

# IMPACT REPORT

# Impact Pathway and Case Studies Southern NSW Innovation Hub

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March 2023

# INTRODUCTION

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## Purpose

The Future Drought Funded Drought and Innovation Hubs have been established in their regions to increase the resilience of farm businesses and their communities. A key to achieving this is to *add value* to the existing Innovation System that supports farm production and rural communities by increasing the synergies, collaboration and effectiveness of those supporting organisations and agencies. By increasing their capacity and effectiveness, the end result of more resilient farm business and communities will increase also.

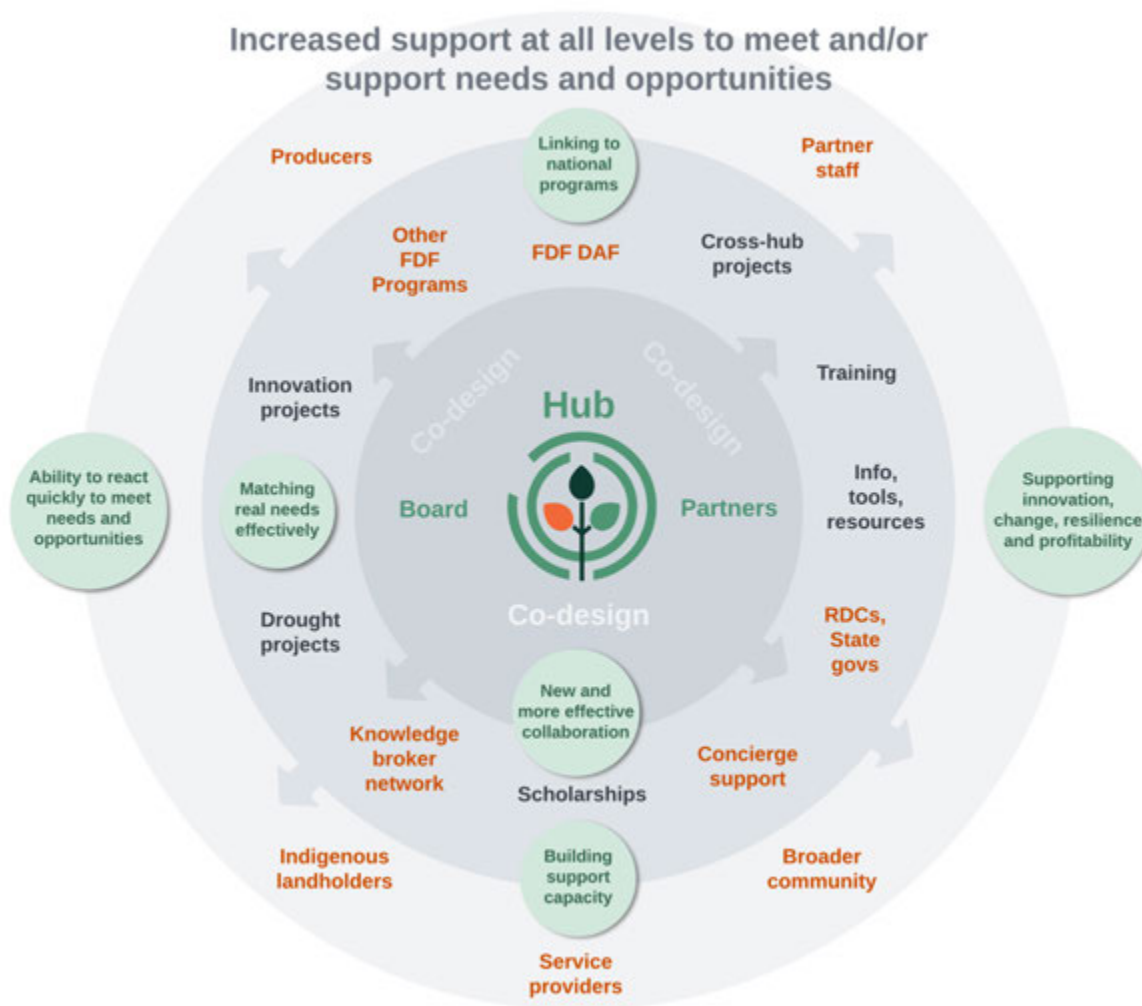
The case studies included here demonstrate by example what the Hub is achieving and can achieve for farmers, communities and the innovation ecosystem in SNSW. It complements the Hub evaluation process but also points towards the long term added value of the Hub in the region.

## Impact Pathways and Case Studies

Impact pathways are about exploring and demonstrating the way in which organisations, programs, projects or activities make a difference on the ground. They are not unlike (and related to) the program logic, but provide that extra level of detail in a diagrammatic form about the links and assumptions along the expected impact path. These articulated pathways provide a basis for demonstrating cause and effect, barriers, enablers and progress – and where changes need to be made or exploited further.

