

# Ecosystem and Species Appreciation in S<sup>EEA</sup> EA

BfN Workshop:  
Economic Valuation of Biodiversity Wealth  
and Debt in National Accounting

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Recognise. Account. Decide.

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# SEEA Ecosystem Accounting framing

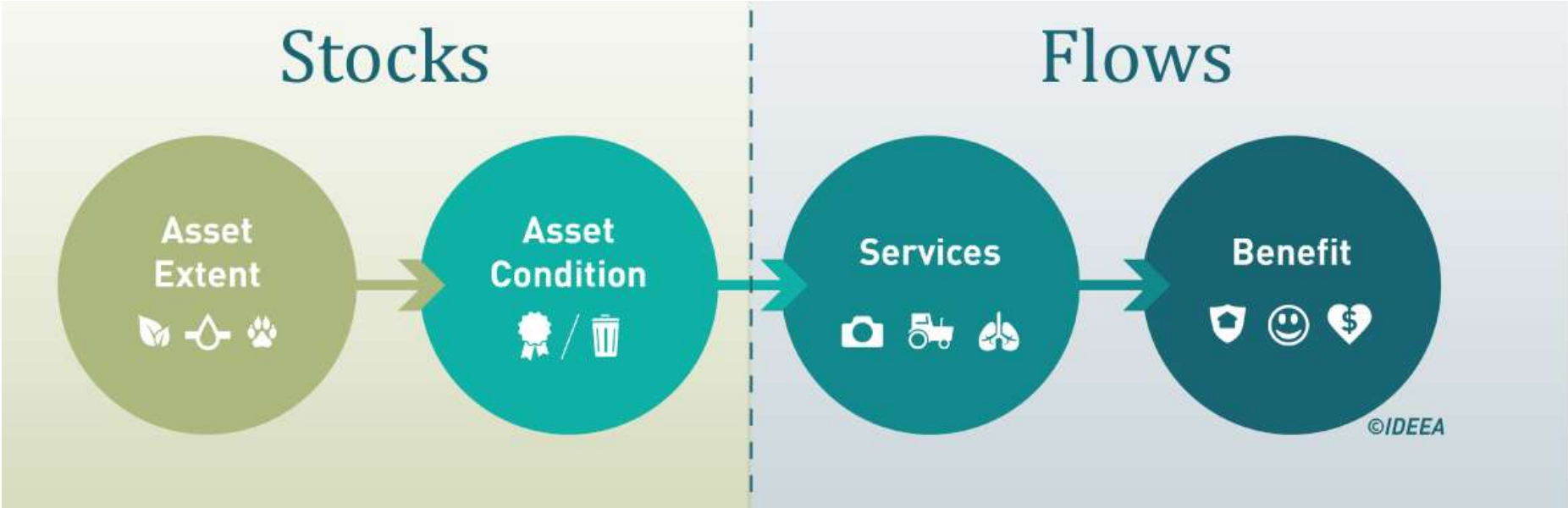
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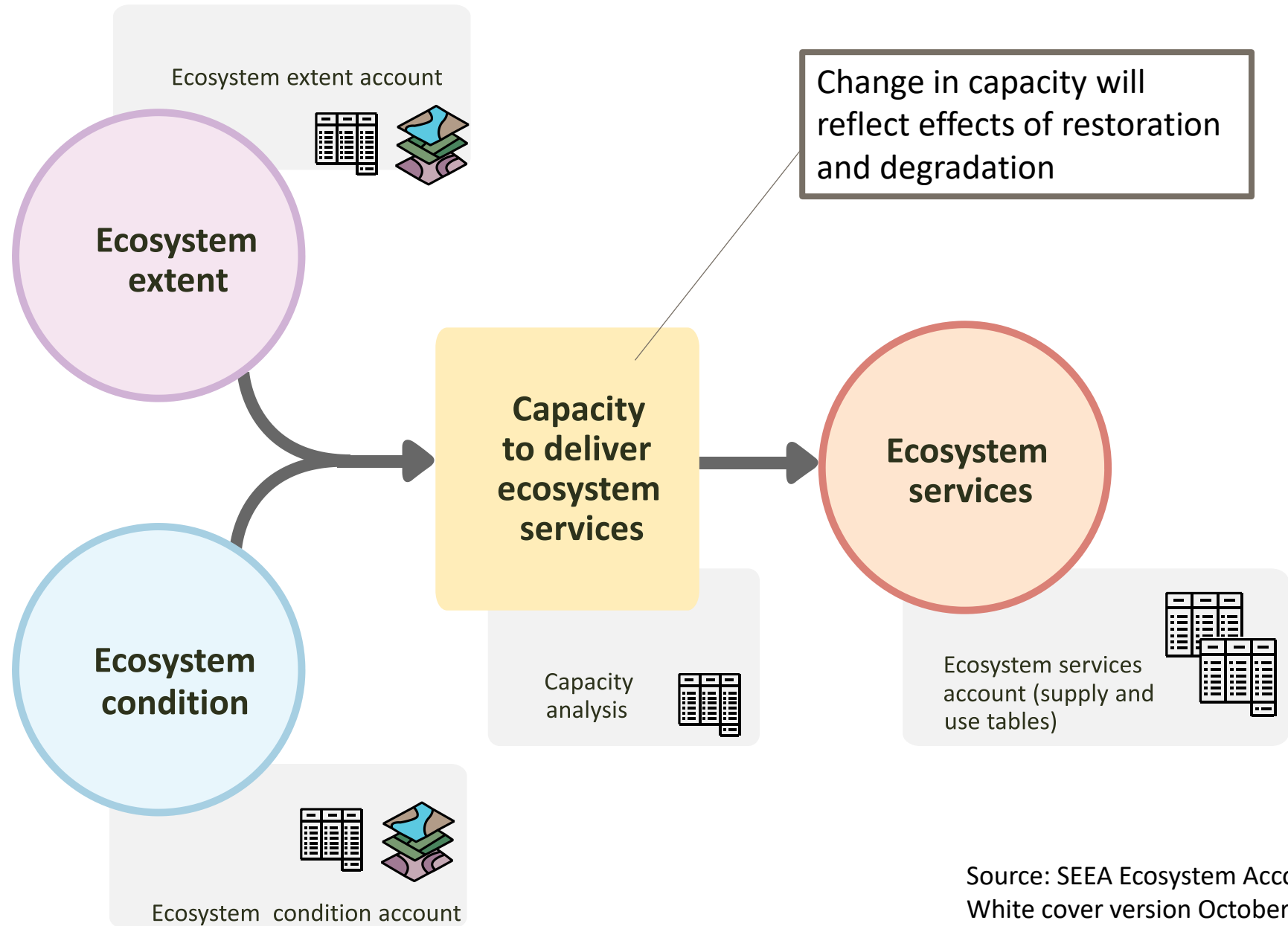


