

# 2023

## TNQ Hub Response to FDF Draft Investment Strategy 2024-2028



**Tropical North Queensland  
Drought Resilience Adoption  
and Innovation Hub**

**6 December 2023**

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**Attn:** Louise Palfreyman

**Respondent:** Tropical North Queensland Drought Resilience Adoption and Innovation Hub (TNQ Hub)

Dear Louise,

Thank you for the opportunity to make a submission to DAFF on the draft Drought Resilience Funding Plan and the draft Investment Strategy.

The TNQ Hub is led by James Cook University out of the Ideas Lab on the Nguma-bada Campus in Cairns. Working in a 'hub and spoke' model, the TNQ Hub is partnered closely with six natural resource management (NRM) groups (Nodes) across Tropical North Queensland (TNQ) to deliver drought resilience activities across the region. The Drought Resilience Research and Adoption Program invests in collaborative research, development, extension, adoption, and commercialization activities. These activities help land managers and Tropical North Queensland communities to become more prepared for, and resilient to, future droughts.

The TNQ Hub works alongside its Node Members to enhance the knowledge and capacity of land managers to better understand the importance of being better prepared and more resilient to changing climates. Resilience building is entrenched in each Node NRM and the TNQ Hub continues to collaborate regionally to identify opportunities to enhance the public good by building on and sharing knowledge and expertise with the agricultural sector, the agricultural landscape, and communities across the TNQ region.

Through a close national community of practice, the eight Resilience, Adoption and Innovation Hubs have established a strong collaboration and knowledge sharing culture and collectively engage in solutions to support the Future Drought Fund's (FDF) aims of protecting Australian agriculture and regional communities from the effects of a changing climate. In addition, the TNQ Hub's interactions with the Department of Agriculture, Fisheries and Forestry (AFF) Future Drought Fund teams have been very positive and supportive.

The TNQ Hub views the FDF as a critical mechanism towards increasing the preparedness of agricultural land managers, communities, and regions to build resilience to future climate variability challenges. The TNQ Hub, since its establishment, has formed networks of First Nations peoples, industry, government and producers and their communities to collaborate and identify opportunities to address gaps by leveraging existing delivery capabilities and look at ways to scale across TNQ, but also the national landscape through the national Hub network. We believe that the Hubs are a success of the foundational investment, contributing to place-based and national outcomes.

Thank you for your consideration of this submission,

A handwritten signature in blue ink, appearing to read 'David Phelps'.

**Professor David Phelps**

Director, Tropical North Queensland Drought Resilience Adoption and Innovation Hub

## Contents

Introduction .....	4
The urgent case for regional resilience .....	6
The importance of a place-based approach .....	8
Enhancing resilience through validated experience .....	9
The triple bottom line and three key capitals to build regional resilience .....	10
Response to Section 5: Proposed key features of new programs .....	12
1) Does the draft funding plan provide an appropriate framework to guide spending on drought resilience initiatives? .....	12
2) Which current FDF programs should be retained? .....	12
3) Which current FDF programs could be integrated with existing programs or built upon to drive efficiency or to maximise impact? .....	13
Response to Section 6: Proposed investment streams.....	15
6.1 Place-based action partnerships .....	15
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? .....	15
5) What implementation pathways and governance options are the most appropriate ways of actioning regional plans? .....	17
6.2 Information, skills, and capacity building.....	18
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)? .....	18
7) How should public and private good be balanced in a future iteration of the FBR program? Should the program require farmer co-contributions? .....	19
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? .....	20
9) Should the long-term goal for CSA be providing adaptation information to better support practice change in response to climate projections? .....	20
6.3 Agricultural landscapes and management.....	21
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? .....	21
11) How can First Nations communities be supported so that their knowledge and practices to care for country can maintained for the benefit of their communities and land? .....	22
6.4 Innovation and transformation.....	23
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? .....	23
13) Should transformational change, and partnerships that facilitate it, be prioritised by the FDF? What incentives or programs would best support transformational change? .....	24

14) What Drought Resilience Innovation Challenges could be targeted in the proposed new innovation pilot program? .....	25
6.5 Enabling activities.....	26
15) What enabling activities are essential to the success of the FDF and should be directly funded to support FDF programs? .....	26
Appendix A: Discussion question list answers .....	27

## Introduction

The Future Drought Funds Strategic Investment Plan has a clear focus on building resilience in regional and remote towns and communities. It is important to support communities through improved leadership, support mechanisms, and ensuring benefits flow back to the town and its people, rather than just to capital cities or to corporations or multinationals. Communities in drought-affected regions need to be supported with data and resources to help them achieve their goals for example through programs like the Australian Rural Leadership Foundation program, which bridges the town-country divide to build resilience within regions.

We need to look at a 12-year horizon to understand where we want to be in terms of resilience. We need to adopt communities at the heart of the entire Future Drought Fund's (FDF) program to build whole interrelated socio-economic systems thinking around what it is that we are here to actually achieve.

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*We want communities like Julia Creek to have had the opportunity to build their resilience through improved community leadership and support mechanisms for their community groups.*

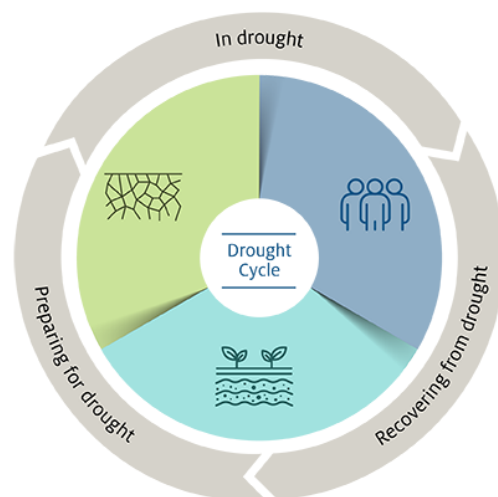
*For them to have the opportunity to actually find and advocate for their own solutions. So, the resilience that's being built on-farm within the district of Julia Creek, for instance, the benefits flow to Julia Creek, and then the whole town becomes more resilient.*

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Typically, when drought hits, supporting organisations will measure the impact at farm level for example, stock losses, feed availability and pasture condition etc. By contrast, little attention is paid to the towns and communities. For the most part towns and communities can serve themselves. However, they need to be armed with the right data to present to politicians etc., for example central western Queensland post drought data, can empower communities to think creatively about transformation. To do so, having leaders from within a region working together in rural leadership programs to create bonds of friendship between town people is crucial.

The Tropical North Queensland Drought Resilience Adoption and Innovation Hub's (TNQ Hub) role as a place-based organisation is to identify what will build resilience within our region at on-country/farm/agribusiness, town/community, and regional levels.

The TNQ Hub's role is to identify what works and increase adoption within the region (scaling out), taking things that work on individual farms to industry level (scaling up) and taking change and embedding it into the future (scaling deep) to shift from reactionary to proactive towards transformational change. Scaling towards transformational change should occur at all points throughout the drought cycle.



To truly measure the outcomes of Hub programs and activities, applied research should be engaged to find practical solutions to identified problems and to analyse existing information to make informed decisions. Participatory action research, an applied research method is used to improve practice through action, evaluation, and critical reflection to identify changes to improve practice. Action research is situation-based and context specific, collaborative, and participative and aims to bring about change in specific contexts by focussing on generating solutions to practical problems. Applied research is crucial for identifying lead indicators and process lags, and there is a need for a clearer understanding of what applied research can achieve across FDF programs.

This document provides:

- high-level suggestions for the further design of the Future Drought Fund Theory of Change and Programs based on scientific publications and practical, lived, experience of enhancing regional resilience for potential future drought and climate impacts; and
- addresses the specific questions posed in the 'Consultation draft: Future Drought Fund Investment Strategy 2024 to 2028' document. These answers are summarised in Appendix A, and key questions are addressed in more detail within the document.



## The urgent case for regional resilience

There is not a moment to lose in supporting Australia's rural, regional, and remote towns, communities, agricultural industries, and regions to build resilience. During the most recent drought, central-western Queensland lost 25% of its population due to drought related job losses (Kelly and Phelps 2019). Once drought impacts agricultural production, the cash-tap turns off and spending dries up in local town businesses. These businesses slowly lose their viability and towns lose their vitality. Support services such as education, health, banking, retail, restaurants, and more are withdrawn. Many do not return even when better seasons prevail. Large companies cite the lack of in-person transactions. Governments cite the lack of population. The risk of a self-perpetuating downward spiral becomes heightened, vulnerabilities to extraneous shocks are exposed, and the capacity for climate and drought adaptation is eroded (Phelps and Kelly 2019).

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*In 2017 the Productivity Commission released a report that most of northern Australia is below average to least adaptive (Figure 1). This is based on aspects such as sparse populations, a lack of external services and investment, low economic diversification, and a high reliance on individuals to provide leadership making it difficult to change and adapt in response to external shocks.*

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The Longreach Regional Council area was one of few above average localities. Since the most recent drought concluded in 2021 Longreach – but also other neighbouring LGAs – have rebounded. New shops have opened, investment in tourism has boomed and the region has established itself as major player in the provision of renewable industries. The region achieved this through:

- capturing place-based advantages;
- enhancing internal and external socioeconomic networks;
- engaging meaningfully through multi-level consultation; and
- seeking to build sustained financial investment (Phelps and Kelly 2019).

