

# Policy uses of Natural Capital Accounts - UK experience

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*A personal view of the Natural Capital Accounts user landscape*

# Background

- UK commitment to ‘put natural capital onto the nation’s balance sheet’ (Environment White Paper 2011)
- Roadmap to 2020; Government commitment reconfirmed in 25 Year Environment Plan (2018); post 2020 resources pending the 2020 Spending Review
- Emphasis initially on valuation and national level accounts; 25 Year Plan has also put focus on condition of natural assets
- Joint Environment Ministry/  
National Stats Office  
programme managed by  
inter-department Steering  
Group, with Natural Capital  
Committee members



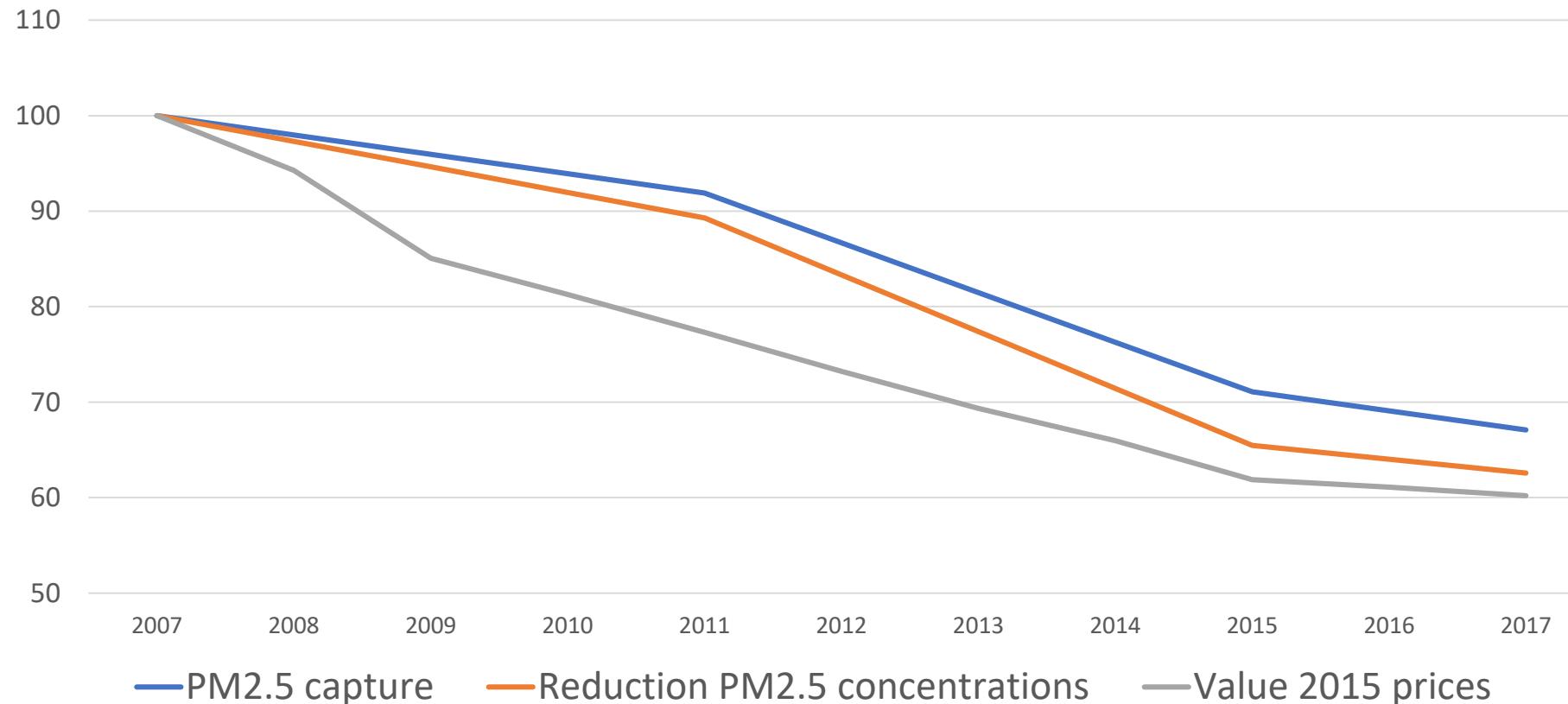
# The theory

- We are all dependent upon our natural resources – the value must be huge!
- Recording the value in the nation's balance sheet will tell us whether we are managing our natural capital sustainably
- Degradation is the loss of natural capital, it should be revealed by changes in the value of the stock
- The accounts should also record the cost of maintenance and restoration – the ecological debt

