

# Natural capital – risks & opportunities



giving  
nature  
a home

# Talk outline

- 1. What is natural capital?**
- 2. Some important points to be aware of**
- 3. A natural capital account of the RSPB's reserves**
- 4. Examples of land-use changes which typically provide overall benefits to society & increase the value of natural capital**



# Natural capital and nature conservation: an introductory guide

Katharine Bolt and Malcolm Ausden

Natural capital is a term being increasingly employed by government, business and conservation organisations. In this article, we highlight how the natural-capital approach can be used to strengthen the case for investment in nature conservation, as well as the potential risks of using it.

Over recent years, our understanding of the importance of a healthy natural environment for our economic and social wellbeing has significantly increased. Despite this, wildlife continues to decline. The reason for this paradox is our economic system, which fails to reflect either the full costs of environmental degradation or the full value of the benefits that nature provides.

The natural-capital (NC) approach seeks to remedy this by highlighting the range of nature's values to people (see Box 1). NC is gaining recognition, for example as a central theme in the Government's 25 Year Environment Plan and through other recent initiatives, including the Clean Growth Plan and the National Infrastructure Assessment for England. It is also resonating with business. If widely adopted via regulation, guidance, public policy support and voluntary compliance,

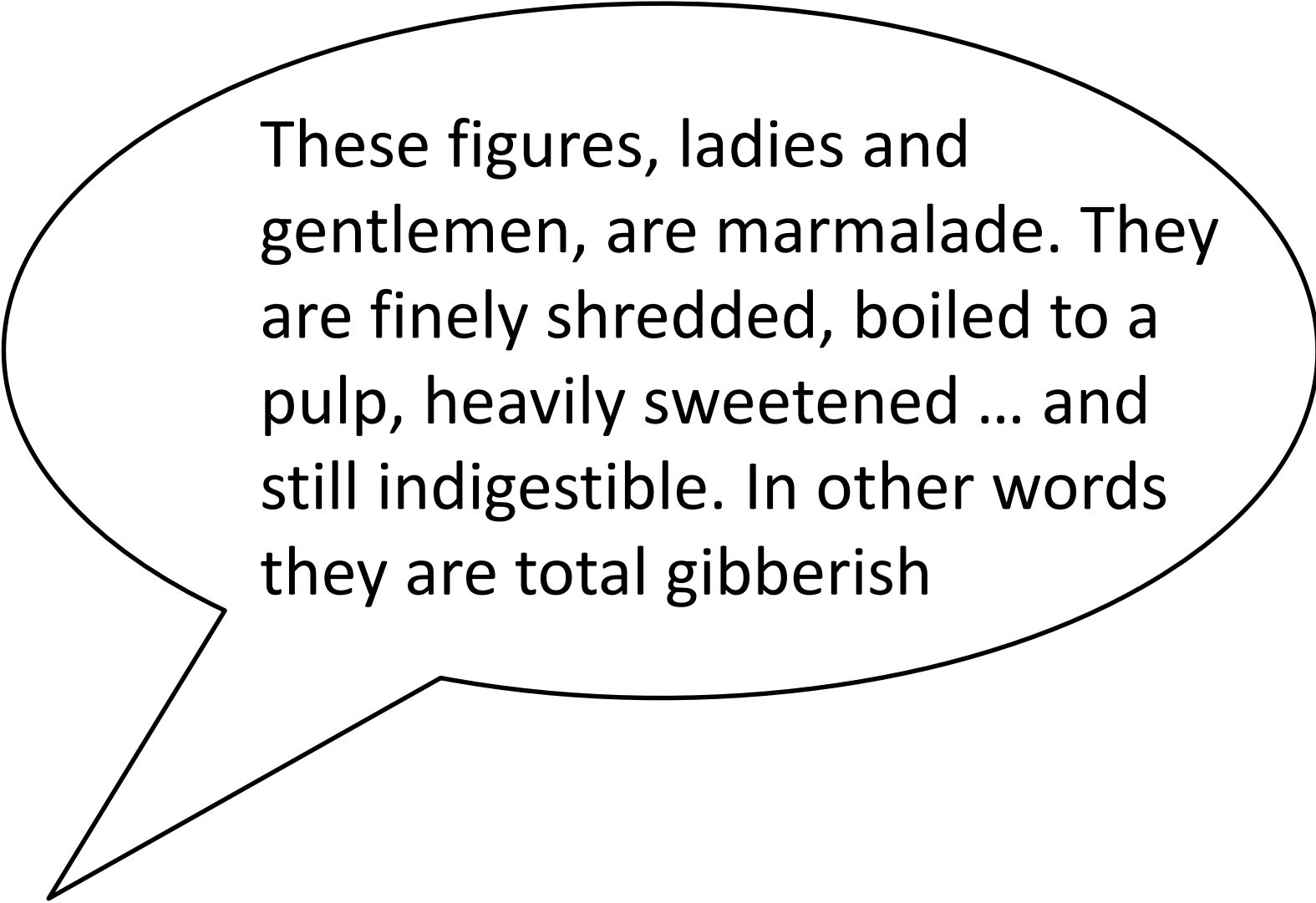
NC has the potential to deliver huge benefits for nature and people, as well as to underpin a resilient and successful economy. If incompletely or incorrectly applied, however, it could also present risks to nature conservation.

