

# **BULOKE SHIRE CLIMATE ACTION PLAN 2021**



***Acting Locally,  
Thinking Globally,  
Building A Better Buloke***



# ABOUT THIS PLAN

Climate change can have direct and indirect impacts on our environment, economy and people. These impacts can be in the form of both risks and opportunities arising from physical impacts, or transitional impacts (from the process of adjusting to a changing climate and a low carbon economy).

**Risks and opportunities** were identified for Buloke Shire through the *“Report for Buloke’s Climate Change Mitigation & Adaptation Strategy & Plan”* (insert link here) under the themes of people, natural resources, built environment, economy and council operations. *The Report for Buloke’s Climate Change Mitigation & Adaptation Strategy & Plan* was prepared for the Buloke Shire by **Ndevr Environmental** in August 2021.

**Climate mitigation and adaptation actions** have been identified to reduce Buloke Shire Council’s corporate and community climate risks and enhance climate-related opportunities. Climate change mitigation refers to measures to avoid and reduce greenhouse gas emissions, while adaptation refers to measures to adjust to current and expected impacts of climate change. Mitigating climate change will help to avoid future climate change scenarios and adaptation will help manage the effects of climate change impacts that are unavoidable.

Actions have been categorised into 13 goals for climate action:

- Integrate climate into Council operations;
- Robust emissions measurement;
- Ongoing emergency management;
- Waste and landfill emissions reductions;
- Council building improvements;
- Community building improvements;
- Energy security and technology switching;
- Low emission transport;
- Transport infrastructure improvements;
- Improve septic tank management;
- Enhance biodiversity, conservation and revegetation;
- Adaptive agriculture; and
- Shared community vision.

It is important this Plan is interpreted alongside and integrated with Buloke Shire Council Plan 2021-205 and Long Term Community Vision, local Community Plans and other intersecting key documents such as the Municipal Emergency Management Plan, the Waste and Resource Recovery Strategy.

# BULOKE 2030 CLIMATE SCENARIO

General findings for climate scenario projections for Buloke Shire in 2030 are consistent across the Victorian snapshots and previous works such as the AECOM IRVACAP (2014), NCCMA Climate Change Plan (2015), Mallee NRM Plan (2016) and the DELWP Regional Adaptation Snapshot – Loddon Mallee (2017).

Overall, Buloke Shire can expect:

- Average temperature increases across all seasons
- Increase in the number of extreme temperatures
- Reduced annual rainfall
- Increase in heavy rainfall intensity
- Increased evaporation
- Reduced humidity and frosts

Based on the above variables, extreme events such as floods and fires are also likely to increase. Key rivers in the Buloke region run through the major towns of Donald and Charlton and floodplains and make these towns particularly susceptible to flooding. Since 2010, Donald has experience 3 flooding events with a major flooding event which occurred in 2011. The 2011 event impacted local and state roads, power, residential and commercial housing, community facilities (e.g., swimming pool, sports club), and agricultural land.

Charlton has experienced recent major flooding including September 2010, November 2010 and January 2011. In January 2011 nearly all of the town was flooded including houses, businesses, emergency service stations (i.e., ambulance, police and fire), hospital and health centre, aged care facility and schools. In addition, a major flood event occurred in Birchip in 2018, causing \$10.8 million in damage. Since most of the land use in Buloke is for agriculture, bush fires are unlikely. However, farms can experience fires to grass and crops.

A more detail look at Buloke’s Climate Scenario, Risks and Opportunities can be found in the *“Report for Buloke’s Climate Change Mitigation & Adaptation Strategy & Plan”* by NDevr Environmental.

Table 2: 2030 Climate Scenarios Across the Mallee, Wimmera and Loddon Regions

Climate variable	Mallee Historical (1986-2005)	Mallee Projected Change (2020-2039)		Wimmera Historical (1986-2005)	Wimmera Projected Change (2020-2039)		Loddon Historical (1986-2005)	Loddon Projected Change (2020-2039)	
		RCP4.5	RCP8.5		RCP4.5	RCP8.5		RCP4.5	RCP8.5
Maximum Temperature (°C)	23.9	25 (increase by an average of 1.1)	25.2 (increase by an average of 1.3)	21.4	22.5 (increase by an average of 1.1)	22.7 (increase by an average of 1.3)	20.7	21.7 (increase by an average of 1)	22.1 (increase by an average of 1.4)
Minimum Temperature (°C)	10.3	11 (increase by an average of 0.7)	11.1 (increase by an average of 0.8)	8	8.7 (increase by an average of 0.7)	8.8 (increase by an average of 0.8)	7.6	8.3 (increase by an average of 0.7)	8.4 (increase by an average of 0.8)
Rainfall (mm)	278.5	261.79 (decrease by an average of 6%)	253.43 (decrease by an average of 9%)	403.4	371.13 (decrease by an average of 8%)	363.06 (decrease by an average of 10%)	499.1	479.14 (decrease by an average of 4%)	449.19 (decrease by an average of 10%)
Relative Humidity (%)	NA	-1.9	-2.4	NA	-2.0	-2.4	NA	-1.5	-2.7
Pan Evaporation (%)	NA	14.4	17.7	NA	13.3	14.9	NA	11.3	15.3
Solar Radiation (%)	NA	1.6	1.3	NA	1.7	1.6	NA	1.7	2.0
Surface Wind Speed (%)	NA	-1.3	-1.5	NA	-1.0	-1.7	NA	-1.1	-1.4
Extreme Daily Maximum Temperature (°C)	NA	1°C average increase	0.8°C average increase	NA	1.0 average increase	1.4 average increase	NA	1.0 average increase	0.7 average increase
Extreme Daily Rainfall (%)	NA	1%	-2%	NA	-2.0	-4.0	NA	-6.0	-7.0

