Summary of the workshop “The Emperor’s clothes? Addressing consistency in ecosystem service studies”, ACES Conference, December 2010

Goals
The number of ecosystem service studies has grown dramatically in the last few years, as has the number of approaches to research the multitudinous aspects of ecosystem services. This variety makes it difficult to extract synthesis conclusions from the literature out there or even judge the quality of individual studies. This workshop aimed to address the problems caused by this variance in methods and look at the potential for streamlining ecosystem studies.

Presentations
- The Emperor’s clothes? Addressing consistency in ecosystem service studies (Florian Eppink, UFZ);
- Can local ecosystem services valuation studies be up-scaled for use in global assessments? (Mike Christie, Aberystwyth University);
- Global quantitative assessment of the value of ecosystem services (Luke Brander, IVM);
- Overview and background of the Multi-scale Integrated Model of Ecosystem Services - MIMES (Roelof Boumans, AFORDableFutures).

All presentations are available on the ACES2010 website.

Discussion
Two main topics arise in the discussion: the need to know the organising principle of ecosystem services and the need for standardising methods and reporting.

It is argued that the discussion on ES valuation gets ahead of the main problem of understanding the underlying ecology, both in research and in policy making. Valuation implies individual, normative judgements, whereas scientists should objectively assess the ecological effects of implementing policies. Without understanding the complexity of ecological systems, valuation results will be unreliable and unfit to support policy development- aside from the problem inherent to valuation methods, such as spatial and temporal incongruence of costs and benefits of ES delivery, and the simultaneous existence of different demand functions for the various ES.

Standardising methods and reporting of ES assessments is necessary because currently every assessment simply does its best with the data and methods at its disposal. This standardisation could come in the form of quality criteria for the measurement of biophysical variables, valuation techniques and the definition of ES. Although solid biophysical underpinnings are often missing, valuation should be used primarily to indicate trade-offs between ES rather than their absolute values. This could help people understand why they should care about the scientific findings.

The discussion also addressed the question why scientists should involve stakeholders at all, whether they really improve the set of viable policy options or just hinder scientists’ ability to do their work. Especially for non-point external effect, stakeholder involvement is deemed necessary to understand the trade-offs of policies better and to communicate to policy makers that assessment results carry weight in the relevant community. Scientists should furthermore be clear to differentiate between those who would benefit from certain policies and those who can actually implement policies.
The discussion also touched on the dichotomy, if any, between public and business interests in ES assessments. In the end consumers will have to shift their balance of environmental and material consumption, which will affect businesses. For their part, businesses do desire a way to implement ES in their accounting, particularly where large investments could be threatened by environmental risks (such as flooding or loss of local resources). Both the public and business are interested in finding out the existence and risk of ecological non-linearities, but progress is hindered by a lack of environmental accounting methods.

**Summary**

Reconciling the ecology and economics of ecosystem services remains challenging, but a one-size-fits-all methods is unlikely to work. It could prove useful to

- Start with assessing local preferences for ES and then select corresponding biophysical variables
- Do separate ecological and economic assessments of ES
- Develop statistical methods to test the quality across ES assessments
- Focus on correctly transferring ES methods across spatial and administrative scales
- Assess the commonalities across frameworks for ES studies

Achieving true understanding and involvement of stakeholder in ES management will also be a continuing challenge. Here, suggestions are to

- Develop a common language to communicate the importance of ES to various audiences
- Involve stakeholders regularly and over longer time spans to assess changes

**Organisers**

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**Organisers’ qualifications**

Ralf Seppelt is head of the department for Computational Landscape Ecology at the Helmholtz Centre for Environmental Research (UFZ) in Leipzig, Germany. Focusing on the interactions of anthropic and biospheric processes his research interests are methodological developments in landscape ecology such model integration, hybrid model systems and scales in space and time. At present he is coordinator of the research field “Land use options: Strategies and adaptation to global change” of the Helmholtz Association and coordinator of the international project Global Assessment of Land Use Dynamics, Greenhouse Gas Emissions and Ecosystem Services (GLUES).

Florian Eppink studied economics at the VU University Amsterdam (the Netherlands) and wrote his doctorate degree at its Institute for Environmental Studies. Afterwards, he moved to the economics department at the UFZ to work on the economics of biodiversity conservation as a Marie Curie Fellow and was involved in the scientific coordination of The Economics of Ecosystems Biodiversity (TEEB). He is now responsible for the scientific synthesis in the GLUES project.