Agricultural Climate Resilience Project (ACRP)
Impact Research Study

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Executive summary

Introduction

This is the research report for the Southern Gippsland Agricultural Climate Resilience Project (referred to as the ACRP), funded in 2013 by the Department of Environmental, Land, Water and Planning as a joint initiative between the South Gippsland and Bass Coast shires to build knowledge, networking and enhance resilience in regard to climate change and adaptation. The research findings included in this report examine the attainment of the aims and objectives that were set for the project which were:

Project aims

- To develop a strong network for local farmers, small lot landholders and the wider community to build their capacity to improve business and management decisions in relation to the production of, and access to, food in the region under changed climatic conditions.

- To utilise place-based practical learning methods that will maintain continued relevance via a range of online resources as well as community knowledge capital within the project network.

Project objectives:

- To engage and support individuals, community groups and businesses, particularly food production businesses, to achieve improved sustainability outcomes.

- To develop strong networks for sustainability enhancement within the context of geographical isolation.

- To break down traditional barriers to information sharing and knowledge building in order to maximise the capacity for building best practice in the area of sustainability, within the context of contemporary issues, environments and challenges.

Research study design

A qualitative research methodology, using mixed methods of data collection, was chosen to shape the study design, with the following research questions driving data collection and analysis:

Has the ACRP been developed and delivered in a manner that is appropriate, relevant and engaging to the local community?

How effectively have targets for networking and mentoring been achieved within the ACRP?

To what extent can networking and mentoring strategies be assessed as successful for adoption of shared climate change opportunities and agricultural resilience building initiatives?

To what extent has the community been mobilised to engage, promote, adopt and advocate for the ACRP as a legitimate tool for capacity building within the context of local industry and identity?
Data collection methods
A range of data collection methods were used to collect data from the 428 research participants. Specific data was gathered through the mechanism of the data collection tools which captured data from 160 active research participants. These methods comprised:

- **Literature review and document analysis.** Project documentation was thematically analysed to identify synergies between project documentation and the aims and objectives of the ACRP. It was also used to support and validate data collected through the survey and the interviews.

- **Online survey.** A 15 minute online survey, where participation was by invitation, was used to examine involvement in the project and the impact of the project for key end users. Data from this survey was analysed using Excel and cross referenced with interview data, as appropriate.

- **Events participation feedback.** User feedback from across the series of events that were delivered by the ACRP was collated and analysed to provide insights into the nature of activities, attendees’ perceptions on the value of events and an external assessment of the ACRP.

- **Individual interviews:** Interviews were conducted with project participants, project staff and government representatives to gain individual and subjective insights into their perceptions of the project.

Research study findings

**Place based learning events:**
The key findings for section 3.2 (Place based learning events) were that:

- A total of 16 place based events were delivered across the South Gippsland and Bass Coast shires using a range of content delivery techniques including information sessions, practical workshops and demonstrations and farm visits. The key topic clusters across the range of events were:
  
  - Vegetable and fruit growing - what to plant, when to plant and how to adapt vegetable and fruit growing in a changing climate.
  - Understanding weather forecasts and trends. A review of drivers of seasonal climate variability and ways in which farming systems can proactively respond.
  - Water management using a variety of scenarios and setting to illustrate irrigation, farm resistance to drought and water efficiency.
  - Soil health and fertility in changing environments.
  - Biosecurity risks and their mitigation.
  - Agricultural enterprise diversification – the why, where and how to of change and diversification.
  - Shade and shelter – shelterbelts and their application and benefits in a changing environment.
  - Financial literacy.
Levels of interest across the different topic clusters, based on rates of attendance were, from highest to lowest:

- Agricultural enterprise diversification.
- Weather and the impacts of weather change.
- Vegetable and fruit growing in a changing environment.
- Water management processes
- Soil health.
- Financial literacy.
- Biosecurity.

- The diversity of the place based learning approaches (such as forums, workshops, farm visits and discussion groups) that the ACRP applied in the delivery of information on the issue of climate resilience was valued. While there were variable levels of interest in each of the information sharing techniques, the diversity provided a means through which to accommodate different interests and learning styles.

- There was variable representation from across the food production sector at the place based learning events. It was not possible to assess the specific numbers from each of the different food production sectors operating in Southern Gippsland shire due to shortfalls in the events data collection tools. Overall however available data indicates a broad, if non-quantified, representation from across various sectors – sheep, beef, diary, mixed horticulture, organic farming, poultry and small and large home gardeners.

While this diversity was assessed as a positive aspect of the project by a proportion of respondents, it was identified as a barrier to effective outcomes by others involved in the data collection process. This was due to the assessment made by these participants that there was a lack of clarity around the target group for the project. This was critiqued as impacting on the effectiveness of targeted delivery, and of creating too strong a focus on the provision of a general approach to information sharing. A proportion of research participants believed that this had weakened the impact of the ACRP as it removed the capacity to ensure information provision that was targeted at specific issues for specific parts of the food production sector. Consequently the project was viewed as having limited value for medium and large scale farming enterprises. For this proportion of the participant pool it was assessed that providing a defined target group, regardless of focus, would have strengthened the reach and applicability of the project.

Conversely, other research participants indicated that the approach worked effectively for all groups and provided a mechanism to link the community to the agricultural sector.

- A variety of strategies were used to build awareness of the project across the implementation timeframe. These strategies included web based media (Sustainability Gippsland website, social media and email contact lists) and non-web based media (newspapers, radio and word of mouth/networks). These strategies were all variably successful and highlighted the need to adopt a mixed approach in maximising project awareness. Word of mouth and networking links overall were considered the most effective project awareness building approaches.

The lack of a dedicated web presence for the ACRP was assessed as being problematic for building project identity and for supporting the capture of legacy data gathered and built throughout the life of the project.
The fact that the project spanned two diverse local government areas was seen as a valuable initiative for strengthening the link between agriculture and government. At the same time, the diversity of the two areas was assessed as creating some issues for developing activities that were most relevant to all parties to the project partnership. Differences in location specific needs, in world views and in the point of knowledge development on the issue of climate resilience were all assessed as potential barriers to maximising levels of engagement with the project.

The greatest level of interest and engagement in the types of place based learning activities was identified as being for:
- Farm visits
- The information provided by field of practice expert
- Practical workshops.

The lowest level of interest in the place based learning events was found in the discussion sessions that defined the climate cafés. However, while the feedback across the collected data on climate cafés indicated that it was the least sought after activity, there were also participants who valued the activity. This was particularly relevant for South Gippsland over Bass Coast (where there was limited interest in this type of activity). Overall the feedback on specific activities reinforced that providing diversity in place based learning approaches was an effective way to engage the maximum number of participants.

Overall the place based learning events were assessed, by a majority of research participants, as having been successful for providing:
- A forum for discussion on issues relating to climate resilience.
- A mechanism to access resources relevant to climate resilience.
- A means through which to build knowledge about impact of climate shifts on community and industry.

The place based learning events provided by the ACRP were assessed, by the research team, based on the data collected and analysed, as having achieved a Level 1 (Reaction) and Level 2 (Learning) impact in building climate resilience knowledge amongst those who participated in the events delivered through the project.

Mentoring and Networking:
The key findings for section 3.3 (Mentoring and Networking) were that:

While mentoring was integral to the original project brief for the ACRP, it was not a programmatic strategy that was ultimately adopted. This was due to a range of factors including:
- Shortfalls in resourcing for training and payment of mentors.
- Inability to locate mentors who would were willing to take on the role within local areas.
- Lack of consensus around elements of the mentoring program at the steering/reference group level.

Available literature on mentoring for successful implementation of change reinforces the value of this approach and, when this literature evidence is combined with research data drawn from this current study on the potential benefit of mentoring, strategies for inclusion of a mentoring program is an area worth exploring for project enhancement.
For any mentoring program initiative to be successful it will require:

- Adequate resourcing
- An overt and endorsed agreement on the mechanics of a mentoring project, including funding and payment allocations, worker location and processes for reciprocal support between the project staff, mentors, the community and the food production sector.

Despite the fact that the mentoring program was not operationalised, the ACRP had significant success in building a range of networks as a result of the events they established in the community. While the climate cafés were developed with the intent of supporting informal mentoring, and enabling connections to be made amongst individuals through discussion of climate issues, this approach was not particularly successful. While some networks were established as a result of the cafés, it was the events at which discussion was combined with practical activities and the opportunity to meet others in farm based environments that created the most valued network and informal networking opportunities.

The value given to networking as a mechanism through which to build connection and provide informal support for implementation of climate resilience strategies flagged the importance of ensuring involvement of key individuals with strong networks and links to local webs of influence. This involvement needs to be formally mapped and embedded at the point of project planning, development and implementation.

The networks that were established as a result of the ACRP were assessed as having high levels of success in:

- Building awareness of issues through word of mouth and ideas sharing.
- Acting as a form of mentoring – all be it a self-regulated and informal organic process of mentoring.
- Establishing connections between:
  - Individuals.
  - Individuals and groups.
  - Farm communities.
  - The agricultural sector and the broader community.

**Engagement and awareness building:**

The key findings for section 3.4 (Engagement and awareness building) were that:

- There has been an increase in recent times in both the academic and the mainstream literature and media relating to the issue of climate impact and the importance of building resilience in the agricultural arena. The ACRP established an overt agenda to build awareness of climate issues and their impact which it achieved, to variable levels, through the strategies put in place across the project.

- Measurement of success in building awareness of climate issues and strategies for building resilience occurred across events participation feedback, online survey and individual interview data. Data drawn from events participation feedback was clustered into three categories:

  1) Sector specific. Fifty-six percent of respondents believed the event/s had built their awareness of climate resilience in relation to a specific issue within an agricultural sector in which they had an interest (personal or business).
2) General – Twenty-seven percent of the data was too general to make an assessment in terms of awareness building.

3) Awareness – Seventeen percent of respondents believed that the event/s had built both general and specific awareness of climate change issues and climate resilience strategies and approaches.

The data gathered and analysed from the online survey found that an average of 78.5% of respondents believed that the ACRP had increased their level of awareness of both climate issues and agricultural resilience. One hundred percent of those involved in an interview made the same assessment.

- Overall the ACRP was assessed as having engaged individuals and groups through awareness building, whilst providing a platform for the discussion of climate issues. Research participants uniformly assessed climate and climate resilience as a critical issue, and the ACRP as a means through which to open the dialogue and ensure that food producers, individuals and communities connected with the climate change agenda.

**Partnership and mobilisation:**

The key findings for section 3.5 (Engagement and awareness building) were that:

- The ACRP embedded the notion of partnerships in the aims of the project and this commitment was mirrored in the project operationalisation. The nature of implementation, when considered on the continuum from governance through to delivery, shows a range of strategies for partnership.

A breakdown of where partnership was able to be achieved shows three key levels of attainment:

**Level One:**

The establishment of a partnership between two local governments was a key strength of the project and one which research participants assessed as adding value and enhancing sustainability into the longer term. The research process did identify that there were some implementation issues cause by locational and context issues, the project overall benefited by the partnership. The capacity for individuals from two local governments to have input into project planning, development and implementation was assessed as beneficial in terms of resource capacity, staff skills and knowledge, and the insights provided around climate when it was placed within the context of two diverse local government areas. These partnership connections were viewed as adding potential for sustainability into the longer term.

The introduction of local government into the climate arena in a proactive way, with clear content delivery components, was viewed positively by the majority of participants to the interview process. The ACRP was conceptualised as a mechanism to build a bridge between the agriculture sector and local government. The movement into the climate space allowed for the establishment of a reciprocal understanding of issues from the perspective of different stakeholders within, and across, each local government area.

**Level Two:**

The use of a multi-stakeholder steering/reference group ensured that there was the capacity for input from a range of different perspectives. In terms of partnership building, these connections provided a platform for issues discussion, links into the networks of the organisations, community groups and food production sectors, and a point of contact for partnership maintenance and expansion into the future.
Level Three:
Available data relating to community partnerships and mobilisation does not make it possible to make a definitive assessment of the level of partnership building with community as a result of the ACRP. The initial indicators however, based on both quantitative and qualitative data are good. The community is viewing the project as a mechanism to increase knowledge, make connection and better understand the issue. The strength of network building provides a good basis for partnership and mobilisation. Further research in this area is needed to make a definitive assessment in relation to sustainability of shifts at the community level.

The partnership links, and the ways in which their interrelationship is likely to enhance sustainability and change across a range of levels is depicted in this diagram. It is a model which is appropriate and readily applicable for the partnership building across a range of domains.

Research study recommendations
The Southern Gippsland ACRP was developed as a local government partnership to build climate resilience across the food production community in Southern Gippsland. At the conclusion of project delivery a research process sought to determine the extent to which the project had achieved a number of indicators of success. Analysis of the data found that the ACRP had achieved a measure of success in building levels of awareness of climate change issues and providing strategies to enhance agricultural resilience. The project used a range of approaches for engagement including place based learning, partnerships and network building.

There were a range of areas where the project did not achieve optimum results, including the establishment of a mentoring project or building strong connections with middle and larger scale farming enterprises. There was limited potential to measure levels of community engagement and mobilisation although initial indicators show a greater level of awareness of the issues and interest in ongoing knowledge development and skill building.

A series of recommendations arising from the insights gained through the research process are provided to support and give some direction for program planning into the future.

Recommendation 1
That, the shires of South Gippsland and Bass Coast meet with state government representatives to discuss options for the development and delivery of a program of awareness raising and engagement on issues of sustainability and resilience for the agricultural sector. This meeting should be used to highlight the value of local government, as the third tier of government, acting as the link between government and agriculture, at the local level, on location and context specific issues of climate change, diversification and resilience.
Recommendation 2
That the local governments of South Gippsland and Bass Coast work to overtly define and document their role in proactively working with community groups, food producers and the broader community in engagement and mobilisation for agricultural resilience and climate change knowledge building. This process may benefit from the inclusion of additional local government areas and should, at conclusion, result in a forward plan for future action on this issue.

Recommendation 3
That a structured mapping of sector leaders, climate change champions and key community groups occur, linked to the existing networks developed through the ACRP. This will build on inroads made by the ACRP and maximise the potential to use formal networking and informal mentoring to increase the capacity to enhance mobilisation of the agricultural sector and the local community on issues of climate resilience and agricultural diversification across the Southern Gippsland region.

Recommendation 4
That, in future strategies for working to address climate resilience, a part of project development include, from the outset, a clearer the definition of the target group/s for the project. This will maximise the capacity to implement strategies that are most closely aligned to the needs of each subset of community and industry. It will also extend the reach of any initiative to the greatest number of potential groups and sectors to include large and middle level farming enterprises.

Recommendation 5
That, as part of any future project development, a documented communication strategy be developed. This should include the identification of:

- the communication mediums that will be used for information sharing;
- how legacy information will be managed and made available to sectors and communities;
- how to maximise information sharing between and across networks; and,
- the type of information sharing strategies that are most likely to be successful for rural communities.

The communication strategy should explore the value of establishment of a dedicated web portal in order to strengthen project identity, allow for crowdsourcing/citizen science opportunity and networking enhancement.

Recommendation 6
That any future initiatives involving the establishment of a project on climate change and resilience be guided by a commitment to early establishment of the project reference group. This will maximise the capacity for active involvement of this group in the development and direction of the project and will ensure uniformity of views at the point of project implementation. Adoption of this approach increases the potential for planned strategies to be fully supported from the planning through to the implementation stage. It will also maximise the potential for project development to be informed by a group of experts in relation to appropriate strategies, project targets and audience. This will avoid potential project divergence from original conceptualisation, as occurred in relation to the mentoring component of the ACRP.
Recommendation 7
That adequate funding is provided to any future project for project administration. The provision of adequate funding levels for administration will ensure that there is project capacity to adequately manage both the tangible and intangible aspects of project development and delivery. This is critical to project success and sustainability. Tangibles include activities such as events delivery, planning, meetings and project organisation while intangibles refer to the provision of a range supports (formal and informal) to networking, partnership building and community mobilisation enhancement.

Recommendation 8
That, should future projects be developed in the area of agricultural resilience and sustainability planning, a research component be an embedded and integral element of the project. This will maximise the capacity for pre testing, longitudinal measurement of delivery and the tracking of behavior and attitudes on climate issues over time. This inclusion will enable a more definitive correlation to be made between project delivery and shifts in knowledge, behavior and attitudes.
Section 1: Introduction and overview

1.1 Background

The Southern Gippsland Agricultural Climate Resilience project (referred to as the ACRP) was funded in 2013 by the Department of Environmental, Land, Water and Planning. This project was funded across a two year timeframe to support ‘Adaptation to climatic changes by South Gippsland and Bass Coast food producers through creating a functional mentor network structure, practical seminars and farm visits to improve resilience to climate risks through better decision making and effective action on the ground.’


The approach developed for this project was characterised by the notion of establishing alliances between key stakeholders in the local area. This commenced with an initial alliance between the local governments of Bass Coast and South Gippsland, and, subsequent to this, the building of links between a range of individuals, groups and associations that operate agricultural enterprises in the local area.

Food production is a major industry for the project region, with an agricultural profile that has, historically, been defined by dairy and grazing, with some pockets of horticultural production. Research specific to the Gippsland region has consistently identified the need for the introduction of climate adaptation strategies to meet projected shifts in climate and food production into the future (Department of Environment, Land, Water & Planning, 2015; Hughes et al., 2013; Stanley et al., 2013; University of Melbourne, 2016). These research findings were reflected in the original funding submission for the ACRP, which argued, as the rationale for project establishment, the importance of maximising the potential of food production to continue to contribute to the growth and prosperity of the area.

This assessment aligns closely to national and international literature on the need for building climate resilience and adaptation capacity within the agricultural sector. While the need for change has been recognised (Ayers & Forsyth, 2009; Garnaut, 2008; IPCC, 2014a; 2014b), contemporary research has highlighted a low level of proactive response to addressing climate change impact by agriculturalists. While research in this area has found an emerging understanding of the potential impact of climate change, and a growing understanding of the influence of human beings on climate, particularly in developed countries (Prokopy et al., 2015), action involving specific strategies to seek opportunity and build resilience, remains limited (Adger et al., 2009; Marshall et al., 2014; Marshall & Stokes, 2014; Raymond & Robinson, 2013; Robertson & Murray Prior, 2016; Zilberman et al., 2012). Much of this difficulty has been linked to resistance to change arising from: a) how information sharing relating to climate occurs; and, b) the unique characteristics of rural and farming populations; worldviews, personalities, value bases and decision making processes (Barnes & Toma, 2012; Haden et al., 2012; Jylha & Akrami, 2015).