## Natural-capital accounting

At the heart of an NC approach is NC accounting, a rapidly developing tool. Accounts prepared on this basis include information on the societal impacts of nature's management, as well as the

**Above** There is good evidence that creating intertidal habitat on ex-agricultural land, such as here, at the RSPB's Wallasea Island Wild Coast, can provide overall benefits to society. Although it reduces agricultural production, the habitat created can benefit wildlife and the climate, reduce flood risk, provide nursery areas for commercially important fisheries, and increase the recreational value of the area. Jeff Kew


# The natural capital approach



These figures, ladies and gentlemen, are marmalade. They are finely shredded, boiled to a pulp, heavily sweetened ... and still indigestible. In other words they are total gibberish



# The natural capital approach



We will also set gold standards in protecting and growing natural capital – leading the world in using this approach as a tool in decision-making

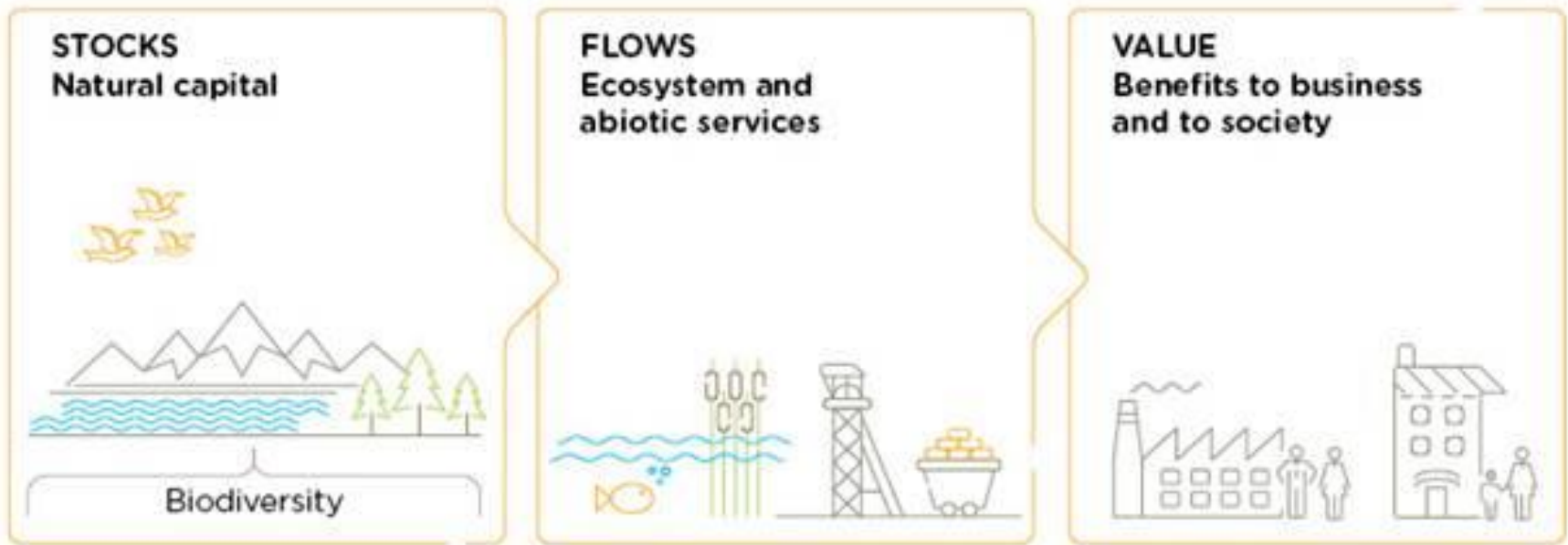
# So what is Natural Capital?