Impact pathways allow for a richer picture of the context and assumptions around a program rather than just a focus on activities, outputs and outcomes. The allows a focus on the relationships and factors affecting these.

Case studies are used to capture real situations of program impacts. Program or project staff informally become aware of changes/impacts that occur but this anecdotal data often does not find its way into the evaluation data. They are not ‘random samples’ and do not quantify to what extent such changes have occurred across a population but they are **real** instances of impact or change and can illustrate the types of changes that are occurring and indicate their value and impact. If enough are systematically collected they can provide data illustrating certain kinds of change. They can also be used to illustrate quantitative assessments of change.



**Table 1: Case studies**

Number	Case Study Name
1	Farming Systems Group Alliance
2	Monaro Farming Systems Group
3	NSW Wine – Track and Trace Innovation project
4	Cross-Hub Collaboration
5	Co-Design Framework

**Table 2: 1-3 year outcomes**

1-3 year outcomes	Relevant Case Studies
Increased collaboration and partnerships among organisations working in research, development, extension, adoption and commercialisation (RDEA&C).	1 2 3 4
Co-design and participatory approaches embedded in the design and delivery of Hub activities.	2
Facilitating learning activities to support resilience among end-users and those who support end users.	5

**Table 3: Hub specific outcomes**

Hub specific outcomes	Relevant Case Studies
Existing networks are strengthened and extended, and new networks are created, enabling increased ability to learn and confidence to access people and/or information to respond to challenges and opportunities.	1 2 3 4
Resources and information have been designed, packaged, translated and delivered directly to end-users, allowing them to make evidence- and values-based decisions and change practices, and/or provided opportunity for commercialisation of some outputs for on-going service provision.	2
Hub projects have been designed with people rather than for them.	5

# CASE STUDIES

## 1. Farming Systems Group Alliance

### Relevant Hub Outcome

**1-3 Year Outcome:** Increased collaboration and partnerships among organisations working in research, development, extension, adoption and commercialisation (RDEA&C).

**Hub specific outcome:** Existing networks are strengthened and extended, and new networks are created, enabling increased ability to learn and confidence to access people and/or information to respond to challenges and opportunities.

### Impact Statement

*The establishment of the Hub has facilitated closer relationships between nine Farming Systems Groups (FSGs) resulting in increased sharing of information, approaches, administrative efficiencies, and successful tendering for projects relevant to their members. It has enabled genuine ground-up driven processes and strengthened regional presence and capacity leading to more effective producer engagement and on-farm adoption.*

### Background

Farming Systems Groups (FSGs) evolved from groups of progressive, community-minded farmers coming together to build an entity to attract engagement of research organisations and funding in order to undertake activities in their regions relevant to the progression of their farming enterprises or industries. With no industry or government backing, these organisations rely on a strongly connected farmer membership, volunteerism and frugal resource allocation for survival.

In order to facilitate effective collaboration and coordination between the FSGs and the Hub, a Collaborative Head Agreement was drawn up to guide the way in which the FSGs work together in a Farming Systems Group Alliance (FSGA) and engage with the Hub. Farmlink (lead member) is undertaking the inaugural representative role with the Hub for the FSGA. It is noted that 'the parties have agreed to enter into this agreement to govern the conduct of the FSGA as it relates to working with the Hub. The objective in this agreement was to *undertake collaborative RDEA&C activities aimed at helping primary producers and rural and regional communities to become more prepared for, and resilient to, future droughts*. This included areas of: cross-sectoral innovative and transformative RDEA&C; a focus on the needs of end users, involving them in the co-design and adoption phases of research and development; the delivery of effective communication of new and existing knowledge and technologies; and co-investment in national drought resilience RDEA&C priorities with collaboration and co-design between governments, primary producers, community groups, research and training providers.

### Influence of the Hub

Prior to the establishment of the Hub, seven of the FSGs in the region met on occasions during the year, with individual groups working together on a case-by-case or informal basis where it was seen as synergies could be established in delivering projects for growers. The main interaction was based around the project that triggered the collaboration. The FSGA was identified in the formation of the Hub as a key mechanism for adopting an effective ground-up approach for determining and

effectively delivering on local and regional farmer needs. The formalisation of the FSGA provided a mechanism to maximise effective coordination between the groups themselves and with the Hub, as well as an opportunity for FSGs to better work beside counterparts within government and research organisations through genuine linkage and inclusion. The relationship also provided a new mechanism for ongoing core staff support to maintain community connections and engagement outside of project rounds – not led by project funding but community needs.