Some initial emerging work has identified the value, and potential for success, of building resilience through smart farming approaches. Approaches that have been found to be successful include:

- Ensuring that there is effective education and communication, particularly to overcome a history of poor communication in how existing practice can (and, in
some cases, already does) align with proactive climate change action. Research has shown that, historically, communication of strategies that have the potential for enhancing climate opportunity has been poor (Abid et al., 2015; Kenny, 2011).

- Building connections between food producers, groups and individuals in regional and/or urban locations. This allows for the building of resilience and exploration of opportunities, based on shared understandings of diverse perspectives.

- Working with a broad range of groups and enterprises to build understanding and appreciation of what works and what existing knowledge is in place across a range of industries and enterprises. This approach has been found to help track ecology and resilience across diverse farming sectors, particularly non-traditional approaches to food production (Kenny, 2011). This strategy has been found to help identify innovative ways to balance profitability and sustainability.

These literature findings align closely with the framework that was developed for the ACRP. To maximise capacity building for food producers in relation to climate science, and the ‘how to’ of proactive action for change, the ACRP sought to provide locally based opportunities to deliver scientific and practical information of relevance to the agricultural sector. To support this process, a range of aims and objectives, which acted as a guide to project implementation, were developed from the outset.

1.2 ACRP aims and objectives

The ACRP aims, as documented in the project proposal when it was submitted for project funding were:

- To utilise place-based practical learning methods that will maintain continued relevance via a range of online resources, as well as community knowledge capital within the project network.

- To develop a strong network for local farmers, small lot landholders and the wider community to build their capacity to improve business and management decisions in relation to the production of, and access to, food in the region under changed climatic conditions.

The objectives established for the project seek:

- To engage and support individuals, community groups and businesses, particularly food production businesses, to achieve improved sustainability outcomes.

- To develop strong networks for sustainability enhancement within the context of geographical isolation.

- To break down traditional barriers to information sharing and knowledge building in order to maximise the capacity for building best practice in the area of sustainability, within the context of contemporary issues, environments and challenges.

This current study, completed by the Centre for eResearch and Digital Innovation, seeks to examine the extent to which these aims and objectives were translated into implementation. Through examination of the specific elements of implementation, the research sought to
explore the approaches that were most effective in supporting the ACRP in achieving that for which it was established.

### 1.3 The Centre for eResearch and Digital Innovation (CeRDI)

The Centre for eResearch and Digital Innovation (CeRDI) has extensive experience in undertaking impact research, identifying opportunities for workflow efficiencies, developing tailored online services and supporting stakeholders in the production and dissemination of plain language information and resources.

CeRDI is located within the Office of the Deputy Vice Chancellor (Research and Innovation) at Federation University Australia. CeRDI has successfully established a broad range of research initiatives defined by notions of knowledge management and data sharing, customised technologies and collaboration and partnership building. This work occurs across a range of disciplines including, but not limited to: business, environmental science, geology, geographic information science, history, information technology, graphic design, law, psychology and sociology.

The discipline and project expertise at CeRDI has enabled the delivery of research innovations that:

- Have real world application
- Build evidence bases for enhanced practice
- Utilise multidisciplinary approaches
- Are accessible and empowering for communities
- Provide a mechanism for research capacity building

- Enable sector development
- Establish a community and/or industry presence
- Utilise mixed methodologies
- Provide a mechanism for community capacity building
- Utilise open standards and open data

This commitment by CeRDI to building research knowledge in relation to community innovation has been significant in determining the study methodology developed for the research. The approach applied has maximised participant input, while applying a study design most likely to support the building of an evidence base around implementation of climate change and resilience innovation in the food production sector.
Section two: Study design

2.1 Design focus and model

In developing the study design for the ACRP impact research it was determined that, from the process of data collection and analysis, there needed to be an evidence base built for the key stakeholders (local government, the funding body, the research and the participant community), of the extent to which the project had influenced and informed:

- Views and knowledge about climate change.
- Perceptions around the effectiveness of project strategies for building climate change opportunities and agricultural resilience – including the enablers and barriers to the success of the mentoring component of the project.
- Networking and mentoring strategies.
- Knowledge building, skill development and the building of trust and connection.

To support this process a model was developed which captured the study design and provided a guide to the types of methods to be used during the research project. This model is depicted in Figure 1.

Figure 1: ACRP model for research design
The model provided the framework for the research and is also a model that can be reapplied in future research endeavours into the impact of this project, should the project re-established. The model is also applicable to similar projects should they be funded into the future. A series of specific research questions have been developed to support research implementation.

2.2 Research questions

In the development of the study design for this research there were three key foci, with specific research questions developed for each of these areas.

The first point of focus examined the extent to which the ACRP effectively communicated information around strategies for building agricultural resilience and sharing climate change opportunities. The research question to support this point of focus was:

Has the ACRP been developed and delivered in a manner that is appropriate, relevant and engaging to the local community?

The second point of focus was the examination of the use of networks and mentors within the ACRP and the extent to which these played a role in the uptake of strategies for building agricultural resilience and sharing climate change opportunities within the target community. This focus area considered barriers to success of the mentoring program as a strategy for supporting the development of the initiative. The research questions put in place to support this point of focus were:

How effectively have targets for networking and mentoring been achieved within the ACRP?

To what extent can networking and mentoring strategies be assessed as successful for the adoption of shared climate change opportunities and agricultural resilience building initiatives?

The final point of focus for the study was examining the extent to which the ACRP facilitated the building of partnership with community and, through this, contributed to the development of community agency on the issue of building agricultural resilience and sharing climate change opportunities within the target community. The research question put in place to support this point of focus was:

To what extent has the community been mobilised to engage, promote, adopt and advocate for the ACRP as a legitimate tool for capacity building within the context of local industry and identity?

In order to respond to these research questions a series of research methods were applied, as outlined in sub section 2.3.

2.3 Research methods

A mixture of qualitative and quantitative methods were used in this study. The methods comprised a literature review and document analysis, an online survey and individual interviews. This approach allowed findings to be cross-referenced and established a process whereby issues that were not addressed/identified through one data collection method could be picked up through alternative methods. This use of a multi method approach allowed for
triangulation of the data. Triangulation occurred for methods (interview, survey and document analysis) and data source (with feedback received from government employees, project participants, members of community and industry). This level of data triangulation has strengthened the body of primary data from which conclusions relating to the implementation of the ACRP have been drawn. Data collection for the study occurred near the end of the project implementation with no capacity to undertake pre-testing due to the nature of the project development and delivery. This is acknowledged as a significant study limitation and has implications for the potential to identify a clear cause and effect in relation to knowledge building and project delivery. This issue is discussed in greater detail in sub section 2.4 of this report.

2.3.1 Literature review and document Analysis

A literature review was undertaken for this study which involved electronic searches of research and policy documents published between 2004 and 2016. The review focused on examination of the issue of climate change, resilience and adaptation, known barriers and enablers to adoption of alternative farming practices and characteristics of farm communities.

Data collections involved Australian and international searches. Searches of EBSCO, Informit, SAGE online, Wiley Interscience and climate adaptation journals were performed using a range of key words of relevance to the study. In addition, all relevant documentation relating to the project were analysed for content and for relevant insights to the project. This included the original funding submission, milestone reports and newsletters.

All articles, policy documents and project documentation were analysed and subsequently clustered into a range of themes including, but not limited to: ‘farmers and climate change’, ‘food producer perceptions and attitudes to the climate change agenda’, ‘community action for climate change and adaptation’, ‘agricultural adaptation and climate resilience’ and, ‘community and food producer networks for change’. This literature was then linked, where appropriate, to relevant evaluation data.

2.3.2 Online survey

An online survey was developed and applied as a central element of data collection for the study. It provided a resource in building the knowledge base relating to the project.

This survey took around 15 minutes to complete and participants were invited by email to complete it. This survey sought to gain a detailed insight into the impact of the ACRP in meeting the needs of participants and targeted individuals who had been active participants in a range of components of the project.

The survey that was used to collect data is provided in Appendix A, while an overview of the number of responses and of the groups involved in the online survey are provided in Table 1.

2.3.3 Events participation feedback

Events participation feedback was collected from feedback sheets completed at events throughout the life of the project. The overview of the number of participants that provided feedback in events is provided in Table 1.
2.3.4 Individual interviews

Individual interviews were used as a means through which to gain targeted individual and subjective insights into user perceptions of service delivery, levels of satisfaction and issues of concern. This type of data is often not accessed through less interactive methods of data collection such as surveys. This method was included to maximise insights gained and to provide validation to other data collected during project implementation. The interviews also provided an opportunity for project strengths to be highlighted and discussed.

The interview schedule used to collect data during interviews is provided in Appendix B, while an overview of the number of interviewees is provided in Table 1.

Table 1: Data collection methods and source

<table>
<thead>
<tr>
<th>Data collection methods</th>
<th>Data collection Period</th>
<th>Profile of data accessed/ participant type</th>
<th>Numbers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Literature review and document analysis</td>
<td>July–September 2016</td>
<td>Documents relevant to the ACRP (promotional and marketing; web pages; funding applications; milestone reports) were reviewed using qualitative document content analysis techniques.</td>
<td>N/A</td>
</tr>
<tr>
<td>Individual interviews</td>
<td>August - September 2016</td>
<td>● Local and State Government; ●Landcare; ● Interested community members; ● Agriculturalists; ● Project management and project delivery staff.</td>
<td>16 participants</td>
</tr>
<tr>
<td>Online survey</td>
<td>August - September 2016</td>
<td>● Local and State Government; ● Industry representatives; ● Administration; ● Private citizens; ● Primary producers; ● Educationalists</td>
<td>30 respondents</td>
</tr>
<tr>
<td>Events participation feedback</td>
<td>October 2014 - September 2016</td>
<td>● Primary producers; ● Educationalists ● Local and State Government; ● Landcare; ● Interested community members; ● Agriculturalists/food producers/industry;</td>
<td>382 event participants 114 feedback sheets collected</td>
</tr>
<tr>
<td>TOTAL</td>
<td>428 project participants</td>
<td>160 active participants in data collection</td>
<td></td>
</tr>
</tbody>
</table>

All data collected for this study was analysed using established techniques for qualitative and quantitative data analysis including coding, thematic analysis and frequency distribution.

2.3.5 Analysis categories

Classification of impact was undertaken using Kirkpatrick’s (2005; 2007) typology of impact for training delivery. The nature of the data enabled a Level I (Reaction) and Level 2 (Learning) assessment to be made. The impact typology was applied to all relevant data; participant events feedback; online survey and interviews.

Level 1 assessment (Kirkpatrick 2005; 2007) refers to an immediate reaction to the activity or training that a participant has been involved in – this was gained through the participant...
events feedback. Level 2 refers to what the event attendee has learnt as a result of attending the event that they did not know prior to the event. This was gained through analysis of the online survey and the interview data.

The nature of the data collected for this study will only allow for an assessment of reaction and learning at the initial knowledge building stage. As there was no tracking of participants across the life of the project, the data can provide limited insights into effectiveness of the events beyond the point of delivery, or of the impact of the initiative in changing behaviour or attitudes into the longer term. This issue is discussed in greater detail in section 2.4 of this report which discusses study limitations.

2.3.6 Ethics
Ethical approval appropriate for research involving individuals was gained from the Human Research Ethics Committee of Federation University Australia and principles guiding the data collection and analysis process were observed to serve the best interests of all participants at each stage of the research process. The ethics approval number for the ACRP research project was A16-121.

2.4 Study limitations

2.4.1 Findings and proxy indicators
Examining the impact of the ACRP on individuals, groups and communities using a qualitative methodology was a complex process. Qualitative research often carries with it unique boundaries relating to generalisability of findings due to the subjective nature of the collected data. However, as a general rule, this subjectivity is overcome using accepted replication and validity measures. These measures were, however, not able to be applied to this study for two key reasons. These were:

- The diversity of participants, both geographically and in terms of project involvement. This diversity made participant comparative analysis very difficult as those who participated in the research had been involved in different workshops (both quantity and focus), were from different industries and different parts of the region, and had different levels of knowledge about, and interest in, the project. While diversity in numbers, industry background and location are not in themselves problematic, and, in fact can be beneficial for capturing different views, the inability to compare workshop attendance across the cohort, the differences in events participation feedback collected (and made available to the CeRDI researchers) and the absence of a trackable participant group from commencement to conclusion of the project, made comparative analysis for impact measurement difficult.

- The prevalence of the climate debate in the community. Building a strong correlation between behavior changes amongst participants as a direct result of the ACRP was mitigated by: 1) the short timeframe of the project; 2) the post project nature of data collection; and, 3) the myriad of additional potential external influences on project participant perceptions on climate issues. This included unrelated press releases, other programs and interventions being offered concurrently to the ACRP, advertising, television debates and web based information. The potential influence of these external influences made cause and effect measurement extremely difficult.
These factors mean that the findings presented in this report need to be considered proxy indicators\(^1\) rather than measures of definitive change. The findings are clustered according to commonalities, with the number of times that individuals provided the same insights into an issue viewed as a proxy indicator of impact. Adoption of proxy indicators enables valuable insights to be gained relating to project influence but cannot be used as definitive measures of impact. These limitations to the research highlight the need for further research into the impact of community based action on shifting climate preparedness. Given this, as an initial recommendation, prior to presentation of findings, it is recommended that project managers give consideration to ensuring that future community based initiatives for climate have a parallel and embedded research process as part of the project design. This will maximise the capacity for pre testing, longitudinal measurement of delivery and shifts in behavior, attitudes and knowledge. It will also enable the establishment of a process for the tracking of identified participants into the longer term.

2.4.2 Data capture and data collection tool limitations

For this study, measurement of impact and effectiveness of ACRP strategies was undertaken through the use of post program delivery approaches. The online survey and individual interviews occurred in the final months of the project, while the event participation feedback occurred at the conclusion of each of the events delivered by the project. While this approach is not unusual, it is important to flag, prior to presenting the findings that, for this project there were two data collection shortfalls that researchers encountered at the point of data analysis. These shortfalls relate only to the data drawn from the event participation feedback and have no relevance to the data collected through the online survey or individual interviews.

The first issue related to the return rate of event participation feedback forms. While there were 378 individuals who participated in the events provided by the ACRP, only 106 provided feedback on their experiences. Overall this is a 29% return rate which, as a total, is an average overall rate of return for survey based research. However it was not a uniform response rate across all events. Of the sixteen events that were delivered, feedback was collected for only ten of the events. While the return rate for those for which feedback was provided was reasonable – and in some cases very good, as shown in Table 2 – the overall returned data is not representative of all events. While the qualitative data collection has addressed this issue to some extent, it is a data shortfall that needs to be identified from the outset.

\(^1\) A proxy indicator is used when it is not possible to provide a definitive demonstration of the correlation between a change and an intervention. An alternative indicator is provided such as the perceptions of individuals, shifts in behaviours which are stated (but not proven) to be a direct result of an intervention. They include the number of times people provided a similar opinion on an issue and the consistency with which similar views are held that state that the change is due to involvement in an intervention.
### Table 2: Event participation feedback return rate per event

<table>
<thead>
<tr>
<th>Event</th>
<th>% Return rate</th>
<th>Event</th>
<th>% Return rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weather trends and forecasting</td>
<td>55%</td>
<td>Climate change café</td>
<td>0%</td>
</tr>
<tr>
<td>Vegetables in a changing climate</td>
<td>80%</td>
<td>Fair food film screening</td>
<td>0%</td>
</tr>
<tr>
<td>Building a wicking bed</td>
<td>57%</td>
<td>Biosecurity workshop</td>
<td>45%</td>
</tr>
<tr>
<td>Fruit growing in changing climate</td>
<td>0%</td>
<td>Improving drought resistance</td>
<td>14%</td>
</tr>
<tr>
<td>Where's my water</td>
<td>0%</td>
<td>Resilience through diversity</td>
<td>23%</td>
</tr>
<tr>
<td>Water wise irrigation</td>
<td>0%</td>
<td>Agridiversity</td>
<td>21%</td>
</tr>
<tr>
<td>Understanding healthy soils</td>
<td>0%</td>
<td>Shade and shelter</td>
<td>60%</td>
</tr>
<tr>
<td>Climate change café Foster</td>
<td>64%</td>
<td>Financial literacy</td>
<td>78%</td>
</tr>
</tbody>
</table>

The second issue relates to comparability of feedback gathered from different events. The ACRP used four different feedback collection tools across the 16 events when collecting feedback from participants. While each feedback sheet sought to gain attendees perceptions on the applicability and usefulness of the event, there was limited uniformity in how this information was gathered.

While this poses no problems for gaining insights into participant perceptions of individual events, it does have implications for comparability across all events; a principal goal in an inclusive project wide assessment of impact. There were some similarities in that, in some cases, the same questions, or different questions with the same knowledge building intent, were asked. Wherever this occurred, data has been clustered and used for the purpose of comparison. This however was not possible consistently across data provided to the researchers. It is recommended that, in future programs of this nature, a consistent data collection tool be applied across all activities, with topic specific subsets, to maximise the potential for overall project impact assessment at the conclusion of the service delivery process.

Acknowledging these issues, the data from the events feedback have been analysed, and wherever possible, used in conjunction with the data gathered from the survey that was administered by CeRDI researchers, and from the qualitative data. Unless otherwise specified, all information presented is drawn from data collected across all data collection methods used for this research (events feedback, online survey and interview).
Section 3: Research Study Findings

3.1 Aligning ACRP aims with research

The key aims of the ACRP, when broken down into measurable sub components, sought to:

- Deliver place based learning methods.
- Develop networks and mentoring to build capacity.
- Engage and support individuals, community and food production businesses to build awareness.
- Support the building of partnerships for community engagement and mobilisation.

In order to examine the extent to which the ACRP has met the aims for which it was established, research data was clustered. This enabled informed assessment to be made of the extent to which each of these subsets were achieved across the delivery timeframe of the project.

3.2 Place based learning

An examination of the data gathered during the research study relating to place based learning provided a number of key insights. Before moving to a detailed examination of these, it is valuable to place the concept of place based learning within the context of national and international literature on this learning technique. An initial review of literature found that, amongst proven strategies for effective engagement and mobilisation of agricultural communities, place based learning has a significant evidence base proving effectiveness. The need for adequate information and knowledge transfer in building competence, shifting behaviours, and in shaping levels of involvement in change, is extensively captured within the literature (Dahlhaus et al., 2014; Hogan et al., 2011; Jordan et al., 2011). Importantly, place has been identified as having a central role in supporting adoption of new ideas and innovations as participants to information sharing processes are better able to understand relevance when it relates to, and is delivered within, the local context. This is further enhanced by the fact that place based learning enables existing connections with individuals that participants know, and often trust, to become part of the learning and competency building process (Blackstock et al., 2010; Chatzimichael et al., 2014; Easdown & Starasts, 2004; Llewellyn, 2007; Reardon-Smith et al., 2015).

