



The Global Land Project Nodal Office on  
Integration and Modelling, Aberdeen, UK

## **Global Land Project Workshop on 'Representation of ecosystem services in the modelling of land systems'**

19<sup>th</sup> - 20<sup>th</sup> March 2010

The Macaulay Land Use Research Institute  
Aberdeen, UK

### **Background**

During the last half of the 20th century the structure of the world's ecosystems changed more rapidly than at any other time in human history. Approximately a quarter of the Earth's terrestrial surface has been now been transformed into cultivated land and one third of annual net primary production is estimated to be appropriated by humans (Vitousek et al 1986; Haberl et al 2007; Rojstaczer et al 2001). With the global population projected to increase to almost 9 billion by 2050 (United Nations, 2002), demands on the planet's ecosystems will continue to intensify, with serious consequences for the goods and services that they provide. The Millennium Ecosystem Assessment (MEA, 2005) defines ecosystem services as the benefits people obtain from ecosystems.

Representation and measurement of ecosystem services as an essential element of the land system is necessary to provide the information those policy makers and land use planners need to make sustainable land management decisions now and for the future. Models of ecosystem services as an integral part of land systems are needed, both adequately to capture complex dynamics of human-environmental processes, and to explore consequences of land change in provision and management of ecosystem services.

### **What is the Workshop aim?**

The concept of ecosystem services is well established, being central to many international initiatives. However, measurement, representation and modelling of ecosystem services in an interdisciplinary manner that accounts for the complexity of the land system is a new research area.

The workshop will explore measurement and representation of ecosystem services in land systems and models for application in policy and practice. The workshop will provide an

opportunity for leading international researchers in land system science, spatial and process modelling of coupled natural and human systems, and ecosystem services to produce a new research agenda on modelling ecosystem services.

The workshop will provide a systematic exploration and documentation of a full range of approaches to representing ecosystem services in land systems and an expansion of the theoretical and conceptual foundations of ecosystem service representation in land system modelling.

### **Who is the Workshop for?**

The subject matter of the workshop is highly interdisciplinary and will therefore bring together researchers from a range of disciplines that are committed to applying interdisciplinary approaches to solve problems that defy disciplinary and multidisciplinary resolution.

The workshop will be limited to 24 participants. All workshop materials/presentations/papers/summaries of discussions will be freely available on the GLP nodal office website (see link for materials from previous workshops).

### **Workshop Programme**

The workshop will consist of a limited number of presentations which will provide context, focus, issues and challenges and breakout group discussions to develop these topics and focus research effort within the context of the GLP.

### **What outputs do we expect?**

We aim to produce a number of synthesis papers in a peer reviewed journal based on the workshop output. During the workshop lead and contributing authors will be identified. The workshop will also be a networking exercise with the aim of identifying sub-groups of researchers with common interests.

### **Further Details**

Please email Carol Ann Stannard at the GLP Nodal Office on Integration and Modelling (c.stannard@macaulay.ac.uk).