



Mulloon Institute
For environment, farming and society

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To Whom it may concern,

RE: Future Drought Fund Productivity Commission Submission

The Mulloon Institute (TMI) welcomes the inquiry into Part 3 of the *Future Drought Fund Act 2019*. We acknowledge the review will include an assessment of the:

- Drought Resilience Funding Plan 2020 to 2024
- programs, arrangements and grants made under Part 3 of the Act
- processes and systems to administer, govern and evaluate the programs, arrangements and grants.

In considering the content of this submission TMI draws on the experience of applying for grants through the Futures Drought Fund programs both as a lead organisation and as part of consortia. A short introduction to TMI and our work is presented below. Consideration is given to the questions posed by the inquiry and comments are provided around our experience with the opportunities and limitations of the FDF processes.

The Mulloon Institute (TMI) is Australia's premier scientific organisation in Landscape Rehydration and regeneration. Its work focuses on capturing and retaining water in the landscape, through identifying and restoring hydrological processes using physical interventions and regenerative land management approaches. As a not-for-profit organisation, TMI carries out landscape repair and rehydration of catchments, by sharing regenerative land management practices, monitoring the outcomes and educating farmers and land managers on these practices. TMI has its own commercial farm comprising 2,500 hectares that acts as a demonstrator, located on the southern tablelands of NSW near Bungendore, around 40 minutes east of Canberra.

Landscape Rehydration projects, also known as 'natural infrastructure', 'conservation earthworks' and 'nature-based solutions,' can transform vast areas in just a few years. These projects use soil, rocks, logs, vegetation and adapted management to slow the flow of water and repair 'landscape function': the patterns and processes by which a landscape retains and uses its vital resources as a biophysical system. Compelling scientific evidence is building global momentum for these solutions. Their multiple benefits truly stack up: they mitigate flood risk, foster drought tolerance, sequester carbon, control erosion, drive habitat recovery and filter pollutants from our drinking water. They are low-cost, low-tech and have negligible greenhouse gas emissions. They can also be scaled from a single erosion gully to the landscapes of an entire catchment.

The Productivity Commission Questions

- Are the funding principles, vision, aim, strategic priorities, and objectives of the Funding Plan (attachment B) appropriate and effective?

These are appropriate and potentially effective.

Drought resilience is unlikely to be achieved just through individual measures or technologies or through reactive strategies (for example drought feedlots). A more holistic approach is required that considers the integration of various approaches on farms and across communities.

Drought resilience will be achieved through repairing and restoring our landscape function (particularly hydrological function) that has been negatively impacted by years of clearing and industrial agriculture. Like pulling the plug from a bath tub our floodplains have been drained, reducing our agricultural productivity and drying out our freshwater wetlands.

Repairing our landscape function is critical to building drought resilience and adapting to climate change. It is only water and vegetation in our landscapes that can assist in managing the increased energy coming from the sun as our atmosphere warms. Like we sweat when it is hot to avoid an increase in our core temperature, our planet also sweats via evapotranspiration. Water and plants in our landscapes are essential to adaptation to the impacts of climate change.

Combining repaired and restored functioning landscapes with farm management that promotes the building of natural capital on farm is a pathway to resilience to drought, bushfire and flood and resilience to climate change. Combining these approaches will involve social change and farmers and stakeholders across the agricultural sector will require support and capacity building. Our regulations will also need to change to support landscape scale repair and restoration. The benefits are many and can contribute to building drought resilient communities.

Direct experience from the catchment scale landscape rehydration project, the Mulloon Rehydration Initiative has revealed how water banked in the floodplain can contribute to drought resilience. At the end of 2018 with virtually no water coming into the catchment for over nine months due to drought, water was still flowing through the stream gauge at the bottom end of the Home Farm floodplain pocket, demonstrating the value of a rehydrated landscape to drought resilience. Anecdotal evidence across the southern tablelands post the 2019/2020 bushfires revealed that where intact or restored valley floors were present wild fire fronts were slowed or stalled by hydrated areas. Healthy functioning landscapes, supporting natural infrastructure can also hold water higher in the landscape during major flood events and while that water will find its way downstream delays and flattening of the flood hydrograph can certainly buy communities time for evacuation.

