

TOOLS TO TRACK NATURAL CAPITAL ON YOUR FARM

MONITORING WHOLE-FARM BIODIVERSITY USING NATURAL CAPITAL ACCOUNTING (NCA)

Biodiversity

FACT SHEET 2 – JULY 2025

WHY MEASURE NATURAL CAPITAL?

Many growers are already making significant contributions to environmental sustainability. Natural Capital Accounting (NCA) helps track and value those efforts. It's a structured way to measure biodiversity and other natural resources, such as soil and water, at the whole-farm level.

By adopting NCA, growers can:

- » Measure and monitor environmental assets and biodiversity over time
- » Understand how management practices impact natural systems
- » See how ecological health contributes to farm productivity

The NCA approach gives insight into:

- » **Stocks:** The amount and condition of resources like soils, vegetation, and water
- » **Flows:** The services those resources provide (e.g. crop production, water retention) and their monetary value

BENEFIT FOR GROWERS

Growers can use NCA to understand how natural assets, such as soil, water, and biodiversity, contribute to their farm's resilience and productivity. It supports decision-making and provides evidence of environmental performance.



Ephemeral wetland Coleambally Irrigation.

Key benefits include:

- » Measuring biodiversity and other natural capital, like carbon
- » Understanding environmental risks (e.g. water shortages, degradation)
- » Identifying new market opportunities (e.g. carbon or biodiversity credits)
- » Preparing for sustainability reporting (e.g. Taskforce on Nature-related Financial Disclosures – TNFD)

Consistent natural capital data helps growers stay >



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ahead of evolving regulations and demonstrate responsible land management.

HOW TO MEASURE BIODIVERSITY USING NCA

NCA is flexible and can be adapted to different farm types, goals, and the sorts of natural capital present on each farm. It helps track biodiversity indicators, such as:

- » **Native vegetation extent and condition** (structure, function, and health)
- » **Presence of native and invasive species**
- » **Land use across your farm**

Growers can apply NCA to both natural and production areas (like croplands and native vegetation) and show how management actions

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affect environmental health over time. It captures both stocks and flows of natural capital. It can involve:

- » **Digital mapping:** Satellite imagery to assess vegetation and land cover
- » **On-ground data collection:** By trained landholders or experts
- » **Data validation and analysis:** Ensuring data

Natural Capital Assets in Agriculture (Stocks)			
Native ecosystems	Planted vegetation	Intensive land-use systems	Water resources
Forests & Woodlands	Shelterbelts	Perennial croplands	Wetlands
Shrublands	Woodlots/plantations	Annual croplands	Rivers and streams
Semi-arid wdl / savanna	Biodiversity plantings	Pastures (sown)	Lakes and dams
Grasslands	Insectariums/grass strips	Pastures (derived)	Groundwater



Ecosystem Services (Flows)			
Regulating	Provisioning	Supporting	Cultural
Micro-climate regulation	Food	Habitat for species	Recreation and mental and physical health
Carbon sequestration and storage	Raw materials (fibres, timber, biofuels)	Maintenance of genetic diversity	Tourism
Moderation of extreme events	Freshwater		Aesthetic appreciation and artistic inspiration
Wastewater treatment	Medicinal resources		Spiritual experience and sense of place
Soil fertility			
Pollination			
Biological control			
Regulation of water flow			

Figure 1. Diagrammatic representation of the ecosystem services (as per the UN Food and Agricultural Organisation framework) that flow from natural capital on farms.

Source: O'Brien, D., Hawdon, A., Lawrence, R., Maisey, A., Ogilvy, S., Rainsford, F., Semmler, I., Sutton, G. and Radford, J. (2023). Farm-scale Natural Capital Accounting Methods. La Trobe University, Bush Heritage Australia and Integrated Futures.



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accuracy before calculating results and trends

» **Analysis and reporting:** Creating consistent biodiversity accounts to track change Compared to simpler tools (e.g., PLANR, see Fact Sheet 1), NCA offers a more detailed, whole-farm assessment, connecting land use, management and biodiversity outcomes.

NATURAL CAPITAL TOOLS FOR GROWERS

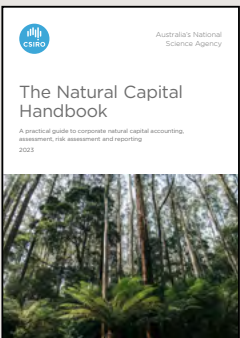
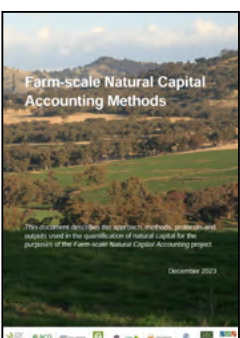
These tools are designed to help growers apply NCA and monitor biodiversity across the farm, see table.

NEXT STEPS

- » Explore the **Natural Capital Handbook or Farm Scale NCA Methods**

- » **Identify natural capital and biodiversity indicators** on your farm
- » **Start building a biodiversity baseline** to support reporting and planning
- » **Read the companion fact sheets:**
 - » **Factsheet:** Tools to track Natural Capital on your farm Monitoring whole-farm biodiversity using Natural Capital Accounting (NCA)
 - » **Factsheet:** On-line Tools for Measuring Biodiversity on Your Farm – A guide to assessing biodiversity and establishing a baseline using tools like PLANR

Understanding your farm's biodiversity now will position you to navigate evolving policies, meet supply chain expectations, and respond to sustainability trends.

Tool	What it Measures	How it Works	Why Use It
 <p>Natural Capital Handbook (CSIRO)</p>	<ul style="list-style-type: none"> » Native vegetation condition & extent » Invasive/native species presence » Threatened/important species » Land use 	A guide by the CSIRO to measure and manage natural capital on farms	<ul style="list-style-type: none"> » Links biodiversity metrics to broader environmental/ economic assessments » Supports sustainability reporting » Offers practical steps for measuring natural assets and the services they provide (e.g. crop production) » Offers flexible measurement options (see the Natural Capital Measurement Catalogue) » May require on-ground data collection
 <p>Farm Scale Natural Capital Accounting Methods (La Trobe University)</p>	<ul style="list-style-type: none"> » Vegetation & habitat condition » Species richness » Invasive species presence » Land use 	A guide by La Trobe University and other partners for landholders seeking to generate a natural capital account at an on-farm scale.	<ul style="list-style-type: none"> » Tailored to farm use » Assesses both natural and managed ecosystems (e.g. croplands, native vegetation) » Suited to mixed farming systems » Links management practices to biodiversity outcomes » Requires on-ground data collection

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