## Operations

Following failure of the FSGs to secure funding for projects in the first round of Future Drought Fund (FDF) funding (November 2021), the Hub was instrumental in working through issues with FDF representatives around the design of grant funding and how it could be better targeted at on the ground needs. The Hub also worked actively with FSGs and other stakeholders to improve development of proposals to be better targeted to Grant requirements. The three projects submitted by the Hub, on behalf of stakeholders, plus three projects actively supported by the Hub and submitted by stakeholders directly, were subsequently successful. This resulted in project funding coming through the Hub(s) and then allocated to the FSGs, with lead FSGs submitting proposals through the Hub. The key projects funded through this process through the Drought Resilient Soils and Landscapes Grants Program geared towards facilitating the adoption of improved practices included:

- **Improved drought resilience through optimal management of soils and available water:** Led by Riverine Plains and included the Hub, CSU, 4 FSGs, CSIRO, DPI NSW, LLS – part funded by GRDC.
- **Saving Our Soils During Drought:** Led by LLS with support from Holbrook and included the Hub, CSU, 5 FSGs, LLS, Irrigated Cropping Council, and the Soil Knowledge Network.
- **Creating landscape-scale change through drought resilient pasture systems** Led by Holbrook Landcare and included the Hub; 5 FSGs; DPI NSW; LLS.

The Knowledge Broker network across the partners – including the FSGA members – has provided another opportunity for networking as well as capacity building within the groups. This has been an evolving role as information products are developed from the Hub and its partners which is assisting community engagement. They provide a key role in identifying issues, needs and opportunities with local communities to guide funding and project activity.

Different scales of FSGs, farming system types and geographical areas impact on the suitability of specific collaborative opportunities but the more formalised collaborative framework means that such opportunities have been broadened without limiting individual groups to take up opportunities as they are presented. Open communication between the groups helps to maintain good working relationships.

## Issues being addressed

It is noted that there is a new level of reporting and compliance that FSGs have had to work through – for example animal care and ethics, and legal agreements – though Hub support and cross-group experience has been helpful in this regard. There is also still some clarification needed around the role and funding of research/innovation within the Hub/FDF context – rather than a demonstration-based approach for known technologies and approaches. This is seen as important as new issues and opportunities are identified and to attract the interest of producers already implementing best known practice.

## Impacts and benefits

The result of this extra level of formalised agreement has *increased the interaction and discussion outside of specific projects*, facilitating more regular and new conversations than would have otherwise taken place across the FSGs. Collaboration has gone beyond projects and opened up discussions around different tools, approaches and communication mechanisms – including opportunities to develop common contract processes and proformas and upskill administration and management. Other benefits raised included:

- Increased staff numbers in region resulting in regional employment and skill sets which flow through to community organisations and other support roles.
- Grass roots organisations working closely with the end user to facilitate improved skills and knowledge and adoption to increase sustainability of regional businesses and communities with the potential to increase adoption because of local relevance.
- Collective of like-minded organisations with different fields of expertise and diversity of local environments and conditions.
- Accessing a broader, critical mass of farmers that adds clout to claims around areas of work needed and potentially scalability of impact.
- Cross-pollination of ideas building internal capacity of organisations. Each FSG is different with distinct staff skills and strengths – *helping each other to do what we do better*.
- Exposure to a broader range of perspectives and attitudes – e.g. Landcare; First Nations engagement; or M&E specialists.

It was noted that recognition of the FSGA more generally has resulted in Rural Research and Development Corporations (RDCs), government, universities and other research organisations increasing their engagement with FSGs. Generally, the Hub was described as ‘turning the RDC model on its head’ so that there was more opportunity for input from FSGs at the planning stage rather than only as tenderers to predetermined projects. There is potential to continue to work with the Department of Agriculture, Fisheries and Forestry (DAFF) and RDCs to recognise the co-designed needs identification and solutions by the FSGA and to invest directly with them to address these collaboratively.

## 2. Monaro Farming Systems Group

### Relevant Hub Outcome

#### 1-3 Year Outcomes:

- Increased collaboration and partnerships among organisations working in research, development, extension, adoption and commercialisation (RDEA&C).
- Co-design and participatory approaches embedded in the design and delivery of Hub activities.

#### Hub specific outcomes:

- Existing networks are strengthened and extended, and new networks are created, enabling increased ability to learn and confidence to access people and/or information to respond to challenges and opportunities.
- Resources and information have been designed, packaged, translated and delivered directly to end-users, allowing them to make evidence - and values-based decisions and change practices, and/or provided opportunity for commercialisation of some outputs for on-going service provision.

### Impact Statement

*Partnership with the Southern New South Wales Innovation Hub has provided Monaro Farm Systems group (MFS) connection with like-minded organisations and opportunities to develop new networks. It has also provided access to funding opportunities that have helped raise its visibility in the community including running a trial site as part of the Resilient Pastures project. Based on co-design principles, this trial is facilitating resources, events, and networking opportunities for producers to talk, ask questions, and share problems with each other and the Local Land Services (LLS). It is reported to be having a positive impact on the community and providing producers with the resources and knowledge to make informed business decisions.*

### Background

Early 2022, the Monaro Farming Systems group (MFS) joined the Farming Systems Groups Alliance which had been established by seven other farming system groups with the Southern New South Wales Drought Resilience Adoption and Innovation Hub (SNSW Hub or the Hub)<sup>1</sup>. Subsequently MFS Executive Officer, Frances Lomas, is the SNSW Hub's Knowledge Broker representing the Monaro region. Frances said that the Farming Systems Group Alliance is critical to the Hub's operations as it provides connection with like-minded organisations.

