, 2022). This was observed in 2020 when a fire followed the prolonged drought.

Global studies show that droughts also have significant impact on communities' physical and mental health (Edwards, et al., 2018). For example, studies have found that the relative risk of suicide in rural males aged 30-49 can increase by 15% as the severity of drought increases (Steffen, 2015).

The figure below shows the different stages of drought for our region during 2018. During 2018-2019, Tamworth Regional Council saw its operating costs increase by $22.5 million dollars when compared to 2017-2018 (Tamworth Regional Council, 2019). This was primarily due to grants and contribution to income for drought and building better communities projects, amongst other items. During this period, reductions in water usage resulted in revenue losses of $3.4 million, with a further loss of over $2 million between 2020-2021 due to ongoing drought (Tamworth Regional Council, 2021).

Walcha also experienced direct financial effects and sought aid due to periods of drought. During 2018-2019, Council received $1 million from Drought Communities Program and a further $300,000 for Drought Relief Heavy Vehicles Access Program (Walcha Council, 2019). Across 2019-2020, water fund costs were $94,945 higher than budget due to funded feasibility study and short-term emergency drought projects (Walcha Council, 2020).

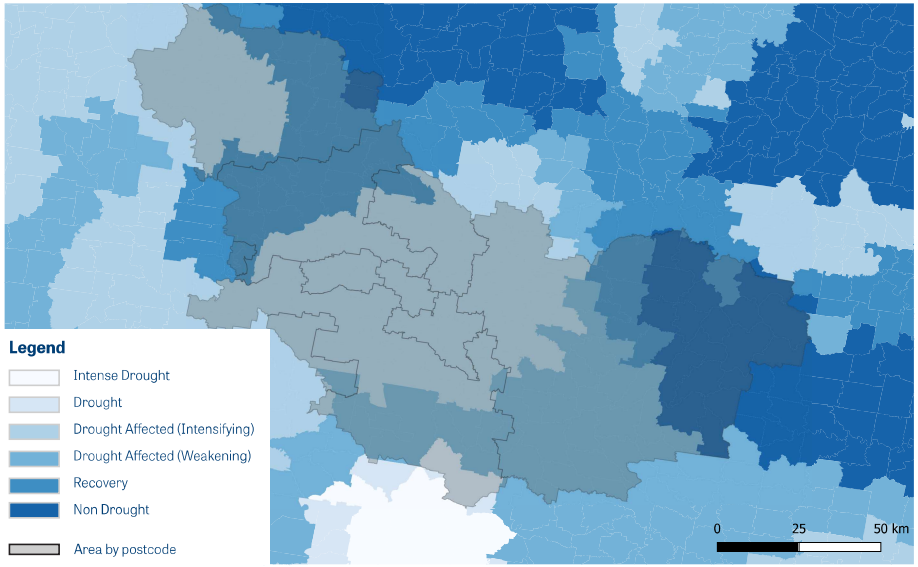


Figure A Combined Drought Indicator (CDI) in 2018 (grey area represents our region)
Source: Catherine Yu, WSP Digital

FUTURE DROUGHT TRENDS

The role of climate change in exacerbating the effects of drought events cannot be underestimated. Globally temperatures have increased by 1°C since pre-industrial levels at a rate of 0.2 °C per decade resulting in hotter and drier climates (Intergovernmental Panel on Climate Change, 2018). Regions experiencing increased temperatures and increased aridity undergo intensified drought conditions. The number of drought days globally is predicted to increase by more than 20% by 2080. Regions directly exposed to drought are predicted to experience a 9-17% increase in number of drought days by 2030 and a 50-90% increase by 2080 (World Bank, 2019).

In Australia, the effects of climate change have contributed to a southward shift in weather systems that typically bring rainfall to the southern regions during the cooler months. As a result, in southeast Australia, late autumn and early winter rainfall has decreased by 15% since the 1970s (Steffen, et al., 2018). It is anticipated that by the late 21st century there could potentially be a 50% reduction in autumn and winter rain precipitation (Steffen, et al., 2018). This reduced seasonal rainfall has intensified recent droughts, in particular those experienced in southern Australia in the late 20th and 21st century (Millennium Drought) (Doyle, 2018).

Using temperature and rainfall data for our region from CSIRO's Climate Change in Australia Threshold Calculator (model Access01), we can see how the region's climate is predicted to evolve over time using the IPCC greenhouse gas concentration trajectory representative concentration pathway 8.5. Based on this information, Tamworth Regional Council LGA is predicted to have six times more days higher than 40°C than today, with a projected 75 days over 35°C by 2090. Walcha Council LGA, is not expected to have significant increase in number of days over 40 degrees.

A key differentiator in predicting a drought hazard is the lack of early warning about its duration and severity. Droughts develop slowly which often means by the time they are identified, and a state of drought is declared, we've missed the opportunity to implement mitigation and adaptation measures. Currently, projections of drought are developed using climatic data based on either global or regional climate models. In Australia, there is only a short record of hydroclimatic data available, adding to the complexity of establishing nationally accurate and dependable models. In recent years, there has been an increasing demand for more tailored region-specific assessments of climate risks including drought hazards (Kirono, et al., 2010). It is therefore critical to establish and embed drought resilience into all sectors, particularly those most exposed and vulnerable, to ensure that future droughts can be effectively managed (Kirono, et al., 2010).

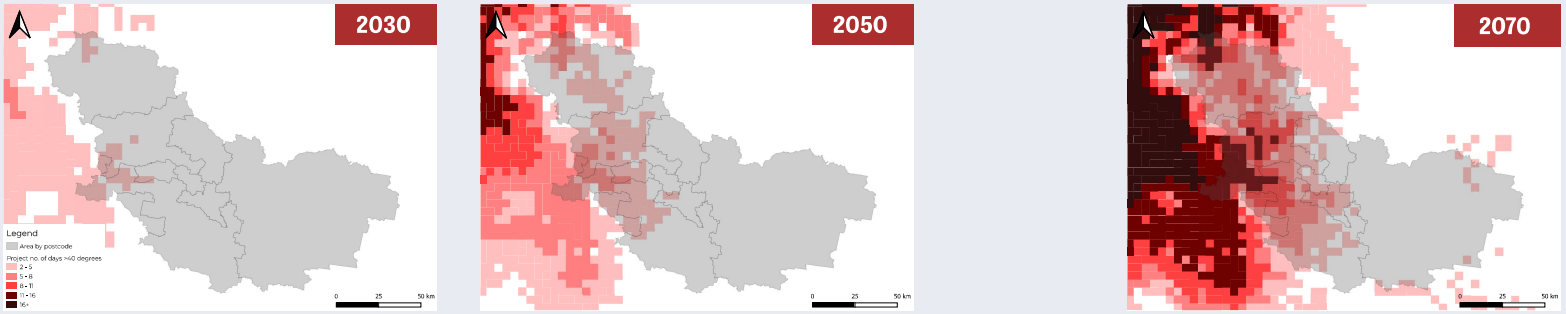
"It shouldn't be a conversation about whether or not drought is going to happen, it is going to happen, so let's be prepared for it"

– Tamworth Water Security Alliance

INCREASED HOT DAYS

Figure B below graphically represents the increase in the number of days over 40°C across our region for 2030, 2050 and 2070. In addition to increased hot days, the average days per year receiving rainfall below the 10th percentile is also anticipated to increase. Together, the predicted increased temperature and reduced rainfall creates the scenario for typical droughts to occur.

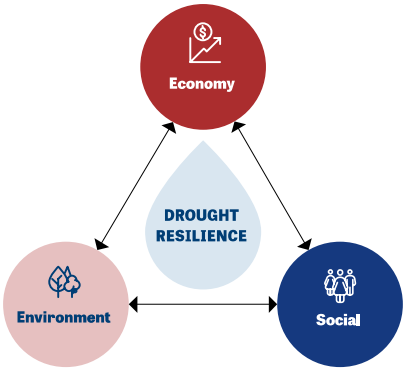
Figure B. Number of days over 40°C from 2030, 2050, and 2070 (Grey area represents Tamworth and Walcha



Source: CSIRO Threshold Calculator, developed by WSP 2022

THE THREE PILLARS

This RDRP has been developed in collaboration with local leaders, community members and with regional coordination. It has a multi-dimensional and cross-disciplinary approach and considers the three pillars that contribute to systems-based drought resilience.



Drought resilience pillars prepared by WSP, 2022

ECONOMIC IMPACTS OF DROUGHT

In our region, the economic impacts of drought are felt across many sectors. For our primary industries, reduced water availability for livestock and irrigation creates lower crop yields and impacts grazing. As a result, the region is unable to support stock numbers, impacting wool and meat production. Rural NSW data shows that the 2002-2003 drought impacted almost 90% of rural NSW, with farm Gross Domestic Product (GDP) falling 24.3%, rural exports falling 26.6% and agricultural income falling by 46.2% (Lu & Hedley, 2004). Figure C shows annual average farm profits since 1988–2018, in comparison to variations in rainfall and commodity prices.

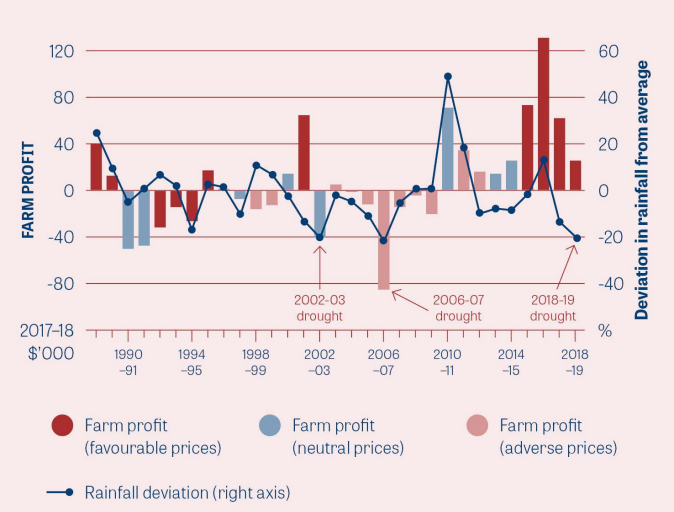


Figure C. Annual farm profits 1988 - 2018 *Source : DAFF, 2018*

This juxtaposition shows that the most profitable years are generally those with high rainfall and favourable commodity prices (2016-2017). In contrast, the least profitable are typically drought years with unfavourable commodity prices (2006–2007) (Hughes, et al., 2019).

An economic analysis conducted on the impacts caused by the drought of 2017 to 2020 on Tamworth Regional Council LGA, estimated a 2.1% reduction in regional economic output. This equates to an approximate loss in value add of $70 million in 2020 compared to 2016 (Regional Australia Institute, 2022). The significance of this is most acute when exploring impacts on the region's economic growth potential. The modelling from this study indicates that if the future conditions are on average similar to historic conditions, the Tamworth Regional Council LGA economy would produce $293 million less value add annually in the next decade, compared with a scenario in which the drought did not occur in 2017 to 2020 (Regional Australia Institute, 2022).

Financial pressures on water sensitive industries also impact surrounding towns as less money is injected into the local economy. Low food supply availability results in supply chain disruptions, increasing food prices during this period. The higher price of goods or the limited availability of products is felt by buyers, impacting not only local economies but also international trade (AdaptNSW, n.d.).

Financial vulnerability of residents in regional towns during droughts is of rising concern, potentially increasing levels of debt, and influencing employment stability. Some studies have estimated that nationally there has been a welfare loss of $63 billion which comprises of $53 billion in losses arising from the drought and $10 billion from the subsequent bushfires (Wittwer & Wachik, 2021). This can cause forced migration in search of stable and reliable income, reducing town populations. Although funding is available for drought-affected areas, short-term funding is insufficient (Bell, 2022).

The region's tourism sector has also been severely impacted by droughts. During the Millennium Drought in 2008, the tourism industry faced losses of almost $70 million. Between 2007 and 2008, drought conditions also caused the loss of 6000 agriculture jobs in the southern Murray-Darling Basin (Steffen, et al., 2018).

Loss of connectivity between regional towns and centres of trade may also impact the economic prosperity of the region. Extreme heat associated with drought may cause softening of road surfaces and buckling of rail tracks. The increased risk of bushfires, made worse by drought hazards, may also impact the region's connectivity via land and air. This creates disruptions in the supply of essential services for industry and production including water carts and feedstock, in addition to relocation of livestock. In Walcha, the increase in transport costs for moving cattle was unprecedented due to the effects of the most recent drought (Walcha Workshop, 2022). These impacts are potentially damaging to farming and agriculture industries relying on these services.

ENVIRONMENTAL IMPACTS

The environmental impacts of drought in the region can create long-term losses which may take years to restore. For Tamworth Regional Council LGA, projected increased temperatures and rainfall variability is expected to result in less water available as inflow to Chaffey Dam and Dungowan Dam. A study revealed the median reduction in rainfall across all climate projections considered was 16% for the area (Regional Australia Institute, 2022).

Prolonged droughts are often followed by intense and frequent storms which cause flooding and overwhelm the stormwater infrastructure. This can be caused by reduced vegetation cover and dry conditions reducing the permeability of the soil. This can cause litter, excess sediments, and contaminants to wash up in local waterways, potentially impacting the functionality of the drinking water treatment infrastructure.

Conditions associated with periods of drought such as extreme heat, dry weather and bushfire, can cause severe environmental impacts. In 2019, the closure of Oxley Highway which connects many towns in the region, was resultant of severe bushfire impacts. Disruption to transport connectivity impacts the accessibility of medical attention and essential supplies including water carts and feedstock. This creates potential damage to stock and agriculture industries relying on these services. During the 2019-2020 bushfires in Southern New England High Country, tourism, agricultural and horticultural industries were significantly impacted. Agriculture suffered impacts through asset damage and loss, while affects to tourism was due to restricted connectivity (Regional NSW, 2020).

On agricultural land, long-term crop losses due to unreliable water supply can result in increased risk of wind erosion, deteriorating soil fertility as topsoil is removed. Potential desertification would exacerbate unproductivity, which may result in forced migration of individuals.

Reduced rainfall slows the flow of rivers and waterfalls making it less attractive as a tourism destination. This is especially prevalent in Walcha. In addition, during droughts, there is a risk of over-extraction of water from waterways for consumption and irrigation which can be detrimental to native flora and fauna, including many fish and bird species relying on river systems for survival. This medium-term risk generates an overall loss to biodiversity and ecosystem health.

Within Tamworth, restrictions or suspensions of environmental flows from Chaffey Dam due to drought conditions, cause impacts in downstream waterways. Potential fish kills, as were observed in Peel River in the summer of 2019 - 2020 (Bell, 2020), may result, in addition to widespread degradation of the ecology waterways. Low flows due to drought can also impact water quality through the development of blue-green algae. This would in turn require alerts to notify of procedures to treat water before consumption.

In past drought periods, water prices in Tamworth were considered undervalued, creating an attraction for visitors to take advantage of water availability in local parks, impacting water supply. The tops of taps were eventually removed to prevent this from happening further (Tamworth Workshop, 2022). Unreliable water supply may also necessitate the use of backup sources such as aquifers within the region. Not only does this require additional treatment and higher costs, but these alternative water sources are at risk of being exploited.

It also creates significant health risks, particularly on those with respiratory illness. Again, this can create a strain on the health care system without sufficient capacity and appropriate equipment to address growing demand.

SOCIAL IMPACTS OF DROUGHT

Limited and unreliable water supplies can create long-lasting community impacts. Decreased water availability, increasing costs of ground water and installation of water infrastructure creates significant impacts on people within primary industries such as farming. For farmers, low water supply and reduced water quality lead to increased workload and increased financial stress. Within the Tamworth and Walcha communities, famers often resorted to reducing livestock numbers to reduce feed costs and water stress (Tamworth and Walcha community Survey, 2022).

In addition, a reduction in water quality and the implementation of harsh water restrictions can impact typical community functioning. The 2017 to 2020 drought created the financial strain of carting water into the region, reduced income resulting in less money spent within the community and increasesdworkloads limiting recreational time and increasing physical burden (Tamworth and Walcha Community Survey, 2022). These factors cause excess emotional strain, having severe impacts on the mental health of the wider community.

Mental health issues typically increase during drought periods as a result of multiple hazards occurring simultaneously, and potentially over long durations. If not addressed promptly, poor mental health may cause longer-term impacts on an individual and the wider community. This can increase reliance on health care services, potentially overwhelming the health care system in the region and limiting the ability to address daily issues. Farmers and farm workers are at higher risk of suffering from mental health issues during periods of drought (Edwards, et. al., 2018). To intensify the issue, the availability of healthcare services, such as telehealth, in regional areas and farms, can be a challenge due to limited or lack of internet connectivity (Walcha Workshops, 2022).

Further, the exclusion of Indigenous communities from water management and the deterioration of waterway health in the long-term, may create impacts to cultural and spiritual wellbeing and disheartenment from the communities.

In the Tamworth Regional Council LGA, during the recent drought in 2018 - 2020, residents facing loss of income were forced to access their superannuation savings to support themselves, while the region experienced increased rates of crime. Despite poor mental health experienced in the community, there was limited coordination and effective communication around the services and support available (Tamworth Workshop, 2022).

Families in Walcha who had no water supply, had to resort to showering in local schools. This had enormous impacts to the mental state of the community, causing extreme stress and weighing heavy on community spirit (Walcha Workshop, 2022).

For regional towns, climate change stresses may encourage younger people to move away, reducing the region's employable workforce. While the population of Tamworth city is forecast to grow by 100,000 by 2041, this is considered to be overestimated (Tamworth Workshop, 2022). This shift results in an aging and increasingly vulnerable population. Rising pressure on health care services creates concern considering further exposure to global pandemics and other climate change risks.

Dry conditions and dust storms associated with drought also creates significant health risks, particularly on those with respiratory illness. Again, this can create a strain on the health care system without sufficient capacity and appropriate equipment to address growing demand.

TYPES OF RESILIENCE AND THEIR VALUE

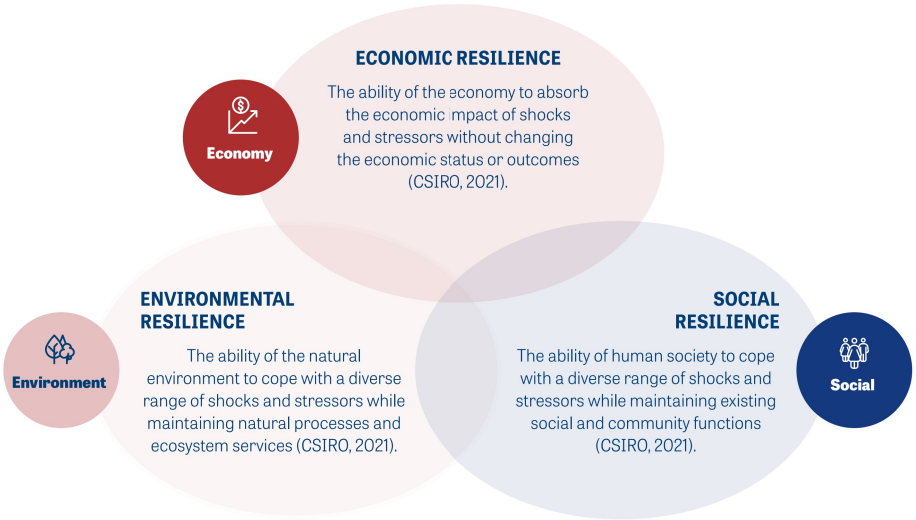
SYSTEMIC RESILIENCE

For a system to be resilient, it needs to have the ability to absorb a disturbance and reorganise itself to maintain the existing functions, structure, and feedback loops (Walker, et al., 2004). This resilience takes many forms, but by broadly categorising the components of resilience, we can understand how best to adapt our practices to build our capacity to withstand disturbances such as droughts.

