
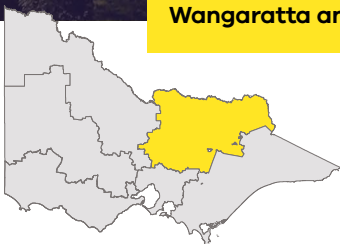


Regional Adaptation Snapshot

Hume



Hume is in Victoria's northeast, reaching from Melbourne's urban fringe to the Goulburn Valley, the Alpine high country and the Murray River. It has three major centres—Wodonga, Wangaratta and Shepparton.



What are the regional adaptation snapshots?

In 2017 the Victorian Government committed another \$9.3 million over three years to support regional solutions through the *Supporting our Regions to Adapt* program. To ensure this funding addresses the most critical needs, officers from the Department of Environment, Land, Water and Planning (DELWP) examined regional impacts of climate change and existing adaptation projects and strategies. Officers spoke to community members, businesses, researchers and government bodies in each region and assessed priorities for communities based on the impacts they're facing as well as their needs and values.

In early 2018, DELWP completed climate change gap analyses in six regions across the state. This report presents a high-level summary of the analysis in Hume. It provides a snapshot of impacts, actions, gaps and priorities in the region.

State of adaptation in Hume 2018

Over the last year, the DELWP Community and Partnership Officers in Hume did a stocktake of the climate change adaptation projects already underway in the region. We also held pop up consultations in four regional towns and conducted an online survey on local attitudes to climate change and adaptation priorities. In total the views and opinions of over 330 individuals were recorded.

We tracked over 160 adaptation projects across the region, being implemented by more than 60 organisations, but we also know there are many more. Many of these initiatives are led by local governments and water authorities but community groups are undertaking nearly three dozen projects too.

The pop up consultation revealed that one of the main reasons people enjoy living in the region is its environment—its climate, waterways, wildlife and landscapes. But people are also concerned that those are the places most vulnerable to climate change. Nine out of ten people surveyed believe climate change is occurring and will have significant impacts.

Climate change impacts are already being felt in Victoria—and successful adaptation requires solutions that are identified, owned and driven locally.

Within Victoria, communities, industry and local government are already leading the way.

What we heard - regional priorities

During the consultation, people identified many projects that could help the region adapt to climate change. Some of the priorities include:

- » educating communities about how to respond to emergencies and resourcing them to create hubs for information and supplies in times of crisis (particularly small communities and the towns in the foothills and valleys of the high country)
- » support for community groups to improve their capacity to influence and plan adaptation action in their location—particularly in small, remote communities with high risk of fire and flood
- » working with communities to develop a plan for more accessible health services
- » increasing opportunities for Aboriginal communities to partner in adaptation planning and implementation
- » further developing tourism in spring, summer and autumn in alpine areas
- » improving planning policy standards for new buildings and retrofits to make real change in energy and water efficiency
- » researching and monitoring water usage in housing and industry, including developing plans for environmental water flows
- » researching groundwater resources and integrating this information into plans for future water security
- » raising awareness about energy consumption and increasing the use of renewables
- » building partnerships to identify, finance and act on opportunities to reduce grid reliance

Project spotlight: Wangaratta Community Food for All

Wangaratta Community Food for All was established in 2013 in response to growing food insecurity and a cut to funding for emergency food relief. It is a network comprising a wide range of members: from welfare, health and community services, to government, local food producers, educators, service clubs, neighbourhood houses and citizens from Wangaratta and surrounds.

The network's key objective is to strengthen community resilience, health and wellbeing, by developing the leadership and partnerships necessary to establish a sustainable food system. It facilitates a collaborative approach to partnerships, local strategies and programs, as well as research, advice, advocacy and local action to improve access to and affordability of healthy food. In doing so, it seeks to address vulnerabilities in the food sector and in disadvantaged and at-risk populations.

Climate Change Adaptation in Victoria

To find out more about adaptation in Victoria



[Victoria's Climate Change Adaptation Plan 2017-2020](#)

Credit: Jerry Alexander

Values and perceptions

In early 2018, DELWP officers in the region conducted an online survey about local attitudes to climate change and adaptation and received over 250 responses. We also held pop up consultations in Wodonga, Benalla, Wangaratta and Shepparton, where we spoke with nearly 80 people.

