



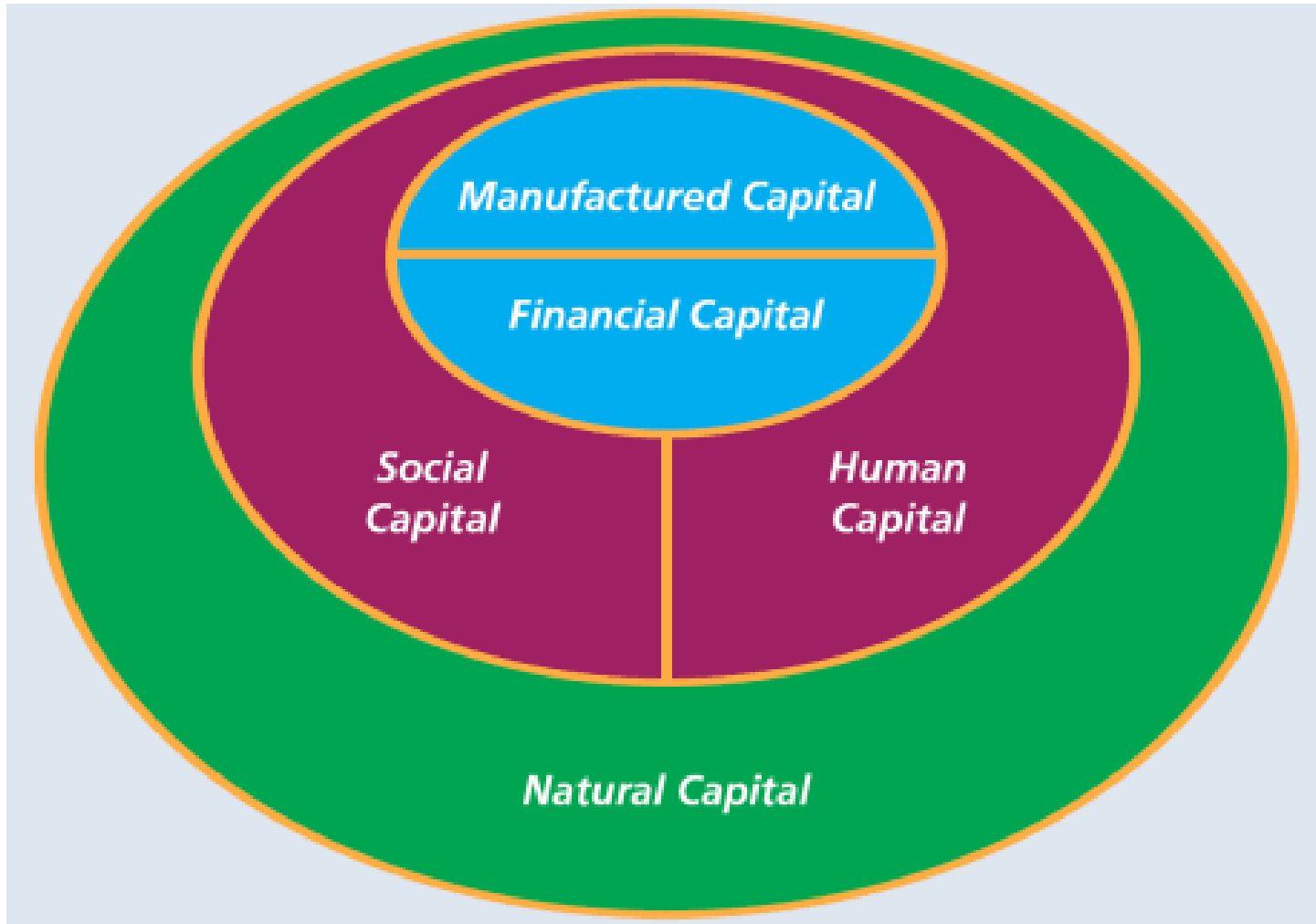
Making Sense of Valuation

a non-economist's guide to valuation
(and why it's important)

