Drought Ready Tasmania

# Southern Tasmania

## Regional Drought Resilience Plan 2025

Australian Government
Department of Agriculture, Fisheries and Forestry

Future Drought Fund

Tasmanian Government

# Executive Summary

Drought is a major risk across all of Tasmania. It causes significant financial, social and environmental impacts for people, primary producers, other businesses and the community. As an island state our geographic isolation brings unique challenges that increase the impacts of drought and climate variability events.

This is one of three Regional Drought Resilience Plans developed by Tasmanians for Tasmanians. They are community-level strategic plans built on community voices as well as historic and recent experiences of drought and climate variability.

The plan aims to give communities a way to achieve practical steps which will help the region be prepared for, cope with and recover from future droughts and climate variability events. The plan development has been co-funded by the Australian Government's Future Drought Fund and the Tasmanian Government.

Drought and resilience hold different meanings across communities, depending on the environment, climate and local experiences. Given this, drought resilience planning needs to be adaptable to constantly changing conditions, as well as accessible to a range of people. This is why each of the three Tasmanian regional plans may look slightly different as no two communities are the same and different engagement methods have been used.

In each region, the plans can be used to guide future effort and investment across all areas and sectors. They can be used by community groups, businesses, not-for-profit organisations and all levels of government to understand the considerations and actions they can take to make a meaningful difference to drought resilience.

**FIGURE 1:** **Drought impacts across Tasmania**

## In a drought, our agricultural, social and ecological systems are affected in complex ways.

When the landscape is very dry, biology is subdued, and ecosystem services are diminished. These include the fertility maintaining action of earthworms, dung beetles and soil biology, insect predation by birds and other animals, pollination and seed dispersal.

Without rainfall, environmental flows in surface waterways are seriously affected and some may dry out completely.

Where irrigation water is fully utilised, environmental flows in waterways further decline. In some cases groundwater systems can be affected and salts may rise to the surface, impacting soil health.


### Ecological

As vegetation dries out and dies, bushfire risk increases. The complex food chain can also be affected, resulting in a loss of wildlife. Topsoil can become damaged from wind erosion. This can reduce its future water holding capacity and increase flooding.

There is also increased opportunity for pests, diseases, weeds and other invasive species, which can impact on the health of native species.


## Economic/ agricultural

The landscape becomes barren, affecting agri-tourism visitor numbers. This can harm extra business income that support many Tasmanian farms.

Low water supply can lead to a lower quality crop, affecting profit. Livestock suffer and must be sold off early for less income. Dairy cows must be dried off, economic and intellectual investment in breeding is lost, and transport costs increase. Property prices may be affected as landowners sell due to economic uncertainty.

## Social systems

Whole systems of income are missed, exacerbating debt and increasing pressure on farming communities. This means less time and money for recreation and volunteering, and higher levels of stress.

This stress and reduced participation in community life can lead to mental health challenges, substance abuse, family violence and social isolation.

Regional towns suffer from less community engagement and reduced spending, which can lead to job losses and a declining population. This can affect the viability of local schools, clubs and businesses.

# How can we achieve a resilient region?

A community-led process identified key themes and goals, to show how we can achieve our vision for a resilient Southern Tasmania.

Building resilience is a complex process and there are interdependencies between all the goals, meaning achieving one can depend on others also being achieved.

While the plan identifies themes and goals that will support Southern Tasmania to achieve its vision for a resilient future, it does not try to list all possible actions that might contribute. Those already working on resilience initiatives should be able to see how their efforts contribute to towards this plan, and those seeking to get involved should find ideas and inspiration for how to take action.

This plan is a living document that will be reviewed and updated over time to reflect progress, insights and new priorities as they emerge.

Vision

# The people, organisations and systems in Southern Ta coordinated way to make our region strong, so that w

Themes

## Flourishing communities

who understand and support each other

Goals

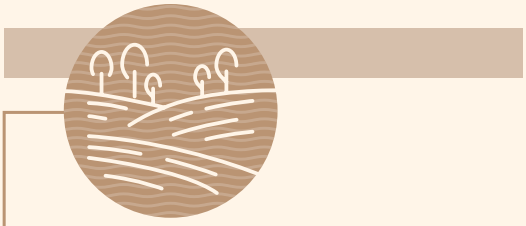
- Range of active and diverse community groups, networks, and social activities
- Residents support one another and feel they belong
- Health, education, and training services meet community needs
- Shared priorities and collaboration across community
- Strong, trusted leadership and governance

## Prosperous local economies

where businesses thrive and provide jobs even when conditions are tough

- Producers and small businesses have the information, knowledge, and management skills to adapt and thrive
- Long-term planning and projects are supported and managed locally
- Proactive systems to support climate-vulnerable groups when times are tough
- Next generation producers are ready to lead and navigate climatic variations and farming pressures

## ısmania all work together in a proactive and ve can thrive no matter the climate.



### Resilient landscapes

from the bush to the farm

- Natural landscapes, waterways, and ecosystems are actively managed for health and diversity
- Farm systems can cope with dry conditions and climate variabilities for long-term economic and environmental sustainability
- Palawa/pakana management of waterways, land, and sea for cultural and ecological values is recognised and supported
- Hazards are identified and proactively managed to reduce disaster risks associated with drought

### Climate-conscious built environment

designed to be resilient, efficient and sustainable

- Climate resilience, social, and environmental outcomes are incorporated into land use planning and development decisions
- Community infrastructure (spaces to meet, play, connect, and access services) is diverse and fit-for-purpose
- Essential services (water, communications, energy) are planned, managed, and used efficiently and sustainably
- Locals understand how they can make their homes and gardens more climate resilient

# Opening Statement from the Project Advisory Group

Drought resilience is a shared responsibility and achieves the greatest impact when addressed at a community level. This plan was guided by the Project Advisory Group (PAG), which brought together representatives from across the community, including local councils, environmental groups, farmer organisations, businesses, and universities. Working in collaboration with the team at Resilience and Recovery Tas, the PAG aimed to provide a clear understanding of what drought resilience means and how communities can proactively plan for a stronger, more adaptable region.

At the heart of this report is the shared vision of resilience in Southern Tasmania:

> **The people, organisations and systems in Southern Tasmania all work together in a proactive and coordinated way to make our region strong, so that we can thrive no matter the climate.**

Designed specifically for Southern Tasmania, this report recognises that resilience is rooted in community strength and that the impacts of drought and climate change vary across regions. It reflects the voices of around 600 community members and is driven by their insights and experiences. The report identifies four key themes and seventeen goals to guide decision-making and action.

The PAG expects this framework to influence policies and strategies at both local and state government levels, supporting a united approach to building a resilient Southern Tasmania.

We hope community members will find the report useful, sharing it within their local networks and working with others to implement its goals.

The case studies provide some great examples of people working together for their community and we hope they will inspire some new local initiatives. Feedback and ongoing involvement will be vital to ensuring the success of this plan.

# Acknowledgement of Country

We acknowledge the Aboriginal people of Lutruwita/ Tasmania. We pay our respect to Elders past and present and recognise their culture and their rights as the original and ongoing Custodians of this Land. We respect their deep wisdom and practices in caring for Country including Land, Sky and Waterways as we work to prepare for a changing climate.

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# Introduction

# 1.1 Project background

Regional drought resilience planning has been funded across Australia from the Australian Government's Future Drought Fund (FDF) – a key investment aimed at building resilience across the agriculture sector, landscapes, and communities.

As part of the FDF's 'Better Planning Stream', the Tasmanian Government developed three regional drought resilience plans, for each of the North, South and North-West regions of Tasmania, with the following aims:

- Empower communities to identify the impacts of drought and develop regional drought resilience and management plans.
- Support communities to consider the incremental, transitional and transformational opportunities needed to strengthen drought resilience and encourage innovative initiatives at the regional level.
- Facilitate increased community understanding of their drought resilience, including by encouraging communities to share their learnings with each other.
- Encourage improved natural resource management capability through planning.

The Tasmanian Department of Premier and Cabinet (DPAC) worked with regional communities and key stakeholders from November 2022 to October 2024 to prepare a community-led Regional Drought Resilience Plan (RDRP), guided by a regional Project Advisory Group.

The Southern Tasmania Regional Drought Resilience Plan (RDRP) has been shaped by Tasmanians' stories and experiences of drought. It has been built on discussions, sometimes one-on-one, but often in groups at a community hall, neighbourhood house or council chambers across Southern Tasmania. Community conversations explored what actions could be taken at a regional level to better prepare communities for future drought and climate variability events. Outcomes from these sessions were then used to build a roadmap of actions for communities to follow to prepare for future drought and climate variability events.

The RDRP is intended as a guide for community, government, not-for-profits and the private sector to align their efforts and to help shape projects and practices for improved drought resilience across Southern Tasmania. It aims to increase collaboration, coordination and consistency across organisations.

The plan does not indicate how each strategic action will be resourced or the organisation responsible as the actions are far-reaching across different sectors and types of change.

As a community-level strategic plan, the RDRP does not attempt to cover the drought and climate resilience needs of an individual farm, enterprise or household. It is a 'living' document that will need to be monitored, reviewed and updated over time to reflect progress, new climate data and revised priorities.

This RDRP has been developed in collaboration with regional communities and guided by a regional Project Advisory Group. Views and perspectives expressed in this plan reflect those of engaged stakeholders and may not necessarily represent the broader views of the Tasmanian Government.


Aurora Australis from Thorpe Farm, Bothwell.
Photo: Will Bignell.

# 1.2 Approach to developing this plan

The project phases and timing guiding the development of the Southern Tasmanian RDRP are outlined in Table 1. The community has led the content of the plan, with approximately 600 participants contributing their knowledge and views.

A detailed summary on the stakeholder and engagement process, including participant demographics and key findings, is included in Appendix B.

**TABLE 1: Southern Tasmanian RDRP development – key steps and timing**

| Timing | Stage | Key activities |
|---|---|---|
| **Nov 2022 – Dec 2023** | Establish project team, governance and planning approach | • Regional project inception and planning<br>• Establish project team and Project Advisory Groups<br>• Statewide Forum |
| **Dec 2023 – Feb 2024** | Baseline studies: understanding drought impact | • Develop baseline data reports (Appendix A)<br>• Community survey to understand drought impacts (see Appendix B for a summary of the engagement process)<br>• Interview stakeholders |
| **Mar 2024** | Developing vision, themes and goals | • Develop the regional vision, themes and goals (done by PAG, based on initial consultation)<br>• Review strategies and policies to inform plan development (provided in Appendix C) |
| **Apr – Aug 2024** | Testing vision, themes and goals. Understanding priorities and brainstorming solutions | • Facilitate 21 community conversation workshops<br>• Engagement stalls at Agfest, Cross-pollinate, Derwent Autumn Festival<br>• Online survey<br>• Future Scenarios Workshop to explore wider implications of drought and climate variability in the region |
| **Sep 2024** | Review of data collected and development of strategic actions and pathways | • Four Pathways to Resilience panels with subject matter experts to review data collected in community conversation workshops and refine it into strategic actions |
| **Oct 2024 – Jan 2025** | Plan development | • Develop draft plan based on key engagement and strategic review outcomes<br>• Seek feedback on key aspects of the draft RDRP, including themes and action areas |
| **Early–mid 2025** | Plan implementation | • Formalise coordination, governance, measurement and learning approaches for implementation<br>• Establish grant programs and other resourcing approaches<br>• Launch plan; support regional engagement and collaboration towards shared goals. |

# 1.3 Understanding the bigger picture

There is a growing number of policies and laws across different levels of government that relate to social, economic or environmental resilience. As the demand for resilience planning increases, the policy landscape will continue to grow in diversity and complexity.

The RDRP is focused on strengthening resilience in order to adapt and cope with changes to our climate, but it does not cover efforts to reduce global warming, which is the role of Renewables, Climate and Future Industries Tasmania (ReCFIT) through development of Tasmania's Climate Change Action Plan and sector specific Emissions Reduction and Resilience Plans.

Appendix C summarises the RDRP's statewide strategic landscape and identifies opportunities for further alignment through implementation.

# 1.4 How you can use this plan

Individuals, businesses, land managers and community groups can use this plan to:

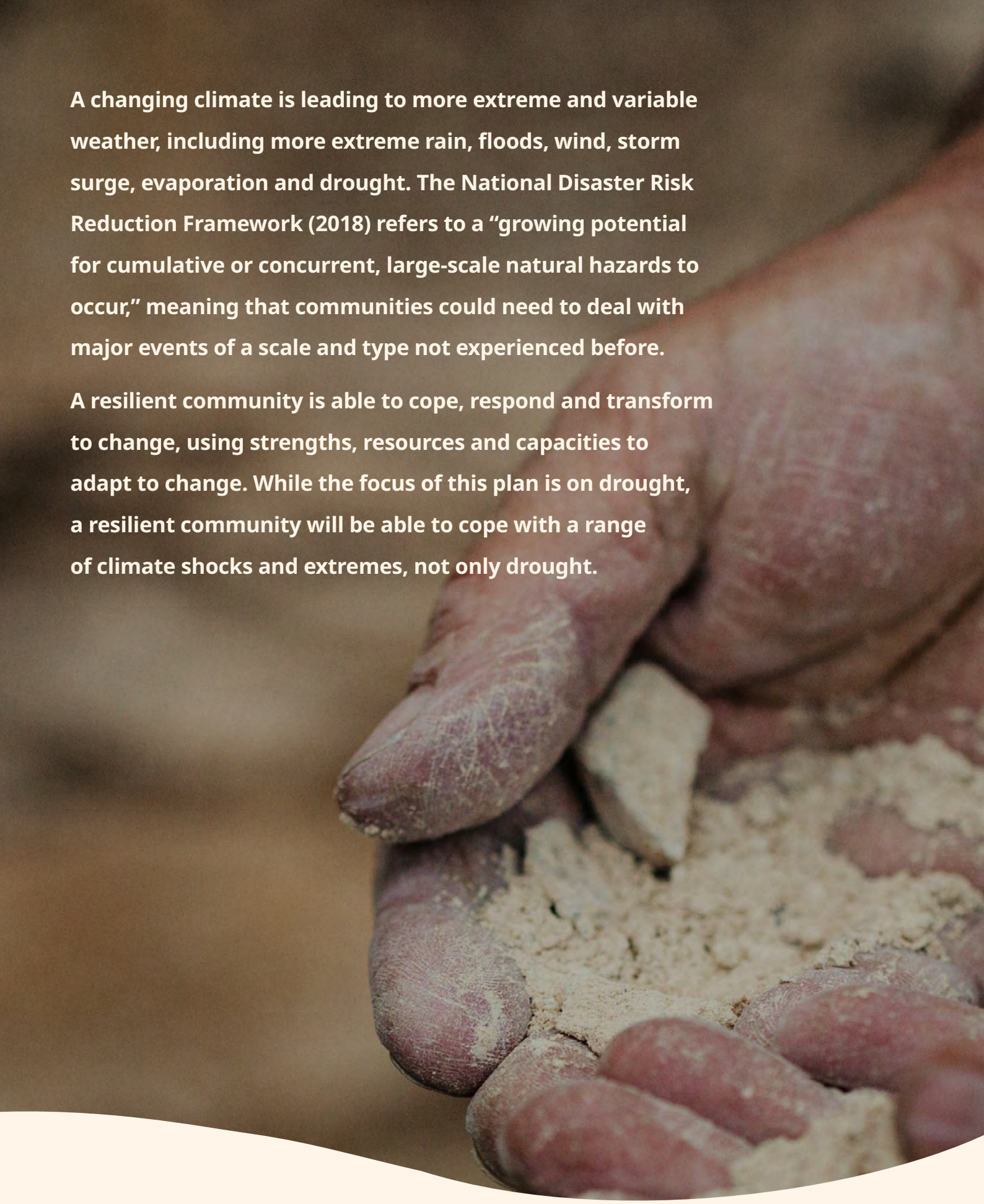
- Increase knowledge of our region's risks, expected changes to our climate, and the impact of drought and climate variability on people, businesses, infrastructure and natural systems.
- Get ideas and inspiration for how take action, minimise drought and climate impacts and proactively build local resilience.
- Gain better understanding of our complex and inter-dependent systems.
- Align local resilience activities with a wider regional approach.

Federal, state and local governments can use this plan to:

- Understand community priorities and aspirations to align future projects, strategy and funding.
- Better understand our complex and interconnected social and ecological systems, and how we can best adapt to change over the long-term.
- Guide policy, resourcing and decision-making around drought resilience.

# 2

# Defining drought and climate resilience



**A changing climate is leading to more extreme and variable weather, including more extreme rain, floods, wind, storm surge, evaporation and drought. The National Disaster Risk Reduction Framework (2018) refers to a "growing potential for cumulative or concurrent, large-scale natural hazards to occur," meaning that communities could need to deal with major events of a scale and type not experienced before.**

**A resilient community is able to cope, respond and transform to change, using strengths, resources and capacities to adapt to change. While the focus of this plan is on drought, a resilient community will be able to cope with a range of climate shocks and extremes, not only drought.**

# 2.1 What does drought mean?

> **"If it doesn't rain for three weeks, it's a drought."**
>
> — Third-generation farmer, Preston, Tasmania

Drought is a defining feature of much of the Australian landscape. It is forecast to become more frequent, severe and long lasting in many regions as the climate changes.

While there is no one definition of drought, for the purpose of Tasmania's Regional Drought Resilience Plans, drought is defined as **'a prolonged, abnormally dry period when the amount of available water is insufficient to meet our normal use'** (Bureau of Meteorology 2024).

Drought can have significant impact on people's health and wellbeing, damage infrastructure and enterprises, and disrupt natural ecosystems and species.

It is important to note that drought and community understandings of drought conditions differ, depending on environmental, climatic and community context. What is viewed as drought in one region may not be seen as a drought in another.

> **"With climate change likely to cause increasingly erratic weather, I'm concerned that we could face prolonged dry periods, with significant impacts to agricultural production and agricultural communities."**
>
> — Primary producer, Coal River Valley

# 2.2 What does drought resilience mean?

> **"I think building in a sense of community and togetherness is key to ensuring the rest of the actions follow. If communities thrive together in times of prosperity they are more equipped to support one another in times of difficulty."**
>
> — Survey respondent, Southern Tasmania

According to the *Future Drought Fund Drought Resilience Funding Plan 2024-2028 Determination 2024*, drought resilience is the ability to **"adapt, reorganise or transform in response to changing temperature, increasing variability and scarcity of rainfall and changed seasonality of rainfall, for improved economic, environmental and social resilience".**

For drought resilience planning in Tasmania, community resilience means how well a community can come together to address its vulnerabilities and use its strengths to prepare for, adapt to and recover from challenges while maintaining or even improving its overall wellbeing. The *Tasmanian Disaster Resilience Strategy* defines resilience as:

> **"The ability of communities and individuals to survive, adapt and thrive in the face of turbulent change or acute stresses"**
>
> — (DPAC 2020)

Drought affects different social groups in varying ways. We might automatically think of drought as something that affects farming communities and businesses economically and by increasing stress. However, it can also affect other communities through higher food prices and reduced availability, water restrictions, and increased temperatures in urban environments, for example.

The most vulnerable in any community are usually those in lower socio-economic categories, whether they live in rural or urban settings.

# 2.3 What does adaptive capacity mean?

Research shows that a community's ability to adapt to a changing climate is shaped by a combination of strengths, attributes and resources available to individuals and community. This is often called 'adaptive capacity' (IPCC 2012).

More resilient communities, that is those with greater adaptive capacity, are better able to respond to problems that arise from a changing environment.

Figure 2 shows the five parts (referred to as the Five Capitals Model) which influence a community's adaptive capacity.

**FIGURE 2: Five capitals model**


(Source: National Climate Change Adaptation Research Facility, Australian Government)

# 2.4 Types of change

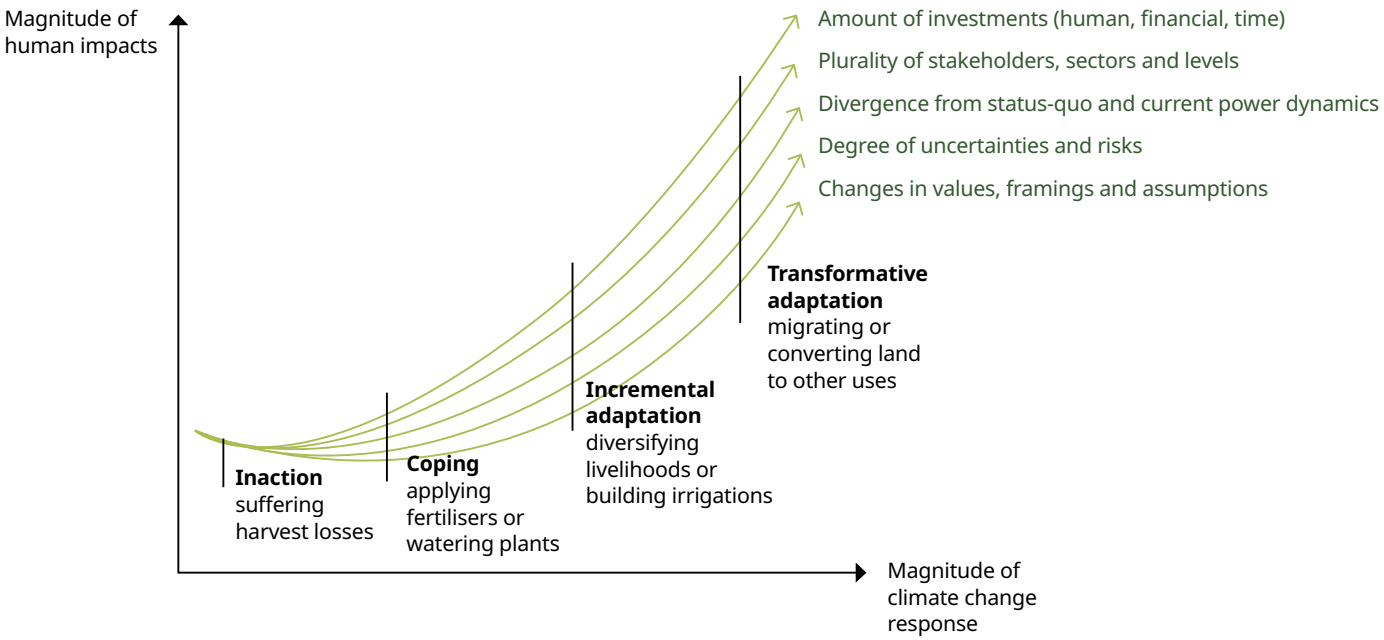
Different types of actions can build drought resilience depending on the scale of the change needed. At a basic level, there are two types of change:

- *Incremental change*: Changes to existing practices or behaviours that allow existing social, ecological and economic systems to absorb, accommodate or embrace change (Dilling et al 2023; Barnes et al 2020).
- *Transformative change*: Changes that involve foundational shifts in values, power dynamics, goals, relationships and mindsets that enable reorganisation towards a more resilient society (Dilling et al 2023; Barnes et al 2020).

Transformative change is less common and can be harder to achieve than incremental change, but there is growing consensus that both types of change are needed to address the scale, complexity and magnitude of climate challenges.

Figure 3 shows these different change types on a spectrum and their relationship to complexity, impact, resourcing and time.

**FIGURE 3: Types of adaptation and change**




(Source: Fedele et al 2019)

# 3

# About Southern Tasmania

**The Southern region has a land area of 25,964 km$^2$, a population of just under 300,000 (over half of Tasmania's population) and contains the local government areas (LGAs) of Brighton, Central Highlands, Clarence, Derwent Valley, Glamorgan-Spring Bay, Glenorchy, Hobart, Huon Valley, Kingborough, Sorell, Southern Midlands and Tasman.**

**FIGURE 4: Map of Southern Region LGAs**


# 3.1 About the Southern Tasmanian community

Compared to Tasmania as a whole, households in the Southern region are skewed towards the higher end of household incomes, and people tend to be more educated and slightly younger.

This is particularly true in the inner urban areas while outer urban, rural and regional areas show far fewer socio-economic advantages.

**TABLE 2: Demographic data for Southern Tasmania**

| Key population statistics | Southern region | Tasmania |
|---|---|---|
| Population density (people per km$^2$) | 11.4 | 8.41 |
| Median age | 40 | 42 |
| % who identify as Aboriginal and/or Torres Strait Islander | 5% | 5.4% |
| % who identify as religious | 43.4% | 43.4% |
| % needing assistance with core activities | 6.3% | 6.8% |
| % people born overseas | 18% | 15.4% |

The Southern region contains both some of the highest and lowest ranked locations in Tasmania on the Index of Relative Socio-economic Advantage and Disadvantage.

