7th Conference of the Ecosystem Services partnership
Local action for the common good
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Session: D4b-27
Title of session: Integration of ecosystem service models and maps into diverse decision making

Session host / primary contact person:

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Co-host(s)/ secondary contact person(s):

Name	Organisation	Email
Louise Willemen	Cornell University, ITC UTwente	wwillemen@ecoagriculture.org
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Short description of the session:

A great strength of the ecosystem service concept is that it identifies all benefits that we derive from nature which can then be used to inform decision-making at many scales in both the public and private sectors. This should lead to better decisions on human interactions with the environment and ecosystems. Doing this well will require better linkages between ecosystem service mapping, modelling science and decision-making. One such recent effort has been to shift ecosystem service mapping and modelling from technical data and tool driven approaches to approaches that better address the needs of end-users. User needs include user-friendly models and methods, rapid assessments, and the capacity to adapt to different decision-making environments, regulatory frameworks, institutional contexts, etc. User-needs can include defining priority areas for ecosystem services supply, accounting for stocks of natural capital and flows of ecosystem services in product supply chains, assessing trade-offs associated with land use alternatives, or designing restoration programs. These needs call for fit-for-purpose models, data and mapped products at appropriate scale, presentation, and institutional context. Participatory approaches to mapping ecosystem services are being increasingly used because of their speed of assessment, their advantages for data-scarce regions, and the possibility to be developed together with decision makers. The co-production of knowledge between researchers and practitioners also allows building the trust needed between researchers and decision-makers for the implementation of the maps in environmental management. The ability to work together from the first phases of an ecosystem services project is one of the best strategies to adapt research on ecosystem service maps with users' needs. The overall aim of the session is to explore better integration of different ecosystem service mapping and

modelling approaches into decision making based on diverse user needs. We will discuss the best practices for ecosystem service mapping and modelling to achieve this goal (and what are the current challenges and limitations). We invited presentations from decision-makers (in public and private sectors) to share experiences of where ecosystem service maps and models have been used to support decisions.

Key questions to be discussed:
1. What are the challenges toward implementation that you (especially modellers) have or may face in the future?
2. What models/maps/data are sufficient to support private and govt/NGO sector investment decisions that involve real and often large amounts of money?
3. What end-users questions is the modelling and/or mapping addressing?

Format & Speakers:

From	To	Title	Presenter	Organisation
13.30	13.40	Introduction	Neville Crossman, Louise Willemen, Ignacio Palomo	
13.40-16.45: Presentations (15 mins each)				
13.40	13.55	Water Funds as a risk mitigation tool for the private sector	Priscilla Trevino	FEMSA Foundation
13.55	14.10	Mapping and assessment of ecosystem services to support decision making in EU policies	Joachim Maes	EC-JRC
14.10	14.25	Designing an indicator for ecosystem services for policy makers, a case from the science-policy interface in the Netherlands (#271)	Bart de Knegt	Alterra, Wageningen University
14.25	14.40	Implementation of ecosystem services concepts and data in the Master Plan for Use and Management of the Urdaibai Biosphere Reserve (#245)	Gloria Rodríguez Loinaz	University of the Basque Country
14.40	14.55	Transdisciplinarity in practice: state of the art and future of local communities of ES-practice. (#238)	Sander Jacobs	INBO
14.55	**15.15**	**Short coffee/tea break**		
15.15	15.30	Spatial data needs to support local decision making in rural landscapes (#363)	Louise Willemen	Cornell University, ITC UTwente

15.30	15.45	Mapping ecosystem service supply and demand for the needs of an ongoing local master plan process (#371)	Arto Viinikka	The Finnish Environment Institute
15.45	16.00	KBA+: A rapid and low-cost methodology to assess the ecosystem service values of Key Biodiversity Areas (#275)	Rachel Neugarten	Conservation International
16.00	16.15	Identifying important environmental conservation gaps: when biodiversity, ecosystem services and uncertainty modelling are included in traditional land planning schemes. A Colombian case study. (#189)	Jaime García-Márquez	IRI THESys, Humboldt University
16.15	16.30	Social dimensions of ES models: Additional research agendas for more policy-oriented knowledge production and its use (#304)	Takuro Uehara	Ritsumeikan University
16.30–17.00: Discussion, questions				

Planned output

Multi-authored journal paper

27. Integration of ES models and maps into science and decision making: future needs (OPEN)

Transdisciplinarity in practice: state of the art and future of local communities of ES-practice.

Presenting author: Sander Jacobs
Other authors: Hans Keune, Nicolas Dendoncker, Simon Moolenaar, Jos Brils Marc Metzger, Alison Hester, Jan Dick, Mike Smith
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Ecosystem service research and practice is torn between scientifically deepened analysis in face of complexity on the one hand, and pragmatic advance to counter ever-faster global ecological resource depletion on the other. One of the strengths of the ecosystem service concept is its ability to bridge social and ecological systems. However, both systems are highly complex. ES-assessments are therefore challenged by multiple sources of uncertainty, (e.g. data scarcity, functional knowledge gaps, demand variability, lack of consensus). This invokes immediate risks for decision making based on ES-assessments, as uncertainty translates to increased risk for undesired outcomes of decisions. The decision on what data, knowledge and information is required and is enough to act in the face of uncertainty is often a compromise or negotiation between scientists and policy makers. Moreover, the effectiveness (as *policy uptake and action to obtain original environmental goals*) of socio-environmental modeling entirely depends on the participation degree, even from the initial formulation of research questions. Transdisciplinarity is strongly recommended and advocated but often not specified. True transdisciplinarity can only be achieved if involved stakeholders (with potentially contrasting interests) somehow succeed in working together to achieve a common goal. "Communities of practice" have shown to be an effective way to realize this. Scientists work together with (other) stakeholders from business, governmental and non-governmental organizations. In these interactions "knowledge brokers" play a crucial role. In Belgium, the Netherlands, Scotland, and several other countries, ecosystem services communities of practice (CoPs) have emerged simultaneously. These CoP's bring together experts from within academia, policy, administrations and local practitioners in flexible platforms for debate, active transdisciplinary capacity building, creating common understanding on ES concepts and advancing practical implementation of ES. We present the experiences, the results and future potential from three local communities of practice up till now. Communities of practice offer a way out of the urgency-uncertainty dilemma and allow to move forward without being paralyzed by a lack of data, incomplete knowledge or absence of hard proof.