This positive foundational evidence on the importance of place in building the learning environment provided a base for the research, which sought to explore the activities and events that were delivered across the funded timeframe of the ACRP. In particular the research sought to build a knowledge base of the:

- Number of events and activities.
- Level of involvement in, and awareness of, the ACRP.

Through this the research also sought to make an assessment of the effectiveness and impact of place based learning approaches for building climate resilience.

All data collected for this study were examined to maximise learning and representativeness; events participation feedback, online survey and individual interview data relevant to the issue of place based learning.
3.2.1 Types and number of activities delivered through ACRP

In total there were nineteen\(^2\) events on the schedule for the ACRP in the timeframe from October 2014 through to the end of the data collection period at September 2016. While attendance at individual events varied, based on the type of event, a total of 382 participants attended these events\(^3\). The specific breakdown of attendance by event type is provided later in this sub section.

The delivery of events, while characterised by additional sessions at the outset and then a break, moved into a series of monthly or bimonthly events for the second year of delivery. This variability is captured in Figure 2.

Figure 2: ACRP events delivery timetable

Figure 2 shows a cluster of events delivered in late 2014 and early 2015 (six events) and the remaining ten events having been delivered, in the main, as a single event on a monthly or bi monthly event across a 19 month timeframe.

The event content included information sessions, practical workshops and demonstrations and farm visits and focused on topics such as:

- Vegetable and fruit growing. This session considered issues of food production in a hotter drier climate with reduced rainfall. Areas delivered for discussion were around what to plant, when to plant and how to adapt vegetable and fruit growing in a changing climate.

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\(^2\) Three of the events, while planned for and include in the schedule of events, were either cancelled due to lack of interest or postponed (and not delivered at the time of data collection). These events were two cancelled climate cafés (Dalyson and Wonthaggi – both in Bass Coast) and one postponed bus trip.

\(^3\) Another of the events, a film screening on Fair Foods, while planned for and delivered, has not contributed to the total participants numbers provided in this report. This film screening was not included as no specific numbers were provided and no feedback surveys were collected for this event.
• Understanding weather forecasts and trends. The presentation in this area reviewed the drivers of seasonal climate variability and how farming systems can respond to climate change and variability.

• Water management. A number of seminars covered water management (or drought management) and included how to build a wicking bed to provide efficient watering of plants, a demonstration of water irrigation in an orchard as well as in a range of settings in farm visits, and improving farm resistance to drought conditions.

• Soil health. This focus area related to how to assess soil health and the importance of nurturing soil microbiology, nutrient availability and soil fertility.

• Biosecurity risks. This session provided information understanding the biosecurity risks to livestock and how these can be mitigated.

• Agricultural diversification. This focus was around strategies for agricultural enterprises to develop resilience, including examples from local farmers who have diversified their farm produce. Impacts of climate and the need for diversification were also considered within this cluster, such as impact on mental health.

• Shade and shelter. This element of place based learning focused on building skills and knowledge for establishing shelterbelts to protect areas, particularly crops, from weather and erosion, as an aid to adaptation to climate variability.

• Financial literacy. This workshop focused on building skills in maintaining financial viability in ventures, understanding, managing and responding to financial risk and building an understanding of strategic and economic planning processes.

The number of participants for each of these types of events is captured in Figure 3.

**Figure 3: Scope of broad topics in ACRP place based learning initiatives**
The greatest level of interest was for enterprise diversification to respond to changing conditions with 33% of the overall participant cohort attending these sessions. The high level of interest in this type of information was further validated in the interview process where ten out of the sixteen participants identified that providing awareness of the potential for diversification, and setting out strategies to support change, was a key strength of the place based learning element of the ACRP.

After enterprise diversification, the next highest level of interest was for sessions on building knowledge relating to weather and the climate change impacts of these (24%), vegetable and fruit growing in a changing environment (15%), water management processes (8%), soil health (6.5%), shade and shelter (5.5%), financial literacy (5%) and biosecurity (3%).

While for the purpose of analysis and presentation, the events have been clustered into this range of sub categories, a complete list of individual events, when they took place and the location of delivery, is provided as Appendix C to this report.

A variety of delivery approaches were used by the ACRP so there was not only variability in content but also variability in terms of the ways in which information was delivered. Delivery approaches included:

- Information forums and workshops combined with farm visits
- Information sessions without farm visits
- Climate change cafes aimed at providing opportunities for issues discussion and informal mentoring
- Expert speakers on key issues of relevance to climate
- Practical workshops
- Film
- Forums and experts for targeted information sharing
- Practical sessions and farm visits
- Discussion groups

<table>
<thead>
<tr>
<th>Approach</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Forums and experts for</td>
<td>212 (55.5%)</td>
</tr>
<tr>
<td>targeted information sharing</td>
<td></td>
</tr>
<tr>
<td>Practical sessions and farm visits</td>
<td>131 (34.5%)</td>
</tr>
<tr>
<td>Discussion groups</td>
<td>39 (10%)</td>
</tr>
</tbody>
</table>

The use of multiple technique for delivery of information was valued by participants as it maximised the relevance of the project for the largest number of potential participants. In establishing an approach that accommodated variability in the central technique used to engage participants it meant that individuals who might not be interested in one approach could be picked up through an alternative approach to place based learning.

The value placed on the use of diversity in place based learning approaches was captured through the interview process and illustrated in statements such as:

*We are very much feeling it happen on the land, seeing the seasons changing and the changing weather patterns and the rainfall particularly is probably what we feel the strongest but also heat. Um, so it’s had an impact on our farm on how we, timing of operations, changed timing of lambing, and the critical thing driving the profitability of the farm is the pasture growth. And sort of, of course that’s linked to the weather and a changing climate. Providing activities to draw people’s attention to the changing climate and how you adapt, is of enormous valuable because there really isn’t anything else in that space being delivered that I’m aware of in this area. And I think there’s real value in that, and in the different types of activities so that there was something for everyone [Interview participant: food production sector].*
Acknowledging the benefit of providing different approaches to information sharing in optimising engagement capacity, the research data allowed the building of a clear profile of the types of events that were more likely than others to engage participants. A discussion of the assessment made by project participants of the effectiveness of the different approaches is provided in sub section 3.2.3 of this report.

A clear theme in the project documentation for ACRP was that the project would, through the mechanism of place based learning, strengthen adaptation by food producers and improve their resilience to climate risks. A foundational indicator of the extent to which they were able to achieve this outcome can be found in the proportion of project participants who indicated they were actually food producers.

An analysis from the feedback collected from events participants identified that the greatest proportion of attendees, did, in fact, identify themselves to be from the food production sector. While there was also attendance from community members/community organisations, businesses and government, over 70% of those involved in the place based learning element of the ACRP identified as food producers, including food producers aiming to modify their production techniques or diversify their current practice into existing or into new endeavours.

The extent to which food producers where the most represented group at events (based on events data) is provided in Figure 4.

**Figure 4: Profile of events attendees**

An exact statistical breakdown of food producers by industry type could not be undertaken as part of this analysis due to the data collection issues outlined at the start of this section of the report. The recorded break down of food production areas involved in the ACRP across the life of the project shows a broad representation across both established (such as beef and dairy) and emerging (such as mixed organic) industries for this region. The scope of industries that registered involvement in the ACRP are detailed below:

- Beef
- Horticulture
- Diary
- Sheep
- Bees
- Fruit
- Poultry
- Mixed organic farming
- Seeds and seedlings
- Home gardeners
While this is a positive initial indicator of the reach of the project, the extent to which the ACRP program engaged representatives from all groups involved in food production (e.g. diary, beef, sheep, mixed farming, etc.) in the region, and the level of this representation, was not able to be definitely measured through the research process.

Analysis of available data, particularly that drawn from the online survey, shows that some participants felt that the project made limited inroads to major industries within the area, as evidenced through statements such as:

- **Great for small growers and general community who choose to engage but I thought the target audience was 'farmers' (and the project missed the boat on this)**
- **Needed more application to medium and large scale farmers.**
- **More relevant information needed for bigger producers and commercial farmers.**

Other respondents assessed the project as providing an effective gateway into the food production sector, as evidenced in statements such as:

- **(the project) ensures dissemination of information to the farming community in an appropriate and peer-driven style**
- **Involvement of local farmers, many of whom are well aware of the potential impact of climate change was good**
- **(the project) provided breakdown of steps we (farmers) can take to improve our property resilience to variant climate events.**

There were concerns raised in both online survey data, and in feedback drawn from interviews, that there was a lack of clarity around the target group for the project. While the aim of the project was to engage food producers, feedback from participants indicated a lack of clarity around the type of producers that would (or should) be engaged. This lack of clarity was considered to have implications for targeting the audience for the project and, linked to this, delivering content within the place based activities that was most relevant to the greatest number of participants.

This assessment by participants was reflected in statements such as - **it provided general information but some extra information relevant to larger producers would have been good and The target audience was not clearly defined and targeted, not sure that this was clear at any stage of the project.**

This type of feedback highlights the benefit, should the project continue into the future, or an alternative similar project be established, of ensuring that, from the point of project development and then subsequent implementation, clear definitions of ‘food producer’ and ‘target group’ are determined.

The development of a target group definition should not be exclusionary in nature but focus on ensuring that the target audience and the content delivered are as appropriately and as closely aligned as practicable. This approach will maximise learning applicability to diverse groups – whether large producers, smaller producers, home gardeners or other community members. It may be all groups are targeted for inclusion however, just as individuals have diverse learning styles, so too do different sectors have diverse information needs, dependent on the scope of their enterprise.
One of the mechanisms through which to determine project reach is through a consideration of existing levels of awareness of the project – how many people actually know about the project? To gauge this, data from both the online survey and from the qualitative data pool was considered. While the project was supported by an email list for information distribution (126 contacts), the key mechanism for approaching individuals for involvement in the current research study, 38% of those who completed the survey indicated that they had not been involved with the ACRP. Of this 38%, a majority of 82% indicated that they had not been involved with the ACRP because they were unaware that it existed. This view that the project was not well known across groups and industry sectors in the region was reinforced in interview feedback within which 11 out of 16 participants (69%) indicated that greater levels of awareness of the ACRP could have enhanced project reach across the South Gippsland and Bass Coast shires.

To better understand the strengths of each awareness building approach used, and inform project enhancement into the future, it is important to consider each of the strategies used by the project.

### 3.2.2 The ACRP and building project awareness

A variety of techniques were used by the ACRP team to build awareness of the project, post establishment. These included a web presence (through a page within an established web portal), email lists and an events calendar. This was verified and reinforced in statements by project staff in statements such as:

> So we’ve definitely been promoting stuff via the internet through various calendars of activities. We have an email database that everything is sent out to. So we’ve used technology as much as we can to get the information out there [interview participant: local government].

The project also used strategies such as local newspapers, word of mouth and community links to maximise participation and awareness raising. In terms of consideration of the most effective strategies to apply for future development of this, or similar community based climate projects, the data provided valuable insights into effectiveness.

#### Web based media

Quantitative data from events feedback (for those returns from data collection tools that incorporated this question) and the online survey, 50% of respondents indicated that they became aware of place based learning events through the web-based media used by the ACRP. This included emails (23%), the Sustainability Gippsland site (20%) Facebook (2%) and the Council web pages (5%).

The Sustainability Gippsland website was used by the ACRP, through the mechanism of web pages within the website. This approach was adopted to provide a platform to connect farming businesses, individuals and community groups to interact and support one another to implement practical solutions for adaptation to climate change. As Sustainability Gippsland was a key online tool for the ACRP, the research team sought to measure usage through the analytics process. As this was not a stand-alone web presence, and the tracking of usage had not been established from the outset, accurate usage figures were not able to be incorporated into the research process. Consequently the CeRDI team undertook analysis of ‘posts’ as a means to ascertain the reach and use of this resource. The main page of the website was set up similarly to a social media feed that allows users to scroll through posts, reply or post something themselves.
Analysis identified low levels of regular activity on the ACRP 'feed' with posts from project staff occurring at two month intervals, with a limit of 16 posts in total over the duration of the project. The page was found to have four group leaders and nine followers, however posts were from those running the project with very few, if any, comments or input from members. In data collected from the interview process, only four out of the sixteen participants indicated that they had used the Sustainability Gippsland website to access information or find out about the ACRP. Further there was specific feedback provided that the Sustainability Gippsland website had not proven to be the most effective mechanism for awareness building and information sharing for the ACRP project:

*The Sustainability Gippsland site was used for promoting all of the events which is okay but it’s not a wonderful site so, you know, when you put posters up on there you can’t read them and things like that so… [interview participant: local government].*

This low level of access of the Sustainability Gippsland website, as shown in Figure 5, was reinforced in the online survey data on levels of usage. Analysis of this data found only 3% had accessed the web pages on a weekly basis, 7% had accessed the web pages a few times a month, 7% had accessed the web pages once a month but the greater proportion of 17% had accessed the web pages less than once a month and the majority of 66% of respondents had never accessed the web pages. No respondents has accessed the web pages on a daily basis.

While the feedback on levels of access of the ACRP web pages indicated that use had not been high, a review of the content found that there had been a commitment to maximising the process of information sharing about the ACRP. Project organisers had included videos from events, links to articles/videos about soil health, diversifying farming, water efficient farming, rainfall, men’s health, as well as promotions and reminders about events. These are all positive strategies for knowledge building and engagement and, importantly, are strategies which align with proven approaches for capacity building through the mechanism of technology. Information technology has been overtly recognised as a central tool for the dissemination of information on a range of issues that are relevant to local communities, including issues of climate change and adaptation. Availability of information through technology has consistently be found to be an important mechanism to overcome access barriers which previously excluded a range of communities, individuals and groups from the knowledge building process. Increased capacity to readily access information about an issue, to view current and past data relevant to a location and to access a range of knowledge repositories changes the landscape for the empowerment of communities on critical issues are all fundamental to behaviour change (Cegarra-Navarro et al., 2014; Detres et al., 2014; Garcia et al., 2014; Hesse et al., 2011; Huysman & Volker, 2005; Lloyd-Smith, 2009; Quinn & Ramasubramanian, 2007; Zimmerman & Meyer, 2005).
Acknowledging that the use of technology was a strategy to achieve higher levels of engagement in, and awareness about, the ACRP, it does not appear to have achieved the reach for which it was established. The extent to which the provision of this type of resource would have been enhanced through the establishment of a dedicated web portal, rather than pages on a site with an alternative, albeit related, focus, was raised during the data collection process. The issues raised by interview participants related, in particular, to two issues: 1) project identification; and, 2) project legacy into the longer term.

Project identification:

The fact that people struggled to find information about ACRP. As a result of the ACRP being housed on the Sustainability Gippsland website, people had difficulty in understanding that the activities they were involved in were aligned with the ACRP. Four out of the sixteen interview participants, while valuing the activities they were involved in, were uncertain which project these activities were associated with.

While a clear programmatic alignment is not problematic in terms of potential learning from an individual activity and the impact of learning on decision making and understanding of climate issues, it did make it difficult for people to make a conceptual link between an individual activity and a programmatic series of activities. A proportion of individuals indicated that they were aware of the project officer and the activities but not the project itself. This has potential implications on community capacity to follow up on progression with the ACRP or actively follow the project as a distinct resource for the community. The impact of this situation is effectively captured in the following extract of interview:

*The project needed to decrease the need to gather data about climate change from other sources and then I sort of did a quick search and (even though) they've got the Twitter and the Facebook and the Sustainability Gippsland but I probably wouldn't decrease my need to search (data elsewhere) because I couldn't really see essential access points for that information. Was I missing a website or is there not a website?* [Interview participant: community based organisation].

Project legacy:

The existence of a dedicated web site was assessed, by a third of the interview participants, as a mechanism through which to maximise capture of legacy data and, through this, enhance sustainability and knowledge sharing from the project beyond the funded timeframe.

It is acknowledged that the project planners did have mechanisms in place to maintain legacy data and this was known by those closely associated with the project:

*I think it’s been worthwhile and I think what we’ve done too is have little YouTube videos done so that any of the information sessions of the farm visits and things like that are all up and available for future reference so it’s something that will be there with, sort of, practical information about, you know, the farm visits so people can refer back to them if they need to* [interview participant: steering/reference group member].
However, it is also acknowledged that the lack of a logical linkage between the project and online resources was assessed, by a proportion of research participants, as an issue of concern. These views are captured in the following extract of interview:

Yeah so even that’s it for the legacy of the project, I know there was great information put together for the various um forums and climate cafes and the like but unless you attended those you wouldn’t have picked them up. So I guess one suggestion might be to decrease the need for people to source information elsewhere there would probably be value in having that information somewhere central as well. And I'm conscious, it’s a busy space websites, and you don’t want to set up a website that’s not going to be maintained properly but um I probably think that would be one thing too that there’s not anywhere for that legacy information. And it may well be sitting on the council’s website, I’m not sure. So that um, kind of yeah? House forums and workshops are really important and from those certainly people talk about and they’ll share that information elsewhere but in terms of having that repository with information to go back to… [Interview participant: community based organisation].

These views are supported in the existing literature which highlights the value of a dedicated web site for building knowledge, capacity and targeted information sharing. The same literature also confirms the value of dedicated web sites for the maintenance of legacy data and for a point of reference for those who wished to return and review learnings in a clearly and easily accessible resource (Carroll & Lambert, 2013; European Economic Area, 2015; Lloyd-Smith, 2009; Murphy et al., 2016; Sanderson et al., 2016).

In addition to the Sustainability Gippsland website, the ACRP used social media as a means through which to connect with different groups. A Facebook group was set up for the project in November 2015 and a Twitter account (@agclimateadapt) was established in December 2014.

At the point of data collection, the Twitter account was found to have 95 followers and 17 likes. The Twitter page was assessed by the researchers as having a higher level of activity compared to the web pages, with regular posts of relevant news articles, YouTube videos, re-tweeting or promoting events. As with Twitter, the Facebook page was found to have a greater level of activity than the web pages, with regular posts of relevant news articles, YouTube videos and promotion of events. These findings indicate the building of a stronger connection with the project than that achieved by the web pages – an assessment reinforced by five out of the sixteen interview participants. These research participants assessed that the use of social media was a strength of the project, and an effective engagement and awareness building strategy. These views are evidenced in statements such as:

I think this project has probably used social media better than most projects… I think they did social media pretty well for what they’ve had the capability to do [interview participant: government].