The stock of the world's living and non-living natural resources, including:

- Soils
- Water
- The atmosphere
- Ecological communities
- The natural processes that underpin their functioning

# Natural capital accounting

- Financial accounts usually report the monetary costs & benefits of an activity to the individual/organisation
- Natural capital accounts seek to highlight the full costs and benefits of an activity on the state of natural capital



*Reproduced from the Natural Capital Protocol, 2016*

- *Provisioning Services* e.g. food & fresh water
- *Regulating Services* e.g. climate regulation, floodwater attenuation & water purification
- *Cultural Services* - non-material benefits such as spiritual and religious benefits, recreation and ecotourism
- *Supporting Services* – services which nature provides that are necessary for the production of other ecosystem services e.g. soil formation & pollination



**Three important points to be aware of with natural capital accounting....**

# 1. The value of the ecosystem service benefits that an area provides can depend greatly on location





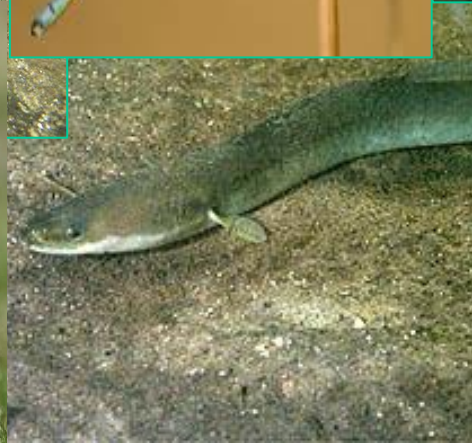


**2. There can be trade-offs.** These can include trade-offs between maximising ecosystem service benefits & maintaining/benefitting biodiversity