Rent and mortgage repayments are higher than in Tasmania as a whole. A smaller proportion of people own their own home, while rental rates are about the same (ABS 2021).

# 3.2 The cultural landscape

Aboriginal people have lived in Southern Tasmania for tens of thousands of years, and evidence of their connection to Country is found across the region "on the coast and along river valleys that provided pathways to coastal resources" (NRM South n.d., p38).

Across the region, there is approximately 7,205 hectares of Aboriginal managed land. This includes including trawtha makuminya (Bronte Park), 'Murrayfield' (Bruny Island), putalina (Oyster Cove), piyura kitina (Risdon Cove), pungkatina (Great Bay, North Bruny), 'Little Swanport' (Little Swanport), and 'Rockmount' (Ellendale) (NRM South n.d.).

Aboriginal organisations and people care for country, passing on traditional knowledge to the next generation. This can include cultural heritage management, such as burning and harvesting, being undertaken across the region (NRM South n.d.).

# 3.3 Economy and agriculture

The region has a diverse agricultural sector and contains 24 per cent of all farm businesses in Tasmania. Land used for production spans approximately 6,450 km2 (27 per cent) of the region's land area and 35 per cent of the total farmland in Tasmania. In general, the region also has a good diversity of agricultural enterprises, both at the property and regional levels. Table 3 shows the scale and value of agricultural enterprises in Southern Tasmania.

Much work has been done to provide secure water supplies for agriculture in parts of the region, through irrigation schemes and individual landowner investments in storage dams. There are still many parts of the region, such as the Tasman and Huon Valley, that are reliant on natural run-off.

**TABLE 3: Value and scale of agricultural enterprises in Southern Tasmania**

| Enterprise type | $ value (million) | % of region |
|---|---|---|
| Livestock (inc meat, wool & eggs) | 100.86 | 31.93% |
| Vegetables | 13.83 | 4.38% |
| Dairy | 13.53 | 4.28% |
| Fruit (inc nuts) | 126.21 | 39.95% |
| Field crops (inc nursery/ floriculture) | 47.37 | 14.99% |
| Wine | 14.08 | 4.46% |
| **Total** | **315.88** | |

In addition, the tourism and hospitality sectors employ around eight per cent of Southern Tasmanians and have close ties to the agricultural sector, meaning the impacts of drought and climate variability are likely to reach greater parts of the economy and community. There are also conflicts that arise between the infrastructure and water needs of tourism businesses and the needs of local residents and producers.

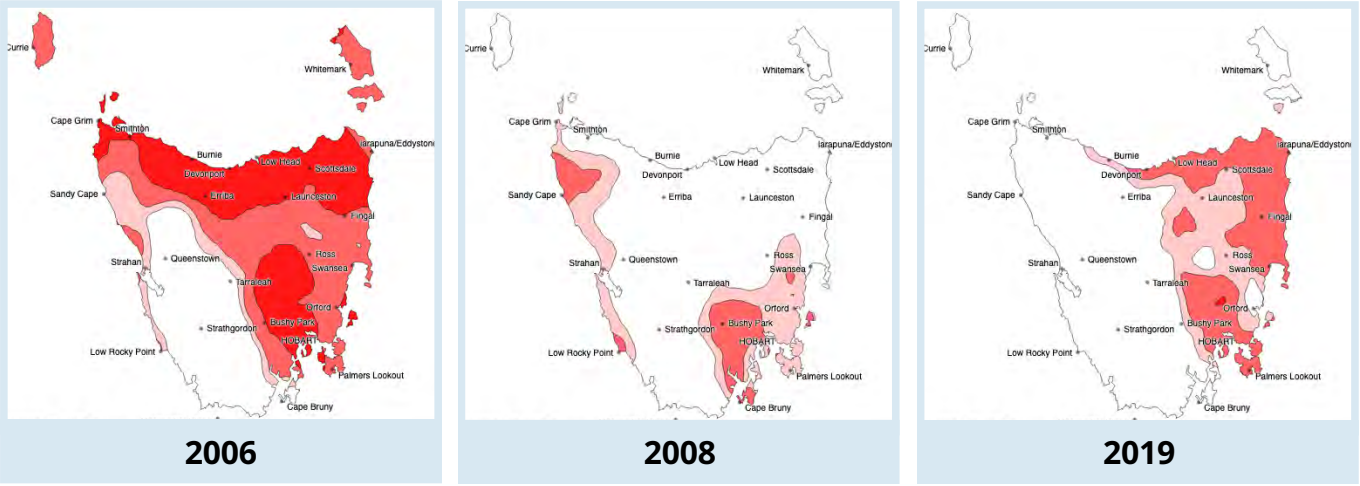
The tensions over access to resources and responsible development were highlighted repeatedly during the community consultation, especially on the East Coast, Tasman Peninsula and Bruny Island.

Recent droughts occurred in Southern Tasmania in 2006, 2008, 2019 and 2024, with further localised droughts in 2002, 2007, 2014, 2015 and 2017 (Figure 5). Agricultural regions, including the Coal River Valley, East Coast and Central Highlands, have a very low annual rainfall. Therefore, producers in these regions have experience dealing with and reducing the impacts of dry times.

However, severe drought conditions still have substantial negative effects on Southern Tasmania's agricultural and rural communities, and the changing nature of climate variability means that even traditionally well-adjusted

areas will need to adapt. For example, among agricultural communities, low availability of feed for livestock in Tasmania can mean that land managers are required to destock quickly, which can be problematic given limited abattoir facilities in the South and price volatility in markets. This can lead to instability in the business community and has implications for the broader value chain and communities that depend on these products.

**FIGURE 5: Past low rainfall years (indicated in red, with dark red the lowest on record)**




(Source: Bureau of Meteorology)

# 3.4 The natural environment

Southern Tasmania is well known for its proximity of urban population centres to pristine beaches, ancient forests and alpine wonderlands. The region contains diverse natural environments, intact ecosystems, and productive land and seascapes. The wealth of natural resources contributes significantly to the region's identity and economic, social and environmental wellbeing (NRM South n.d.).

Native vegetation covers approximately 76 per cent of Southern Tasmania, a large proportion of which is globally significant. The region's rich flora and fauna include many species endemic to Tasmania, a range of complex landscapes and internationally recognised natural icons such as the Tasmanian Wilderness World Heritage Area (TWWHA).

There are several threatened ecological communities, and 261 species have 100 per cent of their recorded range within the region (Department of Climate Change, Energy, the Environment and Water 2021). There are a further 304 species with greater than 50 per cent of their recorded range within the region (Department of Sustainability, Environment, Water, Population and Communities 2011). In total, 114 species occurring in Southern Tasmania are listed as threatened (NRM South n.d.).

Southern Tasmania also has significant water assets, with four internationally significant Ramsar wetlands, 33 rivers containing sections of very high conservation status and 26 undisturbed sub-catchment areas.

# 3.5 Drought risk and resilience assessment

Drought and climate variability are part of complex systems, making their impacts across Southern Tasmania difficult to predict. To help in understanding regional drought resilience, regional assessments were undertaken as part of this program (refer to Appendix A).

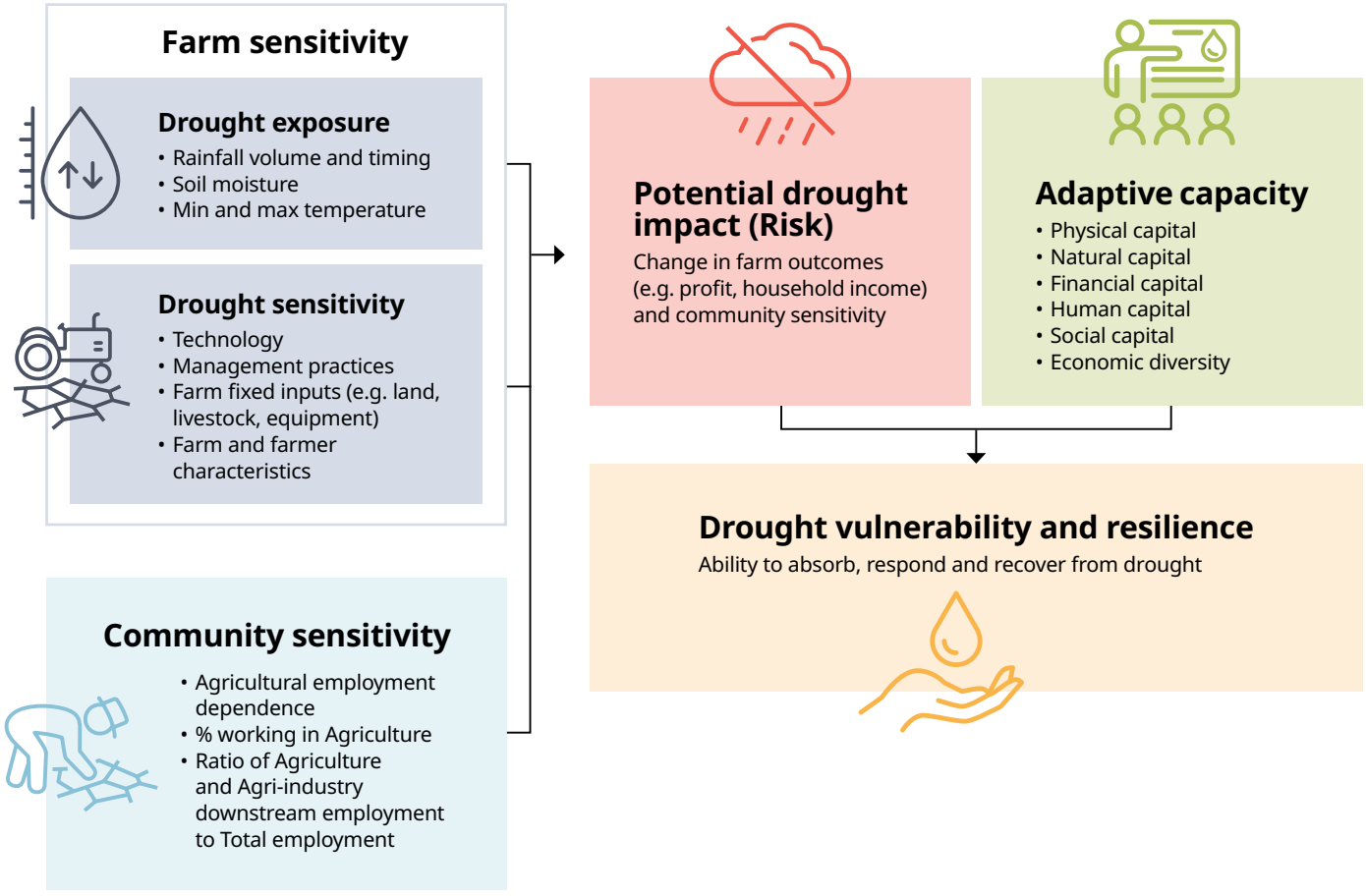
Regional assessments considered drought resilience across each of the region's Local Government Areas (LGAs) through two key factors: potential drought impact (risk) and the ability of communities to adapt (adaptive capacity).

The assessment adopted the ABARES drought resilience criteria, as shown in Figure 6.

The outcomes of the risk and resilience assessments are useful in helping to quantify current risk and resilience including gaps, key risk areas, and to measure progress.

There are opportunities in the future to expand the data sets and indicators used to ensure future assessments offer a more comprehensive analysis.

**FIGURE 6: Drought risk, adaptive capacity and resilience assessment model**




(Source: ABARES)

For Southern Tasmania, the assessment found that the region demonstrates moderate resilience to future drought conditions, though there are significant differences between LGAs.

In general, local government areas in close proximity to the city have high adaptive capacity, with the exception of Glenorchy City and Brighton.

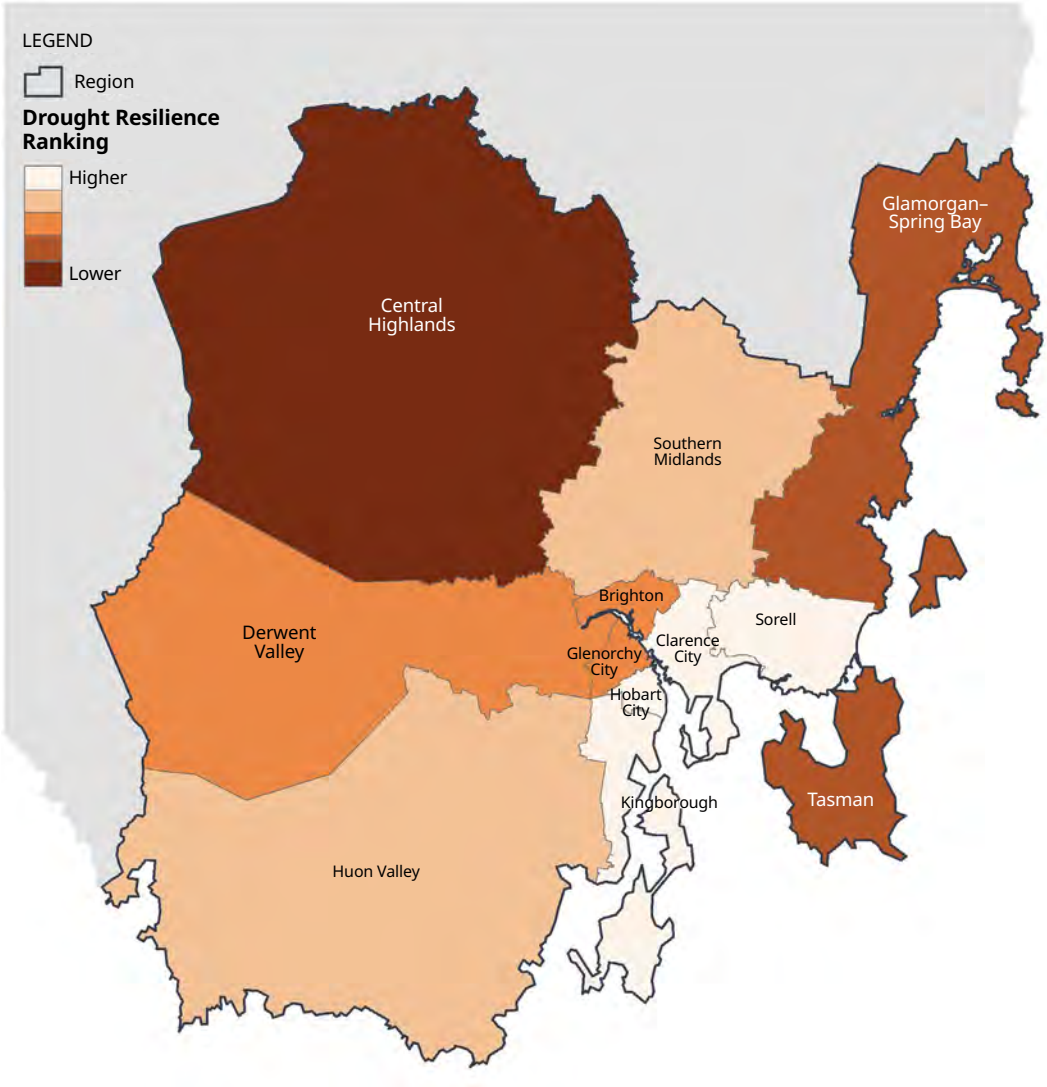
Central Highlands, East Coast and Tasman Peninsula are the most vulnerable due to higher reliance on agricultural production and higher drought exposure and sensitivity. The Derwent Valley, Southern Midlands, and Huon Valley have medium resilience.

Climate change is expected to increase the frequency and severity of extreme weather events, posing challenges for agriculture, forestry, and fisheries, which are vital to the region's economy. Strengthening adaptive capacity to drought will also boost resilience to other climate-related events.

Investments in water security, irrigation, and diverse agricultural enterprises contribute to existing resilience, but ongoing planning and collective action will be essential to address future challenges and build long-term economic, social, and environmental resilience.

Figure 7 shows the overall drought resilience rankings of the region's LGAs. Further detail is provided in Appendix A.

**FIGURE 7: Southern Tasmania drought resilience assessment**



# 3.6 Previous experiences and impacts of drought in Southern Tasmania

## How have you been impacted by previous droughts?

> **"Reduced animal performance, reduced ground cover leading to low water infiltration, erosion, loss of biological activity in the soil, high soil temperatures, loss of farm income and high levels of farmer stress."**
>
> — Primary producer, Franklin

> **"Low soil and vegetation moisture led to high impact fires in the Huon. Native vegetation was lost in drought years with mature medium and large species dying and struggling. I think worsening of tunnel erosion and topsoil loss as a result of reduced soil cover too."**
>
> — Primary producer, Cygnet

> **"During a previous drought, the irrigation scheme ran dry, so it was very expensive to buy in water. We got some poor quality water (blue-green algae, salty) through, which decreased yields that year and subsequent years."**
>
> — Primary producer, Coal River Valley

> **"The cumulative impacts of drought are intense – salt water inundation; decreased biodiversity; stress and mental health; shock for some people; increased diversification of farms and more reliance on off-farm income to survive; some eucalypt species under threat; rural home gardens decimated; soil loss; ran out of tank water."**
>
> — Primary producer, Glamorgan Spring Bay

> **"Previous drought brought feelings of despair and anxiety and high grocery prices, which added additional pressure."**
>
> — Survey respondent

In times of drought, water scarcity affects entire ecosystems and communities. Extreme events such as droughts, fires and floods can favour adaptable invasive species and lead to sudden increases in weed and pest extent and impact (FAO 2021). Changes in climate are also expected to favour the spread of disease vectors such as mosquitoes, ticks and rodents, which have the potential to transmit diseases among wildlife, livestock and humans.

At the community scale, while drought is a regular occurrence in parts of Southern Tasmania, it still has significant economic and social costs that play out over the short and longer term. Lower employment, yet increased farm workloads for all family members, has been reported. Uncertainty and concern for the future, and the lack of support services, can lead young people to lose interest in farming, resulting in a loss of potential future farmers in communities (Lester et al 2022).

Another important consideration in Tasmania is that our electricity is predominantly sourced from hydropower. Long periods of low rainfall impact the water levels of the state's hydro-electric dams, with flow-on effects to the state's power generation capacity and greenhouse gas emissions.

Low rainfall has affected the state in this way in the past and has the potential to do so again. The dependence of hydropower on hydrological conditions means this major source of energy is vulnerable to drought and may be less reliable if droughts increase in severity or duration into the future.

# 4

# Climate trends for Southern Tasmania

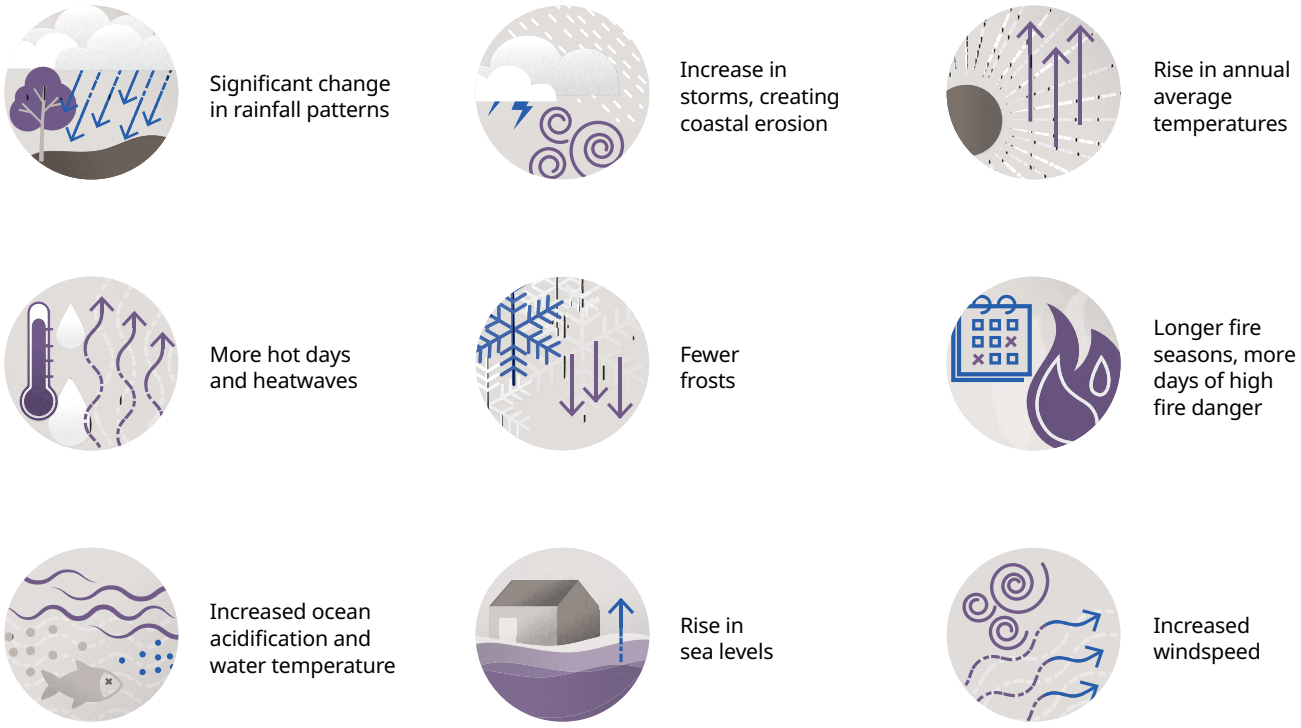
# 4.1 Current climate

The Southern region is temperate with mild or warm summers and cold winters. Unlike the rest of Tasmania, the Southern region has relatively consistent rainfall (500-800 mm) across the year. In general, the agricultural areas of the Southern region have low annual rainfall levels compared to the rest of Tasmania.

# 4.2 Future climate

Many climate change-driven phenomena are already occurring in Tasmania. Figure 8 details the projected changes to 2100 across the whole of Tasmania (ReCFIT 2024).

**FIGURE 8: Projected climate change impacts for Tasmania**



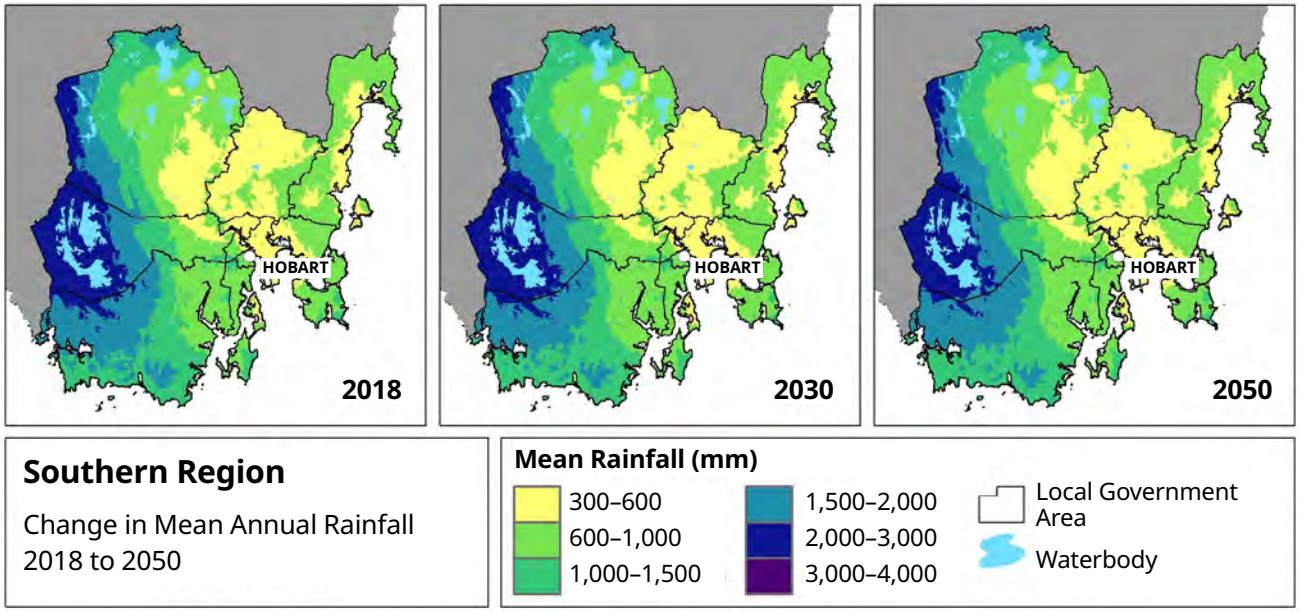

(Source: ReCFIT)

## Rainfall

Mean annual rainfall across the Southern Tasmanian region is projected to stay relatively stable over the next 50 years. However, it is expected to occur at different times of the year than it has historically, with more frequent and severe extreme events (CSIRO and Bureau of Meteorology 2024). Figure 9 indicates that rainfall across key agricultural regions, including the East Coast, Central Highlands and Southern Midlands will start to decrease.