## WHAT WE HEARD

In developing this Draft Plan, Ndevr Environmental undertook a community survey.

Of the 2030 climate scenario predictions, respondents were most concerned about increase in **extreme temperature days** and **fire risk** and **reduced annual rainfall**.

The top concerns about climate change impacts included: disruption to essential services (e.g., power blackouts, telecommunications); closely followed by loss of native plants and animals, and reduced crop yields or livestock health; followed by increase in pests, and water quality and security.

When asked about how they felt about how climate change may impact their lives, respondents were mostly concerned about the impact on their quality of life (e.g., health, freedom, access to resources, etc), cost of living and economic viability of businesses (particularly farming and family farms).

The Buloke community is already making progress towards climate change mitigation and adaptation to reduce their emissions, respondents have made efforts primarily towards waste reduction, improving energy efficiency, installing solar panels and making improvements to their property.

To enhance their resilience to climate change, respondents have made efforts primarily towards installing rainwater tanks, planting vegetation on their property, making building improvements, and fire prevention and management actions.

Despite efforts to reduce waste, use rainwater tanks, install solar, plant vegetation, and make improvements to their property, survey respondents still identified these as key areas they would like to receive more support in implementing.

Improved systems for **recycling** and green waste were the most commonly requested actions for support, closely followed by **renewable energy systems** at the community level. This is evident when looking at what respondents identified as the largest barriers to mitigating and adapting to climate change: lack of systems and infrastructure. Funding was also identified as a key barrier.

## YOUR TOP IDEAS

Ideas from survey respondents to improve existing systems and infrastructure included:

- **Recycling.** *"Soft plastic collection point. Glass collection point. Improve the transfer stations to allow the collection of more materials such as textiles, shoes, carpets etc., and have a partnership with the recyclers of such materials to collect and use them."*
- **Green waste.** *"Turning green waste into compost and wood chips. Support use of green waste services (e.g., composting and worm farms). Composting scheme to educate and encourage composting at home."*
- **Renewable energy.** *"Solar farms and wind turbines stations for each town, with power storage."*

When asked about how Buloke Shire Council could best support the community to take climate action, Council leadership, promoting community collaboration and lobbying were agreed to being the most helpful. These are closely followed by information programs and funding schemes.

Some specific supportive actions that survey respondents have suggested under the categories are as follows:

- **Lead by example.** *Replace their vehicle fleets with electric or hybrid vehicles (cars, utes, machinery etc.). Council should be capturing all food waste from their offices and composting waste.*
- **Information/education.** *Provide environmentally friendly tips. Support the delivery of long-term behaviour change type programs in businesses and schools in the Shire (e.g., Resource Smart Schools). Information sessions and workshops at grassroots level.*
- **Funding/grant schemes.** *Rate reduction for carrying out climate change activities - whether that be household rates or farm rates.*
- **Lobby.** *Lobby for improved rail freight to reduce the number of trucks in the area and for the return of passenger rail.*

# HOW WE WILL CREATE ACTION FOR CLIMATE

## GOAL

### Integrate climate into Council operations

## ACTIONS

- Include climate scenario and risk profile in Councillor briefing packs and staff induction.
- Ensure climate mitigation and adaptation is represented in all relevant documents, policies and procedures. Continue reporting on sustainability implications in Reports to Council.
- Develop climate mitigation and adaptation guidance through the local planning scheme.
- Provide professional development training to planning staff on how to educate residents on climate ready developments.
- Use the How Well Are We Adapting tool to monitor impacts of climate change on Council services and develop responses.

## ROLE

Leader, Regulator.

## MEASURE

Number of staff completed training.  
Outcome of the How Well Are We Adapting tool.

### Robust emissions measurement

- Measure baseline corporate and community emissions in line with robust standards.
- Consider setting a reduced emissions target and interim targets.
- Annual measurement and reporting.

