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Wednesday, 6 December 2023

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**Subject: South Australian Drought Resilience Adoption and Innovation Hub (SA Drought Hub) submission to Draft Drought Resilience Funding Plan 2024 to 2028 and Consultation draft: Future Drought Fund Investment Strategy 2024 to 2028.**

The SA Drought Hub welcomes the opportunity to provide a submission on the Draft Drought Resilience Funding Plan 2024 to 2028 and Consultation draft: Future Drought Fund Investment Strategy 2024 to 2028. Responses have been provided to discussion questions contained in the Consultation draft: Future Drought Fund Investment Strategy 2024 to 2028.

The SA Drought Hub has a network of over 60 members with regional nodes enabling Hub-region wide coverage. The Hub's activities are underpinned by a comprehensive co-design process informed by consultation with primary producers, grower groups, first nations organisations, research organisations and researchers, industry peak bodies, government, nongovernment and private extension officers and networks; local government, and agricultural service and equipment providers. The priorities identified from consultation have been the basis for co-design of collaborative activities.

#### **5.1 Discussion questions**

**Does the draft funding plan provide an appropriate framework to guide spending on drought resilience initiatives?**

**Which current FDF programs could be integrated with existing programs or built upon to drive efficiency or to maximise impact?**

The span of the proposed next suite of FDF programs encompasses the critical elements required to enhance drought resilience across the three interconnected strategic objectives of the fund. As recognised in the Investment Strategy 2024 – 2028 greatest overall impact will be achieved where these objectives can be pursued in a holistic approach.

During the 2020 – 2024 FDF Funding Plan the SA Drought Hub has sought to align and support FDF programs. This support has included providing connections, linking FDF programs on the ground and delivering presentations, workshops and other content to add value to events. This has helped build cross FDF-program awareness but there has been somewhat limited opportunity to plan from early stages for integration of effort to maximise economic, environmental and social resilience to drought. Early planning of programs and consideration of opportunities for integration (rather than retrospective valuing adding) can enhance opportunity for higher impact across-domain collaboration to deliver outcomes across the '5 capitals' (financial, human, physical, social and natural capital) contained in the draft Investment Strategy 2024-28.

Opportunity exists for greater alignment &/or integration between the Hubs program and Farm Business Resilience and the suite of FDF programs focused on Agricultural Landscapes management.

A potential outcome of such integration could be equipping primary producers with the ability to measure (benchmark) enterprise productivity (& productivity resilience), financial performance and natural capital. Moreover, enterprise greenhouse gas emissions (GHG) could also be incorporated into a holistic effort. When these elements are considered together farmers, with guidance, in peer-to-peer small group settings, could then identify and implement strategic direction (e.g. enterprise mix) and tactical management options (e.g. decisions on timing of containment feeding) that deliver measurable improvements across enterprise productivity resilience, financial performance, natural capital, GHG emissions reduction and enhanced connectedness and wellbeing.

Over the medium term, this approach would provide basis for on-farm evaluation and local/regional validation of evolving practices that deliver enhanced outcomes across the '5 capitals'. This provides the pathway from research outcomes to regional validation in commercial systems to enduring on-farm adoption. Overall, such an approach has multi-region and multi-industry applicability and provides a platform for monitoring and evaluation of program impact including longitudinal and impact case studies.

### **6.1.2 Discussion questions**

**How should the Hubs' role be better defined to deliver more impact for their regions? Are the proposed funding options for the Hubs appropriate?**

**What implementation pathways and governance options are the most appropriate ways of actioning regional plans?**

The national hub network is well placed to enable engagement, communication, co-design and implementation of activities/projects that achieve multiple drought resilience outcomes across regions and sectors. This model brings together regionally based design and input to ensure regional specificity in large programs. Building long term drought resilience requires integrated effort across many disciplines with input spanning research, development, extension, adoption and commercialisation (RDEA&C). Outside of the FDF, programs tend to focus on single sector or domain specific efforts. Through the SA Drought Hub there has been opportunity for greater integration delivering a systems approach spanning RDEA&C and multiple industries and regions. 2024-2028 presents an opportunity to continue to build on the success to date and further utilise the national networks of knowledge brokers and adoption officers to help drive multi-Hub collaboration.

The cross-Hub projects within 2020-2024 period have provided an excellent platform to identify common priorities and co-design projects across the broad membership of the national Hubs network. Importantly, the Hubs have continued to actively co-develop and co-design projects on common priorities. This enables synergies from across multiple regions and industry sectors to be achieved in single projects whilst simultaneously retaining ground-up input through placed based delivery models.

Opportunity also exists for building connection between the Hubs program and the Regional Drought Resilience Planning (RDRP) Program. In SA, the Hub Knowledge Broker has contributed to RDRP plan development steering committees during the current phase. This could potentially be extended to enable linkages between FDF programs to be identified and actioned. Such an approach would enable opportunities to be identified and considered in plan development and implementation. As plans are completed this approach also ensures the Hub membership are familiar with the plan and can help action the targeted outcomes of the plan.

