

Farm-scale Natural Capital Accounting

Valuing Natural Capital on your farm

What's in a Farm-scale Natural Capital Account?

Increasingly, businesses in the agricultural supply chain are asking for information about farm performance on key environmental issues such as climate and nature risk. The Farm-Scale Natural Capital Accounting project has established a methodology for providing this information. A key output of that work is a customised account for each participating farm, providing in-depth insights into the farm's underlying natural capital asset base across a broad range of datasets, and an estimate of the farm's dependence on renewable and non-renewable inputs.

The Farm-scale Natural Capital Account Report

The Farm-Scale Natural Capital Account is comprised of three sections:

1. Natural Capital Asset Accounts
 - Register of natural capital assets (type, condition and extent).
 - Biodiversity assets (birds, native plants).
2. Ecosystem Service Accounts
 - Invertebrate-based surrogates for pollination, decomposition and pest control services.
 - Measures of soil condition - ground cover and soil organic carbon (provided by Downforce Technologies).
 - Forage production (for livestock grazing properties).
 - Shade and shelter services.
3. Environmental Performance
 - Greenhouse gas emissions position – for whole of farm and per product.
 - Rainfall use efficiency.
 - Use of non-renewable (finite) resources.
 - Resource-use intensity - pollution generated per unit of product for whole of farm and per product.

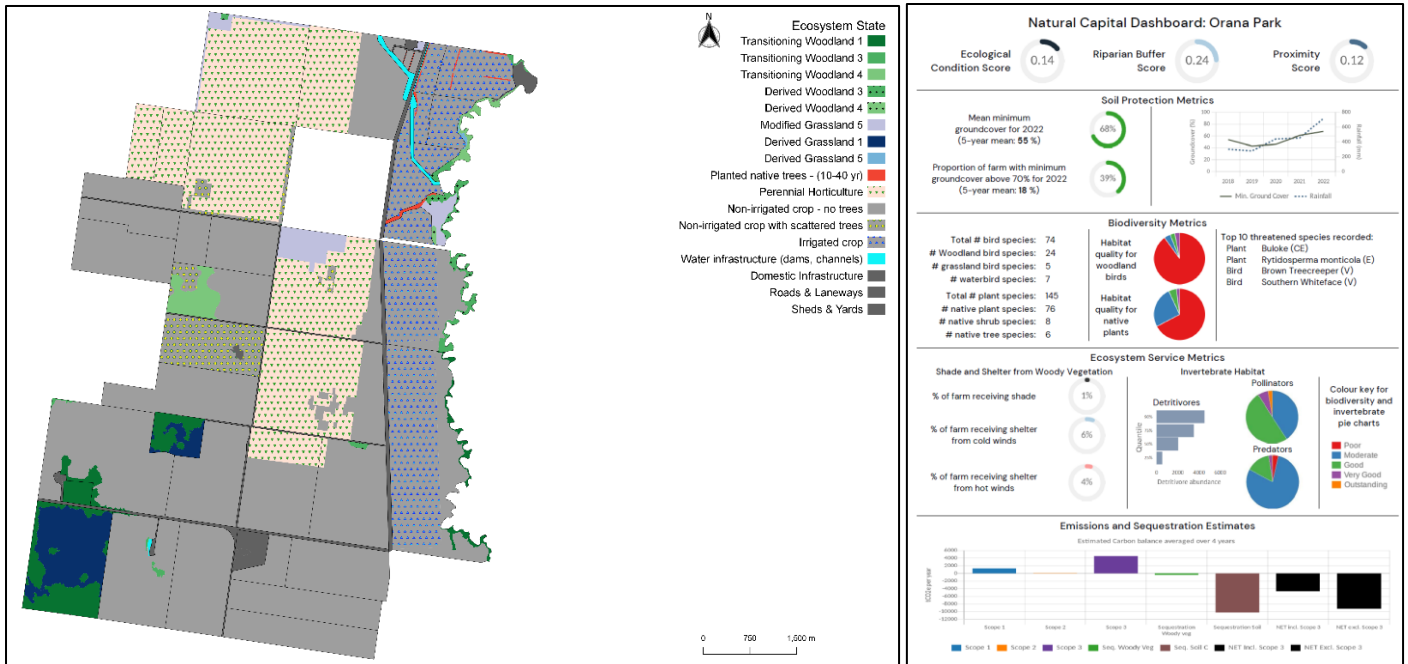
The report is accompanied by:

- A dashboard that summarises key metrics and results.
- Maps showing the distribution of different types of natural capital assets and provision of services across the farm.
- Lists of all bird species, plant species and invertebrate species detected on the farm.
- Explanatory documents providing detailed information about modeling, datasets and terminology.
- Access to the customised Sensand Technologies® digital platform that houses a digital copy of the account, including a user interface to examine the accounts and results of individual rapid ecological assessments, plant surveys and bird surveys at point locations.
- Access to the Downforce Technologies® portal to view the results of the soil organic carbon assessments.



Natural Capital: Type and Condition Extent

The basis of the account is the Ecological Asset Register that captures the condition and extent of the natural capital assets present on a farm at the time of assessment. The power of natural capital accounts will be fully realised when the farm is re-assessed in the future and change in the condition and extent of the natural capital assets is demonstrated.



Components of the Accounts	Description
Ecological (natural capital) assets	Maps of the natural capital assets and an area-based asset account of ecosystem state based on a customised, whole of farm state-and-transition model.
Biodiversity assets	Maps and an area-based asset account of habitat for birds (all birds, woodland birds, grassland birds) and plants (all plants, all native grasses, native ground covers, native shrubs).
Ecosystem services	Maps and an area-based asset account of production areas receiving shade, wind protection (shelter), insect pollinator diversity, invertebrate decomposer abundance and invertebrate predator diversity.
Grazing assets (for livestock properties)	Maps and area-based asset accounts of grazing assets based on persistence, palatability and resilience of pastures.
Soil condition	Including maps and asset account of ground cover and soil organic carbon.
Environmental performance	Estimates of greenhouse gas emissions and carbon sequestration on the farm, and use of finite resources and waste produced.

More Information

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We acknowledge the Traditional Custodians of Australia and their continuing connection to land and sea, waters, environment, and community. We pay our respects to the Traditional Custodians of the lands on which we live and work, their culture, and their Elders past and present.

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Research Centre for Future Landscapes

In partnership with

