



Natural Capital Accounting

An Overview

March 2023





This brief was commissioned by NRM Regions Australia to provide those in the natural resource management (NRM) sector with an introduction to Natural Capital Accounting.

In the spirit of reconciliation, NRM Regions Australia acknowledges Traditional Owners of Country throughout Australia and recognises continuing connection to lands, waters and communities. We pay our respect to Aboriginal and Torres Strait Islander cultures; and to Elders past and present.

Natural capital

“Natural capital is the stock of renewable and non-renewable natural resources, (e.g. plants, animals, air, water, soils, minerals) that combine to yield a flow of benefits to people”
– Natural Capital Protocol, 2016.

Increasingly, governments, businesses, local communities, and the wider society are understanding the close connection and dependence that our economic and social systems have on nature. Framing nature as natural capital helps us to understand those connections and recognises that the successful management of nature must underpin our longer-term prosperity.

This framing is not new, but it has proved challenging to convert natural capital thinking into coherent and widely applied on the ground actions and responses. While some organisations and areas of government are making excellent progress applying natural capital thinking, these efforts need to be scaled up significantly to meet the size of the environmental, social and economic challenges that Australia currently faces.

Acknowledged barriers to progress are the lack of consistent and comparable information about different environmental contexts and the associated lack of a common language to exchange experiences and evaluate best practice. Establishing comparable information and a common language is particularly powerful for:

- measuring and communicating the outcomes of projects
- assessing the risks and opportunities arising from changes in nature, including as a result of climate change
- understanding, preparing for and engaging in emerging environmental markets
- looking at a spatial area and its surrounding landscape and understanding its direct and wider benefits – including both potential profitability and biodiversity outcomes.

This brief introduces the concept of natural capital accounting, the leading approach to overcoming these information and communication barriers. In Australia, support for natural capital accounting is evident in many places, including in the Australian Government’s 2018 strategy for its implementation and its more recent announcement of joint research with the United States on implementation of the United Nations System of Environmental-Economic Accounting (SEEA). Together with companion information sheets, this information sheet is designed to help NRM stakeholders understand and potentially participate in the rapid developments in natural capital thinking and measurement that are currently underway.

Natural capital accounting

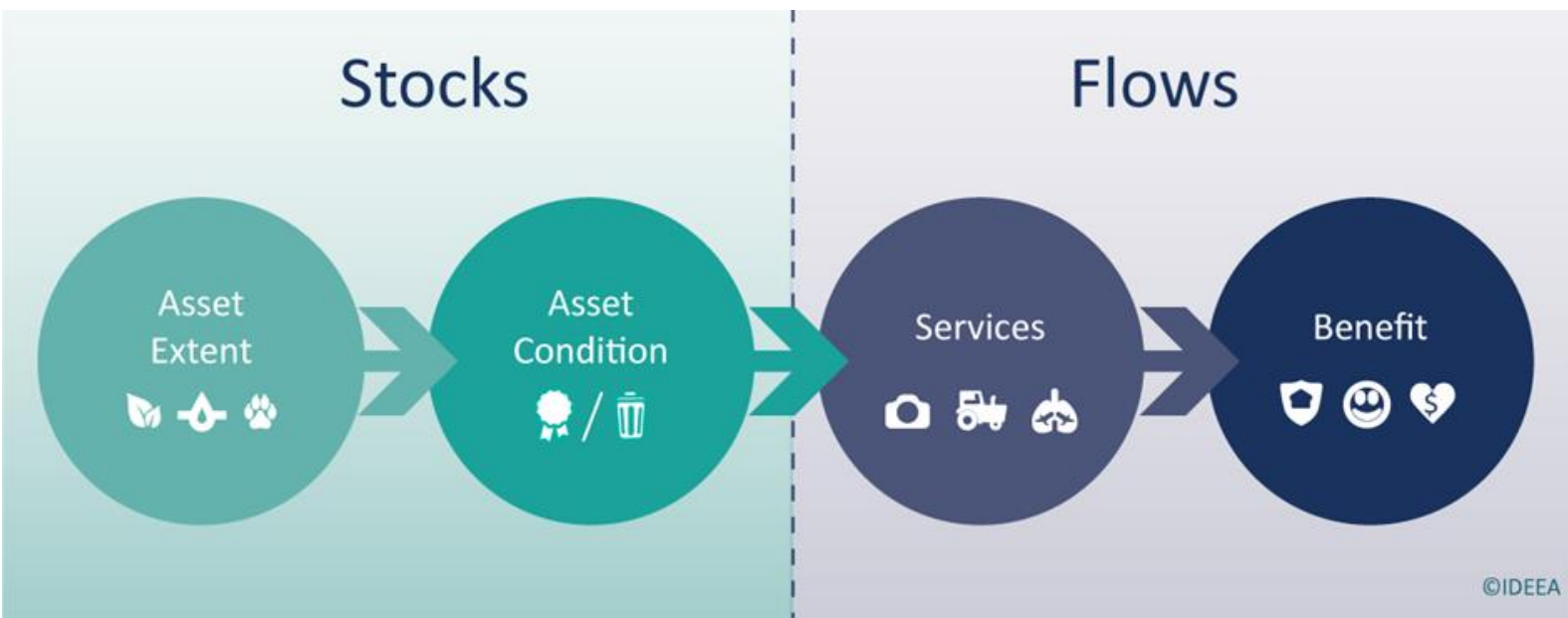
Natural capital accounting is a method for measuring the health and benefits of nature. At the heart of the method is recognising (i) that nature is an asset and (ii) that the extent and condition of that asset (the stock) underpins the flow of ecosystem services and benefits to the economy and society, both now and in the future.