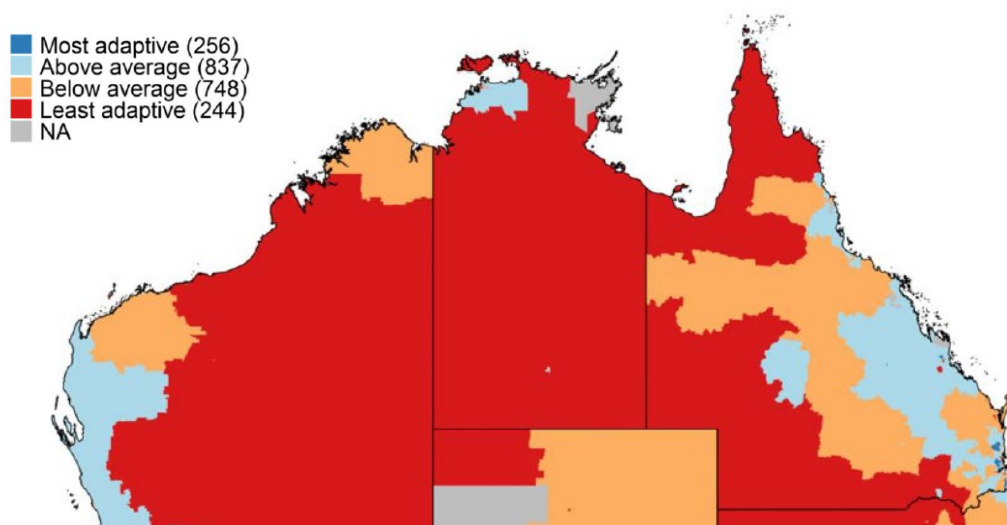


Figure 1. The climate and drought adaptive capacity of regions across northern Australia. Source: Productivity Commission Transitioning Regional Economies interim report, 2017 (cited in Phelps and Kelly 2019).

The scientific publications of Kelly and Phelps (2019) and Phelps and Kelly (2019), and the Western Queensland Drought Appeal commissioned report 'Beyond the Dust' (Kelly 2019), reflect the community and agricultural industry led discussions during the most recent drought. They offer key lessons from a region that is historically exposed to drought and recognises that drought is likely to worsen in the future.

Extensive grazing of livestock (cattle, sheep, and goats) is the main agricultural industry across the region. Regional industry leaders identified that resilience in their businesses is enhanced by:

- Maximising profitability during good seasons;
- Minimising costs during drought;
- Protecting land condition and soil health;
- Implementing modern business systems;
- Maintaining strong social connections within farm and town communities; and
- Ensuring farm decision makers are well equipped to make effective decisions, especially when under stress

Community leaders identified that resilience in towns and the region is enhanced by:

- Reducing the region's reliance on rain dependent agriculture;
- Diversifying the economic base of town businesses and the region e.g., by enhancing tourism and solar power generation opportunities;
- Maintaining strong social connections;
- Emphasising good mental wellbeing and
- Maximising the benefits from drought support services into local towns and communities.

Importantly, the region identified that it is essential that change:

*"includes the ambitions of a community to adapt and transform, progressing towards socially desired goals and value"* (Kelly and Phelps 2019)

Furthermore, proactive communities are essential to building regional resilience, through actions such as:

- Leading the response;
- Maintaining and building social cohesion;
- Providing mental health support;
- Stimulating economic activity and employment;
- Engaging with the media to portray the positive solutions that can arise from adversity; and
- Partnering with external agencies and building networks.

The central-west region continues to invest in transformational change and enhance its resilience. This is just one regional example that underscores the importance of the place-based approach embedded within the Future Drought Fund Strategic Funding Plan. It does provide a potential blueprint for FDF program development and underscores the importance of place-based action.

All FDF programs should ensure that benefits flow into rural, regional, and remote towns and communities. This does not mean that the mix of investment needs to change from the first four-years, but does mean that program, project, and activity design should ensure that benefits flow from farm



support programs into local communities. Programs that build community leadership and empower regional advocacy and solutions should continue.

Climate change is increasing the frequency (e.g., Figure 2), duration and percentage time in drought for many regions of Queensland. Some regions, such as the Gulf and far-west, have a low risk of increased drought. This underscores the importance of the FDF embedding a place-based approach so that programs can be adapted through regional co-design to meet current and future needs.

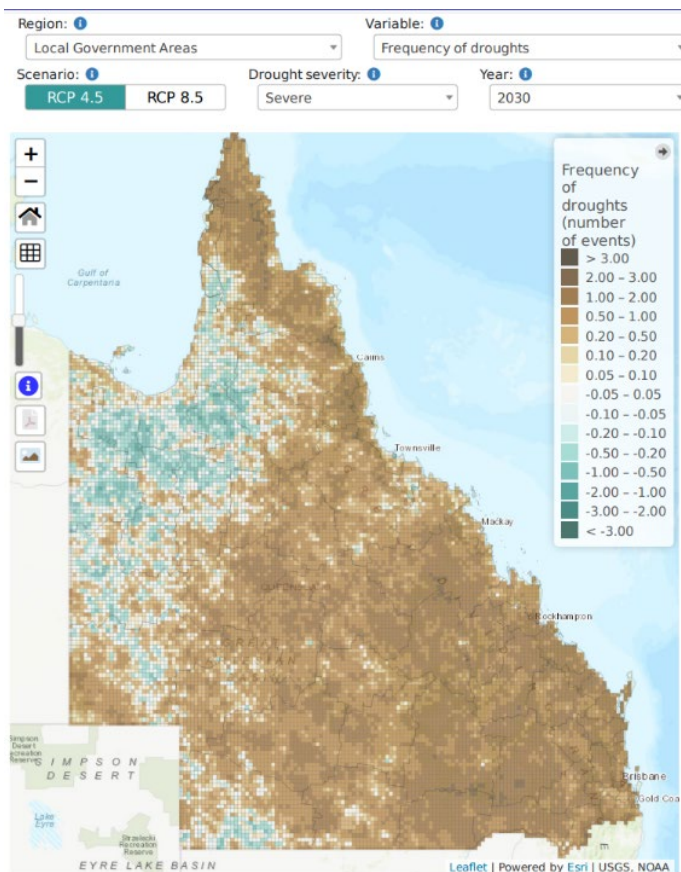


Figure 2. Future drought frequency is likely to increase across the majority of Queensland by 2030.

The combined outlook for higher drought risk, coupled with poor adaptive capacity across regional and remote Queensland (Figure 1) leads the TNQ Hub to believe that resilience needs to be substantially enhanced over the next 10-12 years. This is only four FDF funding cycles and represents the best opportunity to codesign solutions for transformational change. The stability and certainty that FDF funding provides will be crucial to building resilience over the next critical decade.

### The importance of a place-based approach

The regional resilience examples in the previous section and the experience of the TNQ Hub in the establishment phase of the FDF highlights the value of place-based service delivery. The FDF is unique in fostering regional collaboration between the university sector, Natural Resource Management groups, grower groups, First Nations people, Research Development Corporations, Regional Development Groups, Local Government and more with a singular focus:

*“to enhance resilience within rural, regional and remote towns and communities, and the agricultural enterprises that support – and are supported by – these communities”*

It is imperative that the FDF retains a place-based approach as this recognises regional differences in geography and the impacts of drought within a changing climate. Crucially this helps empower regional businesses, towns, and communities to define and implement solutions that build resilience. Other programs and organisations implement important services that focus on agricultural industries (such as red meat, cropping and horticulture), regional economic development (such as regional collectives of Councils and Regional Development Agencies) or relevant services as part of a State-based approach. No other program, however, seeks to be the catalyst for change across multiple agricultural industries, to link economic, social and environmental capitals into one solution, or to focus on building networks and solutions at a regional scale.

The place-based approach facilitates the development and implementation of regional plans, and the identification of regional priorities (Attachment A). The place-based approach helps to empower local towns, communities and industries in a way that State-wide or National approaches are unable to. It helps to bring local solutions to the fore, and explore opportunities to test, demonstrate and apply these solutions in other localities and accelerate transformational change.

### Enhancing resilience through validated experience

Resilience underpins both the FDF and the National Drought Agreement. The TNQ Hub strongly supports this emphasis, and the FDF definition of resilience as:

*“The ability to adapt, reorganise or transform in response to changing temperature, increasing variability and scarcity of rainfall and changed seasonality of rainfall, for improved economic, environmental and social resilience”*

A colloquial version of the definition is simply:

*“Becoming stronger, better and readier”.*

Whilst there is fatigue in some localities of the use of the word ‘resilience’ the FDF should rely on this definition to ensure there is clarity for all stakeholders and clients of the intention of programs delivered through the FDF.

Resilience theory and successful case study regions (such as central-western Queensland) need to underpin the design of FDF plans, programs, projects, and activities. Embedding a place-based approach and the use of the key capitals (environmental, social, and economic capitals) lays a strong foundation.

