

Submission To the Future Drought Fund Consultation – 4 December 2023

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Introduction

I have been employed as the Regional Soil Coordinator for the Southern Queensland and Northern NSW (SQNNNSW) Innovation Hub since April 2022. The Regional Soil Coordinator (RSC) program is funded by the National Landcare Program's Building Landcare Community and Capacity (BLCC) Program.

Whilst being employed in this role I have attended a large number of events, including speaking about the National Soil Strategy and its programs on numerous occasions, as well as many conversations with a large number of primary producers and service providers (such as agronomists and Natural Resource Management (NRM) staff).

The major output that the RSCs are required to produce as part of their Activity Work Plan is a Regional Soil Improvement Plan (essentially a gap analysis for soil capacity in our respective regions).

This feedback is a summary of both my personal observations and feedback that I have received over the last 18 months working for the SQNNNSW Innovation Hub, including from interviews with over 60 people as part of gathering information for the gap analysis.

Whilst my work is primarily related to soil, there is an inextricable link between soil and drought, hence I believe the information below will be of use to the Future Drought Fund.

Feedback on Proposed Investment Streams

6.1 Place Based Action and Partnerships

The FDF Hubs

The place-based action as a feature of the FDF is sound and should be continued. The funding of the Hubs should be continued.

Operational funding including for adoption/outreach officers, funded over the long term, is critical to the effectiveness both the Hubs and achieving the objectives of the FDF and should be maintained if not increased. Comments on training/education for adoption/outreach officers is provided in response to the enabling activities discussion question.

A key weakness of the current Hub structure is the limited funding available to respond to local initiatives/requirements. Noting the proposed feature of 'fewer and longer-term programs that are better integrated,' the provision of greater funding to the Hubs to support regional priorities would both help the achievement of this feature and further empower the Hubs to achieve real outcomes at the regional level.

From a Regional Soil Coordinator perspective, it makes eminent sense for this position to be embedded in a Hub. Without the networking and administrative support provided by the Hub it would be extremely difficult to perform this role and far less effective.

Longitudinal Monitoring

Given both the in-perpetuity nature of the FDF and the significant investment being made, longitudinal studies in the long-term impact of FDF programs is crucial to avoid similar outcomes to

those that occurred with a previous large scale Commonwealth investment into an environmental issue, namely the National Action Plan on Water Quality and Salinity. A review of this program found that:

“Overall, with a few exceptions, projects under the National Action Plan generated few worthwhile salinity mitigation benefits and will have little enduring benefit. This was readily foreseeable given attention to the scientific and economic knowledge of salinity available at the time the program was developed.” (Pannell and Roberts, 2010)

A longitudinal monitoring program will be essential to ensure that a similar assessment of the FDF is not made in the fullness of time.

The FDF endstate

The Draft Drought Resilience Funding Plan details the Vision, Aim and Strategic Objectives of the FDF/next funding cycle. What is unclear from both these statements, and my experience working within a Drought and Innovation Hub, is what does success look like? What does ‘increased resilience to the impacts of drought and climate change’ look like on the ground?

Without having this defined, it will be very difficult to monitor the success of the FDF over time. Hence it is recommended that a statement outlining what success looks like be developed and advertised to all stakeholders by the FDF.

6.2 Information, Skills and Capacity Building

Based on conversations with both landholders and individuals involved in delivering the Farm Business Resilience (FBR) program, this program is seen as highly beneficial. One individual went so far as to say that it is the “best thing they [the Government] have done for a very long time.”

Thus, I read with great concern the comments on the requirement to better offset private benefits of the FBR program, with options including *‘limiting eligibility criteria, prioritising NRM and transformational change efforts, and requiring participant co-contributions.’*

This would be a backwards and short-sighted step that would undermine the effectiveness of the program and likely achieve perverse outcomes, namely leaving farm businesses less resilient in the face of the challenges that they face.

The most effective method to achieve resilience in the face of drought and other challenges is profitable farming enterprises (supported by the mantra that “it is hard to be green if you are in the red”). If participation in the FBR achieves this, then that outcome is actually a public good that benefits local communities, regions and the country as a whole. Additional barriers, such as participant co-contributions, which may result in reduced uptake of the program are short sighted and likely to be counter-productive from a drought and business resilience perspective. Anecdotal observations indicate that many farming businesses are currently under financial and other stresses. Thus, raising the barriers to participate in this excellent program at this time is not in the best interests of achieving the objectives of the FDF.

