

# The Parrett Catchment: A case study to develop tools and methodologies to deliver an ecosystems approach

(Defra Project Code NR0111)



This project is being undertaken by an interdisciplinary consortium of 6 experienced research partners (including ADAS, bluespace environments, CEM, ORMI Consultants, Reading University and Terra Consult) and led by the Centre for Environmental Management (CEM) of Nottingham University. It will build on the outcomes of Defra's NRP Phase I scoping studies, including those on environmental limits.

**AIM:** A key recommendation from the NRP Phase I Scoping studies was for a series of pilot studies that would: (a) Explore the ecosystems approach to sustainable natural resource management by a practical application; and, (b) Provide demonstrations of 'best-practice', given the current state of the art.

This CEM-led case study will interface with NRO 106 (data resources) and NRO 107 (Rationale) to ensure that the results are as robust as possible. It is designed to meet key objectives a) and b) above for enabling Defra to assess whether it is possible and practicable to adopt an ecosystems approach within the current regulatory and land-use planning systems.

**APPROACH:** This case study builds on recent experience gained from initiatives such as Countryside Survey and Countryside Quality Counts (CQC), and will draw on reviews undertaken for Defra and others on ecosystem health (e.g. Raffaelli et al., 2004). All of these initiatives demonstrate that making an assessment of the range and integrity of ecosystem goods and services demands an understanding of 'context'. Ecosystems are dynamic, and change in them is inevitable as they respond to wide-ranging socio-economic and environmental drivers. Assessment of these changes turns on two key issues: firstly, where is change occurring; and, secondly, whether these changes matter and who do they effect. To enable more effective decision- making, ecosystem assessments have to move beyond the assembly of biophysical data describing how systems are changing. Creating a socially negotiated framework in which the values of ecosystem goods and services are understood, and the limits to necessary or desired levels of supply are adequately identified, will be an essential output of this project.

The CQC study identified a number of nationally available data sources for assessing change at the scale of the Joint Character Areas (JCAs) of England. It has also shown how, using information about countryside character, contextual information can be assembled for assessing the significance of ecosystem change at regional and national scales. This new study will considerably develop this diagnostic approach, by moving the focus from the cultural landscape to the biophysical landscapes in which the major ecosystems of England are embedded. It will also investigate how the contextual data available at JCA level **can be considerably extended** for local use to aid policy implementation in very practical ways. The study will do this by using a range of techniques for eliciting vital stakeholder input. This will provide a framework in which the output of ecosystem goods and services can be identified, tested and monitored using local knowledge.

[www.catchmentfutures.org.uk](http://www.catchmentfutures.org.uk)

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The chosen case study is the Parrett Catchment in Somerset. It has been selected to draw upon the recent work undertaken by Forum for the Future (FfF) to pilot area-wide sustainability assessment using a stakeholder-led deliberative process based on the 'five capitals' model. This new work will considerably extend this initial investigation, using the experience to develop and test a range of participatory appraisal techniques, such as those developed by the Quality of Life Capital initiative.

The output will be presented in the form of a set of environmental or ecosystem asset accounts that can be used as a framework for developing indicators of ecosystem health or integrity, and in the assessment of policy options. The key drivers of ecosystem change in England often lie beyond the remit of those charged with the conservation and management of such resources. This makes it essential that tools developed by this project are robust and easy to use by all relevant organisations and interest groups. The study will ensure this by developing an inclusive approach, exploiting the rich network of people and organisations established by FfF in the SW. By basing the study on a contrasting set of JCAs within a river major catchment in the SW, the comparative framework will enable a broader analysis to be made, and the potential limitations of data and methods to be identified.

The key resources and outputs from this study will be:

- the creation of a detailed GIS database for the study area, developing CQC data by adding more detailed local information for practical planning and land management applications;
- locally tested and agreed spatial and deliberative frameworks for aiding local integration and application of strategic policies in ways that safeguard and enhance ecosystem goods and services across the catchment; and
- a report to Defra and key national policy-makers recommending how the value of an ecosystems approach to integrated decision making could be realized.

To make to results as robust as possible, the study will draw in a wide range of local and regional stakeholders via facilitated workshops and focus groups. Communicating the study's development and key findings will be an ongoing activity throughout the 18 months of work. A project website has been created ([www.catchmentfutures.org.uk](http://www.catchmentfutures.org.uk)) to encourage communication between all of the stakeholders involved.

#### Project Team:



The University of Reading

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