Components of resilience must consider the importance of resilience across different types of system to establish holistic resilience. Key systems within which resilience must be built include social resilience, economic resilience, and environmental resilience.

THE VALUE OF SOCIETY IN TIMES OF DROUGHT

Leveraging our existing mental health programs, and by expanding support and access to initiatives for healthier lifestyles, we not only build community, but have the mental capacity to continue to work and contribute to our economy. This means we can continue to provide support to other vulnerable systems such as wildlife impacted by drought.



ENVIRONMENTAL VALUE AND DROUGHT

By encouraging biodiverse and water sensitive farming practices, we not only support our wildlife, but also our food system and economic productivity in times of drought.

ECONOMIC VALUE AND DROUGHT

By creating diversity in our income streams, we not only ensure we can endure the worst economic times, but we create new relationships and find new people to lean on when times are tough.

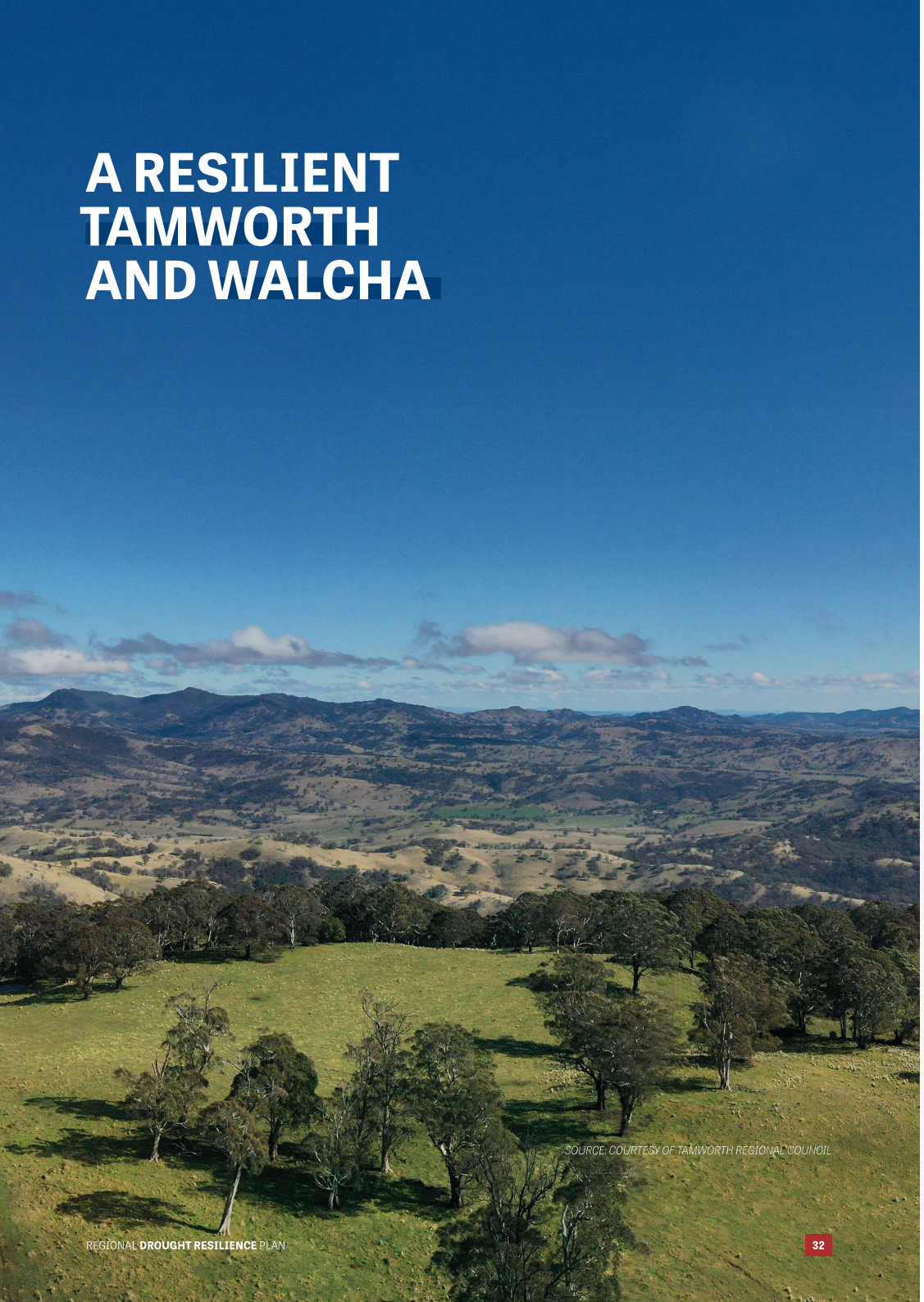
OUR INTERCONNECTED VULNERABILITIES

COMPONENTS OF RESILIENCE

To understand what it means to be resilient, it is also important to recognise the characteristics displayed by resilience systems. There are seven components that contribute to building resilience within a system:

FLEXIBLE	Resilient systems are capable of adapting and evolving in response to changing circumstances. This adaptability can be achieved by introducing new technologies and knowledge, incorporating indigenous practices, and favouring decentralised and modular approaches. Flexible systems are willing and able to adopt alternative strategies in response to changing circumstances.
REFLECTIVE	Resilient systems embrace uncertainty and the ever-changing nature of the world. They consider continually evolving mechanisms and adapt standards based on emerging evidence, rather than accepting the status quo. This allows us to learn from past mistakes and inform future decision-making.
ROBUST	Robust systems are designed and constructed to withstand hazard events without significant damage or loss of function. They anticipate possible failures and avoid over-reliance on a single asset or function to minimise collapse, should the asset fail. Robust systems make provisions to ensure failure is predictable, safe, and not disproportionate to the cause.
INCLUSIVE	Resilient systems prioritise broad consultation and community engagement, including vulnerable and marginalised groups. This collaborative involvement fosters a sense of shared ownership, joint vision, and contributes to building city resilience. Shocks and stressors are addressed through a multi-faceted approach, rather than by one sector, location, or community in isolation.
INTEGRATED	Resilient systems are integrated and aligned, promoting consistent decision-making and ensuring that investments support common outcomes. Integration occurs across different scales, facilitating shorter feedback loops.
RESOURCEFUL	Resilience involves recognising the ability of people and institutions to rapidly find alternative ways of achieving goals or meeting needs during periods of shock or stress. Resourcefulness enables cities to restore functionality to critical systems, which is especially important in constrained conditions.
REDUNDANT	Resilient systems possess spare capacity to accommodate disruptions, extreme pressures, or surges in demand. This involves having multiple avenues to fulfil a given need or function. Redundancy is deliberate, cost-effective, and prioritised.

A RESILIENT TAMWORTH AND WALCHA



SOURCE: COURTESY OF TAMWORTH REGIONAL COUNCIL

OUR RESILIENCE NEEDS

The threats to Tamworth and Walcha's drought resilience form a constellation of risks, including chronic stresses related to water management, workforce availability and aging infrastructure, and potential acute shocks from extreme weather events due to climate change, large bushfires, or an economic crisis.

Through the development of this RDRP, we spoke to over 200 people, representing 50 local organisations and community groups, through workshops, interviews, surveys and phone calls . An outcome of the engagement resulted us in identifying five key shocks to the region, and four main stressors. To ensure resilience, we will need to plan and prepare for all nine priority shocks and stressors. The diagram below shows the priority areas. The size of the bubbles corresponds to the relative importance placed on the shock or stress by stakeholders during different workshops and meetings. Sizes approximate to percentage.

CHRONIC STRESSORS

Long-term, slow burning issues that overwhelm the capacity of the region's resources and erode resident wellbeing.

ACUTE SHOCKS

Sudden, large-scale disasters that disrupt regional services and threaten residents.

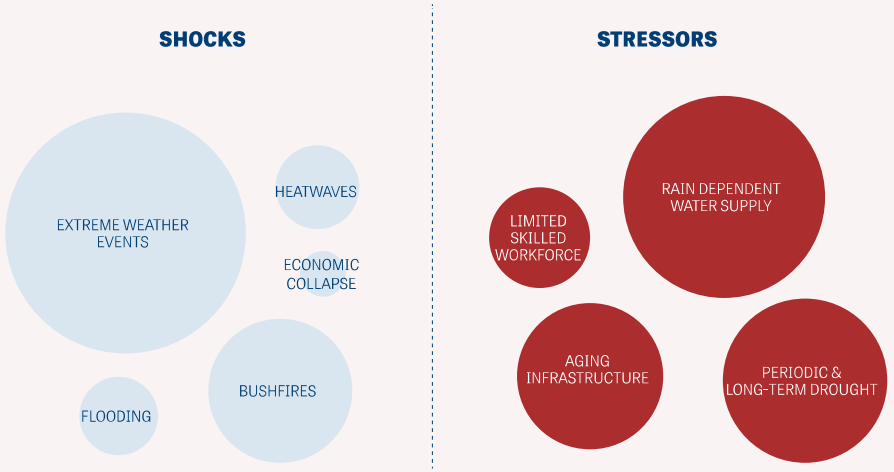


Figure notes: This diagram shows the priority shocks and stresses identified for the region during strategy development. Sizes approximate to percentage.

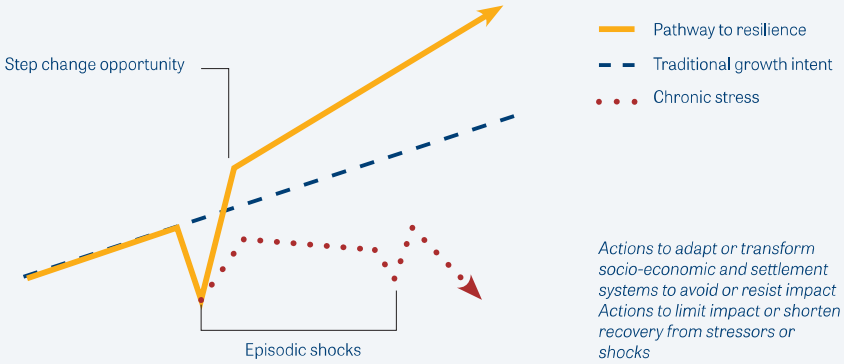
RETHINKING RESILIENCE

This RDRP focuses on identifying potential actions that limit impact or shorten recovery from stresses or shocks. These will help communities in the preparation, prevention, response and recovery of a drought event. It provides pathways for actions to adapt or transform socioeconomic communities or systems to avoid or resist the impact in the first place. This will help our community to deal with long term trends and stresses like climate change, drought and economic downturn. This way, we can provide a long-term blueprint for how our region can continue to improve its drought resilience for years to come.

"(A drought resilient region is) prepared, able to cope with crisis situations and have the ability to bounce back from those crisis situations"

– Tamworth Business Chamber

Figure D. Improving our prosperity through resilience



Adapted from Joseph Fiksel

ESTABLISHED RESILIENCE

In evaluating the risks posed by natural disasters, we have considered the factors influencing vulnerability as well as exposure to hazards. Vulnerability refers to 'sensitivity' of the community, i.e. how readily it is affected or susceptible to change from external sources (Smith, et al., 2017), or adaptive capacity, meaning the potential for government, institutions, the economy, and communities to adapt and transform in the face of disasters (Parsons, et al., 2016).

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. However as additional shocks and stresses occur including pandemics and other disasters including flooding and bushfire, the adaptive capacity of the community will decline. This will occur from overstretched resources, extended economic hardship, and on-going mental health impacts and stress within the community due to the trauma of dealing with multiple events.

We have identified a range of social, economic, and biophysical factors that contribute to the vulnerability of the Tamworth and Walcha communities. We've also outlined strategies to realise adaptive capacity.

OUR INTERCONNECTED VULNERABILITIES

TRANSPORT CONNECTIVITY

Road infrastructure is central to the communities' daily lives. Services utilising transport routes, such as emergency services, are susceptible to hazards related to drought, such as heatwaves and bushfire events causing delays and road closures. If additional road connections cannot be provided, the region needs to ensure that services dependent on land transport routes plan for drought-related impacts. Integrating resilience principles into infrastructure codes and plans, as well as communicating effectively on the potential risks and mitigation measures, ensures sensitivity to hazards and reduces vulnerability.

WELLBEING AND HEALTH

The quality of life of the region has been impacted by prolonged droughts. Tamworth city has one hospital and Walcha is served by a small multi-purpose health clinic. Without allowing for specific contingencies, these services may be sensitive to drought-related impacts. The region needs to ensure there is continuous and adequate health care access to ensure those experiencing drought-related impacts (mental and physical) are easily accessible. This includes education of health district staff on how droughts may lead to poorer health outcomes and ensure staffing levels are appropriate and equipment is available to deal with impacts.

INDUSTRY AND ECONOMIC DEPENDENCY

The region has heavy reliance on agriculture and related services for income and employment. Without preparedness, these industries can become sensitive to impacts from drought. Farmers must be aware of the different types of droughts and to understand early signs of impending drought so they can plan and manage their land accordingly. Those who rely solely on agriculture for their income and employment must apply appropriate planning and management methods to ensure they maintain economic resilience throughout drought periods.

WATER SUPPLY NETWORK CAPACITY

Tamworth Regional Council LGA relies primarily on water supply from Chaffey and Dungowan Dams. Walcha Regional Council LGA have storage for three months and have commenced the construction of a 320ML Off Creek Storage. Walcha Council has, for the last two years, sought the state government to allow use of wastewater for uses such as dust suppression in droughts, and continues to advocate for greater use of wastewater.

The water infrastructure in the region requires frequent repairs and assessment to prevent pipeline failure. During drought, unreliability of supply could limit supply for drinking water and irrigation purposes. Better management of water use for both household and irrigation purposes combined with additional water storage infrastructure is required during periods of drought. Also, a focus on providing permanent repair or replacement of failing water infrastructure is required to ensure minimal maintenance. Updates, at a federal level, to water policy allowing treated wastewater for agricultural and household use is required for Councils to facilitate and promote its uptake.

OUR INTERCONNECTED HAZARDS

EMPLOYMENT AND HOUSING AFFORDABILITY

Unemployment, which can result from lack of diversity in income streams, has a systemic effect on vulnerability to natural hazards and impairs an individual's ability to recover following an event. Council's role is to support individuals and organisations in linking them with businesses and organisations that may provide a greater diversity in income sources. This will support community in ensuring there is greater access to finance. Further, access to quality and affordable housing in the region is key to ensuring community can thrive. Council development controls and incentives for sustainable, affordable housing in the region are key to reducing displacement and reliance on external support in periods of drought.

AGING POPULATION

The elderly population of the region is more sensitive to drought related impacts, including heat stress during heatwaves and increased isolation, leading to poor mental health. Councils must ensure that older residents remain connected with others in the community and feel confident to ask for assistance or be actively sought out by mental health professionals during period of drought related hardship.

LAND AND WATER DEGRADATION

Drought-related land and water degradation can have direct impacts on the region's expansive national parks, that are home to large waterways and native flora and fauna species. Extended drought periods may lead to significant dieback of flora and fauna, in addition to general amenity and tourism. This may have significant cultural implications and impacts to Indigenous peoples who have a spiritual connection with national parks and waterways. There must be consideration of the benefits and importance of cultural flows and impact of flow volume and local waterways regime on species survival.

COORDINATION AND PARTNERSHIPS

Preparing for and responding to natural disasters requires a coordinated approach, as this is a shared responsibility between local community members and the public and private sectors. Various teams within local government have remits to address different elements of a natural disaster, e.g. preparedness, prevention, response, and recovery, making the approach to resilience fragmented when actions are implemented without collaboration. Both local governments have well-defined agencies with recognised experience and expertise in dealing with droughts and other hazards. However, there is a need to create synergies and improve the coordination of efforts in Disaster Risk Management and Disaster Risk Reduction, including clear definition of responsibilities at national and local levels in plans and legislation, timely access to state and federal government financial and technical support, and improved coordination between government agencies, communities and/or the private sector. This process may begin with the integration of this drought resilience plan with a broader approach to resilience planning within both councils.

EXTREME TEMPERATURES

Climate projections show that extreme heat events are expected to occur more often and with greater intensity in the future. There has been an observed increase in occurrence of heatwaves across the region, especially in the last 20 years. Acute extreme temperatures can lead to several health risks particularly for aging populations and damage infrastructure. Longer term chronic drought from extended heat waves is likely to exacerbate water shortages and may contribute to settlement and structural damage to buildings , in addition to jeopardised employment opportunities in affected communities.. Planning and implementing urban and rural cooling measures using natural features (tree canopy shading) will help reduce the regional centre's sensitivity to extreme heat and the sole dependence on air conditioning.

FIRES

Fires occur for a wide variety of reasons, from natural causes such as lightning strikes to human induced causes such as overheating of infrastructure. High urban density or areas of dense woodland can contribute to the rapid spread of fires. Fire hazards create widespread risks across all facets of society and can cause devastating destruction, with long-term consequences. Natural areas can be used as protective barriers against fires and planning with green and blue infrastructure may mitigate against fire spread.

CLIMATE CHANGE

While Australia is currently undertaking efforts to combat climate change through the decarbonisation of energy, the effects of global emissions already released are rapidly accelerating a changing climate. We need to take climate change projections into consideration that highlight wetter winters, hotter and drier summers and more frequent extreme weather events. By implementing climate change adaptation measures now, communities will be better prepared for the future.

CLIMATE AND DISASTER AWARENESS

Public awareness about disaster risk and responsibilities for drought prevention, response and recovery is often poor. Governments are increasingly investing in community awareness campaigns as a key element in strategies to improve disaster preparedness through informed public engagement and action. The Future Drought Fund was established to build local knowledge and capacity to plan for, prevent, respond to and recover from droughts. At a local level, we recommend that this awareness must be expanded to work with non-profit and community-based organisations to appropriately prepare residents for future shocks and stresses. These organisations can do this directly through awareness-raising and outreach, and indirectly through their day-to-day services e.g., supporting the unemployed or providing housing stability which reduce the chronic stressors that contribute to vulnerability.

STORIES OF RESILIENCE

Our community has many great existing initiatives, events and organisations already demonstrating resilience. Although not directly linked to this plan, they showcase how our community are intervening through actions of their own to bolster the resilience of our community. This deserves celebration and recognition.

SOURCE: TARA VENTURINI, WSP, 2019, NSW

RURAL AID 10 TOWN MAKEOVER

Established in 2019 within Rural Aid's Sustainable Community program, the 10 Town Makeover initiative commits $100, 000 to support the makeover of 10 country towns across Australia that have experienced one of the worst droughts in history. Each of the towns receive $10,000 for town leaders to workshop with experts on rural/regional town renewal and facilitate long term sustainability of the local community. The balance funds are then allocated to materials for maintenance projects identified by town leaders, with the aim of supporting local businesses. CEO of Rural Aid, Charles Alder says "Small country towns play a critical role in supporting the social and economic fabric of their local communities. This initiative will lift morale and inject much needed capital into the local community" (Rural Aid, 2022).

Image: Rural Aid heads to Tamworth Country Music Festival (Rural Aid, 2020)

The resourcefulness of our community is shown through leveraging our internationally acclaimed country music festival to divert funds and develop infrastructure to help our local economy.