6.3 Agricultural Landscapes Management

In my role I have had interactions and involvement with a number of Drought Resilient Soils and Landscape (DRSL) programs running in northern NSW and southern QLD. I would support the continuation of this program, largely because it takes a significant amount of time, across a range of seasonal and annual conditions for the effectiveness of new or improved practices to be realised.

The proposed strategy states: *“Opportunities to learn from the existing offering and programs are ongoing, and additional analysis and dissemination of these learnings will strengthen program outcomes”* I am unclear what this means at a local/regional level, and how this achieved.

As part of the Regional Soil Improvement Plan that I am developing, I attempted to conduct a desktop review of the 30 or more Commonwealth funded, soil related Smart Farm Soil Grant projects across the SQNNSW region that have been delivered since 2017. I could barely find a mention of the overwhelming majority of these projects outside of the list of approved projects on the DAWE/DAFF website.

This indicates a structural problem that precludes analysis and dissemination of learnings Australian government funded projects at the local or regional level.

To prevent this from occurring in the future with DRSL or similar programs, the FDF should implement mechanisms that enable learning, analysis and dissemination of lessons at the local and regional level. This could occur in multiple forms, including:

- Easily searchable, central repositories of material produced by FDF projects. Whilst delivery agencies could be tasked with doing this as part of their projects, the ability to keep this material available once a project is complete is dependent upon too many external factors and as such is unreliable.
- The requirement for projects to hold a lesson learned event/workshops/webinar/seminar at the conclusion of the project with invitations to local and regional stakeholders and interested parties.
- The requirement for DRSL projects to work with the Regional Soil Coordinator in their respective regions to assist in the learning, analysis and dissemination of lessons.

NRM is at the core, if not the core, of drought resilience. Therefore, discrete NRM programs are definitely required as well as there being a requirement for NRM to be embedded where appropriate within other investment streams.

A key observation is the requirement to better integrate NRM with production agriculture. Quite often there appears to be a divergence between these foci (e.g. between RDCs and NRM groups) whereas for a resilient and sustainable landscape and agriculture, both NRM and production must be integrated.

The integration of these foci is explicitly stated in the first two strategic objectives of the Draft Drought Resilience Funding Plan, yet outside of grazing, there appears to be limited focus on integration in FDF programs.

6.4 Innovation & Transformation

Innovation or Extension and Adoption

The question is posed whether the FDF should focus on innovation or broader extension and adoption of tried and tested practices.

Whilst there will always be more to learn, and more to know, if all the current knowledge of drought resilient practices were already implemented, then Australia's preparedness for, and resilience to, drought would be in a much better position now than it currently is. This leads to the conclusion that extension and adoption should be the priority rather than innovation.

It also highlights the importance of extension and adoption in identifying, defining and understanding the barriers to adoption of drought resilient practices and developing appropriate strategies to support adoption – where a practice is appropriate.

Transformational Change

On transformational change, it is unclear in practical terms what this looks like from a drought resilience perspective. Terms such as transformational change could also be considered threatening to many landholders and communities given its implicit criticism of current practice/s. As such it is assessed as more effective to focus on the building of incremental change via setting preconditions rather than focusing on transformational change itself within FDF programs.

Agriculture, rural and regional Australia, drought and climate adaption etc, all nest within our current economic system. As has been identified during many interviews I have completed as part of the Regional Soil Improvement Plan information gathering, the current economic system is what drives so much of the decision making on farm and leads to actions/decision which are required for short term profitability at the expense of longer-term sustainability, including drought resilience. As a practical example, with recent drops in cattle prices I have heard from officers in Queensland NRM groups a distinct loss of interest in installing infrastructure, such as off waterway watering points that would support drought resilience, due to the financial pressure graziers are under.

Arguably the most important requirement for transformational change is within the economic system within which agriculture exists. If that system is not reformed such that it facilitates profitable farming enterprises and long-term sustainability, then the likelihood of Australian agriculture being able to transform itself into a sustainable and drought/climate resilient sector over the long term is vanishingly small.

Whilst it may be beyond the scope of the FDF to address this fundamental challenge, it would be useful for the FDF to commission research into the economic drivers of on-farm decision making and the limitations that these drivers place on building drought resilience.

