SA Drought Hub Impact Report

Presentation of Climate Resilience Workshops March 2025 to May 2026 (DN6_24_19)

PROJECT LEAD: SARDI

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PROJECT SUMMARY

This project addresses the gap between providers of climate information and South Australian rural and remote users. Farmers and communities in South Australia have access to a plenty of information and opinions on climate science, but struggle to apply it to their decisions. This project delivered 14 climate resilient workshops. Each workshop was unique and targeted a range of audiences including farmers, aboriginal communities, intermediaries such as commercial advisers and students.

The first outcome is matching sources of information to questions from farmers and communities. In many cases farmers and advisers are unaware of tools such as MyClimateView or confident in accessing the Bureau of Meteorology website.

A second outcome was moving beyond awareness to using climate information in decision making. Forecasts that are in the form of probabilities (e.g. 70% chance of exceeding the median) are difficult to understand and can be misinterpreted as predicting a single outcome such as decile 7 rainfall. Worked examples where we start with even chance of every decile (50:50) and then see how this changes with a forecast can aid with this process. The applied economic approach of Decision Analysis is a robust way of dealing with uncertain information.

This series of workshops expanded from tactical decisions in cropping to include more strategic farming systems questions of how climate is changing in low rainfall regions. We also addressed perennial crops such as irrigated olives, livestock decisions in pastoral and medium rainfall zones. We also included students and had a greater reach to intermediaries such as advisers, researchers and government project officers.

The workshops continue to evolve and to provide valuable feedback on how farmers and communities are dealing with climate risk. This provides useful feedback to the SA Drought Hub, to PIRSA and SARDI and to related projects such as GRDC RiskWi$e.

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PROJECT ACTIVITIES AND OUTPUTS

This project builds on previous projects that funded SARDI Climate Applications to design and deliver climate resilient workshops. The contract specified that 1) the content of each workshop should be tailored to the different target audience 2) include a demonstration of MYCLIMATEVIEW which has been developed as part of the Future Drought Fund and 3) workshops may be integrated with other key events where appropriate and where workshop attendance and profile would be increased by doing so. The contract was for 12 workshops but 14 were delivered.

The 14 workshops involved about 683 participants.

	Farmers	Community members	DEW	PIRSA	Consultants	Research	Students
RMMAC x 3		34	14				
Grains x 6	**104**				**25**	**8**	
Adelaide Uni x 2							**50**
PIRSA x 1				**280**			
Olive Conf x 1	**70**				**10**	**5**	
Livestock x1	**63**				**15**	**5**	
Sub total	**237**	**34**	**14**	**280**	**50**	**18**	**50**

Grand total 683

Three yarning circles with River Murray Mallee Aboriginal Corporation: The first two workshops were Climate Change yarning circles held at the Barmera Beri Hotel in March and April 2025. The first workshop was aimed at community members (12 attended) and the second was aimed at First Nation Rangers working with the Murraylands and Riverland Landscape Board staff and included 5 community members. The final yarning circle, in July 2025 was held in the boardroom of the River Murray Mallee Aboriginal Corporation and included 7 community

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members. The yarning circles were based on previous work with Ngarrindjeri Aboriginal Corporation but required considerable planning with RMMAC, the Indigenous engagement team and ecologists at the Murraylands and Riverland Landscape Board.

After explaining the basics of climate change, we discussed how changes to climate and the environment are part of the deep history of aboriginal people going back for tens of thousands of years. Participants were encouraged to describe changes that they have observed in their lifetime. We focused on what is currently happening, how this might change in the future and what aspects of culture, health and wellbeing are being affected. Adequate time was set aside to discuss what steps can be taken to minimise the damage.

Four cropping climate risk workshops: The grains industry in South Australia has been the primary focus for SARDI Climate Applications due to the size and the obvious set of climate risky decisions including crop type and input level. A challenge is to bring fresh approaches and deal with current conditions including the seasonal forecasts. A workshop with conjunction with the independent agronomist James Cant on Upper EP in February 2025 provided an opportunity to discuss climate risk and focus on input levels. Two workshops in partnership with GRDC RiskWi$e and AIREP in July 2025 on Upper EP and with RiskWi$e and Mid North High Rainfall Zone in September 2025 were opportunities to discuss the use of seasonal forecasts that are arguably better than guessing but a long way from perfect.