Nine out of ten people surveyed believe climate change is occurring and will have significant impacts. Many people aren't aware of what is happening in the region to address those impacts, but the overwhelming majority said they had already made changes around their homes to respond to climate change—especially by reducing energy usage.

The pop up consultation revealed that one of the main reasons people enjoy living in the Hume region is the environment—the climate, waterways, wildlife and landscapes. But people are also concerned that those are the places most vulnerable to climate change. Residents also value health and wellbeing, good communications systems and utilities, and a strong agricultural sector.

On climate change, they believe there is a lack of leadership across all levels of government, which results in uncoordinated responses and plans that don't turn into action.

Trends across Hume Key demographic statistics



269,500

The approximate number of people in the region



>45 yrs

Age of nearly half of the population



Four out of every ten people earn less than \$400 per week



Agriculture, forestry and fishing is the biggest industry by earnings



4 million

Day-visitors and 2.5 million overnight visitors every year



Hospitality and tourism is the biggest employer

Hume has been getting warmer and drier

In the future we can expect



Temperatures to continue to increase year round



More frequent and more intense downpours



Less rainfall in autumn, winter and spring



Fewer frosts









More hot days and warm spells




Harsher fire weather and longer fire seasons

Climate change sector impacts in Hume

	BUILT ENVIRONMENT 	HEALTH AND HUMAN SERVICES 	PRIMARY PRODUCTION 
KEY CLIMATE IMPACTS AND RISK FACTORS	<ul style="list-style-type: none"> » Increasing fires and extreme heat » Increasing floods » Poor quality housing, particularly in socially disadvantaged communities » Electricity transmission infrastructure highly vulnerable to fire 	<ul style="list-style-type: none"> » Increasing extreme weather events—fires, floods, heatwaves » More protracted droughts » High vulnerability to energy disruption » High vulnerability to road/transport disruption 	<ul style="list-style-type: none"> » Decreasing rainfall » Increasing temperature, hot days and fire weather » Irrigation infrastructure vulnerable to extreme weather or disasters » Dairy industry vulnerable to rising energy and fuel costs and grid or transport disruptions
POTENTIAL IMPACTS	<ul style="list-style-type: none"> » Increased maintenance and utility costs of built infrastructure » Disruptions in transport and road infrastructure » Increased building stock that fails or doesn't meet needs » Increased threats to tourism infrastructure 	<ul style="list-style-type: none"> » More stress on health and emergency services » Increased mental health effects » More heat-related deaths, particularly among the elderly and disadvantaged » Changes in disease occurrence 	<ul style="list-style-type: none"> » Loss of productivity and failure of crops » Changed distribution of pests and diseases » Farm business affected by bushfire » Changes in pasture growth » Reduced water security
	NATURAL ENVIRONMENT 	TRANSPORT 	WATER 
KEY CLIMATE IMPACTS AND RISK FACTORS	<ul style="list-style-type: none"> » Decreasing rainfall and snow cover » Increasing hot days and fire weather » Some alpine species vulnerable to changing ecosystem dynamics at higher altitudes » Barmah National Park vulnerable to competition over water resources and reduced water flows 	<ul style="list-style-type: none"> » Increasing flooding » Increasing hot days, heatwaves and fire weather » Many communities in the region's east only accessible by a single road, which is often vulnerable to fire or flood » Limited public transport between two main highways 	<ul style="list-style-type: none"> » Decreasing rainfall » Increasing temperature and fire weather » Increasing floods » Waste water infrastructure vulnerable to disruptions and increasing costs of energy supply
POTENTIAL IMPACTS	<ul style="list-style-type: none"> » Amplification of existing threats to flora and fauna » Changes to habitat » Contraction of alpine ecosystems » Changing dynamics of invasive species and diseases » Reduced snow depth and cover 	<ul style="list-style-type: none"> » Increased flood damage » Disruptions to road infrastructure, food supply and services » Increased fuel and energy costs 	<ul style="list-style-type: none"> » Reduced surface water » Increased maintenance and utility costs of built infrastructure » Increased fuel and energy costs » Disruptions in energy supply

Hume Climate Ready Fact Sheets

More on projected climate impacts for Hume

 [Climate Ready Hume](#)

Climate action in Hume

We identified over 160 climate action projects currently or recently implemented in Hume, but we know there are many more. The majority were focused on renewable energy, such as community renewables and micro-grids, while projects to build community resilience and improve climate modelling and risk assessments also featured highly.