# Natural capital accounting – Core framework



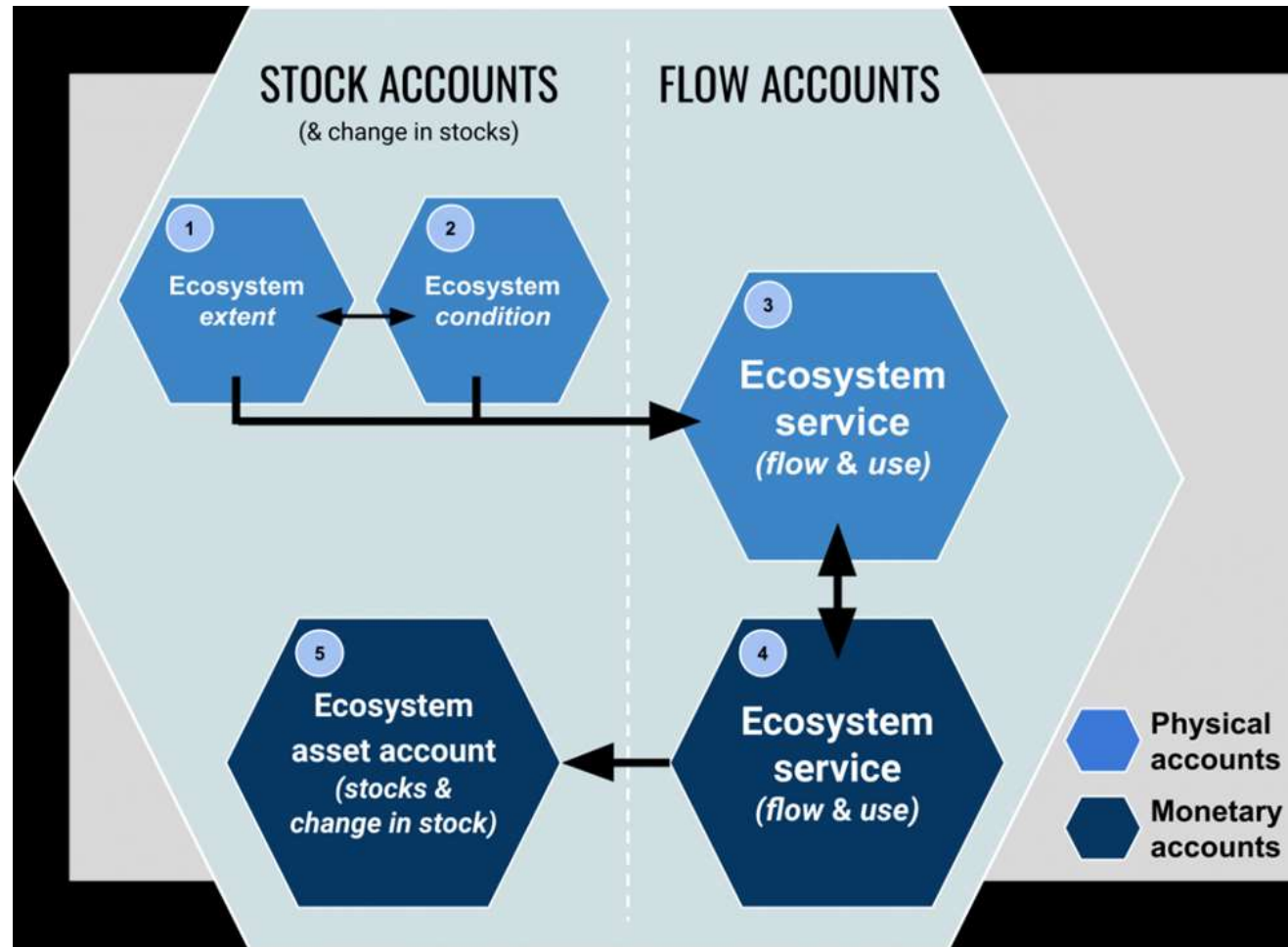
System of  
Environmental  
Economic  
Accounting





Source: SEEA Ecosystem Accounting:  
White cover version October 2021

# System of Ecosystem Accounts



Source: SEEA Ecosystem Accounting:  
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# How is biodiversity reflected in SEEA EA?