A key role of the FDF, and for the Drought Hubs, is to build resilience by strengthening bonding, bridging, and linking social capitals, where:

- bonding social capital is based strong ties within relatively homogenous local groups;
- bridging social capital is based on ties between more diverse local groups; and
- linking social capital is based on ties between local and external groups.

All three social capitals are needed for regional resilience (Phelps and Kelly 2020) and should be embedded in the design of all FDF programs. The transformation of Longreach, QLD and the surrounding region during the most recent drought is further evidence of the need for all three social capitals.

Within regional and remote Australia there are often strong bonding and bridging social capitals based on internal social and formal connections, but gaps in linking social capital due to weak or imbalanced connections with external groups and organisations. The FDF has a key role in improving the 'linking' social capital. A place-based focus is the starting point to address this crucial need.

*The TNQ Hub recommends the FDF form a working group of Australian regional resilience experts – both theorists and practitioners - to contribute to the design of the Theory of Change and future program development.*

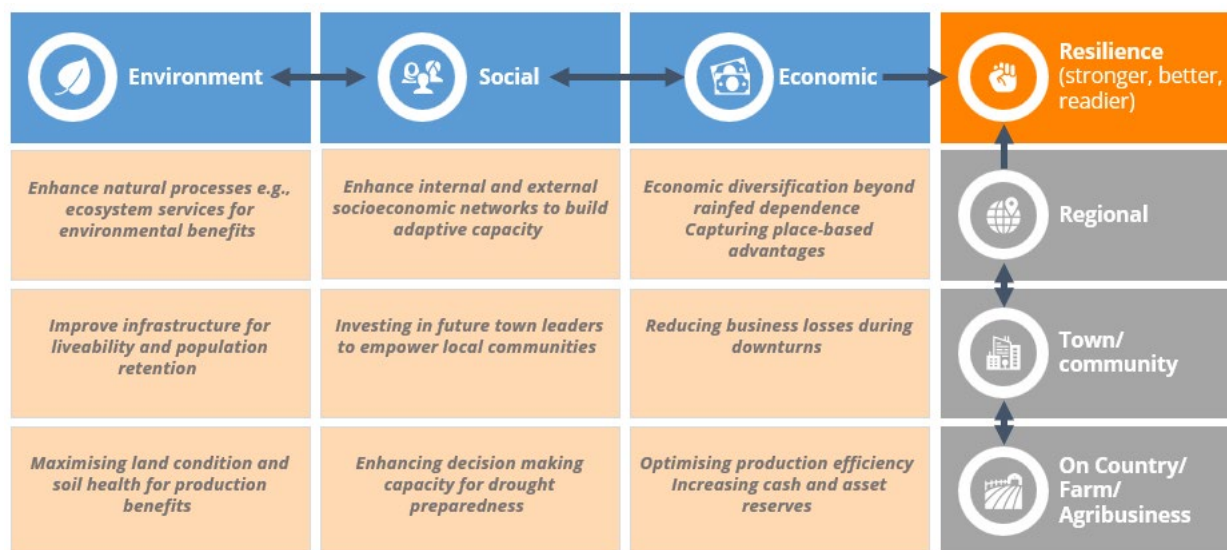
### The triple bottom line and three key capitals to build regional resilience

The TNQ Hub supports a triple bottom line approach of improving environmental, social, and economic dimensions as a holistic approach to building climate resilience. This triple bottom line can also be conceptualised as three underpinning and inter-related capitals, each as important as the other to enhance resilience. Each of these need to be achieved at individual farm and business, town and community, and regional scale to be effective. However, the measures that build resilience differs between the three capitals and scales. Aligning the three capitals and three scales provides a simple conceptual framework to identify where investment can have the greatest impact in building resilience (Figure 3).



Figure 3: Conceptually, resilience is enhanced by investing in Environmental, Social and Economic Capitals at farm, community, and regional scales. This can be used as a simple matrix to guide investment based on potential impact.

The implementation and investment of resilience measures are different at each scale. When placed in the impact investment matrix, investment pathways can be better identified (Figure 4). Further detail can be built into the conceptual diagram and matrix to fine tune investment pathways.



*Light orange boxes provide examples for each capital at each level*

Figure 4: Example application of the drought resilience impact investment matrix.

Importantly, these insights were gained through combining the experiences from central-western Queensland during the 2012-2022 drought with scientific frameworks to describe practical ways to enhance resilience. These insights are presented in detail in the following publications:

- Kelly, Dana (2018). Beyond the Dust. Impact of Drought on Town Businesses in central-western Queensland and some solutions. Published by the Western Queensland Drought Committee. Available from <http://wqda.org.au/beyond-the-dust/>
- Kelly, Dana and Phelps, David (2019). Looking beyond the D.U.S.T. – building resilient rangeland communities. Available from <https://doi.org/10.1071/RJ18047>
- Phelps, David and Kelly, Dana (2019). Overcoming drought vulnerability in rangeland communities: lessons from central-western Queensland. Available from <https://doi.org/10.1071/RJ18052>
- Phelps, David and Kelly, Dana (2020). A call for collaboration: linking local and non-local rangeland communities to build resilience. Available from <https://doi.org/10.1071/RJ20048>

These publications form part of this submission. In essence, Kelly (2018) and Phelps and Kelly (2019) highlighted that all investment and policies should aim to build resilience and cautioned that there is a risk that many measures can ultimately undermine resilience if flow-on impacts are not fully considered. Furthermore, Kelly and Phelps (2019) and Phelps and Kelly (2020) highlight that resilience projects need to strongly incorporate social capital, especially actions that promote social connectedness and linking bottom-up solutions with top-down support, which is one mechanism of delivering linking capital. Two examples of top-down support arise from the actions of the Remote Area Planning Development Board (RAPAD) which represents seven Local Government Areas across central-western Queensland.

In the private sector, RAPAD invited Professor Ross Garnaut, author of 'The Superpower Transformation: Making Australia's Zero-Carbon Future' and 'Superpower: Australia's Low-Carbon Opportunity' to visit and engage with the region during the most recent drought to look for opportunities for solar power generation. A simple idea was born from within the region - that solar power could be more readily generated within a region that is consistently within drought, as there is less cloud cover than other regions. Through on-going engagement with Professor Garnaut, this idea has now transformed into the

Barcaldine Renewable Energy Zone (<https://sunshotindustries.com.au/brez>) through the support of external investment and Queensland Government policy.

In the public sector, RAPAD secured Queensland Government funding to support the construction of sheep-protection fences. Sheep production contributes more jobs for the region than cattle production, through on-farm and contractor labour requirements, and thus contributes strongly to population retention within towns and communities. The sheep industry had been in sharp decline due to predation from wild dogs, exacerbated by drought, resulting in job, business and population losses. RAPAD successfully advocated for public funds to co-contribute to the construction of sheep protection fences through the public benefits derived from direct employment and the establishment of new businesses and employment as the sheep industry increases in size. The region has seen a sizable increase in sheep production, jobs and the return of a younger generation of workers as a result (<https://notjustafence.org/>). A total of \$92 million has been invested in new fencing, \$64 million from private landholders and \$28 million from public funds. The public funds were the catalyst needed to attract private investment, through demonstrating the benefits of the fencing to landholders and the community.

## Response to Section 5: Proposed key features of new programs

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

The draft funding plan provides an appropriate high-level framework. The design of a Theory of Change, and specific programs, projects and activities should be explicitly linked to resilience theory and to use regions as case studies for successful approaches. The TNQ Hub has provided appropriate examples to help translate theory into practice.

### 2) Which current FDF programs should be retained?

The 'My Climate View' platform should be retained as developed under Climate Services for Agriculture. However, the TNQ Hub recommends it be integrated into existing platforms to ensure longevity.

The Farm Business Resilience (FBR) Program should be retained to deliver training, planning and support for farm-level preparedness and resilience. The farm planning approach should consider implementing the successful Queensland model of delivering farm plans through industry groups and existing extension services.

Regional Drought Resilience Planning (RDRP) activity should continue, with improved resources for implementation.

Drought Resilience Adoption & Innovation Hubs, with a greater lead role in place-based FDF program delivery.



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

#### *Integrating FDF programs*

There should be greater emphasis on collaborative approaches through codesign across all programs. This emphasis should include localised and place-based solutions combined with a framework to scale solutions up, out, and deep. Codesign and collaboration between key organisations will maximise impact.

Community resilience is the ability of a community to cope with and recover from various shocks and stresses, such as natural disasters, pandemics, conflicts, or economic crises. To enhance community resilience, three types of scaling strategies can be considered: scaling up, scaling out, and scaling deep.

Scaling up refers to expanding the reach and impact of community resilience interventions to higher levels of governance, such as regional, national, or global. This can involve influencing policies, laws, regulations, or norms that affect the community's well-being and adaptive capacity.

Scaling out refers to replicating or adapting successful community resilience interventions to other communities or contexts that face similar challenges or opportunities. This can involve sharing best practices, lessons learned, tools, or resources among different communities or stakeholders.