Leader

Annual Reporting

### Ongoing Emergency Management

- Continue with the Municipal Emergency Management Plan – review and update regularly, develop community champions.
- Include planning for alternative transport routes in MEMP and protection of shelters.
- Ongoing community education campaigns and training on MEMP.
- Assist community groups and businesses with business continuity planning during times of emergency or extreme events.
- Implement the Safer Together project between CFA and DELWP in the Buloke Shire.
- Identify further community resilience building opportunities.

Leader, Provider

Regular updates of MEMP.  
Number of community education and information sessions held.

### Waste and landfill emissions reductions

- Investigate composting program to divert green and food organic waste from landfill.
- Support partnership opportunities to develop a Container Deposit Scheme and Soft Plastic Recycling for the region.
- Investigate feasibility of recycle and/or compost processing plant in Buloke. Explore partnership options such as BCG for FOGO circular economy
- Investigate feasibility of Emissions Reduction Fund landfill gas capture project and implement if successful
- Support grass-roots initiatives to reduce single-use economy, such as local Op Shops and repair sheds.

Leader, Provider, Partner

Tonnes of waste deposited to landfill versus organic and recycling sites.  
Number of households or businesses participating in programs.  
Meeting Recycling Victoria Policy targets.  
Increase in patronage and support for Op Shops.

# HOW WE WILL CREATE ACTION FOR CLIMATE

## GOAL

### Council building improvements

## ACTIONS

- Conduct facility assessments, targeting high emitting or at-risk Council-owned facilities first.
- Identify specific reduction/adaptation measures for each facility and implement.
- Keep track of assessments and improvements in line with asset management
- Consider a Sustainable Building Policy for new buildings and refurbishments

## ROLE

Leader.

## MEASURE

Number of buildings assessed, and improvements implemented.

Reduction in BSC emissions.

### Community building improvements

- Encourage community to participate in schemes and programs that help them to understand their energy bills and seek advice/funding on how to reduce energy consumption and make their buildings more resilient
- Advocate for equitable access to insurance and policies which include climate considerations
- Continue to promote the uptake of Council's Sustainability Grant Program.

Leader, Supporter, Advocate, Funder.

Number of households and residents participating in programs

Community emissions reductions

Number of Sustainability Grants funded.

### Energy security and technology switching

- Advocate for suitable transmission and distribution infrastructure to support renewable energy projects
- Complete Microgrid Feasibility Study and implement upon successful study

Supporter, Partner, Provider

Roll-out of microgrid

Approval of new transmission lines

### Low emission transport

- Look for partner opportunities to conduct a feasibility study and transition planning to electrify fleet vehicles.
- Raise community awareness of EVs and encourage community to take up State packages (e.g., grant for EV purchase)
- Continue to assess community EV use and advocate for State to (co-)fund chargers and electricity costs.
- Collaborate with the Mallee Hydrogen Technology Cluster to identify opportunities as they arise.
- Encourage and support car-pooling projects and community solutions towards low emission transport.
- Continue investing in footpath maintenance to encourage walking instead of driving within small town reach.

Provider, Partner

Number of EVs registered in Buloke.

Corporate fuel usage data.

### Transport infrastructure improvements

- Update asset management in line with mitigating climate risks
- Advocate for public transport infrastructure
- Advocate for rail freight

Advocate

Rail Freight Alliance attendance.

Listing in Advocacy Strategy.

# HOW WE WILL CREATE ACTION FOR CLIMATE

## GOAL

### Improve septic tank management

## ACTIONS

- Re-new community education on correct septic tank management to reduce risk of health and financial risks to community
- Better resource Environmental Health to increase frequency of inspections
- Advocate for improved domestic wastewater management in townships currently without formal sewerage systems

## ROLE

Leader.

## MEASURE

Number of inspections conducted  
Percentage of compliant systems  
Number of complaints

### Enhance

### biodiversity, conservation and revegetation

- Strengthen relationships with local Landcare Groups.
- Ecological mapping and planning
- Continue use of tools and tree asset management and undertake a prioity treeaudit
- Work with key community groups to link with funded opportunities to promote community understanding of biodiversity, conservation and revegetation.
- Strengthen relationships with Traditional Owners in biodiversity, conservation and revegetation projects.

Leader, Provider, Partner

Number of trees planted in Buloke region (by Council and other groups)  
Outcome of tree audit

### Adaptive agriculture

- Organise educational events with key partners, such as building on the success of the BCG Climate Change.
- Showcase existing wins
- Collaborate with State and farming/agriculture groups to provide cofunding opportunities to small farmers that are not eligible for other schemes

Provider, Facilitator

Number of participants at events  
Number of small farmers with approved funding

### Shared community vision

- Develop a communication strategy to encourage positive discussion and acceptance of climate change
- Encourage community networking through participation in existing programs
- Facilitate community participation in grassroots educational campaigns (e.g., climate chats for schools)
- Linkthis plan strongly with Local Community Plans and Council Plan and Long Term Community Vision to collectively work towards "Building a Better Buloke".

Provider, Supporter, Facilitator

Number of participants in programs/attending events