Stephen Hull

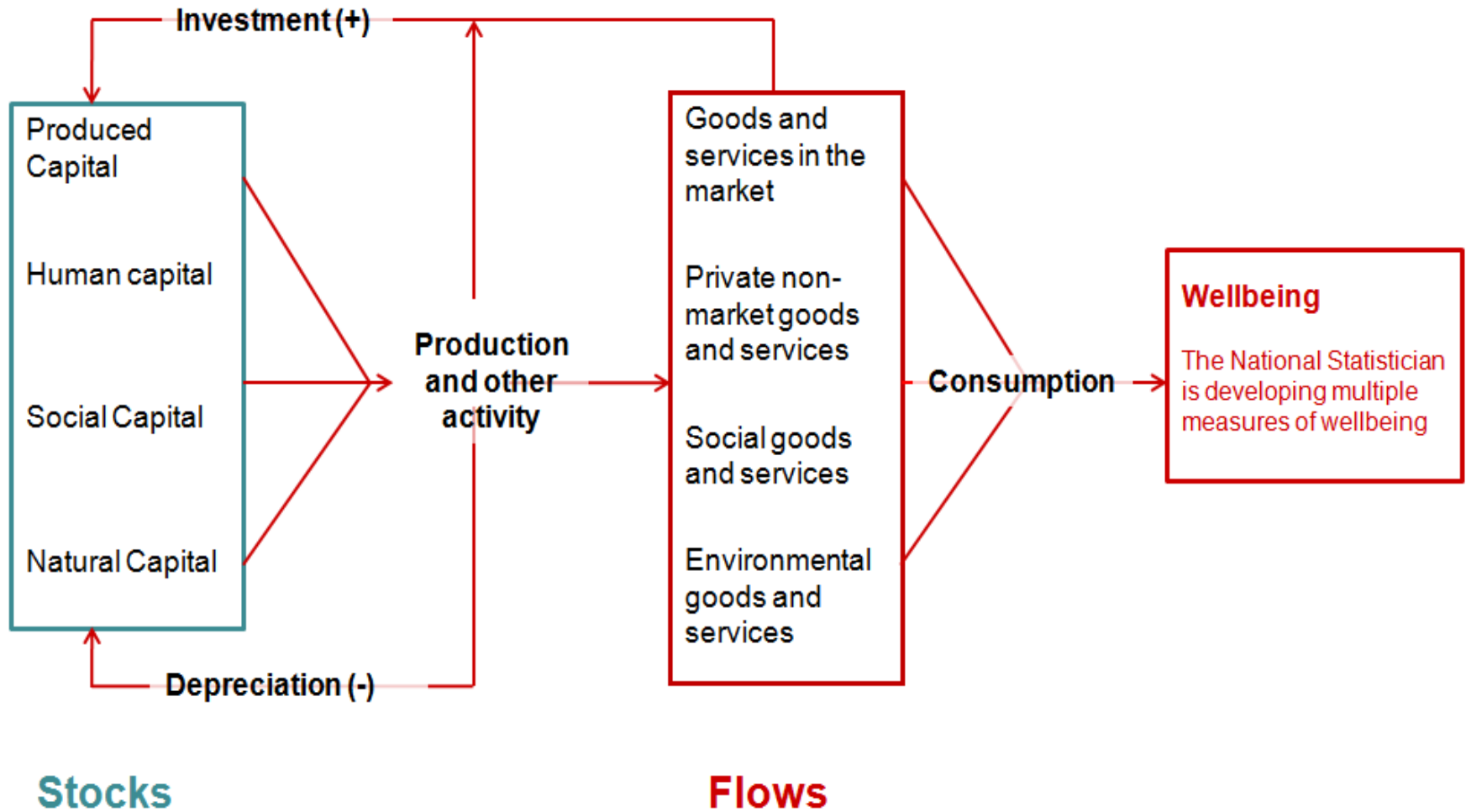
Coastal Futures 18-19 January 2017

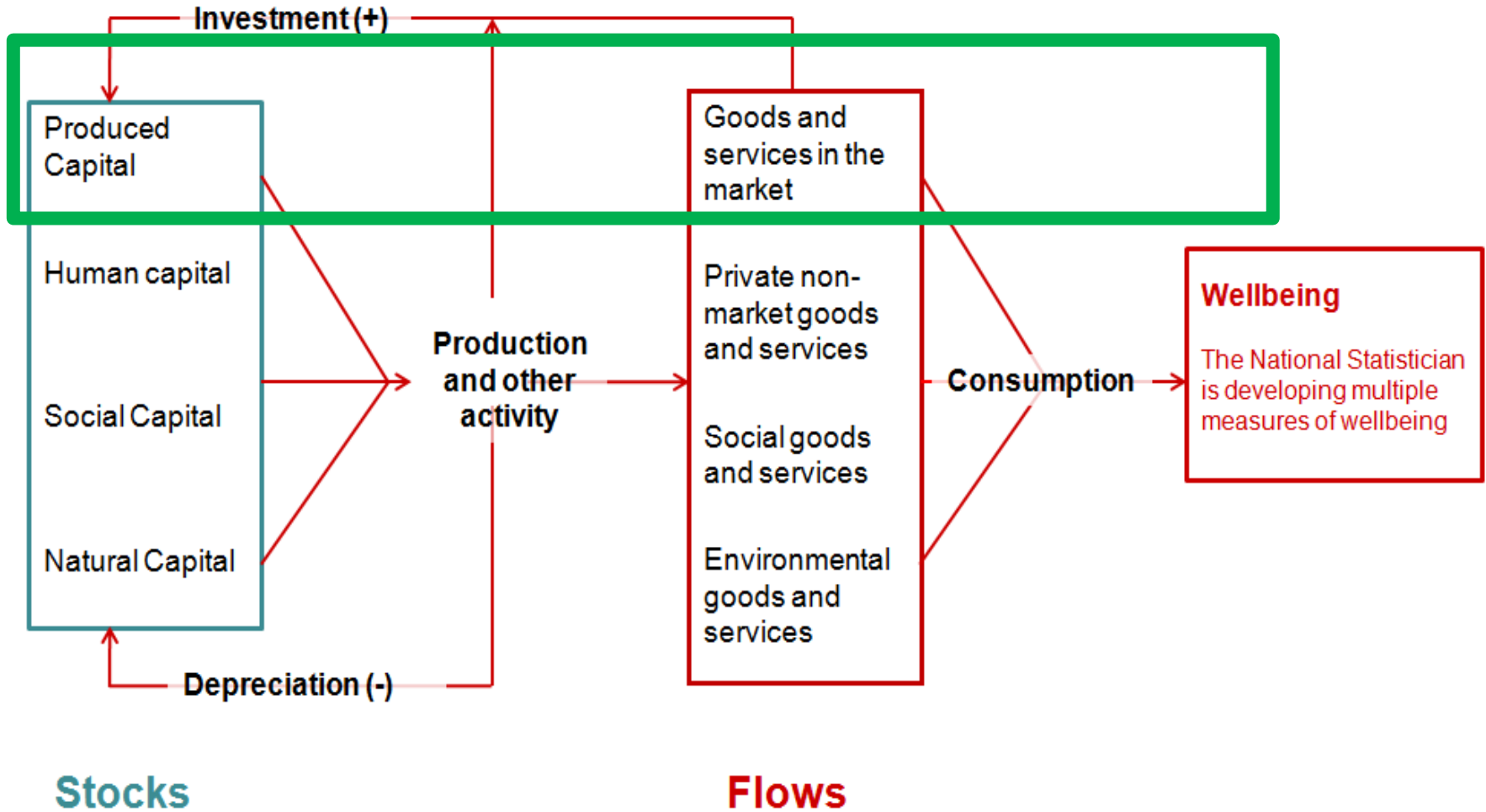
- What's the problem?
- How can economic valuation help us?
- Key concepts and frameworks
- Progress with the application of frameworks
- Future directions

