



# Natural Capital Explained

*What is this jargon  
and why does it matter?*



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NESAAG Rural Forum

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# Aims

A quick scamper through...

- Definition of 'Natural Capital'
- Rationale for its use
- Policy relevance
- Developments at farm level
- Some future developments



Slides will be shared afterwards so include some links for further information



- I am a senior researcher in the Social, Economic and Geographical Sciences (SEGS) Department at the James Hutton Institute
- I work on environmental governance (knowledge and decision-making) especially in catchment management and conservation projects

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# Ecosystem Services

Ecosystem services are the benefits provided by ecosystems that contribute to making human life both possible and worth living

UKNEA (2011). *UK National Ecosystem Assessment.*, Defra.  
<http://uknea.unep-wcmc.org/>



**Provisioning services:** The products obtained from ecosystems.

For example,

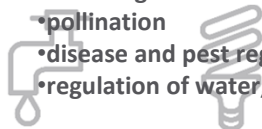
- food
- fibre
- fresh water
- genetic resources



**Regulating services:** The benefits obtained from the regulation of ecosystem processes.

For example,

- climate regulation
- hazard regulation
- noise regulation
- pollination
- disease and pest regulation
- regulation of water, air and soil quality



**Supporting services:** Ecosystem services that are necessary for the production of all other ecosystem services.

For example,

- soil formation
- nutrient cycling
- water cycling
- primary production



**Cultural services:** The non-material benefits people obtain from ecosystems.

For example, through

- spiritual or religious enrichment
- cultural heritage
- recreation and tourism
- aesthetic experiences



# Natural Capital (NC)

- Stocks of renewable & non-renewable natural resources (including geology, soil, air, water)

“an approach to economically value the contribution of nature to the provision of ecosystem services (ES) as key factors of human-wellbeing.”

*Ovando (2021). Natural capital accounting approaches for land-based activities, The James Hutton Institute*  
[hutton.ac.uk/sites/default/files/files/Approaches%20for%20naturalCapital%20Accounting-MYNA\(1\).pdf](https://hutton.ac.uk/sites/default/files/files/Approaches%20for%20naturalCapital%20Accounting-MYNA(1).pdf)

- Focus is on valuing stocks, not (solely) on flows of ecosystem services







# Rationale for NC

- Concern that our natural resources are *still* being degraded...
  - If we better recognise and (ac)count for our stocks of natural resources, we are more likely to act to preserve their value
- Concept of ‘natural capital’ can fit well with other types of capital already routinely considered
  - Especially, hope that it will embed sustainability in planning by private sector organisations

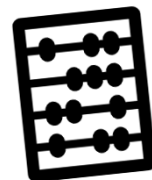


<https://capitalscoalition.org/capitals-approach/>



# Policy influence & relevance

2 distinct families of accounts, one aimed at business (more later) and the other on national accounting.



National accounts:

- Scotland has been busy, tracking capacity of ecosystem to support people (non-monetary) as part of National Performance Framework (<https://www2.gov.scot/About/Performance/scotPerforms/indicator/naturalcapital>) and calculating Scottish Natural Capital accounts ([www.gov.scot/publications/scottish-natural-capital-accounts-2021/](http://www.gov.scot/publications/scottish-natural-capital-accounts-2021/)) Higgin's report on a well-being economy called for NC to support a shift to a well-being economy.
- UK-wide interest ([www.ons.gov.uk/economy/environmentalaccounts/methodologies/naturalcapital](http://www.ons.gov.uk/economy/environmentalaccounts/methodologies/naturalcapital) )
- Also EU and beyond: e.g. all EU member states will soon need to report on NC to EuroStat, UN standard on Accounting





# Policy influence & relevance

- Public sector cost-benefit appraisals,
- RLUPs – being asked to take a Natural Capital Approach
- Applications for public sector funding for specific projects incl ‘nature-based solutions’

“Supplementary guidance to the Green Book covering the consideration of natural capital and environmental impacts in policy appraisal”.

<https://www.gov.uk/government/publications/green-book-supplementary-guidance-environment>



# Policy influence & relevance

## ■ Agricultural policy

- England's post-Brexit Environment Land Management Scheme (ELMS)
- 'Stability and simplicity' is currently the focus in Scotland, but similar exploration of these issues (see [www.nature.scot/professional-advice/land-and-sea-management/managing-land/agriculture-and-land-use-policy-development](http://www.nature.scot/professional-advice/land-and-sea-management/managing-land/agriculture-and-land-use-policy-development))



Gawith, D. and Hodge, I. (2019). Focus rural land policies on ecosystem services, not agriculture, *Nature Ecology & Evolution*, 3(8), 1136-1139. <https://doi.org/10.1038/s41559-019-0934-y>

# Influence beyond usual suspects

- Scottish Forum for Natural Capital
  - £1 billion challenge by SEPA & SWT
  - 9 pillars