### Influence of the Hub

The Hub has benefited the Monaro Farming Systems group in terms of providing funding opportunities and building connections with other organisations and producers. Frances noted that as a result of meeting with and working with other Knowledge Brokers, she has established long-term partnerships and friendships that help her in her role.

Two SNSW Hub related projects providing income and employment opportunities for MFS and the Monaro region are the Resilient Pastures trial and stock confinement workshops.

Worth close to \$1 million<sup>2</sup>, Resilient Pastures (*Creating landscape-scale change through the promotion of resilient pasture systems*) is a Southern NSW Innovation Hub project. Its lead

<sup>1</sup> SNSW Climate Hub MEL Report (August 2022). Coutts J&R.

<sup>2</sup> \$983,950



collaborator is Holbrook Landcare Network, with partners including CSU, FarmLink Research, Central West Farming Systems, Monaro Farming Systems, NSW DPI, Riverine Plains, and Local Land Services. As a result of being involved and running a trial site, MFS has developed stronger working relationships with Holbrook Landcare Network, seen more income produced and added employment within the region. Frances hopes to report on the trial's success at a field day in six months' time.

The stock confinement workshops held by MFS early 2022 were well attended and well received by producers. There was such strong interest from producers in terms of accessing further support in this area that MFS applied for further funding through the Hub.

## Operations

Frances considered the governance structure of the Hub to be effective and continuing to improve after a slow start. As a late joiner, she found it initially challenging to understand its purpose, role and impact. Explaining further, Frances pointed out that the Knowledge Broker role and network are still in the learning stages in terms of defining tasks, goals and operational contribution to Hub outcomes. When clarified, she believes that this will facilitate better delivery of Hub benefits to end-users and producers via the Knowledge Broker network.

By the end of its first three years, Frances sees that the Hub will be reaching its peak with a strong team in place operating as a "beautiful, oiled ship," with clear, evident and articulated outcomes. Her concern is that this will be happening just before the Hub program is due to wrap up.

## Issues being addressed

The Resilient Pastures trial is about showcasing modern pasture species combinations and management practices known to build greater drought resilience into landscapes in the mid to high rainfall zones of central and southern NSW. Using co-design and social learning principles, one of its goals is to build a greater understanding of drought resilient pasture systems amongst land managers<sup>3</sup>. This includes improving producers' knowledge and skills through activities such as farm visits where different pasture systems are showcased and experts and non-experts can engage with each other. This can help producers to make decisions around implementing changes that suit their property and budget.

The project also has the potential to deliver well-focused, well-researched case studies. Available resources and research are filtering out to producers, who are becoming more aware of what is available.

## Impacts and benefits

Although in its early stages, the Resilient Pastures trial is reported to be building positivity among Monaro producers. Frances notes that the Hub's involvement has increased the trial's standing within Monaro community and helped create a favourable impression of its partners. The trial is facilitating resources, events, and networking opportunities for producers to talk, ask questions, and share problems with each other and the Local Land Services (LLS). It is felt that based on this aspect alone, the trial is having a huge impact on the community.

Frances explained that the trial paddock has only recently been fenced off and pastures planted which means it is too early to determine any significant technical progress of the trial. She also noted some concern that costs may be prohibitive for some producers in terms of adoption. However, while the impact may be difficult to prove or measure (e.g. some producers may implement their

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<sup>3</sup> 2021-6421 FDF Drought Resilient Soils & Landscapes Grants Program, Activity Work Plan

own versions of strategies), it is thought that Resilient Pastures is going to deliver valuable and worthwhile outcomes by providing producers with the resources and knowledge to make informed business decisions.

Being a partner in the Hub and the benefits of subsequent funding opportunities has also increased the overall visibility of MFS in the community. It has been instrumental in delivering positive outcomes for new partnership opportunities and enhancing existing ties with long-term partners (including the NSW DPI, CSIRO, and Local Land Services (LLS)).

New networks have included partnerships with higher education institutions such as the University of Wollongong and the Australian National University. Frances said that she had personally connected with people and partners she may not have spoken to otherwise, particularly in preparing funding applications for Hub bids.

# 3. NSW Wine – Track and Trace Innovation project

## Relevant Hub Outcome

**1-3 Year Outcome:** Increased collaboration and partnerships among organisations working in research, development, extension, adoption and commercialisation (RDEA&C).