These are positive indicators of the value of social media as a tool for the ACRP. However, it should be noted that, while the ACRP posted regularly, there was limited interaction in terms of conversation or involvement of others – with only 1-2 ‘likes’ on the posts and very rarely any comments. Inspection of the ‘likes’ shows that the page itself ‘likes’ their own posts which blurred the data in terms of active users versus project staff.
These findings give rise to the question of the role of social media in building project awareness. Available literature has assessed social media as an expanding mechanism for engagement with local government and one that is slowly building connections and enhancing information sharing (Sáez et al., 2015). The use of social media by the ACRP was a positive and inclusive strategy, particularly given that it was one approach within a toolkit of project awareness building strategies.

The feedback received across the participant pool, regardless of the data collection type (event participation feedback, individual interview or online survey) reinforced that, with a new initiative, diverse type of awareness building and connection processes have variable levels of success, dependent on the target audience. For some potential participants a web presence will be most effective, for others social media, for other groups newspapers and for a large proportion of the agricultural sector, face-to-face approaches and word of mouth through trusted networks:

You know having a Twitter handle and driving down the social media path that probably in the space of the newer enterprise people. Some (identity provided and removed) would have said probably that goes down the road of not quite meeting the needs of the big agriculture stuff. [Interview participant: community based organisation].

The farmers tend to be more comfortable with Facebook so, you know, which is sort of older but, you know, it’s sort of more comfortable and easier to use (than Twitter)… I’ve used our calendar of events… But I think it’s definitely been a good conversation starter and people… I mean you’re always going to have your industry leaders that are doing this stuff and it’s a way of bringing everyone else along I guess, so… And it gives you a chance to identify your champions and put others in contact with them. The farmers are very good at talking to each other, you know, and they share information quite readily so… I think the project officer did a great job with the videos and promoting the social media and this is an area again where some of the traditional programs aren’t doing as well, we’re all trying to lift their game there. But you (need to be diverse) to a whole new sector…how do we communicate that more broadly and I think that’s important as well [Interview participant: food production and Landcare sector].

I don’t think we get, we got enough traction in the social media arena. It meant that we got more response from local papers and through existing networks. I think that the reference… I think that now what I’m… I think the traditional ways of delivering information to the farming community worked. I suspect that newer ways such as social media will come forward as a way of delivering information because I see that in newer, younger, smaller more boutique type farmers as the age changes that will probably change. But I don’t think it’s there yet in our area. So we started with Twitter and that didn’t really happen and then we went on we, well we got people connected in with it but they weren’t necessarily from this local area necessarily. And then we moved to Facebook late in the piece but there still wasn’t, you know there still wasn’t an uptake and, yeah, really at the end of the day I suppose that wasn’t probably about understanding the audience as better in knowing how they engage with information, because at the end of the day it’s professional development for them [Interview participant: local government].

Given this feedback, and the fact that the ACRP did use methods other than web-based media, a brief review was undertaken, by the research team, to the impact of non-web based media for awareness building in relation to the ACRP.
Non web based media

As identified in the discussion on web based media, the understanding shown by the ACRP project staff on the need to target a variety of techniques for building awareness of the project, and what it was delivering, was an identified strength. While 50% of respondents had heard about ACRP, and the events available through it, through the medium of web based media, the remaining 50% became involved through reading about the ACRP, and individual events, in newspapers (5%), through networking (27%) and through word of mouth (18%). This breakdown is depicted in Figure 6 and provides a statistical reinforcement of assessments made by interview participants; over half of whom had heard about the events in the local paper or through the networking process.

…there is a big existing network out there so whether it sort of cuts into those… stats on the Twitter and Facebook and look it’s not a huge reach, like I think it was 34, 34 likes on the Facebook page and 13 like on the Sustainability Gippsland. But I guess that’s not a great representation, particularly when you are dealing with the farming demographic when a lot of them aren’t on those pages anyway… getting out and having that face to face time with land holders and that’s a really big help but also things in the local paper and that’s something that the project I thought did really well through local media advertising things where people come along to forums that’s networking for that older demographic [interview participant: food production and land care sector].

These findings align with existing literature on information sharing and awareness building within agricultural communities. This body of literature consistently reinforces the importance of building on trusted networks and gaining buy-in through ensuring that individuals are able to build trust and access resources through mechanisms and strategies in which they have confidence (Aguilar-Gallegos et al., 2015; Al Musawi, 2014; Anil et al., 2015a; 2015b; Attanandana et al., 2007; Baumgart-Getz et al., 2012; Easdown & Starasts, 2004; Gianatti, 2005; Gianatti & Carmody, 2007; Hall & Wallis, 2013; Knowler & Bradshaw, 2007).

This idea was understood by the project team and is captured effectively in this extract of feedback from one of the project steering/reference group members:

A lot of our farmers –we are experiencing generational changeover with some of our farms – and they’re adopting new technologies and taking on board these things. Our older farmers may have read about it, but not quite sure how to approach. So for me I think it’s opened doors and possibilities for them. So there’s people they can talk to who are already doing it. Or there’s little bits of information that they could take on-board and use themselves which they’re comfortable with and then perhaps
extend themselves a little bit further... [Interview participant: steering/reference group].

The final issue raised during data collection on optimising the potential reach of the project to the maximum number of participants related to the location of place based learning events delivery.

**Locational impact**

The development and delivery of the ACRP was undertaken as a partnership between two local government areas: South Gippsland and Bass Coast. Feedback received during data collection was indicative of a project development initiated by South Gippsland and then adopted as a partnership with Bass Coast shire.

The data drawn from interviews on to how location impacted on awareness of the project was mixed, with divergent views held of the impact of location on levels of community and sector awareness of, and responsiveness to, the ACRP.

The differences between the population demographic and sector needs of the two shires was assessed as having had an impact on levels of awareness and uptake. Within the context of location, there was an assessment made, by seven of the sixteen interview participants, that location impacted on applicability of, and responses to, events delivered by the project. This issue was summarised effectively by statements such as:

*There are definite differences across shires... it's a completely different demographic in their farming communities so what works with one lot and South Gippsland would be the traditional text book farmer whereas over in Bass Coast it’s a slightly different model. They are more innovative, they’re less full time and they operate in a different way… because it’s much more of a touristy area and there is much more going on there in terms of business, they have opportunities to market their produce in a different way as well* [interview participant: local government].

This issue was assessed as likely to have an impact on awareness of, and engagement with, the ACRP as the types of activities developed and presented had not been optimal for the specific needs of the location. Research participants indicated that they had encountered greater difficulty customising place based learning content for Bass Coast shire. Networks that were in place, and the positive support that could be gained from these networks for developing appropriate content and for building locational awareness of the project, were stronger in South Gippsland shire than in Bass Coast shire.

While anecdotal feedback on this issue was consistent, it was not possible to validate this through a review of the events profile. The data does show that the two climate cafés that were cancelled due to lack of interest were both to have been delivered in Bass Coast. However the data also shows that the two events with the highest rate of attendance (Weather Trends with 55 attendees and Resilience Through Diversity with 48 attendees) were both delivered in Bass Coast shire. Other events delivered in Bass Coast shire did have lower attendance rates, but not to a level of statistical relevance when compared to events held in South Gippsland Shire.

An analysis of the number of events held in Bass Coast shire found that, of the 16 events held overall, ten were held in South Gippsland shire and six in Bass Coast shire. This discrepancy does suggest a notably lower level of representation of place based events in Bass Coast shire as compared to South Gippsland shire. Two additional events that were targeted for delivery in Bass Coast shire were cancelled due to lack of interest but no
evidence was able to be accessed to explain whether this was due to a failure of these events to adequately address the identified needs for Bass Coast shire farmers. The breakdown of the locations of events is provided in Figure 7.

**Figure 7: Shire locations for ACRP events delivery**

| 1 event held at that location | 2 events held at that location | 3 events held at that location |

It is important to note that, regardless of location, a consistent message from across the interview participant pool was that an initiative driven by local government into the area of climate adaptation and resilience was positive and needed. The specific issue of the role of local government in building partnership for enhanced awareness of climate impact and resilience will be discussed in greater detail in sub section 3.3 of this report. At this point, consideration is being given to the role of local government in strengthening awareness of the project itself, and supporting successful implementation. This was a notion that was consistently supported by participants to the data collection process.

*It has been a positive in the sense that South Gippsland Shire Council and Bass Coast have made that agricultural sort of focus for them because sort of prior to that there wasn’t any concerted effort in that space. So I think that can only be a positive thing... whether it’s them sort of running it or it’s saying supported by council and having outward input helps with and recognising what there is already existing [Interview participant: community organisation].*

Acknowledging the support for the role of local government in projects such as the ACRP, there were concerns raised about how to resolve locational differences and whether or not
the project had adequately responded to the diversity of need across locations. These were not resolved over the life of the project.

To this point in the report, the focus has been on a measurement of the levels of awareness of the ACRP, and the strategies used to build and consolidate this awareness across the target communities. Understanding the impact and effectiveness of the place based events themselves is also an important part of the project review process.

### 3.2.3 Measuring impact and effectiveness of place based learning

As identified previously in this report, a range of place based learning activities were delivered through the ACRP. These included: 1) information forums and workshops both with and without an associated farm visit; 2) climate change cafes aimed at providing opportunities for issues discussion and informal mentoring; 3) expert speakers on key issues of relevance to climate; and, 4) practical workshops.

An analysis of the feedback about different activities to support place based learning found that, across the collected data, the most value was placed on activities which:

- a) provided the opportunity to learn in a practice environment, as occurred with the farm visits; and,
- b) on information provision through workshops and forums, particularly when information was provided by experts.

Analysis of participant feedback drawn from the online survey data found that 72% of respondents rated activities containing these elements as either useful or very useful in meeting their needs for knowledge building on climate and food production. Importantly, in terms of place based learning, no respondents assessed the sessions involving farm based learning as not being useful. This assessment of usefulness is captured diagrammatically in Figure 8.

**Figure 8: Assessment of usefulness in meeting need**

This assessment was supported by those involved in the interview process where 100% of those interviewed identified that the opportunity to learn in an ‘on farm’ environment, with increased capacity for demonstration, networking and discussion with others was an important engagement and experience enhancing aspect of the ACRP approach to place based learning.
These views are captured in the following representative extracts drawn from the interview process:

The best way of getting information across (is on farm learning). I say that based on having 30 years of experience in (mentioned agency). The best activities are where you have ‘on farm’ workshops and field days and workshops like this, where people can see things in action, for themselves [interview participant: local government].

Farmers can’t go past having a perve at someone else’s place... few different things have been spectacularly unsuccessful but declare a farm walk they’re there. And if I’ve been smart and you picked a farm that everyone wants to have a look at because they are doing something particularly well (such as with the soil health and the drought proofing the farm)... people wanted to know what was going on there and how they could go and do something themselves [interview participant: food producers].

It was a good mix of subject and I think the locations of where the forums and field days were really suitable as well. You know where possible trying to hold them on properties or you know depending what we’re seeing delivered, I think that was good. And a good mix across the district as well. Because I know we run events, you’ve got to keep it quite local as well because they’re busy or at night they might not want to travel too far... people like to have a bit of a sticky beak at what other people are doing and yeah just sort of makes it less formal as well and that’s how land managers sort of work, they like to catch up and sort of socialise [interview participant: community group].

The importance given by the ACRP to local context, and the opportunity to learn within a practical environment to engage individuals and maximise the usefulness and applicability of new information aligns closely with the available literature on the issue. Literature sources globally promote the importance of ensuring that there is a high level of locational relevance (seasonal, contextual) if learning is to engage the maximum number of stakeholders. In addition, those involved in learning to change behaviour need to be able to create a conceptual link between the issue and the rationale for a particular industry approach. Farm visits, and experts speaking on key issues and discussing ways in which change can occur in a particular location help create the bridge between ideas, theory and practice. For an industry that is strongly focused on the here and now of decision making (Jackson et al., 2010), strategies for engagement must ensure that levels of relevancy and the potential for reciprocal benefit are overt. The opportunity to understand issues within the context of a particular location, a farm type, a community, and in consideration of what the benefits and risks are (as discussed, perceived and proven through the experience of those within a food production network) plays a significant role in perceptions of value and applicability of learning to the decision making process (Anik & Khan, 2012; Baumgart-Getz et al., 2012; Blackstock et al., 2010; Jackson et al., 2010; Milne et al., 2008; Newsham & Thomas, 2011; Nicholson et al., 2015; Pannel et al., 2006; Prokopy et al., 2015; Raymond & Robinson, 2013).

Hearing from experts and having the opportunity for practical demonstrations were also rated very highly as mechanisms for effective engagement for building climate resilience. Seventy–eight percent of those who responded to the online survey identified that the information and resources provided through the ACRP were either useful or very useful for building their knowledge base around climate adaptation and resilience. This was further supported by written feedback gathered through the online survey, and through the events forms, which highlighted, as a strength of the ACRP, the value placed on these types of activities with...
statements such ability to plan farm visits and having specialists who can help us understand the problems and the solutions.

Research participant perceptions on the value of expert support and advice was further validated in the data collected during the interview process:

And I think building resilience, building strategies is of enormous value… I think these sort of programs and what (the worker) has done in bringing experts in (is exactly what was needed), you can’t try and cover them yourself, you need to bring experts in [interview participant: food production sector].

People that had actually substantial experience and knowledge of the particular area that the focus was on, you know the one with Jane Bunn as the primary speaker was all about weather forecasting and how it all works, and what the patterns are and how you decide if shifts are taking place in weather etc. and that again was supported by people that really know what they talk about and it would be very difficult to come to that, who was wondering about climate change was real or not, it would be very difficult for them to come away and not be convinced. Similarly when we had the one on diversity in farming again the people who were speaking and giving examples were farmers who had actually done this and showing what worked, what didn’t, how the things that worked had worked, what the advantages were, what the disadvantages could be so we all got a broad knowledge of issues that probably most farmers think about. You know should I diversify? should I mix crops? should I you know? And I think again the value of that is you listen to people that actually know what they are talking about [interview participant: food producer and steering/reference group member].

Across the collected data, whether from individual interview; online survey or event participation feedback, the farm visits, expert speakers and practical workshops were assessed positively. When participants were asked to identify the three most valuable things they took away from involvement in the place based learning events, content analysis of written feedback showed that, in 88% of cases, the most valued elements of the events were the attainment of new knowledge, the opportunity to talk to and hear experts, the opportunities that new networks opened up for gaining greater levels of new knowledge and practical strategies to proactively address, manage and/or understand climate issues.

Analysis of the online survey data on where participants felt they would benefit from further project development tracked a consistent trend asking for more on farm audits, action planning and farm trials on resilience and adaptation.

Data analysis on the discussion groups (climate cafés) was not as positive. This was evidenced by the cancellation of two of the scheduled cafés due to lack of interest. It was also found in written feedback on effective strategies which consistently rated the climate cafés as the least effective of the events delivered by the project. Data collected through interview further reinforced this view with statements such as:

the cafés were absolute losers, overall. Yeah over in Bass Coast they were… People just didn’t want to come out at the night time… you know I’ve just milked, I’m absolutely exhausted, it’s been a long day and I’m freezing cold and all I want to do is put my feet up, you know, have my dinner at home and put my feet up and not drive, so… You know, I mean the thought was good, but it… And they wanted few people to chat but I think you’ve got more chance of getting them there over lunch then you have in the evening [interview participant: local government].
While this feedback is acknowledged as valid and consistent across the collected data, it should be noted that the two climate cafés held in South Gippsland shire were well attended, with attendance at the second café (23 participants) increasing from attendance at the first café (16 participants).

Additionally, the data collected from the online survey showed that, while the majority of respondents to the question on the value of the climate change café did indicate they were unsure of the value they provided, or did not answer the question, 39% of respondents viewed the climate change café as a either useful (17%) or moderately useful (22%). These figures reinforce the fact that a range of styles and approaches have been useful to maximise the reach and the style of potential participants to the ACRP.

Overall, in regard to impact and effectiveness of place based learning, while there were areas where there was capacity for enhancement of engagement processes, content or approach, the feedback on the effectiveness of the events was positive. A collation of the events feedback and online survey (where it was possible to match questions across the diverse data collection tools) shows that an average of 82% of participants felt better prepared and skilled to adapt to a change in climate as a result of attending the ACRP event.

Importantly, the place based learning approach was seen as a way to better understand the scope and complexity of climate impact:

*How do you increase resilience in the farming community? Well through the actions of this - you know the farms that participated and the people that participated in the workshops… I’d like to think that the project opened eyes to think about, this is not just about my dirt that climate effects on the ground but it’s the effects on people… so trying to get down to the impact to be felt (at a number of levels) not keep thinking about only the environmental impact [interview participant: government].*

In conclusion, the key summative points assessed through the quantitative data collection found the events delivered through the ACRP were assessed as being useful (on a moderately to very useful range) for providing:

- A forum for discussion on issues relating to climate resilience (89% of respondents).
- A mechanism to access resources relevant to climate resilience (89% of respondents).
- A means through which to build knowledge around agricultural climate resilience and the impact that it has had on community and industry (84% of respondents).

These findings reinforce the impact of the place based learning approach, as does the fact that, overall an average of 72% of this cohort, across a range of events, assessed that they were likely to attend a similar event in the future.

Initial results specific to place based learning events, therefore show that, for the participants for whom feedback could be effectively measured, there had been valuable information provided, and a building of knowledge specific to climate resilience.
These findings (as depicted in Figure 9) are all indicators of both a Level 1 (Reaction) and Level 2 (Learning) impact applying Kirkpatrick’s (2005; 2007) typology of learning. These levels measure how people have reacted to what is presented and how much they assess they have learned as a result of receiving new information. This is a positive indicator of initial impact. However, while there was an interview component to the research study, there was no capacity to assess whether the place-based learning events provided through the ACRP have created any shifts in behaviour or created measurable results in how the region is responding to climate change challenges as a result of the ACRP.