The spread across the seasons is also projected to change, with summer rainfall changes varying from a five per cent increase (Bothwell) to an eight per cent decrease (Huonville). The overall average summer rain across the region is a decrease of two per cent. Modelling completed by Climate Futures Tasmania also indicates a likely increase in extreme rainfall events, meaning fewer and more intense rainfall events (Climate Futures 2024).

**FIGURE 9: Expected mean annual rainfall to 2050**




(Source: LISTmap)

## Temperature and heatwaves

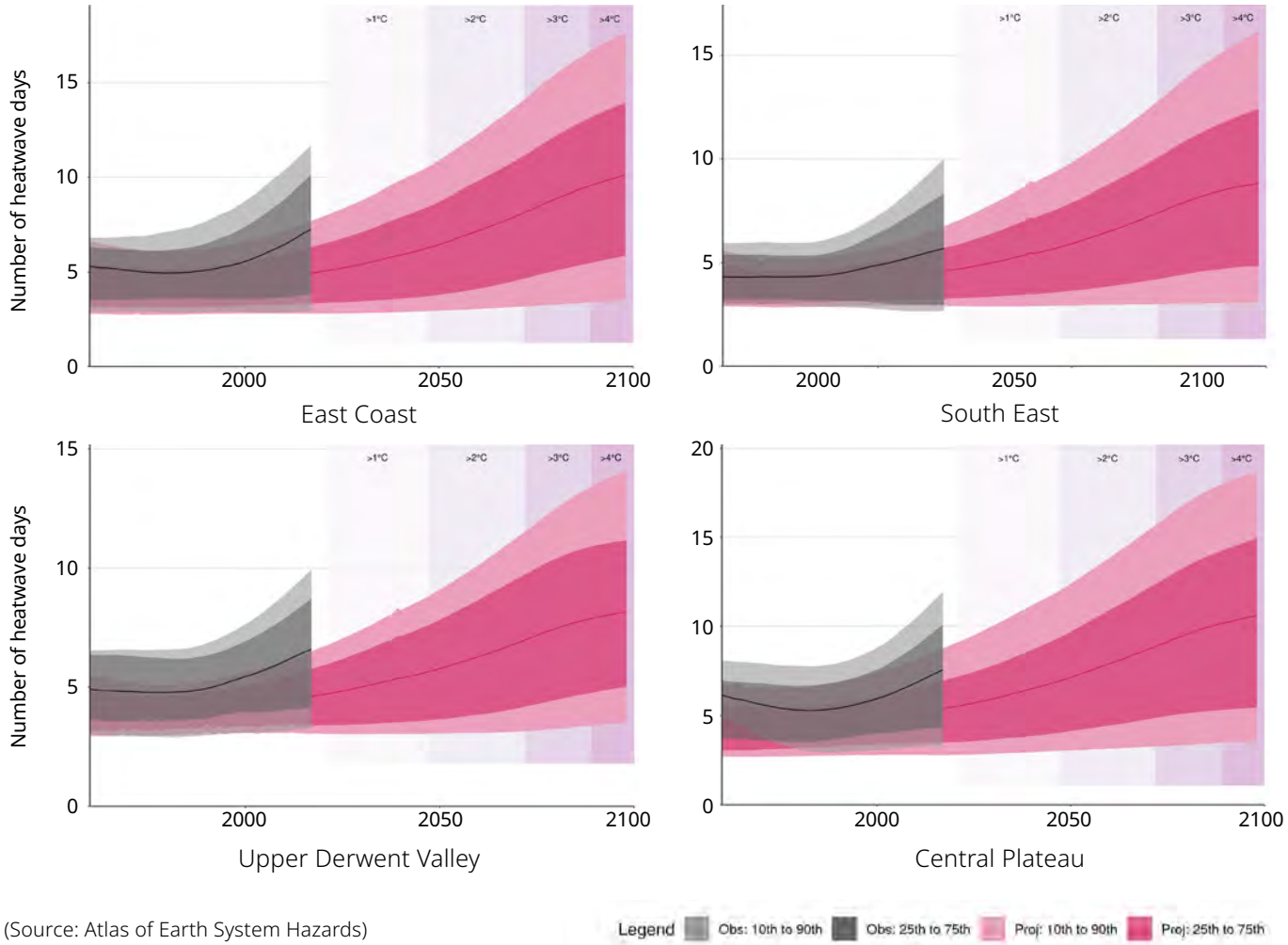
The average minimum and maximum temperatures for key areas of the Southern region are projected to increase by 2.0-2.2°C by 2070, meaning fewer frosts and more hot days.

Stakeholder feedback tells us that this predicted decrease in frosts is particularly important when considering varieties of fruit trees to plant and how many chill hours they require to set fruit.

Stakeholders also shared concern that warmer minimum temperatures will cause an increase in pest and disease activity, which historically has been kept in check by our colder winters.

The below diagram shows the projected increase in heatwave days (pink), the actual observed increase in hot days (grey), and the average of observed hot days across the region (solid black line). As can be seen, we are already experiencing conditions that are at or above the 75th percentile of what was projected (Remenyi et al 2022).

**FIGURE 10: Projected annual number of heatwave days from 1961 to 2100**

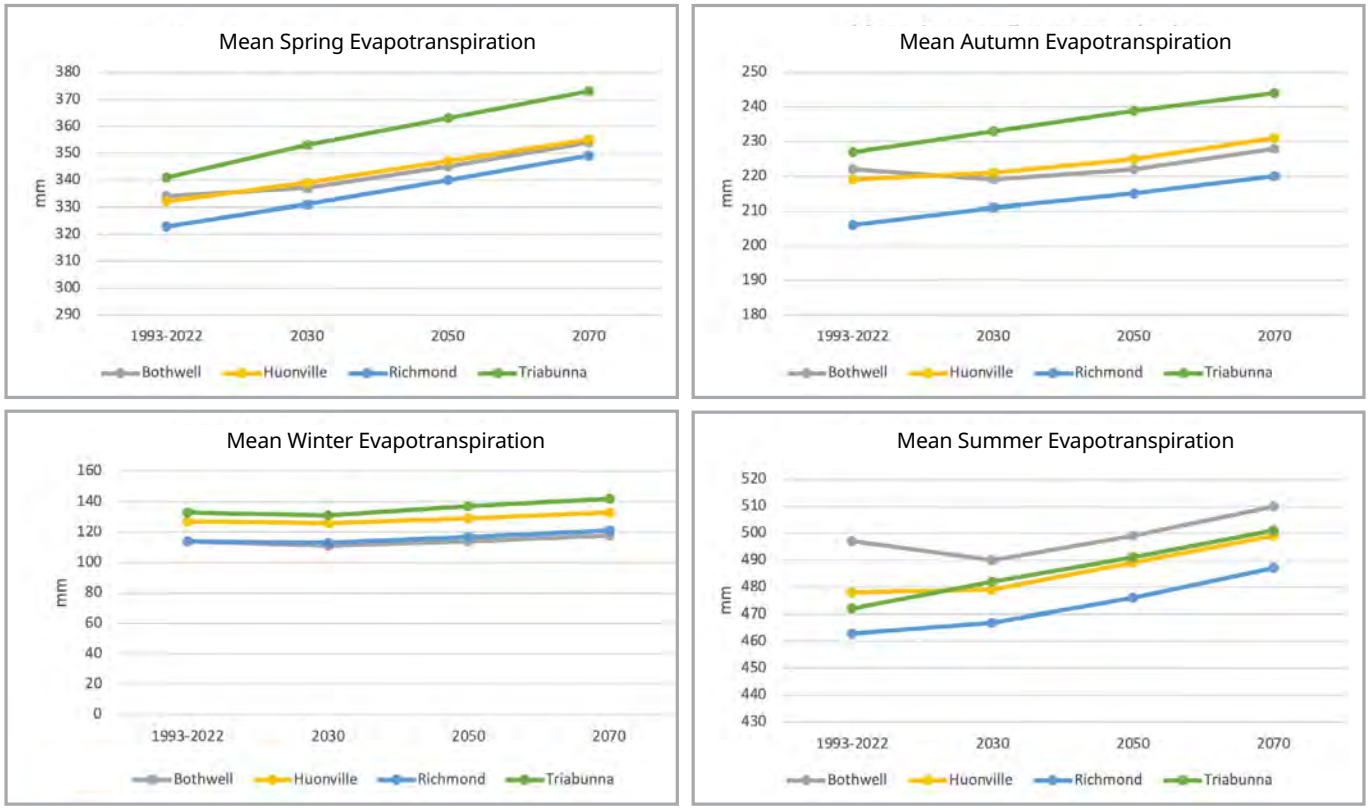



(Source: Atlas of Earth System Hazards)

## Evaporation and evapotranspiration

By 2070, the whole southern Tasmanian region will experience a significant increase in evaporation, especially during spring and summer – the start and middle of the growing season – as shown in Figure 11 (My Climate View). Evapotranspiration is the combination of evaporation from the earth's surface and transpiration from plants. It is also predicted to increase, particularly in spring and summer. This, combined with a small decrease in summer rainfall, means that we will likely see considerably drier summer soil. This in turn increases bushfire risk and vegetation stress and decreases pasture production across dryland grazing systems, leading to low feed availability and increased risks of soil erosion.

**FIGURE 11: Mean seasonal evapotranspiration projected changes from current averages to 2070**




(Source: My Climate View)

## Aridity

Aridity is defined as rainfall divided by evaporation. When evaporation exceeds rainfall, a region is considered 'arid'. Drying is expected across the region, as shown in Table 4, which depicts an increase in arid conditions over time based on this equation. Into the future, a warmer landscape with enhanced evaporation, but with similar (or less) rainfall, means a drier landscape (Remenyi et al 2019).

**TABLE 4: Projected mean annual aridity**

| Region | 1997 – 2017 | 2041 – 2060 | 2081 – 2100 |
|---|---|---|---|
| East Coast | 0.70 | 0.64 | 0.55 |
| South East (inc Tasman, Huon Valley and 5 Greater Hobart LGAs) | 0.91 | 0.85 | 0.76 |
| Upper Derwent Valley | 0.92 | 0.88 | 0.82 |

(Source: Australia's Wine Future – A Climate Atlas)

Temperature and evaporation are also correlated, which can lead to water being evaporated at faster rates from dams, lakes and rivers, drying out the landscape faster. A faster drying landscape increases fire danger. Increasing temperatures decrease mist and cloud cover at altitude, which is required by highland ecological communities. These combinations are best described as the effects of increasing aridity.

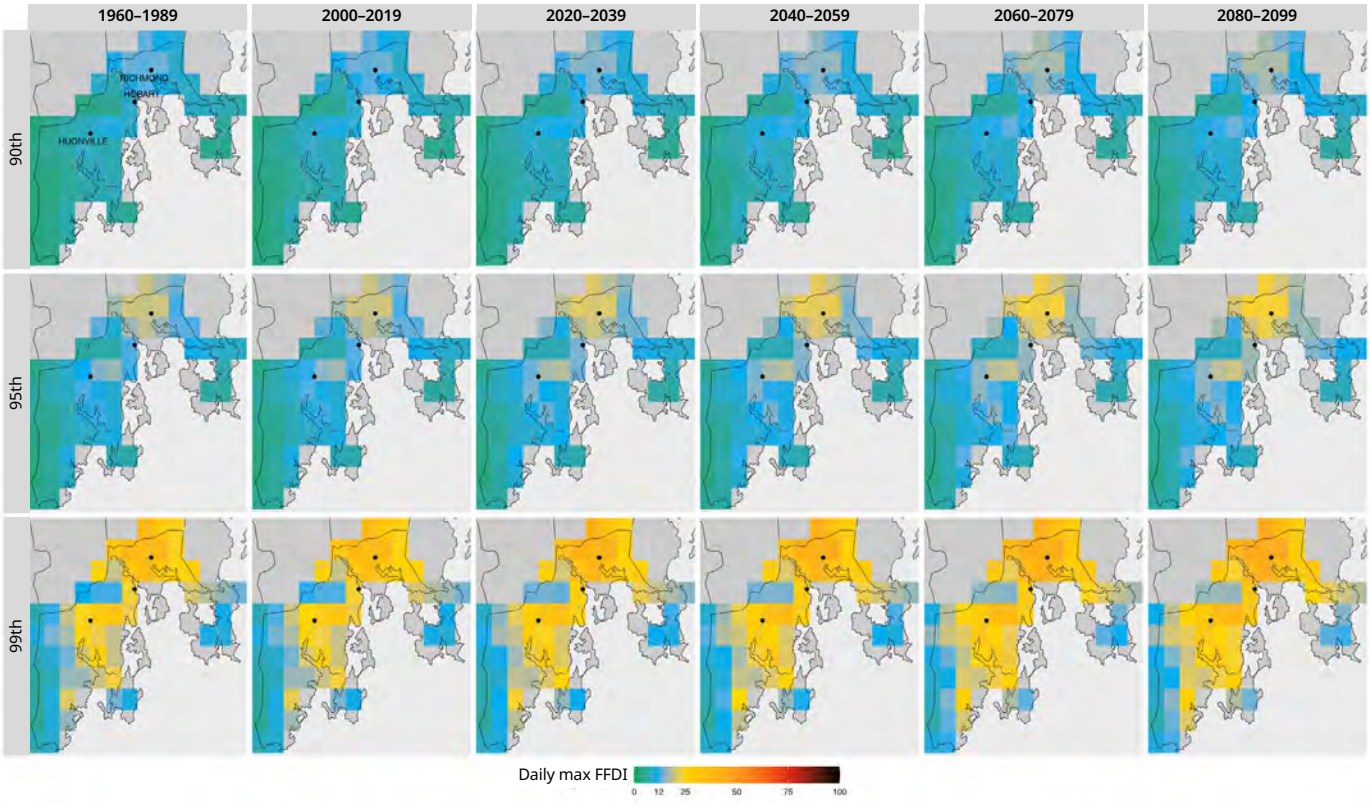
It is worth noting that Southern Tasmania is a very diverse region, with the Coal Valley being one of the driest areas in the country and the Huon Valley one of the wettest. So, while aridity is expected to increase across the entire region, what that looks like will vary.

## Fire risk

A drier landscape results in increased fire danger of twice the danger over twice the area, twice as often. When multiplied together, this leads to an eightfold increase in risk for Southern Tasmania.

Figure 12 shows the projected 90th, 95th and 99th percentile of daily max Forest Fire Danger Index for South East Tasmania for the 30-year baseline period, and then 20-year time periods from 2001 to 2100 (Remenyi et al 2022).

**FIGURE 12: Projected daily max Forest Fire Danger Index for South East Tasmania**




(Source: Atlas of Earth System Hazards)

# 5

# A resilience action plan for Southern Tasmania

**The plan for building drought and climate resilience across Southern Tasmania, including vision, themes and goals, is captured in Figure 13.**


Lake Fenton
Drinking
Water
Supply
System
Water

**FIGURE 13:** **A plan for building drought and climate resilience in Southern Tasmania**

Vision

# The people, organisations and systems in Southern Tasm coordinated way to make our region strong, so that we

Themes

## Flourishing communities

who understand and support each other

## Prosperous local economies

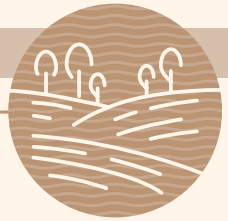
where businesses thrive and provide jobs even when conditions are tough

Goals

- Range of active and diverse community groups, networks, and social activities
- Residents support one another and feel they belong
- Health, education, and training services meet community needs
- Shared priorities and collaboration across community
- Strong, trusted leadership and governance

- Producers and small businesses have the information, knowledge, and management skills to adapt and thrive
- Long-term planning and projects are supported and managed locally
- Proactive systems to support climate-vulnerable groups when times are tough
- Next generation producers are ready to lead and navigate climatic variations and farming pressures

## nania all work together in a proactive and can thrive no matter the climate.



### Resilient landscapes

from the bush to the farm

- Natural landscapes, waterways, and ecosystems are actively managed for health and diversity
- Farm systems can cope with dry conditions and climate variabilities for long-term economic and environmental sustainability
- Palawa/pakana management of waterways, land, and sea for cultural and ecological values is recognised and supported
- Hazards are identified and proactively managed to reduce disaster risks associated with drought

### Climate-conscious built environment

designed to be resilient, efficient and sustainable

- Climate resilience, social, and environmental outcomes are incorporated into land use planning and development decisions
- Community infrastructure (spaces to meet, play, connect, and access services) is diverse and fit-for-purpose
- Essential services (water, communications, energy) are planned, managed, and used efficiently and sustainably
- Locals understand how they can make their homes and gardens more climate resilient

**FIGURE 14: Illustration based on Southern Tasmania's vision for a resilient region**

(Artwork: Sam Lyne)

# 5.1 Understanding complexity – interdependencies between goals

The system underpinning drought and climate resilience in Southern Tasmania is complex and there are interdependencies between all of the goals, meaning achieving one can depend on others also being achieved.

A dependence and connections matrix (see Appendix D) was created to capture how the goals support one another, and which goals depend on others being achieved.

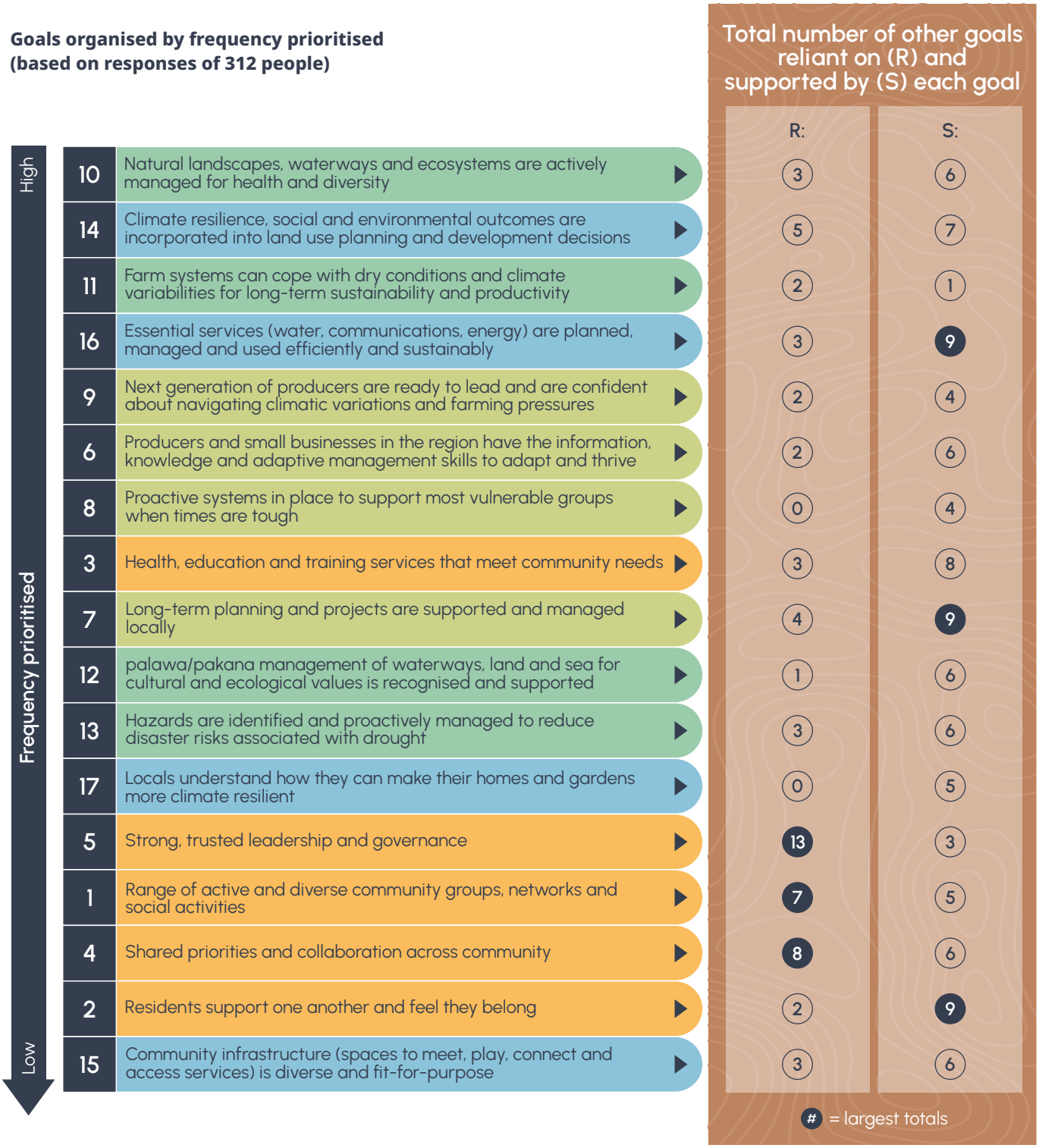
Of particular interest is comparing the frequency with which each goal was prioritised during community engagement, with how many of the other goals are dependent upon or supported by it to be achieved.

For instance, the goals which make up the Flourishing Communities theme were among the least prioritised but were assessed as being required for many of the higher priority goals to be achieved and supportive of even more. It is important to keep this in mind when considering where to focus energy and resources, as without these underlying conditions being met, efforts may not result in the impacts we hope to achieve.

The interdependency mapping and community prioritisation indicates that the highest priority goals are:

- Essential services (water, communications, energy) to be planned, managed and used efficiently and sustainably
- Long-term planning and projects to be supported and managed locally.
- Strong, trusted leadership and governance.
- A range of active and diverse community groups, networks and social activities.
- Shared priorities and collaboration across communities.
- Residents supporting one another and feeling they belong.

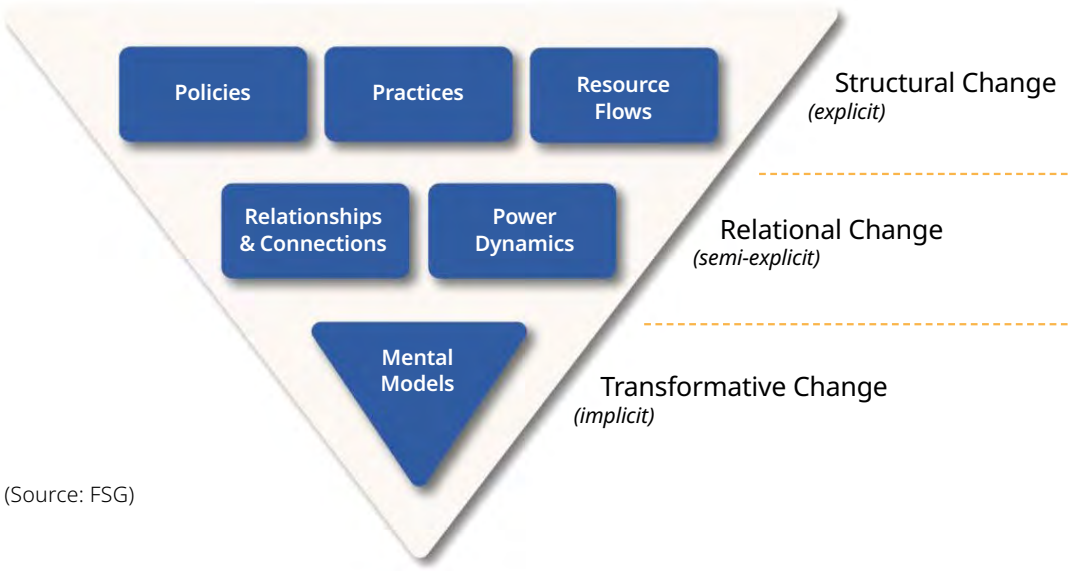
**FIGURE 15: Interdependencies between Southern Tasmania RDRP goals**



# 5.2 A change framework

The inverted triangle of change is a framework that shows six interdependent conditions that play significant roles in holding a social or environmental problem in place. To address the root causes of complex problems we need to focus on these six interconnected layers of the system (Kania et al 2018). The idea is that change is not sequential, and all levels of the triangle are important any attempts to make change will require work at each level simultaneously.