Drought Resilience Innovation Challenge

Virtually all FDF and other climate related activities funded by the Government focus on either addressing greenhouse gas emissions or resilience/adaptation to a changing climate. There seems to be little focus on addressing what may be considered a primary cause of drought and climate variability in Australian landscapes. And that is the changes to the small water cycle resulting from changes to land management (largely due to land clearance) since European settlement.

In short we have largely broken the small water cycle as described by Mulvey and Mulvey (2023). Australia is fortunate to have the Rabbit Proof Fence in southwestern Western Australia that provides a natural experiment highlighting the negative impact upon the small water cycle resulting from extensive land clearance.

Anecdotally, it is common to hear farmers speak of areas which regularly tend to miss out on rain and others that don't. Now whilst some of this will be due to other factors, a common thread amongst many of these examples is a correlation between well managed landscapes with greater vegetative cover and increased rainfall.

To exploit this potential opportunity, a 'Small Water Cycle Innovation Challenge' is proposed for the new pilot innovation program. This challenge could include:

- Documenting local and regional evidence of areas where the small water cycle is functioning effectively with the aim of linking local rainfall patterns and land management.

- Establishing demonstration regions where projects to restore the small water cycle are implemented and monitoring conducted to provide a longer-term evidence base of the feasibility of restoring the small water cycle and the practices that facilitate this restoration.

Restoring the small water cycle is critically important if regions are too pro-actively reduce local climate risks rather than just respond to droughts and other climatic extremes.

6.5 Enabling Activities

The FDF Investment Strategy rightly identifies enabling activities as the backbone of all investments. Comments on essential enabling activities are provided:

Funding continuity of programs/organisations.

It is well established that trust is a critical requirement in effective extension and adoption program in agriculture. Historically changes to, or cancellations of Government programs has contributed to a trust deficit between landholders, rural communities and Government. It is thus critical for the success of the FDF that long term commitments are made to fund programs such as the FDF Hubs. This enables both the Hubs (and other programs) to plan and implement activities with certainty. Also, and crucially, it enables the development of trust between the employee's of the Hub, many of which are located in regional areas, and the communities they serve. Ultimately these relationships will be a major contributory factor to the effectiveness of FDF activities and programs.

People capacity – Extension and Adoption

Historically State Governments and then Universities provided a significant amount of training and education in extension and adoption. Since the significant drawdown in State Government delivered extension there has seen a marked and systemic reduction in the level of education and training in extension being delivered. Whilst there are private providers and courses available via universities (e.g. University of Melbourne micro-credential courses), the current delivery of education in extension can be described as ad hoc. The net result is that many, if not the majority, of graduates from agricultural or environmental degrees have limited or no education in extension and adoption theory and practice.

This is a critical, structural deficiency. The funding principles for the FDF include the promotion of 'transformational change.' This only further emphasises the importance of extension as a fundamental enabling activity to support the objectives of the FDF.

Steps that the FDF could take to address the deficiency in extension capacity, in order to improve the prospects of success for FDF projects could include:

- The adoption of an Extension Model of Practice, such as developed by Williams et al. (2021), to guide the design and implementation of FDF projects that include practice change objectives.
- The identification and recognition of extension training/education courses/packages that are deemed suitable for providing individuals involved in delivering FDF programs with appropriate skills and knowledge.
- The funding of extension training/education training for extension/adoption employed either directly through the FDF Hubs or FDF projects that involved extension.
- Activity Work Plans for FDF funded projects include the requirement for extension related activities to be delivered by individuals with either education/training in extension or experience in delivering extension activities. This could drive an increase in extension related training/education of staff by project delivery agencies with the ultimate outcome being more successful programs.

Project Administration

I am on the Steering Committee for several DRSL projects. One of those projects requested a relatively minor change to its Activity Work Plan. It took five months for this to be approved even with regular contact between the project manager and the FDF. For a two-year project, a five month delay in gaining approval for a change is clearly a significant delay, with potential negative implications for achieving program outcomes.

Whilst it is unclear exactly what caused this delay, it is recommended that the FDF either review its staffing levels or administrative processes to ensure a timelier handling of routine administrative requests to support project delivery agencies in achieving the objectives of their projects.

References

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- WILLIAMS, A., JAMES, J. & PRICHARD, P. 2021. Developing an Extension Model of Practice to guide and empower extension practitioners. *Rural Extension and Innovation Systems Journal*, 17, 10-20.