



Valuation: from ecosystem services to natural capital

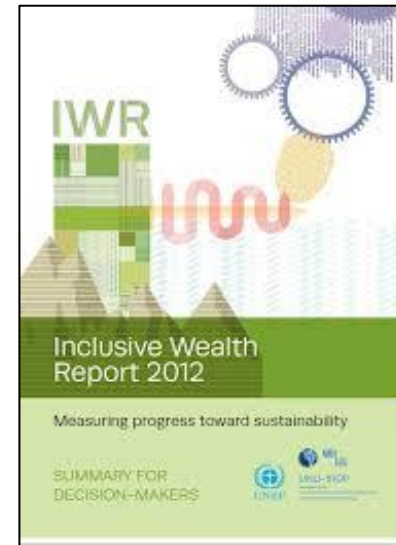
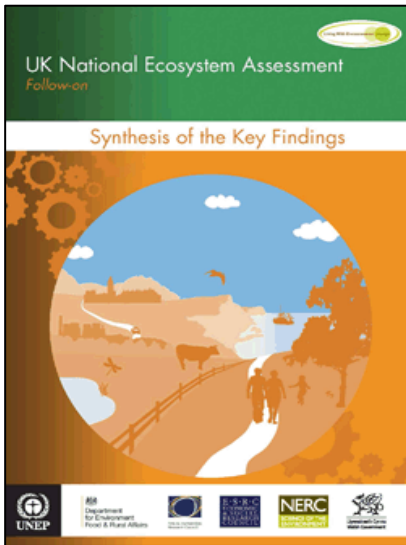
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NCI Summit: Valuing our Life Support Systems

6th Nov. 2014

British Library





What is the best use of land?



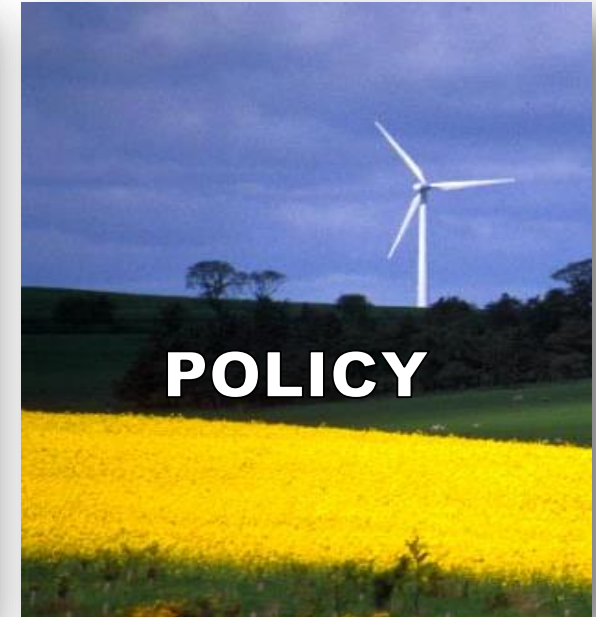
The policy-maker's dilemma: Select the best policy.

Predicted Outcomes

Policies	Predicted Outcomes				
	CO ₂	Crop Yields	Water Quality	Water Availability	Species mating season
Policy A	↑ ppm	↑ tons ha ⁻¹ (Corn)	↑ N mg l ⁻¹	↓ km ³	No information
Policy B	↓ ppm	↓ tons ha ⁻¹ (Beets)	↓ P mg l ⁻¹	↑ km ³	↓ days

- Units are not commensurate for comparison
- Cannot identify the best option
- Need a common unit: **money**

Analyses must incorporate:



Soils

Temperature

Rainfall

Output prices

Input costs

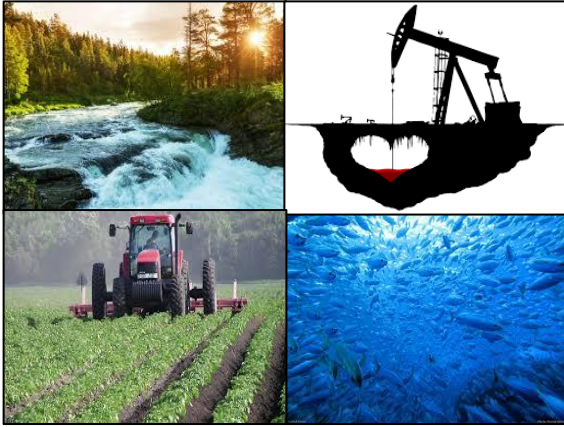
Human behaviour

Common Agricultural Policy

Environmental Policy

Intervention

Natural Capital...



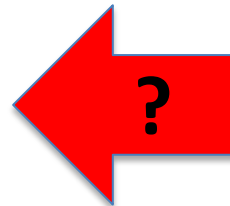
generates flows of
environmental goods &
services...

that benefit people.



Natural Capital Valuation & Accounting

- Scale & aggregation?
 - Local
 - National
 - Global
- Whose accounts?
 - Government
 - Business



Ecosystem Service Valuation

- Values those benefits
- Market prices, revealed & stated preferences
- Spatial dependence
- Marginal changes
- Cost-Benefit analysis

Challenges



Lack of familiarity & incomplete science lead to

Inconsistent & non-robust values



Natural capital is managed by the private sector, but academics are often reluctant to engage (this goes both ways).



Combining *biotic* and *abiotic* natural capital can be problematic.

Inconsistent expectations of what counts as 'robust' and what valuation can achieve.

Next steps (just a few)



Repository of private sector case studies

Natural capital in the supply chain

Formal links between ESS & NatCapAcct