Natural capital accounting goes hand-in-hand with natural resource management. It enables natural resource managers to consistently describe the changes in the quantity and quality of the stock of nature and communicate the breadth of benefits that nature provides to multiple stakeholders. A complete and comprehensive picture in a common language supports improved decision making that balances the objectives of increasing yields, earning incomes, and securing environmental outcomes.

How does natural capital accounting work?

Natural capital accounting uses traditional accounting methods. It records and organises data about the environment in a way that can be linked to standard economic and financial information. Natural capital accounting is sometimes referred to as environmental accounting or environmental-economic accounting. They all refer to approaches for systematically recognising the health and benefits of nature.

Knowing that an asset (the stock) provides services and benefits (the flows) is the key to understanding natural capital accounting. The connection between assets, services and benefits is depicted in the figure below. In summary, the extent (or size) of an ecosystem (such as a wetland, forest or cropland) and its condition or health underpins the flow of ecosystem services and benefits both now and in the future through providing clean air, fresh water, productive soils, pollination etc



Looking at nature in this way helps us to:

- Describe and understand our connection to, and reliance upon, nature
- Assess impacts and dependencies on nature with the aim of achieving nature positive
- Develop community and environmental resilience (by recognising social-ecological systems)
- Make sustainable decisions
- Understand and mitigate risk
- Invest wisely and increase profitability.

The significant advantage and beauty of the SEEA natural capital accounting framework is that it provides guidance on how a vast array of environmental and economic data can be brought together to paint a holistic picture. Natural capital accounting can accommodate the complexities and unique context of each location using a common language which, in turn, can be used to assess and communicate performance beyond standard economic and financial measures.

Natural capital accountants use agreed concepts, definitions, classifications and processes. The process summarised below is based on the United Nations (SEEA), the internationally agreed statistical standard for natural capital accounting.

At the same time, when entering the natural capital accounting space, people are confronted by a wide variety of different methods, initiatives, frameworks and tools. A complementary information sheet provides a guide to the most commonly known tools and materials and places them in context.

There are four steps to developing a set of natural capital accounts:

Step 1: Assess the asset

The first step is to consider nature as an asset – natural capital – and to delineate or map the different types of natural capital (wetlands, rivers, forests and cropland) present on a property, in a landscape or across a state. Each occurrence of a different type of natural capital constitutes a distinct asset.

Step 2: Record asset condition

Once we understand the type, location, configuration, and size of the assets, we need to record their condition – their ecosystem integrity. Using ecological data and the standard condition framework provided through natural capital accounting we can measure their condition and understand trends over time on a comparable basis.

Step 3: Assess the ecosystem services the assets are providing

Next, we ask about the ecosystem services the assets provide. The services may cover provisioning services (e.g. food, fibre, energy), regulating services (e.g. air filtration, erosion control, climate regulation, flood mitigation, water regulation, pollination) and cultural services (e.g. recreation, amenity, spiritual, education). In most cases, one asset will provide more than one service, for example a redgum might provide clean air, have hollows for wildlife, shade for cattle and store carbon. Using a combination of environmental and social data we can measure all of these services.

Step 4: Measure the benefits

Finally, we measure the benefits. For some assets, there will be financial benefits from nature, such as the income from harvesting wheat. But there will also be other benefits, like the long-term health benefits to the people in a community who are exercising on and around a lake and the benefits of storing carbon in trees to limit climate change impacts. Importantly, it is also necessary to recognise the cultural and spiritual connections to ecosystems and the related societal benefits arising from ‘non-use’ of ecosystems, such as the intrinsic value of conserving species and their diversity.

