**Outcome 6:** By 2023, there is an increase in the capacity of agriculture systems to adapt to significant changes in climate and market demands for information on provenance and sustainable production.

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Inputs

* Australian Government funding and investments from state governments, industry and community.
* Review of soil condition factors affecting agricultural productivity and condition of ecosystem services provided by agricultural lands to the broader community; maps showing priority areas for these soil factors which also affect soil water storage and availability to plants.
* Knowledge of sustainable agriculture management practices, climate change trends, impacts and decision tools for different industries and their adoption rates.
* Learnings from previous NRM programs and other programs such as Carbon Farming Futures and Managing Climate Variability.
* Knowledge of developing international market trends.
* Experience from other countries and industries in developing provenance and sustainability credentials.

*Rationale*

Previous Australian Government investment in natural resource management through Landcare and other government programs has created lasting change in how farmers and communities manage natural resources. Building on this positive change further leverages this investment.

Industry-led management practice change, informed by current scientific understanding, will build farmers’ capacity to manage for climate change, and to meet market demands for transparent reporting on provenance and sustainability.

Outputs

* Co-investment from industry, governments, universities and business.
* Training, workshops, field days and demonstrations and information to support practice change.
* New technologies, tools and practices.
* Partnerships / networks developed or maintained to manage change.

Context

Australia’s farmers manage 53 per cent of our landscape, produce 93 per cent of the food we eat, and produce goods for 40 million people outside Australia every day

Global demand for food and fibre is rising, government and industry aim to grow the value of agricultural trade whilst managing risks to the agricultural sector. These risks include the changing climate, and growing market preferences for products with demonstrable provenance and sustainability credentials, including through traceability mechanisms.

Australia has obligations under international conventions to protect biodiversity, soil and wetlands, and to address climate change.

Problem

Across Australia soil health, remnant vegetation and biodiversity are being depleted on-farm due to production pressures, rising input costs and changes to the climate.

Example Services

Regional delivery agents will partner with industry, research organisations and farmer groups to:

* Identify emerging market demands.
* Identify climate changes expected to impact the natural resources (soil, water and vegetation) on-farm, and the production and profitability supported by these resources.
* Develop and implement innovative tools, technologies and practices to help manage market changes, climate change, improve farm productivity, profitability whilst improving the condition of the soil, water and vegetation assets delivering services to the community.
* Encourage benchmarking by industry and farmers to monitor and share the changes to their productivity, profitability and sustainability resulting from adoption of new technologies and management practices.

Midterm evaluation   
(1-3 yrs)

Increased number of industry groups and farmers with the knowledge and skills to:

- provide the transparent provenance and/or sustainability reporting sought by markets.

- adopt new technologies and farm practices to improve on-farm decision making in changing climate conditions.

End of program

* There is a demonstrable increase in the number of farmers using new technologies to support their climate related farm decisions.
* Industry bench marking studies are able to demonstrate the productivity and/or profitability improvements arising from adoption of new climate support technologies.
* There is an increase in the number of industries that have transparent sustainability reporting arrangements in place to meet market expectations.

Outcome Indicators

*Rationale*

Investment in the actions identified above will assist farmers to adapt to changing climates and market expectations, positioning them to maintain profitability and to deliver products that meet new market expectations for provenance and sustainability reporting.

*Rationale*

Measuring outputs provides an initial assessment of engagement and potential for practice change. These outputs can be used to identify indicators of progress to facilitate milestone payments.

*Rationale*

These indicators are considered measureable within a three year time-frame, and align with the program’s mid-term evaluation. They demonstrate that activities and outputs are having an impact.

*Rationale*

These indicators aim to measure the success of the interventions.

*Rationale*

The condition of soil, biodiversity and vegetation is an important determinant of farm productivity, profitability and the longer term sustainability of Australia’s agricultural landscapes.

The regional model is an effective method for building social capital, connectedness and networks amongst Australian farmers. These networks can deliver the skills and knowledge needed to adopt practices that will build resilience to climate change and shifts in market demands.

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