Image: Ash Bell and Sara Tindley. Two of the artist touring for the Small Halls Festival – Resilience Tour 2022

FESTIVAL OF SMALL HALLS – RESILIENCE TOUR

Consisting of 15 performances and presented by veteran festival producers, the Festival of Small Halls – Resilience Tour 2022 was announced in early 2022 and is the 26th edition of the busy and exciting regional tour. The special edition tour targeted bushfire affected communities in particular but also those affected by flood, drought, mouse plague and COVID-19 (Monique Hartman, 2022). The tour stopped over at Yarrowitch Hall just outside of Walcha on the 5th of June 2022. The concert featured the likes of songwriters Ash Bell, Sara Tindley and troubadour Melanie Horsnell, as well as a variety of local acts. Producer Eleanor Rigden said of the festival "One thing that disaster-impacted communities tell us they want is to be better prepared for the next disaster. So, each show will feature some form of education, a way to build key relationships, or raise funds for the local Rural Fire Service - all curated by local communities to suit their unique needs." Woodfordia's Festival of Small Halls presents a program inspired by the strength and power of small communities (The Armidale Express, 2022).

By integrating music and art with education and relationship building, different groups can contribute to the social resilience of our community.

OZHARVEST MOBILE MARKET

In May of 2019, OzHarvest started its Mobile Market in NSW, visiting 16 different rural communities requiring food relief. The Mobile Market managed to clock up over 4, 000km and distributed over 1, 000 bags of fresh food and healthy groceries. Project lead Gabriella Dal Pozzo was moved after seeing the need for fresh food in disaster affected communities, saying "We were happy to see neighbours reconnecting at the mobile market and having meaningful conversations that have been too stifled since the fires and ongoing drought strain. Each person in a fire or drought affected town has had their own stressful journey, yet they still meet us with warmth and gratitude" (OzHarvest, 2020).

Pivoting from a standard market set-up to a rural delivery model brings opportunity to connect, and bolster our social resilience through conversations and relationship building.

THE HOUSE THAT DROUGHT BUILT

The House that Drought Built, a fundraising initiative to build and auction off a family home, is a collective project between The Salvation Army, G.J. Gardner Homes, Lampada Estate, Tamworth Regional Council and PRD nationwide. The concept was born after recognising the devastating impacts on the Tamworth community. The House that Drought Built was auctioned off in July 2020 for over $250, 000 with proceeds donated to The Salvation Army's Drought Relief Program and distributed to the most-drought affected families in the Tamworth region. Kelvin Stace, Salvo's rural chaplain said of the project "It's heartening to see this resilience and optimism throughout the community ... projects like The House That Drought Built play an important role in keeping farmers' spirits high..." (The Salvation Army, 2020).

Image: The House that Drought Built project underway, salvationarmy.org.au/about-us/news-and-stories, 26th of May 2020

By reflecting on the devastating effects of drought in the past, we can also learn from our actions and create new ideas of how best to bounce back.

DROUGHT COMMUNITIES PROGRAM

in 2020, Member for New England Barnaby Joyce announced a $1 million investment into Walcha local infrastructure including a water treatment plant upgrade, community hall refurbishment and amenity improvement under the Australian Government's Drought Communities Program. The first round of investment delivered the Walcha Showground function centre and a variety of other projects to help spur Walcha's economic recovery from drought. Other projects in the pipeline included

- Upgrades to Ingelba Hall
- Installation of a chlorine mixer and SCADA system at the water treatment plant and backup power supply
- Improvements to general community infrastructure such as Lions Park toilets
- Installation of bins and public drinking fountains as Walcha parks.

Walcha Mayor, Eric Noakes said, "The Walcha community is grateful for the continued support of the Federal Government...It is these initiatives that keep communities like ours optimistic in tough times" (The Nationals, 2020).

Image: Member for New England Barnaby Joyce with Walcha Council Mayor Eric Noakes, Site Manager Murray Rose and Walcha Council General Manager Anne Modderno viewing amenities upgrades underway at Walcha Showground's Youth Hall, barnabyjoyce.com.au, 4th of August 2020

By upgrading our infrastructure and injecting money into drought stricken areas of our community, we increase our ability to withstand longer periods of drought and recover quicker from the worst economic impacts.

COMMUNITY RECOGNITION – WALCHA ROOS

In 2018, local rugby league and league tag club, the Walcha Roos auctioned off commemorative jerseys to raise money for the Walcha Support Group and Rural Aid's Buy a Bale campaign. Roos president Michael Aspinall said it was a unanimous decision among the players and club's committee to raise money for organisations important to the Walcha community. (The Northern Daily Leader, 2018).

"Not asking for people to 'qualify' is so important. It's that hope. People need to feel as though they're not begging – someone is actually prepared to lend a hand without asking for anything in return"

– Tamworth Family Support Services

The resourcefulness of our community is reflected in fundraising efforts to support local drought response efforts and encourage social connection, through innovative ideas such as sporting auctions

COMMUNITY RECOGNITION – R U AWARE WE CARE

In July of 2018, Tamworth Regional Council, 88.9FM and a slew of local businesses hosted the first R U Aware We Care Concert with 800 people packing out the West Leagues Club. $12, 500 was raised through the event itself, as well as an additional $1, 775. Country music star Lee Kernaghan and headline act said of the event "Flying in today, I had a whole new understanding of the severity of the drought. To those farmers out there that are doing it tough, don't give up, your family is depending on you."

Image: Lee Kernaghan playing at the RU Aware We Care concert by Peter Hardin, www.goulburnpost.com.au, 23rd of July 2018

Gathering in support of a cause that showcases the strength of our members helps us connect socially and inspires us to keep on pushing when times are tough. It also raises funds to help people stay afloat when money is running dry.

COMMUNITY RECOGNITION – LITRES FOR THE LAND

In 2019, local community members stepped up to help collect and deliver water to drought affected rural families. ClubsNSW, Radio 2GB and Team Rubicon Australia teamed up to deliver water in our region, piping water into empty tanks on Ballimore homesteads and further afield. The Litres for the Land initiative committed millions of litres of potable water through club fundraising activities and public donations. Community members chipped in to fund water carts transporting water to impacted families in the bush for free, helping farms and families that needed it the most.

Image: Tamworth water cartes connecting delivery piping near Somerton, west of Tamworth, www.northerndailyleader.com.au, 3rd of December 2019

By identifying existing infrastructure to store water and bolster our redundancy, we can ensure there is sufficient back-up for when water availability is low.

COMMUNITY RECOGNITION – WALCHA COMING TOGETHER

In 2019, the Terrigal Trotters from the Central Coast, raised money so that every pre-school child in Walcha was able to get a present for Christmas. Additionally, in 2019 the Walcha Show entry fee was waved, through the Empowering Local Communities Grant, coordinated by Rural Health Network, so that the community could come together and put the drought out of their minds. This was such a success, the fee for 2020 was also waved with support from the state government.

"Everyone needs a farmer, 3 times a day. Just very occasionally, farmers need everyone"

– Rotary Club of Walcha

Image: 2019 Walcha Show free for all, www.northerndailyleader.com.au, 3rd of December 2019

By helping our most vulnerable community members, we build relationships and reduce strain on our health care, social care, and external support systems.

DROUGHT RESILIENCE ACTIONS

VISION?

For Tamworth and Walcha, drought resilience means belonging to a community that is prepared, secure and connected so that we can remain economically, socially and environmentally prosperous during times of adversity

PRIORITY AREAS

1. A region that has a strong, innovative and resilient economy
2. A coordinated and cooperative approach to community drought resilience in the region
3. A far-reaching campaign to raise awareness and foster uptake of drought resilience measures
4. A community with access to education on sustainable water management practices
5. An environmentally conscious region that values water and natural capital
6. A healthy, supportive and prosperous community

OBJECTIVES

ECONOMICS:

- **EC1 :** Build infrastructure to improve water security and maintain local employment and industry
- **EC2 :** Drive resilience-driven decision making in existing industries and diversify the local economy
- **EC3 :** Improve cooperation between residents, businesses, and government agencies to build economic resilience
- **EC4 :** Incentivise community members to reduce water consumption and invest in drought risk reduction
- **EC5 :** Implement budgets and planning mechanisms that meet needs in a changing world
- **EC6 :** Encourage community-based programs, events and projects that contribute to the economic prosperity of the region

ENVIRONMENTAL:

- **EN1:** Improve environmental resilience
- **EN2 :** Prioritise guidelines, plans and processes that aim to keep the environment healthy
- **EN3 :** Educate all age groups to better understand the water cycle and climate impacts in their region
- **EN4 :** Invest in sustainable water management, including research and new technologies
- **EN5 :** Promote innovative community projects to improve water sharing and use
- **EN6 :** Build local expertise and First Nations knowledge into natural resource management

SOCIAL:

- **SO1:** Access funding for new and existing mental health support systems to improve mental resilience
- **SO2:** Build capacity among community groups and organisations, enabling them to take ownership of drought impacts and awareness
- **SO3:** Connect the community through conversations centred around drought impacts and awareness
- **SO4:** Foster a prosperous and secure community that attracts a diverse range of people
- **SO5:** Improve information sharing and transparency around water use so the community feels confident it can withstand drought

A NOTE ON OUR ACTIONS

- To meet the objectives of the RDRP, a series of actions have been identified to build community resilience.
- The flagship actions are recommendations to be implemented, subject to action facilitators securing resource, funding and further community support.

IMAGE SOURCE: ANDERS THORNDLAD - WSP STADIA

TRANSITIONAL SHIFTS TO REALISE ACTIONS

TO UNDERSTAND WHAT SHIFTS MAY OCCUR TO REALISE ACTIONS, THE FOLLOWING BROAD CATEGORIES HAVE BEEN DEFINED

POLITICAL AND REGULATORY SHIFTS

Mandates on the reduction of water use, subsidies for low water use crops.

SOCIAL AND TECHNOLOGICAL SHIFTS

Demands for greater transparency and accountability, higher efficiency irrigation equipment, drought tolerant crop changes, higher expectations for sustainable tourism.

ENVIRONMENT AND CLIMATE CHANGE

Demand for greater environmental controls, availability of resources, changes to the water table and hydrology impacting native species.

ECONOMIC SHIFTS

Domestic food security may become an economic priority, where food for both people and livestock are prioritised.

ACTION IMPLEMENTATION TIMELINE

Transitional shifts should be considered in the implementation of the actions outlined in this plan. Depending on the timeline, actions are more likely to be susceptible to the outcomes of transitional shifts

SHORT TERM

- **1.1** Launch a Tourism Climate Adaptation Plan for our region
- **1.3** Support resilience in community businesses through the development of budgets and planning for water scarcity
- **1.4** Create and improve networks to support apprenticeships, paid internships, and other on-the-job training models
- **2.2** Develop a Drought Resilience Framework
- **2.4** Increase collaboration of resilience actions between local authorities and local community organisations
- **3.2** Dedicated resource for resilience to assist with resilience focused initiatives and coordination
- **3.4** Establish community campaign including information sessions and events to advocate for awareness of water resources and resilience
- **3.5** Create a fund to coordinate a pre-school or primary school-based tree planting day – termed 'Stewardship Day'
- **4.1** Promote education on First Nations methods of environmental management
- **5.2** Discourage overuse of water
- **6.3** Provide training for mental health support

MEDIUM TERM

- **1.2** Drive local-scale research and development to foster the implementation of innovative agricultural practices
- **2.3** Scale up financial structures to facilitate grassroot community resilience solutions
- **4.2** Provide community-wide educational and support services in response to drought, based on preparedness and resilience
- **5.1** Prioritise and incentivise initiatives to improve water security within the region
- **6.1** Strengthen community-based access to resources and services for mental health support within the community
- **6.2** Allocate funding for mental health support professionals working in community health support systems

MEDIUM - LONG TERM

- **2.1** Develop a data system to act as a centralised source of information on drought risk, warning, resources, and tools for drought resilience
- **3.1** Improve the transparency and reporting on the management of major water sources and community resources

LONG TERM

- **3.3** Develop Risk Scorecards and Water Saving Mechanisms
- **3.6** Use existing learning programs and events to promote climate change awareness and resilience
- **4.3** Improve the relevance and practicality of education within the community by encouraging the integration of region-specific content within tertiary and university education

PRIORITY 1:

A region that has a strong, innovative and resilient economy

Building a strong, innovative and resilient economy is key to ensuring the long-term sustainability of the region. This relies on all services and systems having some level of resilience to future droughts. The impacts of drought on economic prosperity in regional NSW have been significant in the agricultural sector, with lower crop productivity and job losses being key factors in lower economic output (NSW Government, 2022). Establishing ways to mitigate these losses is one of the most important ways to building a prosperous regional economy.

Further, tourism has suffered substantial losses in regional NSW in recent droughts (NSW Government, 2022). Areas of natural beauty, water-based attractions and other tourism draws are diminished when water availability is scarce. Modernising and adapting these and other existing economic sectors can help guarantee long-term economic success and the region's ability to adapt to droughts and other disaster risks more broadly.

The increasing difficulties linked to climate change and the pressing need to overcome the impacts presents an opportunity to strengthen Tamworth's and Walcha's economy. In facing a drought or other crises, the resilience of the region's economy can ensure continuity of services for its residents and visitors.

ACTIONS

1.1 Launch a Tourism Climate Adaptation Plan for our region

1.2 Drive local-scale research and development to foster the implementation of innovative agricultural practices

1.3 Support resilience in community businesses through the development of budgets and planning for water scarcity

1.4 Create and improve networks to support apprenticeships, paid internships, and other on-the-job training models

ACTION 1.1 - FLAGSHIP

LAUNCH A TOURISM CLIMATE ADAPTATION PLAN FOR OUR REGION

A Tourism Climate Adaptation Plan will be designed, planned and guided through collaboration with relevant businesses in the tourism sector, under the leadership of interested stakeholders and facilitated by council members. The plan will focus on adapting the region's tourism sector to address risks and opportunities associated with climate change (focusing on impacts of droughts) and set a vision for future-proofing the tourism sector using key actions/ priority areas for the region and service providers. Where relevant, the plan will also look to include other relevant industries e.g., accommodation providers and hotels.

The plan will set out a series of examples of opportunity areas to attract tourists prior to and during drought, by appropriately managing water. It will spotlight the most sustainable accommodation options, businesses and attractions in the region to build sustainable tourism. This will include building awareness of sustainable tourism practices by supporting local advertising campaigns for sustainable tourism businesses.

Walcha LGA's tourism sector has long been a key driver of the region's economic development. Tourist attractions are highly vulnerable to hazards such as flooding, fires, and especially droughts. Ensuring the resilience of key tourist sites, as well as the resilience of the sector as a whole, e.g., hotels and transport routes, will minimise disruption during drought events and other climate events, and provide the foundations for building back better.

The plan will also aim to mitigate the impacts of the tourism sector's assets and critical operations on natural environment and populations. Tourism practices that respect the climate and the environment could include training staff to receive information on the region's environmental objectives and environmental management measures, i.e., understanding the average tourist's water consumption during the summer, or measures to automatically offset Greenhouse Gas Emissions (GHG) emissions from transport for tourist packages by investing directly in GHG-offsetting projects or by purchasing certified carbon credits.

STRATEGIC OBJECTIVES

EC1, EC2, EC5, EN1, SO3

KEY OUTCOMES

- Allow the sector to adapt and thrive in the face of a changing climate
- Support the industry in responding to climate risks and opportunities and reduce reputation risks for visitors, guaranteeing the communities' income from tourism in return
- Coordinate opportunities to explore mutual benefits and adaptation measures with Tamworth Regional Council

TIMEFRAME

SHORT TERM

ESTIMATED COSTS

CapEX:
$20,000 (launch advertising campaign, event communications and coordination)

OpEX:
$10,000 (annual sustainable tourism advertising funding grants on council-owned sites)

Design/Development Cost:
$25,000 (consultant fee for dedicated Tourism Climate Adaptation Plan)

COMPONENTS OF RESILIENCE

Reflective
Continuously monitoring and adapting to emerging climate trends

Resourceful
Industry working to ensure tourism business continuity

Robust
Preparation to endure and recover from hazard events

Integrated
Consistent decision making in the event of shocks or stressors

STEPS FOR IMPLEMENTATION

1. Draw out key elements of the Resilience Diagnostic, RDRP and other applicable documents such as the Tamworth Regional Council Sustainability Strategy relevant to the tourism sector and identify priority areas/actions and associated timeframes
2. Appoint a tourism board for the region, exploring synergies with Destination Tamworth, to oversee the development and implementation of the adaptation plan
3. Fund the top three priority actions for immediate implementation
4. Undertake a stakeholder mapping exercise of key industry players and develop an engagement plan
5. Map key hazardous areas with critical assets to create industry-specific and available databases with current and forecast tourism data, to understand climate risk hot-spots
6. Run local advertising campaigns for sustainable tourism businesses
7. Support operator resilience through emergency planning and preparation mapped out in the final adaptation plan
8. Host a community event promoting sustainable, drought resilient and water-wise tourism

PLAN FOR DELIVERY

Action Facilitator	• Walcha Council
Stakeholders	• NSW Government (Destination NSW), Tamworth Regional Council
Financing Options	• Increasing Resilience to Climate Change – Community Grants (NSW Government) • Future Drought Fund – 2023 funding (Australian Government – Department of Agriculture, Fisheries and Forestry)
Revenue/Saving Opportunties	• Ongoing revenue generation through building sustainable tourism capacity
Timeline	• Learnings from RDRP actioned in late 2022 • Stakeholder mapping commences early 2023 • Operator support continues until 2025

INDICATORS

The following KPIs will be developed and used to measure its success:
- Number of businesses registered with 'sustainable business practices' (%)
- Annual regional tourism revenue (year-over-year increase in %)

RESILIENCE DIVIDEND

Social	Building community connections through knowledge sharing
Economic	Revenue generation through additional tourism and investment
Environmental	Improved building performance and greater investment in natural capital

ACTION 1.2 - ASPIRATIONAL

DRIVE LOCAL-SCALE RESEARCH AND DEVELOPMENT TO FOSTER THE IMPLEMENTATION OF INNOVATIVE AGRICULTURAL PRACTICES

This action is tailored to provide resources to relevant stakeholders to enable them to explore innovation within the agricultural industry. Through investment in research and development, the local industry can draw on advancements in domestic and international forums and use these resources to develop plans in their regional context. This will also provide a forum to share knowledge across the sector, driving wider implementation of sustainable farming practices.

As our region relies strongly on agriculture, this action helps to strengthen resilience and prepare the region through calculated responses to water scarcity. For example, promoting the diversification in horticultural practices, drought-resilient crops and the use of cropping practices will help to decrease the sector's vulnerability. Opportunities to build upon Namoi Unlimited's regional work to foster uptake innovative agricultural practices are to be explored when developing this action.

This action also supports resilience in adjacent sectors. The investment in local research and development also creates additional cash flow in the region, increasing the prosperity of local communities.

STRATEGIC OBJECTIVES

EC1, EC2, EC4, EN2, EN3, EN6, SO5

KEY OUTCOMES

- Provide resources for stakeholders to invest in research and development
- Give stakeholders autonomy to go beyond 'business-as-usual' practices and explore innovative ideas
- Invite external investment in research and development
- Encourage local farmers to pilot sustainable and drought tolerant farming practices
- Minimise agricultural sector vulnerabilities
- Strengthen regional economies adjacent to the agricultural sector

TIMEFRAME

MEDIUM TERM

COMPONENTS OF RESILIENCE

Integrated
Disseminating and incorporating research into agricultural practices

Resourceful
Strengthening capacity of industry to build drought resilience

STEPS FOR IMPLEMENTATION

1. Define target for research and development and identify barriers to success
2. Identify stakeholders with interest in exploring and driving research and development
3. Map out agricultural sector stakeholders willing to implement innovative practices
4. Assign responsibilities and define expectations for participants
5. Provide resources to support and guide participants
6. Set up a forum for participants and industry bodies to discuss progress and share knowledge
7. Share learnings with wider industry and integrate external stakeholders in learning process and information sessions

PLAN FOR DELIVERY

Action Facilitator	• Tamworth Regional Council • Walcha Council • Namoi Unlimited EO
Stakeholders	• NSW Farmers Association • Future Farmers Network • Landcare Association • Tamworth Business Chamber • NSW Irrigators Council • SQNNSW Drought Resilience Adoption and Innovation Hub • Meat & Livestock Australia
Financing Options	• Public Private Partnerships • Cost-sharing programs of departments within Tamworth Regional Council and Walcha Council • National Enabling Activities Fund
Revenue/Saving Opportunties	N/A
Timeline	• Objectives to be scoped early 2023 • Identify participants in mid-2023 • Begin facilitation of research and development activities from late 2023 to early 2024

ACTION 1.3 - FLAGSHIP

SUPPORT RESILIENCE IN COMMUNITY BUSINESSES THROUGH THE DEVELOPMENT OF BUDGETS AND PLANNING FOR WATER SCARCITY

The businesses operating within our region are critical to reduce economic vulnerability during drought. Business contingencies and alternative sources of income are necessary when primary industry and water-reliant sectors are yielding lower returns and employing fewer people. This action aims to link businesses with the tools to prepare and adapt to changing climates and respond to ensure economic survival throughout prolonged drought events.