Scaling deep refers to transforming the underlying values, beliefs, attitudes, or behaviours that shape the community's resilience. This can involve fostering a culture of learning, collaboration, innovation, or empowerment among the community members and leaders.

National Enabling Activities could be incorporated into an expanded lead role for the Drought Resilience Adoption & Innovation Hubs in place-based FDF program delivery. Drought Resilience Innovation Grants could be combined with the Drought Resilience Commercialisation Initiative to form a single 'innovation challenge' approach.

NRM Drought Resilience Program (Grants and Landscapes) and the Drought Resilience Soils and Landscapes could be combined into a single 'Landscape and soil resilience' scheme. Drought resilience co-benefits should be included in aligned programs such as National Landcare Program, National Heritage Trust and the National Soils program.

Drought Resilience Long Term Trials and Extension and Adoption of Drought Resilience Farming Practices Grants could be combined into a longer-term RDE&A program. Many RDCs have determined that Research and Adoption need to be integrated into codesigned programs to maximise impact. A new 'Drought Resilience Long-term Practices' program could address the need to accelerate change towards the 12<sup>th</sup> year of a longer-term vision of resilience.

Drought Resilience Scholarships, Drought Resilient Leaders, and Networks to Build Drought Resilience could be integrated into a single program of community capacity building focused on empowering individuals, community groups and local/regional industry groups. The goal would be to empower communities and regions to advocate for solutions that meet their needs, thus creating sustained local resilience building.

The Helping Regional Communities Prepare for Drought Initiative should be linked to RDRPs and guided by place-based knowledge through the Drought Hubs.



### *Aligning other programs*

Effectively building regional drought and climate resilience requires integration across multiple industry, jurisdictional and Commonwealth programs. A Program network analysis should be conducted to better understand the gaps and opportunities, and potential for greater collaboration and impact across environmental, social, and economic capitals.

For example, the following programs are all aligned to FDF outcomes through contributions to improving environmental resilience, enhancing innovation, providing climate information, opportunities for diversified land-based income, or improving the value of agricultural production:

- Climate-Smart Agriculture Program <https://www.agriculture.gov.au/agriculture-land/farm-food-drought/natural-resources/landcare/climate-smart>
- The Natural Heritage Trust (NHT) <https://www.dcceew.gov.au/environment/land/natural-heritage-trust>
- The National Landcare Program <https://www.agriculture.gov.au/agriculture-land/farm-food-drought/natural-resources/landcare/national-landcare-program>
- National Statement on Climate Change and Agriculture <https://www.agriculture.gov.au/agriculture-land/farm-food-drought/climatechange/national-statement-on-climate-change-and-agriculture>
- Agriculture and Land Sectoral Plan <https://haveyoursay.agriculture.gov.au/agriculture-and-land-sectoral-plan>
- Net Zero 2050 plan <https://www.dcceew.gov.au/climate-change/emissions-reduction/net-zero>
- Nature Repair Bill <https://www.abc.net.au/news/2023-12-05/nature-safety-repair-bill-to-pass-senate/103190002>
- North Australia Climate Program <https://www.nacp.org.au/>
- Drought and Climate Adaptation Program <https://www.longpaddock.qld.gov.au/dcap/>
- NESP Climate Systems Hub <https://nesp2climate.com.au/>
- TERN <https://www.tern.org.au/ecosystem-data/>
- National Agricultural Traceability Strategy <https://www.agriculture.gov.au/sites/default/files/documents/national-agricultural-traceability-strategy.pdf>
- National Agricultural Innovation Agenda <https://www.agriculture.gov.au/agriculture-land/farm-food-drought/innovation/national-ag-innovation-agenda>
- The National Agricultural Innovation Agenda [Agricultural Innovation – A National Approach to Grow Australia’s Future](#)
- Improving the RDC system [how to improve the rural research and development corporation \(RDC\) system](#).
- DIGITAL FOUNDATIONS FOR AGRICULTURE STRATEGY <https://www.agriculture.gov.au/sites/default/files/documents/digital-foundations-agriculture-strategy.pdf>
- First Nations Digital Inclusion Plan (2023-26) <https://www.niaa.gov.au/sites/default/files/publications/first-nations-digital-inclusion-plan-2023-2026.pdf>
- Australian Digital Capability Framework <file:///C:/Users/jc215716/Downloads/Australian%20Digital%20Capability%20Framework.pdf>
- Australian Universities Accord <https://www.education.gov.au/australian-universities-accord>

The FDF's place-based approach is uniquely posited to help identify the potential for aligned programs to contribute to regional and local solutions across multiple programs, by facilitating collaboration and regional engagement.

## Response to Section 6: Proposed investment streams

### 6.1 Place-based action partnerships

- 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?

The TNQ Hub agrees with the recommendation that the Drought Resilience Adoption and Innovation Hubs are well positioned to play a specific coordination role in relevant FDF programs. With extensive on-the-ground networks, the Hubs are well placed to identify priority areas and gaps in existing investment and ensure there is no duplication of existing efforts.

This would see the Hubs setting the regional priority areas to support the fund in program design and investment. The national network of regionally based Hubs forms a unique architecture to identify priorities, support program design and coordinate sequencing and regionally specific roll-out of FDF programs. The regional networks of nationally coordinated hubs will also be valuable in supplying 'ground-up' data for a coordinated program evaluation.

The Hubs could also play a role supporting the roll out of other FDF programs where regional specificity or flexibility is required e.g., Farm Business Resilience program, the Regional Drought Resilience Planning program and the Helping Regional Communities Prepare for Drought Initiative – or future programs of similar intent.

This arrangement would see the Hubs and Hub partners identify (or have direct input to) the roll out strategies for each of these programs, including locations for roll out, the timing of rollout (in line with seasonal requirements), and who the best delivery partners would be. The local know-how of the National Hub's Knowledge Broker network will be a key asset in this coordination effort across Australia.

The Drought Hubs have established effective local and regional implementation networks through grower groups, NRM groups and other partners. They have also formed an effective National network with embedded Communities of Practice. They would deliver increased impact if provided a larger leadership and networking role in place-based FDF program delivery. Core roles for the Hubs nationally, and within their regions, in this context include:

- Being a regional touchpoint for FDF programs
- Guiding FDF program engagement with key regional stakeholders
- Developing regional priorities
- Supporting implementation of RDRPs
- Testing local solutions within a framework of scaling (out, up and deep)
- Fostering bridging and linking social capitals
- Fostering a culture of continuous improvement
- Leadership in highlighting the importance of building resilience
- Leadership in collaboration and codesign

- Mentoring key regional organisations in building resilience and translating technical knowledge
- Leadership in critiquing solutions (both from within and external to the region).

For example, the National Hub network can provide the architecture for:

- Regional input into the co-design and coordination of relevant FDF programs at a regional level.
- Building and enhance extension, adoption and M.E.L. skill and capacity in the regions.
- Collaboration and engagement to build trusted long-term relationships with all stakeholders.
- Engagement for information and insight exchange for synergies, learning and prioritisation.
- Prioritisation and focus on solution designs relevant to issues.
- Leverage and attract investment for priority outcomes.
- Provide access and support to transformational and innovative opportunities relevant to regional and national priorities.
- Building a program of incremental on-ground activities to drive towards transformational outcomes.
- Developing and maintaining “communities of practice”.
- National collaboration

The National Hub Network, and each of the Hubs individually, are well positioned to:

- Provide valuable regional input into the coordination of RDEA&C (Research, Development, Extension, Adoption and Commercialisation) in drought and climate resilience including -
  - Environmental stewardship
  - Community resilience
  - Sustainable production and economic outcomes in agriculture
  - Relevant regional priorities
- Coordinate relevant FDF programs regionally to:
  - Foster collaboration and avoid overlap of programs
  - Enable National exchange of knowledge
  - Capacity and capability building for “resilience” programs
- Provide program “vision” for transformational change supporting:
  - the Federal Government agricultural agenda for a stronger and more sustainable sector
  - a Holistic approach (bottom up/top down) to program design and delivery; and
  - open collaboration across regions, sectors, and organisations
- Facilitate funding and investment via FDF and others
  - Leverage and amplify investments for regions, designed for best outcomes
- Facilitate co Design of First Nations engagement in:
  - Drought and climate resilience
  - Agricultural innovation
  - Knowledge sharing and protection (of that knowledge)

The Drought Hubs should not become a ‘gatekeeper’ for FDF programs, but be a trusted source of regional information, networks and engagement pathways to empower program delivery. Some programs would be well supported through a ‘light touch’ whilst others could benefit from strong collaboration and deep engagement.

In the delivery of specific regional programs, consideration should be given to the geographic coverage, distances and distributed populations which can add to the costs of doing business.

The TNQ Hub recommends strongly the concepts of longer-term funding for collaborative and cross Hub projects that maximise the benefits of local solutions across large areas; and flexible funding arrangements for the codesign of local and regional projects.

