

Theory of Change

Farming for the Future:

A more financially prosperous, climate-resilient and decarbonising agricultural sector

November 2021

Why is this work needed?

The Australian agriculture sector currently faces a unique period of change: changing weather patterns, consumer and investor preferences for sustainable business, and increasing levels of government focus on climate change both locally and internationally are creating the perfect storm.

Farming finds itself on the frontline of climate change

- On farm, some landscapes are failing to maintain prior levels of productivity, whilst shifting weather patterns create additional volatility in farm business performance and increasing welfare issues for both animals and humans
- Agriculture globally is also claimed to be responsible for up to 1/3 of the world's greenhouse gas emissions and represents around 51% of Australia's landmass
- Farms deliver significant value to the economy (over \$70bn, with targets to reach \$100bn by 2030). However this appetite for growth creates a challenge in balancing economic outcomes with environmental ones

Natural capital presents an opportunity, but some parts of the puzzle are missing

- Producers have been stewards of Australian landscapes for generations and take pride in leaving the landscape better than they found it
- It is generally accepted that higher levels of natural capital will contribute to reduced spending on chemical inputs, and can reduce the impacts of bad seasons
- However, when it comes to measuring and valuing levels of natural capital and their contribution to farm outcomes, evidence is often limited in scope and anecdotal
- As a result, measuring and managing for natural capital lags behind the current focus on production

***Farming for the Future* aims to make natural capital measurement and management a part of mainstream farm management**

What is *Farming for the Future*?

- *Farming for the Future* is a **collective impact, public interest program** initiated by the Macdoch Foundation, in partnership with PwC Australia and Integrated Futures
- At the centre of the project is a **large-scale research program** designed to equip farmers and their advisory networks to better understand and quantify the relationship between on-farm natural resources, farm business profitability and other benefits for farmers.
- In parallel the project will engage deeply with stakeholders across the ecosystem, from the supply chain to finance and policy to identify **opportunities to support farmers** and share the burden of change and transition

What is the opportunity for Australian agriculture?

Natural capital provides the opportunity to regenerate productive landscapes and position Australian agriculture to be part of the climate solution

Improving natural capital on productive landscapes

Australia has a chance to lead the world on sustainability-based food and fibre systems. There are a number of *push* and *pull* factors at play, creating the impetus for Australian agriculture sector to invest in its natural capital:

- > **Part of the solution of climate change:** regenerating productive landscapes is a nature-based solution which will play a role in mitigating climate change.
- > **Improved profits and increased resilience for producers against climate change:** capacity to increase resilience to drought and to climate change in a number of ways including: improved soil health; increased soil-water retention; reduced erosion: reduced air and waterway pollution and decreased reliance on chemical inputs.
- > **Emerging markets for carbon and other 'natural' stocks:** through local and international markets for carbon offset credits and other ecosystem services, producers can monetise on-farm environmental benefits.
- > **More productive use of credit instruments:** an opportunity for banks to move from supporting recovery from shocks towards supporting a transition to more sustainable practices.
- > **Lower finance costs and risk exposure:** lower financing costs as a result of improving natural capital is a win-win for producers and banks alike, with banks reducing their exposure to risky debts and the cyclical nature of agriculture, while producers are able reduce their interest costs.
- > **Pre-empting regulatory pressures:** carbon border adjustment mechanisms and other similar regulatory measures could be targeted producers not adhering to low carbon production.
- > **Consumer preference and helping brands and retailers reach net-zero:** ESG considerations are having a material impact on decisions made by investors and other stakeholders. Australian producers have an opportunity to assist retailers seek to meet their net-zero emissions and other ESG goals.
- > **Broader economic and environmental benefits for regional communities:** a more resilient farm sector will reduce the social and economic impacts of drought and harsh weather events, and help to revitalise rural and regional communities.

What is the change we need to see?

By equipping producers with *practical and actionable* evidence, as well as the knowledge and tools to measure and value natural capital, we can transform Australian farming businesses at scale.

The gap we seek to fill: our assertion is that the inability of producers to effectively measure and manage natural capital has resulted in a substantial under-investment in this important factor of production.

Beyond farm-level concerns, the incorporation of natural capital into agricultural enterprises is needed as a matter of urgency. This is driven by the emerging productivity risks from climate change and market changes that are increasingly calling for greater transparency about environmental impacts and sustainability.

Farming for the Future seeks to provide a way for the agricultural industry to make the most of natural capital: as a productive asset generating financial and other benefits for farmers.

It is a unique, interdisciplinary program that, for the first time brings together farm economics and natural capital measurement to focus on optimising farm performance, and supplements this with a change program that activates intermediaries and ‘partners of farmers’ (retailers, brands, food companies, banks, insurers and policy makers) to support producers to optimise natural capital, and deliver significant public benefits to the Australian community.