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# SEEA EA and Biodiversity

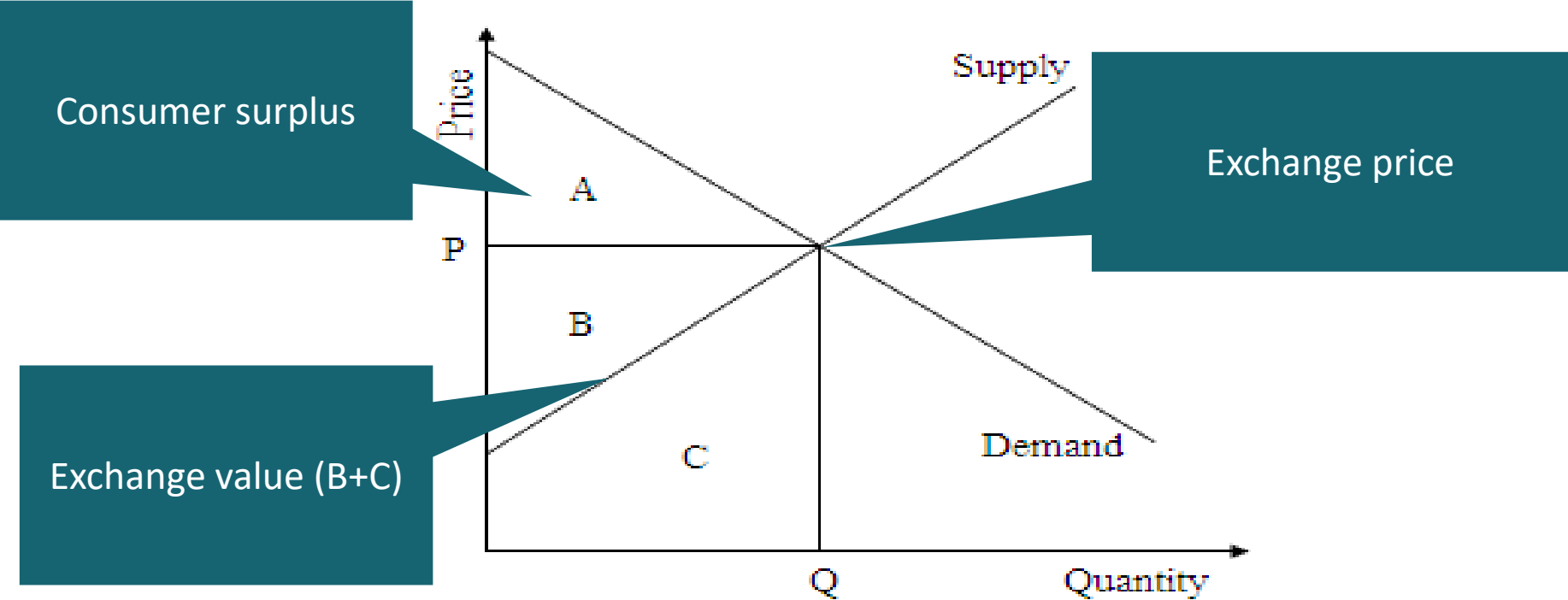
- Start from the CBD definition of biodiversity as reflecting the **diversity** of ecosystems, species and genes.
- In SEEA EA terms, biodiversity thus concerns the characteristics of a stock – of ecosystems, species or genes – it is not a flow. For example, ecosystems can become more or less diverse over time but this characteristic itself does not flow from ecosystems to people.
- Three key questions emerge:
  - What is the contribution of the diversity of a stock to flows of ecosystem services?
  - What data can accounts organize to support the discussion of biodiversity, how it is changing over time and its link to people and the economy?
  - What can SEEA EA say about the monetary value of biodiversity?

# Reflecting values in the SEEA EA

- Chapter 2 outlines the potential for SEEA EA to support discussion of multiple value perspectives including use and non-use values and intrinsic values.
- This requires accounting for both monetary and biophysical data.
- For monetary values focus on
  - Ecosystem services – “contributions of ecosystems to benefits received by people”
  - Ecosystem assets – the net present value of ecosystem services generated
- Ecosystem services require an exchange / transaction / connection to be evident between ecosystems and people. In economic value terms this implies:
  - Use values are included
  - Non-use values are not included – no exchange.



# Valuation concepts for SEEA EA



# Reflecting values concerning biodiversity in the SEEA EA

- Measurement of **ecosystem extent** will support measures of ecosystem diversity
- Measurement of **ecosystem condition** will commonly incorporate measures of species diversity and some ecosystem diversity (in terms of landscape characteristics) (Section 5.5.4). Condition data will reflect restoration activity. Links to concepts of ecological debt depending on baseline/reference condition.
- Measures of **ecosystem services** (and their use values) will inherently reflect the contribution of diversity of ecosystems, species and genes (Section 6.3.3)
- **Ecosystem and species appreciation flows** incorporated in SEEA EA to allow compilers to record data on the non-use values that people hold wrt ecosystems and species (Section 6.3.4). Data could concern presence, absence, abundance or diversity of ecosystems and species. These flows are not ecosystem services.
  - Non-use values cannot be transacted between people
  - Non-use values reflect a value attributable to a stock (e.g. an ecosystem asset) – (Section 12.2.2)
- **Restoration costs** can be recorded following the SEEA Central Framework