The TNQ Hub agrees that:

- Milestone payments should be linked to delivery of agreed outcomes, as this represents good governance
- Operational funding for regional engagement and communication include adoption/outreach officers and knowledge brokers to connect farmers and communities to relevant science, innovation, networks and government initiatives
- Funding to deliver regional priority projects (including potential RDRP projects), including a discrete program of small implementation grants that focus on particular action types or themes, such as those that could be transformational for a region or industry
- That Hubs should also be tasked to take forward aspects of regional plans, in partnership with regional stakeholders, that align with their farmer focus and knowledge brokering
- That Hubs facilitate Innovation Challenges focused on particular regions or systemic problems faced by many regions, so long as there is careful codesign with industry and community groups
- That monitoring and communicating progress, outcomes, and learnings from implementation contribute to continuous improvement of service, delivery, products etc and most importantly working towards achieving regional resilience. Longitudinal studies are an excellent approach to achieving this, coupled with lead indicators, evaluation of lag processes, verification of adoption, and embedding regional case studies into the design of these studies.
- That grassroots (community) actions should be included in the implementation of aspects of RDRPs e.g. through the HRCPI. If the HRCPI was extended it could also continue local support for projects, including those that reflect the interests of First Nations peoples. There should be particular emphasis on bonding, bridging and linking social capitals in the design of this program. In particular, community programs should seek to strengthen linking capital, which is often the missing element for building resilience in rural and remote communities.
- The TNQ Hub recognises that competitive grants are often perceived as the best approach to ensuring that public funds are invested appropriately. However, we have provided many examples throughout this submission to indicate the value of collaboration and codesign, especially for place-based solutions. We recommend funding for long-term cross-Hub or cross region projects that are based on the principles of collaboration and codesign instead of purely competitive funded opportunities.

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

Successful implementation of RDRPs is most likely if the plans are 'owned' by the community that developed them e.g., with Regional Organisations of Councils (RoCs). Drought Hubs and other agencies have a crucial role in implementation where the community has identified a role for these groups, or where actions proposed by the community have a strong alignment with Hub deliverables. The Drought Hubs should review RDRPs as they are released to incorporate into regional priorities, and to work with communities to identify potential funding opportunities for implementation.

The FDF should include funding to provide practical support for implementation. For example, small regional LGAs generally lack the rates base to employ teams of grant writers, and small-town community groups are often dominated by a limited pool of time-poor volunteers. Practical measures could include mobilising volunteers from outside these regions to support grant writing, provide training and

mentoring, and empower small communities to take a lead role in developing further solutions for resilience.

Town and community socioeconomics is a key gap that needs to be addressed not just through RDRPs but also through support mechanisms, policy change and research.

## 6.2 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)?

The TNQ Hub's regions are very diverse in both commodity production and local challenges, and the people servicing these areas are focussing on what is impacting the producer in their industry and in their location. For example, higher farm incomes in the past year saw focus shift into both capital infrastructure and environmental investment (observations from the Rural Financial Counselling Service). In contrast to other states, because of past droughts, disasters, and limited market access, most agricultural businesses in the TNQ region are commercial in nature. Therefore, we advocate for continued focus on viable properties whose principals derive most of their income from primary production or are building their business to a commercial nature.

However, we also recommend that businesses that are too small to meet the current criteria also have access to training because, when combined, they still manage a substantial proportion of land in many localities. While there may be little value of a small farm with say 10 head of cattle completing a FBR plan, there is significant value in those land managers to undertake training to build resilience at the town and community level.

The Farm Business Resilience program should be delivered using a localised and flexible approach rather than a nationally mandated approach. A flexible delivery model would provide benefit to both FBR program delivery staff and to farmers and producers who would be more inclined to participate. Building connection in the bush takes time but local service providers can and are making a significant impact on people's lives. We note that Queensland is the only state delivering the FBR program through their existing extension framework, unlike other Eastern states who are paying external consultants to conduct plans or training programs.

Empowering local people who are working with regional agricultural businesses brings greater public benefits to the regions and builds capacity within the towns, providing benefit to government, community groups and industry as a whole over the longer term. Local staff are passionate about agriculture and the places they live. The TNQ delivery of the FBR program continues to be successful and we attribute this to the local delivery partners as opposed to third party consultants that may have bottom-line driven incentives as drivers. The FBRP helps producers with what they need to improve and grow in a way that fits with them so that they will engage and have buy-in to behavioural changes.

### Key recommendations:

- The program should target farmers and producers who manage significant proportions of land, including small, medium and large agricultural businesses;
- Learning areas should be focused on identified place-based needs of the regions; and
- Local agents should be incentivised to deliver the program.

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

We **do not** agree that course content should only prioritise natural resource management and transformational practices. There should be equal prioritization for natural, social, and economic capital as they are interlinked, and resilience requires all three. The TNQ Hub Building Human Capacity program has identified developing community skills in Governance, Financial Systems literacy, Ag Succession, Leadership, Entrepreneurship and New Business as a priority for the region.

Innovation in business management practices has the potential to scale out by identifying existing successful programs and working to increase their adoption. To scale up by taking practices that work at farm level to industry level and to scale deep by embedding sound business practices into future deliverables, shifting from reactionary to proactive action towards transformational change throughout all points of the drought cycle.

We agree that the funding should have some limiting criteria, for example not paying for farmers tax returns. However, increased business management skills will enable business to address challenges and opportunities in their towns and communities and can have various benefits for the public, including:

- improving the quality of life and well-being of people by enabling them to access education, health, social services, and economic opportunities;
- strengthening the social cohesion and resilience of communities by fostering trust, collaboration, and participation among diverse groups;
- enhancing resilience by empowering local actors to identify, design, implement, and evaluate solutions that suit their needs; and
- promoting the democratic values and human rights of citizens by increasing their awareness, voice, and influence in decision-making processes that affect their lives.

Increasing the pool of skilled and qualified farm business professionals can contribute to the innovation and competitiveness of the agricultural economy.

We **do not** agree that co-contributions should be mandatory in all cases. There will be instances where access to training or commercial services should include fees. Co-contributions from program participants should also consider adjustments according to eligibility criteria and course content. We also wish to highlight that transaction costs (perceived or actual) of farmers are generally not recognised or accounted for (Coggan, Hay, Jarvis, Eberhard & Colls, 2022). Transaction costs are defined as the indirect costs associated with the transfer of a good from one agent to another. Transaction costs can include associated costs of not being on the farm while attending training, the time it takes for out-of-session reading etc (e.g., creating an FRB plan), or to apply for a grant and implement the grant funds in limited time frames and reporting. When transactional costs are too high the opportunity is disincentivised.

As reported by TNQ FBR delivery agents, in many cases the farmer is starting but not completing the FBR plan as the occurrence (observability) of high transactional costs is perceived as too high or that it limits the outcomes of the FBR program. Transaction costs can also be exacerbated by additional risk e.g., limited capacity (time, distance etc.) of professional advisors. This uncertainty in itself can add to the transaction costs and result in incomplete FBR plans.

Transaction costs of observability can be lowered through increased access to brokers e.g., RFCS and other delivery partners and incentives, which could include reduced cash contributions. For example, the



farmer in-kind contribution to producing a FBR plan could be quantified as a 'cash equivalent' contribution to the grant reducing the amount of actual cash that the farmer needs to find to contribute (e.g., \$4,000 in-kind cash equivalent + \$6,000 cash = \$10,000 cash contribution). Placing a value on applicant's time may increase the effectiveness of the program.

**Key recommendations:**

- there should be equal prioritization for natural, social, and economic capital in course content as they are interlinked, and resilience requires all three;
- business management training should be included and will enable business to address challenges and opportunities in their towns and communities and can have various benefits for the public; and
- transaction costs of farmers should be considered as equivalent cash contributions and a schedule developed to manage appropriate attribution for equivalent cash contributions.

- 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?

The FDF should identify gaps and support training where effective information is not currently present. A review of existing programs, training, platforms, and services should be undertaken prior to further investment in this area. This is a complex and busy space, and FDF investment may be best directed towards localised translation of existing information.

Existing programs which are coming to a potential end, such as the Northern Australia Climate Program with their integrated extension service provided by industry embedded 'Climate Mates' should be considered for support and for scaling out into other regions or scaling up into other industries. Other examples of effective climate training tools include the 'Climate Dogs' website which is no longer funded (<https://agriculture.vic.gov.au/climate-and-weather/understanding-weather-climate-and-forecasting/the-climatedogs-the-six-drivers-that-influence-victorias-climate>).

FDF funding in the climate training space should be supplementary, and linked to existing programs such as the LongPaddock, NESP Climate Hubs and others.

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

There are multiple potential pathways to deliver enhanced adaptation information based on future climate and drought projections. The TNQ Hub recommends investment into existing services and well-defined gaps in local and regional climate data. For example, RDRPs would benefit from being able to readily access future drought forecasts in considering their vulnerability to, and risks from, future drought. CSA has developed a useful commodity-based dashboard for use with primary producers, but there are many other products that fulfil a similar role e.g., Queensland's LongPaddock website, training packages and products, the Northern Australia Climate Program's Climate Mate extension network, the NESP Climate Hub Knowledge Broker network. We believe that these existing services already deliver 'adaptation information to better support practice change in response to climate projections' and that it is fundamental to firstly review the products, services and programs to identify gaps that CSA may

contribute to in the future. Enabling services, such as the provision of SILO data for industry scenario modelling needs to be included in this review.