**FIGURE 16: Systems change triangle**




(Source: FSG)

# 5.3 Action plan

The following table lists the key action areas developed by community, through the stakeholder engagement process. This includes a series of overarching actions that apply across all themes and need to be considered holistically from a whole-of-government and whole-of-community perspective, along with actions for each of the four individual themes.

The table provides a description of the actions, identifies potential project partners, specifies a timeframe and change type, and identifies which of the goals the action relates to.

It is important to note that organisations are already working towards many of these actions, and while some of these have been listed as potential partners, there will be many more not listed here. Potential partners may or may not take up the action they are listed against but have been included in recognition of their existing role and mandate relating to that action area.

Coordination between organisations will be key to reduce duplication and leverage effort for maximum benefit.

**TABLE 5: Action plan for building drought and climate resilience, Southern Tasmania**

| Ref | Action area | Brief description | Potential partners | Time frame | Change type | Goals (#) this action supports |
|---|---|---|---|---|---|---|
| **Overarching action areas** | | | | | | |
| **OSA1** | **Sustainable funding models for community organisations** | Collaboratively design innovative funding models that are just, diverse, provide security for community organisations in the longer term and acknowledge those organisations that make a difference in the community. | • All levels of government<br>• Industry & producer groups<br>• Philanthropy<br>• Community organisations | Short-term | • Structural (practices & resources)<br>• Relational (relationships) | 1, 2, 3, 4, 5, 6, 7, 8 |
| **OSA2** | **Meet the basic needs of all community members** | Flourishing communities, prosperous local economies, resilient landscapes and climate-conscious built environments first require community members to have equal access to food, water, health and housing.<br>TasCOSS' 2023 report, *A Good Life: A Wellbeing Framework for Tasmania* is an example of what people across the state see as basic necessities. | • All levels of government<br>• Utility agencies<br>• Community & service organisations | Medium-term | • Structural (resources & policy)<br>• Relational (power dynamics) | 1, 2, 3, 4, 5, 6, 7, 8, 9 |
| **OSA3** | **Recognise and value Tasmanian Aboriginal cultural knowledge, practices and ways of thinking** | Meaningful engagement with Tasmanian Aboriginal leaders to better understand how Aboriginal knowledge and expertise could guide policy, education and community responses to drought, climate transitions, water and land management. | • All levels of government<br>• Aboriginal organisations<br>• NRM & environment groups<br>• Hazard agencies<br>• Businesses | Medium-term | • Structural (policy and practice)<br>• Relational (relationships) | 2, 4, 6, 9, 10, 12, 13, 17 |
| **OSA4** | **Support collaboration, bringing people together to share perspectives and learnings** | A way of working that is focused on creating opportunities for individuals, groups, industry and government to work together in sharing learnings, knowledge and creating change. | • All levels of government<br>• Utility agencies<br>• Community, environment & service organisations<br>• Businesses | Short-term | • Structural<br>• Relational | |

| Ref | Action area | Brief description | Potential partners | Time frame | Change type | Goals (#) this action supports |
|---|---|---|---|---|---|---|
| | **Theme 1: Flourishing communities** | | | | | |
| **FC1** | **Support centralised, place-based systems and organisations to improve social inclusion and connectedness** | Innovative ways to support existing and new organisations to thrive and bring people together, creating community connection. | • Community houses and hubs<br>• Community organisations<br>• Local governments<br>• State government | Short-term | • Structural (resources, policy)<br>• Relational (Relationships) | 1, 2, 4, 15 |
| **FC2** | **Value and support community input and initiatives** | Government and other organisations need to recognise, celebrate and encourage community volunteers and local groups, who are creating solutions and have a vital role in times of need. Make it easier for them to operate and meet the needs of their communities through tangible support and resourcing their efforts, including for taking part in planning and consultation processes. | • State government (cross-agency)<br>• Local governments<br>• Community organisations | Short-term | • Structural (policy, practice and resources) | 1, 2, 3, 4, 5, 6, 7, 8 |
| **FC3** | **Resource the backbone support for key organisations to make it easier for geographical and issue-based groups to collaborate** | A long-term focus on connecting like-minded groups working towards common goals through community connectors, group facilitators, peak bodies and other roles. | • All levels of government<br>• TAS Farm Innovation Hub<br>• Peak bodies<br>• Community organisations | Short-term | • Structural (resources) | 1, 2, 3, 4, 5, 6, 7, 8, 15 |
| **FC4** | **Identify ways to celebrate achievements and support skills sharing to increase resourcefulness** | Share stories and information such as how to grow food, reduce waste, preserve, fix, and mend. Promote and encourage community conversations about taking responsibility for preparedness and resilience. | • Media<br>• Community organisations<br>• Rural show movement | Short-term | • Structural (practices) &<br>• Relational (relationships) | 2, 4, 9, 17 |

| Ref | Action area | Brief description | Potential partners | Time frame | Change type | Goals (#) this action supports |
|---|---|---|---|---|---|---|
| **FC5** | **Accurate, reliable and timely climate risk data and forecasts provided to the community by trusted sources** | Data needs to be transparent, updated regularly, accurate and accessible so that community networks can share it, and members of the community can understand it. | • Local governments<br>• Senior government leaders<br>• Research institutions<br>• BOM | Short-term | • Structural (resources & practices) | 2, 5, 6, 9, 13 |
| **FC6** | **Identify, create and maintain welcoming community facilities** | From bush dances to childcare to an emergency evacuation centre, communities need social infrastructure that is versatile, accessible and has adequate resources (power, water, communications, and so on) and can serve multiple purposes. | • State government (cross-agency)<br>• Local governments<br>• Community organisations | Medium-term | • Structural (resources) | 1, 2, 3, 4, 8, 15, 17 |
| **FC7** | **Strengthening the connection and collaboration between communities and local government to build community resilience** | Develop a framework and ongoing investment in processes and systems which bring the community and local government together in working to improve the social, cultural, economic and environmental wellbeing of their communities. | • Local governments<br>• State governments<br>• LGAT | Medium-term | • Structural (policies & practices) | 1, 2, 3, 4, 5, 6, 7, 8, 15 |
| **FC8** | **Strengthen community-centred decision-making for government policies and strategy** | Develop a mandated model of collaborative working, including deliberative processes, that empower local communities to have a direct influence on decisions that affect their lives.<br>Build on the *Healthy Tasmania 5-year Strategic Plan 2022-2027*, which commits to working to ensure decision-making power and resourcing is transferred to local communities where people take collective responsibility for outcomes. | • Local governments<br>• State governments<br>• Community groups & organisations | Medium-term | • Relational (relationships) | 3, 4, 5, 7 |
| **FC9** | **Develop empathetic thinking and approaches to the health and wellbeing of future generations and our environment** | Foster mindsets that connect individual actions that government, organisations and community take today with the broader, long-term impacts and consequences those actions will have over time. | • All levels of government<br>• University of Tasmania<br>• Media<br>• Business leaders | Long-term | • Transformative | 3, 4, 5, 7, 9, 10 |

| Ref | Action area | Brief description | Potential partners | Time frame | Change type | Goals (#) this action supports |
|---|---|---|---|---|---|---|
| | **Theme 2: Prosperous local economies** | | | | | |
| **PLE1** | **Improving infrastructure to support local businesses and producers to grow, make and supply locally** | Ensure local businesses and producers can thrive and adapt to changing conditions through strategic investment in soft infrastructure such as: technology, public services and labour as well as physical infrastructure such as roads, bridges, meat processing facilities, storage facilities and telecommunications towers. | • All levels of government<br>• Utility providers | Long-term | • Structural (practices & resources) | 3, 6, 7, 8, 9, 11, 12, 15, 16 |
| **PLE2** | **Resource and support opportunities to connect and collaborate with peers** | Support existing local small business or primary producer networks and establish new groups where there are none.<br>Where opportunities for peer-to-peer learning exist, incentivise engagement by ensuring the timing, location and cost are accessible and that the relevance and value proposition is clear. | • TAS Farm Innovation Hub<br>• Producer groups<br>• Community organisations<br>• All levels of government | Short-term | • Structural (policy, practices and resources) | 1, 2, 4, 6, 8, 9, 10, 11, 13 |
| **PLE3** | **Support producers with tailored, localised advice and information based on best-practice and proven benefits** | Establish access to demonstration sites to show best-practice and transformative change in action. Support existing extension resources and re-establish a network of place-based extension officers, across the region, who can provide tailored information and links to other resources at no cost. | • All levels of government<br>• Research organisations<br>• TAS Farm Innovation Hub<br>• NRM South | Short-term | • Structural (policy)<br>• Relational (relationships) | 6, 9, 10, 11, 12, 13 |
| **PLE4** | **Make existing businesses and farms attractive and viable for the next generation and new custodians** | Support farming systems that allow work-life balance and ensure rural communities are inclusive, attractive and vibrant places to live, work and grow. | • All levels of government<br>• Banks<br>• Service providers<br>• Industry groups<br>• Education & training institutions | Short-term & long-term | • Structural (policy & practices) | 2, 3, 4, 6, 7, 9, 10, 11 |

| Ref | Action area | Brief description | Potential partners | Time frame | Change type | Goals (#) this action supports |
|---|---|---|---|---|---|---|
| **PLE5** | **Increase the capacity and capability of flexible, sustainable supply chains, with a focus on supporting supply and demand locally** | Develop and resource ongoing coordination, to increase local processing and sourcing so that Tasmanian produce is bought and consumed by local households, hospitality and institutions. | • TAS Farm Innovation Hub<br>• Producer groups<br>• All levels of government<br>• Businesses (producers, processors, distributors, wholesalers) | Medium-term | • Structural & relational | 4, 6, 7, 8, 9, 11, 16 |
| **PLE6** | **Create streamlined pathways and support for primary producers to access funding and practical support through transition to climate resilient practices** | Build and strengthen connections with programs to support transitions from current practice towards climate resilience. Share success stories of benefits to inspire others to adopt. | • Tasmanian & Australian governments<br>• Media<br>• NRM South<br>• Farm Innovation Hub<br>• Philanthropy<br>• Industry groups<br>• Landcare | Short-term | • Structural (practices and resources) | 6, 8, 10, 11, 13 |
| **PLE7** | **Develop new and support existing mechanisms so Tasmanian Aboriginal organisations and people are supported to lead, contribute to and benefit from responses to climate variability** | Enable Tasmanian Aboriginal organisations and people to pursue economic development through delivering healthy country management, in accordance with self-determined principles. Embed culturally appropriate practice across business, agencies and institutions, ensuring traditional knowledge and skills are recognised and resourced. | • Businesses<br>• State government<br>• Local government<br>• Tasmanian Aboriginal organisations and people | Short-term and medium-term | • Relational | 2, 4, 8, 9, 10, 12 |

| Ref | Action area | Brief description | Potential partners | Time frame | Change type | Goals (#) this action supports |
|---|---|---|---|---|---|---|
| | **Theme 3: Resilient landscapes** | | | | | |
| **RL1** | **Prioritise building resilience, and in times of need ensure appropriate relief is delivered effectively in collaboration with local community networks.** | Use existing networks to deliver appropriate relief that is timely, equitable, flexible and transparent. Relief can be discounts on rates or services, access to fodder or support to establish containment feeding, ensure those who have invested in building resilience are not disadvantaged in accessing relief. | | | | |
| **RL2** | **Improve accountability for environmental stewardship** | Increase the capacity to regulate and enforce controls on native vegetation clearing, pollution, animal welfare, water harvesting and new developments which will lead to better protection of ecosystems and a more sustainable future. | • State government (EPA, Planning Commission, other regulators)<br>• Local governments<br>• Forest Practices Authority | Short-term | • Structural and relational | 5, 10, 13, 14, 16 |
| **RL3** | **Support primary producers and land managers with targeted information, tools and funding to deliver management practices that improve landscape function to cope with drought, climate variability and minimise hazard risks** | Foster peer-to-peer learning, outreach and case studies to share learnings and move beyond education to adoption and implementation. | • TAS Farm Innovation Hub<br>• Tas Institute of Agriculture & other research organisations<br>• NRM & environment organisations<br>• Producer groups<br>• State government<br>• Hazard agencies | Short-term | • Structural | 6, 9, 10, 11, 13, 16, 17 |
| **RL4** | **Develop a set of agreed indicators to collaboratively monitor ecological health over the long term** | Support fit-for-purpose monitoring and data collection (in line with recommendations in the State of Environment Report) that provides consistent information and builds our understanding of condition trends in landscapes, including water quality and catchment health, soil health and vegetation health. | • State government<br>• Tas Irrigation<br>• TasWater<br>• Hydro Tas<br>• Tasmanian Institute of Agriculture<br>• NRM & environment organisations | Short-term | • Structural | 4, 6, 10, 11, 12 |

| Ref | Action area | Brief description | Potential partners | Time frame | Change type | Goals (#) this action supports |
|---|---|---|---|---|---|---|
| **RL5** | **Support consistent monitoring and evaluation that assesses effectiveness of initiatives that build landscape resilience and adaptation** | Funding and policy to support monitoring and evaluation of resilient landscapes management practices and initiatives, using the agreed indicators developed. | • NRM & environment organisations<br>• Tas Institute of Agriculture & other research organisations<br>• Producer groups<br>• TAS Farm Innovation Hub<br>• All levels of government | Medium-term | • Structural and relational | 4, 6, 10, 11, 12, 13, 14, 16, 17 |
| **RL6** | **Resource innovative and impactful research, to understand effects of different interventions and practices on improving landscape function, resilience and productivity through climate variations** | Support research that will directly lead to effectively managing the natural landscape (including waterways and ecosystems) for health and resilience. | • TAS Farm Innovation Hub<br>• Tas Institute of Agriculture & other research organisations<br>• NRM & environment organisations<br>• State government<br>• Local governments | Medium-term | • Structural | 6, 7, 9, 10, 11, 12, 13, 16 |
| **RL7** | **Support the delivery of collaborative and integrated best-practice approaches to landscape management** | Develop and fund catchment-level management plans to guide future land use impacts and inputs. Built on existing work, they should be targeted at improvements to landscape function (rivers, biodiversity vegetation, soil health, and so on). | • NRM & environment organisations<br>• State government<br>• Local governments<br>• Industry & producer groups<br>• Land managers | Medium-term | • Structural and relational | 6, 7, 10, 11, 12, 17 |

| Ref | Action area | Brief description | Potential partners | Time frame | Change type | Goals (#) this action supports |
|---|---|---|---|---|---|---|
| **RL8** | **Integrate Aboriginal-led land management and cultural practices across agencies and organisations that play a role in strengthening resilience to drought and climate variability** | Recognise, understand and value Aboriginal land and water management systems. Increase funding for Indigenous ranger programs, training programs, workshop facilities, equipment and insurance.<br>The work is to be led by Tasmanian Aboriginal organisations and people, with the ways of thinking and approaching land and water management incorporated into standard operating procedures. | • State government (Parks & Wildlife Service, NRE, OSEM, etc)<br>• Tasmania Fire Service<br>• Local government<br>• Aboriginal organisations | Medium-term | • Structural and relational<br>• | 2, 6, 9, 10, 12, 13 |
| **RL9** | **Increase Tasmanian Aboriginal organisations and peoples access to land and waterways to connect and care for country** | Long-term access if not outright ownership for Aboriginal organisations and people to manage diverse areas of land, waterways and sea, to use as demonstration and research sites. Also providing areas for community to come together to connect, practice culture, share knowledge and heal country. | • Local government<br>• State government<br>• Aboriginal organisations<br>• Landowners | Short-term and long-term | • Structural and relational | 1, 2, 7, 10, 12, 13 |
| | **Theme 4: Climate-conscious built environments** | | | | | |
| **CBE1** | **Develop planning regulations that support retention of agricultural land, while also supporting a range of options for producers to live onsite** | Residential developments should focus on creating infill housing and development of land that is not used for primary production. Incentives for retaining land for food production should be explored. Amendments to planning provisions to allow multiple dwellings on a single title of productive land need to be considered to deliver more flexible production models, particularly where multiple generations or households are managing the land. | • State government<br>• Local governments<br>• Planning Institute of Australia | Short-term | • Structural | 9, 11, 14 |

| Ref | Action area | Brief description | Potential partners | Time frame | Change type | Goals (#) this action supports |
|---|---|---|---|---|---|---|
| **CBE2** | **All existing and new buildings meet minimum sustainability and liveability standards** | For existing buildings, facilitate upgrades via education, regulation, support, financial incentives and increasing building sector capacity. For new builds regulate and enforce standards for water efficiency, stormwater collection and energy efficiency. | • All levels of government<br>• Master Builders Association<br>• Home Industry Association<br>• Tenants Union<br>• Developers<br>• Landlords<br>• Real estate sector<br>• Institute of Architects – Tas | Short-term and medium-term | • Structural | 3, 8, 14, 16, 17 |
| **CBE3** | **Support the planning system to be adaptive and responsive to emerging risks and hazards through evidence-based policies and tools** | Incorporate mechanisms for evidence-based climate projections to effectively and efficiently inform land use planning legislation, policy and regulation, in a timely manner, so that they remain current and reflect community expectations for addressing emerging risks and hazards associated with a changing climate. Support the up-to-date mapping of hazard risks and apply regulatory responses through the Tasmanian Planning Scheme (TPS) to appropriately manage their impact on use and development. Enable the TPS to apply adaptive local responses to address issues of local concern, including providing sufficient permeable surfaces to support stormwater management, incorporating bushfire management strategies and enabling low-to-medium risk threshold. | • Regional land use coordinators<br>• State Planning Office<br>• Local government<br>• Planning Institute of Australian<br>• UTAS – Climate Futures | Short-term and medium-term | • Structural | 4, 13, 14, 16 |
| **CBE4** | **Ensure our electricity supply is resilient to disruptions caused by climate variability** | Diversify electricity to be less reliant on rainfall (eg solar, wind, EV to grid) and expand the network to accommodate increased electrification. Improve the resilience of the transmission network, develop local solutions for back-up energy needs (for example, community batteries) and support households and businesses to be more energy efficient. | • TasNetworks<br>• Hydro Tas | Medium-term | • Structural and transformational | 7, 11, 13, 16 |

| Ref | Action area | Brief description | Potential partners | Time frame | Change type | Goals (#) this action supports |
|---|---|---|---|---|---|---|
| **CBE5** | **An integrated and coordinated water use strategy that recognises water as a precious resource and ensures its efficient capture, supply and usage** | Support alignment and collaboration between Hydro Tas, TasWater and Tas Irrigation. Combine the rural and town/urban water use strategies to allow an integrated system-wide approach to water across the region. Support water efficiency initiatives and uptake of reuse and recycling of water across the system from transmission through to end users. Ensure there is no maladaptation, such as over-reliance on water storage solutions that will become scarce during drought conditions. Ensure water security guidelines and advice about on-farm/ rural water storage options are up-to-date and accessible. | • TasWater (including Tasmania Water Future Community Advisory Panel)<br>• Tas Irrigation<br>• State & local government<br>• Veolia<br>• TAS Farm Innovation Hub<br>• NRM & environment organisations | Medium-term | • Structural and relational | 4, 10, 11, 13, 14, 16, 17 |
| **CBE6** | **Improve the supply and reliability of communication systems and digital connectivity** | Address communication blackspots to enable rural communities to have more resilient communication networks. Beyond social connection and day-to-day logistics, reliable access to digital communications enables use of more sophisticated technology and supports crucial data needs on farms (e.g. remote irrigation control, access to online tools and climatic condition information). | • NBN<br>• Starlink<br>• Telcos<br>• All levels of government | Medium-term | • Structural | 2, 3, 6, 8, 9, 16 |
| **CBE7** | **Develop systems that Support regional sufficiency** | Regional and community-sufficiency is creating a system that enables us to collectively meet our basic needs locally, rather than being dependent on outside assistance. Sustainability should be a key driver of development and business practices, supporting circular economy principles like recycling, reuse and closed loop systems. | • Local governments<br>• State government<br>• Business, producer & industry groups<br>• Community groups | Medium-term | • Structural and relational | 1, 2, 3, 4, 5, 6, 7, 8, 9, 11, 14, 15, 16, 17 |
| **CBE8** | **Establish an effective, efficient and climate resilient road network and a public and active transport system across the region** | Assess existing roads and bridges and make sure new developments are resilient to weather events such as flooding and storm surges. Identify opportunities to improve the coverage and convenience of public and active transport. | • Local governments<br>• State government<br>• Metro Tasmania<br>• Bicycle Network<br>• Heart Foundation | Short, medium and long-term | • Structural and transformational | 1, 3, 9, 15, 16 |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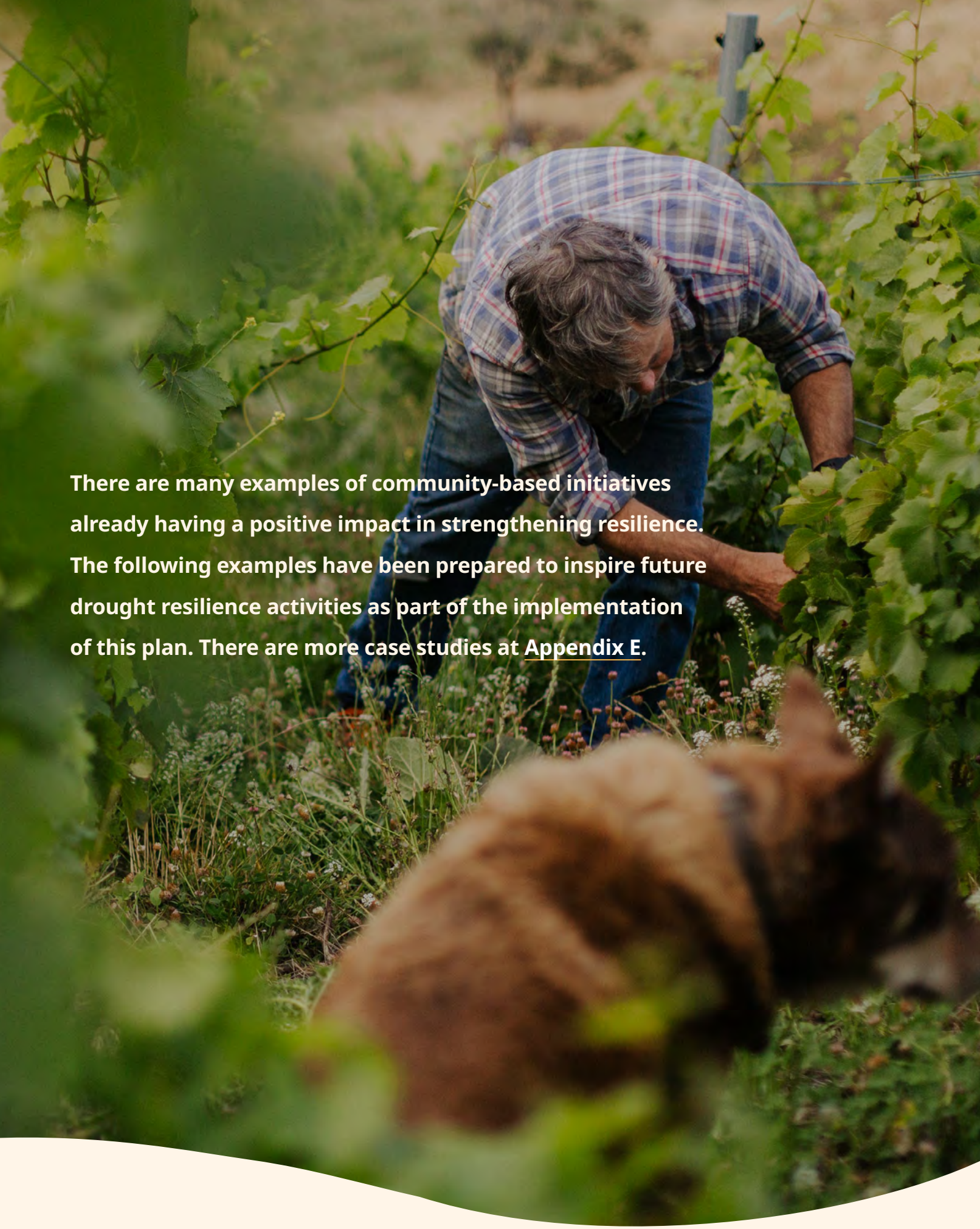
# 6

# A resilient region: case studies



**There are many examples of community-based initiatives already having a positive impact in strengthening resilience. The following examples have been prepared to inspire future drought resilience activities as part of the implementation of this plan. There are more case studies at Appendix E.**

CASE STUDY 1


# CASE STUDY 1
# Building resilience through community infrastructure

## Strengthening resilience to drought and climate variability in Oatlands, Southern Midlands LGA

### Overview

The Oatlands Aquatic Centre is a new single-storey indoor aquatic centre comprising:

- 25 m x 6 m lane main pool, plus a 12 m x 5 m toddler pool, along with a gym/activities room
- change amenities, including M/F, parenting space, accessible/carers
- administration area and associated facilities
- external recreational spaces and playgrounds
- 37 carparking spaces, including 2 accessible spaces, emergency vehicles and 2 EV charging stations
- 238 x 330 W solar panels, providing a solar yield of 82,032 kWh.