Two future of farming workshops Orroroo and Wilmington in Upper North*:* Questions about the viability of Low rainfall farming in the Upper North of South Australia date back to George Goyder in the 1860s. This region is the focus of another SA Drought Hub project considering alternative farming systems. Rachel Trengove and Barry Mudge from Upper North Farming Systems group approached SARDI Climate Applications to hold a workshop at Orroroo following the very poor season of 2024. The attendance was high at over 30 which was a significant proportion of farming businesses and included a number of attendees who were new to Upper North Farming Systems. One of the attendees requested another workshop for the more western region towards Willowie and Wilmington which included another 9 farmers.

Feedback from Rachel Trengove, Program Manager Upper North Farming Systems.

Following the severe drought of 2024, many farmers entered the 2025 season feeling uncertain about the future profitability and resilience of their farming businesses. Barry and Peter's RiskWi$e pub sessions, held in February and March 2025, provided a timely and highly valued opportunity for farmers to come together and discuss these challenges. The informal sessions focused on practical discussions around managing risk in mixed farming businesses, particularly in areas around Goyder's Line where seasonal variability has a significant impact on profitability. Attendance was good, and the sessions were well received, with participants valuing open discussions that encouraged farmers to share experiences, challenge assumptions and learn from one another while exploring strategies to minimise losses in poor seasons while maximising opportunities in favourable years.

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These sessions demonstrated the importance of having responsive farming extension, in supporting community resilience, knowledge sharing and improved decision-making during challenging times.

Two workshops taking a more strategic climate change focus with Adelaide University students at Waite and the 100-year celebration of Koonamore vegetation reserve: Resources from this project were used to prepare and present a tutorial on climate change and climate risk for 25 third year Adelaide University students at Waite campus in September 2025. About 25 Adelaide University post graduate ecology students and academics were part of the 100 year celebration of Koonamore vegetation reserve. A sponsorship from the SA Drought Hub funded a bus for the 60km from Yunta to Koonamore and resources from this project were used to prepare a presentation of the 100 year rainfall and the MyCLIMATEVIEW projections of future trends in rainfall and temperature.

PIRSA annual conference at the Adelaide Oval and the Australian Olive conference at the Adelaide convention centre: Each October PIRSA holds an annual forum at Adelaide Oval attended by about 250 staff members in person with regional staff connecting through video conference. We were invited to run a session on climate risk which provided an opportunity to speak about the Future Drought Fund, the SA Drought Hub and have an interactive session using MyClimateView.

The national olive conference, also in October 2025, was an opportunity to discuss drought and climate risk in perennial horticulture to about 85 delegates made up of 70 producers, 10 consultants or agribusiness and 5 researchers.

Tactical climate risky decisions with the Barossa Improved Grazing Group: Recent years have been particularly hard for the SA livestock producers. The BIGG conference was an opportunity to discuss climate change and tactical climate decision making.



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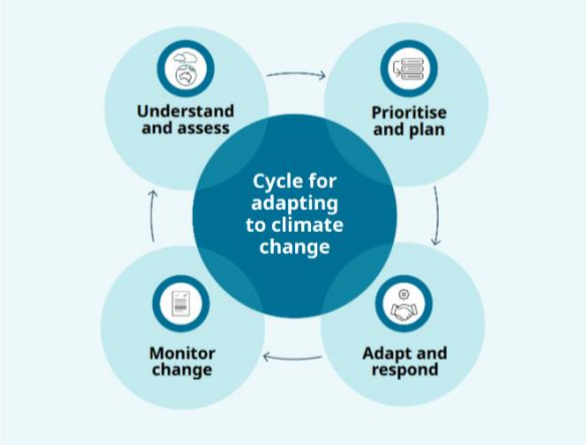
OUTCOMES AND IMPACT