**3.2.4 Summary of findings for place based learning**

The key findings in this sub-section, as drawn from the data collection and analysis process, have been that:

- A total of 16 place based events were delivered across the South Gippsland and Bass Coast shires using a range of content delivery techniques including information sessions, practical workshops and demonstrations and farm visits. The key topic clusters across the range of events were:
  - Vegetable and fruit growing - what to plant, when to plant and how to adapt vegetable and fruit growing in a changing climate.
  - Understanding weather forecasts and trends. A review of drivers of seasonal climate variability and ways in which farming systems can proactively respond.
  - Water management using a variety of scenarios and setting to illustrate irrigation, farm resistance to drought and water efficiency.
  - Soil health and fertility in changing environments.
  - Biosecurity risks and their mitigation.
  - Agricultural enterprise diversification – the why, where and how to of change and diversification.
  - Shade and shelter – shelterbelts and their application and benefits in a changing environment.
  - Financial literacy.
Levels of interest across the different topic clusters, based on rates of attendance were, from highest to lowest:

- Agricultural enterprise diversification.
- Weather and the impacts of weather change.
- Vegetable and fruit growing in a changing environment.
- Water management processes
- Soil health.
- Financial literacy.
- Biosecurity.

- The diversity of the place based learning approaches (such as forums, workshops, farm visits and discussion groups) that the ACRP applied in the delivery of information on the issue of climate resilience was valued. While there were variable levels of interest in each of the information sharing techniques, the diversity provided a means through which to accommodate different interests and learning styles.

- There was variable representation from across the food production sector at the place based learning events. It was not possible to assess the specific numbers from each of the different food production sectors operating in Southern Gippsland shire due to shortfalls in the events data collection tools. Overall however available data indicates a broad, if non-quantified, representation from across various sectors – sheep, beef, diary, mixed horticulture, organic farming, poultry and small and large home gardeners.

While this diversity was assessed as a positive aspect of the project by a proportion of respondents, it was identified as a barrier to effective outcomes by others involved in the data collection process. This was due to the assessment made by these participants that there was a lack of clarity around the target group for the project. This was critiqued as impacting on the effectiveness of targeted delivery, and of creating too strong a focus on the provision of a general approach to information sharing. A proportion of research participants believed that this had weakened the impact of the ACRP as it removed the capacity to ensure information provision that was targeted at specific issues for specific parts of the food production sector. Consequently the project was viewed as having limited value for medium and large scale farming enterprises. For this proportion of the participant pool it was assessed that providing a defined target group, regardless of focus, would have strengthened the reach and applicability of the project.

Conversely, other research participants indicated that the approach worked effectively for all groups and provided a mechanism to link the community to the agricultural sector.

- A variety of strategies were used to build awareness of the project across the implementation timeframe. These strategies included web based media (Sustainability Gippsland website, social media and email contact lists) and non-web based media (newspapers, radio and word of mouth/networks). These strategies were all variably successful and highlighted the need to adopt a mixed approach in maximising project awareness. Word of mouth and networking links overall were considered the most effective project awareness building approaches.
The lack of a dedicated web presence for the ACRP was assessed as being problematic for building project identity and for supporting the capture of legacy data gathered and built throughout the life of the project.

The fact that the project spanned two diverse local government areas was seen as a valuable initiative for strengthening the link between agriculture and government. At the same time, the diversity of the two areas was assessed as creating some issues for developing activities that were most relevant to all parties to the project partnership. Differences in location specific needs, in world views and in the point of knowledge development on the issue of climate resilience were all assessed as potential barriers to maximising levels of engagement with the project.

- The greatest level of interest and engagement in the types of place based learning activities was identified as being for:
  - Farm visits
  - The information provided by field of practice expert
  - Practical workshops.

The lowest level of interest in the place based learning events was found in the discussion sessions that defined the climate cafés. However, while the feedback across the collected data on climate cafés indicated that it was the least sought after activity, there were also participants who valued the activity. This was particularly relevant for South Gippsland over Bass Coast (where there was limited interest in this type of activity). Overall the feedback on specific activities reinforced that providing diversity in place based learning approaches was an effective way to engage the maximum number of participants.

- Overall the place based learning events were assessed, by a majority of research participants, as having been successful for providing:
  - A forum for discussion on issues relating to climate resilience.
  - A mechanism to access resources relevant to climate resilience.
  - A means through which to build knowledge about impact of climate shifts on community and industry.

- The place based learning events provided by the ACRP were assessed, by the research team, based on the data collected and analysed, as having achieved a Level 1 (Reaction) and Level 2 (Learning) impact in building climate resilience knowledge amongst those who participated in the events delivered through the project.

3.3 **Mentoring and networking**

One of the principle aims of the ACRP, embedded within, and integral to, the original project brief, was the establishment of a mentoring program. The rationale for this approach was closely aligned to concepts of innovation and change champions – a concept that has been key to organisational and community change agendas globally for a number of decades (Dopson et al., 2002; Ferlie et al., 2001; Jansen et al., 2016). Mentors (champions) have been promoted as a mechanism through which to connect with individuals and communities to provide support, knowledge and expertise in an identified area. This alignment validates the decision made to include a mentoring program in the conceptualisation of, and planning for, the ACRP.
3.3.1 ACRP mentoring program

While this project aim was closely aligned with research evidence on effective strategies to support change in the agricultural sector, the mentoring component was not implemented by the ACRP. Feedback from interview participants, and written feedback from the online survey, provided participant assessments that mentoring was viewed positively as a mechanism to strengthen the potential for greater uptake of climate resilient strategies and adopt agricultural diversification.

Given the body of evidence that supports the concept, the fact that those participants to the research process uniformly saw it as an effective and sought for change building strategy, and the fact that it was included in the project brief, it was necessary to examine why this element of the project was not implemented.

In the agricultural and climate change arena, available research highlights the importance of ensuring that individuals chosen to be mentors are a respected and trusted individual, preferably an integral part of the agricultural sector and a member of the local community. These factors are key prerequisites for success in supporting and facilitating adoption of strategies for change, including climate resilience (Kettle & Dow, 2016; Nain et al., 2012; Straith et al., 2014; Strong & Irani, 2011). Without this, particularly in agricultural sectors where networks, webs of influence and trust, and an understanding of the need to mitigate risk are such powerful themes, the successful uptake of change, including diversification of established practices, becomes more difficult.

Extensive research on the role of those with a brief to mentor, support and drive a change agenda has found that the chosen individuals need to have a number of key characteristics. These include: 1) being part of established networks; 2) holding high levels of trust amongst key groups and individuals; 3) having a commitment to, and a strong belief in, the change being introduced and promoted; 4) having levels of expertise in the sector (in this case food production) and being allocated an associated level of respect as a result of their expertise in, and commitment to, the sector; 5) having the capacity to reach a number of groups and individuals and provide some level of support in implementation and roll out of changes and points of diversification; and, 6) having the capacity and the willingness to commit to involvement in an ongoing way, while sharing their own experiences, processes and techniques for implementation of a particular approach to the issue under consideration.

These defining characteristics, in themselves, provide a key indicator of why this element was not ultimately included in the ACRP. Identification of a group of individuals with the characteristics required for mentoring is likely to be problematic, particularly across a large geographical area with locational differences and unique contextual needs. This is particularly true in an agricultural environment in which notions of expertise and formalised advice provision are not embedded conceptualisations for how to enhance business outcomes. This assessment was captured effectively by interview participants:

*That was written into the project and I think that the dream of the people that set the project up would be that (it would be possible ) to find farmers out there that could (be paid) for their time and be trained and they could mentor other farmers because they were leaders in what they were doing and they had really good soil or they had they farm water supply or they had good shelter on to their farms and they didn’t have the stock losses that people with more exposed properties had, just that kind of thing. That sounds easy in theory but in practice it was nearly impossible. Farmers are really time poor and when you ask them to be a mentor they sort of go no nope not me mate, I’m not an expert in anything [Interview participant: local government].*
For farmers mentoring, it’s sort of like a business jargon word and unfortunately a lot of them don’t, still don’t see themselves as business people, which is one of the things that we’re sort of trying to, you know, saying to them, you know, ‘you are business people, you’re multi-million-dollar business operators’, you know [interview participant: local government].

In addition to gaining commitment of time and expertise, there is an issue of resourcing associated with the development, management and ongoing support of a mentoring project. The resourcing demands relate to: finding and inducting mentors, the provision of support and training to these individuals, reimbursement of costs of involvement of these individuals and, for mentor program sustainability, some level of remuneration. The ACRP was not able to allocate this level of resourcing.

(the project) never had the resources to actually in any shape or form. And couldn’t find any, and (even if it had been possible) couldn’t find anyone who was prepared to be a mentor unless they were professional working in the field who were quite prepared to do a farm talk anyway. (This group could have been) mentors but (the project) would have to pay their $1500 a day fee it took and would have run out of money really quickly [interview participant: local government].

The issue of resourcing was broader than the mentoring program and was identified consistently, by six out of the sixteen interview participants, as being problematic for program administration and management. It is an issue that will be considered in greater detail later in this report. In terms of the mentoring program, the lack of adequate resources for the mentors, and for the administrative staff to support the mentors, had a notable impact on the potential for the mentoring to be adopted and integrated into the ACRP.

This is particularly problematic if there is not uniform agreement, at the project governance level, in relation to the structure and roll out of a mentoring program (Huffer 2009). The need for this type of structure and uniformity in views relating to the establishment of a mentoring program is a consistent theme in literature on successful mentoring programs.

Feedback provided during the interview process identified that, in addition to resourcing constraints, there was lack of uniform agreement in terms of:

- The payment of mentors (whether it should occur and at what level) - there was a disagreement as to how that, whether mentors should be paid or not basically and that there was a distaste for that at that level [interview participant: local government]

- The location of the project officer. This was shifted from an initial idea of housing this individual in a location with greater access to potential mentors and greater capacity to provide support in the development of a mentoring project – the Project Officer was to be stationed out of a sustainability food hub one day a week and that would give an opportunity for (attracting mentors) and also an organisation there would be contracted to provide some support in that area and that was vetoed fairly early on which ultimately changed the project plan [interview participant: local government].

The potential impact of shifts in project delivery structure and philosophy was not assessed as part of this current research process however a lack of agreed structure on project components and implementation, post funding, is a situation to be avoided in future project planning.

Ensuring these issues are addressed from the outset will maximise the capacity to identify potential issues before they arise, and ensure there is an agreed upon response strategy to
address issues relevant to housing, resourcing and longer term project sustainability and enhancement targets.

While the research process identified that the mentoring program had not been successfully implemented, there was clearly a high level of success in the development of a strong network of people as a direct result of the ACRP.

### 3.3.2 ACRP networking successes

Networks have been identified consistently as having an impact on decision making across a range of sectors and domains (Blackstock et al., 2010; Bodin & Crona, 2013; Wright, 2011), with their influence in the farming sector consistently highlighted as integral to modern industry management (Anil et al., 2015a; 2015b; Baumgart-Getz et al., 2012; Gianatti & Carmody, 2007; Hall & Wallis, 2013). Networks provide critical social and peer interaction and are fundamental in influencing practice approaches and decision making (Eastdown & Starasts, 2004; Taylor, 2013).

There are a range of networks of relevance within agricultural communities including peers (what neighbours are doing on their farm enterprises), social groups, local and industry based communities and key professionals (such as sector based associations and agricultural consultants). These networks provide a way to gain opinions, advice and practical techniques (expert and peer based) on products, practice approaches and shifts within the sector (Aguilar-Gallegos et al., 2015; Al Musawi, 2014; Anil et al., 2015a; Easdown & Starasts, 2004; Gianatti, 2005; Knowler & Bradshaw, 2007).

The project organisers did, once having determined not to implement the mentoring program, attempt to support the development of informal networks. Data analysis during the research study did track that there was feedback sought from events participants (through the events feedback sheets) on sourcing possible mentors. This attempt to map mentoring options was largely unsuccessful and provided limited feedback and very few specific options for project organisers to pursue.

An alternative approach to building a mentor program was also sought through the mechanism of the climate café – a concept which aimed to provide a forum for discussion and for building links and networks for support and ‘mentoring’. There was a very small proportion of research participants who found the climate change café concept to be valuable for making those type of connections:

*Climate change café I went to the one in Korumburra and there were lovely discussions and interactions, connecting about what we are doing with farming… I also meet a number of people I have been wanting to meet there and followed up with some of the actions on that so that has been a value to me personally as a result of the connections I have made there [interview participant: food production sector]*

However, the vast majority of research participants felt that the climate cafés did not create networking connections to the same extent as the workshops, farm visits and forums.

*And I’m not sure whether that was that the subject matter which I wasn’t in to or whether it was just the way (it was done), having a chat over dinner informally would maybe make an unpleasant topic maybe a bit more bearable by putting guest at the table that you know could talk about the uncomfortable topics of climate risk management and looking after your mental health… But you know I’ve been working in this space for quite a while now and I don’t think (you should) be prepared to take*
any of the stuff off the farm, doing it (the session) in a shed gets the most bums on seats. If you've got them there and they're listening to you then you've got a chance of actually getting through to them. And it's good for them I think and it starts the conversations between each other [interview participant: local government].

The opportunity provided through the events, specifically the practical and information sharing events for networking, was conceptualised, by a large proportion of research participants, as creating organic growth into an informal mentoring network. A point at which individuals created informal links and used these to access mentoring and advice on key issues of relevance to building their climate resilience.

*I think through the workshops and the forums and things people have sort of started talking amongst themselves and, sort of, almost self-mentoring. [interview participant: steering/reference committee].*

This was further validated in online survey data where participants specifically identified that links made through the events were used as mentoring and networking opportunities through mechanisms of follow up meetings/contacts. These meetings or contacts, initiated at the event, including onsite visits, discussions and chats using social media and the ACRP web pages, contacting individuals via email and other (unspecified) types of networking activity.

These post event networking links are captured in Figure 10.

**Figure 10: Networking links followed up post ACRP events**

- Meeting with individuals in person
- Follow up on-site visits
- Discussion or chats on web pages/social media
- Contacting individuals via email
- Other

Given the prevalence of networks as a mechanism to share knowledge and build expertise in the food production sector it is unsurprising that network building has been a logical consequence of the ACRP. The benefit that individuals found in the ability to build connection, and gain support on building resilience, were defining features of the project for many research participants.
The perceived benefit drawn from enhanced networking capacity was evidenced in a range of ways during data collection and analysis. These included:

- The value given to farm visits - as discussed in a previous sub section of this report.
- The interview process - as evidenced by the extracts of interviews provided below.
- The breakdown of feedback from events and online survey respondents - as highlighted in Figure 11.

Indicative comments drawn from the interview process on networking and the ACRP illustrate the importance given to the ability to build connections, to learn, to hear about the experience of others, and to build relationships which provide the foundation for follow up beyond the place based learning event:

What I probably like most out of the ones I went to was actually the connections to people. So it was about, so there was learning and hearing some people’s stories or different views around dealing with the changing climate, but it was actually having time to connect and build relationships to follow on from things and I have followed on with all the things I’ve been to that I can remember, I have followed on and I think that’s invaluable. Instead of just coming to something and doing nothing as a result of it but it’s probably the connections and the people that are the most things, so building that network [interview participant: food production sector]

Building those networks and connections are very important, and providing opportunities to come together um with common interest is of enormous value empower the community, and community engagement and enabling the community [interview participant: food production sector]

The structure was aimed at engaging with farmers, land holders, food producers to sort of look at the impact of climate change. To network together to learn from each other because one of the biggest problems we have in this area is that farmers work incredibly long hours and generally are very isolated, so bringing them together to share useful common knowledge or exchange information about you know methods for dealing with climate change can only be beneficial. Like they are beneficial at a social level as well as a technical or scientific level. And I think the whole things is a fantastic exercise in you know getting people together from common causes and actually delving into them and providing an avenue for follow up [interview participant: community member].

I think part of the networking is one thing which is so important and the feeling that we’re all in this together instead of I’m isolated out on my farm, I’m up to my ears in mud and I have a cow dying in the next paddock you know and I’m all by myself and I can’t do all of this. It’s actually a recognition that we’re in the same boat, we’re in this together [interview participant: community member]

An analysis of the events feedback and online survey data strengthens the evidence base on the value of the networking potential created by the ACRP, as captured by Figure 11.
Indicative comments provided through the data collection tools relating to networking included:

*Regular and varied interest workshops and info days were an amazing way to connect with other producers, mentors and gain a deeper understanding of practical implications of climate change.*

*Key benefits and valued aspects of the project: Increased mentorship, increased multimedia, increased collaboration.*

Triangulation across data collection methods found networking to be a consistent positive trend and this enabled the establishment of a strong proxy indicator of the value of networking as a support to building climate resilience. This is an important evidence base both for this project, and also for projects of a similar nature into the future.

It is important to consider why networking is such a valuable tool in the process of change. The networks with which an individual surrounds themselves creates what is termed ‘the web of influence’, which refers to a complex and interrelated web that includes other food producers, sector experts and community. Each of these participants to the web enters into a reciprocal relationship through which each influences the other, creating particular approaches and worldviews in relation to decision making and forward planning on a range of issues – in this instance climate resilience and change (Anil et al., 2015a; Attanandana et al., 2007; Llewellyn, 2007; long, 2013).

The web of influence is a multifaceted concept. Although awareness of this web builds understanding of the importance of networks when attempting to influence decision-making processes, it remains difficult to readily identify who the key influencers are within each complex web – particularly as the level of influence can shift between members depending on the issue, the situation or the timeframe (Bellotti & Rochecouste, 2014).

However, knowing how important networks are when working to build resilience, and having an awareness of the scope and complexity of networks, helps clarify the ways in which communication and information sharing processes need to occur to maximise capacity for success. The trust relationship that is built within the web of influence is an important element in determining the types of innovations and changes that individuals are likely to accept and adopt within their community or food production enterprise.
Consequently, while networking has occurred organically in the ACRP, the research finding around networks and the web of influence highlights the importance of targeted involvement. If a structured mentoring program cannot occur within a project then involvement needs to be targeted to maximise the web of influence at all points; planning, development and implementation. As an integral part of project development there needs to be a structured mapping of sector leaders, informal champions of the concept being put forward and ideas innovators. The involvement of this group, as a core element of project roll out, is imperative to maximise networking potential. The ACRP project sought to address this through the steering/reference group that was developed to support the project however, given the centrality of networking, a formal mapping process would have strengthened the impact of an adopted strategy, and done this from the point of project development.

The accuracy of this assessment is captured in the following extracts of interview which capture the notion of networks as conduits for learning and influence:

When you start a movement I guess, this is yours, you’ve got to set your sights on South Gippsland farmers and you’re infiltrating their network getting information, who knows where that ripple will go... and then when they tell their neighbour might go what are you doing, oh well I’ve just been thinking about the grass and growing and we’ve had a few dry years lately and I’m going to change species and plant. It’s that stuff there that’s really hard to catch, they’re becoming resilient, their looking at the whole system and going yeah right okay [interview participant: government].