In addition to being a celebrated community asset, which contributes to health, wellbeing and connection, it has also improved the community's preparedness through establishment of a ready and available high-quality recycled water source in the form of a 'tank farm'. This holds 540,000 L of water for the replenishment of fire tankers on the fireground, enabling them to hit hard at the start of any fire in the landscape.

## Why did you do it?

During the design phase of the new facility, TasWater advised that they could accept a maximum of 160 L of wastewater per day into their treatment ponds at Oatlands. The pool holds 500,000 L of water, so at 160 L per day it would take us approximately 7.5 years to drain the pool. We anticipated needing to drain it for maintenance every eight years, as well as needing to backwash the pool and discharge 10,000 to 13,000 L every seven to ten days. Council officers brainstormed the issue and arrived at the view, if TasWater couldn't accept the wastewater and treat it, Council would treat it and use the end product to build the resilience of the village and the district.

## How did you do it?

Southern Midlands Council was eligible for a submission under the Black Summer Bush Fire Recovery Grant Program, so we put in an application for $298,000. The scope of the grant application involved creating a 'tank farm' facility by building six, 90,000 L concrete water storage tanks on Council-owned land close to the Oatlands Aquatic Centre to pipe the backwash water. The backwash water had to be treated before being used for firefighting, and that treatment process was undertaken at the 'tank farm' site.

We had to get planning, building and environmental health approvals through Council. It took approximately six months for the design of the treatment process and infrastructure by COVA and HydroFlow, hydraulic engineers. The water quality is nearly potable water quality, which is tested and analysed on a monthly basis by the State Government's Public Health Laboratory. Communications cabling was also required to manage the discharge from the Aquatic Centre into the tanks, and power is required to be supplied to the 'tank farm' site.

## Did it work?

According to the *COVA–Southern Midlands Council Aquatic Centre Fire Water Supply Holding Tank Farm Scoping Report*, the outcome of this project has been quick and easy access for fire tankers as well as Council trucks with 10,000 L water tanks to pick up water from the 'tank farm' and transport it to the fireground where the trucks can backfill the fire tankers. With four of Council's truck tanks there would be a constant supply of firefighting water (40,000 L) on the road to the closest fire. The system does not rely on electricity supply to work once the water is in the 'tank farm'. This is a built-in contingency in case of a power outage. Local contractors were used for construction works, which boosted the economic benefit to the region.

The provision of this infrastructure reinforces the risk management provision for the protection of people, buildings and livestock, crops and fences. When the six 90,000 L tanks are nearly full, we are also able to draw water from the tanks for road reconstruction water for our gravel road network, therefore not having to take water out of the town water supply or farm dams during the summer months when water levels are low. The final measure is that we are able to provide a wonderful aquatic centre facility, with its positive benefits for community health and wellbeing, capacity, engagement and inclusion, as well as the potential to save many lives that could have ended up in a drowning tragedy.

## Can others do it too?

No barriers whatsoever, other than the initial cost, but rather than it being a cost we consider it an investment in supporting the resilience of our village and district. With the support of organisations like HydroFlow, there is no reason why every council pool couldn't provide a service such as this.

## Anything else you'd like to share?

**We didn't accept that it couldn't be done.**

## Which of the Southern Tas drought resilience goals does this contribute to?

13, 14, 15, 16.

Content contributed by Andrew Benson, Southern Midlands Council.

CASE STUDY 2

Soil workshop organised by CRPA and NRM South. Photo: Sophie Milic.

# CASE STUDY 2
# Coal River Products Association fosters farmer networking and learning

## Overview

The Coal River Products Association (CRPA) is a thriving, not-for-profit organisation of around 50 engaged members. For nearly 60 years, CRPA has brought together primary producers and others involved in the agriculture sector from the Coal Valley and surrounds, with members from Dysart to Bream Creek.

## Why did you do it?

CRPA was originally formed to share equipment and knowledge to help farmers recover from the 1967 bushfires, and this focus on practical support and information sharing has remained throughout the association's history.

Over the years, CRPA has been an instrumental way for farmers to collectively influence developments such as irrigation schemes to deliver reliable water to the valley, and contracts for produce.

## How did you do it?

CRPA has successfully maintained momentum and member engagement over the years. Some elements that have contributed to this success include:

- regular dinner meetings (approx. 10 per year) that encourage social as well as professional networking
- interesting guest speakers at meetings
- an annual membership fee that covers the cost of dinners throughout the year, which encourages regular attendance
- a supportive environment
- an active and professional volunteer committee which works hard to represent members and organise valuable member events.

## Did it work?

CRPA's success can be measured by its continued thriving membership, strong turnout at meetings and events, and its impressive longevity and reputation.

The benefits the association provides members are numerous – personal connection and support, professional development and knowledge sharing, practical networking and collaboration opportunities, collective consultation, bargaining and lobbying.

## Can others do it too?

While establishing groups from scratch can take some work, the CRPA model can absolutely be replicated elsewhere.

One barrier or consideration could be that the CRPA model relies heavily on the passion and dedication of its volunteer committee. The model could be strengthened if there was a way to fund a part-time person to support the volunteer committee. This would also allow the model to support a broader membership base and to undertake additional projects beyond the capacity of a volunteer committee.

## Which of the Southern Tas drought resilience goals does this contribute to?

1, 2, 6, 10, 11

Content contributed by Sophie Milic, Coal River Products Association.

# 7

# Implementation approach

The implementation of the Southern Tasmanian Regional Drought Resilience Plan will be community led, with support from the Tasmanian Government. There are two elements: guiding and supporting.

Guiding means promoting the plan and the identified actions as a roadmap to align community, government, not-for-profit and private sector effort. The intent here is to educate Southern Tasmanian leaders and communities about how to shape existing and future projects and practices to ensure we are all working in the same direction toward better drought resilience for our region.

Under the supporting element, the Regional Drought Resilience Planning Program will offer a targeted program of support for identified projects that will work towards the RDRP actions.

While the RDRP program will provide some funding for implementation, communities are encouraged to use the plan to help secure additional funding. Implementation will be a collaborative effort between regional communities, stakeholders and government.

Implementation will reflect the following principles:

- Goals and action areas detailed in the RDRPs will guide allocation of funds.
- Community voices in decision-making will continue to guide where available funding is spent.
- Available funding will be accessible to a diverse range of interested groups, varying in interest, scale and capacity.
- Where appropriate, vulnerable areas will be prioritised.
- There will be fairness in funding across regions.
- Implementation will focus on place-based local solutions.
- Implementation will aim to place as little administrative burden on stakeholders as possible.

The first round of implementation will be coordinated by the project team within the Tasmanian Government's Department of Premier and Cabinet, in collaboration with Project Advisory Groups or a similar community voice. After the first round, monitoring, evaluation and learning (MEL) outcomes will be used to refine the plans and a long-term owner will be identified.

# 7.1 Next steps

Next steps for the Regional Drought Resilience Planning Program are:

- **Greater coordination:** while there are pockets of strategic work underway, across the state there is currently no consolidated approach to drought and climate resilience planning. Work needs to continue to drive greater coordination across all parts of government and sectors. This will help to achieve a more holistic and strategic response to drought and climate resilience planning.
- **Access and availability of centralised data:** further work is needed to improve the availability of, and access to, centralised climate data and to understand future implications for key agricultural industries and natural resource management, including cropping, dryland grazing and landscape function.
- **Aboriginal involvement:** there are opportunities to enable and involve Aboriginal organisations and people in drought and climate resilience planning, using outcomes to shape future implementation. This approach must reflect the principles of self-determination and community priorities and needs.
- **Role clarity and purpose:** efforts to clarify roles and responsibilities of key departments, agencies and organisations involved in drought and climate resilience in Tasmania are needed.
- **Opportunities for strategic alignment:** efforts will be required to integrate the Regional Drought Resilience Plans with complementary strategic documentation and framework.
- **Broader FDF program direction:** RDRPs may be able to provide greater strategic direction and clarity across the FDF program.
- **Resilience assessment review:** to ensure plans remain up-to-date and to inform longer-term monitoring, evaluation and learning activities, it is recommended a review of the plans, supporting resilience assessments and maps be undertaken when significant changes occur, such as when new fine-scale or 'downscaled' climate projections for Tasmania are available. Reviews should also consider further refinement of the indicators used in the resilience assessment.

# 8

# Monitoring, evaluation and learning

The proposed monitoring, evaluation and learning (MEL) approach for the Southern Regional Drought Resilience Plan has been informed by the Future Drought Fund MEL Framework, December 2020, and the RDRP MEL Framework. As well as monitoring and evaluating the plan, broader Tasmanian RDRP program activities will be monitored according to the RDRP 2.0 Outcomes Framework.

MEL activities for the Southern Tasmanian RDRP will aim to measure progress against the plan's themes and goals.

The monitoring and evaluation approach for the RDRPs must be streamlined, simple and efficient to implement. Community feedback will be a critical component to MEL activities. This may be collected through a range of activities, including grants acquittal processes, surveys and community focus groups, aligned with monitoring and evaluation efforts of other FDF programs or activities.

Data and information will be collected at key milestones, including at the completion of projects and at the completion of the first round of implementation.

MEL outcomes and findings will be used to refine the Southern Tasmanian RDRP, as well as the broader program structure and funding approach.

The RDRP project team will be responsible for undertaking MEL activities for the first round of implementation. After this, MEL responsibilities will be in line with the longer-term governance arrangement for the plan.

Ultimately, the plan aims to improve overall drought resilience in Southern Tasmania, as measured by the baseline resilience assessment and mapping. As noted in the previous section on next steps, it is recommended that the assessment be repeated, ideally within five years.

Table 6 outlines the MEL approach for the Southern Tasmanian RDRP.

**TABLE 6: Southern Tasmania RDRP MEL approach**

| | |
|---|---|
| **Whole-of-plan objectives (RDRP Program Framework)** | The RDRP is used to drive decisions, actions and investments to proactively manage drought and climate variability preparedness (FDF long-term outcomes 4+ years) |
| **FDF Impact Areas** | • Agricultural communities are resourceful, adaptable, and thriving<br>• Primary producers and businesses are self-reliant, productive, and profitable<br>• Agricultural and natural landscapes are functional and sustainable, with healthy natural capital |

| Relevant Southern Tas Theme | Indicators (adapted from FDF and RDRP MEL frameworks) | Timeframe |
|---|---|---|
| **Foundational**<br>across all themes | Number of activities underway to progress strategic actions identified in the plan | 1-4 years |
| | Communities share knowledge, collaborate and partner with government more often to build drought resilience | 1-4 years |
| | Increased community understanding of the region's current and future drought resilience, considering the region's unique economic, environmental and social characteristics | 1-4 years |
| | Communities use relevant data and information to better understand their resilience to drought and plan for resilience to drought | 1-4 years |
| | Plans have buy-in from key stakeholders in the region | 1-4 years |
| **Flourishing Communities**<br>who understand and support each other | The number of, and participation in, local networks and programs to enhance drought resilience increases | 1-4 years |
| | Greater sharing of learnings related to drought resilience between communities | 1-4 years |
| | Stronger connectedness and greater social capital within communities, contributing to wellbeing and security | 4+ years |
| | Communities implement transformative activities that improve their resilience to drought | 4+ years |

| Relevant Southern Tas Theme | Indicators (adapted from FDF and RDRP MEL frameworks) | Timeframe |
|---|---|---|
| **Prosperous Local Economies**<br>where businesses thrive and provide jobs even when conditions are tough<br>  | Regional leaders are in a stronger position to implement strategic actions, adapt to change and take advantage of opportunities to build economic resilience as they arise | 4+ years |
| | Producers, small business and other connected stakeholders report they have the localised information they need to adapt to change and leverage off future economic opportunities as they arise | 1-4 years |
| | Business owners are pursuing opportunities to increase financial security of their business before, during and after drought and climate-related events | 1-4 years |
| | More primary producers preserve natural capital while also improving productivity and profitability | 4+ years |
| **Resilient Landscapes**<br>from the bush to the farm<br>  | Partnerships, networks and engagement are built between stakeholders managing natural resources | 1-4 years |
| | Natural resource management capability is improved across the region | 4+ years |
| | Land managers are implementing land management practice change to monitor and improve the ecological function of native and productive landscapes | 1-4 years |
| **Climate-Conscious Built Environment**<br>that is designed to be resilient, efficient and sustainable<br>  | Greater sharing of learnings and collaborative planning related to drought and climate resilience between community, government and agencies | 1-4 years |
| | Actions, pathways and opportunities (including innovative and transformative) to improve regional drought resilience, mitigate risks and adapt to change are identified | 1-4 years |
| | Investment in building, maintaining and improving infrastructure has contributed to increasing the communities' drought and climate resilience | 4+ years |

# 9

# References

# References


ABS (Australian Bureau of Statistics) (2021) Socio-Economic Indexes for Areas (SEIFA), Australia, Interactive Map (SA1) accessed 11 November 2024.

Climate Futures (2024) *Climate futures for Tasmania*, accessed 11 November 2024.

CSIRO (2024) *My climate view*, accessed 11 November 2024.

Department of Climate Change, Energy, the Environment and Water (2021) *Threatened ecological communities in Tasmania,* accessed 11 November 2024.

Department of Agriculture, Water and the Environment (2024) *Future Drought Fund (Drought Resilience Funding Plan 2024-2028) Determination 2024,* accessed 8 November 2024.

Department of Sustainability, Environment, Water, Population and Communities (2011) *Biodiversity summary for South Tas,* accessed 11 November 2024.

Design Council (2024) *The Double Diamond,* accessed 11 November 2024.

DPAC (Department of Premier and Cabinet) (2020) *Tasmanian Disaster Resilience Strategy 2020-2025,* accessed 11 November 2024.

Drennan L and Rasheed A (2020) *Determinants of adaptive capacity for climate change adaptation: considerations for regional Victoria,* Griffith University, Brisbane, accessed 11 November 2024.

FAO (United Nations Food and Agriculture Organization (2021) *Scientific review of the impact of climate change on plant pests*, accessed 11 November 2024.

Fedele G, Donatti CI, Harvey CA, Hannah L and Hole DG (2019) 'Transformative adaptation to climate change for sustainable social-ecological systems', *Environmental Science & Policy*, 101:116–125, https://doi.org/10.1016/j.envsci.2019.07.001.

Kania J, Kramer M and Senge P (2018) *The water of systems change*, FSG, accessed 11 November 2024.

Lester L, Flatau P and Kyron, M (2022) *Understanding the social impacts of drought,* Centre for Social Impact, University of Western Australia, accessed 11 November 2024.

National Disaster Risk Reduction Framework, Australian Government, Internet, Department of Home Affairs, 2018. Available from: https://www.homeaffairs.gov.au/emergency/files/national-disaster-risk-reduction-framework.pdf.

*NRM South (n.d.) NRM Strategy 2030 Southern Tasmania,* accessed 11 November 2024.

ReCFIT (2024) *What are the projected climate change impacts for Tasmania?,* accessed 11 November 2024.

Remenyi T, Rollins D, Love P, Bindoff N and Harris RMB (2019) *Australia's wine future – a climate atlas*, University of Tasmania, accessed 11 November 2024.

Remenyi T, Rollins D, Love P, Earl N, Harris RMB and Beyer K (2022) *Atlas of Earth system hazards for Australia,* UTAS, report, accessed 22 November 2024.Siders AR (2019) 'Adaptive capacity to climate change: a synthesis of concepts, methods, and findings in a fragmented field', *Wiley interdisciplinary reviews: Climate Change, 10(3),* https://doi.org/10.1002/wcc.573.

# Appendices

# Appendix A: Southern Region Drought Risk, Resilience and Adaptive Capacity Data Report

The Drought Risk Resilience and Adaptive Capacity Data Report for Southern Tasmania was compiled in 2023 to provide baseline data for drought resilience planning. The report is a snapshot in time of the indicative and potential drought impacts for the Southern region of Tasmania and answers the following three questions:

- What is the prevalence, severity and impact of drought?
- What is the likely prevalence, severity and impact of drought?
- What are the vulnerabilities, gaps in preparedness and adaptive capacity for drought and other related permanent transitions to a changing climate?

This report analyses the resilience of agricultural, natural environment and community systems to drought.

The Drought Risk Resilience and Adaptive Capacity Data Report, Southern Tasmania heavily informed this Southern Tasmania Regional Drought Resilience Plan and can be considered the partner document to the RDRP.

The Drought Risk Resilience and Adaptive Capacity Data Report, Southern Tasmania, 2023 can be accessed at: https://droughtready.tas.gov.au/southern-regional-drought-resilience-planning

# Appendix B: Community engagement overview

## Approach

The Regional Drought Resilience Planning Program (RDRP) has been community led. In total, around 600 participants contributed their knowledge and views to the development of the Southern RDRP. A visual overview of the stakeholder and community engagement process guiding the development of the Southern RDRP is provided in Figure 17. It is based on the 'Double Diamond' design methodology.

The consultation process has involved:

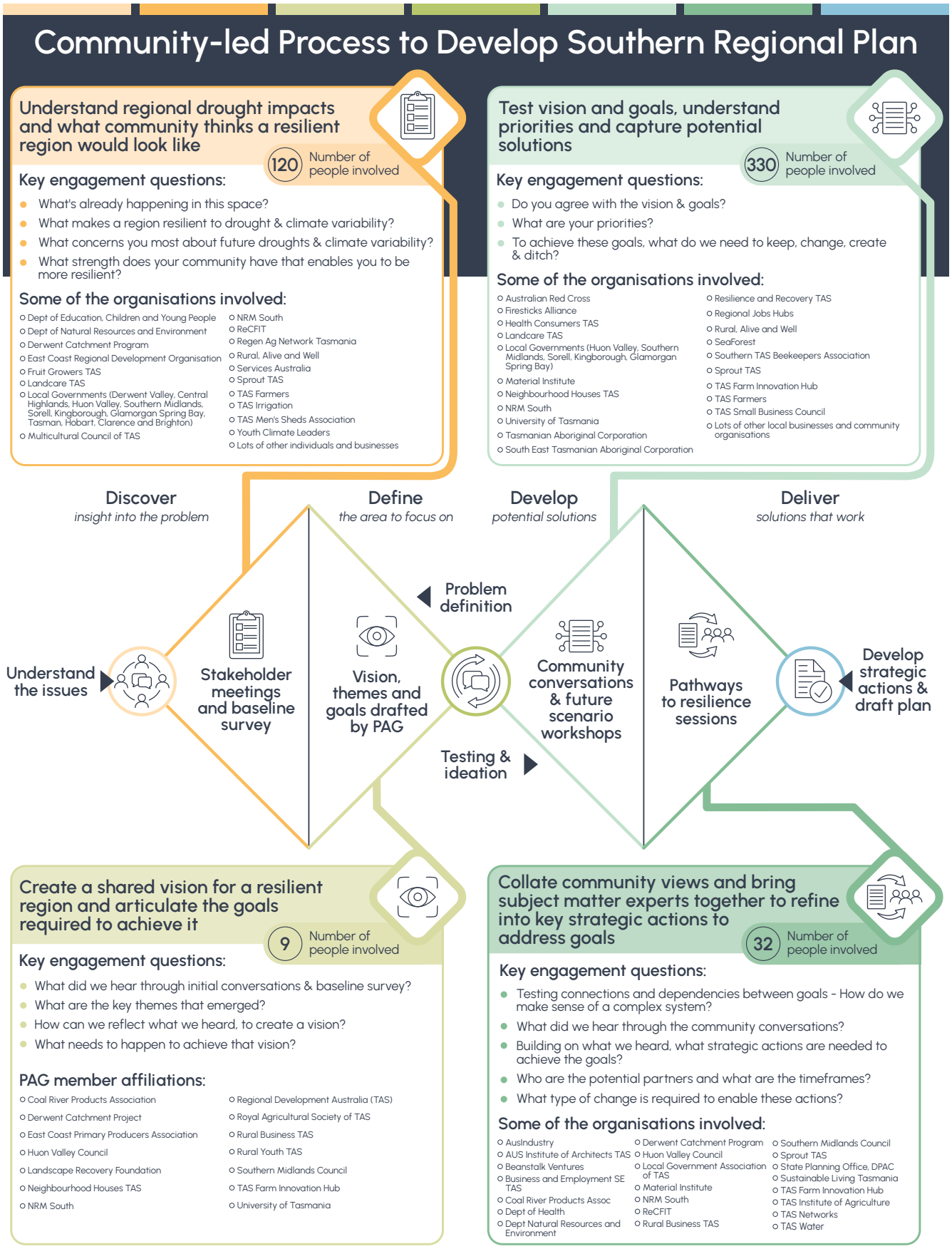
- establishment and coordination of a Project Advisory Group (PAG). The PAG met eight times throughout the plan's development. Made up of nine members, the group included representatives from local government, producer groups, other FDF projects, the community sector and NRM organisations. Throughout the development of the plan, the PAG provided local insights and knowledge, directly shaping the engagement process, refining the vision and goals, and facilitating stakeholder connections and participation.
- a series of Community Conversation sessions, attended by over 200 people between June and August 2024
- engagement at community events including: Nourish Tasman, Triabunna Stepping into the Future Expo, tunapri luna women's knowledge – Aboriginal Water Symposium, Derwent Autumn Festival, Cross-Pollinate and Agfest
- the facilitation of a future scenarios workshop, attended by 16 participants, in August 2024
- four Pathways to Resilience Workshops, attended by 32 community members and subject matter experts, in September 2024
- attendance at a range of stakeholder events and meetings
- targeted one-on-one stakeholder discussions
- three online surveys via the DroughtReady website (https://droughtready.tas.gov.au/)
- six stakeholder email updates.

In addition to the above activities, the Tasmanian Government's Department of Premier and Cabinet worked closely with a project steering committee made up of project partners and key stakeholders to guide strategic direction of the program, plans and consultation processes. A range of stakeholder meetings were also held with statewide project partners, with outcomes used to influence program direction and scope (see Table 7).

**TABLE 7: Organisations engaged across the statewide RDRP program**

| Organisation name | |
|---|---|
| Australian Rural Leadership Foundation (ARLF) | RDA Tasmania |
| Department of Natural Resources and Environment | Rural Youth Tasmania |
| Department of Health (Public Health focus) | Sustainable Timber Tasmania |
| Department of State Growth (ReCFit) | Tasmanian Chamber of Commerce and Industry |
| Foundation of Rural and Regional Renewal (FRRR) | TasCOSS |
| Hydro Tasmania | Tasmanian Conservation Trust |
| Landcare | Tas Farm Innovation Hub |
| Local Government Association of Tasmania (LGAT) | TasFarmers |
| National Emergency Management Agency (NEMA) | TasWater |
| Rural Alive and Well (RAW) | Tasmania Fire Service |
| Rural Business Tasmania | Tasmanian Institute of Agriculture |
| Tasmanian Irrigation | Neighbourhood Houses Tasmania |
| Tas Parks and Wildlife | TasNetworks |

**FIGURE 17: Engagement process overview**



# 9.2 Baseline survey

At the start of the engagement process, an online face-to-face survey was used to explore community knowledge and understanding around drought and climate variability in their region. The survey was also made available to complete face-to-face with project staff at engagement events. In total, 38 people from Huon Valley, Tasman, Southern Midlands, Central Highlands, Sorell, Clarence, Derwent Valley, Hobart and Glamorgan Spring Bay local government areas completed the baseline survey. Of these participants, 63 per cent were female, and 16 per cent were male, with 21 per cent of participants providing no answer.