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PROJECTS THAT FOCUSED ON RENEWABLE ENERGY AND ENERGY EFFICIENCY

- » Solar
- » Micro-grids
- » Pumped hydro
- » Energy efficiency
- » Waste to energy
- » Supporting vulnerable households



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PROJECTS ON THE WATER CYCLE

- » Climate modelling
- » Waste water recycling
- » Water conservation
- » Water supply demand strategy



8

PROJECTS IMPROVING EMERGENCY MANAGEMENT AND PREPAREDNESS

- » Heat waves and extreme temperatures
- » Bushfire preparedness
- » Community preparedness



63

PROJECTS AIMED AT BUILDING SUSTAINABLE & RESILIENT COMMUNITIES

- » Strategic planning
- » Building knowledge
- » Local food production
- » Climate risk assessments
- » Climate resilient infrastructure
- » Waste reduction and recycling



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PROJECTS WORKING ON BIODIVERSITY AND AGRICULTURE

- » Biodiversity and ecosystem preservation
- » Carbon farming and sequestration
- » Strengthening resilient agriculture practices
- » Climate modelling and assessment



Virtual Centre for Climate Change Innovation

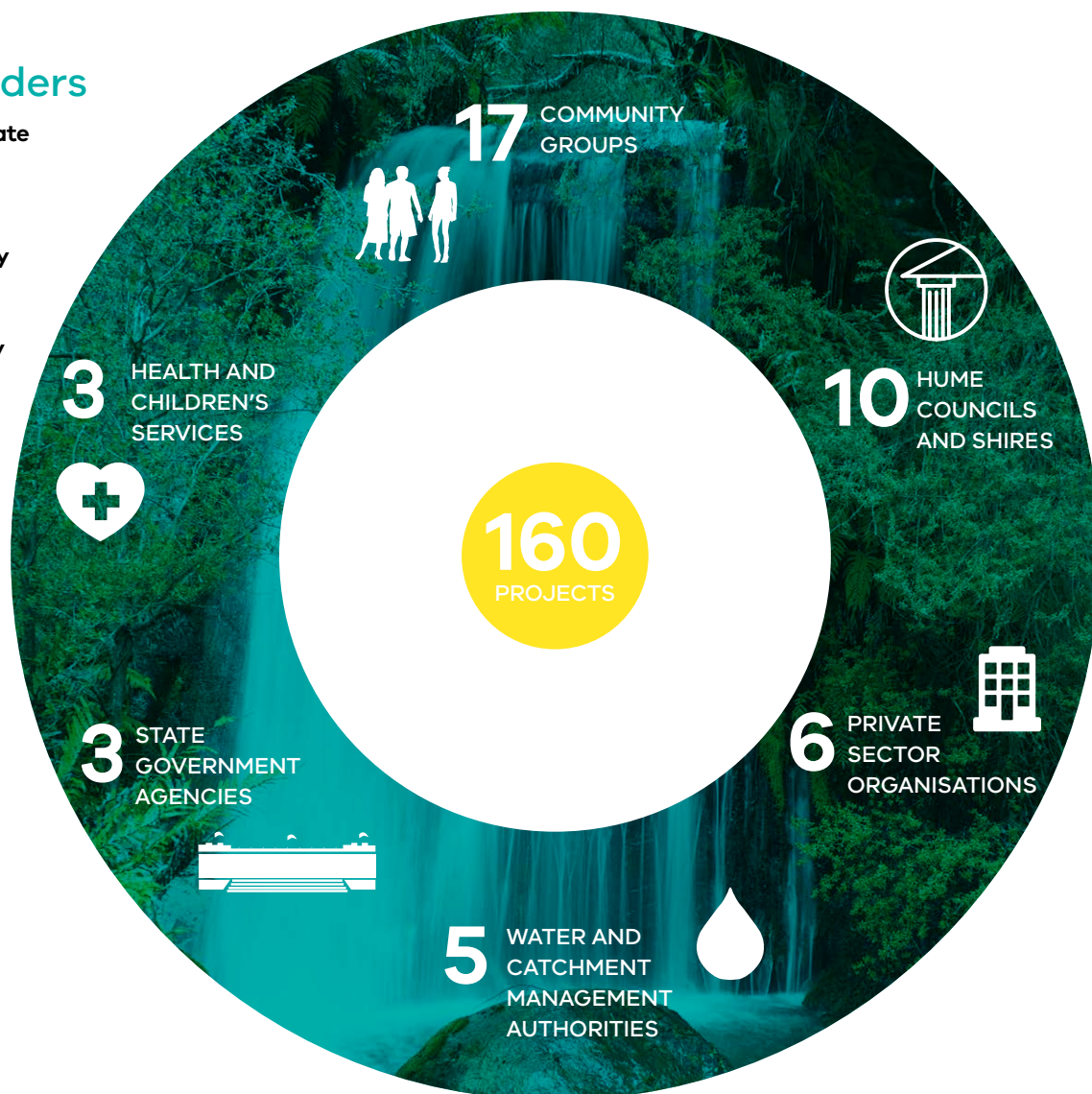
The Virtual Centre for Climate Change Innovation (VCCCI) has been established to strengthen Victoria's role as a climate change leader.