By linking businesses with training, support and planning resources to business groups and local industry leaders, greater economic resilience for the region may be achieved and lead to a greater uptake of existing support resources. Training will include:

- Business Sustainability
- Succession planning
- Budgeting and business continuity strategies
- Business diversification
- Risk planning
- Accessing drought insurance.

This action will improve uptake on existing training resources and ensure businesses are equipped with tools to cope in a drought event. This will have flow-on effects into the community and bolster their adaptability and economic literacy and ensure key businesses in the region have a dedicated drought preparedness plan.

STRATEGIC OBJECTIVES

EC2, EC3, EC5, EC6, SO2, SO5

KEY OUTCOMES

- Improve community access to information and proactive tools to ensure business continuity during water scarcity
- Provide flow-on effects to build financial literacy and planning within the community for economic resilience

TIMEFRAME

SHORT TERM

ESTIMATED COSTS

CapEX:
$30,000 for external facilitator to develop content and host 5 training modules

OpEX:
Nil as ongoing costs to manage drought preparedness plan is the responsibility of business owners

Design/Development Cost:
Nil assuming dedicated Council resource will host workshops and identify external facilitators and training modules

COMPONENTS OF RESILIENCE

Reflective
Recognising dynamic environments and using past learning to inform future decision making

Flexible
Equipping businesses with capacity to adjust with shifting climate and situations

Integrated
Ensuring budgets and planning integrate drought considerations

STEPS FOR IMPLEMENTATION

1. Nominate a working group within Walcha Council and Tamworth Regional Council to identify businesses to be included in this training
2. Identify training courses and online learning modules on the topics of business planning, budgeting, diversification, risk planning, succession planning, accessing drought insurance and change management
3. Coordinate a workshop with the Tamworth Business Chamber and relevant Walcha representatives to determine key training modules required to facilitate business continuity planning
4. Run a training program for identified businesses so each business has the necessary resources and learning to develop their own drought preparedness plan
5. If budget permits, provide an option for some drought preparedness plans to be reviewed by experts e.g., accountants or financial advisors for technical advice and oversight

PLAN FOR DELIVERY

Action Facilitator	• Tamworth Business Chamber Chair
Stakeholders	• Tamworth Business Chamber members • NSW Farmers' Association • Walcha Council
Financing Options	• Increasing Resilience to Climate Change – Community Grants (NSW Government) • Future Drought Fund – 2023 funding Release (Australian Government) • Funding via Drought Adoption and Innovation Hubs up to $75 million
Revenue/Saving Opportunties	• Future savings in drought support if businesses develop their own drought preparedness plans
Timeline	• Nominate working group in early 2023 • Training courses and modules from 2023 to 2025

INDICATORS

The following KPIs will be developed and used to measure its success:
- Number of businesses with a drought preparedness plan (%)
- Number of business leaders trained to manage water scarcity per annum
- Quarterly regional revenue forecast vs actual (during a future drought event) (% reduction in revenue)

ESTIMATED BENEFITS

Social	Build mental resilience in the community with knowledge and planning included in the drought preparedness plans
Economic	Greater business continuity during drought events
Environmental	Nil

ACTION 1.4 - FLAGSHIP

CREATE AND IMPROVE NETWORKS TO SUPPORT APPRENTICESHIPS, PAID INTERNSHIPS, AND OTHER ON-THE-JOB TRAINING MODELS

To increase opportunities for residents to obtain the diverse skills and competencies needed to drive the local economy, the Councils will engage with businesses, academic institutions, and community organisations to advocate for apprenticeship schemes, internships, vocational skills programs and work-based learning programs.

The Councils will identify sectors where the placements will be useful and focus on target populations, e.g., young residents and others wishing to diversify their skills. These steps will support the regions to increase employment of these target populations and help in retaining skills within the region.

This will include:

- An 'Apprenticeships Champions Network' fair, to promote and encourage apprenticeships in key sectors
- Connecting with local and state community organisations to develop internship opportunities for students and recent graduates
- Prioritising community members who wish to diversify or change careers, such as mature age students or others who do not fall into the 'youth' category

The key to success would be to have an ongoing upskilling scheme that is embedded into the local TAFE and university educational system through training programs or internship opportunities, and a method of engaging with community members who wish to upskill or diversify to ensure income continuity during drought.

COMPONENTS OF RESILIENCE

Inclusive
Providing accessibility for a broad range of people and meeting a range of needs

Integrated
Combining efforts to develop and strengthen networks

Resourceful
Utilising existing efforts to build resilience in the community

STRATEGIC OBJECTIVES

EC2, EC3, EC5, EC6, SO2, SO5

KEY OUTCOMES

While there are many benefits to business in offering apprenticeships and internships, it is often unclear how they can implement this type of scheme in their organisations. Therefore, by setting up a clear program and network, potential businesses can more easily implement employment solutions that match demand and skills available with potential for training and up-skilling across sectors. This will ensure young people are more prepared for employment and better prepared for disaster events, and community members wishing to diversify have opportunities to ensure their income is not severely impacted by drought.

TIMEFRAME

SHORT TERM

ESTIMATED COSTS

CapEX:
$20,000 for initial engagement and hosting network events and small subsidy of stipend/ paid internships in the initial round

OpEX:
$15,000 for networking events and subsidising stipend/paid internships in future rounds

Design/Development Cost:
$30,000 to develop toolkit and facilitate development of materials, or fund external party to provide training

STEPS FOR IMPLEMENTATION

1. Identify target populations and potential employers
2. Develop and establish the network of businesses who have availability to take on interns, apprenticeships and on-the job training staff, and identify key roles and responsibilities for delivery of this action
3. Develop the toolkit and materials needed – including an online platform where interested parties can apply for applicable programmes
4. Organise training and networking events (e.g., career fairs) to ensure the uptake of apprenticeships, paid internships, and other on-the-job training in targeted areas
5. Provide ongoing support and development.

PLAN FOR DELIVERY

Action Facilitator	• Tamworth Regional Council • Walcha Council
Stakeholders	• Tamworth Community College • Tamworth TAFE • Tamworth High School • Peel High School • Parry School • Oxley High School • Farrer Memorial Agricultural High School • Bullimbal School • Walcha Central School • University of New England, Armidale • Department of Employment and Workplace Relations (DEWR formerly DESE) Employment Facilitators
Financing Options	• Regional Partnerships Project Pool Program (Australian Government)
Revenue/Saving Opportunties	• Retention and upskilling of community members to generate greater revenue for the region
Timeline	• Identification of potential employers in 2022 • Network established in early 2023 • Training and networking events and ongoing support from 2023 to 2025

INDICATORS

The following KPIs will be developed and used to measure its success:
- Number of attendees at networking events
- Number of apprenticeships, internships, on-the-job trainees before vs after action delivery (% increase)
- Regional quarterly revenue before vs after action delivery (quarterly increase in %)

RESILIENCE DIVIDEND

Social	• Diversification of skillsets and uptake of training in the region
Economic	• Higher wages due to improved qualifications and skills, greater revenue for the region • Ongoing employment through disaster events as a result of diversified qualifications and skillset within the community
Environmental	Nil

PRIORITY 2:

A coordinated and cooperative approach to community drought resilience in the region

On the ground action during a drought event is driven by strong communication and cooperation between local services, communities, and larger government disaster management agencies. The relationship between these groups needs to be based on trust, knowledge sharing and mutual confidence. This relationship is ideally developed prior to an event and can be facilitated through action plans. The initiatives presented under this strategic objective therefore seek to encourage cooperation between various governance levels and agencies to streamline data sharing, encourage integrated planning, and clearly identify funding streams that can quickly be released before, during and after a drought. Strengthening funding sources to address resilience can also encourage resilience-building initiatives at the local level.

A mechanism to facilitate data sharing will help agencies, businesses and community members involved in risk management make informed decisions. It helps them share accurate information to affected communities. A central system for data sharing can learn from past events and further improve the drought-readiness of the region.

An overarching framework can be used as a foundation to build drought resilience in the region. It draws upon updated and existing plans and strategies, creating streamlined objectives and approaches to drought resilience. It attributes actions to a projected timeline, lending clarity to the direction of the region and outlining strategies to achieve outcomes. Committing to an action plan can build community confidence in regional authorities, decreasing stresses that accompany drought events.

Tapping into expertise, resources and existing initiatives is key to improving drought tolerance and reducing future drought impacts. Linking local organisations with governing bodies, state and federal resources will facilitate a faster transition rather than each one working in isolation. This mechanism can assist in understanding where distribution of equipment and resources needs to be improved and also where funding is to be directed to upgrade targeted services.

Additionally, instilling resilience within the community requires change driven from the ground up. Ownership and accountability are key to ensuring the successful implementation of this strategy. Empowering our community members to lead the charge in making change will help us remove obstacles and foster proactive measures to increase our region's drought tolerance.

ACTIONS

- **2.1** Develop a data system to act as a centralised source of information on drought risk, warning, resources, and tools for drought resilience
- **2.2** Develop a Drought Resilience Framework
- **2.3** Scale up financial structures to facilitate grassroot community resilience solutions
- **2.4** Increase collaboration of resilience actions between local authorities and local community organisations

ACTION 2.1 - ASPIRATIONAL

DEVELOP A DATA SYSTEM TO ACT AS A CENTRALISED SOURCE OF INFORMATION ON DROUGHT RISK, WARNING, RESOURCES, AND TOOLS FOR DROUGHT RESILIENCE

To inform data-backed decision making and response to water scarcity, the region recognises the value of accessible and centralised knowledge. This action is intended to provide a single source of information based on region-specific data for drought warnings and drought resilience resources to provide support before, during and after drought events.
This action will develop an open-access platform for curated, community-wide resilience data. This will foster collaboration, align resources, drive actions and measure outcomes to deliver shared community goals for the drought resilience of the region. A user-based, visual, and multi-level hazard map will support the region to better plan, improve knowledge of vulnerable areas, and inform decision making by government, businesses (where to invest), and individuals (where to live).

The platform will include the following:

- Region-specific measurements and data, in addition to expert-based knowledge to empower the community to make informed decisions
- An accessible list of information sources (platforms, websites, etc. where readers can obtain more information)
- Real time information to provide information on the severity of drought risk and the stage of a drought, with a prompt for recommended actions needed
- Contact details for local, state, and federal grants, financial counsellors and agricultural advisors

STRATEGIC OBJECTIVES

EC3, EN2, SO1, SO2, SO4

KEY OUTCOMES

- Provides community access to information and proactive tools to respond to water scarcity
- Enables greater communication and collaboration in resilience planning to generate more fit-for-purpose projects that provide a wider range of benefits
- Knowledge-sharing and collaboration increases innovation within the region
- Creates a centralised database as a single source of reliable information to inform decision-making relating to climate change and drought resilience actions

TIMEFRAME

MEDIUM - LONG TERM

COMPONENTS OF RESILIENCE

Integrated
Alignment of information to provide a single source of truth

Inclusive
Providing accessible sources of information and resources

STEPS FOR IMPLEMENTATION

1. Outline the various uses of the platform and its intended users
2. Explore broader scale initiatives like Drought Hub and Drought Signals, to avoid duplication of information
3. Collaborate with Councils to identify the user needs to develop the platform
4. Develop a strategy to ensure the platform is kept updated and accurate
5. Link drought information into the platform
6. Develop the platform and make available for all providers
7. Ensure the platform is regularly updated and there is a dissemination strategy to inform all members of the community as to the location user functions of the platform

PLAN FOR DELIVERY

Action Facilitator	• NSW Reconstruction Authority (recommended Resilience Officer [Action #3.2]) • Supported by Tamworth Regional Council, Walcha Council, and Namoi Unlimited
Stakeholders	• Community members and business owners of Tamworth and Walcha regions
Financing Options	• Allocations/Grants from State Funds • Leverage off the National Delivery Climate Services for Agriculture platform which provides historical climate data, seasonal forecasts, and future climate projections at a 5 square kilometre resolution across the country • National Enabling Activities fund to develop region's own platform up to $7.8 million
Revenue/Saving Opportunties	• Utilise State resources to facilitate and manage process. • Namoi Unlimited to support collaboration between Councils
Timeline	• In parallel with Action #3.2, Resilience Officer role established end of 2022 • Action to begin early 2023 with scoping goal and users of platform • Ongoing action to be maintained and updated on a regular basis


SOURCE: TASHA CHAVINER

ACTION 2.2 - FLAGSHIP

DEVELOP A DROUGHT RESILIENCE FRAMEWORK

It is important to approach regional drought resilience in an informed and structured manner. To address relevant challenges within the community and across the industry sectors, it is crucial to use regional, state and national drought response assessments.

This drought resilience framework will streamline efforts around a single timeline, providing clarity on approaches to strengthen the region's resilience. It will define the ultimate goals of the region and the strategies to achieve them, including the scope of each strategy, implementation stages, expected outcomes and responsibilities.

The development of this framework will highlight any outstanding gaps exposing the region's vulnerability and offer appropriate resilience responses.

This document will also help initiate conversations between vulnerable industries.

COMPONENTS OF RESILIENCE

Integrated
Recognising existing initiatives across the region to streamline and inform approach to resilience

Inclusive
Consider existing initiatives across a broad range of sectors to address holistic resilience

Robust
Framework to recognise gaps and allow opportunities to address challenges.

STRATEGIC OBJECTIVES

EC2, EC3, EC5, EN1, EN5

KEY OUTCOMES

- Provides clarity around governance and strategies around regional drought resilience.
- Adds structure to relevant strategies and plans for drought resilience, increasing transparency around approaches to resilience
- Provides an accessible and comprehensible stakeholder engagement channel
- Equips stakeholders with a foundation to prepare for future drought events

TIMEFRAME

SHORT TERM

ESTIMATED COSTS

CapEX:
Nil, Covered in Design/Development cost

OpEX:
Communication and marketing activities to disseminate knowledge: $15,000

Design/Development Cost:
$140,000 (update of strategic plans, development of roadmap and implementation)

INDICATORS

The following KPIs will be developed and used to measure its success:

- Relevant plans and strategies reflect RDRP outcomes
- Framework document developed
- Monitoring and evaluation program established and functional)

2. Hotchkiss, E. L., & Dane, A. (2019). Resilience roadmap: a collaborative approach to multi-jurisdictional resilience planning. National Renewable Energy Lab.(NREL), Golden, CO (United States).

STEPS FOR IMPLEMENTATION

1. Identify the regional areas and industry sectors involved in developing the framework
2. Update relevant strategies and plans with findings from the Resilience Diagnostic assessment and incorporate stakeholder feedback
3. Identify gaps in plans for regional drought resilience
4. List key plans and strategies and create a roadmap for integration of interventions, tying into planning documentation and funding avenues. This will include detailing roles and responsibilities, timeframes, programs, people, and services
5. Identify trigger points to switch communities between drought response measures and 'business-as-usual'
6. Consult with government stakeholders to incorporate overlaps with existing government plans
7. Determine the monitoring and evaluation process
8. Publicise the plan with stakeholders and community
9. Pending budget, this action will also look to install signage indicating the 'drought stage' similar to fire hazard signs, supplemented by a broader communication campaign to educate the community on measures to be implemented at each stage. See Action 3.4.

PLAN FOR DELIVERY

Action Facilitator	• Namoi Unlimited
Stakeholders	• National Emergency Management Agency (NEMA) • CSIRO • SQNNSW Drought Resilience Adoption and Innovation Hub • Tamworth Regional Council • Walcha Council • The Department of Regional NSW • NSW Government Agencies (NSW Reconstruction Authority, Local Land Services, State Emergency Service, Environment Protection Agency, etc.)
Financing Options	• Allocations/Grants from State Funds (Department of Regional NSW) • Small grants available through Regional Drought Resilience Planning funding to take forward priority actions
Revenue/Saving Opportunties	A study funded by the Federal Emergency Management Agency (FEMA) in the USA found that money spent on mitigation has a cost-benefit ratio of 1:4. As such, for every $1 spent on mitigation, there was a $4 return of avoided losses in the future[2]
Timeline	• Update relevant strategies based on RDRP and identify gaps in late 2022 • Consultation begins mid 2023 • Framework and roadmap finalised mid-2024 and shared with stakeholders by end of 2024

RESILIENCE DIVIDEND

Social	• Improved trust in Government commitments to strengthen drought resilience • Increased comprehension and reduced confusion surrounding tangible actions to reduce regional vulnerability • Transparency of regional direction towards drought resilience
Economic	• Structured plan for investment decisions to align governments, communities and businesses
Environmental	• Improved awareness of vulnerabilities across the region • Accountability for stewardship of natural resources

ACTION 2.3 - ASPIRATIONAL

SCALE UP FINANCIAL STRUCTURES TO FACILITATE GRASSROOT COMMUNITY RESILIENCE SOLUTIONS

To create a resilient region, drought resilience must be factored into conventional planning processes, project design and development decision making. Establishing a resilient city financing structure in both Tamworth Regional and Walcha Councils will ensure that the risk-oriented components of community projects can be addressed. This will also ensure that, in the event of a disaster, finances are available to support services.

A transition to a climate-resilient region will require a substantial increase in the amount of investment in urban and rural infrastructure and a shift in the way existing streams of finance are allocated. This action therefore seeks to develop innovative solutions to finance resilient actions at the community level. This could include local carbon offsetting funds, Private-public partnerships, private investments, crowdfunding, social financing, micro-grants, tax incentives, or the provision of physical assets. This action will connect grassroots community initiatives with a diverse portfolio of funding opportunities to create a pipeline for community investments.

STRATEGIC OBJECTIVES

EC2, EC3, EC4, EC5, EC6, EN4, EN5, SO2

KEY OUTCOMES

- Expands institutional support for prioritised resilient development practices to encourage responsible growth from the private sector and local communities in the region
- Provides capabilities to address resilience actions, helping to empower the community to take ownership of planning, preparation, and response to drought
- Provides understanding of the region's understanding of strengths and weaknesses in facilitating community-based resilience actions

TIMEFRAME

MEDIUM TERM

COMPONENTS OF RESILIENCE

Robust
Anticipation of future challenges by building existing capacity

Inclusive
Community-led and directed actions

Resourceful
Utilising existing capacity through grassroot measures to stimulate change and build resilience

STEPS FOR IMPLEMENTATION

1. Assess the current financial instruments that are currently available and identify areas for improvement and innovation to leverage opportunities
2. Identify the scope of funding required
3. Obtain approvals from Council elected representatives and management
4. Establish a committee to support cooperation and communication between Councils; the committee will meet every two months to assess funding applications and identify funding sources where needed
5. Develop a grant application process that will determine grant categories so community groups can apply for funding
6. Launch a platform, in collaboration with a crowd-resourcing organisation, to connect community with funding
7. The committee to meet every two months to assess the funding applications and establish different avenues for funding where needed.