# The practice

- The total value is nothing like big enough, even allowing for partial coverage and different valuation approaches
- The relationship between the asset value – based on the net present value of future services – and the condition of natural assets is not linear
- There is no clear guidance yet on how to record degradation in monetary terms, but we know it's not a trivial process – and the year on year changes will be small
- We have no idea what 'restoration' means for the bulk of our natural capital

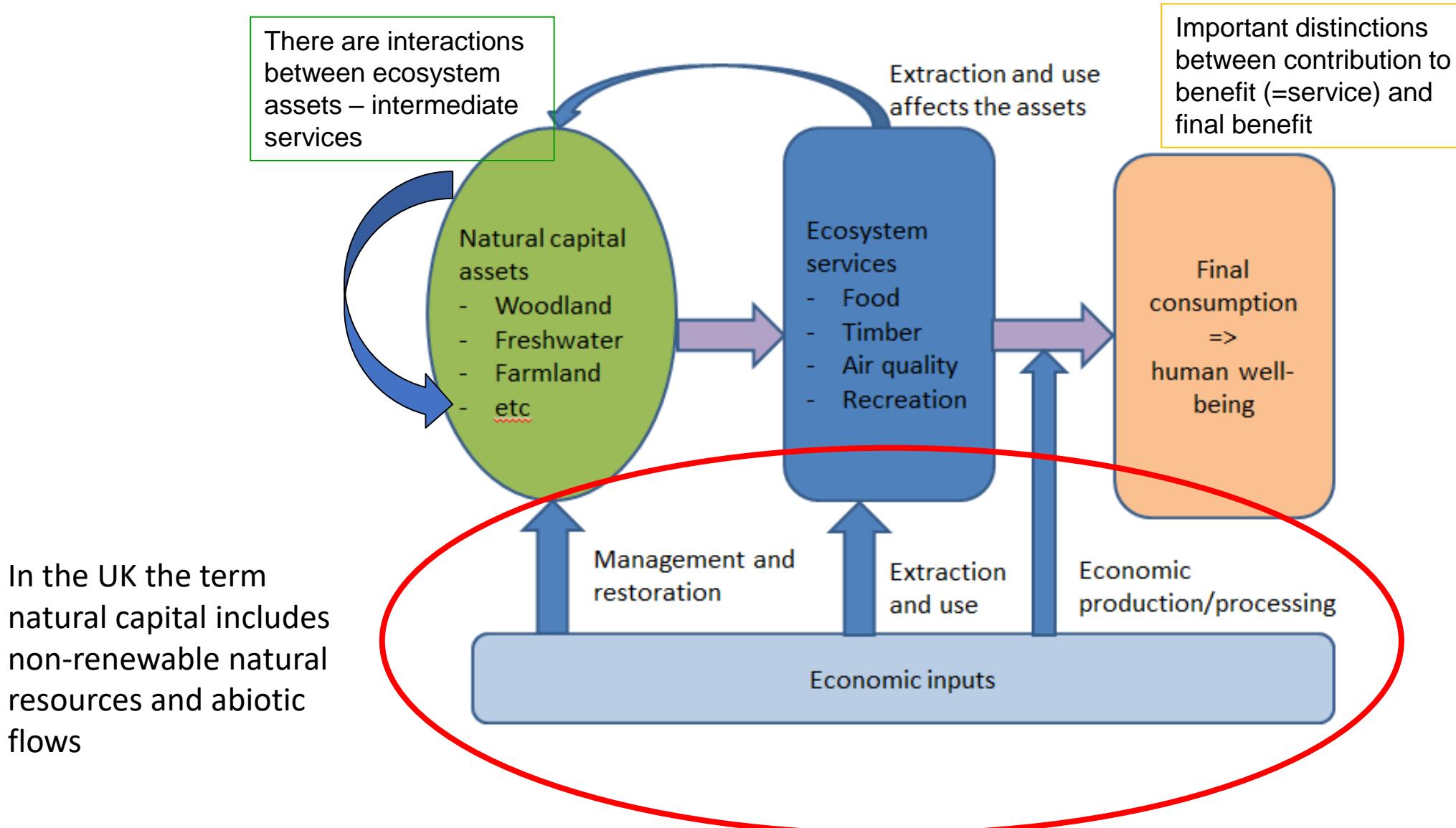
# UK air filtration service physical flows and monetary values for urban areas (2007=100)