Project stakeholders

Of the 160 climate action projects in Hume the majority were implemented by local councils and shires and community groups.

State government agencies, water authorities and catchment management authorities, implemented fewer but typically much larger projects.



Project spotlight: Totally Renewable Yackandandah (TRY)

TRY is a community group that formed in 2014, aiming to power Yackandandah with 100 per cent renewable energy by 2022.

TRY is developing one of Australia's first commercially operated mini-grids, in partnership with AusNet Services and Mondo Power. The group is also working closely with North East Water, which has installed a 43kW solar system and 40kW of battery storage at the town's water treatment site. And as a result of TRY's fundraising, the Yackandandah Health Service has also installed a 90kW solar array and converted to LED lighting.

Key gaps in Hume

During the consultation, people identified many projects that could help the region adapt to climate change. Taking into account the measures already under way—and focussing on regional issues, rather than state or national—here are some gaps, especially for Hume:

- » lack of a region-wide project working with small communities to identify assets and vulnerabilities and work on resilience
- » housing for some vulnerable or disadvantaged people does not adequately protect against extreme heat, strong winds and rain
- » insufficient sharing of existing knowledge about agricultural climate futures, including Goulburn Broken Greenhouse Alliance's research into suitable crops for future scenarios
- » lack of investment in the management of pest plants and animals, to contain current incursions and prevent new outbreaks
- » need to integrate the Catchment Management Authorities' climate change planning into the management of natural resources throughout the region
- » need for analysis of interrelated and cross-sector climate change impacts at a high level and to include experts from a range of sectors
- » challenges expanding food hubs and nutritional food projects, which limits access to healthy produce, particularly for disadvantaged communities
- » limited knowledge about climate adaptation among some health policy practitioners and farm managers

Enabling adaptation

Community groups are involved in the most significant work on climate adaptation in the region—for example, in Yackandandah, with its micro grid, and in Wodonga, with North East Water's renewable energy solutions. This work is happening by way of strong partnerships and local engagement. Conversely, in areas without an organised community group pushing for sustainable solutions, adaptation projects are less well developed. In Hume, the community has a crucial role in instigating and accelerating change.

Project spotlight: North East Water

North East Water is collaborating with stakeholders to improve resource efficiencies. In one project, the wastewater treatment plant in Wodonga will divert high-carbon wastewater to generate energy for the facility via a bio-digester. It will reduce its grid electricity needs while improving the quality of wastewater coming into the facility.

At other treatment plants, North East Water is planting lucerne on land where it returns treated wastewater to the environment. By doing so, it creates stock feed irrespective of drought or water restrictions. The availability of feed during times of drought could assist the resilience of the agricultural industry to climate change impacts.

Credit: Jerry Alexander

What's next?

The information gathered through the regional adaptation gap analysis will inform priorities for action under the *Supporting our Regions to Adapt* program over the next three years.

This program will ensure government works in partnership with regional communities. We'll collaborate to support action to prevent—as well as mitigate—the risks presented by climate change, helping Victoria meet the challenges and act on the opportunities of climate change.

FOR MORE INFORMATION ON WHAT IS HAPPENING IN HUME CONTACT:

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Climate Action in Victoria

To find out about other
Victorian Government
climate actions visit:

climatechange.vic.gov.au

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