**Hub specific outcome:** Existing networks are strengthened and extended, and new networks are created, enabling increased ability to learn and confidence to access people and/or information to respond to challenges and opportunities.

## Impact Statement

*NSW Wine sought support from the SNSW Hub to expand a track and trace biosecurity project based on QR technology. The partnerships and extra funding secured as a result of the Hub's involvement meant the project and its potential impact significantly expanded. The project's outcomes will contribute to modernising and centralising NSW's biosecurity data allowing more timely, effective and efficient responses to biosecurity threats.*

## Background

In 2022, the NSW Wine Industry Association (NSW Wine) was asked by the New South Wales State Government to investigate the technology used in the track and trace system employed during the COVID pandemic in New South Wales, and whether it could have agricultural biosecurity applications. Biosecurity in Australia is important as an outbreak could have severe repercussions for businesses and regional areas. In the case of an incursion. A biosecurity outbreak could result in substantial economic losses for the wine industry, as demonstrated by the estimated \$1 billion<sup>4</sup> cost of the phylloxera outbreak in the Yarra Valley.

NSW Wines had already run a simulation outbreak addressing a major industry threat in 2019. President of the NSW Wine Industry Association, Mark Bourne, wrote a paper outlining how the QR code check-in system could be used as a method to track and trace biosecurity threats and vectors. In his paper, Mark suggested using the QR code track and trace system to run a similar pilot test.

NSW Wines had a small amount of money (\$60,000-\$70,000) available to run a pilot program using the QR code track and trace system, however more funding was needed. It was at this point the idea was pitched to the Southern New South Wales Drought Resilience Adoption and Innovation Hub (SNSW Hub or the Hub).

## Influence of the Hub

The Hub helped NSW Wine secure a New Zealand based technology partner who contributed substantial funding allowing the test program to grow into a 12-month pilot to the value of \$1.2 million. This partnership means that NSW Wines has the opportunity to rigorously test the technology to see whether it could make a difference in the case of a biosecurity outbreak.

<sup>4</sup> NSW Wine R.D.E & A Prospectus 2021/22 (August 2021). Accessed 18 February 2022: [Research & Development – NSW Wine](#) . Original source: Vine Health Australia (2019). Phylloxera: Yarra financial impact. Accessed 15 July 2021: <https://vinehealth.com.au/2019/08/phyloxera-yarra-financial-impact/>.

With the Hub's support the project has expanded further to include the NSW Department of Primary Industries (NSW DPI) and three NSW wine regions. This resulted in extra funding (approximately \$350,000) from the partners which will be instrumental to the project's outcomes.

Beginning August 2022, the technology aspect of the track and trace project was up and running relatively quickly with 12 months allocated for testing. If the technology is found to be effective, the NSW Government anticipates it could be applied not just to the NSW wine industry, but to other horticultural crops nationally facing similar biosecurity risks and incursions.

## Operations

The SNSW Hub was instrumental in helping the project secure the necessary funding to run a pilot that could produce verified data outputs. In addition, it provided guidance and support to NSW Wines in preparing and putting together the partnership agreement between the pilot's four partners. While NSW Wines are experts in their own right and have prepared many grant applications, Mark explained that "the way the Hub went about the process was quite new to us and quite useful." Templates were provided to support the alliance agreement and advice offered on how to value add industry contributions into a project.

## Issues being addressed

Biosecurity threats are increasing, with a significant number of established species in Australia yet to be eradicated or deemed ineradicable. According to CSIRO, current biosecurity approaches and responsibilities need transformational change to generate greater efficiencies and effectiveness.<sup>5</sup> A track and trace capability could allow for early identification of a threat, enable tracing to the original source, reduce the spread, and accelerate eradication. This would align with the Australian Government's National Traceability Framework and the Modernising Agricultural Trade agenda<sup>6</sup>.

## Impacts and benefits

The SNSW Hub filled a significant gap in the development of the track and trace project allowing NSW Wine to expand the project to ensure significant impacts and outcomes. These include developing a new product and methodology to identify potential biosecurity threats, and delivering resources targeted at growers and vineyard managers, wineries, suppliers, contractors and other relevant visitors to vineyards. To ensure the tool is fit for purpose, it is being co-designed with growers and vineyard managers. It aims to be easy to use, secure, and the anticipation is that it will be readily adopted given the familiarity of QR codes as a result of COVID-19. Partnerships with grower associations will also help with raising awareness.<sup>7</sup>

At a broader level, the project is contributing to modernising and centralising the state's biosecurity data. This facilitates more timely, effective, and efficient responses to biosecurity threats, and optimises resources. Potential economic benefits include reduced costs associated with managing biosecurity compliance and reduced economic losses as a result of faster containment of biosecurity threats. Other potential benefits include less use of chemicals responding to biosecurity incursions, increased sustainability and resilience of vineyards, and increased compliance and record keeping helping to build to stronger connections across industry, government, research partners<sup>8</sup>.