Source Office for  
National Statistics

*Supply side changes not modelled as they make little difference to service flows: change is mainly driven by demand side factors and income growth*

# So what are natural capital accounts about?



# Conceptual basis

Extensions of conventional accounts to natural capital using national accounting concepts

- **Stocks and flows:**
  - Stock of assets at a point in time (wealth)
  - Flow of services consumed each year (supply / use)
- **Physical and monetary**
  - Allows for balanced sustainability and wealth perspectives

Spatial detail also important



# Benefits of an accounting approach

- Consistent, rigorous and comprehensive framework in which to understand relationship between the environment and the economy/society
- Incorporates systematic classifications and definitions
- Enables regular (annual) updates
- Not just supply of services - users and beneficiaries are a key part of the accounts
- Monetary values shed light on the importance of non-market services and provide a common metric

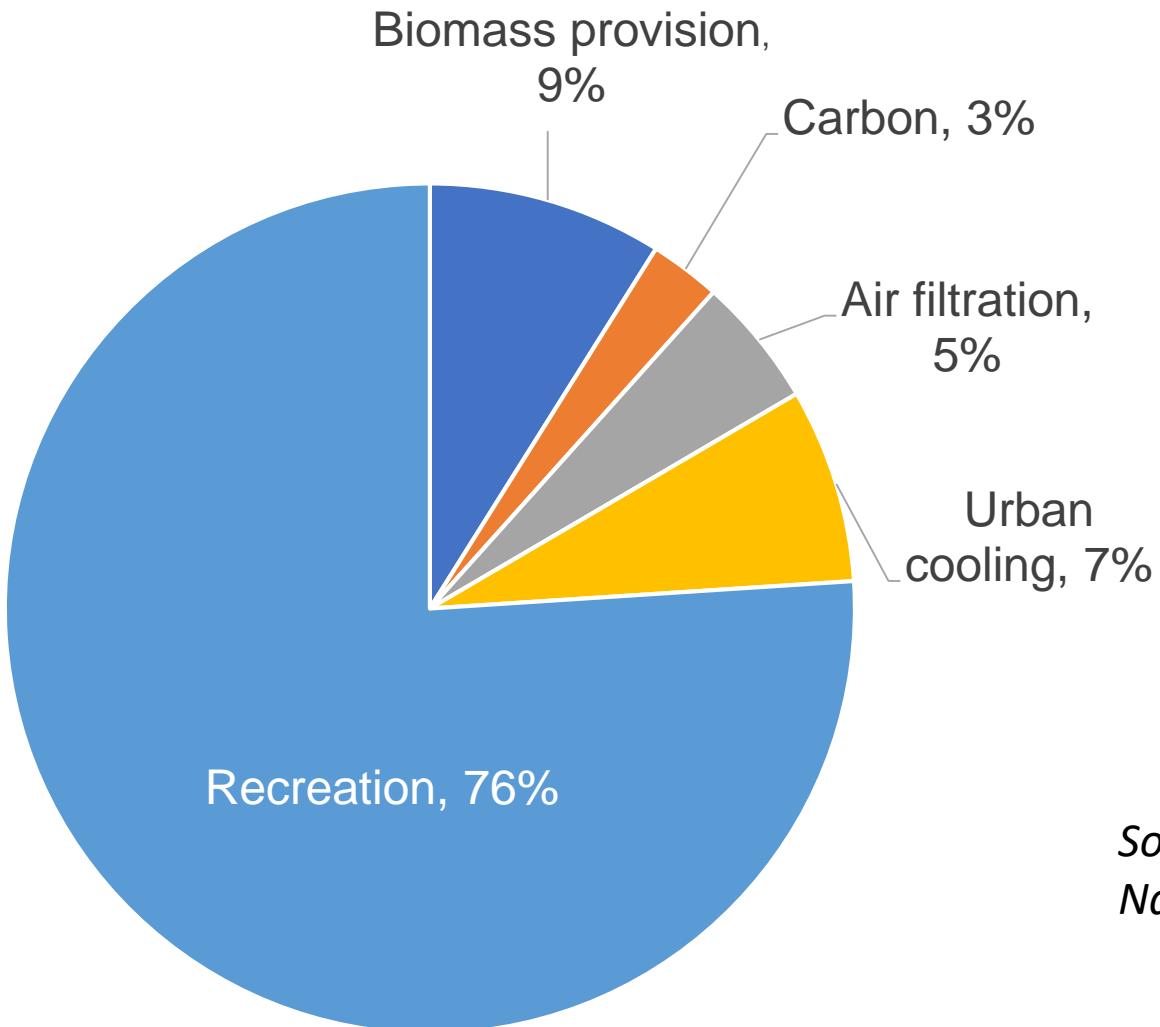
# Leading to ... better decision processes and better informed decisions

