

CLIMATE CHANGE LAND CAPACITY AND CAPABILITY PROJECT - PILOT

Case Study April 2019



National Vegetable
Extension Network
VICTORIA - GIPPSLAND



The Concept

This pilot project came out of the Bass Coast Landcare Network, with a view to explore the utilisation of farmland within Bass Coast Shire and the capacity of the land to diversify away from traditional grazing systems. From this seed idea, a unique partnership was created with VegNet Victoria Gippsland through the East Gippsland Food Cluster, West Gippsland Catchment Management Authority, Bass Coast Shire Council and Bass Coast Landcare Network.

This partnership designed the Land Capacity and Capability Pilot project which set about exploring the drivers for climate change in Bass Coast, how a changing climate was going to impact the region and the land's capacity to diversify into the future.

The pilot sought to answer some key questions when thinking about innovation and diversification including:

- Climate change and its impacts on agriculture in Bass Coast Shire;
- The planning scheme and its impacts on agriculture in Bass Coast;
- Examples of diversification activities in Gippsland;
- Land capability assessment - how to apply it to your own property;
- Development of options on case study property in Woodleigh;
- Diversification and innovation 'how-to-start' checklist



The Funding

This pilot case study developed a key partnership with VegNet Victoria Gippsland through the East Gippsland Food Cluster, West Gippsland Catchment Management Authority, Bass Coast Shire Council and the Bass Coast Landcare Network.

From this seed funding, an additional \$255,000 was gained through a successful application to the Virtual Centre for Climate Innovations Grants Program to extend this pilot throughout Southern Gippsland and develop a web-based decision-making portal.

The Methodology

A property selection matrix was established and the Mulherin's property in Woodleigh was chosen for this pilot project. The property is 75 acres with 50% of the property under a Trust for Nature Covenant. The remaining acreage was under a dryland grazing system.

Declan McDonald from SESL was engaged to undertake this pilot program. The project was then broken up into four stages.

Climate Change Land Capacity & Capability Project

Stage One involved onsite testing and a desk top analysis to define the biophysical elements of the property with a focus on:

- Topsoil texture
- Soil chemistry
- Shrink-swell properties
- Dispersion risk
- Slope
- Drainage
- Flood risk
- Stoniness

Stage Two looked at climate change adaptation for the property, the assets, strengths and weaknesses and opportunities for horticultural enterprises.

Stage Three then went on to look at the land capability assessment and explored the options for horticulture, the suitability of the land, the amelioration required, and the design of the enterprises identified. This included the exploration of both risks and opportunities for the enterprises.

The final stage looked at how the identified options would fit in with the Bass Coast Shire Planning Scheme.

There were three main options for further research identified for the property including farm tourism, community supported agriculture and novel crops such as bush foods, cut flowers, grapes, olives, herbs, saffron, rhubarb, walnuts and avocados.

The Results

This project identified that the climate change trends in Southern Gippsland since 1950 show a decline in rainfall of between 100 – 200 mm and increase in temperature of between 1 and 1.2 degrees Celsius. This is significant in terms of future diversification as relatively small shifts in temperature can bring about big shifts in growth rates, agricultural productivity and then overlaid on that is a reduction in rainfall and the lengths of the rain session.

It was identified that the major assets of the property were the soil types and the threats were moisture and temperature. The project also identified that within Bass Coast Shire Council Planning Scheme there is a strong focus on agritourism with support for diverse uses of agricultural land and support for novel industries which



included a southward movement of industry in response to climate change.

This pilot project started the conversation about what a changing climate will look like in Bass Coast and subsequently what agriculture will look like into the future. From this pilot the Bass Coast Landcare Network developed a partnership with Federation University, RMIT University and the Bass Coast Shire Council to expand this project out into Southern Gippsland. This partnership was the successful recipient of a Victorian State Government Climate Change Innovation Grant and has been awarded \$254,236 over two years.

This project will enable Southern Gippsland farmers to respond to climate change challenges. It will provide the agricultural sector with twelve detailed case study action plans. Specific climate resilient opportunities for innovation and diversification will be documented. Broader engagement will enable more informed climate change decision-making.

This is an extremely exciting project for Southern Gippsland as it presents a significant opportunity to directly work with local farmers responding to climate

change challenges. It provides an important opportunity for our agricultural communities within our local area to team up with the science to lead a practical response to climate change through innovation and diversification. Working with RMIT and Federation University will ensure the project is underpinned with science-based expertise. The **VegNet Victoria Gippsland** project is represented on the Project Reference and Support Group.

What are Mulherin's now doing with that property?

As a result of this pilot project, the Mulherin's have fully destocked their farm and are growing locally indigenous and high nutrient value foods including mountain pepper, lemon aspen and river mint. They have also harvested their first crop of organic garlic and are now selling it locally.

They are looking at Bush Tucker options including bush tomato, native berry and limes that are more suited to their immediate environment.