Shared knowledge is growth isn’t it. So you know inevitably you have answers to questions, you see better ways of doing things, you have a chance to contribute what you know as well which may work the other way and your eyes get open to oh gee that’s a good idea, I never saw that before. So I think it has all sorts of substantial benefits. As well as the side chat you learn something from your other delegates as much as the actual people that are hosting it. I used to say, I used to go to a huge number of conferences and I used to say the discussions you had in the networking were where you learnt the most [interview participant: community member].

It’ll take time to gradually move around but and I guess remember we’ve got a lot of information coming in from different places, now if all our information does this confirm stuff I’ve already been reading or suspicion or evidence that they can go, oh yep. I heard on the radio a while ago and somebody else said the same, and this person here is saying it again and then the power of the information [interview participant: government].

These data clearly show that, while the mentoring component of the original project plan was not implemented, informal mentoring, through the mechanism of networking and the web of influence, has occurred consistently, and as a key strategy for the ACRP. How this networking process has impacted on awareness building on climate issues, is examined in sub section 3.4 of this report.

3.3.3 Summary of findings for networking and mentoring

The key findings in terms of networking and mentoring, as drawn from the data collection and analysis process, have been that:

- While mentoring was integral to the original project brief for the ACRP, it was not a programmatic strategy that was ultimately adopted. This was due to a range of factors including:
  - Shortfalls in resourcing for training and payment of mentors.
• Inability to locate mentors who would were willing to take on the role within local areas.
• Lack of consensus around elements of the mentoring program at the steering/reference group level.

Available literature on mentoring for successful implementation of change reinforces the value of this approach and, when this literature evidence is combined with research data drawn from this current study on the potential benefit of mentoring, strategies for inclusion of a mentoring program is an area worth exploring for project enhancement. For any mentoring program initiative to be successful it will require:

• Adequate resourcing
• An overt and endorsed agreement on the mechanics of a mentoring project, including funding and payment allocations, worker location and processes for reciprocal support between the project staff, mentors, the community and the food production sector.

• Despite the fact that the mentoring program was not operationalised, the ACRP had significant success in building a range of networks as a result of the events they established in the community. While the climate cafés were developed with the intent of supporting informal mentoring, and enabling connections to be made amongst individuals through discussion of climate issues, this approach was not particularly successful. While some networks were established as a result of the cafés, it was the events at which discussion was combined with practical activities and the opportunity to meet others in farm based environments that created the most valued network and informal networking opportunities.

• The value given to networking as a mechanism through which to build connection and provide informal support for implementation of climate resilience strategies flagged the importance of ensuring involvement of key individuals with strong networks and links to local webs of influence. This involvement needs to be formally mapped and embedded at the point of project planning, development and implementation.

The networks that were established as a result of the ACRP were assessed as having high levels of success in:

• Building awareness of issues through word of mouth and ideas sharing.
• Acting as a form of mentoring – all be it a self-regulated and informal organic process of mentoring.
• Establishing connections between:
  ▪ Individuals.
  ▪ Individuals and groups.
  ▪ Farm communities.
  ▪ The agricultural sector and the broader community.

### 3.4 Engage and support to build awareness

The issue of building awareness of the impact of climate change within the agricultural sector has gained significant traction in recent times. This has occurred within the research literature through which there is now overwhelming evidence that the climate is changing. Despite substantial climate change mitigation efforts, there will be irreversible and rapid impacts of
climate change which will require adaption by communities and industry (Arbuckle et al., 2015; Ayers & Forsyth, 2009; IPCC, 2014a; 2014b; Nursey-Bray et al., 2013; Schwarz et al., 2013; Star, 2012).

Building awareness has also occurred through mainstream media where the issue has begun to gain some traction. Discussions are emerging around a growing awareness that climate change is having significant and irreversible impacts on the agricultural sector. A recent mainstream broadcast explored the issue of climate impact in agriculture and provided a profile of food producers who are building their knowledge bases, and are experiencing attitude and behavioural shifts. These changes have been driven by the necessity to build industry resilience in a rapidly shifting environment. (http://www.abc.net.au/radionational/programs/backgroundbriefing/2016-10-02/7888334).

Structured analysis of these emerging and informed debates leaves no question that shifts have occurred increasingly in recent years in terms of awareness, attitude and understanding. The extent to which this is an issue in Southern Gippsland region is captured in statements such as the following that were gathered during the research process:

*We are beginning to feel it on the land in different ways. Rain, heat and shifts that are not going away. We used to just talk all about seasonable fluctuations (variability) but now it is much more about saying um it is a climate issue and we need to take notice and do something, take some action* [Interview participant: food production sector].

The ACRP was an early innovator in working to build local and sector knowledge, establishing a project which overtly stated, as a principal aim, ‘the building of awareness on issues of climate change and resilience’. Importantly the project sought to address this aim through a specific focus on the food production sector’.

Given this aspirational focus, a key question explored during the research was the extent to which research participants assessed that the ACRP had actually increased levels of awareness amongst food producers and/or community. As identified at the commencement of this report, creating a clear link between project delivery and increased awareness is very difficult, particularly in an environment in which the issue is gaining increased traction and media focus. However it was possible to draw out some proxy indicators from the data, particularly the interview data, as this allows for subjective perceptions and detailed reflection by participants on issues of awareness and change.

### 3.4.1 Awareness building and ACRP events

The data gathered through the events participation feedback did not overtly test the question of awareness building. There were no questions within any of the four different events participation feedback tools used for the ACRP events which explored this issue. There was a question which asked events participants to provide feedback on the most valuable things they had gained from the event they attended. These data were analysed using qualitative content analysis techniques in order to gauge the impact that the event might have had on participant levels of awareness.

The data from this process was able to be broken into three categories:

1. **Sector specific**. Respondent comments indicated that the greatest value they found in the event was having gained new sector specific knowledge. For example, as a result of the event participants indicated they now had new information specific to soil,
or vegetable growing or poultry or financial management. Fifty six percent of the event participation data contained comments that could be included in this cluster. Given that these comments showed that participants had additional knowledge and awareness about an issue within the context of climate resilience these data were assessed as indicative of an increase in climate resilience awareness.

There was no mechanism within the collected data to draw a direct correlation between sector specific knowledge gains and increased awareness of climate issues. It can however be assumed that, at a minimum, awareness enhancement occurred. The awareness may be within the bounds of a single and specific sector issue or concern but was nonetheless classified as successful awareness building.

2. General. These were respondent comments that provided no insight on the extent to which the activity had increased awareness of climate issues or climate resilience. This type of comment accounted for 27% of responses and were very general in nature. These comments related to feedback on issues such as level of enjoyment of events, networking opportunities or catering for the events. It cannot be assumed from these comments that there was any level of increased awareness on climate issues, including climate resilience. While this does not mean that there was no increase in awareness, there was simply no content within the available data to make this type of assessment.

3. Awareness. Seventeen percent of respondent comments specifically made reference to an increase in their awareness of climate issues as a result of involvement in an event. Comments such as *so my awareness has improved a lot and I now know who to contact* indicate that there was a direct correlation between the event and a perceived increase in awareness.

There was no mechanism in place to measure if this awareness translated to practice change but the classification did allow for an assessment of Level 1 (Reaction) and Level 2 (Learning) attainment.

The results across these three clusters show that, for 73% of events participants who provided feedback, the key benefits of the events were an increase in awareness of climate issues and climate resilience. This breakdown is provided in Figure 12.

**Figure 12: Events awareness building**
3.4.2 Awareness building and the online survey

The data gathered and analysed from the online survey was more specific than that which was collected from the events participation and shows shifts in levels of awareness both in the comments provided, and from the collated results from specific questions on awareness.

The collated results from the online survey questions which specifically targeted the extent to which respondents perceived that the ACRP had achieved the aim of raising awareness provided good insights. The results showed that a majority of respondents overtly acknowledge that the ACRP had increased their level of awareness of both climate issues and agricultural resilience.

Eighty-four percent of online survey respondents indicated that the events they had attended increased their knowledge of climate adaptation and agricultural resilience. Seventy-three percent of the same cohort assessed that the ACRP had built community and sector understanding of climate adaptation and agricultural resilience. Their feedback also highlighted the value placed on the ACRP for building awareness in an inclusive and informative way. Examples of this survey feedback include statements such as:

Value of the program is that it increased awareness, discussed localised solutions and networking

It has raised awareness in many different community forums of potential and opportunities for adaptation to climate change without "turning people off" due to fanaticism or pressure to accept climate change.

3.4.3 Awareness building and individual interviews

These assessments were also mirrored in the interview feedback. One hundred percent of participants who were involved in an interview indicated that they believed that the ACRP had some role in increasing levels of awareness of climate adaptation and resilience issues. While the data gathered through interviews was more specific and targeted than that gathered through the online survey/participant events feedback, it was not possible to develop a specific measure to quantify the level of awareness directly attributed to the ACRP by each interviewee.

For some interview participants the assessment was that the ACRP had played a major role in building awareness of key issues of relevance to food production and climate resilience. This cluster assessed that ‘there is nothing similar to this for farmers out there and so it is ground breaking for awareness building’ [interview participant: food production]. Others within the interview participant cohort assessed that it is part of a complex jigsaw and everything raises awareness no matter how small – the project is just part of that and that is all positive [interview participant: community organisation].

Regardless of where interview participants were on the continuum, all participants assessed that the ACRP had a role in building and enhancing awareness on the issue of climate resilience.
The following assessments from across the interview pool provide further evidence of these perceptions.

*I think awareness raising, most definitely, within the community. And we’ve worked really hard – to include other groups that are already on the ground like our Landcare group and things like that to make sure that any of the activities that we do, we actually include them because they have wonderful on the ground contacts, you know, they’re the ones that are… Especially in Bass Coast, our Landcare group is particularly strong. I think just about all of our farmers are Landcare members so, you know… And they will be – for me – they will be the way we continue getting the message out. You know, once the project finishes there’s nothing worse than ‘oh well, that’s it now, we’ve done our bit for, you know, climate change – it’s all over’, you know. So for me that’s the benefit. It’s kind of opened doors… built awareness [interview participant: local government].

*I think it enhances your knowledge on it and then, more and more people are understanding it than there were even 12 months ago, there’s more people who understand it and I think without it you’d still be in the same position as you were 12 months ago or whatever. So it certainly gets the word out and you can talk about it with different people, specifically at a land care group and that sort of thing, I think people are really aware of it. And I think in South Gippsland you know there are over 700 families involved in land care and, I think most of those probably a few years ago didn’t understand it and I think even if they didn’t go to the courses or the days they talk to people that have been on them and there is a far greater understanding of what’s going on, there really is [interview participant: food production sector].

Providing activities to draw people’s attention to the changing climate and how you adapt, is of enormous value because there really isn’t anything else in that space being delivered that I’m aware of in this area. And I think there’s real value in that [interview participant: food production sector].

Overall, the combination of data across the data pool captures a perception of shifts in awareness that can be directly attributed to the ACRP. Figure 13 captures the interrelationship between the findings on awareness building across the three key methods of data collection.

**Figure 13: Awareness building across data collection pool**

- **Event participation feedback:** 56% + 17% = 73% rated the ACRP as building awareness
- **Online Survey:** Average of 78.5% across 2 clusters rated the ACRP as building awareness
- **Interviews:** 100% Rated the ACRP as building awareness
One of the key messages to emerge from the data was that, regardless of the perceptions on how much impact the ACRP has had on awareness raising, the project has engaged individuals and groups and provided a platform for the discussion of climate issues. There were no participants who viewed climate as an unimportant issue, and the ACRP was viewed as a means through which to open the dialogue and ensure that food producers, individuals and communities connected with the climate change agenda.

The ACRP provided a mechanism to learn strategies for resilience, adaptation and to help skill and knowledge building which actively worked toward having sustainable farms into the future. Research participant perceptions of the potential of projects such as the ACRP to achieve this is captured in the following extract specific to the issue of awareness.

*I think it’s hugely important, you know people, people might not pick up things immediately but over a period of time, you know really it’s like, people smoking, when I grew up everybody smokes now it’s considered bad and I think the same thing will happen with this sort of thing. You’ve got to start somewhere and you bang your head and you bang your head but then you get through. But I think it’s a really good thing and it’s hugely beneficial and you just have to break down the barriers and I think this is as good a place as any to start really [interview participant: food production sector].*

### 3.4.4 Summary of findings for engagement and support to build awareness

The key findings to emerge from the analysis of data on awareness building as a result of the establishment and delivery of the ACRP have provided the following key insights:

- There has been an increase in recent times in both the academic and the mainstream literature and media relating to the issue of climate impact and the importance of building resilience in the agricultural arena. The ACRP established an overt agenda to build awareness of climate issues and their impact which it achieved, to variable levels, through the strategies put in place across the project.

- Measurement of success in building awareness of climate issues and strategies for building resilience occurred across events participation feedback, online survey and individual interview data. Data drawn from events participation feedback was clustered into three categories:
  
  i. Sector specific. Fifty-six percent of respondents believed the event/s had built their awareness of climate resilience in relation to a specific issue within an agricultural sector in which they had an interest (personal or business).

  ii. General – Twenty-seven percent of the data was too general to make an assessment in terms of awareness building.

  iii. Awareness – Seventeen percent of respondents believed that the event/s had built both general and specific awareness of climate change issues and climate resilience strategies and approaches.

The data gathered and analysed from the online survey found that an average of 78.5% of respondents believed that the ACRP had increased their level of awareness of both climate issues and agricultural resilience. One hundred percent of those involved in an interview made the same assessment.
Overall the ACRP was assessed as having engaged individuals and groups through awareness building, whilst providing a platform for the discussion of climate issues. Research participants uniformly assessed climate and climate resilience as a critical issue, and the ACRP as a means through which to open the dialogue and ensure that food producers, individuals and communities connected with the climate change agenda.

3.5 Partnerships for community engagement and mobilisation

The final area of review for this research relates to the issue of community engagement and mobilisation, specifically within the context of partnership building.

Prior to moving onto an assessment of the extent to which partnerships were able to address issues of climate change and resilience built through the ACRP, it is important to state, at the outset, that the data available for the research did not allow for the tracking of mobilisation shifts over time. As identified previously in this report, the lack of a pre implementation project group (which could have been tracked over the lifespan of the ACRP), and the fact that this current research is occurring in an immediate post-implementation timeframe, limits the capacity to measure ongoing mobilisation. It also minimises the capacity to review shifts in responses and behaviour directly attributable to the ACRP. The following sub section therefore presents proxy indicators of partnership building and mobilisation rather than definitive trends.

In examining the issue of partnership building for community engagement and mobilisation, a key capacity building constraint identified related to project resourcing. The ACRP events delivery, advertising and project awareness raising strategies needed to occur within a set budget determined by the level of project funding. A decision to maximise the delivery elements of the ACRP was a proactive strategy for the practical and measurable components of the project. It did however impact on time availability for project administration. There was an ACRP Project Officer, supported by a steering/reference group, who was employed to coordinate the project. There was however only sufficient project funding to resource the position one day per week.

The restricted availability of coordination and project administration time impacted on partnership building capacity as it resulted in:

- Some limitations to the timeframe available for building partnerships links and coordination. The feedback provided indicated that good work was done in building partnerships and that these links have provided a strong foundation into the future. This partnership building occurred as a result of the activities themselves, through their planning, as well as through project administration. However funding level constraints did stretch project capacity and, in a time intensive area such as partnership building and links coordination, this should be noted.

- Time constraints in regard to liaison between groups and sectors. While again the feedback provided highlighted that liaison between groups and sectors was an important part of the project, and one that was central in project development, only having one day per week places clear time constraints on the extent to which this can be optimised.
• Limiting the level of follow up on opportunities for building partnerships that might have emerged during project events or during formal or informal discussions.

Acknowledging these constraints, it is noted that the feedback provided across the participant pool relating to the project, and the input provided by project staff to the support and delivery of the ACRP, was consistently positive. It was identified as a strength in terms of partnership building. The issues that were raised were, in the main, relating to: 1) time constraints, and their impacts; and, 2) the need to increase funding for administrative processes to maximise project momentum. The issue of time allocation is relevant to the ability of the project to achieve the aims for which it was established, and consequently is flagged.

The fact that these issues were identified highlights the importance of ensuring that adequate funding is made available for project administration in projects which require buy in from a range of stakeholders across sectors and the community. Success in building partnership and community mobilisation is not as readily quantifiable as success in events and awareness building initiatives but these elements of community based project development are nonetheless integral for project reach and sustainability. The literature on building partnerships for success highlights the importance of partnership for maximising community and sector commitment to new and challenging concepts. It also highlights the importance of facilitating sustainability through building strong connections and supports; the need for adequate administration capacity is integral to the process (Eberhard et al., 2013; Gulati et al., 2012; Jimali et al., 2011)

Having identified these points, the data collected provided some valuable insights into the importance of partnership building and the types of links that had been successfully made by the project to enhance engagement and mobilisation.

3.5.1 Partnerships between local government
As stated, the ACRP was an initiative involving two local governments working with a range of stakeholders to establish a coordinated, sustainable and partnership based response to climate issues. As this was a fundamental element of the project, participant perceptions on the role of local government in the climate resilience space was examined and responses mapped.

The data highlighted very clearly that the decision to establish a partnership between councils was valued by research participants in two specific ways: 1) coordination and enhancement through shire connection; and 2) shires building a place in the agricultural space.

Coordination and enhancement through shire connection
The fact that two shires were working together to address an issue that was impacting across a large geographical region was viewed as a key strength of the project. While a small proportion of participants argued that a community based governance and implementation model would have been more effective, this view was held by only 6% of the overall participant pool. Those who argued for community based governance and implementation did this on the basis of project reach rather than as a criticism of local government taking the lead in the project. This view was based on the fact that, from the perspective of these participants to the research, existing and established community organisations were seen to have stronger networks and greater capacity to immediately engage a larger number of individuals and groups from across the food production sector, and from the broader community. While there is validity to this view, the majority of participants believed that a partnership between the two local governments provided a new
perspective to the issue, and enhanced capacity for coordination and enhancement across shire boundaries in a way that had not happened as effectively previously.

As discussed previously in section 3.2 of this report (place based learning), there were some difficulties in implementing a project across two diverse shires. These related to managing the event distribution equitably across each shire and ensuring that issues diversity was adequately recognised and responded to. Notwithstanding these implementation issues, the concept of a shire partnership as a way to enhance engagement and support mobilisation was assessed, by the majority of those involved in the interview process, as a positive aspect of the ACRP. The fact that council had created a partnership was viewed as an indication that there was growing awareness of the need to address complex climate issues in a more holistic way supported through a partnership agenda.