The four main groups and the outcome are as follows:

1. Farmers were provided with access to historical climate information in formats that enabled them to place their lived experience in context. They were also exposed to sources of information on weather and seasonal climate forecasts and presented with ways to use this information in decision making. In addition, they were shown MyClimateView and, in most cases, accessed this on their phone and looked at climate change projections for their site. An outcome was the further development of budgeting across deciles picked up by the GRDC RiskWi$e project and future SA Drought Hub activities.
2. Aboriginal community members, including rangers took part in conversations about climate impacts with peers. An output was a document summarising a series of climate impacts and an outcome was a contribution of this document to prioritise further funding.
3. Intermediaries including state government employees (Primary Industries and Regions SA and the Department of Environment and Water), consultants and researchers were exposed to the SA Drought Hub, MyClimateView and other sources of climate information. Not all the staff at the PIRSA forum will use the information, but many of them live and work in rural areas and deliver programs to farmers.
4. Students in 3rd year course on plants in a changing climate at the University of Adelaide and post graduate and undergraduate ecology students visiting Koonamore reserve learnt about the SA Drought Hub and accessed MyClimateView

Workshops are joining rather than starting a conversation on climate risk.

One of the 'Theories of Change' for the Future Drought Fund and other Commonwealth and state programs is that better climate information will lead to better decisions which will boost drought and climate resilience. This is the basis of funding for this project of climate resilient workshops. One illustration is the cycle for adapting to climate change in the National Adaptation Plan released in September 2025.



Intentionally or otherwise, the diagram is read from the top left-hand corner of information being delivered in a consultative way before planning then adapting and finally monitoring.

What has become very apparent in this project is that in most cases we are working with participants who are already managing and responding to climate risk. In the case of aboriginal communities this has been happening for many thousands of years. Farmers rely on their own decades of experience, but because most farms are multi-generational, they are also learning from past generations. New

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knowledge on sources of information on El Nino, how to interpret and use probabilistic seasonal forecasts, where to find climate change projections is applied to existing knowledge.

Joining a conversation with the River Murray and Mallee Aboriginal Corporation.

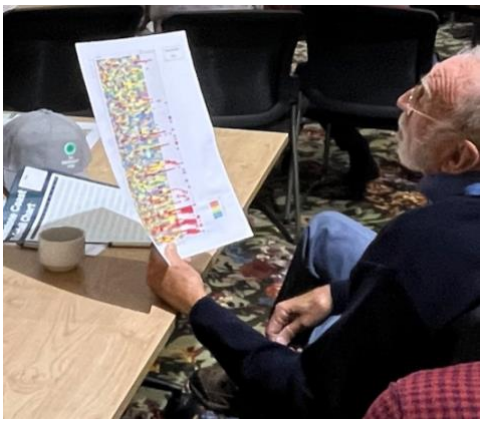
Attributing outcomes to a particular project is always difficult; this is especially the case for the many interacting programs run with RMMAC. The success of this project came from co-design with RMMAC and input from the First Nations engagement team of DEW and the SA Drought Hub knowledge broker, Tony Randall. Ample time was set aside to explain the basics of climate change and the impacts on the local ecology of the Murray River and the Mallee. Participants had an opportunity to share their experiences of environmental change backed up with data on local rainfall, temperature and river flow. This conversation led to interesting discussion about prioritising culturally significant sites and considering irrigating specific wetland seeps and specific scar trees and ring trees during the next drought.

The final workshop on June 20th at the RMMAC board room was aided by a table of climate risks prepared by Jem Tesoriero (Landscape Board) and revised by Peter Hayman to cover the three main risks 1) changes to temperature including more heat waves and bushfires, 2) changes to rainfall amount, seasonality and intensity and 3) changes to the health of the Murray River including the banks and the flood plains. This document of climate change impacts and priorities raised through workshops with community was used as part of successful funding applications.

Gerard, near Loxton is an aboriginally controlled local government area. Discussion about future increases in the chance of fire highlighted current vulnerability of residents to fire risk and suggestions of how this could be improved.

