

Future Drought Fund Investment Strategy 2024 – 2028

Response to the Consultation Draft

Ms Lu Hogan and Professor Lewis Kahn, University of New England (UNE)

6 December 2023

This submission is made by Ms Lu Hogan and Professor Lewis Kahn from the University of New England (UNE). The views represented in this document are personal and have developed as a result of our following engagement with the Future Drought Fund:

1. Leaders of the unsuccessful UNE bid to lead the SQNNSW Drought Resilience Adoption and Innovation Hub (Hub).
2. Recipients of additional funding from FDF to operate a dedicated Node at Armidale (UNE), under the management of the University of Southern Queensland (USQ), the successful tenderers for the leadership of the SQNNSW Hub.
3. Manager of the Armidale Node of the SQNNSW Hub (Lu Hogan)
4. Project Leader – FDF Innovation Grant – Decide and Thrive (Lewis Kahn)
5. Project Leader – FDF Drought Resilient Soils and Landscapes Program – Drought Resilient Pasture Landscapes Scaled Through Communities of Practice (Lewis Kahn)
6. Project Leader – FDF Innovation Grant – Empowering Generation Z (Lu Hogan)
7. Project Team – FDF Regional Drought Resilience Plan Program – Pilot project with Gwydir and Inverell Shire Councils (Lu Hogan and Lewis Kahn)
8. Project Leader – Agricultural Innovation Hubs Program – Development of Ag360 Phone Apps (Lu Hogan)
9. Development of 2 submissions to the recent Productivity Commission review of the Future Drought Fund (Lu Hogan and Lewis Kahn)

Executive Summary

The next iteration of the Future Drought Fund (FDF) Investment Strategy offers the opportunity to identify and build upon successful programs, and to refocus elements that demonstrated clear potential.

The first step is to more clearly define the objectives of the FDF, as well as to identify the individual programs and projects that have assisted in achieving those overall goals. In addition, there would be great benefit in instituting clearly measurable outputs and outcomes.

There are a number of successful projects and programs that could be rolled out nationally (for example the *Farming Family Reboot*) and others that offer the potential, with the setting of clear outcome expectations, to drive the transformational change (for example, through the Innovation Hubs) needed as Australia grapples with increasing climate variability.

Integration between the various supported activities of the FDF, within a place-based approach to ensure local implementation, will be key.

5.1 Discussion questions – proposed key features of new programs

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

As noted in our submissions to the Productivity Commission's review of the Future Drought Fund, clarity is needed about how individual projects and programs achieve the overall goals of the Future Drought Fund (FDF). This funding plan is a foundational opportunity to more clearly define the objectives of the FDF, and institute clearly measurable outputs and outcomes for all activities, supported by a practical monitoring and evaluation program.

We support the proposed key features of the new FDF programs, as outlined in the draft investment strategy.

With regard to building momentum and learning from programs with demonstrated impact specifically, we propose that the training and wellbeing program titled *Farming Family Reboot* and the software *Ag360* and associated coaching program (titled: *Drought Resilient Pasture Landscapes Scaled Through Communities Of Practice*), both developed by UNE, and well tested in the first funding round, are suitable for national rollout. Both build trust, self-confidence and social support that are key for enduring impact from the knowledge and skills gained through the project. There are also public benefits from the outcomes of these projects. Project frameworks and content are developed that will fast track national delivery through a "train the trainer" approach integrated with Hubs.

2) Which current FDF programs should be retained?

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

As per our submissions to the Productivity Commission's review of the Future Drought Fund, we see ongoing value in a variety of programs.