Interview comments such as the following support and validate this assessment:

*The perspective has been across South Gippsland and Bass Coast I think um that sort of enables more of a regional approach which is good. Certainly been getting good feedback, we work quite closely with Bass Coast land care network, I'm not sure if you will be interviewing them as part of this as well, but yeah I think it's sort of provided that sort of connection across the networks.* [Interview participant: Community organisation].

*I think it’s about increasing motivation…a combined council lead approach supports this. The only other thing would be there’s a role for state government to share the information (that is learned through a council partnership) across the state and other councils, councils need support from other councils* [interview participant: government].

Local government building a place in the agricultural space

In addition to the issue of partnership between councils, a consistent theme to be drawn from across the interview data related to the place of local government working with the food production sector to address issues of climate resilience. The majority of those involved in interview (84%) indicated that they believed that, while there were some implementation issues in terms of meeting the needs across both shires, the fact that the councils had taken the initiative to develop and lead a partnership project in the climate area was a positive development.

The partnership between the local governments was viewed as providing a mechanism through which to:

- Ensure that the maximum number of groups and communities (across food production sectors and across geographical areas) could be included in proactive action for change.
- Build a bridge between the food production sector and local government – an area that had previously had limited focus
- Support the opening of a dialogue between the food production sector and other areas of the community, including other councils.

These views were also found in the written feedback from the quantitative data with comments such as: *allows for increased collaboration with wider community not just farming enterprises and more capacity for co-ordination and allows for much more Much more focus on strengthening community based initiatives on climate.*

This feedback provided an important indicator of the general view of the place of local government in the climate space. There was limited capacity to triangulate this theme
through the data drawn from the survey and events participation feedback as it was not consistently addressed by this group. The most consistent reference to the role of council was found in the interview data where participants were given the opportunity to explore the issue in greater detail.

The feedback from interview participants effectively captures the majority view on the issue:

One of the other values is that the shires been involved. It’s unusual in the agricultural sector for them to be delivering a program and … these connections if you look at the value of agriculture to our region I think that’s a really, really good. That’s really good. And the fact that they made the effort to make connections to other sectors and to deliver I think that’s been very, you know to be commended … I mean food production sectors continue to complain about the red tape that’s out there and you look at the value they bring back to a sector. If a shire can be looking at how can we enable and empower our farmers to continue to run good businesses because they’ll employ more people and attract more people in… So I think building those connections, the shire building those connections and understanding and connecting particularly to the leaders ah is of enormous value [Interview participant: food production sector].

And think that you are responsible for the bulk of your rate payers and trying to service them and give them the information they need to be better businesses because we are a rural shire and most of our rate payers are farmers there isn’t a lot of other industry out here, apart from the cheese factory, and dairy do all this stuff but they do it in house so this (shire run project) is for the everybody else, the beef farmers, the sheep farmers, the vegetable growers, anything that is out there and some of them are very small scale but that’s fine too if they are doing best practice farming then more to the good [Interview participant: local government].

There’s not enough relationship between the agriculture sector and government, local government. They’re out there a bit blind. They’ve got you know they’re the closest to the ground - the clutch point if you like between government and community… if you’re in a new sector or if you’re not you know playing that space or you’re just not that inclined to join up with the beef group or lamb group or whatever it is then you can be left out cold. So it’s an important space, I think there is a role for local government … it’s about connecting people and you know it’s a hub of information, so but it’s basically a door knock on every farm to say how’s things going [Interview participant: state government].

The strongest message therefore to emerge from this data pool was the commitment to the building of partnerships between local government and, linked to this, partnerships with the broader community and the food production sector. While there were some difficulties identified in terms of roll out of this process, analysis of the data highlights that this was a fundamental principle of implementation that strengthened rather than diminished across the life of the project. This assessment is most effectively captured in the following statement by one of the interview participants:

I think it’s a good thing for the two councils to work in partnership. The things I don’t think that worked in the partnership were that there is actually some significant differences between the audience in the two areas and that created a challenge in the long run. Different business types and interests and structures and distances and all of those sorts of things…(however) the partnership with Landcare and the partnerships in general with all of the different people, the different, I suppose, the other agencies and other local organisations that we’ve been in connection with. And look that’s part of the program. It was a sustainability partnerships program so it was actually from the outset very clear that we wanted to create those partnerships so that’s worked well and has then enabled either directly though or indirectly by encouraging more thinking and discussion around climate change [Interview participant: local government].
3.5.2 Partnerships with community organisations and food production sector

The ACRP was managed, at the management and operational level, within the council, using a partnership approach involving representatives from the two local governments and the state government. This, at the micro level, was a partnership arrangement that mirrored the underlying philosophy of the project. This was further strengthened through a partnership building framework that sought to maximise the building of partnerships with the food production sector. This commitment is found, at the most fundamental level, in the steering/reference group support structure in place for the project. The steering/reference group that was established included representation from a range of community based organisations and the food production sector.

Members included representative from:

- Community organisations
- Industry
- Landcare
- State government
- Food producers
- Local government

This broad base of representation enabled a range of perspectives to be included in planning and in discussion and issues resolution as it pertained to the project. This was a strength of the project and one which was commented upon by a range of participants to the interview process.

*"A group of local representative who are suggesting what they think we need to know and that’s been very helpful as well. None of this is new stuff, it’s all sort of same old same old. But the input enables (the project) to look at things from a slightly different perspective which I think is helpful [Interview participant: local government]."

In addition to supporting project implementation and development, the inclusion of a range of individuals from different areas increased the opportunity for networking and for the building of sustainable partnerships from key groups and individuals.

Representatives from the steering/reference group who were involved in interviews identified that, as a result of their involvement, there was enhanced capacity for the project to:

- Better capture key issues of relevance to the sector.
- Promote issues, and the project itself, through pre-existing contacts and more extensive networks held by project steering/reference group members.
- Explore the delivery of joint initiatives and, through this, expand the reach and relevance of the ACRP.
- Build a more integrated and sustainable platform for promotion and exploration of the need for a climate resilience agenda across the Southern Gippsland region.

An example of how this occurred is found in the description of joint activity delivery by one of the research participants:

*"We worked really hard to include other groups that are already on the ground like out Landcare group and things like that to make sure that any of the activities that we do, we actually include them because they have wonderful on the ground contacts, you know… Especially in Bass Coast, our Landcare group is particularly strong. I think just..."
about all of our farmers are Landcare members so, you know… And they will be the way we continue getting the message out. You know, once the project finishes there’s nothing worse than ‘oh well, that’s it now, we’ve done out bit for, you know, climate change – it’s all over’, you know. So that’s the benefit. It’s kind of opened doors… [Interview participant: local government]

The funding has given us the opportunity to do some great workshops, there’s been quite a few good site visits as well as sort of, you know, sort of forum-y type things. And I think what’s been done has been good [Interview participant: local government].

Some concerns were raised during interview, by a small percentage of the interview cohort (6%) that this level of partnership building could have been enhanced if the project had been embedded, at the outset, with existing and larger scale industry groups within the region. The larger scale operations inherent to these groups, and the fact that climate issues have such an impact on large scale sectors within the region, was identified as a potential motivator for transferring the project to a group with more capacity to extend partnership links and networks. This view is captured below - it provides a valuable perspective but was not representative of a consistent trend across the data pool.

You’ve got a lot of players that you know not having climate change as a specific issue as such but they’re running programs in that sort of agricultural space, so in some respects, not that it has provided a duplication, but perhaps that the climate change could somehow be embedded through you know Agribusiness Gippsland or through Landcare because then you’ve you know already got quite a sort of captive sort of market through, you know they’re huge Agribusiness Gippsland so rather than sort of creating this separate project it sort of accounts, you know you’ve got really strong links to industry and current programs. And that can sort of add leverage [Interview participant: community organisation].

The ACRP also sought to build partnerships with the food sector through the mechanism of the links made with sector experts. These were individuals involved in events delivery and in the provision of advice in relation to the issues targeted by the project for information delivery, knowledge building and practice change. These links were identified as a mechanism to build partnerships for sustainability both in terms of those putting a name and a context to the experts themselves but also in regard to creating links for project participants for contacts, and a pathway for future knowledge development on issues that might emerge within their food production enterprises.

Look (as someone who works and educates in this area) I need to congratulate the organisers for actually doing it… it’s a long-term project that, if anyone is starting it it’s just got to be a big picture just for getting it going... the workshop’s about next steps and that’s a critical one… making the links and getting people from the area on board to have an ongoing relationship and build capacity [Interview participant: community organisation and sector expert].

This feedback provides a valuable insight into the potential of the project to achieve sustainability into the longer term through the mechanism of partnership building. Project organisers, in choosing the approach used, enabled the creation of a three tiered model for partnership building. Depicted in Figure 14, this model strengthens partnerships at:

Level 1:
The governance and management level. By creating a partnership across two local governments the project was able to explore the place of local government in the climate change space, while using the expertise and support base available across two local government areas. While there were some implementation issues caused
by locational differences, the approach nonetheless created a strong foundation for ongoing joint action on the issue into the future.

**Level 2:**
The project delivery level. Through the establishment of a steering/reference group to provide guidance and advice on the content of the program, and by using experts in the area with networks and contacts of relevance to the climate issue, the project was able to both maximise the responsiveness of content delivery and build a network across a range of groups and sectors. This network, if nurtured, will enhance the capacity for issues sustainability beyond the life of the ACRP.

**Level 3:**
The community level. The intent of the ACRP was also to build connection, awareness and mobilisation at the community level. The extent to which this was successfully and sustainably achieved is discussed in the final results subsection (3.5.3) of this report.

**Figure 14: Partnership building continuum**

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### 3.5.3 Partnerships within community

As identified a number of times throughout this report the capacity to measure impact on community, including impact of partnership building endeavours, and community mobilisation, is limited by the research design model applied to the project. The lack of pre testing and tracking across the life of the project has impacted on overall measurement. However, emerging indicators, both from the events participation feedback and the online survey data provide some promising and valuable insights.

As outlined in detail in section 3.2 of this report (place based learning) the majority of responses indicated that the project was valued for highlighting key issues relating to climate resilience, providing practical strategies for action and mobilisation and for building networks across groups and communities. These are all good indicators of positive change and a foundation for partnerships building and mobilisation. In order to gauge sustainability in this arena further research is needed across a longer timeframe.

The interview data has provided a good supplement to the quantitative data gathered, and presented to date in this report, as it focuses specifically on the issue of partnership building.
within the community. All participants involved in the interview process identified that they believed that the ACRP, in building awareness, had concurrently provided some good foundations for sustainability through community partnership and mobilisation. This is captured in statements such as:

When this project first started people would go (scoff) climate change what’s that there’s nothing, you know it is nothing. And over those three years, or two and a half years or however long it’s been there’s certainly been a paradigm shift in the way people are talking about it. And I think it really has been a recognised thing and I think if we’ve helped just a little bit with that dialogue that’s a really really good thing. They’ve gone from going oh you know it’s just weather, weathers always variable and you know my dad talked about the big drought and you know. And you know we’ve just said look at this graph of temperatures in Wonthaggi, look what’s happened to it, they say oh oh. And they say you know where’d you get those figures from, it’s just off the Bureau of Meteorology’s website you can download it and make a graph of it in Excel and you can measure it’s a degree warmer than it used to be in the last 30 years. And that’s something that would take forever if… And they’re coming round, they’re seeing it in the media a lot and in various documentaries and stuff like that and it just gives them licence to talk about [Interview participant: steering/reference group].

Because there are topics there that, you know, we’ve had sessions on that may have happened incidentally but probably not. You know and it sort of creates more awareness within the farming community that these are going to be issues in the future. I know very early on (the Project Officer) came and presented to the rural engagement group because we wanted them involved and to spread the word of the activities. And they were quite dismissive of climate change and, you know, typical farmer ‘oh yeah it’s just cyclical’ and, you know, ‘we’ve been there before’. But then as the session went on they started, sort of, saying ‘well what about pests and what about grasses?’ and that actually helped us formulate future programs as well, so… They’re the things that they were noticing changes in but they actually hadn’t sort of tied them into climate change [Interview participant: local government].

The extent to which this information and knowledge building opportunity will translate to community mobilisation and enhanced partnerships for change is yet to be determined however the early indicators was positive. As stated by an interview participant:

into the longer term the by-products of the actual program - I think that is really key for the community giving them access to opportunities they may not have had. And one of the things I was really clear about when we were talking in the project, you know, steering group meetings, was sort of taking, you know how climate change has sort of become this big bogeyman word taking away that, but emphasising the changes in climatic conditions and how people can adapt to them… (It’s been a mechanism to take away the fear or the aversion caused by the, the sort of context of how it’s delivered and it’s provided practical strategies, perhaps making it a bit more real for people) [Interview participant: local government].
3.5.4 Summary of findings for community partnerships and mobilisation

The key findings to draw from the data collection and analysis process, as they relate to the issue of community partnerships and mobilisation were that:

- The ACRP embedded the notion of partnerships in the aims of the project and this commitment was mirrored in the project operationalisation. The nature of implementation, when considered on the continuum from governance through to delivery, shows a range of strategies for partnership.

A breakdown of where partnership was able to be achieved shows three key levels of attainment:

**Level 1:**
The establishment of a partnership between two local governments was a key strength of the project and one which research participants assessed as adding value and enhancing sustainability into the longer term. The research process did identify that there were some implementation issues caused by locational and context issues, the project overall benefited by the partnership. The capacity for individuals from two local governments to have input into project planning, development and implementation was assessed as beneficial in terms of resource capacity, staff skills and knowledge, and the insights provided around climate when it was placed within the context of two diverse local government areas. These partnership connections were viewed as adding potential for sustainability into the longer term.

The introduction of local government into the climate arena in a proactive way, with clear content delivery components, was viewed positively by the majority of participants to the interview process. The ACRP was conceptualised as a mechanism to build a bridge between the agriculture sector and local government. The movement into the climate space allowed for the establishment of a reciprocal understanding of issues from the perspective of different stakeholders within, and across, each local government area.

**Level 2:**
The use of a multi-stakeholder steering/reference group ensured that there was the capacity for input from a range of different perspectives. In terms of partnership building, these connections provided a platform for issues discussion, links into the networks of the organisations, community groups and food production sectors, and a point of contact for partnership maintenance and expansion into the future.

**Level 3:**
Available data relating to community partnerships and mobilisation does not make it possible to make a definitive assessment of the level of partnership building with community as a result of the ACRP. The initial indicators however, based on both quantitative and qualitative data are good. The community is viewing the project as a mechanism to increase knowledge, make connection and better understand the issue. The strength of network building provides a good basis for partnership and mobilisation. Further research in this area is needed to make a definitive assessment in relation to sustainability of shifts at the community level.
The partnership links, and the ways in which their interrelationship is likely to enhance sustainability and change across a range of levels is depicted in Figure 14. It is a model which is appropriate and readily applicable for the partnership building across a range of domains.

The findings overall, as outlined throughout Section 3, provide some clear insights into the ACRP and the extent to which the project achieved the stated project aims. The following and final section contains a brief summary conclusion of the findings from the research and puts forward a range of recommendations to inform future project development and implementation in the areas of climate resilience in the food production sector.
Section 4: Study conclusion and recommendations

The Southern Gippsland ACRP was developed as a local government partnership to build climate resilience across the food production community in Southern Gippsland. At the conclusion of project delivery a research process sought to determine the extent to which the project had achieved success in relation to the following indicators:

- Implementation of a project developed and delivered in a manner appropriate, relevant and engaging to the local community.
- Introduction of networking and mentoring strategies likely to support the adoption of shared climate change opportunities and agricultural resilience building practices across the regional food production sector.
- Mobilised community to engage, promote, adopt and advocate for the ACRP as a legitimate tool for capacity building.

Analysis of the data found that the ACRP had achieved success in building levels of awareness of climate change issues and implementing strategies to enhance agricultural resilience. The project used a range of approaches for engagement including place based learning, partnerships and network building.

Of particular benefit for networking and engagement were the practical and site based events and the opportunity to access support to discuss and practice strategies for addressing resilience. The establishment of a joint project between two local governments provided a strong foundation for partnership building. This was further consolidated through the use of a multi sector steering/ reference group and the engagement of experts from across the agricultural, climate and health and well-being sector.

There were areas where the project did not achieve optimum results including in the establishment of a mentoring project and the building of strong connections with middle and larger scale farming enterprises. There was limited potential to measure levels of community engagement and mobilisation, although initial indicators show a greater level of awareness of climate change and agricultural resilience issues, and interest in ongoing knowledge development and skill building.

The overall assessments of research participants was of a valued project and one that had provided information, created links and supported the exploration of issues in a range of ways that had successfully increased levels of awareness, networking and overall sector and community capacity.

This assessment is best captured in the following statement drawn from the interviews conducted for the research:

"It is always about building capacity in our community whether that be a community of individuals, schools, farmers, whoever, a group, the community as a whole – unless they build their capacity to make better decisions, because they have a greater understanding of the complexity and the whole issues that may, you know, be presenting the risks then we don’t have any hope of having true, sort of, resilience, resilient communities."
A series of recommendations arising from the insights gained through the research process are provided to support and give some direction for program planning into the future.

**Recommendation 1**

That, the shires of South Gippsland and Bass Coast meet with state government representatives to discuss options for the development and delivery of a program of awareness raising and engagement on issues of sustainability and resilience for the agricultural sector. This meeting should be used to highlight the value of local government, as the third tier of government, acting as the link between government and agriculture, at the local level, on location and context specific issues of climate change, diversification and resilience.

**Recommendation 2**

That the local governments of South Gippsland and Bass Coast work to overtly define and document their role in proactively working with community groups, food producers and the broader community in engagement and mobilisation for agricultural resilience and climate change knowledge building. This process may benefit from the inclusion of additional local government areas and should, at conclusion, result in a forward plan for future action on this issue.

**Recommendation 3**

That a structured mapping of sector leaders, climate change champions and key community groups occur, linked to the existing networks developed through the ACRP. This will build on inroads made by the ACRP and maximise the potential to use formal networking and informal mentoring to increase the capacity to enhance mobilisation of the agricultural sector and the local community on issues of climate resilience and agricultural diversification across the Southern Gippsland region.