- **Foundational:** embedding rigour in analyses of the relationships between the environment and the economy/society
- **Walking the talk;** supporting and enabling sub-national applications
- **Awareness raising** – highlighting the importance of non-market services
- **Communication:** enabling analysts of different disciplines to understand each other better
- **Advocacy:** justifying the need to protect and restore natural capital

# Natural capital accounts for urban areas

- Urban areas 8% of UK land area
- Cash-strapped local councils can save money by cutting down street trees and selling off urban parks
- Some evidence of what would be lost but nothing systematic
- So the UK national level accounts focused on the value of services which might not be covered by accounts for more natural areas
- They also emphasised the need to have ‘non-ecological’ indicators of asset condition

# Ecosystem services flows in urban areas in the UK: percentage shares of monetary values (2017 prices)



NB Flood protection and  
amenity values not yet  
included

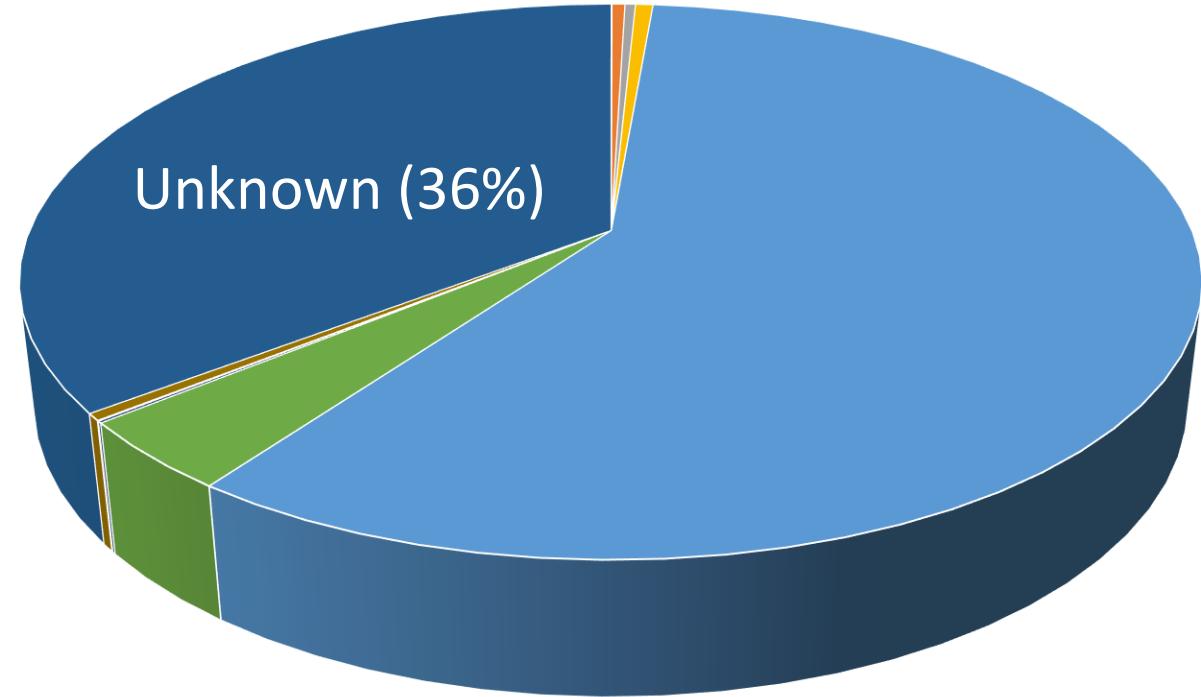
*Source: Office for  
National Statistics*