- The impact of Innovation Hubs could be built upon through better clarification of their role and better integration with other FDF programs and projects on a regional basis.
- Supporting agricultural innovation is an important facet of the Future Drought Fund, and there remains a role in fostering collaboration, and identifying (and funding) current gaps, rather than funding programs/activities that compete for the same target audience with other FDF programs, existing state government or RDC programs. An innovation challenge would be a useful trial but other avenues for identifying and funding high priority projects should also be retained.
- The Climate Services for Agriculture Program, now known as My Climate View, provides important information for industry on what the long term (decadal) impacts of climate change will be on key climate parameters. As such it is an important source of information for long term strategic planning. This program should be retained, but it is important that it does not extend its scope to compete with other (and well-established and well-received) short term weather forecasting services also supported by the FDF. The BoM does not have the agricultural expertise to provide integrated agricultural decision-making tools; Ag360 (delivered through the Armidale Node) provides farmers with a short term (6 month) weather outlook (curated from BoM), which is integrated with individual farm information to provide predictions and decision-making tools for the coming seasons. The support provided by the FDF has

resulted in the growth of Ag360 to more than 500 users nationwide, and there is a significant opportunity to utilise the complementary nature of the two services in future training and extension.

- It is difficult to see how DR.SAT could be integrated with My Climate View in a cost effective and useful way.
- The programs relating to Better Prepared Communities (Drought Resilience Leaders, Networks to Build Drought Resilience, Helping Regional Communities Prepare for Drought Initiative) would be better integrated with implementation of the Regional Drought Resilience Plans and other integrated training programs such as Farming Family Reboot and Farm Business Resilience Program, which take a triple bottom line approach to building drought and climate resilience. These Regional Drought Resilience Plans need explicit pathways to funding to enable priority actions.
- We support the continuation of the Soils and Landscapes Program which has been successful in delivering improved natural capital outcomes. The project, *Drought Resilient Pasture Landscapes Scaled Through Communities Of Practice* has achieved its outcomes, by developing a coaching program that equips livestock producers with skills and knowledge to improve grazing management, retain ground cover, and improve soil and water health. The Ag360 tool has been integral to this achievement, by incorporating climate forecasts into feed budgets, and provides an excellent example of how private good outcomes (better feed budgeting and animal performance) can deliver public good outcomes (improved groundcover, water quality and reduced erosion). The Ag360 coaching program and software are now ready for development into a national rollout that can be structured to meet the public good requirements of the FDF.

6.1 Discussion questions – proposed investment streams

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

Investment stream 6.1 discusses the importance of place-based action and partnerships. The outcomes from the dedicated Armidale Node of the SQNNSW Innovation Hub are an excellent example of what can be delivered working at a local level with partners and a known budget to address priorities and problems relevant to the local community and industries.

Figure 1: illustrates the flow of high level FDF objectives to SQNNSW Innovation Hub objectives to delivery of onground priorities developed with partners and the local community in northern NSW by the Armidale Node.

Figure 2: summarises the activities of the Armidale Node between February 2022 and November 2023. A total of 80 training, capacity building and engagement events delivered by the Node or in collaboration with partners to 2,200 participants. Evaluation data from each event has documented participant engagement with the activity, intentions to change practice and ensured continuous improvement of future events. Activities at the Armidale Node have also ensured integration and collaboration with other FDF funded projects in the region, leveraging opportunity and outcomes for industry.

