UK NEA follow on phase WP2 Macroeconomic implications of ecosystem service change and management

Annela Anger

Email: aa451@cam.ac.uk

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The Cambridge Centre for Climate Change Mitigation Research (4CMR)

WP 2 – aims and objectives

- **Aim:** *Provide a scoping review and research agenda for understanding the macroeconomic implications of ecosystem service change and management in the UK.*

- **Objectives:**

a. Select key areas for the focus of this study which allow inspection of how alternative policies and usage regarding ecosystem services impinge upon the macroeconomy. Suggested foci include impacts upon jobs, growth and food production.

b. Conduct the scoping review accessing the widest possible existing evidence base.

c. Prepare a research agenda and suggested methodology for undertaking a detailed quantitative analysis of the macroeconomic implications of ecosystem service management and change in the UK

WP 2

- **WP 2** will be carried out through **6 work packages**

- Small team and an advisory board

- Mainly literature review and a model comparison exercise

- WP2.1 to 2.5 will have **interim reports** as deliverables - deadlines

- WP2.6 is writing a **final report** that combines all other work packages

- We envisage 2-3 peer reviewed journal articles as an academic output

Source: UK NEA, 2011

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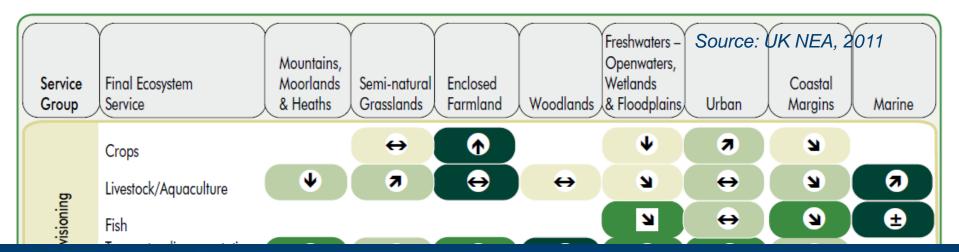CAMBRIDGE

Work packages in WP2

- **WP2.1 - Conducting an extensive literature review of macroeconomic implications of policies and usage regarding ecosystem services**

- Includes existing academic and grey literature

- identification of key services and their connections with creation of jobs, sectoral outputs, GDP, trade, investments, etc macro indicators

- impacts on countries that provide ecosystem services for other countries

- geographic coverage of literature as wide as possible

Work packages in WP2

- **WP2.2 - Based on findings from WP2.1 and on the UK National Ecosystem Assessment (2011) mapping of supporting, provisioning, regulating, cultural ecosystem services and their values against their possible macroeconomic implications.**

- Creates matrices of ecosystem services and their macroeconomic impacts

- Includes direct and indirect effects

Service Group	Final Ecosystem Service	Mountains, Moorlands & Heaths	Semi-natural Grasslands	Enclosed Farmland	Woodlands	Freshwaters – Openwaters, Wetlands & Floodplains	Urban	Coastal Margins	Marine
Provisioning	Crops	↔	↑			↓	↗	↘	
	Livestock/Aquaculture	↓	↗	↔	↔	↘	↔	↘	↗
	Fish			↘		↔	↘	±	

Source: UK NEA, 2011

Work packages in WP2

- **WP2.3 - Based on WP2.2 conduct an in-depth assessment of methods and models to identify a range of existing models and techniques including methodologies applicable for forecasting.**

- Includes models and methods described in the literature

- Identifies additional measures that might be applicable

- **WP2.4 - Based on WP2.3 conduct a comparison of existing methods and models to identify the differences and their possible causes (differences in theory, coverage, etc.)**

- Compares models and methods

- Creates overview tables of methods with their strengths and shortcomings

Work packages in WP2

- **WP2.5 - Based on the outcomes of WPs 2.1 to 2.4 establish a provisional research agenda for quantitative assessment of the macroeconomic impacts of ecosystem services and policy impacts of ecosystem services on macroeconomic indicators.**

- Identifies gaps and shortcomings in existing research

- Proposes methodologies for assessment

- **WP2.6 - To write a report by combining the outcomes of the deliverables above that establishes the baseline for further studies.** .

- Combines everything above into a coherent report

Team

- **Team**

Dr Annela Anger   PI and researcher   University of Cambridge

Dr Stanislav Shmelev   researcher   Environment Europe

- **Advisory board**

Dr Terry Barker   macroeconomics   University of Cambridge

Prof Anatoly Shvidenko forestry   IIASA, Austria

Dr Bruce Horton   water   environmental policy consult

Prof Joe Morris   agriculture   Cranfield University

Dr Dimitri Zenghelis   modelling   LSE

Progress so far

- **Team meeting on 7 June to discuss the time line and outline and tasks**

- **Team and advisory board meeting in Cambridge, some people via teleconferencing w/c 16 July**