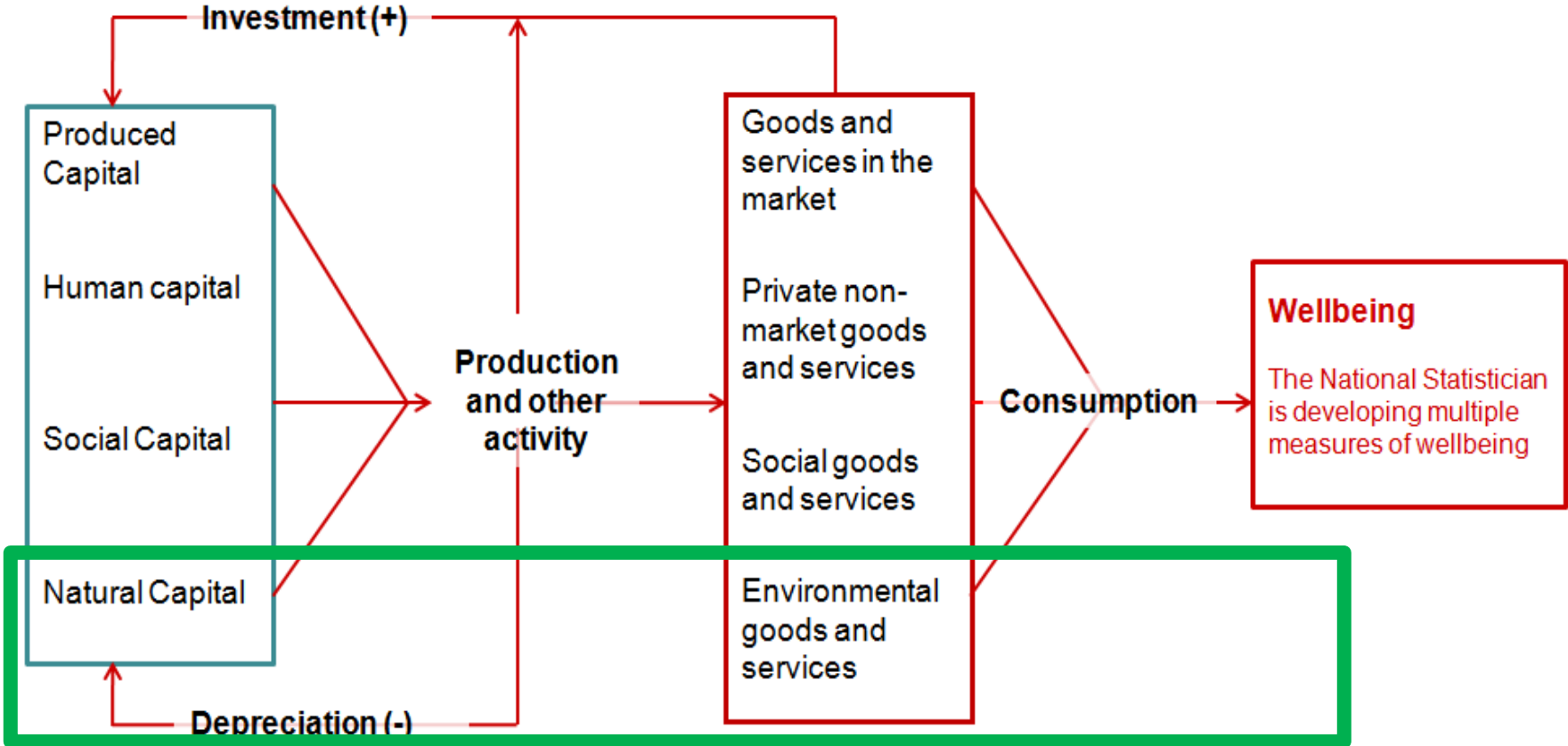


Forum for the Future – Five Capitals Model

- Understanding the types of environmental and social impacts that may be relevant
- Understanding the scale of these values
- Providing better/more information that can support decision-making