**Recommendation 4**

That, in future strategies for working to address climate resilience, a part of project development include, from the outset, a clearer the definition of the target group/s for the project. This will maximise the capacity to implement strategies that are most closely aligned to the needs of each subset of community and industry. It will also extend the reach of any initiative to the greatest number of potential groups and sectors to include large and middle level farming enterprises.

**Recommendation 5**

That, as part of any future project development, a documented communication strategy be developed. This should include the identification of:

- the communication mediums that will be used for information sharing;
- how legacy information will be managed and made available to sectors and communities;
- how to maximise information sharing between and across networks; and,
- the type of information sharing strategies that are most likely to be successful for rural communities.
The communication strategy should explore the value of establishment of a dedicated web portal in order to strengthen project identity, allow for crowdsourcing/citizen science opportunity and networking enhancement.

**Recommendation 6**

That any future initiatives involving the establishment of a project on climate change and resilience be guided by a commitment to early establishment of the project reference group. This will maximise the capacity for active involvement of this group in the development and direction of the project and will ensure uniformity of views at the point of project implementation. Adoption of this approach increases the potential for planned strategies to be fully supported from the planning through to the implementation stage. It will also maximise the potential for project development to be informed by a group of experts in relation to appropriate strategies, project targets and audience. This will avoid potential project divergence from original conceptualisation, as occurred in relation to the mentoring component of the ACRP.

**Recommendation 7**

That adequate funding is provided to any future project for project administration. The provision of adequate funding levels for administration will ensure that there is project capacity to adequately manage both the tangible and intangible aspects of project development and delivery. This is critical to project success and sustainability. Tangibles include activities such as events delivery, planning, meetings and project organisation while intangibles refer to the provision of a range supports (formal and informal) to networking, partnership building and community mobilisation enhancement.

**Recommendation 8**

That, should future projects be developed in the area of agricultural resilience and sustainability planning, a research component be an embedded and integral element of the project. This will maximise the capacity for pre testing, longitudinal measurement of delivery and the tracking of behavior and attitudes on climate issues over time. This inclusion will enable a more definitive correlation to be made between project delivery and shifts in knowledge, behavior and attitudes.
References


Murphy, A., McKenna, H., Corbett, J., Taylor, M (2016). Online Farm Trials: Wave One extended research study, *Centre for eResearch and Digital Innovation*, Federation University Australia.


Robertson, M. & Murray-Prior, R. (2016). Five reasons why it is difficult to talk to Australian farmers about the impacts of, and their adaptation to, climate change, Regional Environmental Change, 16, pp. 189 – 198.


Appendices

Appendix A  Online Survey

The Centre for eResearch and Digital Innovation (CeRDI) at Federation University Australia has been funded to research the impact of the Agricultural Climate Resilience Project (ACRP). This project aims to support the uptake of climate change adaptation strategies by agriculturalists, specifically food producers. The approach is characterised by the establishment of alliances between key stakeholders in the local area.

Dr Angela Murphy, Alison Ollerenshaw, Jennifer Corbett and Meghan Taylor from CeRDI are undertaking research into the impact of the ACRP and invite you to spend 15 minutes completing this survey. Aggregated response data will be included in a report to the project partners and the funding organisation and may be used to prepare academic journal articles and conference papers.

This project received approval from Federation University Australia's Human Research Ethics Committee (approval number: A16-121) and the Plain Language Information Statement is available to review in full.

Online Survey

1. Please indicate which of the following best describes your role: (Check any that apply)
   - Food producer
   - Local government representative
   - Agricultural Climate Adaptation Project staff member or mentor
   - Community member
   - Researcher
   - Business owner
   - N/A
   - Other: __________________

2. Could you please provide your postcode?
   ______________________

3. Could you please indicate your age range?

   18 - 25  26 - 35  36 - 45  46 - 55  56 - 65  66 - 75  75+  N/A
   □    □    □    □    □    □    □    □

4. Have you been involved in the ACRP?
   - Yes
   - No
   - N/A

   If yes, go to question 6.

5. What are the reasons why you haven't you been involved in the ACRP? (Check any that apply)
 Didn’t know about it
☐ Not interested in climate change and agricultural adaptation initiatives
☐ Not relevant to my food production enterprise
☐ Not relevant to my business/research/community activity
☐ Too busy
☐ Not interested
☐ N/A
☐ Other: __________________

Go to question 26.

6. Please identify your involvement with the ACRP: (Check any that apply)

Involvement in establishment of the program:
☐ Involvement in establishment of the program
☐ Involvement in management of the program
☐ Involvement in an advisory capacity with the program

Involvement in delivery of the program:
☐ Workshops
☐ Information sessions
☐ Farm visits
☐ Other: __________________

Involvement as a mentor:
☐ Involvement in mentor training
☐ Involvement in mentor support
☐ Involvement as a mentor

Involvement in the roll out of the program through attendance at:
☐ Attendance at workshops
☐ Attendance at forums
☐ Attendance at information sessions
☐ Attendance at farm visits
☐ Attendance at climate change cafes
☐ The ACRP web pages

Involvement in events in the community:
☐ Involvement in events in the community as a participant
☐ Involvement in events in the community as a program provider
☐ Other: __________________
☐ N/A

7. How would you rate the ACRP program in terms of the following?
### 8. Please rate the overall usefulness of the following:

<table>
<thead>
<tr>
<th>Activity</th>
<th>Extremely useful</th>
<th>Moderately useful</th>
<th>No use</th>
<th>Unsure</th>
<th>N/A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Building knowledge around agricultural climate resilience and the impact it has on community and industry</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Providing a forum for discussion on issues relating to agricultural climate resilience</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Providing a mechanism to access resources relevant to agricultural climate resilience</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Providing a mechanism to network with others the issue of agricultural climate resilience</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>

### 9. Please rate the overall usefulness of the ACRP initiative in terms of:

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Very useful</th>
<th>Neutral</th>
<th>Not at all useful</th>
</tr>
</thead>
<tbody>
<tr>
<td>The information and resources provided</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Relevance to your individual needs</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Increasing your knowledge of climate adaptation and agricultural resilience</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Building connection within community through networking</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Using mentors to support the change process</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Building community understanding of climate adaptation and agricultural resilience</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>

### 10. What would you describe as the strengths of the ACRP for the agriculture and food production sector?

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

### 11. Are there additional elements that you would like included on the ACRP to build knowledge and skills?

- ☐ Yes
- ☐ No
- ☐ N/A

If no, go to question 13.

### 12. What would you like to see included?
13. Has the ACRP met your expectations?
☐ Yes        ☐ No   ☐ To some extent   ☐ N/A

14. Please provide reasons for your response:
_____________________________________________________________________
_____________________________________________________________________
_____________________________________________________________________

Questions 15-24 relate specifically to the ACRP web pages on the Sustainability Gippsland website

15. Are you a member (with login) on the Sustainability Gippsland website?
☐ Yes        ☐ No   ☐ N/A

16. Which information on the ACRP web pages have you accessed? (Check any that apply)
☐ Chat function
☐ Mapping function
☐ Groups
☐ Events
☐ Business guide
☐ Support link
☐ N/A

17. Please estimate how often you access the ACRP web pages:

<table>
<thead>
<tr>
<th>Daily</th>
<th>A few times a week</th>
<th>Once a week</th>
<th>A few times a month</th>
<th>Once a month</th>
<th>Less than once a month</th>
<th>Never</th>
<th>N/A</th>
</tr>
</thead>
<tbody>
<tr>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>

18. How many times have you visited the ACRP web pages since becoming aware of them?

<table>
<thead>
<tr>
<th>1 - 5 times</th>
<th>6 - 15 times</th>
<th>16 - 25 times</th>
<th>26 - 40 times</th>
<th>41 - 60 times</th>
<th>More than 60 times</th>
<th>N/A</th>
</tr>
</thead>
<tbody>
<tr>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>

19. Did you find the ACRP web pages easy to use?
☐ Yes        ☐ No   ☐ N/A

If no, go to question 21.

20. What do you find easy to use?
_____________________________________________________________________
_____________________________________________________________________
_____________________________________________________________________

Go to question 22.
21. What do you find difficult to use?

_____________________________________________________________________
_____________________________________________________________________
_____________________________________________________________________

22. Please rate the overall usefulness of the different components of ACRP web pages:

<table>
<thead>
<tr>
<th>Component</th>
<th>Very useful (1)</th>
<th>Neutral (3) (4)</th>
<th>Not at all useful (5)</th>
<th>N/A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chat function</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Mapping function</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Group link</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Events page</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Business guide</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Support link</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>

23. Do you trust the relevance and accuracy of information contained on the ACRP web pages?
☐ Yes ☐ No ☐ Sometimes ☐ N/A

24. Please provide reasons for your response:
_____________________________________________________________________
_____________________________________________________________________
_____________________________________________________________________

25. How would you rate the ACRP web pages in terms of the following?

<table>
<thead>
<tr>
<th>Feature</th>
<th>Extremely useful (1)</th>
<th>Moderately useful (2)</th>
<th>No use (5)</th>
<th>Unsure</th>
<th>N/A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Providing a basis for decision making</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Reduced time in sourcing information on climate change and agricultural resilience</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Providing a basis for food production planning</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Providing network and resource information</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Providing a mechanism to network/chat with others interested in climate change and agricultural resilience</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>

26. Do you have any other comments you would like to make relating to ACRP?
_____________________________________________________________________
_____________________________________________________________________
_____________________________________________________________________
27. If you would like to be involved further in this research project please provide your contact details below.

Name: ____________________
Email: ____________________

Thank you for participating in this survey. Your responses have been successfully recorded.

If you have any questions, further feedback about this project or would like to participate in future ACRP research, please contact one of the following researchers:

Dr Angela Murphy  
Email: aa.murphy@federation.edu.au  
Telephone: (03) 5327 6198

Alison Ollerenshaw  
Email: a.ollerenshaw@federation.edu.au

Meghan Taylor  
Email: m.taylor@federation.edu.au

Jennifer Corbett  
Email: j.corbett@federation.edu.au
Appendix B  Interview Schedule

Southern Gippsland Agricultural Climate Resilience Project

Interview Schedule

1. Please tell us your views about, and knowledge of, climate change issues as it relates to your food production initiative/ your community/ your workplace.

2. Can you provide some feedback around the strategies that you use to respond to climate change and building agricultural resilience?

3. Please detail your experience with the Agricultural Climate Resilience Project (ACRP)
   Prompts:
   - Involvement in establishment/roll out of program
   - Input into content or workshops
   - Use of content in work/ personal and/or community context
   - Attendance at workshops? Information sessions? Farm visits
   - At a community level event

   Can you tell us about this experience?

4. Do you find ACRP to be a useful initiative for building agricultural climate resilience?
   Prompts: Content
   - Relevance to your need
   - Role in increasing your knowledge of climate adaptation and agricultural resilience
   - Building connection within community through networks
   - In using mentors to support the change process

5. Which elements of ACRP did you access the most and what are the reasons for this?
   a. The forums
   b. Workshops
   c. Climate change cafes
   d. Information sessions
   e. Farm visits
   f. The web portal

6. Have you had any involvement in the mentoring program? If yes, what have been the strengths of this component of the ACRP program in building climate change opportunities and agricultural resilience? Do you have any suggestions for ways in which the mentoring program might to strengthened and/or extended?

7. What do you see as the strengths of the ACRP for the agriculture and food production sector?
8. What do you see as the individual benefits of ACRP for building knowledge and 
skills relating to climate adaptation and agricultural resilience? Please consider your 
response within the context of networking opportunities, your community needs 
and/or regional issues or concerns.

9. Do you believe that ACRP has proven to be a valuable resource for enhanced 
information sharing in relation to climate adaptation and the building of agricultural 
resilience at the community level? Please consider your response within the context 
of community based networking opportunities, community action and/or regional 
issues or concerns.

10. Have you used the ACP web portal? Why/why not?

11. In what ways do you use the ACRP web portal? 
   Prompts: for general information 
   To inform decision making 
   For farm/food enterprise planning 
   As a discussion point with family, community members, work 
   associates 
   Other?

12. Do you believe that ACRP has provided a mechanism to enhance decision making 
and inform practice? In what ways?

13. Do you believe that the ACRP program is a resource that should continue into the 
future?

14. Do you believe that there are other knowledge and skills that should be included in 
the ACRP program to maximise its potential and impact?

15. Has ACRP decreased your need to gather data about climate change and 
agricultural resilience from other sources? Alternatively, has it prompted you to seek 
out additional information on this issue?

16. Do you believe that ACRP has made it easier for you/ for food producers/ for the 
community to identify knowledge and information gaps relevant to climate change 
and agricultural resilience?

17. Has ACRP, and the information it provides to you as a researcher/consultant/food 
producer/ community member met your expectations? In what ways?

18. Are there other comments you would like to make relating to the Agricultural 
Climate resilience Project?
## Appendix C  List of specific events delivered by ACRP

<table>
<thead>
<tr>
<th>Workshop/field day</th>
<th>Location</th>
<th>Date held</th>
<th>Number of attendees</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weather Trends and Forecasting</td>
<td>Inverloch – Bass Coast</td>
<td>31/10/2014</td>
<td>55</td>
</tr>
<tr>
<td>Summer Series- Veg in a changing climate</td>
<td>Korumburra- South Gippsland</td>
<td>11/1/2015</td>
<td>17</td>
</tr>
<tr>
<td>Summer Series- building a wicking bed</td>
<td>Korumburra South Gippsland</td>
<td>25/1/2015</td>
<td>15</td>
</tr>
<tr>
<td>Summer Series - Fruit growing in a changing climate</td>
<td>Korumburra South Gippsland</td>
<td>8/02/2015</td>
<td>29</td>
</tr>
<tr>
<td>Where is my water?</td>
<td>Phillip Island Bass Coast</td>
<td>15/02/2015</td>
<td>15</td>
</tr>
<tr>
<td>Water wise irrigation - three farm visits</td>
<td>Woodley, Outtrim and Inverloch</td>
<td>28/02/2015</td>
<td>10</td>
</tr>
<tr>
<td>Understanding healthy soils</td>
<td>Fish Creek South Gippsland</td>
<td>27/05/2015</td>
<td>25</td>
</tr>
<tr>
<td>Climate Change Café Foster</td>
<td>Foster South Gippsland</td>
<td>23/06/2015</td>
<td>16</td>
</tr>
<tr>
<td>Climate Change Café Korumburra</td>
<td>Korumburra South Gippsland</td>
<td>26/08/2015</td>
<td>23</td>
</tr>
<tr>
<td>Climate change café Daylston</td>
<td>cancelled due to little interest</td>
<td>Bass Coast</td>
<td>14/09/2015</td>
</tr>
<tr>
<td>Fair Food Film Screening</td>
<td>Foster South Gippsland</td>
<td>12/10/2015</td>
<td>No numbers provided</td>
</tr>
<tr>
<td>Biosecurity Workshop</td>
<td>Inverloch Bass Coast</td>
<td>19/11/2015</td>
<td>13</td>
</tr>
<tr>
<td>Climate change café Wonthaggi</td>
<td>cancelled due to little interest</td>
<td>Bass Coast</td>
<td>25/11/2015</td>
</tr>
<tr>
<td>Improve the drought resistance of your farm, a workshop with Graham Shepherd</td>
<td>Outtrim/ Leongatha South Gippsland</td>
<td>27/11/2015</td>
<td>40</td>
</tr>
<tr>
<td>Resilience through Diversity</td>
<td>Bimbadeen, Phillip Island Bass Coast</td>
<td>24/02/2016</td>
<td>48</td>
</tr>
<tr>
<td>Agridiversity</td>
<td>Leongatha South Gippsland</td>
<td>18/03/2016</td>
<td>38</td>
</tr>
<tr>
<td>Shade and Shelter</td>
<td>Fish Creek South Gippsland</td>
<td>19/06/2016</td>
<td>20</td>
</tr>
<tr>
<td>Bus trip for farm visits</td>
<td>Thurgoona Neither Bass Coast nor South Gippsland</td>
<td>13/07/2016</td>
<td>Postponed</td>
</tr>
<tr>
<td>Financial Literacy</td>
<td>Inverloch Bass Coast</td>
<td>02/09/2016</td>
<td>18</td>
</tr>
</tbody>
</table>
Appendix D  List of specific locations for events delivered by ACRP

**South Gippsland Shire**

Agrodiversity: Practical advice from farmers who have diversified—A forum
18 March 2016
ECG Gippsland
Howard Street
Leongatha  Victoria  3953

Climate change café
26 June 2016
Korumburra Railway Station
Station Street
Korumburra  Victoria  3950

Climate change café
23 June 2015
Foster Golf Club
7 Reserve Street
Foster  Victoria  3960

Fair food week documentary screening
12 October 2015
33 Station Road
Foster  Victoria  3960

Improve the drought resistance of your farm, a workshop with Graham Shepherd
27 November 2015
Outtrim Hall
1025 Outtrim-Leongatha Road
Outtrim  Victoria  3951

Shade and shelter workshop
19 June 2016
Fish Creek Farm
245 Eastaways Road
Fish Creek  Victoria  3959

Summer series – Building a wicking bed
25 January 2015
The Food Hub
Coal Creek Car Park
12 Silkstone Road
Korumburra  Victoria  3950

Summer series – Fruit growing in a changing climate
8 February 2015
The Food Hub
Coal Creek Car Park
12 Silkstone Road
Korumburra  Victoria  3950

Summer series – Vegetable growing in a changing climate
11 January 2015
The Food Hub
Coal Creek Car Park
12 Silkstone Road
Korumburra  Victoria  3950

Understanding healthy soils: Let’s get down and dirty
27 May 2015
195 Kerrs Road
Fish Creek  Victoria  3959

Water wise irrigation
28 February 2015
105 Cosgriffs Road
Outtrim  Victoria  3951

**Bass Coast Shire**

Financial literacy workshop
2 September 2016
5 Lindsey Close
Inverloch  Victoria  3996

Livestock biosecurity information session
19 November 2016
5 Lindsey Close
Inverloch  Victoria  3996

Resilience through diversity
24 February 2016
Bimbadeen
550 Back Beach Road
Ventnor  Victoria  3922

Water wise irrigation
28 February 2015
69-77 Cashin Street
Inverloch  Victoria  3996
Water wise irrigation
28 February 2015
110 Williams Road
Woodleigh  Victoria  3945

Weather trends and forecasting forum
31 October 2014
Inverloch Hub

16 Abeckett Street
Inverloch  Victoria  3996

Where’s my water? A demonstration of class
A water irrigation in an organic orchard
15 February 2015
The Phillip Island Community Orchard
Corner Hoad Street and Hallway Drive
Wimbledon Heights  Victoria  3922