# 9.3 Community conversations

In total, over 200 community members attended a community conversation. These sessions brought community members together to explore drought and climate variability resilience, through understanding their priorities and sharing diverse perspectives on what needs to happen to strengthen resilience across Southern Tasmania.

Sessions were held in a variety of formats to cater to needs and availability. In total, there were:

- 10 stand-alone, open invite, community sessions
- 11 sessions held as part of a meeting or event hosted by another organisation.

Sessions were held in the following LGAs:

- Huon Valley, Tasman
- Glamorgan Spring Bay
- Greater Hobart
- Kingborough
- Brighton
- Southern Midlands, and
- Sorell.

Where sessions were not able to be held, one-on-one discussions were conducted with local government, primary producers and organisations in the Central Highlands and Derwent Valley to ensure that voices from those regions were captured and incorporated into this plan.

Organisations who participated in community conversations are listed below.

- Resilience and Recovery Tasmania
- Regional Jobs Hubs
- Southern Beaches Coast & Landcare
- Landcare Tasmania
- NRM South
- Tas Farm Innovation Hub
- Coal Valley Products Association
- Rural Alive and Well
- Sprout Tasmania
- Sustainable Living Tasmania
- Material Institute
- East Coast Primary Producers Association
- Small Business Council of Tasmania
- Health Consumers Tasmania
- Australian Red Cross
- Kingborough Council
- Huon Valley Council
- Sorell Council
- Southern Midlands Council
- Tasman Council
- University of Tasmania
- Neighbourhood Houses Tas
- Southern Tas Beekeepers Association
- Tas Small Business Council.

Of those participants where data was captured, 50 per cent of participants were female, and 35 per cent were female, with 15 per cent providing no answer. Participants were generally older, with 76 per cent of participants aged 45 years or older and the most common occupations were farming/agribusiness, not-for-profit or government roles.

Data captured provided some strong insights into the value of the Regional Drought Resilience Planning Program across Southern Tasmania. Key insights are summarised below:

- 96 per cent of participants (of 146 participants who completed a feedback form) felt that a drought resilience plan for the region was needed
- 93 per cent felt the sessions were valuable in making connections and sharing knowledge with others about drought resilience
- 91 per cent of participants felt the Vision and Goals for the region captured the key priority areas
- 75 per cent of participants felt the sessions helped them better understand drought impacts.

# 9.4 Future scenarios workshop

Facilitated by Disruptive Co, a full day future scenarios workshop was held with 16 participants, including representatives of local governments, NRM South, primary producers, Tas Water, University of Tasmania and DPAC. Although futures and foresight approaches often involve identifying and mitigating risks, this work was equally about supporting the community to focus on what they want to achieve rather than simply avoiding harm, which built agency in shaping their own future. Through a participatory approach, scenarios were developed based on current data and evidence, but also the realities, hopes, and concerns of those in our communities who are affected by climate challenges. Outcomes from the workshop were used to test and validate the key areas (themes and goals) of the Southern Tasmanian RDRP.

Regional priorities from the Southern futures workshop are captured below.

- **Long-term planning and futures thinking:** Participants supported planning efforts to shift beyond 10 year horizons, building community-wide futures thinking capacity to consider long-term implications for future generations.
- **Support for community-led initiatives:** Participants called for greater support for communities to launch and grow local projects – through network building, leadership and mentorship programs, sharing economy incentives, seed funding, and decision-making opportunities.
- **Water management and innovation:** Efficient and innovative approaches to water use and management were key priorities. Ideas included stormwater harvesting, recycled water systems, improved water accounting, and widespread community education on efficient water use and minimum water needs.
- **Better coordination and collaboration:** Improved collaboration between government agencies, communities, and sectors was identified as a key need. Agreements on shared goals and targets across the state were seen as critical to effective resilience building efforts.
- **Sustainable development:** Participants wanted to see sustainability as a key driver of development and business practices, supporting initiatives like urban infill, green cities, and circular economy principles like recycling, reuse, and reducing consumption.
- **Investing in education, health, and housing:** Adequately resourcing key social services, such as education, health, and housing, was seen as essential for addressing inequalities and building long-term resilience.
- **Engaging the whole community:** Participants emphasised the importance of involving the public in planning and decision-making through public forums, workshops and outreach. Building capacity and providing pathways for more community members, including young people, to contribute to efforts was seen as essential.
- **Aboriginal knowledge and expertise:** Participants called for deeper engagement with *palawa* leaders to better understand how Aboriginal knowledge and expertise could guide policy, education, and community responses to drought, water and land management, and climate transitions.
- **Skill building for a shifting economy:** Participants proposed initiatives that supported the community to prepare for a shifting economy, with opportunities to retrain and build new skills suited to emergent jobs and sectors.
- **Fostering local economies and sharing:** Investing in local sharing initiatives such as community gardens, crop swaps, tool-sharing, and skills-sharing were seen as ways to build community connection, create local opportunities, reduce waste and increase resilience.

# 9.5 Pathways to Resilience workshops

Four Pathways to Resilience workshops were held, attended by a total of 32 participants comprising community members and subject matter experts. Workshops each focussed on one of the four RDRP themes and participants worked together to refine collected data down to the key action areas captured in the Southern plan. The workshop used the inverted triangle of change framework to review strategic actions.

The following organisations participated in the workshops:

- Department of Renewables, Energy and Future Industries Tasmania
- Department of Health
- State Planning Office
- Huon Valley Council
- Coal River Products Association
- Rural Business Tasmania
- AusIndustry
- Tasmanian Institute of Agriculture
- NRM South
- Derwent Catchment Program
- Tas Farm Innovation Hub
- Local Government Association of Tasmania
- Department of Natural Resources and Environment
- Tas Water
- Tas Networks
- Sustainable Living Tasmania
- Sprout Tasmania
- Australian Institute of Architects (TAS)
- Southern Midlands Council
- Materials Institute, Business & Employment Southeast Tas
- Tasman Landcare
- Beanstalk Ventures

# 9.6 Engagement findings

There were several key areas that emerged from the engagement process about what people thought the key features of a resilient community are.

The process reinforced that our communities possess a wealth of local knowledge, skills, lived experience of past challenges and innovative solutions, yet we may not be tapping into the full potential of these strengths. There was a strong desire to learn from the palawa/pakana community who have been here for millennia, experiencing many climatic changes and disruptions.

> **"We need to recognise the knowledge held by Aboriginal Communities for how this place has changed through time and how to manage through climatic variations. We have so much to learn from their history, practices and traditions about resilience."**
>
> — Community conversation, Brighton LGA

> **"Deeper engagement with palawa leaders to better understand how Aboriginal knowledge and expertise could guide policy, education, and community responses to drought, water and land management, and climate transitions."**
>
> — Future scenarios workshop

Whether through Aboriginal land management practices, community-driven sustainability initiatives, or sector-specific knowledge, participants felt it essential to establish stronger platforms for knowledge sharing and collaboration, enabling the collective wisdom within our communities to drive action.

> **"A coordinated approach to managing current and emerging risks in the changing climate. We need all levels of government, business and community organisations working together on practical solutions". -**
>
> — Future scenarios workshop

> **"We need increased funding and resources for existing initiatives. We don't need to reinvent the wheel – we know the solutions, just need more government support and backing."**
>
> — Community conversation, Hobart LGA

While acknowledging there are many things working well already, the process highlighted the perception that many current systems and practices are inadequate for the challenges ahead. There is a clear need to move beyond existing approaches that may focus on short-term gains, prioritise economic growth over community and ecosystem health, or operate within rigid institutional silos. Instead, communities, governments and industries must be willing to invest in the organisations and programs already working on the ground to create impact and be open to trialling and testing new initiatives that can foster the systemic changes required for our communities to be adaptable and resilient.

**"We need brave, long-term projects, support and infrastructure that will enable landscapes and people to change. eg Don't just support farmers through short term drought effects. Have a program that enables farmers to take the many steps needed to improve the landscape function."**

— Community conversation, NRM South

**"Decision-making should focus on data and research, but also be underpinned by ethics, intergenerational considerations and planning, and the ability to solve problems upstream rather than mitigating problems downstream. The precautionary principle needs to be used far more and the correct scale of impact should always be considered.**

— Community Conversation, Landcare Tas

Another point that came through strongly from consultation was that the resilience planning process should focus on strengthening community connection, trust and collaboration, transparent and accountable governance, and shared vision, values and systems – rather than relying solely on technical fixes. While technical solutions play an important role, it is the capacity of communities to work together, creatively solve problems and adapt culturally that will drive long-term success in managing drought and climate risks.

**"We need collaborative problem solving – clear goals and objectives at the regional level – owned by all stakeholders."**

— Community conversation, Glamorgan Spring Bay LGA

**"We need greater support for communities to launch and grow local projects – through network building, leadership and mentorship programs, sharing economy incentives, seed funding and decision-making opportunities."**

— Future Scenarios Workshop

A focus on improving landscape function, rather than productivity of agricultural land was also raised repeatedly.

**"Taking a holistic approach to improving landscape function. Not a 'them or us' attitude. Conventional farmers, agroecological farmers, large scale commodity, small scale and everything in between – we all need to move together in a direction that will improve our landscape function over time, and this will in turn improve our ability to cope with the changing climate (goodness me, it might even help mitigate some of the detrimental impacts we've had on our climate), help produce food for local communities, keep our farmers connected through support and networks, and connect people to country."**

— Baseline survey

The concept of community sufficiency was also a focus for participants, highlighting the need to meet the basic needs of the community locally, with everyone pitching in to help.

> **"Good networks and connections so assets and knowledge/expertise can be readily accessed (good bridging and social capital) as needed. Decreasing reliance on 'outside' support, increasing intra reliance".**
>
> — Baseline survey

> **"Hyper-local production models that have reduced reliance on global supply chains and support local family-owned farms and enterprises. Encouraging local manufacturing and food security can help strengthen community resilience."**
>
> — Future scenarios workshop

Other key themes emerging through engagement are summarised below:

- **Governance** – community-driven decisions, agreed priorities and community-led action with a focus on long-term planning and projects.
- **Collaboration** – bring diverse voices together, create opportunities to share learnings and knowledge and work together to create change, rather than competing.
- **Economy** – thriving small businesses with adaptive management skills and strong local economies which keep value in the region.
- **Knowledge** – access to accurate and reliable information and a shared understanding of risks, preparedness actions and how to access support. Literacy, digital literacy and understanding of ecological systems and how everything is interconnected.
- **Land Management** – sustainable use of resources and adaptive management practices which enhance the health and diversity of plants, waterways, soils and animals in both natural and productive systems.
- **Connectedness** – a sense of belonging, feeling supported by one's community.
- **Equity** – closing the gaps in wealth, education and health, ensuring that no one is left behind.
- **Wellbeing** – infrastructure and services that support communities, including access to mental health care, social and recreational spaces. Prioritise community and ecosystem wellbeing over economic indicators of growth.

Table 8 provides an example of the feedback received through the engagement process.

**TABLE 8: Engagement insights, Southern Tasmania RDRP planning process**

| Theme | Insights |
|---|---|
| **Geographical areas** | Participants shared that places including the Tasman Peninsula, Bruny Island, Central Highlands and the East Coast may be more vulnerable to drought. The lack of reticulated water or irrigation schemes, and the increased pressure of tourist numbers on limited natural water supplies was of concern in some areas.<br><br>Areas with active producer networks, such as the Coal River Valley and East Coast, felt well supported and had good access to information.<br><br>The presence of neighbourhood houses and other social infrastructure (sports grounds, halls, etc) were also raised as key to local resilience. |
| **Agriculture** | Participants felt that within the agricultural sector, there are some specific activities that may be more susceptible to drought. Participants spoke of the need for crop diversity, a greater focus on building business planning skills, sustainable land management practices to withstand drought conditions, learning and development opportunities and the need for opportunities for greater collaboration across all sectors.<br><br>• *"Lots of farms on East Coast and Tasman have actually diversified since the last drought, especially planting vineyards, which cope well with dry."* – Baseline survey respondent<br><br>• *"So many farmers rely on commodity markets, which weaken their business's resilience. We've seen this recently with the onset of dry conditions coinciding with other market factors which has seen a huge drop in the price of lamb such that farmers are culling sheep. Generally I think business planning could be stronger among all types of business. I'd love to see more use of land management practices which enhance the land/environment's ability to hold water and cope with drought (eg practices which promote soil health)."* – Primary producer, Clarence LGA<br><br>• *"Agricultural practices need to be transitioned to regenerative practices to help restore the health of Country by limiting soil loss, improving water quality and reducing carbon emissions. It is necessary for agricultural practices to be regenerative and not contribute to further harm, instead of just being able to survive periodic dryness."* – TAC Healthy Country Unit<br><br>• *"Run more learning events that bring farmers together to share challenges and timely, helpful information."*<br><br>• *"We need to create stronger networking opportunities and support for producers, small businesses and community organisations so each is not in their own silo."* – Community conversation participant, Landcare Tasmania<br><br>• *"It's hard to get enough water for livestock and crops to feed them. And it impacts carbon accounting projects as it's much harder to increase carbon stores in drought and there are no solutions for this."* – Primary Producer, Glamorgan Spring Bay LGA<br><br>• *"We need a locally run abattoir to process stock so farmers can sell directly to public, which would mean we could value add to our produce. Currently there is virtually no scope for this as small abattoirs are booked out months ahead. The only commercial sheep abattoir in state dictates prices and current seasonal conditions mean that there is no store market."* – Primary producer, Southern Midlands LGA<br><br>• *"We need to change the way we farm, reduce reliance on inputs and reconsider where and what we grow."* – Primary producer, Central Highlands LGA |

| Theme | Insights |
|---|---|
| **Water infrastructure and efficiency** | Participants had a variety of thoughts on water supply, storage and use:<br>• *"On the Tasman, everyone is on tank water and there is very limited creek supply, so if it doesn't rain, we need to buy water in, even if we can afford to."* – Community member, Tasman LGA<br>• *"Southern Midlands doesn't have much irrigation actually – no constant rivers, irrigation scheme very limited; and it's very hard to get dams approved – regulatory frameworks in general are very daunting…red tape – makes it hard to adapt or react quickly."* – Baseline survey respondent, Southern Midlands LGA<br>• *"Southern Midlands didn't have full allocation this year as they decided they didn't want to pay the extra costs of accessing alternative supply from Great Lake via Hydro. Modelling showed that 1 in 4 years would require accessing alternative supply."* – Tas Irrigation<br>• *"There are areas that are particularly drought prone (ie East Coast) where there is no intention of developing irrigation schemes, because there just aren't reliable sources that can be economically viable to develop, even at 70 per cent capital subsidy."* – Tas Irrigation<br>• "*I don't think irrigation is the answer and the economics don't stack up. When commodity prices are down, there is no use paying to irrigate. The upfront cost of setting up irrigation plus the ongoing costs of electricity and water (if you have to pay for it) seem considerably more than the cost of having to buy in feed in bad years. And in terms of river health and environmental impacts, central pivots won't save us."* – Primary producer, Derwent Valley LGA<br>• *"We need to explore the use of new tech desalination plants (small sustainable units) for long term security and local storage for community."* – Community conversation participant, Eaglehawk Neck<br>• *"Increase acceptability of alternative waste water and sanitation systems (ie composting / grey and black water) to make the water we have go further."* – Community conversation participant, Geeveston<br>• *"We need security on 'promised' irrigation scheme roll-out – extension of Southern Irrigation Scheme."* – Community conversation participant |
| **Environment and Biodiversity** | Participants spoke at length of the role and impact drought has on the environment and biodiversity, and the importance of taking a systems wide approach to environmental conservation, management and health.<br>• *"We must stop destruction of natural environment systems. Intact systems are more resilient and provide buffers."* – Community conversation participant, Huonville<br>• *"We need a commitment to native revegetation along waterways, replant natives as weed species are removed."* – South East Tasmanian Aboriginal Corporation<br>• *"I'm concerned about biosecurity – pests, weeds, diseases – new as well as some that are already here and fairly controlled, start flourishing as they are more adaptable to change than natives."* – Baseline Survey respondent, Oatlands<br>• *"Maintain forests with traditional palawa values and management systems to prevent bushfires and promote biodiversity."* – Community conversation participant, Huonville<br>• *"Whole of system approach to projects to include practical work, research, monitoring etc across a whole catchment."* – Community conversation participant, NRM South<br>• *"Regulate land use to protect water supplies eg land clearing near streams, erosion limitations, planned use of aquifer assets."* – Community conversation participant, Bruny Island |

| Theme | Insights |
|---|---|
| **Fire and other disasters** | Fire and emergency preparedness was a recurring theme through engagement, with participants expressing concerns around the capacity of our current firefighting service to meet increasing future events. They spoke of their fears around impacts of large fires on natural assets, agriculture and supporting infrastructure.<br>• *"Increased fire risk concerns me most about future drought."* – Primary producer, Coal River Valley<br>• *"I'm concerned about all of the accompanying disasters – fires, property damage, crop losses, infrastructure damage, negative mental health issues, public health issues."* – Baseline survey respondent, Kingborough LGA<br>• *"One of our biggest weaknesses is insufficient firefighting capacity."* – Baseline survey respondent<br>• *"Emergency preparedness needs to be expanded to embrace all risks. Far better collaboration and communication across all relevant organisations – role definitions – more planning."* – Community conversation participant, NRM South<br>• *"Bushfires will be a big problem going forward – need lots of cultural burning in all landscapes according to biodiversity needs and conservation."* – Community conversation participant, Sorell LGA<br>• *"We need increased recognition of and skill development in cultural burning practices. Shift in thinking to ensure biodiversity and conservation, not just fuel reduction."* – SETAC |
| **Community** | Participants reflected on the strengths of their communities, and the importance of this in building resilience around drought and climate variability. They recognised the importance of inclusivity and the role of gathering places such as neighbourhood houses in sharing news. Participants also spoke of the critical importance of government listening and acting on local community knowledge to address problems.<br>• *"Community groups and the relatively small population allows a stronger connection to community which also benefits the exchange of knowledge and trust building in the region."* – Baseline survey respondent<br>• *"Our community has a stable population – generational connection to place; know one another and able to call on each other; strong networks; good grant writers; good local government team (youth, community, NRM, events, etc); facilities for 'glue' (halls, recreation areas, pool, wildlife sanctuaries); community and sporting groups; new infrastructure (after Broadmarsh fires, $1-2 million for upgrading sports facilities and fitting out as potential evacuation centre)."* – Community conversation participant, Southern Midlands LGA<br>• *"Many people know each other in this area. Neighbourhood Houses are amazing locations to spread messages. Rotary and CWA are good supporters. Lots of local producers too."* – Baseline survey respondent, Tasman LGA<br>• *"We have lots of community groups that are active; lots of options for people, there's a group for everyone."* – Baseline survey respondent<br>• *"We need acknowledgement and investment in cultivating community connectedness and establishing clear supports for maintaining equity."* – Community conversation participant, Eaglehawk Neck<br>• *"There has been a pattern of failure of government-agency practices that effectively ignore community knowledge of problems that effect sustainability and resilience."* – Community conversation participant, Bruny Island |

| Theme | Insights |
| --- | --- |
| **Governance** | Participants highlighted the importance of strong and effective governance in building drought and climate resilience. Some felt that there were opportunities to strengthen this across all levels.<br>• *"Lack of agreement on priorities, lack of knowledge of impacts and solutions across the broader community, and weak connections between some stakeholders is negatively impacting our resilience."* – Baseline survey respondent<br>• *"Ditch two party dominance, political partisanship and divisive discourse by leaders. Trial deliberative democratic processes (ie citizen jury, sortition, citizen assembly, etc) with REAL decision-making power."* – Community conversation participant |

# Appendix C: Strategic context

Key strategic documentation relevant to the Tasmanian RDRP Program is summarised below.

**TABLE 9: Strategic context, Southern Tasmanian RDRP**

| Document/ strategic initiative | Document purpose and opportunities for strategic alignment |
|---|---|
| **Commonwealth** | |
| Future Drought Fund Act 2019 | The FDF Act provides the legislative framework for the FDF program, and specifically the RDRP program. The object of this Act is to enhance the public good by building drought resilience. It will be critical that long-term plans for the implementation of the Tasmanian RDRP align with the Act, including any future amendments to the Act that may be made. |
| Future Drought Fund (Drought Resilience Funding Plan 2024-2028) Determination 2024, 7 Feb 2024 | The FDF Determination provides the framework to guide spending under the Future Drought Fund. Moving into implementation, it will be important that this is considered in the design of the grants implementation program. |
| National Health and Climate Strategy | Australia's first National Health and Climate Strategy sets out a whole-of-government plan for addressing the health and wellbeing impacts of climate change, while also addressing the contribution of the health system. This strategy should continue to be reviewed for further insights into opportunities and needs for building community resilience around drought. |
| National Disaster Mental Health and Wellbeing Framework | The National Disaster Mental Health and Wellbeing Framework provides guidance to recovery workers to support disaster-affected communities' mental health and wellbeing. This strategy should continue to be reviewed for further insights into opportunities and needs for building community resilience around drought. |
| **Statewide** | |
| **Climate change** | |
| *Climate Change (State Action) Act 2008*<br>Tasmania's Climate Change Action Plan 2023-25 | *Tasmania's Climate Change Action Plan 2023-25* outlines the government›s plans for action on climate change until 2025, to help reach our target to maintain net zero greenhouse gas emissions, or lower, from 2030. The action plan guides the delivery of priorities.<br>Through the implementation of the RDRPs, there may be opportunities to strengthen and contribute to the targets listed in the action plan. |
| Tasmania's Emissions Reduction and Resilience Roadmap 2024-29 | Developed by RECFIT to link together the six Sectoral Emissions Reduction and Resilience Plans and Tasmania's Risk Assessment for Climate Change 2024, and set out how Tasmania will maintain net zero emissions across our economy through to 2030 and beyond. |

| Document/ strategic initiative | Document purpose and opportunities for strategic alignment |
|---|---|
| Tasmanian Local Government Climate Capability Program | A statewide local government climate capability program initiated by councils that is coordinated by LGAT and the Tasmanian Government. There are opportunities to strategically align priorities with the RDRP program. |
| Tasmanian Positive: our state's sustainability strategy | The Tasmanian Government is currently developing a statewide sustainability strategy. The purpose of the strategy is to ensure that future generations have what they need to live well, including a healthy environment, social equity, and economic prosperity, while also meeting the needs of the present. During implementation, there will be opportunities to explore opportunities for alignment and collaboration between the two programs. |
| **Aboriginal Policy** | |
| Closing the Gap, Tasmanian Implementation Plan | The Tasmanian Implementation Plan for Closing the Gap support the implementation of the National Agreement on Closing the Gap 2020. 'It sets priorities for government agencies and Aboriginal community-controlled organisations to deliver improvements to the inequalities faced by many Aboriginal and Torres Strait Islander people so that their life outcomes are equal to all Tasmanians' (2021).<br><br>Where suitable, the Tasmanian Closing the Gap Implementation Plan can be used to guide funding priorities, and to prompt thinking around possible projects and initiatives for building community resilience around drought and climate variability. |
| **Agriculture** | |
| Agrivision 2050 plan: Tasmanian Government's Competitiveness of Tasmanian Agriculture for 2050 White paper | The Tasmanian Government has an ambitious goal to grow the annual value of the state's agriculture to $10 billion by 2050. Investment in agricultural research, development and extension (RD&E) is a key factor to achieving the growth rate necessary to reach this target.<br><br>Policy makers and industry should consider how this agricultural growth target is compatible within emissions reduction scenarios across agriculture for policy coherence and mutually reinforcing goals. |
| Impacts of climate change on Tasmanian agriculture | This is a good public resource for farmers on a range of topics, including climate impacts on agriculture, emissions reductions, and opportunities to adapt and plan for a changing climate.<br><br>There is an opportunity to continue integrating resilience, productivity and emissions reduction goals in agriculture and food policy goals. |
| Agriculture Sector Emissions Reduction and Resilience Plan (ERP) 2024-2029<br><br>*State of Play report – Tasmania's Agriculture sector* | This report provides a high-level summary of Tasmania's agriculture sector, its emissions, and the impacts of climate change on the sector. It also outlines emissions reduction and resilience opportunities and barriers, and relevant policies and actions at the local, national and international level.<br><br>There may be an opportunity to integrate the FDR goals and RDRPs into this sector-wide action plan for agriculture. |
| Tasmanian Agri-Food ScoreCard | The ScoreCard measures and reports on the value and final market destinations of the state's agriculture, food and beverage production. |