PLAN FOR DELIVERY

Action Facilitator	• Tamworth Regional Council • Walcha Council • Namoi Unlimited
Stakeholders	• Country Women's Association • Garden Club • Rotary Club • Lions Club • Tamworth RSL Subbranch • Quota Club • Walcha Town and Country Committee • Australian Red Cross • The Salvation Army • Walcha Central P&C • St Patricks Walcha Parents and Friends • Tamworth Regional Residents and Ratepayers Assoc Inc • Zonta • Hall committees • NSW Farmers Association • Future Farmers Network • Landcare Association • Tamworth Business Chamber • NSW Irrigators Council
Financing Options	• Allocations/Grants from local Funds • Tamworth Regional Council 2016 Demand Management Plan • Walcha Council Adverse Event Plan • Grants available through Drought Adoption and Innovation Hubs – Hub Projects up to $4 million
Revenue/Saving Opportunties	• Use of Namoi Unlimited to create funding structures and projects regionally
Timeline	• In conjunction with Action #1,2, to start mid 2025 • Establish committee early 2026 • Launch platform end of 2026

ACTION 2.4 - FLAGSHIP

INCREASE COLLABORATION OF RESILIENCE ACTIONS BETWEEN LOCAL AUTHORITIES AND LOCAL COMMUNITY ORGANISATIONS

Non-profit and community-based organisations contribute to long-term community empowerment and can support the regions by preparing residents for future shocks and stresses, especially those related to droughts. This can be done directly, through awareness-raising and outreach around these issues, in addition to providing emergency relief. This can also be done indirectly, through organisation's day-to-day services (for example, combatting unemployment) which reduce the chronic stressors that contribute to vulnerability.

This action will bring together key stakeholders from these organisations to identify their needs, funding and resource requirements. This will inform and improve the region's efforts on preparedness, prevention, mitigation and emergency response to droughts. Local, state and national funding for community and voluntary organisations must be reviewed and strengthened to ensure these organisations are confident and able to continue providing their services.

To support community efforts, public agencies can share their facilities or public outdoor spaces with organisations to carry out resilience-building activities. In addition, private sector partners can provide financial support and access to additional resources.

STRATEGIC OBJECTIVES

EC2, EC3, EN4, EN5, SO2, SO4

KEY OUTCOMES

- Empowers the community to address local shocks and stresses related to water scarcity
- Engages community sectors to establish social capacity within the region, providing support during periods of drought
- Helps scope targeted and well-supported resilience-building actions within the region, reducing potential opposition to implementation
- Ensures stakeholder consultation is comprehensive and inclusive.

TIMEFRAME

SHORT TERM

ESTIMATED COSTS

CapEX:
Nil, no set-up costs. Included in OpEx.

OpEX:
Scoping and engagement activities: Unknown;
Lease of facilities (cost to governments): Unknown Community Outreach: $6,000

Design/Development Cost:
N/A

COMPONENTS OF RESILIENCE

Integrated and Inclusive
Collaboration between stakeholders to direct efforts towards a common goal

Resourceful
Exploring different ways to build resilience

Robustness
Increasing collaboration to reduce reliance on individual actions

STEPS FOR IMPLEMENTATION

1. Undertake a stakeholder mapping exercise to identify key community groups and stakeholders (private sector, government departments, etc.). Note: this builds on stakeholder engagement conducted to develop the RDRP.
2. Undertake a needs assessment of the community and volunteer-based organisations, including actions to mitigate climate change and encourage disaster preparedness and response
3. Identify avenues for collaboration and funding and resourcing support required by organisations that carry out resilience-building activities, through workshops, surveys, town hall events etc. Including how existing funding can be better allocated and accessed
4. Promote the findings to demonstrate how Tamworth Regional Council and Walcha Council is assisting these organisations.

PLAN FOR DELIVERY

Action Facilitator	• Tamworth Regional Council • Walcha Council
Stakeholders	• Tamworth and Walcha community groups, businesses, and community members
Financing Options	• Allocations/Grants from State and Commonwealth funds • Working group or committee established by local Councils • Small grants available through Regional Drought Resilience Planning funding to take forward priority actions
Revenue/Saving Opportunties	• Involvement from organisations to operate under pro bono contributions
Timeline	• Mapping exercise in mid-2022, building upon work of RDRP • Needs assessment in late 2022 • Engagement/consultation activities in mid-2023, ongoing for six months • Findings reported early 2024

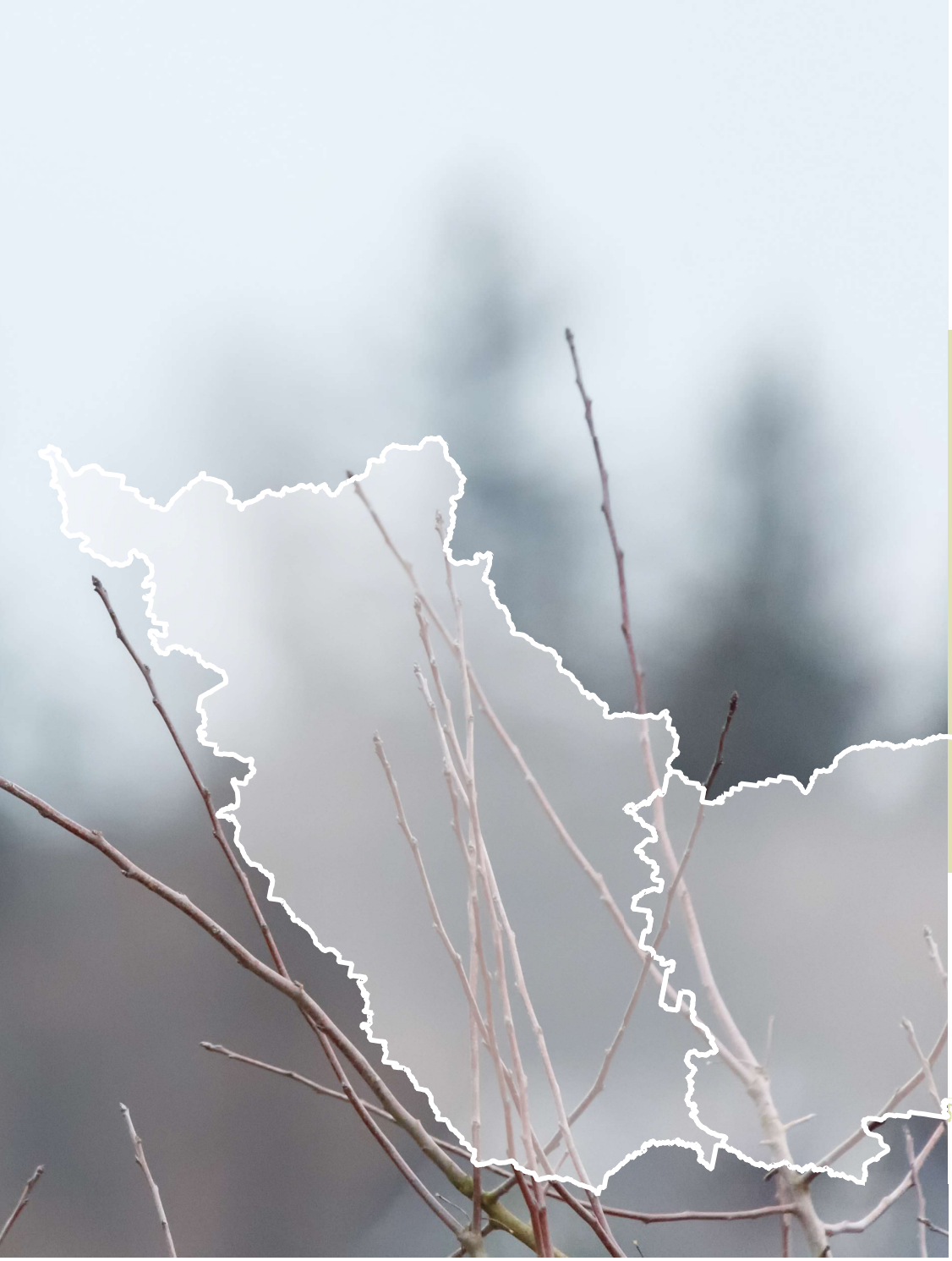
INDICATORS

The following KPIs will be developed and used to measure its success:

- Number of programs being delivered through partnerships
- Total public and private investments/additional funding per annum
- Number of volunteers directly involved in resilience actions per annum
- Number of community members having completed the 'services impact and resource requirements' survey per annum

RESILIENCE DIVIDEND

Social	• Community empowerment in addressing drought impacts • Develops social capacity to respond to drought impacts • Improved collaboration between governmental levels
Economic	• Comprehensive idea of resourcing needs within the region for future investment • Support of community organisations to increase economic stability, reducing regional vulnerability during drought events
Environmental	Equip region with tools to prepare, mitigate, and respond to drought impacts



PRIORITY 3:

A far-reaching campaign to raise awareness and foster uptake of drought resilience measure

Awareness and education are key to ensuring a community takes ownership of their own resilience and is achieved through initiatives including community events, training, social media, workshops and classroom education, among others. Education is not only the role of schools and the government; community members are also responsible for educating each other. Community members must pass on their knowledge and expertise so that resilience-based thinking becomes a community-driven concept. This priority area focuses on the development of a successful and far-reaching drought-resilience awareness campaign.

An important step in improving community awareness and education around drought resilience is having established points of contact and information that is accessible and digestible for the community. This priority area also focuses on creating visible points of contact within government agencies with responsibility for integrating resilience thinking into ways of working and who design drought resilience projects for the region. Ensuring that accessible and digestible information relating to drought risk is available to the community is also important. Information will be consolidated and made available to the community. This includes through establishing engagement mechanisms around drought awareness to serve as an opportunity for the community to connect with one another, particularly during times of hardship and stress.

ACTIONS

- **3.1** Improve the transparency and reporting on the management of major water sources and community resources
- **3.2** Dedicated resource for resilience to assist with resilience focused initiatives and coordination
- **3.3** Develop Risk Scorecards and Water Saving Mechanisms
- **3.4** Establish community campaign including information sessions and events to advocate for awareness of water resources and resilience
- **3.5** Create a fund to coordinate a pre-school or primary school-based tree planting day – termed 'Stewardship Day'
- **3.6** Use existing learning programs and events to promote climate change awareness and resilience

ACTION 3.1 - ASPIRATIONAL

IMPROVE THE TRANSPARENCY AND REPORTING ON THE MANAGEMENT OF MAJOR WATER SOURCES AND COMMUNITY RESOURCES

To build trust between residents, businesses and government, it is important that those who are perceived to be in control of a community's resources speak openly and share data on exactly how those resources are used. Water sharing in particular can be an extremely contentious during times of drought as people's incomes, livelihoods and wellbeing are dependent on the amount of water they are allowed to use.

The primary purpose of this action is to identify methods of obtaining water consumption data and information. This may be through existing state level mechanisms such as Water Insights by WaterNSW. Secondly, the action aims to identify ways of sharing this information with the community, including via channels like a community Facebook page, local newspaper, newsletter, Council rates letters or announcements on radio and at local events.

Ultimately this action will aim to improve trust within the community and allow them to have confidence that government agencies are using water resources appropriately and the water saving mechanisms in place are fair and just. This may also reduce stress and anxiety levels within the community as they know exactly how the water within the region is being used.

STRATEGIC OBJECTIVES

EC3, EN2, SO3, SO4

KEY OUTCOMES

- Improved trust and confidence within the community that it can withstand drought
- Improved confidence in local and state government agencies overall
- Improved communication between residents, businesses and all levels of government

TIMEFRAME

MEDIUM-LONG TERM

COMPONENTS OF RESILIENCE

Flexible
Altering systems to improve circumstances

Reflective
Ability to learn from behaviour and adjust based on past drought event feedback

Integrated
Providing transparency across management processes to increase community understanding and trust

Inclusive
Allows ownership over preparation and response to changing conditions

STEPS FOR IMPLEMENTATION

1. Identify what water consumption information/data will be shared with the community e.g. Water Insights by WaterNSW provides real time local data on dam levels, water allocations and general updates
2. Identify how this information will be disseminated e.g. radio, TV, local paper, social media, community notice board, website, etc.
3. Establish a community feedback forum for community members to ask questions and Council responds

PLAN FOR DELIVERY

Action Facilitator	• Walcha Council • Tamworth Regional Council • Namoi Unlimited • WaterNSW • NSW Department of Industry • Australian Government Department of Agriculture, Fisheries and Forestry
Stakeholders	• Water Users Associations • Tamworth Water Security Alliance • SQNNSW Drought Resilience Adoption and Innovation Hub • NSW Irrigators Council • Future Farmers Network • OzFish • Local Aboriginal Land Council • Amaroo Land Council
Financing Options	• Future Drought Fund – Resilience Leaders Program for training of Council personnel to understand data and respond to community queries
Revenue/Saving Opportunties	• Leverage off publicly available Water Insights data Use free, public platforms to disseminate data e.g. social media. community events, notice boards.
Timeline	• Project starts in 2024 • First phase completed by 2025 • Updated regularly every 3 years

ACTION 3.2 - FLAGSHIP

DEDICATED RESOURCE FOR RESILIENCE TO ASSIST WITH RESILIENCE FOCUSED INITIATIVES AND COORDINATION

It is crucial to ensure that a regional approach to drought resilience is informed and guided by experts and led from a local level. As such, it is important to establish a role, so responsibility lies with a representative to delivery agreed drought resilience initiatives. Both Councils will assign a dedicated Resilience Officer funded by the state government to guide and manage all resilience initiatives for their local government area. This includes preparedness, preparation, response and recovery. This role will guide and inform the community about available, reliable services and resources around climate and disaster resilience. Additionally, they will drive change by integrating the resilience lens into key public policy planning.

As Tamworth and Walcha works to ensure a secure and healthy environment for its residents, it will be important to train Council staff on resilience planning. Integrating resilience guidelines and processes within agencies and Council departments will reinforce the community's trust in the Council's capacity to manage drought events. The Resilience Officer will also help provide this training and build a repository of corporate knowledge including resilience guidelines and processes.

COMPONENTS OF RESILIENCE

Redundant
Creating capacity to invest in and champion progress for resilience

Reflective
Reflection of previous events and adaptation of role based on changing needs

Robust
Extended roles to provide continuity and certainty in resilience outcomes

STRATEGIC OBJECTIVES

EC2, EC3, EN1, EN2, EN6, SO2

KEY OUTCOMES

- Establish internal expertise and skills
- Establish point of contact between community and local government, and between local and state/federal governments
- Establish confidence in the community that local government is adequately prepared for disasters
- Establishment of local resilience guidelines, policies and processes
- Efficient distribution of information to the community, as well as within the Council and government

TIMEFRAME

SHORT TERM

ESTIMATED COSTS

Based on $10 million worth of funding:

CapEX:
$80,000 per role ($160,000) or $120,000 for one Regional Resilience Officer and $900,000 spent on local resilience projects

OpEX:
As above, on-going salary to Resilience Officer and approximately $64,000 on creation and maintenance of resilience related policies and documents

Design/Development Cost:
External consultant fees for individual projects if required

STEPS FOR IMPLEMENTATION

1. Apply for funding through Disaster Risk Reduction Fund – Local and Regional Risk Reduction Stream
2. Develop job description for Resilience Officer (covering all elements of resilience)
3. Assign responsibility for accessing financial resources
4. Ensure Resilience Officer has access to all relevant material and organise a 'Meet your Resilience Officer' event in each LGA
5. Establish communication between the Resilience Officer and those currently working in drought resilience across the Tamworth and Walcha LGAs, e.g., Australian Government Recovery Support Officers, Namoi Unlimited, Australian Red Cross
6. Resilience Officer will support Council and the community to achieve tangible project outcomes

PLAN FOR DELIVERY

Action Facilitator	• Tamworth Regional Council • Walcha Council
Stakeholders	• NSW Reconstruction Authority • Recovery Support Officer, Walcha (Australian Government Contact for Walcha) • Recovery Support Officer, Tamworth (Australian Government Contact for Tamworth) • Namoi Unlimited
Financing Options	• NSW Reconstruction Authority Disaster Risk Reduction Fund – Local and Regional Risk Reduction Stream – Pathway 1 – up to $10 million
Revenue/Saving Opportunties	N/A
Timeline	• Complete funding application by late 2022 • Recruitment for role in early 2022 (18-month term ending late 2024)

INDICATORS

The following KPIs will be developed and used to measure its success:
- Two positions created and recruited - one Resilience Officer each for Walcha and Tamworth OR one position created - One Regional Resilience Officer for Tamworth and Walcha working across both LGAs
- Proportion of policy measures that incorporate components of drought resilience

RESILIENCE DIVIDEND

Social	• Two jobs created • Additional jobs created through coordinated local resilience projects • Improvement of community and institutional knowledge of resilience and awareness of drought • Improved trust between community and government at all levels
Economic	• Reduced effort by departments to coordinate – replaced by a single point of contact • Cash injection to local economy and businesses through the creation of additional jobs i.e. Resilience Officers and jobs associated with individual projects
Environmental	• Maintaining and improving natural capital through the establishment of local resilience projects, policies and processes

ACTION 3.3 - ASPIRATIONAL

DEVELOP RISK SCORECARDS AND WATER SAVING MECHANISMS

The primary intent of this action will be to develop scorecards that capture plausible drought risks for both Tamworth and Walcha and then present these scorecards in a format that is digestible and useful for the general community. The scorecards will be easy to access for the community and will be promoted on community notice boards in each region.

This action will also use the scorecards to identify and validate local water-wise projects to reduce drought risk. Projects may include new rainwater tanks, design and construction of stormwater swales, replacing fixtures with low-water usage ones and upgrades to public irrigation systems in sporting fields and parks. The projects could also include looking into building recycled water infrastructure (treated wastewater) for irrigation to secure drinking water storages.

STRATEGIC OBJECTIVES

EC4, EN1, EN6, SO2, SO4

KEY OUTCOMES

- Builds community expertise and drought risk awareness
- Improves information accessibility and transparency related to drought risks
- Empowers the community to take ownership of projects that contribute to their own resilience

TIMEFRAME

LONG TERM

COMPONENTS OF RESILIENCE

Reflective
Using past experience to assess current risk and response

Robust
Providing resources for community to prepare for drought risks

Resourceful
Capacity to respond to risk at a community level, using community-driven approaches

Integrated
Alignment of tools and resources across the community

STEPS FOR IMPLEMENTATION

1. Develop drought risk scorecards for Tamworth and Walcha, drawing on existing reports or new risk assessments in consultation with the community
2. Consider future growth forecasts (population and industry) and other risks such as fire management in each of the scorecards
3. Upload scorecards to accessible platforms (e.g., via the SQNNSW Drought Resilience Adoption and Innovation Hub) and display printed copies on community notice boards
4. For each of the risk scorecards, develop water saving strategies for each town or village and include targeted recommendations, e.g. native deep rooting plants and light-coloured roofs in new developments, use of recycled/greywater, regenerative agriculture, strip planting, rainwater tanks

PLAN FOR DELIVERY

Action Facilitator	• Tamworth Business Chamber OR; • Business NSW
Stakeholders	• Namoi Unlimited • WaterNSW • Water Users Associations • Tamworth Water Security Alliance • SQNNSW Drought Resilience Adoption and Innovation Hub • Australian Red Cross • The Salvation Army • Landcare Association • Future Farmers Network • NSW Farmers' Association • Local Land Services
Financing Options	• National Enabling Activities fund up to $7.88 million • The NSW Environmental Trust Environmental Education Grant up to $250, 000 per project
Revenue/Saving Opportunties	• N/A
Timeline	• Scorecards finalised by end 2024

ACTION 3.4 - FLAGSHIP

ESTABLISH COMMUNITY CAMPAIGN INCLUDING INFORMATION SESSIONS AND EVENTS TO ADVOCATE FOR AWARENESS OF WATER RESOURCES AND RESILIENCE

This action will develop and implement a comprehensive campaign to engage the population of Tamworth and Walcha in drought disaster risks and response requirements at the different stages of drought. The campaign will be developed in collaboration with representatives from the local community, businesses, religious leaders and local government and have clear actions and measurable outcome. The campaign will use different channels of engagement, including print and social media, television and radio and local influencers and advocates. This action is linked to Action 2.2.

