

**One Gippsland
Climate Services for Agriculture
Pilot Region Proposal
February 2021**





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Executive Summary

One Gippsland, as a peak regional advocacy body representing Gippsland, are submitting this paper to support our proposal that Gippsland should be announced as in the next round of region's as part of the *Department of Agriculture, Water and Environment - Future Drought Fund: Climate Services for Agriculture program*.

The food and fibre sector in Gippsland contributes 43 per cent or \$7 billion the regions \$16 billion Gross Regional Product (GRP). Spanning over 41,500 kilometres squared, Gippsland is one of the most diverse regions in the country and with 28 per cent of this land size being used for agricultural purposes, the food and fibre sector is also very diverse in its offerings with strong industry sectors such as dairy, meat, horticulture, fish and forestry.

The diversity of Gippsland's food and fibre sector, both geographically and in its produce and product offerings, makes the region primed to be one of the four pilot projects as part of the this initiative.

Prolonged drought is amongst one of series of economic shocks the Gippsland region has faced in recent years and resulted in a direct output loss of \$343 million.

Without support for farmers and producers in Gippsland to understand and plan for the impacts of climate change, the region will find itself at a growing disadvantage struggling to maintain productivity and output in a hotter, drier and harsher climate.

Pilot Ready

The Gippsland region is 'pilot ready'.

The region makes this assertion on the bases of factors:

- 1 The diversity of the food and fibre sector
- 2 The success of the Australian farming Futures: Climate Change Research Program

Food & Fibre Gippsland have further developed a novel data management system that can deliver (amongst other functions) a broad range of climate adaptation content and knowledge direct to business across all areas of the food and fibre supply chain. This platform, known as KEDI (Knowledge Economy Digital Innovation) has been designed to be able to integrate with other information platforms.

In addition to having the potential to integrate with other systems such as the Climate Services for Agriculture program, the roll out of this technology has done the 'legwork' in socialising and familiarising farmers and producers with accessing and understanding information and subsequently being able to plan for and mitigate the impacts of climate change.

This means that not only does the technology platform in Gippsland exist to be able to disperse information from the CSIRO and Bureau of Meteorology, the business and farmers who require this information are signed up and ready to go maximising the reach and benefit of the program.

One Gippsland member Food & Fibre Gippsland are the key industry and advocacy body for the food and fibre sector in the region, representing their 150 Business members across the Gippsland, and connecting to greater than 500 related supply chain businesses . This organisation would be best placed to be the conduit between government and industry should this region be announced for one of these pilots.

Ask of Government

One Gippsland request that the Federal Government announce Gippsland in the next round of the Future Drought Fund Climate Services for Agriculture program and that the Government work with Food & Fibre Gippsland in the roll out of this program in the region.

About Gippsland and One Gippsland

Gippsland is a geographically, socially and economically diverse region. At approximately 41,000 km², it is the largest region in Victoria. Home to over 270,000 people¹ and 6 Local Governments, the region annually produces \$16 billion in Gross Regional Product (GRP).

One Gippsland is a peak regional advocacy body representing this diverse region. We aim to connect the dots between government, business and community, while also collectively working together to champion the interests of our region and our people.

It is our mission to create a thriving and dynamic region that harnesses social, environmental and economic capabilities and assets. We do this to ensure that Gippsland continues to have remarkable diversity so that we can offer resident's opportunities for a great lifestyle and access to services at all stages of life.

A recent report produced by SGS Economics shows that Gippsland has undergone a series of economic shocks that has impacted the economic output of the region. Between 2015 and 2020 the combined effect of the COVID-19 restrictions, bushfires, dairy crisis, drought and hazelwood closure have had the following impact:

- Direct output loss of **\$3.28 billion**;
- Combined direct and indirect output loss was **\$6.86 billion**;
- A total of **10,213 job losses** (direct and indirect); and
- Gross regional product shrunk by **\$2.66 billion**.

The closure of the native timber industry is expected to negatively impact direct output by **\$548 million** and further shrink Gross regional product by **\$431 million** in the next 10 years.

Despite these challenges, Gippsland has great growth aspirations including:

1. Being Australia's **most liveable region** by 2040;
2. Attracting an additional **75,000 residents** 2040; and
3. Increasing the annual **Gross Regional Product to \$23.2 Billion** by 2040.

To be able to meet these goals, assistance will be required to ensure that key industry in Gippsland is supported to be as productive and competitive as it can be in a changing climate and economy.

¹ https://quickstats.censusdata.abs.gov.au/census_services/getproduct/census/2016/quickstat/205?opendocument

The Food and Fibre Sector in Gippsland

The Gippsland economy is in transition due to the progressive closure of the regions traditional energy sector. As outlined above, there has been a range of economic shocks that have further impacted the regions ability to respond to opportunity and grow its Gross Regional Product (GRP).

The food and fibre sector is a major contributor to the Gippsland economy with agriculture forestry and finishing alone employing 15,400 people or 12 percent of the regions workforce . It's worth around \$7 billion annually, making up 43 per cent of the regions \$16 billion GRP. This includes both primary production, and pre- farm-gate produce (worth roughly \$2.2 billion annually), as well as the broader food and fibre value add and supply chain. In addition to bolstering almost half of the regional economy, Gippsland produces 30.6 per cent of Victoria's dairy production, 28.1 per cent of its beef and 25 per cent of its vegetables².

Spanning over 41,500 kilometres squared, Gippsland is one of the most diverse regions in the country. With 28 per cent of this land size being used for agricultural purposes, the food and fibre sector is also very diverse in its offerings with strong industry sectors such as dairy, meat, horticulture, fish and forestry.