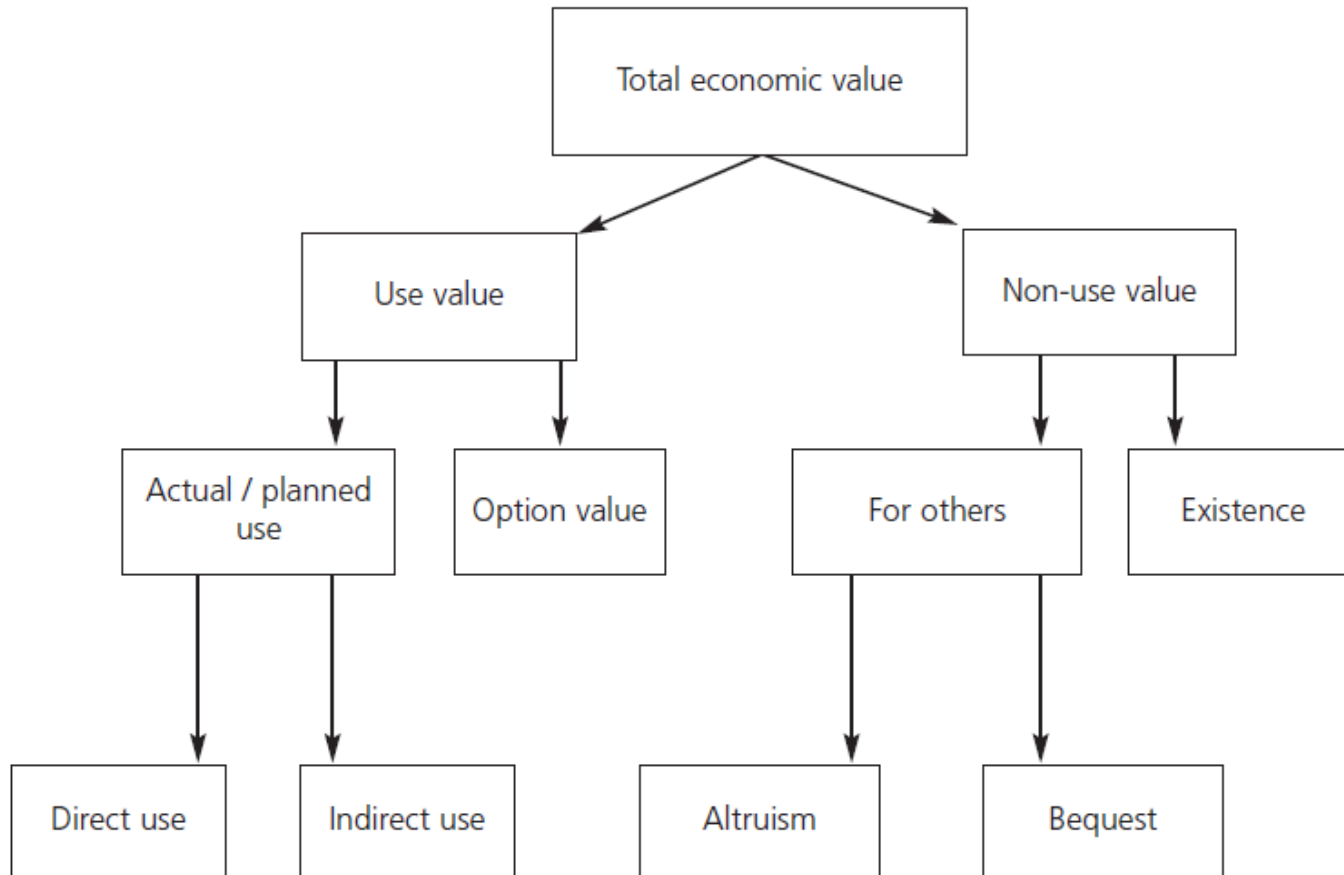




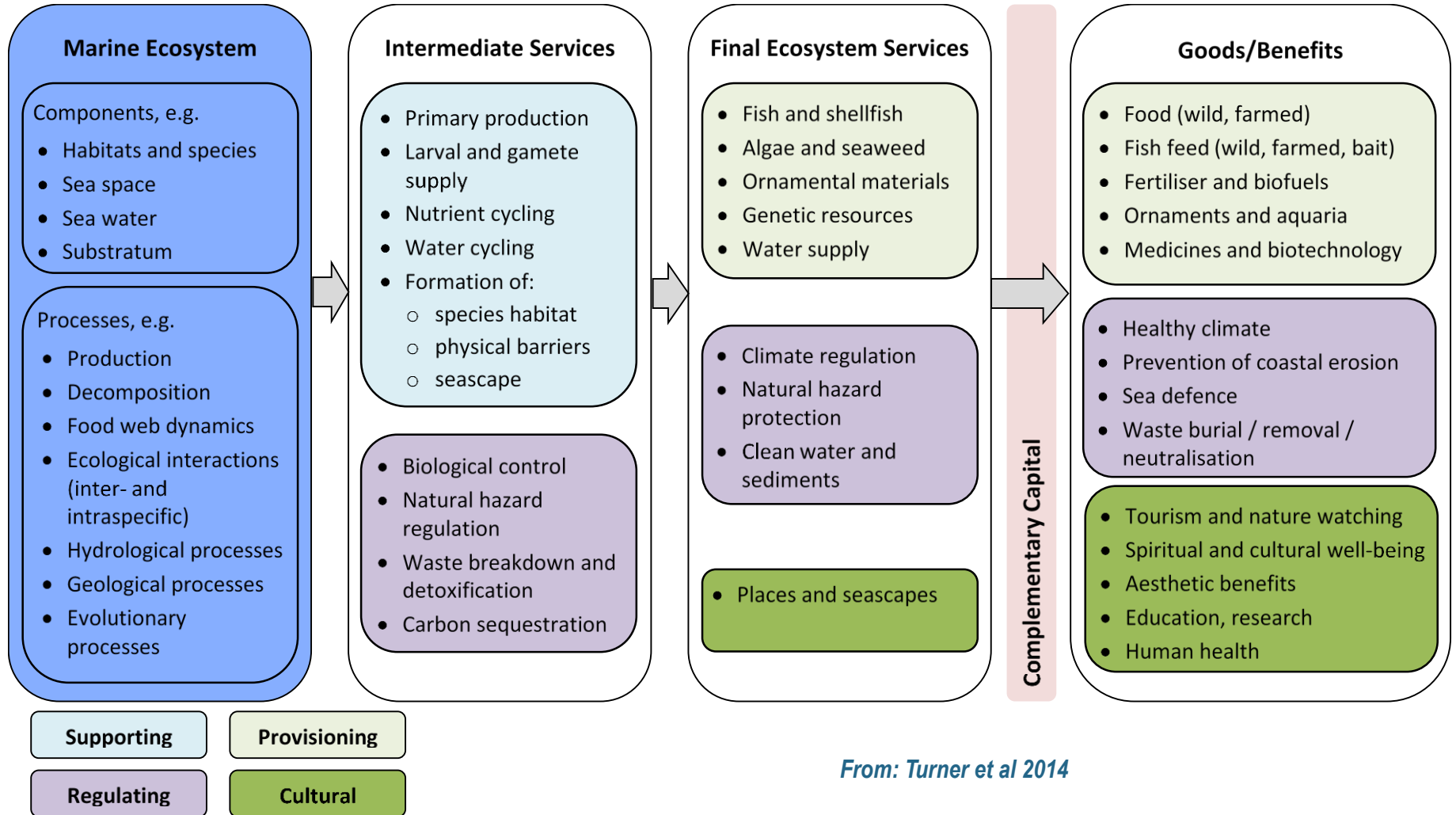


Stocks

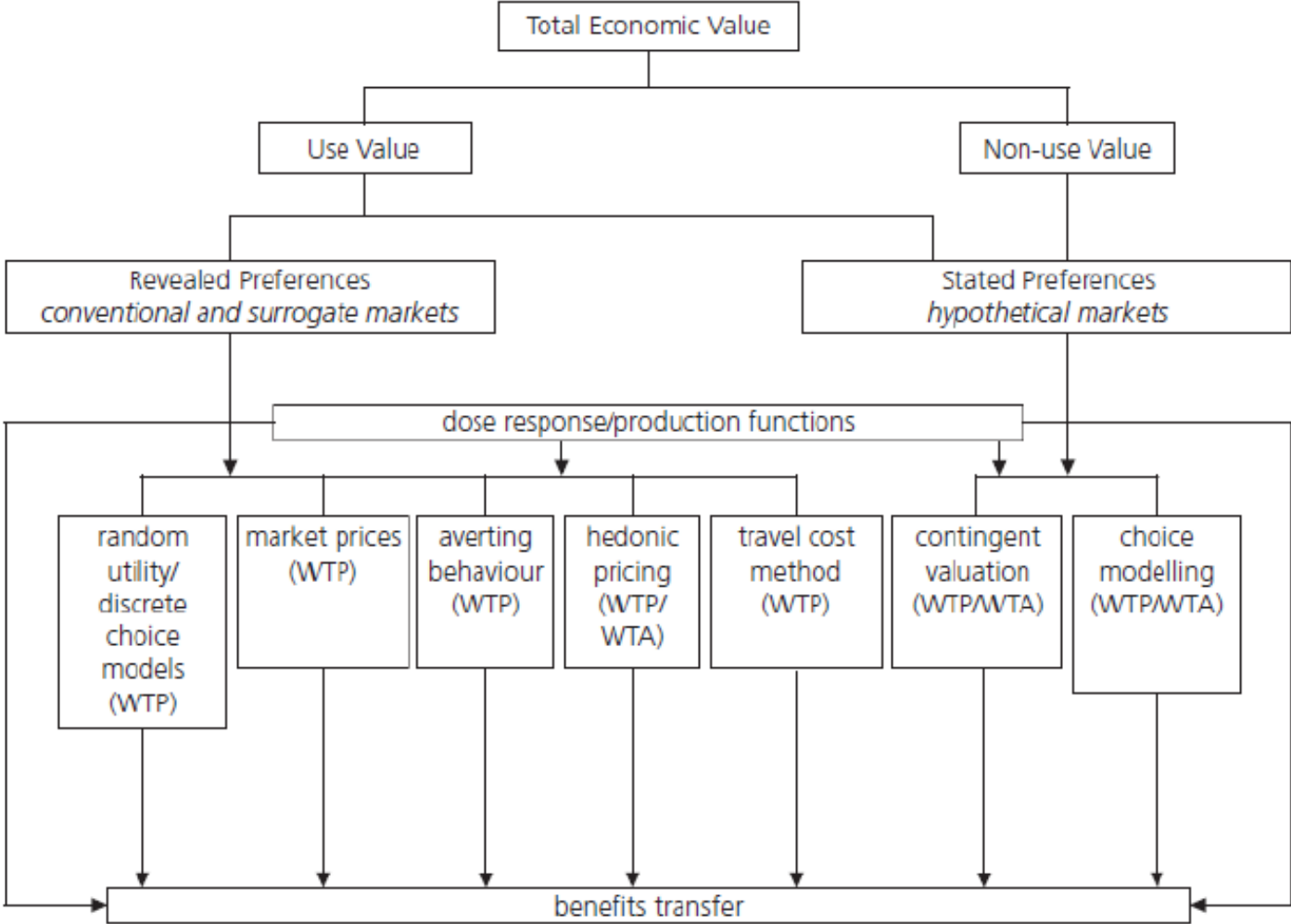
Flows



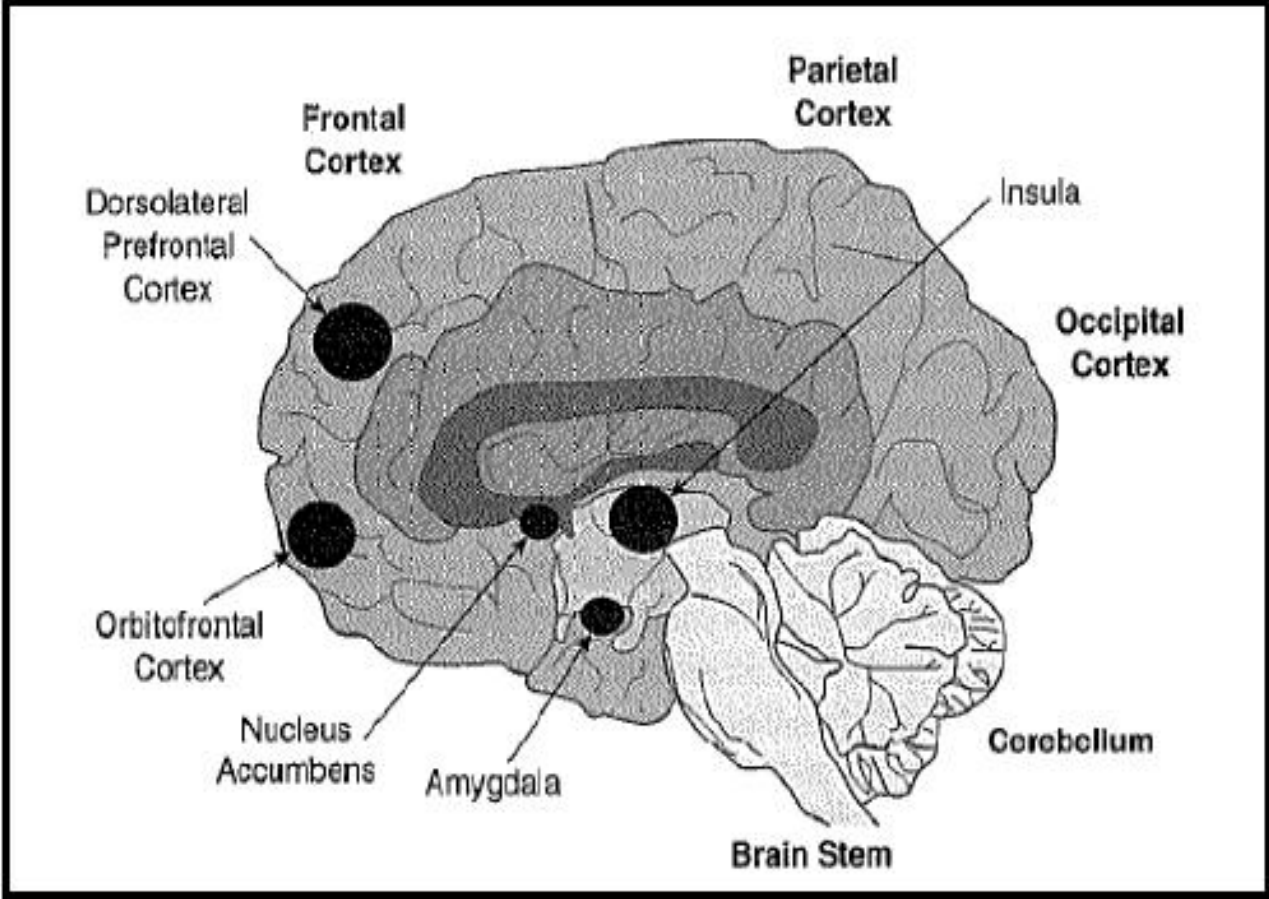
From: Defra 2007



From: Turner et al 2014



From: Defra 2007



From: Hastie & Dawes 2010

- Guidelines on the economic principles that should be applied to the (ex-ante) appraisal and (post) evaluation of (public) projects and policies
- Elements:
 - Cost benefit analysis as main appraisal tool
 - Assess unvalued impacts using multi-criteria analysis
 - Guidance on valuation techniques for social cost-benefit analysis (Fujiwara & Campbell, 2011) and valuing ecosystems (HM Treasury/Defra (2012))
 - Guidance on assessing additionality
 - Guidance on distributional analysis – fairness, social impacts, scale