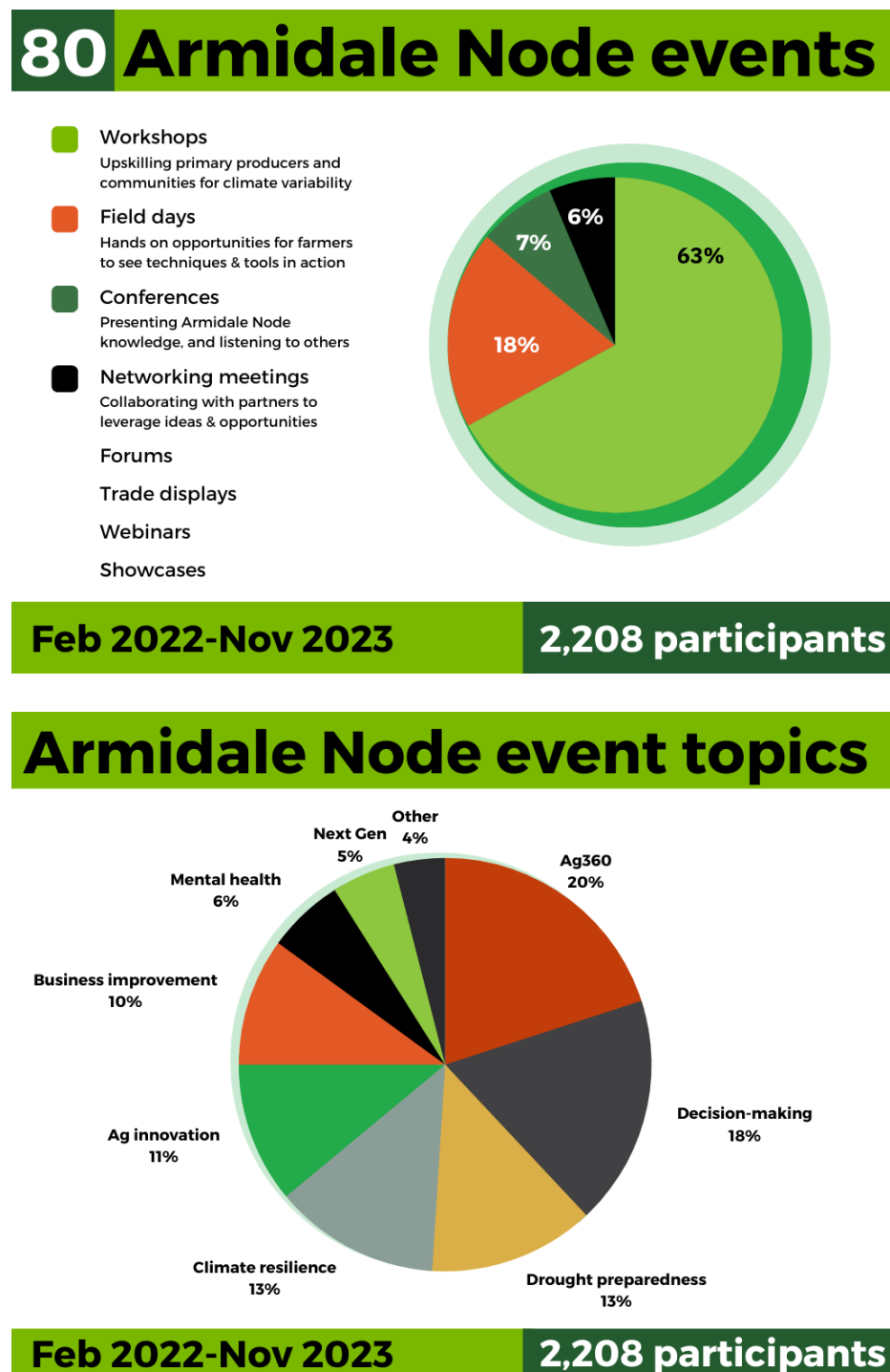
The Armidale Node has worked closely with its partners, in particular GLENRAC Inc, Rural Aid, Bush Agribusiness, Central West Farming Systems, Meridian Agriculture, and RCS and

provided funding to partners to deliver training, hands on producer demonstration activities, and extension events of high priority to farmers across the region.