Should CSA continue beyond June 2025, a more sustainable model could be to embed the platform into business as usual within the Bureau of Meteorology or CSIRO.

Future investment needs to be based on collaboration through a consortia of existing key players (e.g. CSIRO, BoM, Qld DES, NESP and the private sector such as Cibo Labs) and not through open competitive grants. Future investment should focus on innovation and continuity of services.

### 6.3 Agricultural landscapes and 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?

Consider a balanced and flexible approach that combines both discrete and embedded NRM programs that are prioritised through the social capitals and the objectives of the NRM projects. Establish clear and consistent NRM principles, standards, and indicators that can guide and align the NRM activities across different investment streams.

Discrete programs, such as a new Drought Resilience Soils and Landscapes program, could provide more focused and targeted funding for specific NRM outcomes, such as improving soil health, water quality, biodiversity, and carbon sequestration. They could also allow for more innovation and experimentation in NRM practices, as well as more monitoring and evaluation of the impacts and benefits of the projects. We recommend that a resilience perspective be included in the National Landcare and other Natural Resource Management programs to deliver mutually beneficial outcomes at farm, town, community, and regional scales.

We recommend that programs remain flexible and adaptable of NRM delivery to accommodate changing needs of the environment and communities.

Fostering more collaboration and coordination among different NRM stakeholders, such as farmers, land managers, researchers, government agencies, and non-government organizations will result in more holistic and integrated NRM solutions that address multiple environmental, social, and economic challenges and opportunities.

Natural capital management projects should have equal prioritisation within the FDF as the social and economic capitals. All three capitals are needed to enhance regional resilience. There are opportunities to seek co-benefits from non-FDF programs by embedding resilience outcomes into the goals and targets, and seeking place-alignment through the guidance of the Drought Hubs and their partners. These programs include:

- Climate-Smart Agriculture Program <https://www.agriculture.gov.au/agriculture-land/farm-food-drought/natural-resources/landcare/climate-smart>
- The Natural Heritage Trust (NHT) <https://www.dcceew.gov.au/environment/land/natural-heritage-trust>
- The National Landcare Program <https://www.agriculture.gov.au/agriculture-land/farm-food-drought/natural-resources/landcare/national-landcare-program>

- National Statement on Climate Change and Agriculture <https://www.agriculture.gov.au/agriculture-land/farm-food-drought/climatechange/national-statement-on-climate-change-and-agriculture>
- Agriculture and Land Sectoral Plan <https://haveyoursay.agriculture.gov.au/agriculture-and-land-sectoral-plan>
- Nature Repair Bill <https://www.abc.net.au/news/2023-12-05/nature-safety-repair-bill-to-pass-senate/103190002>
- Australian Universities Accord <https://www.education.gov.au/australian-universities-accord>

A new Drought Resilience Soils and Landscapes program would be a welcome contribution to building natural capital across the regions, given the underpinning importance of soil health to agriculture.

#### 11) 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?

Across the TNQ region there is a vast array of Indigenous businesses, some run by Councils, some run by First Nation institutions, and others run collectively or privately by Aboriginal or Torres Strait Islander corporations, families, or individuals. Our core objective in relation to this client group is to strengthen existing networks servicing these businesses, and to increase the flow of information about business resilience and innovation as widely as possible. Our primary network relationships include the newly formed Queensland Indigenous Business Network (QIBN), the Indigenous Land and Sea Corporation, and the Torres Cape Indigenous Council Alliance.

The Hub acknowledges that First Nations peoples' knowledge is essential in building regional resilience to drought. The key mode of operation of the TNQ Hub's Sustainable Aboriginal and Torres Strait Islander Enterprise (SATSIE) Program is to stand alongside and behind these three primary client groups, and to invest support and resources directly into lifting their own Indigenous-led capacity. This has enabled the Program to grow quickly and effectively service a wide range of Aboriginal and Torres Strait Islander communities, enterprises, and individuals across the region and more widely.

The TNQ Hub supports the more explicit recognition of building resilience to climate change and acknowledges that reference to climate change already exists in the Funding Plan Vision. Recognising different terminology for 'drought' is more inclusive, particularly for Indigenous communities, where the changing seasons help communicate their connection to the use and management of Country. It is also important to be discussing resilience or livelihoods more broadly with Aboriginal and Torres Strait Islander people.

The TNQ Hub recommends establishing and contributing to a FDF Aboriginal and Torres Strait Islander working group to work with the Department to ensure that First Nations communities' knowledge and practices to care for country is embedded in programs that benefit communities. The working group should pay particular attention to not create an inflexible national structure. We recognise that it will be difficult to represent the interests of every Indigenous group across Australia. We think that to be successful the working group should include Aboriginal and/or Torres Strait Islander and Hub representation so that an FDF Aboriginal and Torres Strait Islander strategy can develop through a co-designed learning activity.

The TNQ Hub strongly supports the inclusion of a dedicated funding stream that provides opportunities and benefits to Aboriginal and Torres Strait Islander peoples, at the same time integrating local,

traditional, and scientific knowledge, while building a ‘future generations’ philosophy into the FDFs Theory of Change. First Nations knowledge, values and philosophies should not be treated in isolation. While there is a need for some First Nations only services to meet specific local need, we should not work in silos. We all need to walk together. The TNQ Hub in its first phase has delivered a specific indigenous program and will continue to do so.

The TNQ Hub is taking a regionalised approach to supporting a range of Traditional owner groups and entities to build resilience of Aboriginal and Torres Strait Islander communities across central and northern Queensland to drought and other climate related stresses. Our TNQ region encompasses many traditional custodial lands and indigenous peoples. Many Traditional Owners have strong and enduring connections to Country and are actively involved in managing their traditional land and sea country. Based on this experience we believe that Indigenous programs should be embedded in place-based delivery and not treated as separate standalone activities.

Land and sea agribusiness that offers positive social, cultural, and economic opportunities for Indigenous community members that reflects the rights, values and aspirations of Aboriginal and Torres Strait Islander Peoples should be included in the investment strategy.

There should be a focus on the development of meaningful partnerships with Indigenous organisations with accountability to the MEL framework. The TNQ Hub supports the suggestion of flexibility around grant criteria for indigenous communities and projects. In addition, we recommend consideration also be given to other communities that link to remoteness, capacity, and future risk.

## 6.4 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 TNQ Hub supports focussing on both innovation and extension and adoption of successful practices to create scalable change. Innovation may involve new use cases of approved best management practices using new innovative methodologies for example, AI and large language models, resulting in more opportunities to develop both new and improved solutions that address the emerging and future challenges and opportunities of the environment and the communities. Innovation fosters more creativity and experimentation in NRM practices, as well as more collaboration and learning among different NRM stakeholders.

Innovative solutions need to adopt a fail fast methodology, be well funded to enable the generation, testing and scaling of innovative solutions.

Extension and adoption that builds on successful existing knowledge and experience of the NRM practitioners and communities, as well as the evidence and best practices of the NRM research and policy may need innovative application to scale adoption. We recommend supporting successful practices that need to be scaled, but also that combine innovative application for example, biocrust for bare ground reparation.

The FDF should focus on transformational change over a 10-12 year horizon, supported through incremental change. This will require both innovation (defined as not yet tried in Australian agriculture) and scaling existing successful practices up, out and deep. MEL should be implemented to determine the appropriate balance of investment as the 12-year deadline is approached.

13) 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?

Flexible and long-term funding for NRM projects that aim to achieve transformational change and foster partnerships, rather than short-term and output-oriented funding that may constrain the scope and impact of the NRM projects should be considered. Transformation needs to be achieved over a 10-12 year planning horizon (i.e. by 2035). Implement and plan now to enable future transformation whilst accelerating incremental change across subsequent 4-year funding plans.

The Hub's provide a strong network for stakeholders to exchange knowledge, experiences, and lessons learned on transformational change and partnerships, and to identify and address the common and emerging NRM challenges and opportunities.

Developing capacity-building and training programs for stakeholders to enhance their skills and competencies in facilitating and participating in transformational change and partnerships, such as stakeholder analysis, conflict resolution, negotiation, and facilitation is required.

Recognizing and rewarding stakeholders who demonstrate leadership and commitment in promoting and implementing transformational change and partnerships, such as through awards, grants, or publications is recommended.

The FDF should continue to also build incremental change and focus on the social capitals to enable individuals and communities to make transformational changes.

Both incremental and transformational change are important and complementary for enhancing the adaptive capacity and resilience of natural systems and human communities to cope with and respond to drought and other environmental stresses. We recommend keeping a focus on incremental change as it provides the foundation for transformational change through the building of knowledge, skills and support to recognise and address challenges and opportunities. Incremental change can reduce the risks and uncertainties of transformational change, as they:

- allow the stakeholders to test and learn from the innovations and experiments in a safe and supportive environment
- can increase the acceptance and adoption of transformational change, as they create the trust and communication among the stakeholders to share and integrate their perspectives and experiences

We recommend a bilateral/flexible and somewhat unstructured approach (avoiding existing paradigms and structures) to incremental and transformational change, to ensure that activities are sufficient and effective in achieving the desired outcomes and impacts while facilitating scaling up and out.