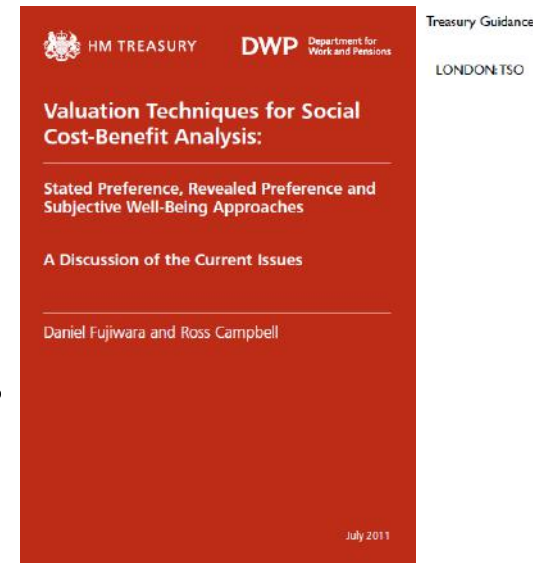
THE GREEN BOOK

Appraisal and Evaluation in Central Government

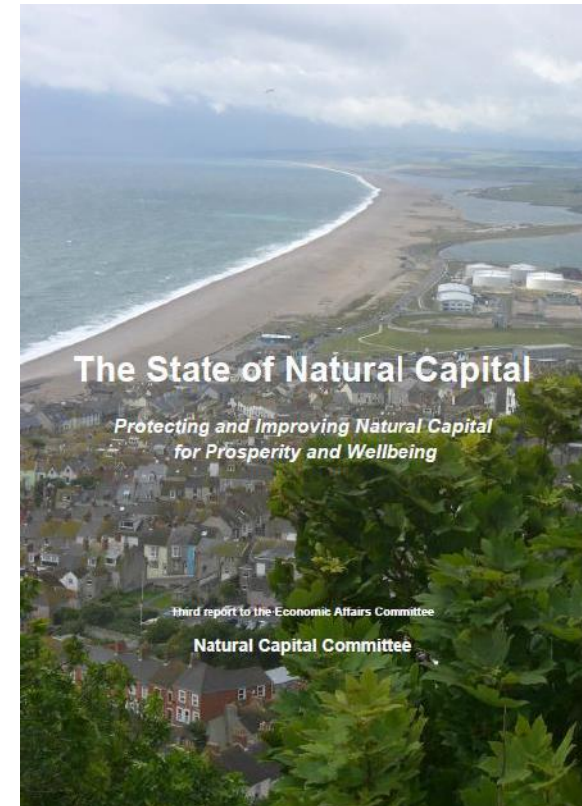
These explaining changes made to the Green Book in July 2011:

This is the 2003 edition of the Green Book. However, pages 57-58, which deal with the valuation of non-market goods, have been updated alongside the release of a Green Book discussion paper on this subject - Fujiwara and Campbell (2011), Valuation Techniques for Social Cost-Benefit Analysis: Stated Preference, Revealed Preference and Subjective Well-Being Approaches.

The changes set out on pages 57-58 has been highlighted in red within this updated document. Because of the changes there is some duplication of paragraph numbers and there is some change to the sequence of footnotes in this section.

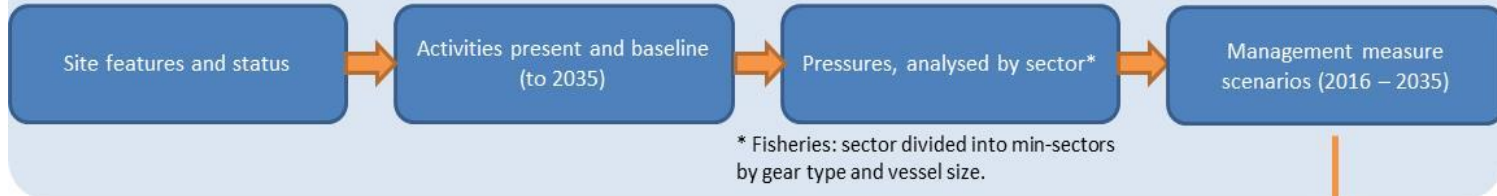


- Established in 2012 - commitment from 2011 Natural Environment White Paper
- Independent advisory body reporting to Economic Affairs Committee. Now in 2nd term
- Published 3 State of Natural Capital Reports
- 3rd report recommended 25 year plan to enhance natural capital – some of recommendations now being taken forward by Defra



- Example of impact assessment (Green Book methods) - MCZ/MPAs
- State of the environment reporting – UK NEA, MSFD
- Natural capital accounts
- Corporate accounting
- Multiple Benefits - PES, Green investments
- Application to projects

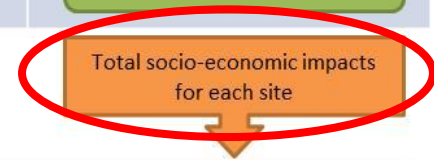
Site analysis



Socio-economic** analysis

	Costs (one off/annual)	Benefits	Total socio-economic impacts
Economic	<ul style="list-style-type: none"> GVA impacts (direct and indirect) Employment impacts (direct, indirect and induced) Turnover Industry costs Public sector costs (e.g. surveys, actions for industry) 	<ul style="list-style-type: none"> Marine tourism 	Discounted economic impacts
Social	<ul style="list-style-type: none"> Impacts generated by changes in income and employment (primary and secondary) 	<ul style="list-style-type: none"> Social welfare impacts (e.g. recreation) 	Social impacts
Environmental	<ul style="list-style-type: none"> Impacts of displaced fishing 	<ul style="list-style-type: none"> Changes in pressures Changes to ecosystem services 	Environmental impacts