Although specific value chain and sector data is often isolated and fragmented, it is estimated that dairy is worth \$3 billion, forestry worth \$1.2 billion, meat and horticulture both worth \$1 billion each and fishing and aquaculture worth \$500 million. These figures are based on commodity output only and therefore do not fully capture the value chain impact of Gippsland's food and fibre sector.

it is estimated that in Gippsland there are over 6,500 agriculture, forestry and fishing businesses that contribute to around 250 small communities across the region with a the viability of further 2,500 businesses dependent on the food and fibre value chain.

Given its vast economic footprint to both the regional and state economy and its significant role in regional employment, this sector has been identified by the Victorian Government and key stakeholders as a priority future industry.

However, despite being such a vast and diverse industry and economic powerhouse in the region, it has been and will continue to be heavily impacted by the effects of climate change.

Climate Projections and Impacts in Gippsland

A study commissioned by One Gippsland showed that the recent prolonged drought in the region has impacted the regional economy in the following ways:

- **Direct output loss:** direct output lost due to the drought is estimated to total \$343 million (Over the period 2017/18 to 2019/20);
- **Total output loss** (direct and indirect): estimated at \$601 million; and
- **Job losses:** The loss of business incomes led to a loss of an estimated 95 FTE annual jobs in the agriculture sector and related industries in 2017/18, rising to 930 in 2018/19.

² https://agriculture.vic.gov.au/_data/assets/pdf_file/0011/554159/gippsland-report.pdf

Future climate projections in Gippsland show that this trend will continue, with the region expected to become hotter and drier³. Other climate projection trends include:

- **Average temperatures will continue to increase in all seasons.** This will create high vulnerability to effects of reduced soil moisture.
- **Rainfall will decrease in winter and spring** (estimated winter rainfall decreases of up to 22% and spring rainfall decreases of up to 38%). Reduced water security will affect almost all sectors of the industry.
- The **frequency and intensity of extreme rainfall is expected to rise** (Despite a trend of declining rainfall overall, there will be an increase in extreme downpours in the rain that does occur. This is likely to lead to an increase in the incidence of flooding events)

These projections will impact farmer's ability to produce cropping, pasture vegetable and fruit varieties and will change the distribution of pests and diseases. Severe weather events are also expected to increase, which will have significant impacts on horticulture and dairy production. More severe weather will create harsher and more prolonged bushfires seasons that can devastate livestock and farming infrastructure (fencing, irrigation, barns/shed, feed) amongst causing many other environmental effects.

Building the capabilities, resilience and adaptiveness of the regions food and fibre sector will be crucial to the economic recovery and future prosperity of Gippsland. To achieve this, Gippsland farmers and producers need to be able to understand, plan, prepare and respond to these climate challenges by being provided with applicable information to be able to take up appropriate adaptation techniques.

Climate Services for Agriculture

The diversity of Gippsland's food and fibre sector, both geographically and in its produce and product offerings, makes it a primed region to house one of these four pilot projects.

One Gippsland would like to thank and congratulate the Federal Government for the extensive work done to date, aimed at helping the agriculture and food and fibre industry respond to and manage the effects of climate change. Namely the *Future Drought Proof Fund* and its recently announced *\$10 million Climate Services for Agriculture* initiative that will implement four pilot regions to trial a new interactive digital 'climate service'.

Funding a Climate Services for Agriculture pilot in Gippsland would complement existing Federal and State initiatives already funded in the region, most notably:

- **Australian Farming Futures: Climate Change Research Program:** A number of university partners received considerable investment from the Federal and Victorian governments and industry to support regionally important research, development and extension programs. At a producer level it also funded action on the ground and extension and outreach programs for producers and consultants. This resulted in the following successes:

³ https://www.climatechange.vic.gov.au/_data/assets/pdf_file/0021/60744/Gippsland.pdf

- **Ellinbank SmartFarm and Research Station:** Ellinbank SmartFarm is Australia’s leading dairy innovation and research facility, it is the research and development anchor point in the region and along with the Ellinbank Research Station has received a range of funding for climate change research. It is world class in its research and development on initiatives like measuring the methane production from animals and has a target of being the world’s first carbon-neutral farm. It is delivering benefits to the Australian dairy industry in terms of productivity and environmental sustainability through:
 - improvements in measuring, managing and utilising the homegrown feed base
 - improving the health and welfare of cows
 - improving the longevity and lifetime performance of cows
 - sustainably increasing annual milk production per cow.

Additional funding through the \$10 million Climate Services for Agriculture pilot would allow the region to build upon these initiatives which set the region in a strong position to hit the ground running if or when a pilot is announced.

KEDI Platform Developed by Food & Fibre Gippsland

In addition to the above initiatives in the region, Gippsland is an obvious choice for a pilot as the region has also done extensive work of its own in the technology and climate research space.

Food & Fibre Gippsland have commissioned the development of a novel data management system that federates web based business-to-business platforms with learning management systems. This program is called KEDI (Knowledge Economy Digital Innovation) and was funded through the Victorian Government Workforce Training & Innovation Fund.

KEDI delivers a broad range of content and knowledge, its design would allow for information through the Climate Services for Agriculture program to integrate through this system and disseminate to users. By socialising information through web based social frameworks we can allow business to either receive a high level (lite – but trusted source) content or take a deeper dive into the learning management / data bases.

The implementation of this system in the region has socialised and done the ‘legwork’ in bringing businesses and farmers onboard with acting on information received through this kind of platform. This means that the roll out of the Climate Services for Agriculture platform will be more widely and efficiently received by its intended recipients in the region, providing a larger base to assess the success of this government pilot program.

There is scope to use the KEDI platform to disseminate the information gathered for distribution for the Climate Services for Agriculture program, alternatively this platform can be used to market and direct existing KEDI users to the Government platform developed for this pilot.

One Gippsland would welcome the opportunity to discuss this scope and opportunity further with the Federal Government.

For More Information

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