Advantages of natural capital accounting for regional NRM

NRM organisations and landholders already play a vital role in the management of natural capital. Using natural capital accounting provides a set of information that can be used to communicate the work that is being done and support implementing relevant activities more widely. In short, it gives NRM organisations and landholders a consistent and comparable way to tell their natural capital management story, especially to those stakeholders whose decision-making processes are embedded in the language of finance and economics. A set of common and agreed definitions and guidelines can be used to describe the assets that they have and the condition that they're in. NRM organisations and landholders can then demonstrate the services and benefits they are producing in partnership with nature in a way that allows them to compare their work to others. Further, natural capital accounts can be used to identify values for assets and calculate returns on investment in order to attract further investment.

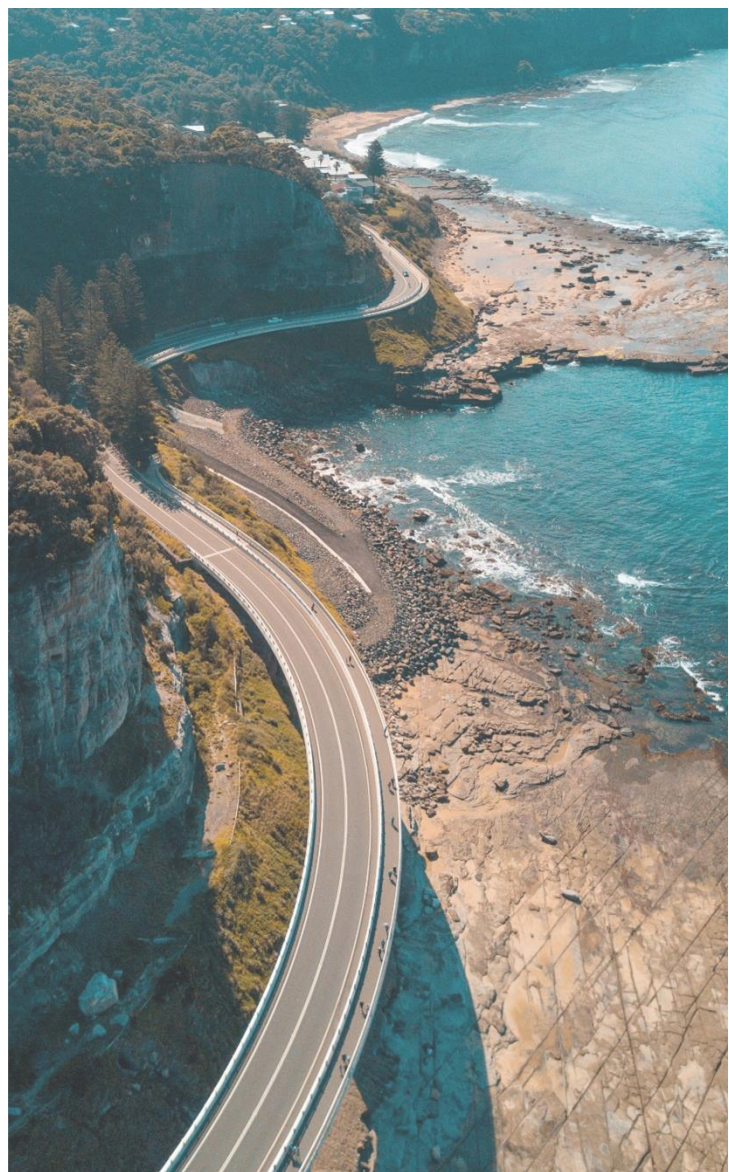
NRM organisations and landholders have the opportunity to use data and natural capital accounting methods to measure the outcomes they are creating and quantify the changes that are occurring in the landscape.

A particular challenge in recognising the benefits of nature is that people hold varied perspectives on the importance or 'value' of nature. Generally speaking, people's values concerning nature will reflect a combination of both (i) the protection and restoration of nature for future generations, and (ii) the use of nature to support our economies and societies. Since the framework used for natural capital accounting incorporates measurement of both stocks and flows, and uses data in both monetary and non-monetary terms, a wide range of information can be brought together. As a result, information relevant to different value perspectives can be found in a common source. A factsheet explaining the links between natural capital accounting and the measurement of different value perspectives provides more information.

Want to know more?

Download our information sheet on decluttering the natural capital space to help you understand the tools and methods for measuring the health and benefits of nature.

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