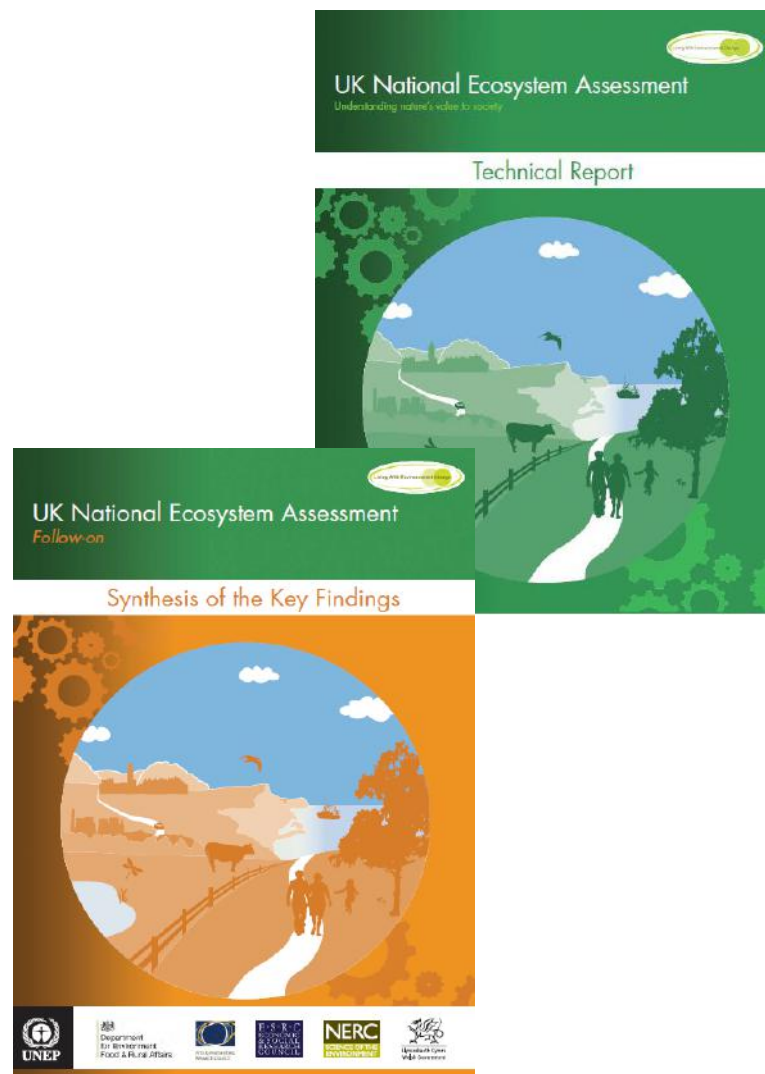
** Value evidence used (in order of preference): market, surrogate market, revealed preference, stated preference. Transfer of values dependent on relevance to environmental change, beneficiary population, etc.



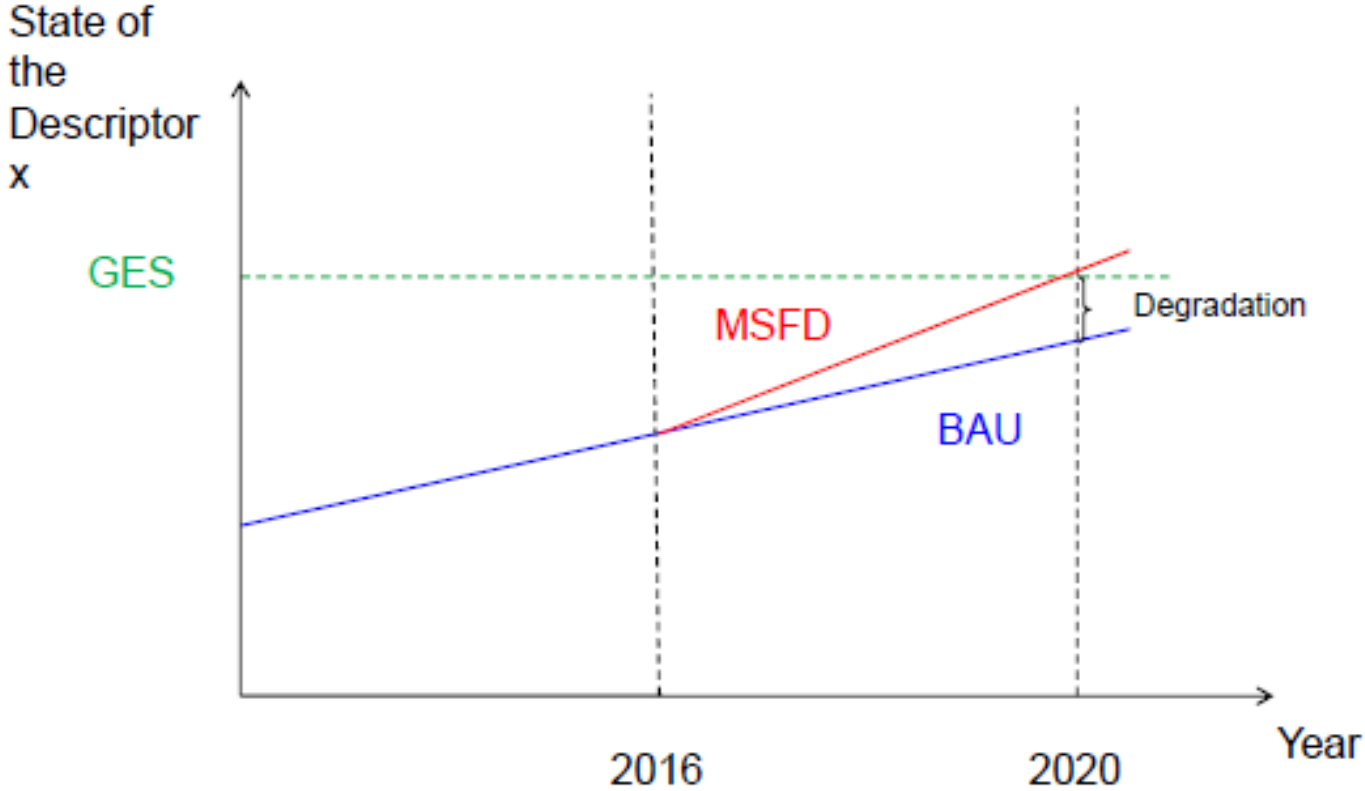
Cumulative impacts



- Collating information on UK ecosystem values
- Developing assessment frameworks
- Exploring application of ecosystem services concepts to decision-making