Activities require organisational support as there is the need for all actors within the FDF to be subject to transformational change for this to work i.e., that includes all levels of government, the university sector, towns, farms etc. It is not just the actors embedded in the rural landscape that need to change, it is all actors.

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

Drought Resilience Innovation Challenges need to be derived through codesign and based on RDRPs and regional priorities. Challenge design should be based on sound codesign theory and practice, to effectively design and document clear, concise 'Challenge Statements' that articulate place-based problems.

Design and implementation should incorporate inclusive and participatory processes including participatory action (applied) research methodology. Regional universities offer a unique value proposition for the FDF investment providing practical experience and creating opportunities for researchers and students to fill gaps in industry and government, while at the same time delivering applied research outcomes.

Through Hub activities, students gain practical work integrated learning (WIL) experience that deliver applied R&D outcomes that are measurable through the university system (HERDC). The value is reciprocated through impact pathways that have multiple outcomes for the region, the university and the FDF. For example, a student employed in a Work Integrated Learning internship, will develop a work ready graduate, build the capacity of the regional organisation and deliver positive impact on NRM practices that lead to future drought resilience.

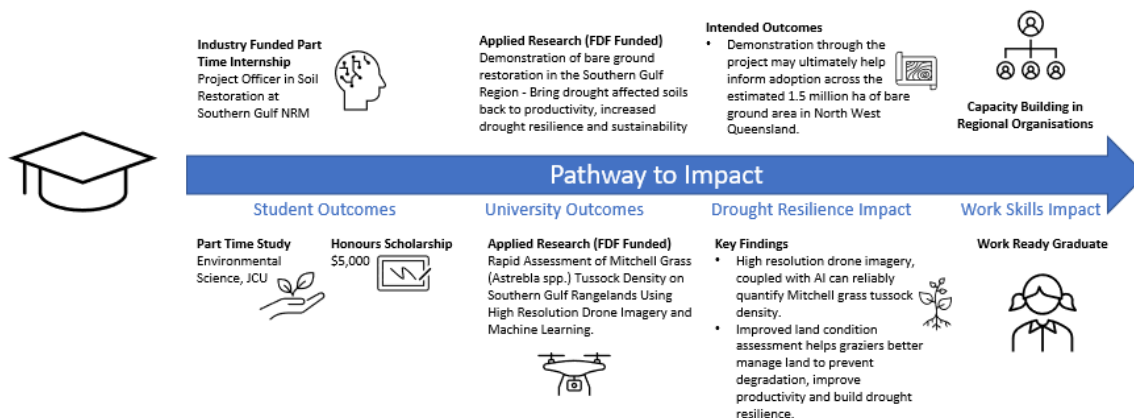


Figure 5: Student based impact pathway

As stated, challenges should develop through co-design, however, some examples from the TNQ Hub region include:

- How to create and scale up novel and diversified income streams and business models for drought-affected farmers and communities that can reduce their reliance on rainfall-dependent activities and enhance their financial and social wellbeing.
- How to leverage and integrate big data, artificial intelligence, and digital platforms to provide timely, accurate, and tailored drought information and services that can support decision-making and action-taking for drought resilience at various scales and contexts.



- How to foster and facilitate cross-sectoral and cross-regional collaboration and learning among different drought resilience actors and initiatives that can enhance the sharing and integration of knowledge, experiences, and best practices.

## 6.5 Enabling activities

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

Core enabling activities should be place-based and include extension and adoption. The program needs to tap deeper into universities as an enabler. Enabling activities may include:

- Monitoring and evaluation of the FDF programs and projects, to assess their effectiveness, efficiency, relevance, impact, and sustainability, and to provide feedback and learning for improvement and adaptation.
- Knowledge management and communication of the FDF programs and projects, to capture, store, share, and disseminate the knowledge, experiences, and lessons learned from the FDF activities, and to raise awareness and engagement among the FDF stakeholders and beneficiaries.
- Capacity building and training of the FDF staff and partners, to enhance their skills and competencies in designing, implementing, and managing the FDF programs and projects, and to foster a culture of innovation and collaboration within the FDF.
- Stakeholder engagement and participation in the FDF programs and projects, to ensure the inclusion and empowerment of the diverse and often marginalized drought-affected groups and communities, such as women, youth, Indigenous peoples, and smallholders, and to foster trust and communication among the FDF actors and initiatives.
- Innovation support and facilitation of the FDF programs and projects, to provide the necessary resources and incentives, such as funding, infrastructure, expertise, and awards, to enable the generation, testing, and scaling of innovative drought resilience solutions.

## Appendix A: Discussion question list answers

Key recommendations are included in Table A1. Discussion is included in the body of the response document as indicated below:

*Table A1 List of discussion question answers*

Number	Section	Question	Key recommendations
1	5.0 Proposed Key Features of New Programs	Does the draft funding plan provide an appropriate framework to guide spending on drought resilience initiatives?	<p>See Section 5, Question 1.</p> <p><b>Key Recommendations:</b></p> <ul style="list-style-type: none"> <li>• The design of a Theory of Change, and specific programs, projects and activities should be explicitly linked to resilience theory</li> <li>• Regional case studies should be used to demonstrate successful approaches</li> </ul>
2	5.0 Proposed Key Features of New Programs	Which current FDF programs should be retained?	<p>See Section 5, Question 2</p> <p><b>Key Recommendations:</b></p> <ul style="list-style-type: none"> <li>• The 'My Climate View' platform should be retained as developed under Climate Services for Agriculture.</li> <li>• The TNQ Hub recommends it be integrated into existing platforms to ensure longevity.</li> <li>• The Farm Business Resilience (FBR) Program should be retained to deliver training, planning and support for farm-level preparedness and resilience.</li> <li>• The farm planning approach should consider implementing the successful Queensland model of delivering farm plans through industry groups and existing extension services.</li> <li>• Regional Drought Resilience Planning (RDRP) activity should continue, with improved resources for implementation.</li> <li>• Drought Resilience Adoption &amp; Innovation Hubs, with a greater lead role in place-based FDF program delivery</li> </ul>

3	5.0 Proposed Key Features of New Programs	Which current FDF programs could be integrated with existing programs or built upon to drive efficiency or to maximise impact?	<p>See Section 5, Question 3.</p> <p><b>Key recommendations:</b></p> <ul style="list-style-type: none"> <li>• Greater emphasis on collaborative approaches through codesign across all programs</li> <li>• Include localised and place-based solutions combined with a framework to scale solutions up, out, and deep.</li> <li>• Codesign and collaboration between key organisations will maximise impact</li> <li>• National Enabling Activities could be incorporated into an expanded lead role for the Drought Resilience Adoption &amp; Innovation Hubs in place-based FDF program delivery</li> <li>• Drought Resilience Long Term Trials and Extension and Adoption of Drought Resilience Farming Practices Grants could be combined into a longer-term RDE&amp;A program</li> <li>• The Helping Regional Communities Prepare for Drought Initiative should be linked to RDRPs and guided by place-based knowledge through the Drought Hubs.</li> </ul>
4	6.1 Place-based Action and Partnerships	How should the Hubs' role be better defined to deliver more impact for their regions? Are the proposed funding options for the Hubs appropriate?	<p>See Section 6.1, Question 4.</p> <p><b>Key recommendations:</b></p> <ul style="list-style-type: none"> <li>• The TNQ Hub agrees with the recommendation that the Drought Resilience Adoption and Innovation Hubs are well positioned to play a specific coordination role in relevant FDF programs.</li> <li>• The Hubs deliver increased impact if provided a larger leadership and networking role in place-based FDF program delivery</li> <li>• Hubs are well placed to identify priority areas and gaps in existing investment and ensure there is no duplication of existing efforts</li> <li>• Hubs setting the regional priority areas to support the fund in program design and investment.</li> <li>• The Hubs could also play a role supporting the roll out of other FDF programs where regional specificity or flexibility is required</li> <li>• The Drought Hubs should not become a 'gatekeeper' for FDF programs, but be a trusted source of regional information, networks and engagement pathways to empower program delivery.</li> <li>• The TNQ Hub recommends strongly the concepts of longer-term funding for collaborative and cross Hub projects that maximise the benefits of local solutions</li> </ul>

across large areas; and flexible funding arrangements for the codesign of local and regional projects.