Figure 1:



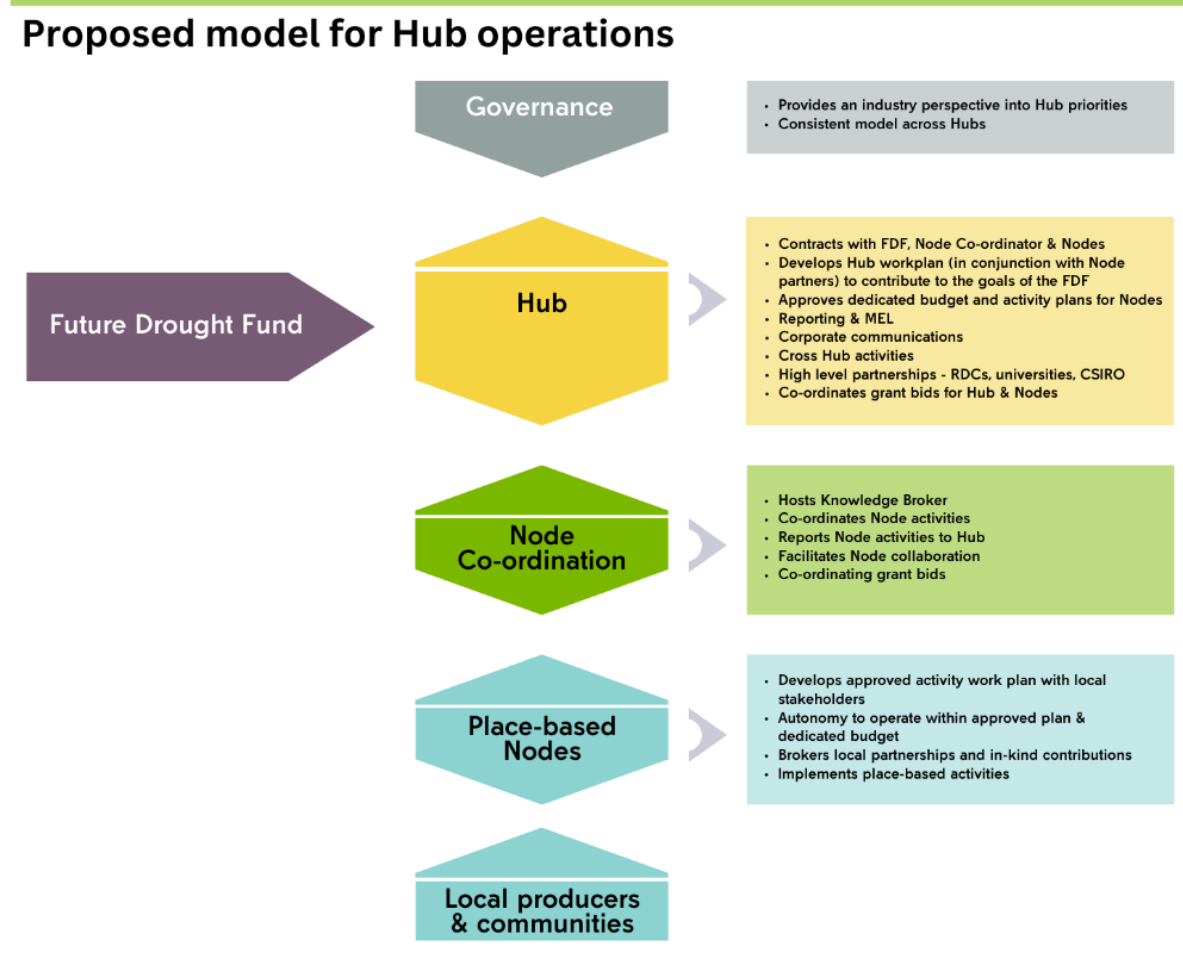
Figure 2:



This approach of providing the Node with a dedicated budget and autonomy to operate under a Hub-approved Activity Workplan, has been effective in ensuring the Node and its partners can both plan strategically (for example, the Farming Family Reboot) while also being responsive to immediate needs (for example, supporting early weaning workshops during the current – late 2023 – dry season).