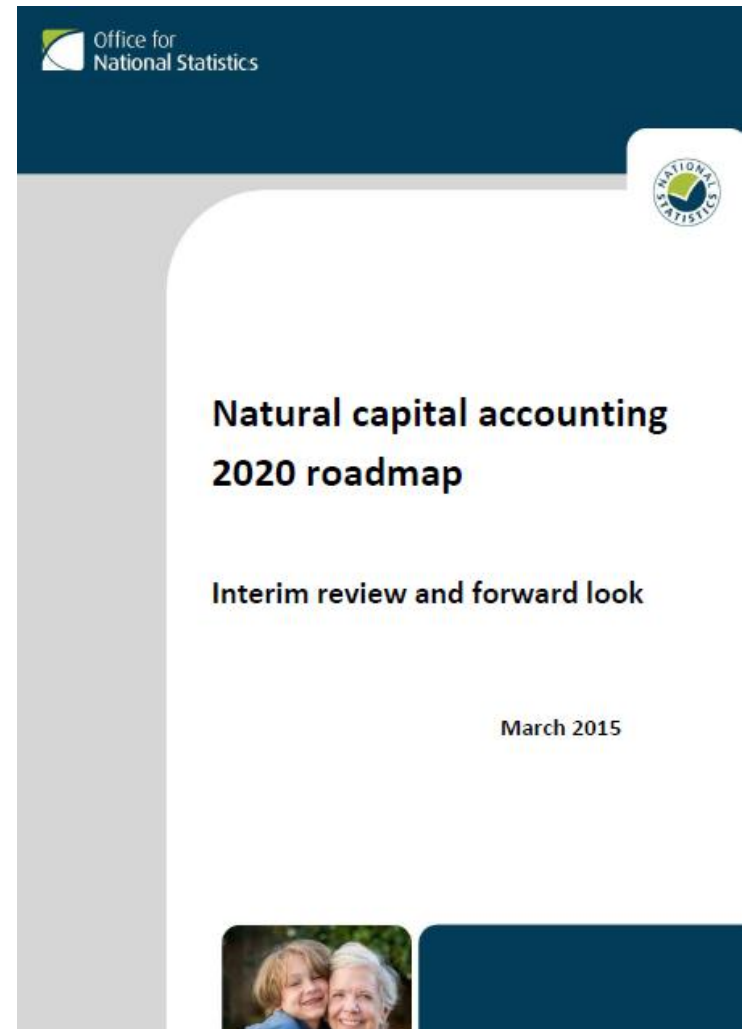


MSFD Initial Assessment – Degradation Cost

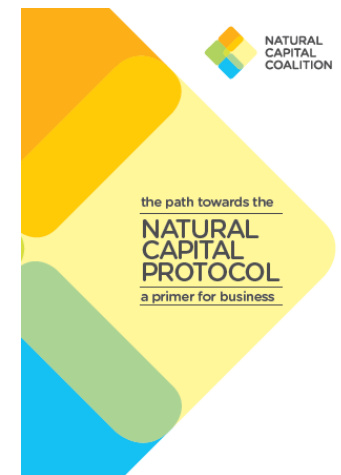


HM Government, 2012

- ONS and Defra programme to develop aggregate estimates of UK natural capital
- Building on UN endorsed Experimental Ecosystem Accounting guidelines (2013)
- Seeking to incorporate natural capital within UK Environmental Accounts by 2020
- 2020 roadmap
- Initial scoping for marine accounts (2015) and coastal margins (2016) – stocks and flows



- Natural Capital Coalition – Natural Capital Protocol
- Framework to measure, value and integrate natural capital into existing business processes
- Helps business to understand their impacts on natural capital and to better manage risks



- Voluntary schemes involving payments to managers of land or other natural resources in exchange for the provision of specified ecosystem services
- Terrestrial examples:
 - Agri-environment schemes
 - Raw water improvement schemes
- Defra 16 PES pilots – RSPB Poole Harbour reducing N inputs
- Deben Saltmarsh pilot – community funding approach
- Natural solutions delivering cost-effective outcomes



- Ecosystem services increasingly used to demonstrate multiple benefits:
 - Natural Capital Committee green investments
 - Managed realignment
 - Beneficial use of dredgings (sand engines, saltmarsh recharge, mud islands)
- But:
 - Beneficiaries willingness to pay?
 - Voluntary arrangements

- Public development projects
 - FCERM appraisal
 - Transport projects (NATA)
- Water industry – many examples of PES
- Private development – rarely applied
- Marine environmental decision-making dominated by EIA and Habitats Directives
- Proposal to include ecosystem services assessment within revised EIA Directive - rejected
- Marine Scotland - economic and social assessment of offshore renewables
- The sea is a public resource – opportunity to ensure marine development contributes to sustainable development

- VALMER
- TIDE
- Ecosystem Knowledge Network
- Valuing Nature Network
- Defra - Pioneer Projects
- JNCC – marine ecosystem ES



A FRAMEWORK FOR THE OPERATIONAL ASSESSMENT OF MARINE ECOSYSTEM SERVICES

VALMER WP1 GUIDELINES DOCUMENT

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March 2015



Ecosystem Service Assessment of TIDE Estuaries

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- Defra 25 year environmental plan
- Natural Capital Accounting
- Natural Capital Protocol
- Work to address challenges of marine valuation
- Impact of Brexit

- Economic valuation can provide information to support better decision-making
- Challenging to apply in marine environment – limited data, legal/policy framework, stakeholder acceptance
- Likely to see increasing use of economic valuation evidence to inform future policy direction (Defra 25 year plan)
- Increasing use of natural capital accounting by government and business
- Brexit provides opportunity to advance policy and improve decision-making in pursuit of sustainable development



Thank you for your attention

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