



# UK National Ecosystem Assessment

Follow-on

## Work Package 2: Macroeconomics

**Why:**

Changes in ecosystem services influence economic activity and these changes are reflected in indicators, such as employment numbers, sectoral output numbers, GDP and trade values, that governments operate with. Therefore (better) understanding these links would help decision makers to understand how protecting and managing ecosystem services impacts the economy and where possible trade-offs and undesirable effects can emerge.

**What:**

**Aim:**

To provide a scoping review and research agenda for understanding the macroeconomic implications of ecosystem service change and management in the UK

**Summary:**

The systematic literature review will identify key ecosystem services and their connections with GDP, sectoral outputs, trade, investments, creation of jobs, etc., and will consider macroeconomic impacts on countries that provide ecosystem services for other countries. Mapping ecosystem services and their (market and non-market) values against their possible macroeconomic implications will be one component of the research. The work package will also identify and compare a range of existing models and techniques that could be applicable for assessment of macroeconomic impacts of ecosystem services as they are, or in an amended form. Additionally, the work package will establish a research agenda for quantitative assessment of the macroeconomic impacts of ecosystem services change and management.

**Outputs/outcomes:**

Output/outcome	Status	Opportunity for input	Anticipated audience(s)
An up-to-date literature review	Complete	Peer review	Academic, National Government
A report with matrices of ecosystem services and their direct and indirect macroeconomic impacts	In progress	Workshop (28 Feb-1 Mar 2013); Peer review	Academic, National Government, Local Governments, Industries and businesses
A report of the methodology review	In progress	Peer review	Academic, National Government
A report of the model comparison exercise	Not started	Peer review, advice on	Academic, National Government, Funders

A provisional research agenda for quantitative assessment of the macroeconomic impacts of ecosystem services change and management.	Not started	Peer review; Workshop (date TBC)	Academic, National Government, Funders, Local Governments, Agencies and advisory bodies, Industries and businesses
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**Methods/tools being developed:**

- This work package will not be developing new methods but will be reviewing existing methods and models.

**Anticipated Case Studies:**

- This work package will not be using case studies.

**Links to other Work packages:**

- WP1: Links to deployment of other forms of capital; understand how to model ecosystem services performance in the economy
- WP3a: Understand how to model ecosystem services performance in the economy
- WP3b: Understand how to model ecosystem services performance in the economy; contribute to scenario formulation from a macro perspective
- WP4: Understanding of cultural values from natural capital assets
- WP6: Contribute to scenario formulation from a macro perspective: Time focus? Possible link if future orientated; enriching scenarios with GDP?

**Team:**

**Principal Investigator:**

- Annela Anger (University of East Anglia)

**Team Member:**

- Stanislav Shmelev (Environment Europe)

**Advisory Board:**

- Terry Barker (University of Cambridge)
- Bruce Horton (Environmental Policy Consulting)
- Joe Morris (Cranfield University)
- Anatoly Shvidenko (International Institute for Applied Systems Analysis)
- Dimitri Zenghelis (London School of Economics)
- Oliver Fryatt (Defra)

**Resource allocated:** £100,000