The relatively low level of uptake of incorporating of natural capital as a factor of production amongst farm businesses, is driven by:

Complexity of the relationship between improvements in natural capital and on-farm profitability: Large-scale evidence in the Australian context is limited and needs to be more robustly developed across a wider range of farming sectors and climates.

A lack of practical ways for producers to measure natural capital: The lack of detail over practical ways for producers to measure their natural capital and quantify its contributions to their operations remains a major constraint to unlocking greater farm productivity.

A lack of practical ways for intermediaries to effectively advise farmers on natural capital: Intermediaries such as farm advice organisations and services providers lack easy to access and use tools and data to measure natural capital and advise on its contribution to client outcomes.

A way of demonstrating impact to supply chain stakeholders: Enabling producers to invest in improving their natural capital, they need to be able to demonstrate the impacts this is having to their supply chain stakeholders.

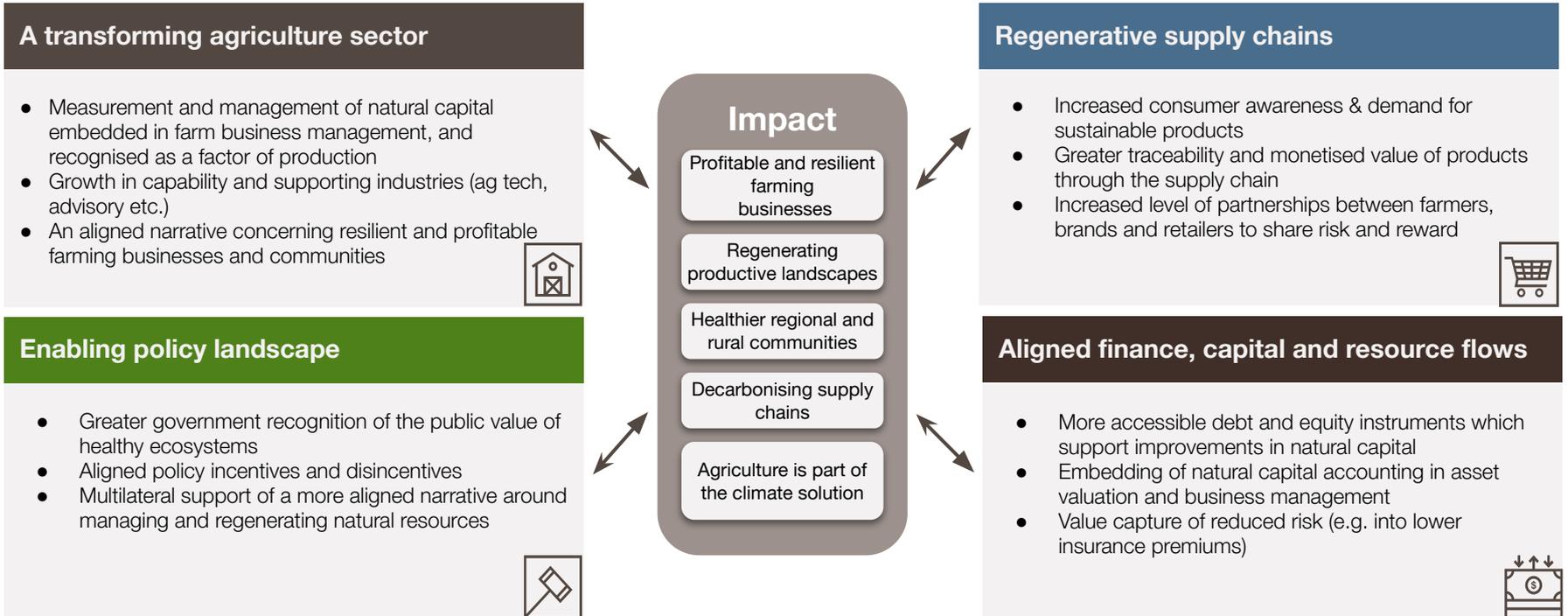
A disjointed enabling policy environment: A better understanding of the public value of healthy ecosystems is required to spur multilateral support for a move to a greater, more mainstream emphasis on improving natural capital.

A need to reform supply chains for food and fibre: A lack of alignment of farming practices with corporate ESG targets to harness and support producers to shift.

A lack of awareness from financial institutions: Farm accounts which reveal not just financial information, but also information about the state of natural capital, will require financial institutions to adjust to assess risk more accurately.

Future State: a system that values natural capital

The agriculture ecosystem extends well beyond farms. There are huge numbers of complex interactions and relationships which shape the outcomes we see today. If we wish to see different outcomes we need to consider the change required across the whole system.



What is *Farming for the Future* ?

Accelerating the uptake of agriculture that improves natural capital to create more resilient farming businesses and regional and rural communities, and delivers a nature-based solution to climate change for Australia.

What is *Farming for the Future*?

Farming for the Future is a collective impact program initiated by the Macdoch Foundation, to be funded by philanthropy, industry and government. It has been established as a response to the increasing urgency for agriculture to decarbonise, and the opportunity for agriculture to be a nature-based solution to climate change for Australia.