Consideration could also be given to capturing the drivers of adoption for drought resilient practices including access to natural capital markets. Building natural capital is one of the funds 3 strategic objectives.

improve the natural capital of agricultural landscapes for better environmental outcomes

In the 2020 Drought Resilient Soils and Landscapes Grants Program a number of consortia that TMI were involved in had elements of access to natural capital in their bids but none of these to our knowledge were funded. TMI absolutely appreciates the challenge and need to focus on actions for drought resilience on farm that can be scaled and adopted by farmers but some consideration of the key drivers would be of value.

- Do the programs, arrangements and grants focus on the right priorities to support drought resilience? If not, what should the programs, arrangements and grants focus on and why?

Overall, in general terms, yes. Further investigation of the merits of landscape rehydration as a landscape repair and restoration approach to drought resilience is warranted. Consideration of how actions to deliver drought resilience can also deliver co-benefits in terms of natural capital including biodiversity would also be of value. A focus on scale and adoption is also important for the fund. Currently the 8 drought hubs have budgets allocated on a regional basis. The opportunity for the FDF to fund a truly national scale project with major impact on drought resilience is limited by this funding allocation approach.

- Should the scope of the Fund be broadened to support resilience to climate change? Why or why not?

TMI acknowledges that the Fund's vision statement already acknowledges increased resilience to climate change.

The Fund's vision is an innovative and profitable farming sector, a sustainable natural environment and adaptable rural, regional and remote communities — all with increased resilience to the impacts of drought and climate change.

The scope of the fund should be broadened to support resilience to climate change. Funding should be targeted at projects that achieve both drought resilience and adaptation to climate change. This would potentially drive a more holistic view of farm management and enable a focus on landscape scale repair (including landscape rehydration) that addresses both drought resilience and climate change.

- How could the Fund enhance engagement with and benefits for Aboriginal and Torres Strait Islander people?

Ideally the hubs established under the fund would support reference committees that have as part of their terms of reference a process for consultation with Aboriginal and Torres Strait Islander people and representative groups so the Aboriginal and Torres Strait Islander people could guide how best their involvement could be structured.

- What opportunities are there to enhance collaboration in planning and delivering drought resilience initiatives, including with state and territory governments?

There are major opportunities for collaboration, ideally through the 8 drought hubs. Currently some hubs seem to work with a small number of State Government organisations and agencies. A broader remit to work collaboratively with State Governments and leverage or match State Government funding could amplify positive impacts of projects.

The Experience

In preparing this submission TMI has reflected on our own and the experience of others in the NRM space with the drought hubs and FDF funding. We offer the following comments.

- Early on in the FDF there appeared to be little strategic direction to the allocation of the funding, it was not clear that the projects funded matched the vision, aim, strategic priorities and objectives of the Fund.
- Drought hubs are not always easy to access and relevant staff are hard to contact and sometimes have other roles.

- Drought hubs are now competing directly with external consortia for FDF funds, it is unclear how this will work in practice, some external groups perceive that any grant bid will have to go through the hubs or be sanctioned by the hubs to receive funding.
- Drought hub consortia can be limited to State Government organisations or agencies who are already funded by the government – leading to a sense of frustration from external parties.
- Drought hubs all bar the southern Western Australia hub are led by Universities and this gives an impression that provides priority access to FDF funds for the Universities.
- The drought hubs can be perceived as continuing the status quo in terms of research and farming practices and are perceived as being unlikely to back truly innovative approaches that may divert funds away from traditional research programs.
- The division of the country into 8 separate hubs limits the opportunity to put forward a truly national project as funds are allocated via hubs or hub regions.
- The timing of the bids and the programs need review.
 - Lead times for bringing serious consortia together need to be longer.
 - 12 months is not enough time to deliver a project with real farmers on commercial properties that face seasonal changes and constraints on time – project timelines need to be a minimum of two years with reporting built in.
 - Timing a grant application to open in mid-December and be due during the second week of January means overworked teams do not all get to take a break at Christmas.

Yours sincerely,

Carolyn Hall
CEO Managing Director GAICD
The Mulloon Institute