### 6.3.2 Discussion questions

**Should the FDF prioritise natural capital management projects through discrete programs (such as a new Drought Resilience Soils and Landscapes program) or should NRM continue to be embedded throughout most streams of investment? Or both?**

**How can First Nations communities be supported so that their knowledge and practices to care for country can be maintained for the benefit of their communities and land?**

There is likely benefit in having NRM embedded in several investment streams as well as discrete programs focused on NRM. There is clear potential to embed NRM outcomes in projects that are designed to deliver multiple benefits across the 5 capitals. An example of this potential was provided in response to discussion questions from Section 5.1 (above) focused on benchmarking, decision making and implementation. Within South Australia, the Soils and Landscape program has also helped deliver projects that realise a measurable NRM benefit and other enterprise productivity resilience benefits, e.g. improved feedbase establishment and management to maintain feed quality, quantity, responsiveness and ground cover in low rainfall environments.

The SA Hub has established Ngarrindjeri Climate Yarning co-designed activity led by the Ngarrindjeri Aboriginal Corporation with collaboration from Murraylands and Riverland Landscape Board. This approach was highly effective in engagement of Ngarrindjeri community members, together with climate scientists and ecologists in knowledge sharing to enable a greater understanding of cultural knowledge related to drought resilience and climate change. The outputs from this activity will help inform decision making practices for Yarluyar Ruwe - land and water – management in the region with regard to climate change impacts. The potential for expansion within the SA Hub of this approach is being scoped and may have applicability to other regions and First Nations communities. The long-term relationship between the Ngarrindjeri Aboriginal Corporation and the Landscape Board was critical to the development and delivery of the Climate Yarning activity.

### 6.4.2 Discussion questions

**Should the FDF focus on innovation, or broader extension and adoption of tried and tested practices to enable change at scale in Australia? Or both?**

**Should transformational change, and partnerships that facilitate it, be prioritised by the FDF? What incentives or programs would best support transformational change?**

**Or should the FDF continue to also build incremental change – that eventually lead to transformation – and focus on the preconditions (knowledge, skills and support etc) that enable individuals and communities to make transformational changes?**

**What Drought Resilience Innovation Challenges could be targeted in the proposed new innovation pilot program?**

There is benefit in focusing on both innovation and extension and adoption of tried and tested practices to enable change at scale. The near-term benefit is most likely to accrue from adoption of tried and tested practices. A key constraint to greater successful adoption is capacity. Therefore, if this approach is pursued there may need to be resourcing for building capacity of people to work with land managers and communities to aid in successful adoption. If achieved at scale successful adoption of incremental improvement can deliver significant outcomes.

Maintaining innovation drive is also of critical importance for development of optimal future practices for drought resilience. Opportunity exists for FDF to facilitate transformational challenge oriented focused programs. These could be centred on convergence science approaches which integrate knowledge from highly diverse domains for development of practical (& adoptable) solutions on-farm.

An example of a locally identified challenge-oriented need that has potential multi-region applicability is described. Within the SA Hub, the Stakeholder Advisory Groups of Orroroo and Port Augusta Nodes have recognised climate change and drought has the potential to significantly impact on primary production businesses in the low rainfall environments of South Australia. Two examples are Flinders Ranges (livestock production, Port Augusta node) and the northern areas of the Upper North (mixed livestock and cropping, Orroroo Node). Optimal enterprise design in these regions, and analogous regions, throughout Australia for drought resilience is unknown. Moreover, other potential market drivers and opportunities, including greenhouse gas emissions abatement (or carbon sequestration), protection or enhance of natural capital and biodiversity add further complexity to consideration on optimal enterprise design for drought resilience. This example may justify a staged ‘challenge-oriented’ approach to forming, and then locally validating enterprise mix solutions to support wider adoption efforts. Moreover, if successful, such an approach would deliver measurable transformation change.

Drought Resilience Innovation Challenges can be targeted at complex cross-sectoral multi-region multi-faceted drought and climate resilience challenges. Some potential Drought Resilience Innovation Challenges that have multi-sector and multi-region applicability are:

- a) Development of optimal farming systems at an enterprise and regional level taking into account the interactions of drought resilience, natural capital, biodiversity, GHG emissions, labour availability and renewable energy opportunities.
- b) practices, methods and technologies that significantly increase the water holding capacity / volume of soils to better store out of season rainfall for in season crop use. This is particularly important for low rainfall cereal cropping districts.
- c) Mitigating the impacts of heat stress and extremes in weather on many primary production sectors through lowered productivity and product quality. Whilst there are many industry specific efforts seeking to mitigate impacts of heat stress and weather extremes there is likely benefit in cross-sectoral and multi-region approaches.

Innovation challenge programs should incorporate regional validation and adoption of practices such that the real-world benefits of research outputs are achieved. Experience from the Ag Innovation program within the SA Hub has shown that targeted innovation projects which integrate RDEAC outcomes can be highly successful and lead to clear adoption opportunities.

### 6.5.2 Discussion questions

**What enabling activities are essential to the success of the FDF and should be directly funded to support FDF programs?**

Currently, many of the regionally based organisations the SA Drought Hub has established collaborative effort with have some constraints on capacity to deliver projects and services. Funding of enabling activities focused on building and maintaining further regional capability in effective extension and adoption practices will continue to be important to address the identified capacity constraint. Supporting such an extension network through regional partners will help ensure delivery across the FDF and other agricultural and regionally focused programs.

Resourcing for development and implementation of coordinated monitoring, evaluation and learning programs across FDF is important to ensure consistent approach and build comprehensive understanding of the outcomes from FDF programs. This is also important to guide a continuous improvement process in delivery.

Thank you for the opportunity to provide feedback, I would be happy to answer any further queries.

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