# Natural Capital Accounts for marine and coastal areas

- Clarified what we don't know
- Incorporate pressure indicators where state or condition is not known
- Preliminary indication of value of non-market services
- Potential use for
  - Monitoring Marine Protected Areas and designation of new areas
  - Understanding importance of non-market services to the 'Blue Economy'
  - Identifying stakeholders of the marine environment – users and beneficiaries

## Extent: UK Marine and coastal habitats as proportion of total area (ha)

- A1 Littoral rock
- A2 Littoral sediment
- A3 Infralittoral rock
- A4 Circalittoral rock
- A5 Sublittoral sediment
- A6 Deep-sea
- B1 Coastal dunes
- B2 Coastal shingle
- B3 Rock cliffs
- Seabed (mainly infralittoral)
- Known unknown (no survey data)



**Issue: How much of 'coastal' should these accounts cover?**

# Marine natural capital contribution to Blue Economy (£m)

**Illustrative/ Provisional**

	Marine/coastal supply of services	Additive to /contributes to	Blue economy GVA
Fish, aquaculture	292	=>	2,416
Carrier services? (maritime transport)			2,595
Ports, shipbuilding			9021
Shipbuilding			2,529
Oil and gas, minerals and aggregates	1,171	=>	10,313
Wind power	1,345	=>	?
Air pollution removal		+	
Carbon sequestration	384	+	
Storm buffering	5,590	+	
Temperature regulation		+	
Waste mediation	1,692	+	
Enabling recreation	1,299	+	
Amenity (and other non-use?) values		+	
Nature-based tourism	800	=>	7,056