This model (Figure 3) is proposed for all Hubs in the next funding round, to grow an even greater level of place-based activity. It provides a clear “allocation of effort” within the Hubs. Hubs would be responsible for high level partnerships, reporting, co-ordination with other cross Hub projects, monitoring and evaluation and grant bids. Nodes would be responsible for (Hub-endorsed) development of place-based, local strategic initiatives, local partnerships and practical trials, as well as responsive training activities, dependent on seasonal conditions, within a guaranteed budget and an agreed scope-of-work.

Figure 3:



6.2 Discussion questions – information, skills and capacity building

6) Should a future iteration of the FBR program be more focussed on specific learning areas or target particular cohorts of farmers (e.g., young farmers, remotely located farmers, smaller landholders and/or those operating on marginal land)?

We do not support limiting the FBR program to specific areas or cohorts of farmers. The program should be available to any farmer that has the interest and commitment to participate in an extensive coaching program to build business resilience.

As we have heard from our on-ground partners, what often stymies adaptation “on the ground” is a lack of confidence on the part of landholders and their staff. The opportunities provided to farmers and farm workers via the FBR to increase skills in strategic business management, farm risk management and decision-making, natural resource management, and personal and social resilience is an important pathway to building confidence to try new practices, techniques and technologies.

7) How should public and private good be balanced in a future iteration of the FBR program? Should the program require farmer co-contributions?

As we have noted in previous submissions to the Productivity Commission, there is a need to be realistic about the interweaving of private and public benefits. They are very often so tightly interwoven that it isn't possible to separate them. Put bluntly, farms that perform better financially and environmentally will deliver public benefits – both locally (employment, spending, natural capital) and nationally (annual tax or levy takes). An element of private good is always required in a public good program to provide sufficient incentive for farmers to participate. To what extent does the FDF need to be confident that the logic of farms in better shape is the cause of public good?

The Farming Family Reboot workshop developed by the Armidale Node of the SQNNNSW Innovation Hub is an excellent example of an integrated program that delivers on economic, environmental and social outcomes with both private and public good elements. Participants in the 6-day program gain skills in goal setting, decision making, strategy development, business management, grazing management, the use of Ag360 to incorporate climate forecasts into farming and natural capital decisions on farm; and strategies to care for their mental and physical wellbeing. The Farming Family Reboot video (<https://vimeo.com/838565054>) developed for the Science Practice Forum provides multiple testimonials of the value and impact of this program. Whilst participating farmers receive private benefits in terms of future business performance, there are also public benefits in terms of improved natural capital, better mental health and stronger regional communities.

There are opportunities to position Farming Family Reboot as an introductory course that showcases the opportunities and benefits, from participating in the longer running, intensive one-on-one coaching program offered by the FBR program. It would seem rational to provide the introductory Farming Family Reboot program free to participants nationally and expect a “user contribution” for participation in the FBR which has a greater proportion of one-on-one consultation and private benefit.

8) Should the FDF provide training on how best to use and interpret information from existing climate tools, including but not limited to 'My Climate View'? If so, who could benefit most from such training?

We strongly support the concept of providing training and skills development in the use of existing climate tools, and certainly not limited to My Climate View. We have proposed elsewhere in this submission a coaching program incorporating the use of [Ag360.com.au](https://www.ag360.com.au). These two tools, both supported by the FDF, are complementary and serve different but important purposes for the user. They highlight the difference between a long-term climate outlook and a shorter-term weather forecast.

My Climate View provides a long-term (decadal) view of the impact of climate change on a range of climatic variables. As such, My Climate View is useful for developing a long-term strategy for the business (eg *Will I be able to grow crops here in 20 years' time? How many animals will I be able to carry on this property in 20 years' time without degrading the soils and biodiversity?*).

By contrast, Ag360 provides a shorter-term weather outlook, on a daily time step for the next 6 months, customised to the farm location. The forecast is updated daily with new information from BoM. This shorter-term weather forecast is combined with farm management data to predict how much pasture will be available over the next 6 months, how well animals will grow and what health risks they might experience. It is a tactical (6-month outlook tool) that is highly valued for improving preparedness for drought and climate variability generally.