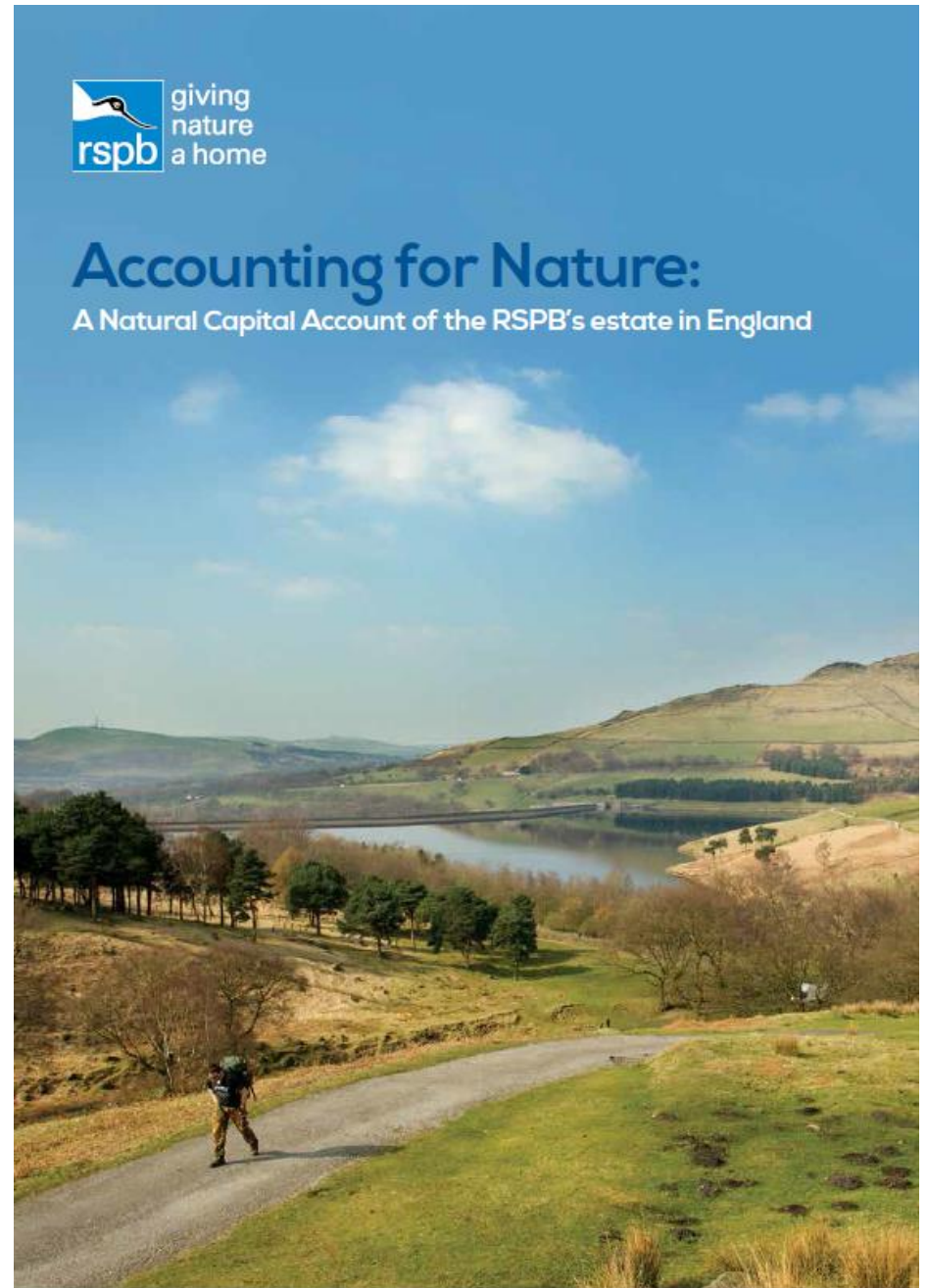
### 3. The full value of biodiversity is under-estimated in natural capital accounts





# A Natural Capital account of the RSPB's reserve network in England

<https://www.rspb.org.uk/globalassets/downloads/documents/positions/economics/accounting-for-nature.pdf>





## Nature's goods and services

	Climate regulation	Reliable flows of clean water	Reduction in flood risk	Production of biomass	Recreation	Production of food	Landscape, aesthetic & cultural value	Wildlife	Benefits to volunteers	Education
<b>Financial account</b>				✓✓	✓	✓✓				
<b>Natural capital account</b>	✓✓		✓	✓✓	✓✓	✓✓			✓✓	

# The effects of habitats & their management on the climate – some key points

- Determined by estimating the habitat's greenhouse gas flux
- Most habitat management for conservation in itself is bad for the climate
- 'Dry' semi-natural habitats, undrained peatlands & saline habitats generally produce a net cooling effect on the climate, while eutrophic wetlands can produce a net warming effect
- Agriculture produces a net warming effect



# Valuing biodiversity in natural capital accounts

*The approach advocated by the NC Committee is:*



If land management falls short of achieving a minimum level of maintaining the stock of biodiversity, then the cost of measures within the control of the organisation that are required to remedy this shortfall are reported in the natural capital account as a liability (i.e. as a cost)

# **The RSPB's commitment to the biodiversity component of natural capital on its reserves**

- 1) There are no RSPB-managed Sites of Special Scientific Interest for which the RSPB is responsible for the cause of unfavourable condition
- 2) That breeding populations of priority bird species are at least maintained (and hopefully increased) on its reserve network