# Influence beyond usual suspects

## Accounting protocols for businesses

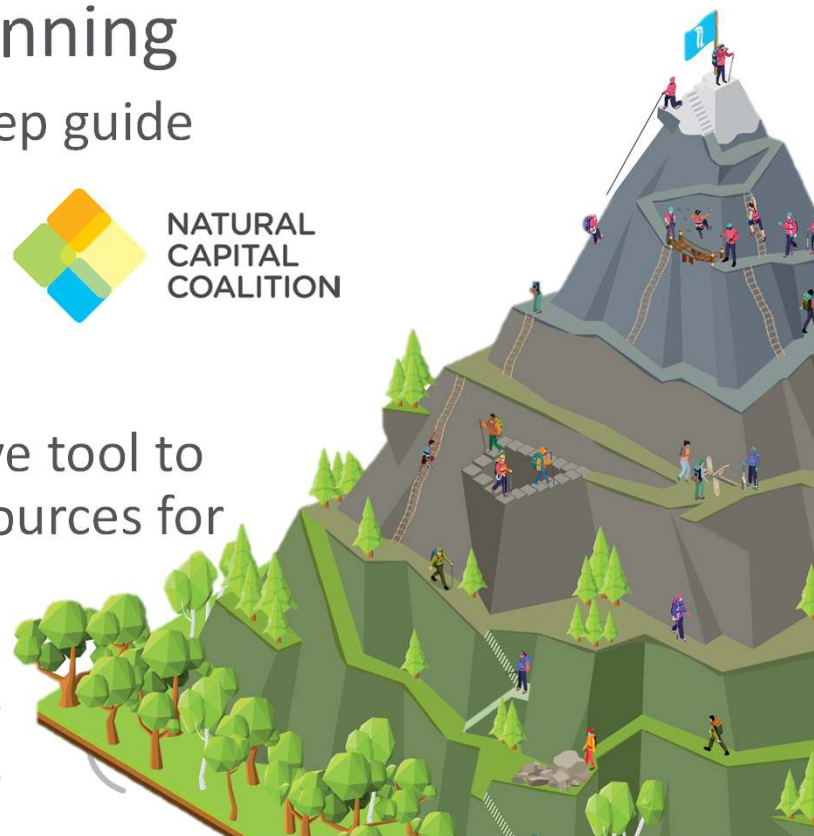
- Good mix of examples at <https://www.business-biodiversity.eu/en/natural-capital>

## Guidance on how to use in planning

- “*Natural Capital Protocol*” a step by step guide for business to explore impacts and dependencies on natural capital.  
<https://capitalscoalition.org/capitals-approach/natural-capital-protocol/>
- “*Natural Capital Journey*” an interactive tool to identify likely barriers and identify resources for overcoming those barriers.  
<https://journey.wevaluenature.eu/>



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# Developments at estate & farm level

- Efttec briefing for RSA Food, Farming and Countryside commission proposed that accounting should be feasible for farms  
[www.thersa.org/globalassets/images/projects/ffcc/nca-for-farms-eftec-rsa-240619.pdf](http://www.thersa.org/globalassets/images/projects/ffcc/nca-for-farms-eftec-rsa-240619.pdf)
- Detailed exploration of the potential and effects of applying the Natural Capital Protocol to a land-based business:  
[www.hutton.ac.uk/research/projects/application-natural-capital-protocol-glensaugh-farm](http://www.hutton.ac.uk/research/projects/application-natural-capital-protocol-glensaugh-farm)
- NatureScot's farmer-led pilots, as part of NCAPP:  
[www.nature.scot/professional-advice/planning-and-development/social-and-economic-benefits-nature/natural-capital/pilot-programme/ncapp-farmer-led-projects](http://www.nature.scot/professional-advice/planning-and-development/social-and-economic-benefits-nature/natural-capital/pilot-programme/ncapp-farmer-led-projects) Phase 1 established feasibility: phase 2 currently starting, will explore affect of different levels of guidance, practically how to set up e.g. how to structure and monitor schemes.

In future, demonstrating stewardship of natural capital may be taken into account by lenders & investors, as well as public sector.



# Future directions and questions

## ■ Questions

- What kind of data do we need and is feasible to access?
- Policy can't do it all, but if/how can it enable other sectors?

## ■ Worries

- Disquiet at fitting nature into markets & economic rationalities
- Need to collaborate, esp. locally
- Must recognise complexity of natural systems, multiple views, (incommensurate) values

*Holmes & Cavanagh (2016). A review of the social impacts of neoliberal conservation: Formations, inequalities, contestations, Geoforum, 75, 199-209.*

<http://dx.doi.org/10.1016/j.geoforum.2016.07.014>



# Future directions and questions

## ■ Future research and pilots

- 
- Future Scottish Government Research (SRP) 2022-2027 – 6 projects on natural capital (modelling, valuing, working with policy, project and investor decision-making), also linked with work on 'Nature-Based Solutions'
  - UKRI research on valuing natural capital
  - NatureScot 'NCAPP' <https://www.nature.scot/professional-advice/planning-and-development/social-and-economic-benefits-nature/natural-capital/scotlands-natural-capital-pilot-programme-ncapp>
  - Lots of other initiatives in Ireland and Europe, especially to improve valuation and accounts but also trying out in decision-making.

Will NC actually make a difference? If so, what, how, for whom? How can existing datasets best help us? Will this be go beyond 'just' carbon? What new data do we need? Will NC really help embed sustainability? ...

**Many unanswered questions but nevertheless Natural Capital is becoming a common term & achieving influence – worth attention.**





# Thanks

- I don't know all the answers but am happy to field questions or pass on to colleagues who may know the answer. Developing understanding of natural capital is an interdisciplinary endeavour and a work in progress!
- Much of our work on this has been supported by the Scottish Government's RESAS Strategic Research Programmes 2016-21, 2011-16, and 2006-11; also by the Macaulay Development Trust and Horizon 2020 projects.
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