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<sup>5</sup> NSW Wine R.D.E & A Prospectus 2021/22 (August 2021). Accessed 18 February 2022: [Research & Development – NSW Wine](#)

<sup>6</sup> Department of Agriculture (2019). National Traceability Framework. Canberra: Australian Government

<sup>7</sup> NSW Wine R.D.E & A Prospectus 2021/22 (August 2021). Accessed 18 February 2022: [Research & Development – NSW Wine](#)

<sup>8</sup> NSW Wine R.D.E & A Prospectus 2021/22 (August 2021). Accessed 18 February 2022: [Research & Development – NSW Wine](#)

Mark explained that without the Hub, NSW Wines would not have been equipped to fund the simulation of all the data the industry had collected during the current growing season as it required significant computing power. Working with the SNSW Hub also benefited the project by offering a much wider perspective beyond the wine and grape industry, which is useful when framing up a project of this scale. As a result, ideas and issues that may not have been otherwise considered have been highlighted and the project's footprint spans across agricultural sectors considering community values and impacts.

A Hub Knowledge Broker is also based at NSW Wines. This means the wine industry has representation throughout the Hub network providing a significant voice for the wine industry in terms of sharing key priorities and on ground challenges. Being part of this established framework is viewed as a major benefit for the wine industry.

# 4. Cross-Hub Collaboration

## Relevant Hub Outcome

**1-3 Year Outcome:** Increased collaboration and partnerships among organisations working in research, development, extension, adoption and commercialisation (RDEA&C). Baselineing has highlighted the need for a holistic approach to drought resilience including cross-Hub collaboration and an integrated view of land-users and natural resources.<sup>9</sup>

**Hub specific outcome:** Existing networks are strengthened and extended, and new networks are created, enabling increased ability to learn and confidence to access people and/or information to respond to challenges and opportunities.

## Impact Statement

*Collaboration across Hubs allows the identification of common challenges and adoption of well-targeted and effective solutions. It also means that Hubs can pull together expertise and investment across regions where there are similar issues. Although the Hubs are still quite young, the value of their efforts in this space is emerging. Within a short timeframe, examples of cross-Hub project collaboration demonstrate achievements including strengthened industry networks and on ground benefits. Local level connections may also increase efficiency in the agriculture industry.*

## Background

The Future Drought Fund (FDF) is a national program aimed at building resilience and preparedness for drought in Australia. It includes eight Drought Resilience Adoption and Innovation Hubs (Hubs) supporting farmers and communities to prepare for drought. Collectively they have a national footprint across the country and represent a broad range of stakeholders, providing the program with extended reach and impact. The Hubs connect farmers with regional agricultural experts, innovation and new practices.<sup>10</sup>

Collaboration between the Hubs can facilitate the sharing of skills, insights, expertise and resources, as well as increase the potential for positive impact. The Southern New South Wales Hub (SNSW Hub) and the South Australian Hub (SA Hub) have worked closely together to map out potential joint projects with other funding agencies or pursue other funding opportunities wherever there are common priorities. One of the goals being to link grower groups together across South Australia (SA), Victoria (Vic) and New South Wales (NSW), where it makes sense to do so.

Two projects demonstrating collaboration between these Hubs and others include:

- **Drought Management for Health and Longevity of Perennial Horticulture Plants** with lead collaborator SA Hub and collaborating partners SNSW Hub, Victorian Hub, and the Tasmanian Hub.<sup>11</sup> The horticulture project (*Image-based sensing for improved irrigation scheduling of horticultural crops*) is strongly linked to crop irrigation requirements and will deliver a vineyard and orchard monitoring system to help growers manage irrigation and improve their drought resilience and plant health, under water constrained environments. The tool will integrate canopy measurements and soil moisture data for accurate irrigation modelling.

<sup>9</sup> SNSW Climate Hub MEL Report (August 2022). Coutts J&R

<sup>10</sup> <https://www.agriculture.gov.au/agriculture-land/farm-food-drought/drought/future-drought-fund/research-adoption-program/adoption-innovation-hubs>

<sup>11</sup> SNSW Climate Hub MEL Report (August 2022). Coutts J&R.

- **Managing Rangelands for drought resilience** with lead collaborator NWANT Hub; and collaborating partners SNSW Hub, SA Hub, SWA Hub, SQNNSW Hub, and TNQ Hub. The SNSW and SA Hubs both have a significant focus around cropping, livestock and mixed farming systems. They also have similar primary impact pathways through farming systems groups.

## Influence of the Hub

Collaboration means that Hubs can pull together expertise and investment across regions where there are similar issues, and although the Hubs are still quite young, the value of their efforts in this space is emerging. The Hub Knowledge Broker network in particular has been instrumental in facilitating collaborative efforts and improving outcomes. Through regular meetings and sharing resources, it plays a critical role in identifying opportunities for collaboration, bringing stakeholders together (including researchers, industry, science, and government), and helping to facilitate the development of cross-Hub projects.