**A natural capital account of the  
RSPB's reserve network in England  
(values in £m, costs shown in parentheses)**

	<b>Private (RSPB)</b>	<b>External</b>	<b>Total</b>
Discounted sum of <b>benefits</b>	41	1,031	1,072
Discounted sum of maintenance <b>costs</b>	(448)	(80)	(528)
<b>Total</b>	<b>(407)</b>	<b>951</b>	<b>544</b>

**Examples of changes in land-use  
which typically provide overall  
benefits to society (i.e. which increase the  
value of the stock of natural capital)**



# Conversion of arable to intertidal habitat

- **Agricultural production**
- **Flood risk management**
- **Commercial fisheries**
- **Climate regulation**
- **Recreational value**

e.g. MacDonald *et al.*, 2017  
*Estuarine, Coastal & Shelf  
Science*



*RSPB Wallasea Island Wild Coast, Essex*

# Creation of wetlands on ex-arable or agriculturally improved grassland, which reduce flood risk

- **Agricultural production**
- **Flood risk management**
- **Climate regulation**
- **Recreational value**



*The Ouse Washes, Cambs/Norfolk*

e.g. Peh *et al.*, 2014. *Ecosystem Services*

# Re-wetting drained peatlands

- **Agricultural production from sheep farming**
- **Climate regulation**
- **(Flood risk management)**
- **(Reduction in water treatment costs)**



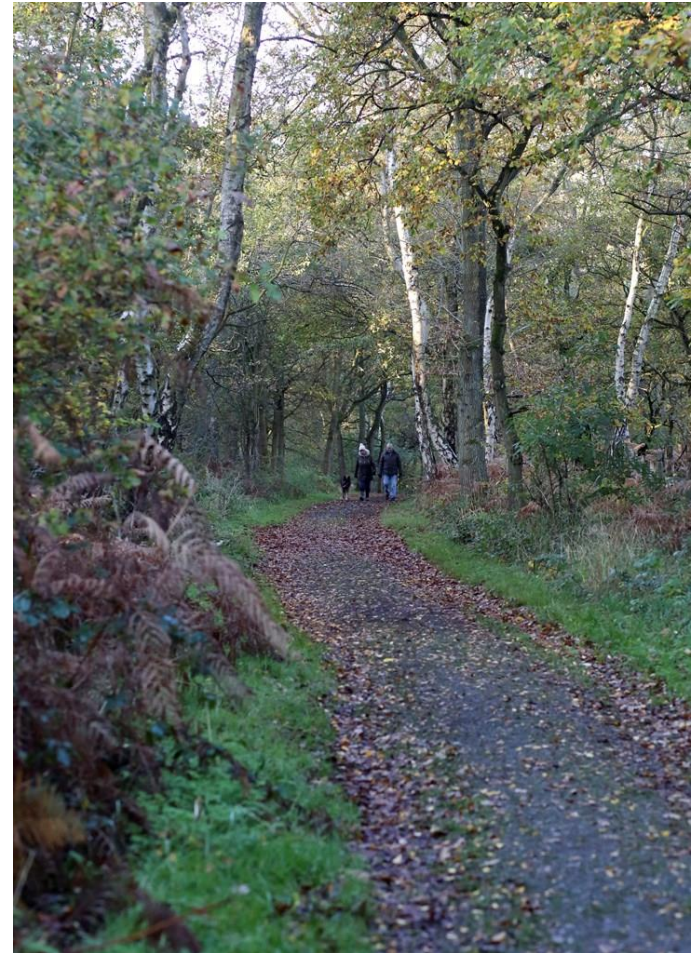
*Dove Stone, Derbys*

e.g. Morison *et al.* (2010) Forest Research and Lindsey *et al.* (2010) Unpublished RSPB report



# Creating woodlands on ex-arable or improved grasslands near centres of population

- **Agricultural production**
- **Climate regulation**
- **(Flood risk management)**
- **Recreational use**



e.g. Natural Capital Committee (2013)

# Conclusions

- If applied well, adopting the natural capital approach could help deliver big benefits for both nature & people
- But there are also big risks for conservation if wildlife is not sufficiently taken into account
- Good evidence that recreating various types of semi-natural habitat can provide overall benefits to society & increase the value of natural capital

**Thank you!**

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