Using deciles to continue conversations on climate risk with grain growers

This round of workshops has increased our confidence in using deciles. Deciles are the language of risk for grain growers and agronomists. A decile 3 growing season indicates that 2 out of 10 seasons have been drier and 7 out of 10 have been wetter. In the previous round of climate resilient workshops, we used the A4 sheet with the monthly rainfall-coloured warm colours for drier deciles and cool colours for wetter deciles. We also showed the ranking of annual and growing season rainfall along with the ranking of 2, 3, 4 and 5 consecutive years.



This process leads to interesting conversations about recent and past droughts. At the Orroroo and Wilmington workshops the growers drew attention to the very dry period in the 1930s. Most low rainfall farming businesses are multi-generational and farmers talk about the dry 1930s as if they were lived experience.

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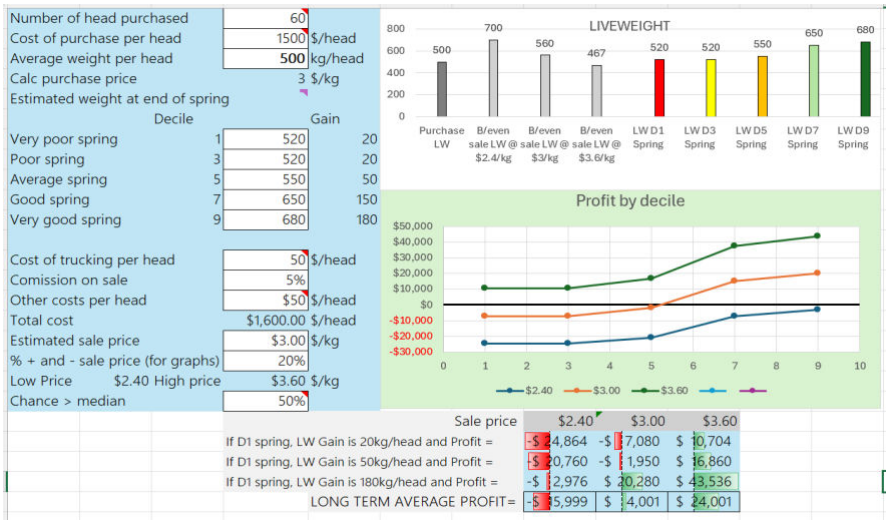
Climate information needs to be forward looking to be used for decision making. A common observation is that farmers don't understand forecasts such as 30% chance of above median rainfall. Some adults don't understand the mathematical concept of percentages and fractions, but this isn't the case for most farmers. Grain protein, area cropped or equity are all meaningfully expressed as percentages. The problem lies in applying percentages to different futures. A robust finding of psychology is that we find it easier, and more efficient, to think about a single future than multiple futures. However, if risk means anything, it involves the likelihood and consequence of multiple futures

Joining a conversation about climate risk in the livestock industry

The presentation at the Barossa Improved Grazing Group was an opportunity to apply frameworks on climate risk developed in the grains industry to the livestock industry. Although both the grains and the livestock industry face climate and price risk, price risk is a greater consideration in the livestock industry, especially for the example of buying cull cows where it is possible for the price $/kg liveweight to fall between purchase and selling. The risk in purchasing 60 head of cull cows ranged from a possible loss of almost $25,000 in a poor spring and a profit of almost $44,000 in a good spring with good prices.

As outlined in the milestone report, the ongoing drought in February 2026 combined with an El Nino outlook wasn't conducive to discussion about livestock purchase. Although this exercise didn't lead to the same level of discussion as we experienced with nitrogen fertiliser decisions with grain producers, it passed inspection by leading producers and consultants and is a first application of this approach to livestock.

We are exploring opportunities to further develop this framework with experts from the livestock industries. The main value of this profit by decile framework in grains or livestock is the discussion generated on risk management which provides useful feedback to the SA Drought Hub, to PIRSA and SARDI and to related projects such as GRDC RiskWi$e.



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