| Document/ strategic initiative | Document purpose and opportunities for strategic alignment |
|---|---|
| Tas Institute of Agriculture – Current Projects | The Tasmanian Institute of Agriculture (TIA) is a specialist institute at the University of Tasmania with a mandate to deliver research, industry development and education for the agri-food industry of Tasmania.<br>Moving forward, there is opportunity for the RDRPs to provide strategic insight around community priorities for building resilience. |
| **Water** | |
| *Water Management Act 1999* | *The Water Management Act 1999* is part of the state's integrated Resource Management and Planning System and provides for the management of Tasmania's freshwater resources.<br>Future community resilience planning initiatives need to align closely with the water management legislative framework and operational environment. There is an opportunity to support the water industry in further educating communities on key roles and responsibilities for water management in Tasmania. |
| Rural Water Use Strategy | The Tasmanian Government has developed the Rural Water Use Strategy to ensure that our freshwater resources are available to support the wide range of water uses and environments that depend on them as well as new opportunities for innovation and growth.<br>There is opportunity to integrate resilience goals into rural water use in the context of a changing climate, as well as support further community education and awareness raising around key roles and responsibilities. |
| TasWater Tasmania Long Term Strategic Plan 2018-2037 | TasWater's Long Term Strategic Plan (LTSP) sets out organisational outcomes over a 20-year period, from 2018 to 2037. |
| TasWater Water Security Strategy 2023 | The purpose of the Water Security Strategy is to ensure customers receive enough drinking water to meet their needs over the long term. This document sets out how TasWater needs to work together with customers, community, regulators and other water catchment stakeholders in Tasmania.<br>There are opportunities to support TasWater in these efforts. |
| Tasmania Water Future Community Advisory Panel Report and Recommendations | Report and recommendations from the 45-member community panel which guide TasWater's price and service plan submission. |
| Tasmanian Irrigation Annual Report | Annual report of Tasmanian Irrigation which exists to be recognised as a leader in working with others to sustainably grow the Tasmanian economy through providing reliable, cost-effective irrigation.<br>Moving forward, there is opportunity for the RDRPs to provide Tasmanian Irrigation with strategic insight around community priorities for drought resilience. |
| **Land use planning** | |
| Tasmanian Planning Policies (TPP) (currently under review) | The TPPs are currently under review. In future reviews, it will be important for the key priorities detailed in the RDRPs to be considered in the TPP framework. |

| Document/ strategic initiative | Document purpose and opportunities for strategic alignment |
|---|---|
| **Public health** | |
| Tasmanian Disaster Resilience Strategy 2020-2025 (under review) | Tasmania's first Disaster Resilience Strategy brings together sectors and communities to build on current actions that support disaster resilience. It provides a vision of a disaster resilient Tasmania and paths to work towards that vision.<br>Currently under review, there is an opportunity to integrate with the strategy in the areas of prevention and preparedness in disaster resilience planning and regional resilience planning, to ensure efficient, effective and systemic resilience planning for regions and communities. |
| Food relief to Food resilience Tasmanian Food Security Strategy 2021, and action plan (2023-2025) | The Food Relief to Food Resilience Strategy 2021-24 encourages collaboration across government and communities to help meet demand for food relief and increase the resilience of communities to prepare, store and have access to healthy and nutritious food. There are opportunities the RDRP program support the implementation of these principles. |
| Healthy Active Tasmania: Tasmanian 20-Year Preventative Health Strategy 2026-2046 | The Tasmanian Government is currently developing a 20-year preventative health strategy, with a vision to transform Tasmania's health outcomes. Once developed, it will replace the Healthy Tasmania 5-year strategy.<br>The strategy's discussion paper identifies a range of health risks from a changing climate, including "increased frequency and severity of natural disasters such as bushfires or floods, increased air pollution and pollen, and mental health challenges." (2024, 27)<br>As the strategy is developed, there will be opportunities for community drought resilience principles and key priorities to be incorporated into the plan. |
| Healthy Tasmania 5-year strategic plan 2022-2026 | Tasmania's current strategic plan around a Healthy Tasmania, the vision for the plan 'is for all Tasmanians to have the opportunity to live healthy, active lives in communities that support connections to people, place and culture'.<br>The plan promotes working together across all areas of government and community refers to the many government agencies working together to develop, support and invest in key areas of action.<br>Opportunities are noted above in the long-term preventative strategy (currently under development). |
| Child and Youth Wellbeing Strategy (DPAC) | The Wellbeing Strategy provides a long-term direction for the Tasmanian Government to improve the wellbeing of children and young people aged 0-25 years with a specific focus on the first 1,000 days.<br>There may be opportunities through the RDRP program implementation, to contribute to the outcomes of the wellbeing strategy. |
| **Energy** | |
| TasNetworks planning documentation | TasNetworks continuously reviews the adequacy of the Tasmanian electricity transmission and distribution networks for both current and future needs and optimises associated network development plans.<br>Opportunities for how the RDRP program can work alongside the energy sector will be further explored through implementation. |

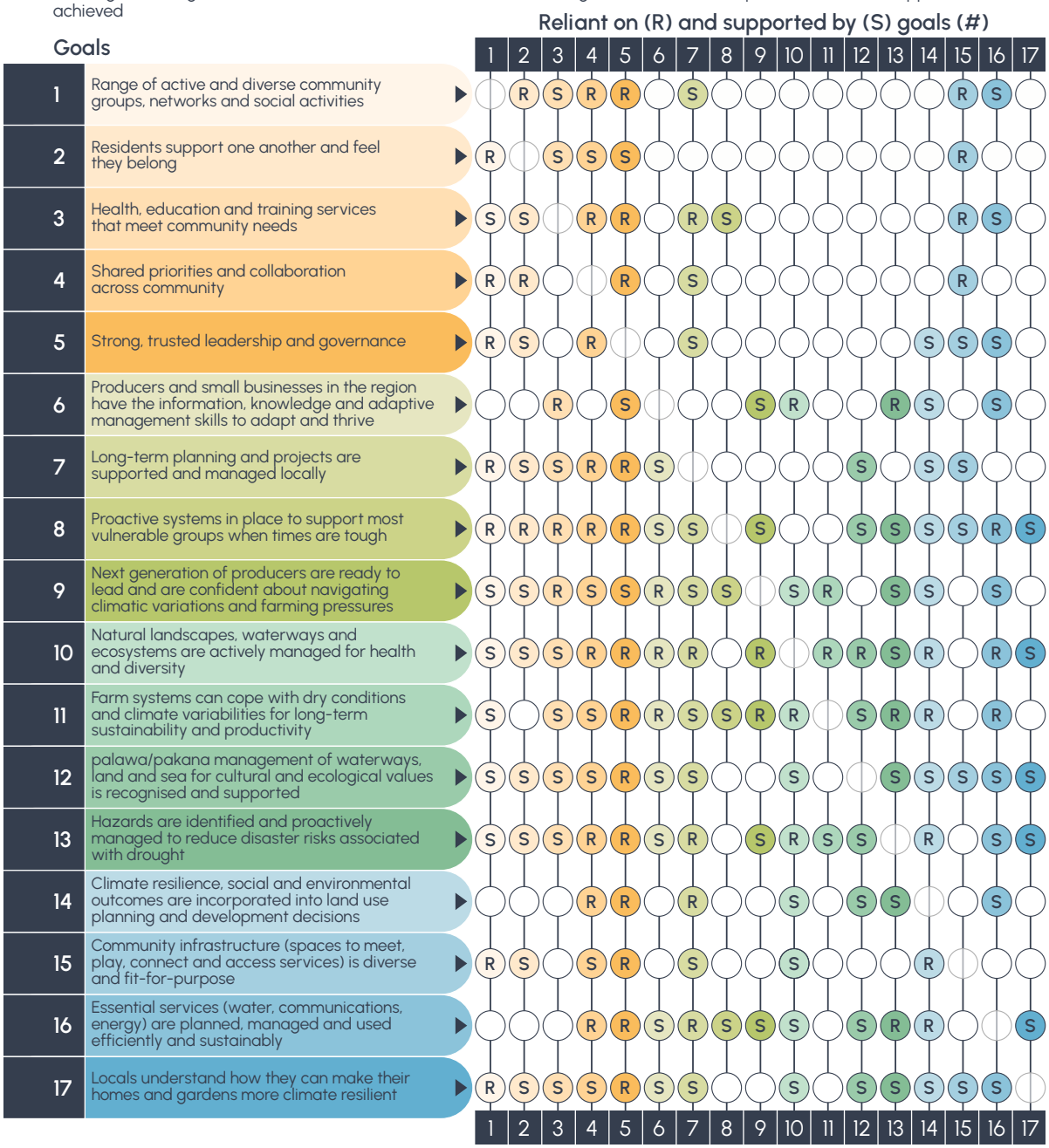
| Document/ strategic initiative | Document purpose and opportunities for strategic alignment |
|---|---|
| **Regional Development** | |
| Strategic Regional Plan for Tasmania 2023 | This Strategic Regional Plan (SRP) outlines regional priorities for Tasmania, and reflects the vision of the Australian Government, the Tasmanian State Government and local governments in Tasmania.<br>During implementation, there will be opportunities for the Strategic Regional Plan and the RDRPs to complement each other's strategic priorities, particularly around community priority one: 'Ensuring communities are resilient to emerging threats of climate change and resource protection'. |
| **Environmental** | |
| PWS – TWWHA Natural values and Climate Change Adaptation Strategy | The TWWHA Natural Values Climate Change Adaptation Strategy 2021-2031 provides a mechanism for integration of best available information to inform management responses necessary to ameliorate the impacts of climate change on the natural values of the TWWHA.<br>RDRP implementation may provide opportunities to support the strategy's strategic priority areas. |
| FPA – State of the Forests Report | Covering the period 1 July 2016 to 30 June 2021, the report provides a comprehensive overview of forests, the condition they are in and any changes that have occurred in Tasmanian forests. Information on both production forest and reserved areas are included in the report.<br>As part of RDRP implementation, there is an opportunity to better understand the importance of forests in relation to wellbeing, resilience and long term environmental, social and economic resilience. |
| Tas Planning Commission – State of the Environment Report, 2024 | SoE reporting in Tasmania is a requirement under the *State Policies and Projects Act 1993*. The 2024 report includes:<br>• recommendations for future action in relation to management of the environment<br>• the achievement of resource management objectives<br>• conditions, trends and changes in the environment.<br>As part of implementation, there is an opportunity to further explore how the RDRP program can support the recommendations detailed in the report. |
| **Regional strategies** | |
| Local Government Strategic Plans | Many councils in the Southern region have strategic plans as well as specific plans or strategies for climate change, community wellbeing, natural resource management and economic development, all of which cover areas relevant for strengthening resilience to droughts and climate variability. |

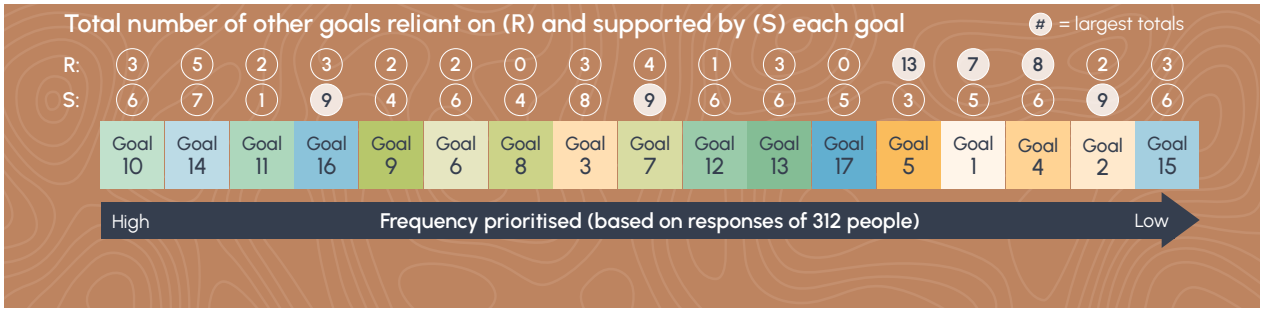
| Document/ strategic initiative | Document purpose and opportunities for strategic alignment |
|---|---|
| Southern Tasmania Regional Land Use Strategy 2010-2035 | Currently under review for Southern Tasmania. The strategy is to facilitate and manage change, growth, and development within Southern Tasmania over the next 25 years. It provides comprehensive land use policies and strategies for the region and serves as a key planning tool that includes long-term planning directions for the Southern Tasmania region, influencing land use and development and providing a critical link between state and local strategic planning within the region. |
| NRM South strategies and plans | Strategy 2030 - a framework for action to guide activity that will help manage and improve the natural resources in our region, with a view to long-term outcomes that include support for Aboriginal communities, improving landscape resilience to climate change, improved waterway health, and reducing impacts on Tasmania's threatened species, the regional strategies maintain a strong focus on improving the condition of natural resources and driving sustainable production using specific and measurable criteria.<br><br>Biodiversity and Natural Capital Emergency Preparedness, Response and Recovery Plan – a strategic blueprint to enhance preparedness, response, and recovery measures pertaining to emergency events impacting biodiversity and agricultural natural capital assets. The plan aims to provide information to assist integration of these crucial assets into emergency frameworks, and to mitigate risks, minimise damage, and expedite recovery processes for natural assets in the face of natural disasters. |
| Community Carbon Emissions and Energy Footprints | Developed by the Regional Climate Change Initiative (a collaboration by the 12 Southern Tasmanian councils that supports action to create climate resilience and transition to a low carbon economy) the report highlights the energy and waste emission reduction actions required by communities across the 12 local governments. |

# Appendix D: System description – dependencies

## System Description - understanding dependencies and connections

The matrix below attempts to illustrate the complex system of interdependence and relationships between each of the goals. Starting with the goal on the left, follow the row across to see which goals (#) it is reliant upon (R) and which support it (S) to be achieved



# Appendix E: Case studies

CASE STUDY 3


2023 participants in the Hill Top Hike, an annual awareness and fundraising event organised by the Right Place Network. Photo: Jorinde, Harcourts Huon Valley.

## CASE STUDY 3

## Supporting mental health and wellbeing in the Huon Valley through the Right Place Network

### Overview

In 2015, in the Huon Valley, we created the Right Place Network, which is made up of local people and organisations volunteering to help people find the health and community services they need, when they need them. These members are based at local schools, banks, post offices, health centres and more. The Right Place aims

to be as accessible as possible with both an online directory as well as having face-to-face locations across the community, identifiable through placement of the Right Place logo on their front door or window.

Our members are in privileged positions to provide guidance to someone reaching out for support, actively connecting the person to the right service and communicating directly with that service when appropriate. We reinforce that they are not experts or professional counsellors, simply a local person who cares and can help connect someone with local support services.

It is a way of working that puts people at the centre of their own care, and promotes communication, collaboration and engagement across sectors. The aim of educating and supporting this network was that its reach would eventually creep through our community, supporting those informal conversations with a friend, family member or colleague, about mental health or suicide concerns.

## Why did you do it?

In 2018, the community lost four people to suicide within four weeks, the oldest in their 80s and the youngest just 14. At that time there were no mental health services on the ground, and no one knew who to turn to, what to say or how to recover and support one another. The community realised we had to rely on each other. So, community, services and the local council came together to work out how we could support each other through tough times.

We heard that members of our community care deeply for others and that this is one of our strengths. We also heard that community members wanted to build their confidence and skills in supporting their families, friends and colleagues. We know that for many, times are tough and that with drought and climate variability, there will be additional stressors on mental health. This project is assisting community members to gain confidence to support the mental health and wellbeing of themselves, their friends, their families, and colleagues.

## How did you do it?

The project team have tapped into a pre-existing strength – the care within the community – and provided the space for people to come together, connect with others and have confidence to talk about the importance of mental health and resilience. The approach was twofold: encouraging people to build their own understanding of and resilience to mental health stressors while building people's confidence to support another person who might be struggling.

We recruited interested community members and then started running regular mental health self-care, resilience, first aid and suicide prevention training programs for our network members and began growing the Right Place Network's reach to sporting clubs, op shops, food banks and outlying townships.

We created easily accessible information about support services, again promoting them through the Right Place. One of our greatest partners has been A Tasmanian Lifeline, a counselling service that not only supports the person struggling, but also the community member providing the care. The key components were community awareness raising; promoting help-seeking behaviour; community education; and providing easily accessible information about available support services.

## Did it work?

The primary outcomes have been the increase in connections (soft infrastructure) across the community, increased confidence in talking about mental health care and improved knowledge of the services available. We currently have 120 members including CWA, Men's Sheds, She Shed, community halls, job provider agencies, transport services, libraries, child & family learning centres, food relief agencies, pharmacies, and so many more.

## Can others do it too?

Absolutely – The project team have tapped into a pre-existing strength, the care within the community, and provided the space for people to come together, connect with others and have confidence to talk about the importance of mental health and resilience.

## Which of the Southern Tas drought resilience goals does this contribute to?

2, 3, 8

Content contributed by Angela Barrington, The Right Place Network.

The Right Place Hilltop Hike event 2023. Photo: Jorinde, Harcourts Huon Valley.

CASE STUDY 4

Blackmans Bay Community Association Edible Garden Trail Hosts. Photo: David Bain.

# CASE STUDY 4

# Revitalising the Blackmans Bay Community Association

## Overview

Working with my local area community association, we aimed to redirect our efforts towards rich, authentic community resilience building after the disruption of Covid in 2020. We added the aim to 'Build community resilience by offering regular and varied opportunities for residents to get together and find connection to each other and to place' to the original aim of 'Promote and protect the interests of the residents, ratepayers and the environment of Blackmans Bay.'

We brought in regular connection activities that were low cost (in effort and money to organise) and provided contact points for our residents throughout the year. For example, beach clean-ups, crop swaps and boardgame nights. We also established an annual edible garden trail in Blackmans Bay that is aimed at bringing gardeners together and to inspire others in our community to develop edible gardens.

## Why did you do it?

After Covid there was a bit of a 'hands off' vibe to everyone's approaches to connection. People were feeling less trust and a lot of anxiety about seeing people face to face and building new relationships. However, throughout the pandemic it was clear that our local community was who we needed for support. Our community was made up of people who were ready to help and of people who were really living on the edge and struggling with their physical health, mental health and overall wellbeing. New residents to our community were without local family, and often their network was overseas. We wanted to ensure that everyone had someone physically close to them who they could call on when they were in need.

## How did you do it?

For the year 2021-22 we scraped around in a quiet meeting room and had five of us put up our hands to be on the committee. We had around 35 to 40 members, who were committed to their community, with a focus on physical resources, road infrastructure, water quality and planning. While these are vitally important and part of what is expected of a community association, in 2021 I began to push the group to include extra activities at their meetings which were inclusive, and which would attract a more diverse group of participants.

Regular beach/bush clean-ups were the beginning. I faced a few roadblocks, but I persoanlly maintained a solution-based focus (which is sometimes tricky) and made them happen. Crop swaps were the next to come in – they were and still are totally casual and joy-filled and happen monthly. Crop swaps allowed me to meet gardeners who would then become open garden hosts for the edible garden trail! The following year I reached out to a range of community members who I had connected with through local sharing groups, school and they jumped on board as committee members with a new aim of building community resilience. Thisfresh outlook spurred us on and we applied for funding (with a confident local artist who did the hard yards!) and got the Blackmans Bay Edible Garden Trail up and running. This gave us a strong profile and people began to recognise us as productive and happy people!

A major hurdle the funding overcame was insurance. This covered us for the entire year, so all our activities could be 'above board'. We have continued to advocate for our community, and we try to do it positively and in a collaborative way with council. Our meetings are at times that suit a diverse range of people (like families, who are welcome to bring their children) and rarely involve sitting down in a room with one person speaking at a time. We use thinking and questioning routines to allow all people to contribute in an equitable way and then consider our actions from there. We have since held parties in our skate park, one AGM was a community group market-type event, and we try to stay interesting and excited about what we are doing.

## Did it work?

Our membership has grown to around 100 people of a diverse nature. We see hundreds of people at our events and listen to their voices. We are hearing of more and more little connected groups springing up in our community, made up of people who we have introduced at our events. Our community garden (totally informal and not the association's) is becoming more productive as we are there monthly, and the plotters have become regularly connected. Groups are supporting people who are struggling with their health to create garden sanctuaries. People go swimming with their neighbours at ungodly hours and catch up with members they bump into at the beach. People are reaching out, suggesting events and helping run them or asking if we know someone who would fill in the gap, and we can generally find them!

## Can others do it too?

I believe that they could. It would be useful to resource help in the early stages of set-up for other groups, to see if they can skip the things that grind groups to a halt. Providing guidance to new groups, or established groups that need revitalising, would be an effective way to share the lessons we have learnt, to skip the queue and to allow them to jump straight into action. It is possible to play by the rules, but to get stuff done.

The barriers to this working are time and energy. We are constantly working on creating a system that allows enthusiasm to flourish and be sustained. We move in ebbs and flows, our enthusiasm can wane when we have a few months of working through rules and expectations, but then one simple crop swap can bring that energy back again. It is about finding that balance.

People seem to struggle with the commitment of being on a committee, and this is something we are currently trying to creatively problem solve in our group. As part of this we have identified that there are two focuses within our Community Association: community building and civic engagement. We are in a period of discovery where we aim to work out how to engage meaningfully with both areas, in a sustainable and joyous way; we have no doubt we can figure it out!

## Which of the Southern Tas Drought Resilience Goals does this contribute to?

1, 2, 4, 7, 8, 15, 17

Content contributed by Louisa d'Arville, Blackmans Bay Community Association.

CASE STUDY 5

East Coast farmers looking at connectivity and water efficiency solutions at Runnymede. Photo: Tahnee McShane.

# CASE STUDY 5

# East Coast farmers group supports connection and knowledge sharing

## Overview

Funded by the TAS Farm Innovation Hub, this project brought together farmers to discover their knowledge gaps regarding drought resilient practice. This community-led approach ensured that the project addressed the most pertinent issues faced by the farmers. A series of learning events, workshops and peer-to-peer learning opportunities were conducted, facilitated by experts to fill the identified knowledge gaps and enhance drought preparedness. These sessions focused on critical areas such as water security, maintaining stock numbers during drought, mental health and the impacts of extreme weather events. The project is now ongoing and aims to bridge the knowledge gaps through better communication tools, access to experts and peer-to-peer learning. It also functions as a social resilience tool, with in-person get togethers being a key foundation for the groups.

## Why did you do it?

Farming is increasingly evolving and challenging as the climate also changes. We wanted farmers to be better prepared and better connected for the changing climate, both at a business level, personal level and community level.

## How did you do it?

The East Coast Primary Producers Association (ECPPA) applied for funding through the TAS Farm Innovation Hub.

The funding enabled a paid facilitator to run the program. It is also supported by volunteers on the committee, as well as other organisations, such as Rural Alive and Well and NRM South.

## Did it work?

Yes. It has worked. One of the key outcomes has been a stronger and more resilient community. This has been measured by surveys after key events, as well as at end of the funding. Farmers were asked to answer the question 'please rank how well this information session has helped you strengthen your community network'.

"[Farmers] developed stronger community networks to support information sharing, fostering a collaborative approach to drought preparedness. Additionally, producers started thinking differently about drought resilience, considering diversification, infrastructure needs, and water use efficiency. The engagement levels were high, with the ECPPA farming community actively participating in project consultation, design and activities, ensuring the learning was tailored to their needs and preferences."

Additionally, it is important for farmers to get together to learn from each other and grow their social networks, and doing so at a learning event where their farming problems can be addressed is a great forum to strengthen community connections.

## Can others do it too?

Yes, this could be replicated, if resources (time, money) allow. An existing group structure would certainly be of benefit – as a level of trust and confidence allows better cohesion.

Peer-to-peer learning could certainly be used beyond farmer groups, for people who have similar interests or want to come together for a certain cause, such as waste management.