The campaign will also include annual community events and information sessions to bring together locals and empower community members to build personal resilience and proactively manage stresses around drought risk. Additionally, it will foster community-based information sharing to build networks. Other campaign ideas include mobile water recycling plant demonstrations, establishing community gardens, commemorative drought resilient planting and sustainable farming food festivals.

COMPONENTS OF RESILIENCE

Reflective
Considering and learning from past experiences

Flexible
Capable of adapting to the needs of the community

Inclusive
Encouraging attendance of all community members to build awareness

Resourceful
Using existing resources such as agricultural shows to spread campaign awareness

STRATEGIC OBJECTIVES

EC2, EC6, EN2, EN6, SO2, SO3, SO4

KEY OUTCOMES

- Builds social capacity and proactivity within the community
- Improves the community's readiness and response capacity to drought events
- Improves social connectivity and sense of belonging in the community resulting in improved mental health

TIMEFRAME

SHORT TERM

ESTIMATED COSTS

Based on $2 million worth of funding:

CapEX:
$20,000 to establish initial marketing campaign e.g. website, social media presence, newsletter and logo design with paid consultancy services

OpEX:
$100,000 spent annually on events, $90,000 on educational programs and training, $8,000 on stationary, paper, meeting space hire etc. for committee purposes

Design/Development Cost:
Fees for external marketing consultant

STEPS FOR IMPLEMENTATION

1. Design, name and establish a community drought resilience awareness campaign specifically tailored for our region.
2. If additional funding is available, undertake a behavioural change study to understand the community perceptions of drought risk and resilience to inform the campaign design
3. Establish a campaign committee to guide planning. The committee may include people from existing community groups working in this space and will be based locally to ensure connection to community
4. Create an events and activities calendar
5. Identify appropriate communication channels and branding
6. Use the Resilience Officer, Drought Resilience Adoption and Innovation Hub, Namoi Unlimited and other existing agencies to deliver authentic drought awareness and resilience content
7. Implement the campaign annually

PLAN FOR DELIVERY

Action Facilitator	Resilience Officer to establish campaign in collaboration with a committee. Within the committee, as a minimum, the following groups should be included: • Rural Aid • Rural Financial Counselling Service • National Recovery and Resilience Agency
Stakeholders	• Rotary Club • Lions Club • Australian Red Cross • Country Women's Association • Future Farmers Network • NSW Farmers
Financing Options	• The Yulgilbar Foundation Fund, 2022 application dates to be released, up to $2,000,000 **and/or** • Australian Red Cross: Drought Resilience Program – dependent on specific offerings and community needs • Networks to Build Drought Resilience Fund up to $3.75 million
Revenue/Saving Opportunties	N/A
Timeline	• Campaign established and funding application complete by the beginning of 2023 • Campaign kick-off by beginning of 2023

INDICATORS

The following KPIs will be developed and used to measure its success:
- Number of engaged committee members (their attendance at planning meetings; involvement in events, etc.)
- Number of events hosted per annum
- Level of engagement with social media including number of likes or comments
- Number of drought and resilience related content distributed to the community

RESILIENCE DIVIDEND

Social	• Improved mental health outcomes within the community resulting in reduced rates of depression, loneliness and anxiety • Improved social cohesion and sense of belonging within the community resulting in reduced crime rates e.g. vandalism
Economic	Cash injection back into the local economy from hosting events and attracting people to the region
Environmental	Improved resilience and environmental awareness across all age groups

ACTION 3.5 - FLAGSHIP

CREATE A FUND TO COORDINATE A PRE-SCHOOL OR PRIMARY SCHOOL-BASED TREE PLANTING DAY – TERMED 'STEWARDSHIP DAY'

This action will identify a green fund to develop a 'Stewardship Day', where pre-school and/or primary school aged students spend one day planting drought-resilient trees. This will be an opportunity to educate younger community members of the environmental benefit associated with planting native and/or drought tolerant plant species including reduced water consumption, improved soil health, pollination, habitat connectivity and other benefits to local flora and fauna.

It will also allow younger community members to connect with nature and drive an environmental mindset that they can apply later in life, resulting in long term environmental appreciation and care.

Ideally the event would be advertised in a school newsletter so that parents and the broader community may also attend. The event will be an opportunity for the community to connect with one another, with the tree planting being the focus to help facilitate discussions of not only drought resilience, but environmental resilience more broadly.

COMPONENTS OF RESILIENCE

Inclusive
Recognising the value of youth awareness and contribution to resilience

Flexible
Can incorporate indigenous knowledge and adjust to needs of the community

Resourceful
Seeks multiple benefits from one action and utilises existing initiatives

STRATEGIC OBJECTIVES

EN2, SO1, SO3, SO4

KEY OUTCOMES

- Enhances the environmental resilience of community green spaces
- Reduces water consumption associated with maintaining green spaces, as well as improved soil health and positive symbiotic relationships between the tree and other flora and fauna
- Reduces impact of urban heat island effect due to increased tree canopy

TIMEFRAME

SHORT TERM

ESTIMATED COSTS

Based on $10 million worth of funding:

CapEX:
$500 for schools to host individual events i.e. food and drink. $1,000 for facilitator to come in and teach the kids about drought resilient plants.

OpEX:
None – on-going plant maintenance to conducted by schools and students

Design/Development Cost:
External consultant fees for individual projects if required

STEPS FOR IMPLEMENTATION

1. Apply for The Seedling Bank grant or alternatively approach local nurseries for donation of tree saplings with a focus on drought resilient trees
2. Plan an educational day with local schools to educate students about drought resilient trees (the facilitator should be a chosen member of the community, potentially a local farmer)
3. Register the Stewardship Day as a Schools Tree Day event
4. Use the Schools How-to Guide and Tree Day Toolkit for event set-up
5. Advertise event through school newsletter and other channels

PLAN FOR DELIVERY

Action Facilitator	• Walcha Council • Tamworth Regional Council
Stakeholders	• Tamworth Local Aboriginal Land Council • Amaroo Local Aboriginal Land Council • Tamworth and Walcha pre-schools and primary schools • Landcare Association (Tamworth and Walcha) • Garden Club (Tamworth and Walcha) • Tamworth Regional Residents and Ratepayers Association • Parents and Friends for Climate Change • Tamworth Community Organic Garden Group • Department of Education, NSW
Financing Options	• The Seedling Bank which includes donation of plants/seedlings only i.e. not a cash grant
Revenue/Saving Opportunties	• Sapling seedlings donated by local nursery • Event costs covered by individual schools
Timeline	• Application for grant from The Seedling Bank submitted by end 2023 • National Tree Day schools event hosted in schools beginning 2024 • Annual event until 2027

INDICATORS

The following KPIs will be developed and used to measure its success:
- Number of trees planted
- Number of events hosted per annum
- Number of students and community members in attendance at each event
- Level of event engagement through social media per event (e.g. number of Facebook likes, comments, etc

RESILIENCE DIVIDEND

Social	• Improved mental health outcomes within the community • Improved environmental responsibility mindset in school communities • Improved drought and general environmental awareness
Economic	• Reduced irrigation costs associated with planting drought tolerant plant species
Environmental	• Improved soil health • Reduced water consumption from irrigation • Improved pollination activity (depending on species type) • Reduced urban heat island effect • Benefits to native fauna

ACTION 3.6 - ASPIRATIONAL

USE EXISTING LEARNING PROGRAMS AND EVENTS TO PROMOTE CLIMATE CHANGE AWARENESS AND RESILIENCE

Disaster risk reduction, especially when it comes to droughts, requires informed and prepared decision makers. There are many ways in which the relevant stakeholders can be engaged on the topic of climate change and drought resilience planning, from thought leadership and knowledge-sharing conferences to capacity-building workshops. This action will organise annual events with public officials and city planning-decision makers on the topic of climate change and drought resilience to help build confidence and inspire creative solutions in the face of a challenge that can be overwhelming. As a pilot, the first event will be small in scale with local officials and city planners from across NSW.

STRATEGIC OBJECTIVES

EN2, EN6, EN6, EN7, SO1, SO2, SO3, SO4

KEY OUTCOMES

Learning programs and events are an effective way to engage with the relevant stakeholders and inspire them to learn, respond and innovate. This action will create a more inspired and ambitious community working to make the regions more resilient and prepared for the challenges brought about by climate change. Additionally, the staff involved with city planning and decision-making will be better informed and more confident in making the most appropriate decisions for the Councils.

TIMEFRAME

LONG TERM

COMPONENTS OF RESILIENCE

Resourceful
Use existing avenues available to promote awareness

Redundant
Multiple avenues used to achieve same result

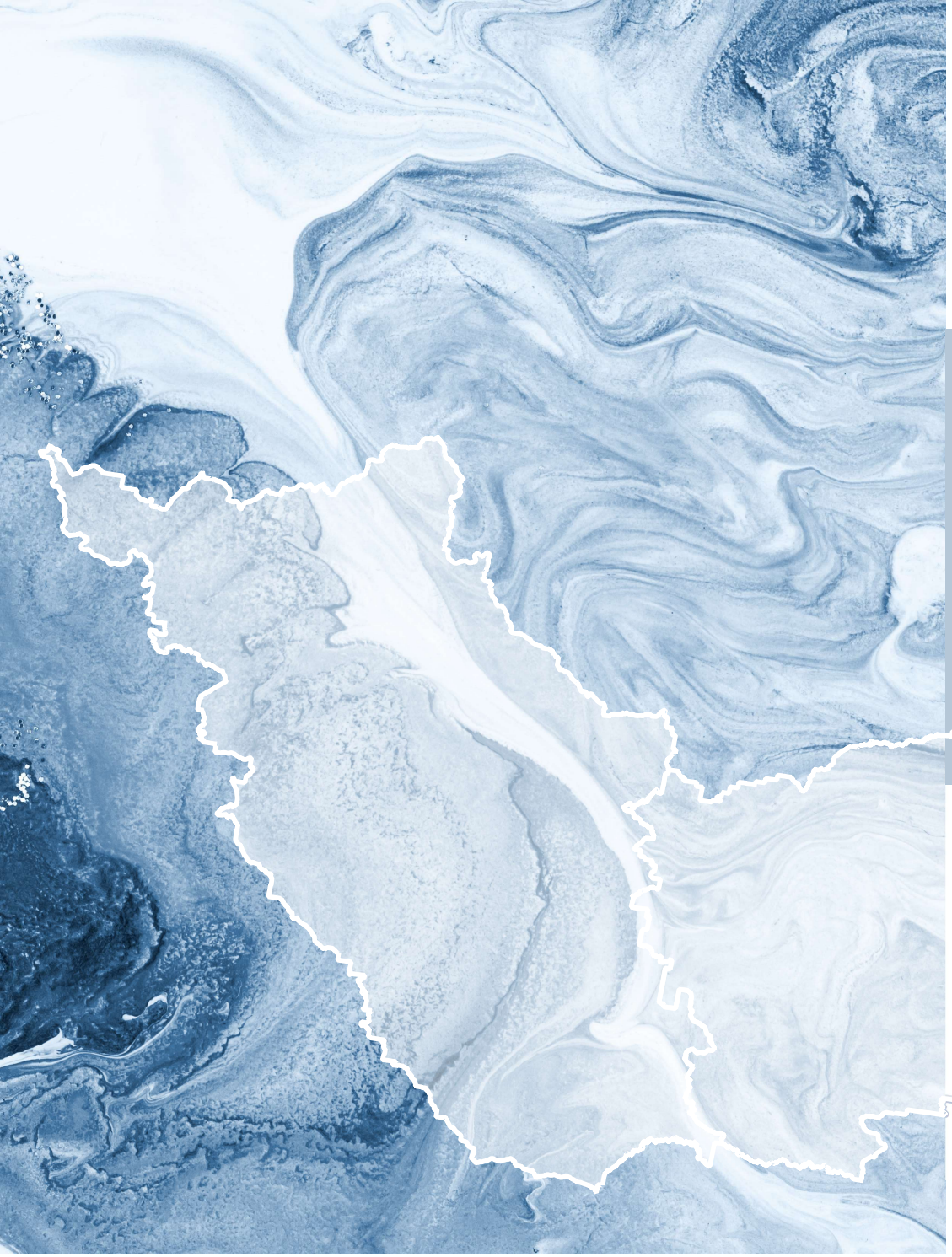
Integrated
Focus on decision-makers to ensure consistent and well-informed decision-making and outcomes

STEPS FOR IMPLEMENTATION

1. Identify other regional centres and local governments facing similar challenges or that are currently implementing innovative drought resilience initiatives
2. Identify existing regional or local events at which to promote climate change awareness and resilience (e.g. The Nature Conservation Council Regional Conference or Drought Wellness forum)
3. Identify potential keynote speakers
4. Promote the event in Tamworth and Walcha communities

PLAN FOR DELIVERY

Action Facilitator	• Walcha Council • Tamworth Regional Council • Department of Regional NSW
Stakeholders	• Namoi Unlimited • Rotary Club • Lions Club • Australian Red Cross • Country Women's Association • Future Farmers Network • NSW Farmers • Landcare Association (Tamworth and Walcha) • Tamworth Business Chamber • SQNNSW Drought Resilience Adoption and Innovation Hub
Financing Options	• Destination NSW Regional Business Event Development Fund - up to $30,000 based on event attendance • Networks to Build Drought Resilience up to $3.75 million
Revenue/Saving Opportunties	• Leveraging off existing events/forums to save costs associated with creating and hosting new event • Possibility for key-note speakers to attend free of charge
Timeline	• Project starts late 2023 • First event held early 2024 • Ongoing annually



PRIORITY 4:

A community with access to education on sustainable water management practices

Contributing to the advancement of knowledge around drought resilience in academia provides opportunities for both educational institutions and the Tamworth and Walcha region. Educational institutions can benefit from a region experienced with drought which can provide applied and tested experience and input into educational materials while the Tamworth and Walcha region can benefit from increased connectivity with educational institutions and applied learning opportunities for its community.

Encouraging more people to complete further education and facilitating knowledge sharing of success stories lays the groundwork for sustainable change and will increase interest in investing time and effort in long-term water saving measures.

Finally, Traditional Knowledge held by Traditional Owners and Indigenous groups throughout the region can contribute to the efficacy and sustainability of land management practices. Sensitive and appropriate inclusion of traditional land management techniques will increase drought resilience as well as contribute to community cohesiveness.

ACTIONS

4.1 Promote education on First Nations methods of environmental management

4.2 Provide community-wide educational and support services in response to drought, based on preparedness and resilience

4.3 Improve the relevance and practicality of education within the community by encouraging the integration of region-specific content within tertiary and university education

ACTION 4.1 - FLAGSHIP

PROMOTE EDUCATION ON FIRST NATIONS METHODS OF ENVIRONMENTAL MANAGEMENT

Our region has a significant population of First Nations Peoples with deep connection to Country: the Kamilaroi Country to the west and north, the Nganyaywana Country to the north, the Dainggatti Country to the east, and the Biripi Country to the south.

Traditional Knowledge and land management techniques are informed by millennia of lived experience and stories and provide a deep and connected resource to support sustainable drought resilience. It is important to recognise the intrinsic, cultural, and historical value of this knowledge and to support meaningful collaboration through the establishment of respect-driven relationships, an understanding of cultural practices and protocols, as well as an enduring commitment.

The intention of this action is to meaningfully recognise the enduring value of First Nations custodianship on the land and collaboratively develop water resilient and drought tolerant agricultural and land management practices based on Traditional Knowledge and land management techniques.

This action seeks to identify and engage Traditional Owner and First Nations representatives able to provide input on environmental management strategies and share Traditional Knowledge. Educational activities will be targeted to farmers, land managers, as well as various governmental agencies involved in land, water, and drought management

STRATEGIC OBJECTIVES

EN3, EN4, EN5, EN6, SO3, SO4

KEY OUTCOMES

- Understanding successful historic land-management practices from a Traditional Knowledge perspective will help improve regional water security and developing more drought tolerant agricultural practices
- A better understanding and connection to the land combined with a deepened appreciation of the value of water from a cultural and environmental perspective support drought resilience

TIMEFRAME

SHORT TERM

ESTIMATED COSTS

CapEX:
$25,000 for Indigenous engagement and development of benefit sharing framework

OpEX:
$20,000 (for 5 x 3-hour workshops per annum)

Design/Development Cost:
Nil

COMPONENTS OF RESILIENCE

Inclusive
Provides a voice to Indigenous Australians and includes their practices and knowledge

Reflective
Shows the changing desire to include First Nations work and way of life within environmental management practices

STEPS FOR IMPLEMENTATION

1. Engage First Nations Cultural consultants to provide regionally and culturally appropriate guidance throughout the process
2. Connect and develop trust-based relationships with Traditional Owners and First Nations representatives to understand their perspectives and needs
3. Establish clear and mutually agreed knowledge and benefit sharing framework
4. Engage representative(s) from First Nations communities to be involved in the development of integrative environmental management strategies (paid engagement)
5. Support and facilitate educational sessions run by Traditional Owners. Develop a feedback structure to share tangible outcomes with Traditional Owners and First Nation communities

PLAN FOR DELIVERY

Action Facilitator	• Tamworth Regional Council • The Mayor of Walcha • Supported by Tamworth Local Aboriginal Land Council and the Amaroo Local Aboriginal Land Council
Stakeholders	• Traditional Owners and First Nations groups • Yinarr Maramali • Gomeroi Dance Company • Tamworth Regional Council • Walcha Council • Landcare Association Southern New England • Tamworth Landcare
Financing Options	• Federal Government National Indigenous Australians Agency • State Government Aboriginal Communities Water and Sewerage Program • State Government Safe and Secure Water Program • Grants, donations, or pro bono contributions from firms, NGOs, foundations, or individuals • NRM Drought Resilience Program – Landscapes up to $5.62 million
Revenue/Saving Opportunties	• Tamworth Local Aboriginal Land Council and the Amaroo Local Aboriginal Land Council to support collaboration between Councils and Traditional Owner groups
Timeline	• Action plan developed in 2023 • Engagement commences in 2024 • Repeated engagement every 3 years

INDICATORS

The following KPIs will be developed and used to measure its success:

- Number of occurrences of Traditional Owner and First Nations direct input into environmental management strategies
- Number of Cultural Knowledge and Traditional Practices education and awareness sessions delivered in a calendar year
- Number of participants attending Cultural Knowledge and Traditional Practices education and awareness sessions

RESILIENCE DIVIDEND

Social	• Increased cultural integration and knowledge sharing • Increased community cohesiveness
Economic	• Efficiencies gained through more effective land management practices reducing ongoing management costs
Environmental	• Increase in adaptivity and applicability of sustainable land management practices based on Traditional Knowledge

ACTION 4.2 - ASPIRATIONAL

PROVIDE COMMUNITY-WIDE EDUCATIONAL AND SUPPORT SERVICES IN RESPONSE TO DROUGHT, BASED ON PREPAREDNESS AND RESILIENCE

The Tamworth and Walcha communities recognise the value of fostering local knowledge and targeted education to empower community members to drive and support enduring action-based resilience. This action will support community education on drought and drought resilience. This will be achieved by various initiatives including expert-led workshops, providing drought-resilience support and content for local schools, and targeted information sessions for the agricultural sector e.g. value of maintaining sustainability credentials.

The after-school drought resilience-themed activities, programs and water-smart facilities will help educate the next generation, fostering a culture of drought resilience.