5	6.1 Place-based Action and Partnerships	What implementation pathways and governance options are the most appropriate ways of actioning regional plans?	<p>See Section 6.1, Question 5.</p> <p><b>Key recommendations:</b></p> <ul style="list-style-type: none"> <li>• Successful implementation of RDRPs is most likely if the plans are ‘owned’ by the community that developed them</li> <li>• Drought Hubs and other agencies have a crucial role in implementation where the community has identified a role for these groups, or where actions proposed by the community have a strong alignment with Hub deliverables.</li> <li>• The Drought Hubs should review RDRPs as they are released to incorporate into regional priorities, and to work with communities to identify potential funding opportunities for implementation.</li> <li>• The FDF should include funding to provide practical support for implementation.</li> <li>• Town and community socioeconomics is a key gap that needs to be addressed not just through RDRPs but also through support mechanisms, policy change and research</li> </ul>
6	6.2 Information, Skills, and Capacity Building	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)?	<p>See Section 6.2, Question 6</p> <p><b>Key recommendations:</b></p> <ul style="list-style-type: none"> <li>• The program should target farmers and producers who manage significant proportions of land, including small, medium and large agricultural businesses.</li> <li>• Learning areas should be focused on identified place-based needs of the regions</li> <li>• Local agents should be incentivised to deliver the program</li> </ul>

7	6.2 Information, Skills, and Capacity Building	How should public and private good be balanced in a future iteration of the FBR program? Should the program require farmer co-contributions?	<p>See Section 6.2, Question 7</p> <p><b>Key recommendations:</b></p> <ul style="list-style-type: none"> <li>• There should be equal prioritization for natural, social, and economic capital in course content as they are interlinked, and resilience requires all three</li> <li>• Business management training should be included and will enable business to address challenges and opportunities in their towns and communities and can have various benefits for the public</li> <li>• Transaction costs of farmers should be considered as equivalent cash contributions and a schedule developed to manage appropriate attribution for equivalent cash contributions</li> </ul>
8	6.2 Information, Skills, and Capacity Building	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?	<p>See Section 6.2, Question 8.</p> <p><b>Key recommendations:</b></p> <ul style="list-style-type: none"> <li>• The FDF should identify gaps and support training where effective information is not currently present.</li> <li>• A review of existing programs, training, platforms and services should be undertaken prior to further investment in this area.</li> <li>• FDF investment may be best directed towards localised translation of existing information.</li> <li>• Existing programs which are coming to a potential end, should be considered for support, and for scaling out into other regions.</li> <li>• FDF funding in the climate training space should be supplementary, and linked to existing programs such as the LongPaddock, NESP Climate Hubs and others.</li> </ul>
9	6.2 Information, Skills, and Capacity Building	Should the long-term goal for CSA be providing adaptation information to better support practice change in response to climate projections?	<p>See Section 6.2, Question 9.</p> <p><b>Key recommendations:</b></p> <ul style="list-style-type: none"> <li>• The TNQ Hub recommends investment into existing services and well-defined gaps in local and regional climate data.</li> <li>• We believe that these existing services already deliver 'adaptation information to better support practice change in response to climate projections' and that it is fundamental to firstly review the products, services and programs to identify gaps that CSA may contribute to in the future.</li> </ul>

- Should CSA continue beyond June 2025, a more sustainable model could be to embed the platform into business as usual within the Bureau of Meteorology or CSIRO.
- Future investment needs to be based on collaboration through a consortia of existing key players (e.g., CSIRO, BoM, Qld DES, NESP and the private sector such as Cibo Labs) and not through open competitive grants. Future investment should focus on innovation and continuity of services.

10	6.3 Agriculture and Land Management	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?	<p>See Section 6.3, Question 10</p> <p><b>Key recommendations:</b></p> <ul style="list-style-type: none"> <li>• A balanced and flexible approach that prioritises both discrete and embedded NRM program prioritised through the social capitals</li> <li>• Establish clear and consistent NRM principles, standards, and indicators that guide and align the NRM activities across different investment streams.</li> <li>• A resilience perspective should be included in the National Landcare and other Natural Resource Management programs to deliver mutually beneficial outcomes at farm, town, community, and regional scales.</li> <li>• Programs should remain flexible and adaptable of NRM delivery to accommodate changing needs of the environment and the communities</li> <li>• A new Drought Resilience Soils and Landscapes program would be a welcome contribution to building natural capital across the regions, given the underpinning importance of soil health to agriculture.</li> </ul>
11	6.3 Agriculture and Land Management	How can First Nations communities be supported so that their knowledge and practices to care for country can maintained for the benefit of their communities and land?	<p>See Section 6.3, Question 11.</p> <p><b>Key recommendations:</b></p> <ul style="list-style-type: none"> <li>• The TNQ Hub's core objective is to strengthen existing networks servicing these businesses, and to increase the flow of information about business resilience and innovation as widely as possible.</li> <li>• Recognise different terminology for 'drought' that is more inclusive, particularly for Indigenous communities, where the changing seasons help communicate their connection to the use and management of Country.</li> <li>• The TNQ Hub recommends establishing and contributing to a FDF Aboriginal and Torres Strait Islander working group to work with the Department to ensure that</li> </ul>



First Nations communities' knowledge and practices to care for country is embedded in programs that benefit communities.

- The working group should include Aboriginal and/or Torres Strait Islander and Hub representation so that an FDF Aboriginal and Torres Strait Islander strategy can develop through a co-designed learning activity.
- The TNQ Hub strongly supports the inclusion of a dedicated funding stream that provides opportunities and benefits to Aboriginal and Torres Strait Islander peoples, at the same time integrating local, traditional, and scientific knowledge, while building a 'future generations' philosophy into the FDFs Theory of Change.
- The Indigenous programs should be embedded in place-based delivery and not treated as separate standalone activities.
- Focus on the development of meaningful partnerships with Indigenous organisations with accountability to the MEL framework.
- The TNQ Hub supports the suggestion of flexibility around grant criteria for indigenous communities and projects. In addition, we recommend consideration also be given to other communities that link to remoteness, capacity, and future risk.

12	6.4 Innovation and Transformation	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?	<p>See Section 6.4, Question 12.</p> <p><b>Key recommendations:</b></p> <ul style="list-style-type: none"> <li>• Focus on both innovation and extension and adoption of successful practices to create scalable change</li> <li>• Flexibility to combine tried and tested practices with innovative delivery</li> <li>• Innovative solutions need to adopt a fail fast methodology, be well funded to enable the generation, testing and scaling of innovative solutions.</li> <li>• We recommend supporting successful practices that need to be scaled, but also that combine innovative application</li> <li>• The FDF should focus on transformational change over a 10-12 year horizon, supported through incremental change.</li> <li>• MEL should be implemented to determine the appropriate balance of investment as the 12-year deadline is approached.</li> </ul>
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13	6.4 Innovation and Transformation	<p>Should transformational change, and partnerships that facilitate it, be prioritised by the FDF? What incentives or programs would best support transformational change?</p> <p>Or</p> <p>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?</p>	<p>See Section 6.4, Question 13.</p> <p><b>Key recommendations:</b></p> <ul style="list-style-type: none"> <li>• Flexible and long-term funding for NRM projects that aim to achieve transformational change and foster partnerships</li> <li>• Transformation needs to be achieved over a 10-12 year planning horizon and shouldn't be expected within every 4-year funding plan</li> <li>• Within the context of achieving transformational change by 2035, we recommend focusing on accelerating incremental change over the next 10-12 years, starting with laying the foundation for transformational change through the building of knowledge, skills and support to recognise and address challenges and opportunities.</li> <li>• Developing capacity-building and training programs for stakeholders to enhance their skills and competencies in facilitating and participating in transformational change and partnerships, such as stakeholder analysis, conflict resolution, negotiation, and facilitation is required.</li> <li>• Recognizing and rewarding stakeholders who demonstrate leadership and commitment in promoting and implementing transformational change and partnerships, such as through awards, grants, or publications is recommended</li> <li>• The FDF should continue to also build incremental change and focus on the social capitals to enable individuals and communities to make transformational changes.</li> <li>• We recommend a bilateral/flexible and somewhat unstructured approach (avoiding existing paradigms and structures) to incremental and transformational change, to ensure that activities are sufficient and effective in achieving the desired outcomes and impacts while facilitating scaling up and out.</li> <li>• Activities require organisational support as there is the need for all actors within the FDF to be subject to transformational change for this to work i.e., that includes all levels of government, the university sector, towns, farms etc. It is not just the actors embedded in the rural landscape that need to change, it is all actors.</li> </ul>
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14	6.4 Innovation and Transformation	What Drought Resilience Innovation Challenges could be targeted in the proposed new innovation pilot program?	<p>See Section 6.4, Question 14.</p> <p><b>Key recommendations:</b></p> <ul style="list-style-type: none"> <li>• The challenges should be derived from codesign, RDRPs and regional priorities.</li> <li>• Design and implementation should include inclusive and participatory processes including participatory action (applied) research methodology.</li> <li>• Value should be reciprocated through impact pathways that have multiple outcomes for the region, the Hub's host university and the FDF.</li> </ul>
15	6.5 Enabling Activities	What enabling activities are essential to the success of the FDF and should be directly funded to support FDF programs?	<p>See Section 6.5, Question 15.</p> <p><b>Key recommendations:</b></p> <ul style="list-style-type: none"> <li>• Build a culture of continuous improvement within the FDF and its partners</li> <li>• Include lead indicators with validation steps to track on-ground change so that timely adjustments to FDF deliverables can be made when required</li> <li>• MEL should measure aspects that reflect on and direct outcomes</li> <li>• Programs should be built on using an Acton Learning approach</li> <li>• Include nationally comparable indicators but not necessarily identical indicators</li> </ul>