This approach can be applied to other community groups by bringing together members to identify their needs and challenges related to drought resilience. By securing funding, appointing a coordinator, leveraging volunteer support, and collaborating with relevant organisations, communities can create communication and learning platforms. Regular social gatherings and expert advice will help build a more connected and prepared community. By measuring and evaluating outcomes, the program can continuously improve and adapt to effectively strengthen resilience to drought and climate variability.

## Anything else you'd like to share?

The success of the events often comes from the informal sharing that happens after the main activities, especially when people gather over food. Participants enjoy getting together for field trips to see real-life examples of what they can achieve, which makes the learning experience more tangible and inspiring.

## Which of the Southern Tas drought resilience goals does this contribute to?

1, 2, 6, 9, 11

Content contributed by Tahnee McShane, East Coast Primary Producers Association.

CASE STUDY 6

Sprout Producer Program participants visiting Valley Field Farm in Glen Huon Tasmania. Photo: Libby McKay.

# CASE STUDY 6

# Sprout Producer Program strengthens resilience for small-scale producers across Tasmania

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## Which of the Southern Tas drought resilience goals does this contribute to?

1, 2, 6, 9, 11

Content contributed by Ollie Benson, Sprout Tasmania.

CASE STUDY 7

Sheep and cattle farmer Will Ferguson checking out the Farming Forecaster updates on his phone. Photo: Fraser Johnston.

# CASE STUDY 7

# Farming Forecaster gives farmers better climate data for improved planning and resilience

## Overview

The NRM South Farming Forecaster (FF) Project from 2021-24 to assist drought-prone dryland pasture producers in making well-informed decisions based on real-time data. Working in collaboration with partners NRM North and the Tasmanian Institute of Agriculture, NRM South facilitated the adoption of the 'Farming Forecaster' tool across Tasmania. This tool, developed jointly by CSIRO and producers, provides reliable pasture forecasts for the next three to four months based on rainfall patterns and climate impact. The initiative aims to help farmers protect their livelihoods, adapt to a changing climate, and secure the future of agriculture in Tasmania.

Through this project, NRM South and Tasmanian producers facilitated a common conversation around seasonal forecasts and soil moisture status, ultimately helping to optimise productivity and build resilience against climate variability.

## Why did you do it?

### *Listening to our community*

In response to the East Coast Primary Producer Association's request, we recognised the value of the FF tool as a vital resource to help Tasmanian producers manage drought. Already in use across NSW, the FF tool was refined and further developed to suit Tasmanian conditions and pasture species as part of the pilot project and the main FF Project, supported by NRM South through funding from the Australian Government's Future Drought Fund, Drought Resilient Soils and Landscapes program.

### *Caring for our agricultural landscapes*

Increasing drought in regions such as the Midlands, Derwent catchment and East Coast has reduced seasonal ground cover. Without adaptive measures, this could lead to soil erosion (and associated declining water quality), carbon loss, and a decline in dryland grazing viability. The project supports farmers with better planning tools for improved pasture management.

## How did you do it?

Farming Forecaster's success was based on listening to community needs, leveraging funding, and collaborating with partners. The project established 46 sites, engaged with 150 producers across Tasmania, and created resources (including podcasts, videos, and factsheets) to offer ongoing support for drought resilience beyond the life of the project funding.

## Did it work?

The project saw significant uptake of the FF tool by producers, a continuing expansion of the probe network, and received highly positive producer feedback. Surveys and interviews conducted by a social researcher bore out the success of our project:

> **"Farming Forecaster is a very practical tool for producers who are at the coal face of rainfall variability."**
>
> — East Coast producer

> **"The tool is the best thing we can give producers for their mental health, to help them become more confident in their decision-making and to make better decisions."**
>
> — Phil Graham, Advisor

## Can others do it too?

The project emphasises the need for support tools to assist with drought decisions for the agricultural community. The FF tool currently provides free information for Tasmanian producers. NRM South is working with Farming Forecaster Inc. to investigate a co-contribution model involving the farming community, industry and government to support the maintenance and potential future development of the FF network.

## Anything else you'd like to share?

- Farming Forecaster website: www.farmingforecaster.com.au
- NRM South Farming Forecaster web page for more information Farming Forecaster Tasmania – Supporting Farmers for Drought Resilience – NRM South

## Which of the Southern Tas drought resilience goals does this contribute to?

6 & 11

Content contributed by Jacinta Leys, NRM South.

CASE STUDY 8


Excavator work on the Lachlan River. Photo: Derwent Catchment Project.

# CASE STUDY 8

# Lachlan River restoration with the Derwent Catchment Project

## Overview

A comprehensive three-year river restoration project has been undertaken to implement the *Lachlan River Flood Resilience Plan,* developed by the Derwent Catchment Project (DCP) in 2020. The key achievements were:

- **Willow eradication:** Primary control of invasive willows, which destabilise banks and reduce aquatic health, has been undertaken along the river's entire 23-kilometre length.
- **Bank stabilisation:** Erosion control measures have been implemented in critical areas to reinforce the riverbanks and prevent further degradation (koya rock bags in stepped wall formation at two high erosion sites on the river with clean fill deposited and compacted behind the constructed walls).
- **Revegetation:** Following willow removal and woody weed control, about1,500 native trees and shrubs have been planted along the riverbanks, with 2,000 more scheduled for planting this year.

## Why did you do it?

In 2018, a high-intensity rainfall event on the slopes of Mount Wellington caused extensive flood damage to the Lachlan River, Glen Dhu Rivulet and Sorell Creek. This initiative is aimed at significantly improving the Lachlan River's ecological health and enhancing its resilience to future flooding events. The key objectives were:

- **Improving river flow and function:** By removing willows and flood debris, the project aims to enhance the

- natural flow and functionality of the Lachlan River. Willows are shallow rooted and can break during high flow events, causing damage to the riverbank and infrastructure such as bridges and pumps. Standing willows can also exacerbate flooding.
- **Improving biodiversity:** The revegetation efforts focus on planting deep-rooted native species along the riverbanks. These plants play a critical role in stabilising the banks, reducing erosion and improving overall biodiversity. The native vegetation also creates a more resilient river ecosystem that can better withstand future floods.

## How did you do it?

The Derwent Valley Council and the DCP collaborated to secure a grant from Disaster Ready Fund (Australian Government) to implement the Lachlan River Flood Resilience. The DCP held public events, sent formal letters through the rates notices with support from Council, and door knocked all properties along the river to establish working relationships with the landholders. Signed management agreements ensured the willow removal work and revegetation efforts were agreed to on a property-by-property basis. The project and on-ground team continue to work closely with landholders to facilitate on-ground activities. These relationships strengthen over time, especially when positive outcomes on the ground are realised.

## Did it work?

Recent high rainfall weather events (August 2024) tested the restoration efforts so far, and we were pleased when multiple landholders called to say how impressed they were with the function and lack of debris flowing down the Lachlan River. The project provides resources to report on the work undertaken in terms of how much willow removal has been completed and the extent of revegetation. Monitoring at a finer scale is not funded; however, there is a wide body of evidence relating to the benefits of willow removal and planting deep-rooted native species for riparian resilience and flood mitigation.

## Can others do it too?

Yes, this approach can be scaled. However, it is vital to have the right team with skills and experience spanning riparian restoration planning, community extension and on-ground logistics to ensure success.

## Anything else you'd like to share?

Building on the success of the Lachlan River project, restoration work will soon extend to Glen Dhu Rivulet and Sorell Creek, beginning this year. These waterways were also impacted by the 2018 floods, and similar measures will be taken to improve their resilience and ecological health. We have also been successful in another three-year Disaster Ready Fund grant for willow removal and revegetation on the Clyde River.

## Which of the Southern Tas drought resilience goals does this contribute to?

10, 11, 13, 17

Content contributed by Eve Lazarus, Derwent Catchment Project.

CASE STUDY 9

Nicole and JJ monitoring a cool burn in native grassland. Photo: South East Tasmanian Aboriginal Corporation.

# CASE STUDY 9

# Cultural burning and revegetation in the Huon Valley

## Overview

Building resilience within the palawa community and enabling us to work with other land managers to look after country. Partnering with a local business, we worked over several years to manage the land in a way that enhanced landscape function, reduced fire risk, halted erosion and increased native vegetation. This was done through removal of hazardous fuel loads with multiple cool burns, usually at night, removing small amounts of vegetation at a time. We concentrated on eradicating invasive weed species, including their seedbanks, while protecting native species. People across the community came along, increasing exposure to cultural and land management practices within the community. We also used the opportunity to bring community together to connect, share and celebrate through yarning circles and skill sharing on the land.

## Why did you do it?

We are passionate about building capacity within our community, but it is hard to do that without access to land. Our partnership with these private land managers allowed for mutual benefits: we got to increase skills and knowledge of our community and they benefited from a reduced fuel load, a nicer more useable space and healthier country.

We say, Right Fire, Right Place, Right Time. Cultural burning is different to fuel management, which is focused on reducing risk in the short term, but over time actually makes a landscape more fire prone. Our approach reduces fire risk while also increasing germination of native tree species and regenerating the land.

## How did you do it?

South East Tasmanian Aboriginal Corporation (SETAC) received four-year funding from the Australian Government Department of Industry, Science, Energy and Resources (Preparing Australian Communities – Local Stream) to help build capacity and capability within our community. The funding allowed us to employ four people and train them in both cultural burning and a Cert 2 in remote firefighting. This investment was crucial for enabling us to have the capacity to act when approached by a business operating in our area that wanted to reduce fire risks and bring cultural practice onto their property.

Partnerships were key to the success of this work. In addition to the business managers, we also partnered with other Aboriginal organisations, such as Koori Country Firesticks Alliance, who assisted with the burning and shared skills with our community to enhance our knowledge and practice.

## Did it work?

There have been many benefits, both for the land and for our community. One of the most spectacular results that we saw was that a patch of land covered in blackberries and other European species, with natives mixed in, was transformed into a field of native white flag irises after two years of cool burning. No one in living memory had seen them in this place and up they grew once the invasives were gone and the land started healing. For our community, seeing the irises come back had a profound impact on mental health and wellbeing, reinforcing the importance of the work we are doing. Having a space to come together as a community increased the sense of connection and belonging for many.

## Can others do it too?

Definitely, we are really keen to help build capacity of other Aboriginal organisations in Tasmania to do this work and build resilience within the community. It does rely on support from outside though, both through funding to enable us to build capacity, but also through getting reliable access to land to care for country. In this example, for instance, a change of management at the business we were partnering with meant there was no longer a desire by them to maintain a cultural fire regime on the property. Not only does that mean that we are no longer able to care for that country, but also that we lost a place that community had connected with and gathered on.

## Anything else you'd like to share?

Through this and opportunities like it, we have been able to involve others, to engage stakeholders and to find interested landowners, enabling this work to continue within our community. This is healing the country we work on, along with our own mental health through these connections.

## Which of the Southern Tas drought resilience goals does this contribute to?

1, 2, 3, 4, 10, 12, 13

Content contributed by James Shaw, South East Tasmanian Aboriginal Corporation.

CASE STUDY 10

Volunteers weeding out cocksfoot seedlings in the Eucalyptus viminalis coastal woodland. Photo: Marina Campbell.

# CASE STUDY 10

# Community and council work together won native flora park in the southern beaches

## Overview

Southern Beaches Landcare Coastcare protected threatened plants, threatened plant communities (TasVeg DVC, DAS, ARS/ASS), and the habitat of threatened species (eastern barred bandicoot, swift parrot, masked owl) and other local fauna in the largest area of Council-managed bushland in our municipality. As we work together, we share and laugh and cry, supporting each other to manage anxiety arising from our experience of the climate crisis.

## Why did you do it?

Irreplaceable protected and precious local plant communities and habitat were being destroyed by inappropriate management of perceived fire risk by Sorell Council and the local fire brigade. This included annual, summer slashing with an eight-tonne tracked excavator with groomer attached and too hot, too frequent, poorly managed burns. Staff were not adhering to the Council's own management plan or the expert fire plan for this precious reserve. The program of

fire management was increasing fire risk, encouraging vigorous woody regrowth of weeds and shrubs and favouring fire-prone weedy grasses, while destroying well-documented natural values of the reserve.

## How did you do it?

Community! Community! Community! This is where the knowledge is held! High staff turnover in local government and failure to pass on or consult digital records results in a loss of corporate knowledge. Community members have to educate and inform successive personnel. Inadequate funding for the environment, from all levels of government over many years, results in a repeated loss of relevant knowledge and expertise.

Southern Beaches Landcare Coastcare volunteers negotiated with Council to take on an area where we could demonstrate a more effective management regime that enhances natural values and reduces fire risk: hand weeding invasive bulky, weedy grasses which dry off early and are ready to burn in early summer and allowing native grasses, which are deep rooted, drought resilient and remain green throughout the fire season, to thrive. This approach also allowed orchids, native grasses, sedges and wildflowers to mature, flower, set seed and spread. Pollinators, reptiles, birds and fauna soon began returning. We kept in regular contact with the Council NRM officer and ran working bees and activities with community and students from the local school to explain and demonstrate our approach and to delve into local nature and science.

We were deeply shocked when, despite our efforts and their demonstrated success and the support of the Council NRM officer, senior Council staff decided to bring in the eight-tonne excavator in direct contradiction of the council's own plan for the reserve!

We stood our ground, examined the Council's management plans, attended Council meetings, contacted councillors and commissioned and funded an independent Natural Values Assessment of the reserve. We considered citizen action. Thankfully, senior Council staff entered negotiations with us for more sensitive management.

## Did it work?

Council commissioned new management and fire management plans for this and other reserves, with community consultation. Council funded the Natural Values Assessment. At present we have good relationships with and support from several key staff at Council. Two works crew staff work with us for two hours a week to share understanding of the natural values of the reserves and weed management.

This is a game changer! The culture among Council staff is changing from regarding our group and volunteers as a nuisance, to one where we work and learn together. With their help we have capacity to take on and revive new areas in the reserve. Council staff now contact us before undertaking works on local reserves where natural values may be affected.

The community is more aware of the value of this and other reserves. People share their observations of fauna and flora or contact us for advice about what to plant or how to deal with weeds.

We are reducing the fire risk and improving the drought resilience of vegetation in the reserve.

## Can others do it too?

Yes! However, we would still be 'out in the cold' if it were not for new councillors elected during the 2022 local government elections, along with a few key council staff. Also, new residents have moved into our community attracted by the active local community and the local environment. They bring with them knowledge and expectations which have added critical mass to the efforts of those who have been caring for the local environment for decades.

## Anything else you'd like to share?

Never underestimate the importance of community! We have hung in there for over 30 years and not given up. A modest investment in support for community volunteers goes a very long way!

We need to rebuild a properly funded public service with environmental expertise at all levels of government to inform decision-making and support communities. The current cycle of short-term politically motivated grant rounds results in loss of knowledge and networks and leaves communities and the environment vulnerable.

Website: southernbeachescoastcare.org

## Which of the Southern Tas drought resilience goals does this contribute to?

1, 2, 10, 15, 17

Content contributed by Gwen Egg, Southern Beaches Landcare Coastcare.

Council Works staff assisting with 'habitat enrichment' – chainsawing sections of a fallen Eucalyptus trees which can then be rolled over to create hollow logs. Photo: Nicole Jamison.

CASE STUDY 11

Surveying dung beetles. Photo: Rachael Treasure.

# CASE STUDY 11

# Dung beetles introduced to improve water-holding capacity in Tasmanian pastures

## Overview

Twelve species of cattle dung-burying dung beetles were released throughout dairy and beef regions of Tasmania. This was done as part of, and as offshoots from, the CSIRO Dung Beetle Program. Four of these species have established successfully over much of the state; however, there are still many seasonal and spatial gaps in dung beetle coverage.

## Why did you do it?

Dung beetle activity increases rainfall infiltration into the soil and increases water-holding capacity. As a result, there is much less rainfall run-off, and increased storage of water in the soil. This dramatically improves a landscape's resilience to rainfall variability and drought.

## How did you do it?

The key element that made these introductions possible was a nationally funded Dung Beetle Program. This program conducted the very expensive exercise of selecting and bringing exotic dung beetles into the country, ensuring they were safe to release, and breeding sufficient initial seed populations.

Once the beetles were in the country, organising their distribution was a team effort. Some of the leaders in this effort were generous farmers who saw the value of dung beetles, NRM and government bodies, and Landcare programs.

## Did it work?

The introduction of dung beetles has made big strides towards increasing the drought resilience of large areas of Tasmania. Few studies have been done to directly prove this, but to illustrate how effective dung beetles can be, a recent study done is South Australia found that, following approximately 50 mm of unseasonal autumn rain, 95 per cent of the rainfall had entered the soil profile where dung beetles were present, whereas where the beetles were absent, only 10 per cent of the water had entered the soil profile.

## Can others do it too?

Replication: the main barriers to maintaining successful dung beetle populations are management practices, particularly the use of chemicals in farming.

Scaling the impact: the increased infiltration and water storage capacity that could be provided by the introduction of a range of additional deep-tunnelling dung beetles is immense. Internationally, some dung beetles tunnel deeper than one metre; however, only one of the dung beetles currently established in Tasmania tunnels deeper than 15 cm.

## Anything else you'd like to share?

While the introduction of cattle dung-burying dung beetles has been a great success so far, the opportunity left untapped at this point in terms of increasing landscape drought resilience with deep-tunnelling dung beetles potentially dwarfs the benefits so far gained.

## Which of the Southern Tas drought resilience goals does this contribute to?

10, 11, 13

Content contributed by Andrew Doube.

CASE STUDY 12

On the Google Maps image, two “contours” are visible and labeled. Note: one has been incorrectly labeled by Google Maps as ‘Pages Creek’. They were installed in recent years based on Natural Sequence Farming principles to drive landscape rehydration, retain soil fertility, sequester carbon and recreate habitat for native wildlife. Despite their relatively recent construction, and the very dry conditions since, in the image green growth can be seen developing on the downhill side of the contours.


# CASE STUDY 12

# Ripple Farm landscape healing hub improves farm landscape resilience in Richmond

## Overview

In 2018 I was asked to assist property owner Daniel in the repair of 100 acres of degraded land and waterways with the vision of restoring it to a functioning ecosystem, profitable food production enterprise, and education hub. To do this we would use holistic grazing management, biological function repair, regenerative principles and Natural Sequence Farming (NSF) methods.

## Why did you do it?

We wanted to showcase the power of adopting regenerative agricultural principles and show how farm inputs can be reduced, landscape can be repaired, and nutritious ethical food can be created within the space of ecological function. We wanted to solve the issue of inheriting degraded land and having limited capital to repair it and we knew by partnering with free natural resources to restore it, we could not only repair the land hydrology and soil, but build a loyal, local customer base seeking ethically raised meat.

## How did you do it?

Pasture cropping pioneer Colin Seis from Gulgong NSW was a long-term mentor of mine. He advised us on direct drilling multi species pasture with a homemade machine and 'crash grazing' the resulting biomass 'aka weeds' that had arrived to heal the soil. We used Dexter cattle and Aloeburn Poll Merino sheep to kick start the natural cycle. Rachelle Armstrong from NutriSoil advised us on biological inputs such as seaweed and worm juice. Hamish McKay, a biodynamics expert advised us on holistic systems. For the past three years, Stuart Andrews, son of Natural Sequence Farming founder, has been to the farm to repair the land's hydrology, which has been destroyed since settlement.

## Did it work?

We have had UTAS students and school groups study water infiltration and plant and insect diversity, compared with conventionally-managed land over the fence. The life that is returning to Ripple Farm since the hydrology repair and management change has been astounding. The benefits have been delicious beef, mutton and eggs that attract premium payment from loyal conscientious consumers via the not-for-profit Tasmanian Produce Collective. We now have people from all over the world requesting to work on the farm to learn 'how' we achieved landscape restoration.

## Can others do it too?

Absolutely, yes this is scalable and is being replicated across Australia and, in fact, the world. The barriers have been political. Regenerative ag has nothing to 'sell' so it sits outside the commercial economics-only model of agriculture. Historically, the field of university study has been influenced by others with commercial interests, so adoption has been slow. Also, a different 'mindset' is required. Instead of linear learning, reductionist science and prescription agriculture, it requires holistic thinking, biological understanding, wisdom and intuition.

## Anything else you'd like to share?

A major current limitation and stress is the lack of an option for accredited on-farm livestock slaughter, processing and packaging. It results in overgrazing, profit loss and incredible loads of stress for both animals and owners, as our only option is to send animals away to large centralised abattoirs that are increasingly only accepting large farm supermarket customers. On-farm kills for on-sell would be a game changer for drought resilience and profitability for our small but mighty model of farming. I have paused the direct sell business as current kill systems do not meet the farm's high ethical animal standards. I am hopeful legislation will alter to take in the needs of small holistic meat producers.

## Which of the Southern Tas drought resilience goals does this contribute to?

Particularly 6, 10, 11, 13. But all of them!

Content contributed by Rachael Treasure.

# Appendix F: Useful Resources

**Care Through Disaster – Australia ReMADE –** https://www.australiaremade.org/care-disaster – explores what communities need, and how leaders at all levels – from citizens through to community organisations and every level of government – can better equip Australians to face our biggest challenges.

**Climate Futures Tasmania** – https://climatefutures.org.au/ – Based at the University of Tasmania, Climate Futures provides localised climate information, producing fine scale climate change projections that allow local analysis of climate impacts, changes to seasonality and extreme events. The site contains links to projects, such as the Climate Atlas and technical reports and will have updates on development of the Natural Hazards Atlas for Tasmania, which will map natural hazards to build disaster resilience and preparedness.

**Derwent Catchment Project –** https://derwentcatchment.org/resources/ – a range of resources including information on cross industry biosecurity risks associated with a changing climate, short videos about weed control, pasture management, willow removal and flood recovery.

**Derwent Pasture Network** – www.pasturenetwork.org/ – information about dryland grazing, tools and resources.

**Drought, disaster and rural support** (Australian Department of Agriculture Fisheries and Forestry) – https://www.agriculture.gov.au/agriculture-land/farm-food-drought/drought - Australian government programs and services to help you prepare for, manage and recover from dry times and disasters.

**Drought Ready TAS** – https://droughtready.tas.gov.au/ – Regional Drought Resilience Planning in Tasmania.

**Farm Point –** https://farmpoint.tas.gov.au/ – Tas Government portal to connect producers to information that informs, educates and helps them grow their businesses.

**Future Drought Fund –** https://www.agriculture.gov.au/agriculture-land/farm-food-drought/drought/future-drought-fund – overview of the FDF programs, current funding rounds and more.

**Landcarer online library –** https://www.landcarer.com.au/ – online repository of tools for learning, engagement and interaction to help landcare and other environmental community groups, to share and expand their knowledge, skills and resources.

**Land Access Toolkit – Sprout Tasmania –** https://www.sprout.org.au/the-land-access-toolkit – resource designed to support farmers through finding, assessing, and securing farmland.

**NRM South –** https://nrmsouth.org.au/resource-library/ – searchable library of information and resources for natural resource management.

**Plan Build Tasmania** https://www.planbuild.tas.gov.au/ – For properties that fall under the Tasmanian Planning Scheme, Plan Build Tasmania provides a comprehensive guided enquiry service, including identifying planning, building and plumbing rules that may apply to a proposed project. Users can generate a property report that includes maps, details of the planning zone, codes and other information that affect the selected property.

**Renewables, Climate and Future Industries Tasmania** – https://recfit.tas.gov.au/get_involved/resources – resources about renewable energy and climate change in Tasmania, the government's actions, and frequently asked questions.

**Resilient Building Council** - https://rbcouncil.org/resilience-ratings/ – Disaster and Energy Efficiency Resilience Ratings are in development and a Bushfire Resilience Rating app has just been launched. The app enables Australians to assess their site-specific risk and receive evidence-based recommendations on actions to improve their bushfire resilience.

**Sustainable Living Tasmania** – https://slt.org.au/take-action/households/ - practical information for households and organisations about living more sustainably.

**TAS Farm Innovation Hub** – https://www.tasfarmhub.com.au/resources/ – links to useful websites and downloadable reports, fact sheets and case studies relevant to Tasmanian farmers, agribusinesses and regional communities seeking to build climate resilience and preparedness through practice change and improved decision making.

Drought
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Tasmania

Australian Government

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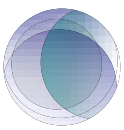

Future
Drought
Fund

Tasmanian
Government