STRATEGIC OBJECTIVES

EC2, EC6, EN2, EN3, EN5, EN6, SO1, SO2, SO3

KEY OUTCOMES

- A more informed, sensitised, and upskilled community
- Manage expectations in relation to drought resilience
- Creates a better understanding around the regional dynamics of drought and drought resilience
- Provides knowledge and tools supporting community-driven drought resilience
- Ensures the community is supported and understands the variety of information sources and the physical support services available

TIMEFRAME

MEDIUM TERM

COMPONENTS OF RESILIENCE

Inclusive
Community-wide services is inclusive of all people, regardless of status

Integrated
A single program providing knowledge in a consolidated manner

Flexible
The services can be adapted to target particular audiences

Resourceful and Redundant
Through the use of existing services

STEPS FOR IMPLEMENTATION

1. Develop regional program and event calendar, develop key themes, and engage key experts and stakeholders to deliver sessions
2. Facilitate regional community-based expert-led education sessions on drought, associated impacts, and preparedness for the general community
3. Facilitate targeted program for the farming community to provide information about sustainable farming practices and the importance of protecting the natural environment
4. Provide support services and educational programs for children at schools
5. Develop and provide adapted materials for both community and school session and programs to bolster engagement, learning, and attendance

PLAN FOR DELIVERY

Action Facilitator	• Walcha Council • Tamworth Regional Council
Stakeholders	• Namoi Unlimited • Rural Aid • Tamworth Business Chamber • NSW Department of Education • Landcare Association Southern New England • Tamworth Landcare
Financing Options	• Federal Government Future Drought Fund • State Government Safe and Secure Water Program, Emergency Drought Relief Package, Water Security for Regions Program • National Enabling Activities Fund up to $7.8 million • Grants available through Drought Adoption and Innovation Hubs – Hub Projects up to $4 million
Revenue/Saving Opportunities	Nil
Timeline	• Program and event calendar to be prepared in 2023-2024 • Programs and events to implemented from 2025

ACTION 4.3 - ASPIRATIONAL

IMPROVE THE RELEVANCE AND PRACTICALITY OF EDUCATION WITHIN THE COMMUNITY BY ENCOURAGING THE INTEGRATION OF REGION-SPECIFIC CONTENT WITHIN TERTIARY AND UNIVERSITY EDUCATION

The inclusion of region-specific drought resilience content and research in tertiary and university courses will support the development and sharing of adapted regional drought resilience knowledge and adaptation approaches. This will also support the addition of real-world, tangible, subject matter into specialised training programs.

This action has the additional benefit of creating and strengthening links between cities and the region as well as providing local economic opportunity through increased visitation and overnight stays.
To support this underlying ambition, this action is broken down into two phases:

1. Identify and consolidate local knowledge in a central repository to support the development of courses and programs. In collaboration with targeted educational institutions this will focus on driving conversations around base information and data requirements supporting the development of courses and programs. This will also enable local councils and stakeholders to guide the nature, subject, and scope of drought resilience educational programs relevant to their region.
2. Identify and establish facilities or infrastructure required to facilitate educational institutional participation and presence in the region. This could include field trip facilities, dedicated test sites, access, etc.

STRATEGIC OBJECTIVES

EN2, EN3, EN6, EN7, SO3, SO5

KEY OUTCOMES

- Increased number of specialists and skilled workers equipped with locally relevant and appropriate knowledge
- University research contributes to developing regional drought-related knowledge and insight
- Increased knowledge and understanding around local drought and drought resilience trends
- Availability of locally informed and locally relevant academic courses and programs
- Localised specialised skilled workforce to support the community's capacity to plan, prepare, respond, and recover from droughts
- A greater understanding of the uniqueness of the region and an appreciation for the multifaceted impact of droughts

TIMEFRAME

LONG TERM

COMPONENTS OF RESILIENCE

Integrated
Offering community relevance and region-specific content within the university context

Reflective
Utilising lessons learned from previous university course offerings to improve practical applications

Resourceful
Through the use of existing university resources

STEPS FOR IMPLEMENTATION

PHASE 1

1 Develop relationships with relevant academic institutions who can benefit from local input and provide benefit to the region through the development of knowledge and an authentic offering of contextually relevant educational content

2 Support educational institutions to provide relevant course material such as sustainable practices (farming, energy, horticulture, environmental management, healthcare)

PHASE 2

3 In collaboration with participating academic institutions, identify facilities required to bolster attractiveness for students, improve course uptake throughout the region and foster a conducive environment for research

4 Facilitate the access to, or the implementation of, appropriate facilities and research requirements

PLAN FOR DELIVERY

Action Facilitator	• NSW Department of Education • Supported by Walcha Council, Tamworth Regional Council, and SQNNSW Drought Resilience Adoption and Innovation Hub • In collaboration with engaged universities and TAFE
Stakeholders	• Universities (University of New England, Avondale University, University of Newcastle, Charles Sturt University, University of Sydney) • Educational institutions other (NSW TAFE)
Financing Options	• Federal Government Future Drought Fund • State Government Safe and Secure Water Program • Private Public Partnerships involving educational institutions and drought-affected businesses
Revenue/Saving Opportunties	• Potential increased revenue to the local tourism industry from increased visitation • Potential for university research to provide free data and reports avoiding costs related to specialised input
Timeline	• Engagement of Universities to start in 2023 • Establishment of partnerships and programs to commence in 2025

PRIORITY 5:

An environmentally conscious region that values water and natural capital

Putting a value on natural capital is challenging, as it offers many interrelated and often intangible benefits. Harnessing the passion of community members to thrive while also encouraging the growth and the community-led stewardship of biodiversity will allow natural systems to balance out and create their own water cycle. Healthy and robust natural water systems will contribute to the region's drought resilience. Our community can benefit from long-term planning and prioritisation of natural assets to reduce water consumption, runoff, and long-term drought impacts.

Targeted and appropriately applied disincentives can provide the necessary impetus to increase water-wise management during times of water restrictions related to drought. Finally, the real-time tracking of water consumption can promote community ownership of water consumption and support self-regulation during periods of water restrictions.

ACTIONS

5.1 Prioritise and incentivise initiatives to improve water security within the region

5.2 Discourage overuse of water

ACTION 5.1 - ASPIRATIONAL

PRIORITISE AND INCENTIVISE INITIATIVES TO IMPROVE WATER SECURITY WITHIN THE REGION

This action supports the development and implementation of water security bolstering initiatives throughout the Tamworth and Walcha regions. Both Councils recognise the effectiveness of financial support and incentives in driving the adoption of water saving initiatives and intend to use financial levers to drive investment in natural ecosystem services that prioritise and improve regional water security and efficiency.

Through a number of supporting measures and schemes, the Councils will:

- Prioritise retention and enhancement of existing forests and wetlands into planning schemes to increase natural catchment water retention and water flow in existing assets
- Increase Development Application incentives for retaining water through Water Sensitive Urban Design initiatives
- Encourage best practice specification of industrial processes reliant on water
- Invest in water source shading, using conventional tree shading or innovative practices like floating solar panels
- Invest in improvement measures and metering for water leaks to improve resilience of existing assets.

STRATEGIC OBJECTIVES

EC1, EC2, EC3, EC4, EN1, EN3, EN4, SO3

KEY OUTCOMES

- Improve the region's overall drought resilience
- Maximise the efficacy and sustainability of water and drought-resilience natural ecosystem services

TIMEFRAME

MEDIUM TERM

COMPONENTS OF RESILIENCE

Reflective
Aiming to improve previous problematic areas upon reflection of past drought events

Flexible
Making improvements to existing systems, reflective a level of flexibility and capacity for change

Redundant
Improving water security to ensure enough for all

STEPS FOR IMPLEMENTATION

1. Conduct a study to assess the regional water balance including the characterisation of water sources and understanding the role and impacts of infrastructure and natural assets
2. Identify key infrastructure weaknesses and their impact on optimised regional water management
3. Identify key natural assets supporting water security and build understanding of their health and what actions needed for improvement
4. Work with relevant state and local government agencies to implement investment and planning strategies
5. Report on findings and progress

PLAN FOR DELIVERY

Action Facilitator	• Tamworth Regional Council • Walcha Council
Stakeholders	• Regional Department of NSW • NSW Reconstruction Authority • WaterNSW • Tamworth Local Aboriginal Land Council • Amaroo Local Aboriginal Land Council • Landcare Association • NSW Farmers • DPI Fisheries • Tamworth Water Security Alliance • NSW Irrigators Council • Peel Customer Advisory Group
Financing Options	• Federal Government Australian Government Drought Response, Resilience and Preparedness Plan, Drought Resilience Funding Plan, Future Drought Fund, National Water Security Plan for Cities and Towns • NSW Department of Primary Industries and Department of Planning and Environment grants • NRM Drought Resilience – Grants up to $7.81 million
Revenue/Saving Opportunties	• Opportunity for drought resilience mechanisms and initiatives to overlap with conservation, offsetting, and other land management initiatives
Timeline	• Run in parallel with Action 5.2 • Commence water balance study in 2024 • Design and implement investment and planning mechanisms beginning in 2025

ACTION 5.2 - FLAGSHIP

DISCOURAGE OVERUSE OF WATER

In Tamworth and Walcha, approximately 50% of total water usage is associated with industry – primarily abattoirs. Water usage fees are based on a three-tiered system, where larger consumers pay more than smaller consumers. Historically, residents are generally receptive to water restrictions during periods of drought, whereas business consumption does not vary substantially during restrictions.

This action seeks to implement community-focussed strategies to disincentivise the overuse of water in the region.

The following measures are included:

- Discourage poor water usage practices with economic disincentives like local water price surcharges for non-essential uses
- Appropriately communicate and reiterate the importance of water saving measures (e.g. length of showers)
- Effectively promote efficient water uses during water restriction periods
- Develop real-time monitoring of water consumption and share this information to raise awareness of community water usage and increase accountability.

STRATEGIC OBJECTIVES

EC4, EC5, EN1, SO2, SO3

KEY OUTCOMES

Region-wide reductions in water consumption during drought and restriction periods will help extend water resources and allow for the distribution of water resources where there is most need. Expanding and reinforcing a culture of responsible water stewardship and community ownership of water resources management will contribute to community resilience to drought.

TIMEFRAME

SHORT TERM

ESTIMATED COSTS

CapEX:
$20,000 launch advertising campaign, event communications and coordination

OpEX:
$40,000-60,000 per annum annual advertising on Council-owned sites as well as GIS work to manage data and mapping

Design/Development Cost:
Nil, covered in OpEX

COMPONENTS OF RESILIENCE

Flexible
Changing the current system to reflect new and different circumstances

Reflective
This action notes the current inadequacy of pricing for abattoirs etc., and aims to address such issues

Integrated
Ensuring uses are standard and aligned across council and the region

STEPS FOR IMPLEMENTATION

1. Engage with businesses and large water users to determine most effective and appropriate ways of communicating with relevant audiences
2. Implement appropriate economic disincentives within local government area
3. Develop communication campaign and related materials to bolster community awareness and compliance
4. Implement reporting mechanism to allow for up-to-date water consumption tracking and consumption hotspots across the region.

PLAN FOR DELIVERY

Action Facilitator	• Walcha Council • Tamworth Regional Council
Stakeholders	• NSW Reconstruction Authority • WaterNSW • Tamworth LALC • Amaroo LALC • Local community groups for disseminating through existing channels • Local media • Large business providers (e.g. Baida, Teys, Thomas Food International)
Financing Options	• State Government Safe and Secure Water Program, Emergency Relief for Regional Town Water Supplies, Aboriginal Communities Water and Sewerage Program • Local Government Tamworth Regional Council - Tamworth Regional Council Water Management Plan (under review) • Drought Resilience Innovation Grants – Ideas Grant up to $50,000
Revenue/Saving Opportunties	• Income from increased disincentives
Timeline	• Run in parallel with Action 5.1 • Engagement and advertisement to commence early 2023 • Implementation of disincentives to be implemented in 2024 (re-evaluation to occur in 2027)

INDICATORS

The following KPIs will be developed and used to measure its success:
- Revenue collected through economic disincentives per annum and tracking progress over time
- Number of residents and businesses successfully reached through communication campaigns

ESTIMATED BENEFITS

Social	Increased community ownership of water resources and community water consumption
Economic	• Increased revenue to support drought resilience initiatives • Increased water reserves during times of drought to allocate to high-need areas
Environmental	Reduces water consumption reducing stress on catchments and water systems

PRIORITY 6:
A healthy, supportive and prosperous community

This priority is based on the notion that a region with healthier and well-supported community members will have an increased capacity to connect and provide support to each other to deal with, manage, and recover from the multiple shocks and stressors related to and arising from long-term drought events. Community cohesiveness through a resilient community network and support systems form the backbone and the first line of defence for a community's response to drought-related impacts.

Furthermore, a community free of stigma surrounding mental health as well as a culture of interdependence and support will encourage more vulnerable individuals to seek support when needed. This priority area includes projects aimed at reaching out to vulnerable community members and connecting them with adapted and sufficiently funded mental health support services, to strengthen our collective mental health and assist us in bouncing back from adversity.

ACTIONS

6.1 Strengthen community-based access to resources and services for mental health support within the community

6.2 Allocate funding for mental health support professionals working in community health support systems

6.3 Provide training for mental health support

ACTION 6.1 - ASPIRATIONAL

STRENGTHEN COMMUNITY-BASED ACCESS TO RESOURCES AND SERVICES FOR MENTAL HEALTH SUPPORT WITHIN THE COMMUNITY

This action aims to support community health (mental and physical) through access to support services and resources. To do this, the region needs to foster an environment that is supportive and conducive to community members receiving the care and the support they need, in times of crisis and otherwise, to maintain healthy levels of mental and physical health. This will be achieved through a number of steps to bolster understanding of community needs, improve uptake of existing resources by reaching out to vulnerable community members, de-stigmatise mental health needs and support, develop community cohesiveness, identify and support mental health champions and local resources, and delivery of targeted initiatives to support the community in times of need.

STRATEGIC OBJECTIVES

EC2, SO2, SO3

KEY OUTCOMES

- Community members will have an increased capacity to deal with, manage, and recover from shocks and stressors
- Increased community cohesiveness
- A support structure that is community-driven and community-adopted

TIMEFRAME

MEDIUM TERM

COMPONENTS OF RESILIENCE

Reflective
Improving community resources and mental health support based on recognised shortfalls that currently exist

Robust
Ensuring systems in place addressing mental health are robust enough to endure times of hardship

Inclusive
Inclusive of all community members

Integrated
The development of support centres and online platforms streamline health access points

STEPS FOR IMPLEMENTATION

1. Engage with relevant stakeholders to better understand the gaps in capacity to deliver mental health services
2. Ensure that the communications and support structures provided for accessing psychological therapies, such as telehealth, are effective and accessible
3. Develop a regional mental health campaign which includes:
   - Encouraging the destigmatising of mental health support and early engagement
   - Introducing local community members as health champions
   - Encouraging community gatherings and getting community members to know each other and develop community support structures
4. Develop a strategy and allocate resources specifically for times when increased local mental health support is needed
5. Provide mental and family-support services for Council staff to adapt to changing stresses
6. Establish service and support centres and online platforms to provide tools for drought resilience

PLAN FOR DELIVERY

Action Facilitator	• Hunter New England Health • In collaboration with Rural Aid, RAMHP, New England Family Support, and Tamworth Family Support Services
Stakeholders	• Tamworth Regional Council • Walcha Council • NSW Reconstruction Authority • Hunter New England Health • NSW Farmers' Association • Lions • Rotary • CWA • Healthwise
Financing Options	• State Government NSW Drought Stimulus Package, CWA Drought Relief Funding, and NSW Drought Support Rebates and Savings • Networks to Build Drought Resilience up to $3.75 million
Revenue/Saving Opportunties	• Mental health services development initiatives and funding to potentially come from different funding sources such as COVID-19 response or other regional support frameworks
Timeline	• Direct engagement in 2024 • Regional mental health campaign commences in 2025

ACTION 6.2 - ASPIRATIONAL

ALLOCATE FUNDING FOR MENTAL HEALTH SUPPORT PROFESSIONALS WORKING IN COMMUNITY HEALTH SUPPORT SYSTEMS

Securing direct funding to support the employment and retention of mental health professionals throughout the community will ensure long-term commitment to mental health across the region. This will be done by ensuring there is sufficient access to mental health support professionals in times of drought-induced stress and other high-demand periods when, historically, mental health support has been found to be insufficient.

This action will prioritise and finance the development of mental health support outside of the conventional healthcare system to offer more personalised and expedited services to the community.

Further, this action provides increased support for mental health support workers in the region to support personnel retention. A particular emphasis is on supporting youth mental health services.

STRATEGIC OBJECTIVES

EC2, EC5, EC6, SO1, SO2, SO3, SO5

KEY OUTCOMES

- A community with increased capacity to deal with, manage and recover from shocks and stressors arising from long-term drought events
- More well-funded and well-resourced mental health support system
- Encourage and support increased specialist involvement and retention in mental health, especially in the field of youth mental health

TIMEFRAME

MEDIUM TERM

COMPONENTS OF RESILIENCE

Robust
Ensuring sufficient funding for full time worker

Redundant
Ensuring there is spare capacity for mental health workers, with sufficient funding and resources available

STEPS FOR IMPLEMENTATION

1. Seek and secure funding from either state government grants, NGOs or other professional groups in the region, beyond conventional healthcare systems. Funding to consider both initial investments as well as recurring expenditures to maintain services and retail resources. Allocate a proportion of funding on the priority area of staff retention, specifically for the youth mental health workers.
2. Seek input from counsellors and psychologists to develop the mental health support system framework

PLAN FOR DELIVERY

Action Facilitator	• NSW Health • In collaboration with Rural Aid, RAMHP, New England Family Support, and Tamworth Family Support Services
Stakeholders	• NSW Reconstruction Authority • National Emergency Management Agency (NEMA) • Tamworth Regional Council customer service staff and other key staff members who are community facing during times of drought (i.e. Water sustainability officer and Sustainability Coordinator, Director of Water & Waste, Manager of Water Operations) • Walcha Council
Financing Options	• State Government Mental Health Recovery funding, Rural adversity mental health program (RAMHP), and NSW Rural resilience program
Revenue/Saving Opportunties	• Mental health services development initiatives and funding to potentially come from different funding sources such as COVID-19 response or other regional support frameworks
Timeline	• Funding secured and grant structure deployed by 2025

ACTION 6.3 - FLAGSHIP

PROVIDE TRAINING FOR MENTAL HEALTH SUPPORT

Facilitated access to training for health practitioners will improve community access to high quality mental health support and enhance local capacity. This action is based on evidence that shows that communities with healthier and well-supported members have an increased capacity to deal with, manage, and recover from shocks and stressors arising from long-term drought events.

This will be achieved through mental health training sessions and other upskilling initiatives for health care workers. The aim is to upskill key staff so they can provide direct mental health support to community members and also feel equipped with the skills and knowledge necessary to provide guidance and connection with the appropriate resources.

Additionally, this action will also seek to establish community champions to provide mental health support outside the traditional healthcare system. This will be achieved by promoting mental health awareness first aid training for community members.

Through the expansion of mental health support to more healthcare members, mental health issues in the community will be identified and addressed more effectively. Further, a network of local community champions can provide a supplementary level and support and provide accessible and familiar resources for drought-affected communities.