# Conclusions

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# Key messages

- Information about biodiversity is reflected in various places in the SEEA EA system.
- Focus is on the organization of data in biophysical terms
- Ecosystem and species appreciation flows are a placeholder for data on non-use values. They are not ecosystem services in an SEEA EA context.
- SEEA EA recognizes non-use values as relevant but not within the valuation concept of exchange values used in the SEEA EA (and SNA)

# Thank you

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# About IDEEA Group

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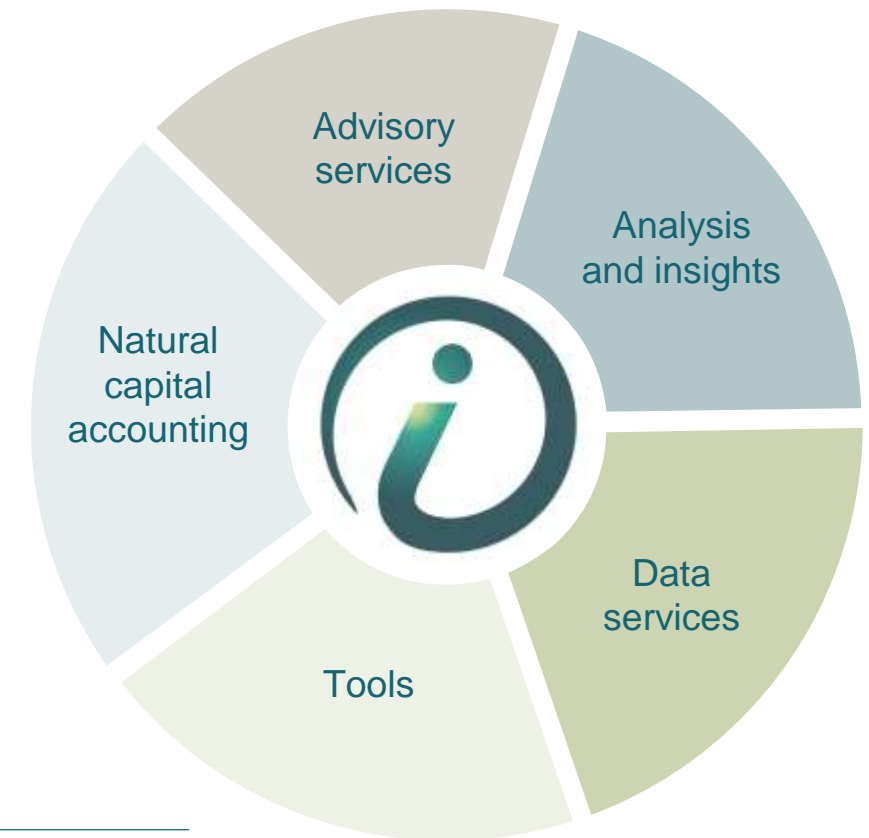


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-  Authors of the SEEA
-  Supporting governments and organisations around the world
-  Natural capital software – Data4Nature
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## IDEEA Group

IDEEA Group is a Melbourne-based firm with a team of expert economists, environmental accountants, and national accountants. The team brings together expertise in a range of disciplines including environmental markets, the design and implementation of measurement frameworks, environmental valuation, spatial analytics, sustainability, and risk management. IDEEA Group operate at the nexus of economics, ecology and accounting and realise the importance of employing a multi-disciplinary approach to solve complex problems.

IDEEA Group are world renowned experts in the development and production of environmental-economic accounts using the United Nations' System of Environmental-Economic Accounting (SEEA). IDEEA Group Principals have over 20 years of experience in natural capital thinking and are at the leading edge of conceptual and practical advances in ecosystem accounting.

# Thank you

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