The research program has a bold vision to transform Australia's agriculture sector into one that empowers farmers to evolve their farm businesses in ways that maintain and enhance the natural capital they use as the best route to build resilience and improve profitability.

For more producers to embrace a change, the business case must provide financial and risk incentives. The backbone of *Farming for the Future* is a statistically significant, robust body of evidence that supports this case for change.

As farming businesses begin to place a greater emphasis on the condition and value of their natural capital, productive landscapes will regenerate, and position Australia agriculture to reduce and mitigate emissions.



Key focus areas

1

Develop and communicate the Australian evidence base. Through research and economic analysis, *Farming for the Future* aims to build the national-scale, robust evidence base connecting natural capital and farm profitability for producers and the broader system.

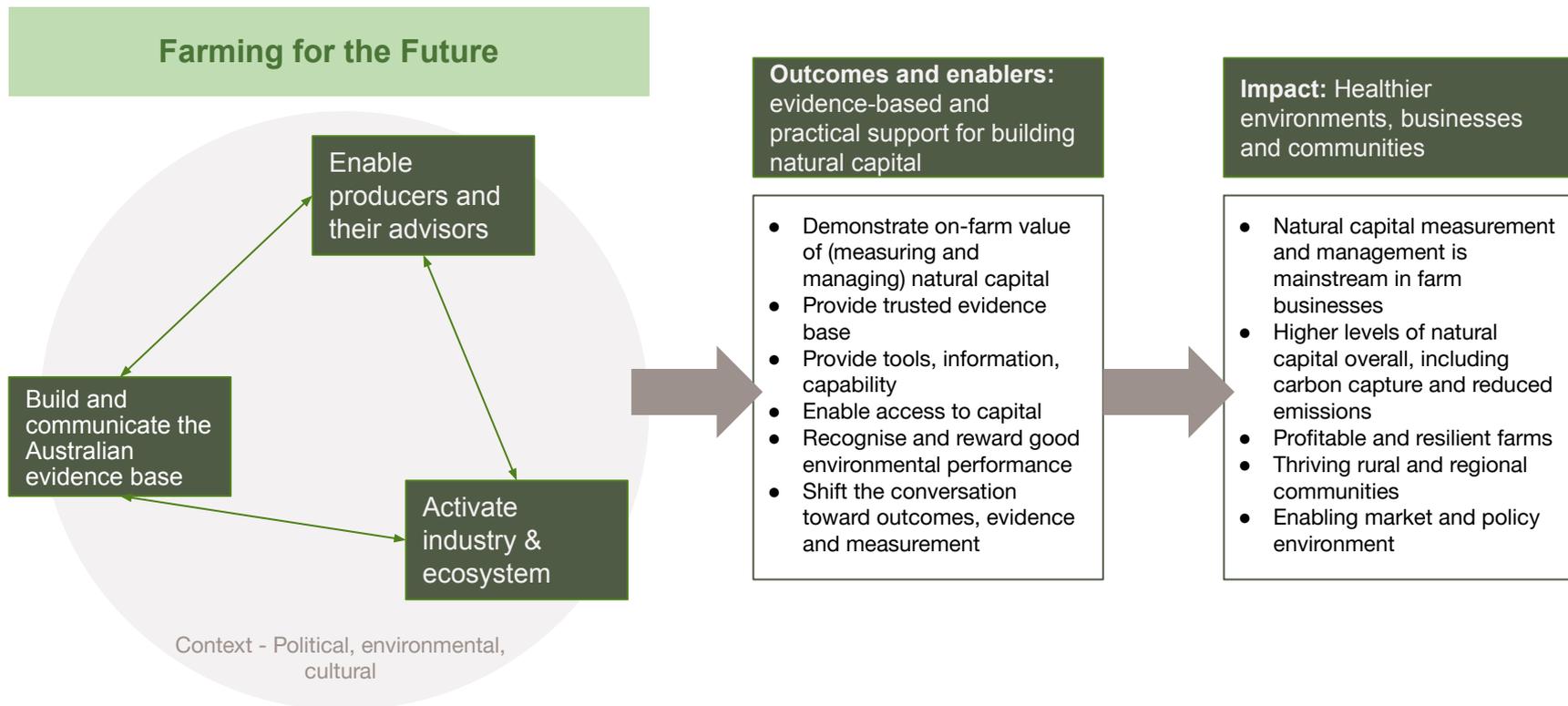
2

Identify and develop tools and solutions. To enable translation of research and collaboration into change, we will support the delivery and activation of information, models and tools, including a benchmarking platform, that will encourage action and change.

3

Co-designing system solutions with industry and policy stakeholders. Acting as a neutral intermediary, FftF will build and sustain engagement with key individuals and organisations across retail, production, banking, government etc. Through this approach we aim to enable individual and collective action in service of a shared vision.

Farming for the Future: Theory of Change at-a-glance



Thank you