STRATEGIC OBJECTIVES

EC2, EC3, SO1, SO3, SO5

KEY OUTCOMES

Build community capacity to respond to challenges arising from long-term drought events

TIMEFRAME

SHORT TERM

ESTIMATED COSTS

CapEX:
$10,000 (Initial engagement and consultation of healthcare experts)

OpEX:
$100,000 (Workshops with expert educators (10 workshops per annum) and development local champion network)

Design/Development Cost:
$100,000 (Initial design and development of learning materials and programs)

COMPONENTS OF RESILIENCE

Flexible
Integrating new knowledge and training

Reflective
Noting previous situations and working to improve these

Robust
Ensuring the system is not going to collapse due to unemployment or under-skilled staff

Resourceful
Making use of available training

STEPS FOR IMPLEMENTATION

1. Consult mental health industry experts and local community groups and NGOs to develop an understanding of applicable and effective measures to provide training
2. Encourage frontline workers to attend free mental health training through incentive programs (these trainings can be run by a local NGO group such as the New England Family Support, and the Tamworth Family Support Services)
3. Identify and establish a community champion in each town to be trained in Mental Health Awareness first aid training

PLAN FOR DELIVERY

Action Facilitator	• NSW Health • Supported by NSW Reconstruction Authority • In collaboration with New England Family Support and Tamworth Family Support Services
Stakeholders	• NSW Reconstruction Authority • Hunter New England Health • Walcha Multipurpose Service • NSW Farmers' Association
Financing Options	• State Government Mental Health Recovery funding, Rural adversity mental health program (RAMHP), and NSW Rural resilience program • Networks to Build Drought Resilience up to $3.75 million • Helping Regional Communities Prepare for Future Droughts up to $29.6 million
Revenue/Saving Opportunties	• Mental health services development initiatives and funding to potentially come from different funding sources such as COVID-19 response or other regional support framework
Timeline	• Consultation with mental health provider experts in 2023 • Roll-out of training programs and local champion support in 2023 • Ongoing (based on funding availability)

INDICATORS

The following KPIs will be developed and used to measure its success:
- Number of healthcare workers having attended a mental healthcare training or workshop
- Number and spatial distribution of community champions established throughout the Walcha and Tamworth regions

RESILIENCE DIVIDEND

Social	• Increased community mental health and overall resilience to stressors • Strengthened regional community support network
Economic	• Reduced impact on household budgets in periods of crisis
Environmental	Nil

IMPLEMENTATION

WORKING TOGETHER TO IMPLEMENT THE RDRP

Tamworth Regional Council and Walcha Council will facilitate the implementation of this RDRP together. In order to do so, it is first paramount that further funding is secured to ensure both councils have at least one dedicated full-time Resilience Officer to drive the actions identifed in this plan (**see Action 3.2)**. Once both councils have dedicated Resilience Officers, they may facilitate councillor workshops to determine which actions are to be implemented and what further funding is required to achieve the objectives of the identified actions.

Actions will be driven through local leadership, community engagement and in some cases regional resourcing under the direction of Regional NSW. This will be done with appropriate support from other coordinating bodies and entities, recovery and resilience officers, state government agencies, and not-for-profit organisations. This approach recognises that while actions are best delivered locally, multi-disciplinary regional level support is also required to encourage cross jurisdictional collaboration, provide technical assistance and proactively assist project implementation.

Funding opportunities are listed in **Appendix B.**

ENDURING GOVERNANCE AND FUNDING ARRANGEMENTS

This RDRP provides a framework of how local governments, and stakeholders can work together to achieve common resilience outcomes for the region. It seeks to inform strategic and coordinated approaches to drought resilience activities to align funding and action. Under this model, the RDRP acts as the regional 'blueprint' for coordinated and sustained action.

The successful delivery of this plan is reliant on state and federal support. The ongoing funding for people resources and financial resources to facilitate the delivery of actions is paramount to ensure these actions are implemented. An agreed governance arrangement will support the implementation of the RDRP and represent an enduring commitment to championing resilience into the future. This model is underpinned by a **'role for everyone' in delivery.**

LOCAL OWNERSHIP

Where ongoing funding for resources and implementation are provided from state and federal government, both local governments may wish to establish their own multidisciplinary resilience working groups or integrate into existing working groups to transition community and drought resilience to front-of-mind in all local government functions. This will be achieved by combining existing recovery group arrangements with an ongoing resilience focus over the next year.

STATE OWNERSHIP

Ongoing regional coordination is important to the project, as this will enable the plan to be implemented. The State government's role is to offer enabling measures like administration of grant funding programs, delivery of core governmental functions that interface with resilience building, and facilitation/coordination of support that can assist the ongoing implementation of actions.

It is acknowledged that state government support may require further backing by additional federal funding to support in the successful delivery of these actions.

COMMUNITY OWNERSHIP

As a community led and owned document, there will be an established Drought Resilience Group of key organisations, members and local NGOs to meet once a quarter and discuss the progress and implementation of the RDRP. This will be an opportunity to also receive guidance and advice from Councils, and state and federal governments on grant opportunities and funding programmes to continuously build drought resilience. Following the successful appointment of two or more long term resilience officers, one for Walcha region and another for Tamworth region using state and/or federal government funding, an expression of interest will be released for members to apply to be involved in the group.

MONITORING, EVALUATION AND LEARNING PLAN

MONITORING

Local leadership and progress monitoring

The two Councils will play a strong leadership role across both communities, working in partnership with the NSW Government, and key local organisations, to support, guide and advocate for the actions on building resilience across the two Local Government Areas. Actions will be monitored throughout the lifecycle of the RDRP. A Project Management Plan has been developed for each action, breaking down tasks according to the entity responsible for implementation and the projected delivery timeframe. The Project Management Plan also provides the sequence of action milestones over the life of the action. Monitoring will be completed each quarter to allow changes and adjustments to occur before the next phase begins.

Impact Monitoring Plan

The Impact Monitoring Plan is based on the KPIs set out in each action and establishes a quantitative baseline for the state of social and environmental assets **(see Appendix C)**. The Impact Monitoring Plan sets out the baseline condition for each indicator against which annual evaluation could be undertaken. This enables a consistent assessment of the impact the various actions have on mitigating and preparing for drought events over the short to medium-term. The aim is to identify whether each implemented action is having the desired results and impacts, and if not, what interventions may be required to adjust or adapt the action. The Councils are responsible for overseeing the Impact Monitoring Plan.

EVALUATION

The RDRP will be evaluated each year, to allow for more substantial interventions if an action is not progressing as expected. The evaluation of the implementation success of the actions will be determined by its performance relative to the following pillars:

Implementation: The action is being taken into effect and executed.

Investment: The necessary funding to ensure the action can deliver its objectives has been met.

Impact: The actions impact on its target communities is being met.

Sustainability and Viability: A successful action will be maintained in the long term and be continuous.

Poltical Support: A successful action will have political and community acceptance.

Barriers and mitigation measures

Several barriers may impede the successful delivery of resilience actions. The table below identifies potential barriers to implementation and suggested mitigation measures.

Barriers	Mitigation Measures
Political Acceptance: Actions face barriers to implementation when there is little or no political buy-in. With little political buy-in, local government budgets may be distributed to other priorities.	**Partnerships:** Having several delivery partners will reduce the strain on one organisation alone and ensure a more holistic approach to action implementation. Additional coordination is, however, required between the partnering entities.
Lack of investment and financing by Local, State and Federal government: A main barrier and constraint to implementation is finding investment and financing. Without investment the action may not be implemented completely or reach its full impact potential.	**Multiple funding streams:** A diversified funding stream will help mitigate any changes in circumstance or funding availability. This will ensure the delivery of the actions may continue even if one funding stream is compromised.
Missing resources or technical expertise within action owners particularly, Local Government: Some actions require technical specialism to support the implementation and delivery of the action. Without these, the action may be lacking information and only be able to deliver a fraction of its full impact.	**Awareness-raising:** In order to gain public and political acceptance, the action owners should introduce awareness-raising campaigns through social, public, and print media to identify the importance of these actions and how they will improve general welfare.
Inefficient communication and coordination among stakeholders: Action implementation and monitoring will require the coordinated efforts of multiple internal and external stakeholders. Without clear channels of communication and coordinating protocols (e.g. such as bimonthly meetings, department coordination leads, etc.) the actions may be stymied in the implementation process.	**Participatory processes:** Ensuring that critical stakeholders and the wider public are engaged in further design and delivery of the actions will be key to increasing stakeholder buy-in and promoting methodologies that are well-integrated with the local context.
Administrative and legal challenges: Action implementation will require the municipal government to engage with different entities, including private landowners.	**Transparent communication protocols:** To enhance stakeholder coordination and administrative efficiency, it is necessary to establish clear communication protocols to ensure that all necessary stakeholders are involved, challenges are flagged early, and all parties are aware of the current status of implementation.

Evaluation of each action against the four pillars will be captured in the Impact Monitoring Plan (IMP). Any barriers and mitigation measures identified should also be noted. The evaluation process should be undertaken by the relevant action owners at the prescribed interval (annually). If mitigation measures are identified that need additional assistance or funding from organisations (Tamworth Regional Council, Walcha Council, State or Federal Government) these should be raised with the relevant department or alternatively raised with a Resilience Officer, so the matter is actioned prior to the next phase of progress monitoring.

LEARNING

Learning will be facilitated through reflection and analysis of activities and projects associated with each of the actions within the RDRP. An annual learning workshop facilitated by Councils in conjunction with other action owners can help collect qualitative information on the following key themes:

QUESTION THEME	KEY REFLECTIVE QUESTIONS
Sectors	Are there best practice approaches or innovations that can be shared between sectors or stakeholders? How can approaches be strengthened? What new expertise, technologies and types of interventions can Councils explore to make its programs more effective?
Positioning	How should Council and action owners best position themselves to achieve their allocated actions? How can Council and action owners better focus their activities, expertise and resources in order to have the greatest impact?
Access to services	How have Councils improved access to, and the quality of, resources, networks and systems? How effective are approaches that aim to improve access to, and quality of, resources?
Voice, Agency and Power	How have Councils and action owners strengthened the community's inclusion and participation in decision making?
Protection	How have Councils and action owners addressed power dynamics and reduced vulnerabilities to create a safer environment for people or make power-holders more accountable to them?
Access	How have Councils increased the quality, accessibility or responsiveness of formal systems to the communities they serve?
Responsiveness	How responsive and agile are Councils and action owners to changing needs and opportunities? Are projects, programs and initiatives able to respond to priority needs in the region, or are action owners using a cookie cutter approach?

Reflection should be guided by available evidence including consideration of data collected through monitoring and evaluation processes. The objective of reflection is to not only highlight successes but also identify failures, challenges and opportunities. Learnings identified through the workshop should be summarised into a short learning paper, issued annually to relevant Council members, as well as action owners. It is expected that the RDRP will be updated to reflect new learnings.

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APPENDIX

APPENDIX A

Drought Indicators

VARIABLE	DESCRIPTION	RELEVANCE
Frequency	Number of drought events per defined time interval	More frequent droughts can cause long-term impacts
Severity	Related to the water deficit. Computed as the sum of the differences, in absolute values, between the drought indicator (DI) values and threshold used to define the level of dryness Si=∑|DIi| < Threshold	Deficit of water in relation to the water needed for specific uses (e.g. irrigation, domestic water consumption, energy production)
Intensity	Severity divided by duration of the event	Characterises the overall potential for impacts
Duration	Number of days, months, or time steps of the event	Longer droughts propagate further through the hydrological cycle with a higher potential for cascading secondary effects
Onset	First day, month or time step for which indicator is below a given threshold	Relevant if a drought starts in sensitive periods with greater water demand like seeding and flowering periods. Relevant for drought management and the declaration of farming emergencies.
Cessation	Meteorological indices have returned to normal, soil moisture is restoring, pasture growth re-establishes, fore re-growth re-establishes, reservoirs and lakes re-fill.	Relevant for management
Endpoint	Agricultural and natural eco-system productivity returns to average pre-drought conditions. Socio-economic conditions return or stabilize to normal conditions.	Relevant for management.
Peak month	Day or month with lowest value of the drought indicator	Period with potentially strongest impact.
Area affected	Area or percentage of a region (or country) with values of the drought indicator below a certain threshold	The wider the area, the more assets are affected.

The above table has been sourced from Drought Risk Assessment and Management, Jurgen V. Vogt et al, European Commission, 2018 and modified for this report.

APPENDIX B

Funding opportunities

Federal Government

Allocations and Grants from funds:

- Future Drought Fund 2020, Department of Agriculture, Fisheries and Forestry
- Australian Government Drought Response, Resilience and Preparedness Plan 2019, Department of Agriculture, Fisheries and Forestry
- Future Drought Fund 2020, Department of Agriculture, Fisheries and Forestryy

Transfers, grants or cost-sharing programs from Departments:

- Transfers, grans or cost-sharing programs are addresseD within each of the identified plans with funding targeted at financing drought resilience initiatives at a national, regional and local level
- Key departments include the department of agriculture, fisheries, and forestry

State Government

Allocations and Grants from funds:

- NSW Emergency Drought Relief Package 2020, Department of Primary Industries
- NSW Drought Stimulus Package, Department of Regional NSW
- CWA Drought Relief Funding, Country Women's Association

Transfers, grants or cost-sharing programs from Departments:

- Safe and Secure Water Program, Department of Primary Industries:
  - Manilla Water Supply System Upgrade – Tamworth Regional Council
  - Walcha Town Water Security – Walcha Shire Council
- Emergency Relief for Regional Town Water Supplies, Department of Planning and Environment:
  - Calala WTP Off-Stream Storage – Tamworth Regional Council
  - Tamworth Drought Response – Stage 1 - Block Banks and Planning & Development for Stage 2 – WaterNSW
  - Walcha Stage 1 Short term (emergency) works – Walcha Shire Council
- Aboriginal Communities Water and Sewerage Program, Department of Planning and Environment and NSW Aboriginal Land Council
- Water and Wastewater Backlog Program, Department of Planning and Environment
- Water Security for Regions Program, Department of Planning and Environment
- Country Towns Water Supply and Sewerage Program, Department of Planning and Environment
- National Water Security Plan for Cities and Towns, Department of Climate Change, Energy, the Environment and Water
- NSW Drought Support Rebates, Savings and Support Services:
  - On-farm Emergency Water Infrastructure Rebate Scheme
  - Farm Innovation Fund
  - Bee Site Permit Fee
  - Farm Innovation Fund
  - Local Land Services (LLS) Rates
  - Water Licences
  - Safework And Fair-Trading License Fee Waivers
  - Wild Dog Fence Charges
  - Drought Assistance In NSW

- Drought And Rural Support – Department of Agriculture
- Rural Financial Counsellors
- Local Land Services (LLS) – Drought Response

Local Government
Allocations and Grants from funds:
+ Tamworth Regional Council 2016 Demand Management Plan
+ Walcha Council Adverse Event Plan
Transfers, grants or cost-sharing programs from Departments:
+ Tamworth Regional Council DroughT Initiatives:
- Water Saver Rebate Scheme
- Tank, Bore or Greywater System Inspections
- Bulk Water Refill Stations
- Large Water User Audits
- Reuse of backwash water at Calala Water Treatment Plant
- Storage Tank at Manila
- Reuse of backwash water in Barraba
- Automated Meter Readers
- Water Restriction Patrols

APPENDIX C

Impact Monitoring Plan

The Impact Monitoring Plan (IMP) is based on the KPIs set out in each action and establishes a quantitative baseline for the state of social and environmental assets. The IMP sets out the baseline condition for each indicator against which annual evaluation will be undertaken. This will enable a consistent assessment of the impact the various actions will have on mitigating and preparing for natural disaster or health emergency events over the short to medium-term. The aim is to identify whether each implemented action is having the desired results and impacts, and if not, what interventions may be required to adjust or adapt the action.

ID	Action	KPIs related to action	Target	Further justification (as required)	Figure					
					2022	2023	2024	2025	2026	2027
1.1	Launch a Tourism Climate Adaptation Plan to build Tourism Industry Resilience in Walcha	Number of businesses registered with 'sustainable business practices' (%)	25%	Number currently unknown. This target constitutes a realistic and attainable objective given current knowledge.						
		Annual regional tourism revenue (year-over-year increase in %)	5%	Tamworth: $208.3m (2019/2020 data (tourism sales)) Walcha $10.5m (2016)						
1.3	Support resilience in community businesses through the development of budgets and planning for water scarcity	Number of businesses with a Drought Preparedness Plan (%)	5%	Based on current regional knowledge, there are 11 in Tamworth. Walcha unknown. This target constitutes a realistic and attainable objective.						
		Number of business leaders trained to manage water scarcity per annum	20	This target constitutes a realistic and attainable objective.						
		Quarterly regional revenue forecast vs actual (during a future drought event) (% reduction in revenue)	≤8%	Studies show impact of drought being directly correlated to share of farming in local economy. Reducing the impact on regional economy impacts supports drought resilience.						
1.4	Create and improve networks to support apprenticeships, paid internships, and other on-the-job training models	Number of attendees at networking events	50							
		Number of apprenticeships delivered before vs after action delivery (% increase)	0%	Number currently unknown. This target constitutes a realistic and attainable objective given these current knowledge.						
		Regional quarterly revenue before vs after action delivery (quarterly increase in %)	1.5%	Corresponds to 6% per annum. This target constitutes an optimistic objective.						

ID	Action	KPIs related to action	Target	Further justification (as required)	Figure					
					2022	2023	2024	2025	2026	2027
2.2	Develop a Drought Resilience Roadmap	Relevant plans and strategies reflect RDRP outcomes	Yes							
		Roadmap document developed	Yes							
		Monitoring and evaluation program established and functional	Yes							
2.4	Increase collaboration of resilience actions between local authorities and local community organisations	Number of programs being delivered through partnerships	10							
		Number of local organisations involved	50,000							
		Total public and private investments/additional funding per annum ($)	30							
		Number of volunteers directly involved in resilience actions per annum	150							
3.2	Dedicated resource for resilience to assist with resilience focused initiatives and coordination	2 positions created and recruited- 1 Resilience Officer each for Walcha and Tamworth OR 1 position created - 1 Regional Resilience Officer for Tamworth and Walcha working across both LGAs	Yes							
		Proportion of policy measures that incorporate components of drought resilience	25%	To be obtained through Council data (in at least 4 major documents within each council)						

ID	Action	KPIs related to action	Target	Further justification (as required)	Figure					
					2022	2023	2024	2025	2026	2027
3.4	Establish community campaign including information sessions and events to advocate for awareness of water resources and resilience	Number of engaged committee members (their attendance at planning meetings; involvement in events, etc.)	10							
		Number of events hosted per annum	2	Committee data						
		Level of engagement with social media including number of likes or comments	2							
		Volume of drought and resilience related content distributed to the community	200	This target constitutes a realistic and attainable objective.						
3.5	Create a fund to coordinate a pre-school or primary school-based tree planting day – termed 'Stewardship Day'	Number of trees planted	600	10 trees per objective of persons attending event						
		Number of events hosted	2							
		Number of students and community members in attendance at each event	60							
		Level of event engagement through social media per event (e.g. number of Facebook likes, comments, etc)	200							
4.1	Promote education on First Nations methods of environmental management	Number of occurrences of Traditional Owner and First Nations direct input into environmental management strategies	3							
		Number of Cultural Knowledge and Traditional Practices education and awareness sessions delivered in a calendar year	5							
		Number of participants in each Cultural Knowledge and Traditional Practices education and awareness sessions	30							

ID	Action	KPIs related to action	Target	Further justification (as required)	Figure					
					2022	2023	2024	2025	2026	2027
5.2	Discourage overuse of water	Revenue collected through economic disincentives per annum and tracking progress over time ($)	5,000	This target constitutes an optimistic objective.						
		Number of residents and businesses successfully reached through communication campaigns	15,000 (approx. 20%)	This target constitutes a realistic and attainable objective.						
6.3	Provide training for mental health support	Number of healthcare workers having attended a mental healthcare training or workshop	20							
		Number and spatial distribution of community champions established throughout the Walcha and Tamworth regions	10 across both councils							