Senior Knowledge Broker at the SA Hub, Tony Randall, said that Hub connections made it easier to collaborate. For example, knowledge of the SNSW Hub's priorities and contacts meant that a high priority project for SA producers could extend beyond state borders and SA Hub boundaries through eight of the SNSW partners coming on board. This allows impacts to be region-wide, cross industry and result in significant learning opportunities.

SA Hub Director, Stephen Lee also pointed out the potential of cross hub collaboration. “We can see it's working in horticulture, we can see the potential in grazing and cropping systems, and we would love to capture that potential.” To date, the SA Hub has put up several project bids including two with significant involvement from grower groups and partners from SNSW, Victoria, and Western Australia.

## Operations

“It's in our interests to be successful,” said Stephen. Explaining further, he said cross-Hub collaboration is important because it benefits all stakeholders involved and by working together, the Hubs can achieve more than they would individually. Adopting a trans-regional approach allows Hubs to identify common challenges and adopt well-targeted and effective solutions. This can help build resilience and preparedness for drought across Australia.

The Hubs are also positioned to address regional nuance. “The focus is not on fitting everyone into the same box,” said SA Hub Knowledge Broker Tony. This approach ensures that a project is not pitched as a one-size-fits-all solution, but rather tailored to the needs of each region. For example, the Hubs involved in the horticulture project customised its approaches to the technologies best suited for their local environment and grower needs.

The horticulture project also builds on existing regional programs. Understanding that producers are at different stages of understanding, knowledge, and development, means that Hubs can build on what has already been implemented to achieve more effective outcomes.

## Issues being addressed

Despite the existence of state-based grower organisations and a grower group network that spans the country, there is currently a lack of coordination between cross-jurisdictional projects and groups in different states. State based organisations including the AG Excellence Alliance in South Australia, and similar organisations in Western Australia and New South Wales, primarily focus on

facilitating projects across grower groups within their respective states. The Hubs are providing a larger coordination level connecting grower groups across states.

## **Impacts and benefits**

As a result of the collaborative efforts of six Hubs (including SNSW and SA), the rangelands project has involved all of Australia's rangelands systems and is engaging pastoralists across the country. It centres on the use of mapping tools for improved land and soil grazing management, including the Australian feed-based monitor developed by Meat and Livestock Australia. The project has demonstrated industry benefits in the management of property, land, and livestock.

In addition, an extension and adoption grant has been developed off the back of the cross-hub project to further promote the use of similar tools for improved land and livestock management. While this grant will not involve SNSW Hub directly, the information will be relevant and shared across regions.

The Hubs involved in the horticulture project are already collectively scoping next steps. Rather than only benefiting a particular cohort of growers, a particular region or a particular industry, this project has been able to target multiple industries and work more effectively work across states. The collaboration is building relationships across industries, regions, and research, development, and adoption. For example, the Agtech providers involved intend to continue collaborating after the current project finishes.

A new collaborative project between the SNSW, Victoria, SA and WA Hubs focusing on adoption is under development. It involves 20 grower groups across Southern Australia (Southern NSW, Victoria, SA, and WA) working directly with each other across state boundaries. Themed around sowing cereal crops, the project aims to facilitate individual and community driven approaches by each grower group. If the bid is successful, the grower groups will have the opportunity to work on additional projects. If it is not successful, the connections made between the grower groups will still benefit producers and the value chain in terms of adoption and improved business resilience.

Within a short timeframe, these examples of cross-Hub project collaboration demonstrate achievements including strengthened industry networks and on ground benefits. The benefits of local level connections also potentially include increased efficiency in the agriculture industry. Improved information sharing between grower groups can also benefit national funders such as the Grains Research and Development Corporation (GRDC), by providing greater confidence that investment into projects and the information generated will be shared directly between groups.



# 5. Co-Design Framework

## Relevant Hub Outcome

**1-3 Year Outcome:** Facilitating learning activities to support resilience among end-users and those who support end users.

**Hub specific outcome:** Hub projects have been designed with people rather than for them.

## Impact Statement

*The SNSW Hub is committed to using co-design principles and embed them in its work. To facilitate this, RuralScope Director, Jo Eady, was engaged to work with the Knowledge Brokers to help them better understand human-centred approaches. Knowledge Brokers indicated they have benefited from capacity building activities focused on co-design principles and gained new resources. Co-design principles have also underpinned the successful funding of six new Hub partnership projects.*

## Background

In its foundation year, the Southern New South Wales Drought Resilience Adoption and Innovation Hub (SNSW Hub or the Hub) has invested in capacity building through support networks such as farming systems groups and Local Land Services who work directly with producers. Strengthening farmer resilience has involved providing strong, capable support that can link them to relevant resources at the right time in the right manner. The Hubs' Knowledge Brokers have played a critical role in this process and as a result, the hub has identified the value in providing additional support and resources to this network.<sup>12</sup>

Co-design processes challenge traditional extension models. The human-centred approach works with people, it values the lived experiences of end users, offering the same power to everyone in the room. It is not about doing things to people or for people, which is what government and consultants typically rely on when providing support to growers. For example, technical experts, extension staff or consultants will typically hold the power during a workshop, demonstrate technical outcomes and inform growers on the best methods to solve a problem. The belief is that the learnings from those involved in co-design can move the process further along in defining an issue and working on a prototype product or solution that will be accepted, adopted or could impact practice change.