Ag360 provides functionality and services on a national basis and would be well suited to a national program to improve farmer use of a weather forecasts for drought preparedness and planning, thereby building resilience from all three perspectives – economic, social and environmental. A national training program could be implemented to upskill node managers and adoption officers, so they can in turn support farmers adopting the tool. The national program could also include training on use of the strategic information provided by My Climate View.

Ag360 has and can also be integrated into other FDF projects. Examples where this has already occurred include the Farming Family Reboot program; the Soils and Landscapes project – *Drought Resilient Pasture Landscapes Scaled Through Communities Of Practice*; the *Empowering Gen Z* project and the *Overcoming Knowledge Gaps* project.

9) Should the long-term goal for CSA be providing adaptation information to better support practice change in response to climate projections?

No, BoM does not have the expertise or remit to provide agricultural industries with adaptation information. That task is better undertaken at the regional level by people with specific domain knowledge and expertise. And our submission regarding Ag360 indicates this already exists and further investment into CSA for this purpose would be in direct conflict with FDF aspirations to reduce duplication. However, there is an excellent opportunity for extension of My Climate View within Ag360 training days, utilising My Climate View to provide the “big picture” and Ag360 to improve management decisions on the landholder's property within a more immediate timeframe.

BoM's role is to provide high quality climate and weather projection data that can be used and interpreted by others in industry (such as Ag360) as required and in the correct format. There are improvements that could be made through investment with BoM to provide weather data of higher quality for all users. Having analysed BoM performance at 20 locations around the country over a number of years, our group at UNE would willingly contribute to nominating areas for improvement.

In addition, we would like to note the importance of language, when extending any tool to landholders and other rural and regional stakeholders. The goal, as we see it, is *managing climate variability*. The cause of that variability does not necessarily need to be explicitly outlined in order to secure a change in management practices, as this can often be achieved by asking about their local experiences with the severity of the change (bigger floods, faster on-set of drought, bush fire extent), and if there has been a shortening of the period between such extreme events.

6.3 Discussion questions – agricultural landscapes management

10) 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?

Both approaches have merit and warrant continued investment. Each approach will attract different cohorts of producers depending on their interests. Some producers will be attracted to participating in projects that are primarily about managing natural capital, others will be more interested in addressing natural capital outcomes as part of a whole of business approach.

6.4 Discussion questions – innovation and transformation

12) 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?

The national agenda needs to focus on a pipeline of innovation that starts with blue sky research and progresses through applied research and development and then ultimately to extension and adoption of proven technology. Without continuous investment throughout the entire pipeline, the flow of new innovation available to industry eventually dries up.

For this reason, the FDF should take a portfolio approach to balancing their investments between innovation, development of new technologies, and adoption of tried and test practices.

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

We would recommend that Drought Resilience Innovation Challenge focuses on solving the complex systems-based issues faced by Australian farmers. Climate change and associated

greater variability is changing the risk profile of farming through changes to rainfall, temperature, evapotranspiration and the frequency and extent of extreme events. The risk of experiencing an extremely low income has already doubled as a result of the climate change already experienced.

There is an urgent need for research that develops and optimises farming systems that are resilient and profitable in the face of this risk and variation. And to explore alternative on-farm income streams that will develop through nature repair and carbon markets. These are complex decisions which reach into the economic, social and environmental spheres as well as long term family structural arrangements. This is the highest priority for an innovation challenge.

6.5 Discussion questions – enabling activities

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

Success will be greatly enhanced with clear program logic for the FDF which aligns all programs of investment and enables reporting of outcomes in a consolidated way.

Other keys to success include:

- ensuring greater collaboration and integration between FDF programs within a region via the place-based Nodes of each Hub
- a high quality and easy to use Knowledge Management system that informs all players of other projects, activities, IP and resources developed through the FDF
- keeping overhead expenditure (at the FDF, Hubs and project level) and arduous administration processes to a minimum.