*Source: Eurostat, Defra*

# Natural Capital Accounts for the Public Forest Estate

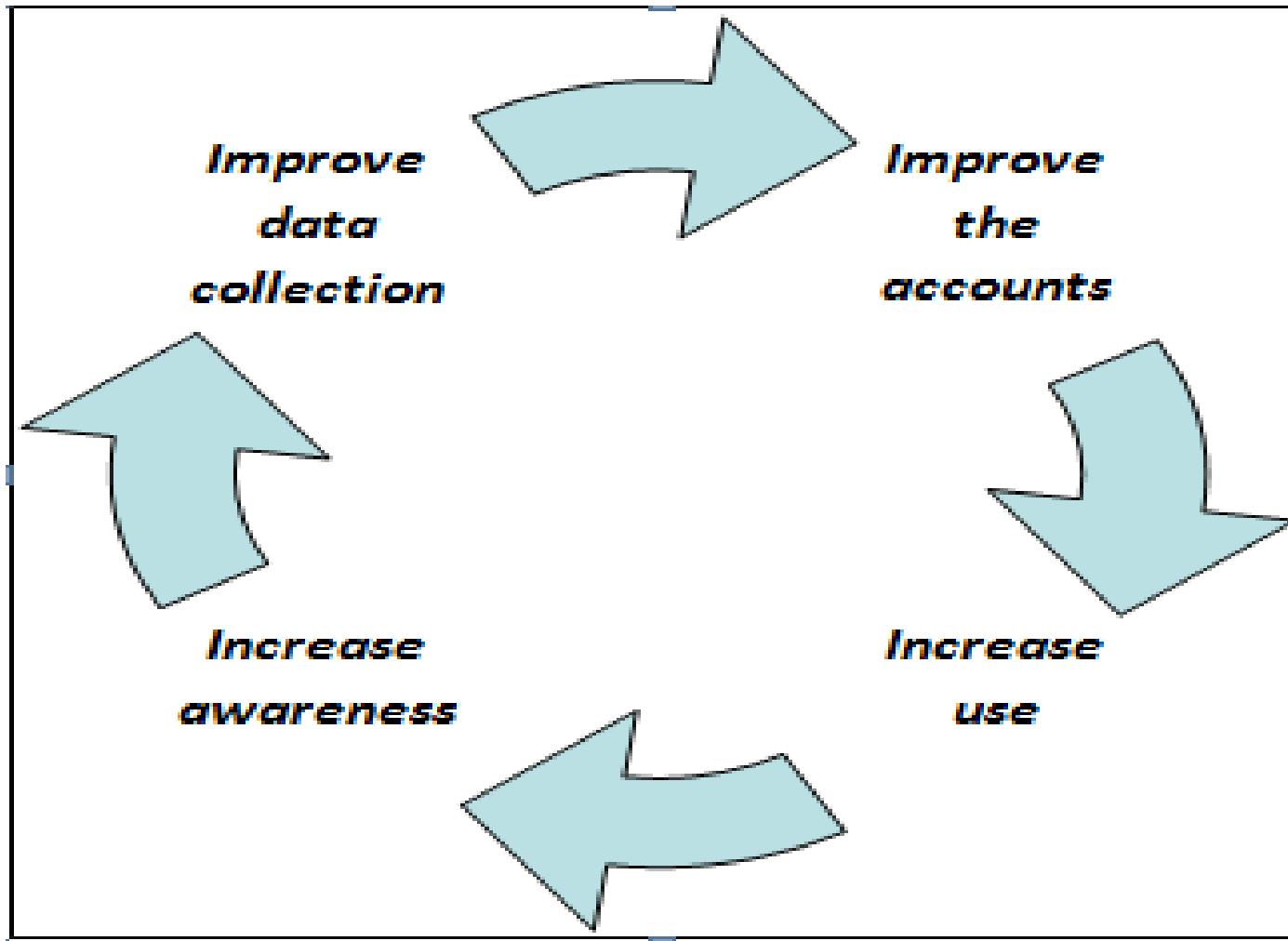
- Public outcry at proposals to sell off the Public Forest Estate
- Realisation that the public place a value on non-market services but the values are not shown in the formal accounts
- Commitment to develop natural capital accounts to keep track of the benefits we get from the natural capital
- Based on Natural Capital Committee's pilot work on Corporate Natural Capital Accounts (CNCA) but looking for closer links with national accounts
- Reported to senior management and also used for management of individual estates
- It may be the only example of annual CNCA that we have at the moment!

# Natural capital accounts for the Public Forest Estate (England)

Spatial accounting unit by natural capital benefit	Type of flow	Baseline year 2013/14	Reporting year 2018/19
<b>Timber provision</b>			
Woodland	Timber produced	11.1	17.0
<b>Climate regulation</b>			
Woodland		98.7	106.0
Bogs		(0.5)	(0.6)
Grassland	Carbon sequestration value	-	-
Heathland		-	-
Woodland on Deep Peat Soils		(5.0)	(5.2)
<b>Recreation</b>			
Whole estate	Recreation	346.3	522.2
	Volunteers	-	-
<b>Plant and seed supply</b>			
Whole estate	Plant and seed revenues	3.1	3.2
<b>Food provision</b>			
Whole estate	Wild game carcass value	0.01	(0.14)
	Livestock production value	-	-
	Crop production value	-	-
<b>Minerals</b>			
Whole estate	Mineral production volume	0.9	0.4

Source: Forest Enterprise England

# Where next: a virtuous circle



# Where next: enabling other applications

- Providing spatially detailed estimates for use in local applications
- Setting up a Centre of Excellence on a hub-spokes basis, pending funding
- Otherwise might set up specialist sets of user groups
- It would be nice to have an ANU-type course – but would have to include CNCA