## Influence of the Hub

The SNSW Hub is committed to doing things differently by building capacity within people and organisations, working with and hearing from their stakeholders. Director of RuralScope, Jo Eady was approached by the SNSW Hub to help them better understand human-centered approaches and co-design and how they could embed these principles into their work. While Jo was familiar with the philosophy of co-design, she found the term itself was not widely understood. Jo has worked with the SNSW Hub to build our joint capacity in these areas, with the goal of encouraging and empowering Knowledge Brokers to support and create co-design teams or groups.

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<sup>12</sup> SNSW Climate Hub MEL Report [August 2022] Coutts J&R.

## Operations

The SNSW Hub asked Jo in early 2022 to facilitate the human centered approach and coordination of the Knowledge Broker network. Since then, Jo has been working with the Knowledge Brokers to “seed the principles” of human centered design and build capacity in co-design. As a part of her work, she facilitated two workshops and created a design team to support Knowledge Brokers in implementing co-design principles. Participants were challenged to think about their methodologies, encouraged to define the problem, and better understand pain points or ideas they want to develop before working on a solution. Feedback from the workshops indicated that participants gained value from both and took learnings away. Those attending the co-design workshop rated it highly in terms of increasing their awareness of co-design and application (average rating 8.1/10). There was interest in learning more about co-design principles and how this relates to their day-to-day project work and Hub expectations.

During a session with the Knowledge Brokers (October 2022) Jo shared the *Double Diamond*, a human-centered process model that comes out of the UK Design Council. Jo said the discussion was a highlight for her. While some suggested the model was too philosophical or preferred the way things have always been done, two voices stood out. Two First Nations engagement officers suggested the double diamond was missing a diamond. They proposed a triple diamond model with the additional step of “discuss” before “discover.” The triple diamond model has now been adopted by the Hub. As a result of this work a uniquely Australian and agricultural co-design principles are emerging.

Jo believes defining the problem or idea is a crucial component that has not fully existed as well as it could in the past. This is evident due to the ongoing emergence of repeat issues in agriculture. The triple diamond model supports and empowers people to engage in first defining an issue and then working through to a solution. It supports the understanding of a people-first process rather than technical first.

## Issues

The cycle of information and knowledge flowing from the Hub through the Knowledge Broker network, and into the community and grower groups, should be considered a circle in order to be representative of a co-design framework. However, there is a challenge for the Knowledge Brokers involved in terms of fully embracing the concept of co-design.

It was suggested that many tend to fall back into the “way we have always done things,” where there is a clearly defined focus on budget, structure and quantifiable project deliverables. Jo believes this is the result of societal conditioning to accept hierarchical systems (demonstrated through government and education systems), where people are not often consulted or included in decision-making.

The SNSW Hub, with the support of Jo and the design team, hope to disrupt this pattern and place people at the centre of decision-making, including them in the creation of solutions in ways they have not been before. The process will be slow and as part of action research, resistance to any new way of thinking is expected, but also seen as an important part of offering something new to the community.

## Impacts and benefits

Jo Eady introduced eight concepts along the mindset continuum during her first session with the Hub Knowledge Brokers. These were developed by the New Zealand Co-design Lab based on work

done with the Maori. The role of a co-designer or Knowledge Broker is to support people in changing their mindset and to recognise their expertise and ability, to be equal partners at the table, whether it is alongside a lecturer on their left or a government official on their right. “To sit in equal presence with equal power,” Jo said. She explained the importance in placing people at the centre and being a part of creating meaningful solutions. Something many have never been part of before.

As a result of her work so far, Jo has produced eight articles about co-design for the Knowledge Brokers and developed co-design materials to support and guide understanding of the five co-design principles and best practices. Co-design principles one (engage and learn) and two (interpret and prioritise) have been used in securing funding for six new partnership projects. Co-design principle three (Respond and deliver) will be used to implement the projects to match end-user requirements. The co-design approach means that the Hub is working collaboratively with farmers and land managers and its communities to understand their priorities for the complexities of the issues they face, their values and drivers of practice change. Each of the six funded projects have been designed with these people rather than for them.<sup>13</sup>

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<sup>13</sup> *SNSW Climate Hub MEL Report* [August 2022] Coutts J&R.