

SESSION DESCRIPTION

ID T10

Title of session:

How useful is an ecosystem services approach in participatory decision making? Lessons learnt

Hosts:

	Title	Name	Organisation	E-mail
Host:	Dr.	Alessandro Gimona	The James Hutton Institute, UK and ESP	alessandro.gimona@hutton.ac.uk
Host:	Dr.	Kirsty Blackstock	The James Hutton Institute, UK	kirsty.blackstock@hutton.ac.uk
Co-host:	Dr.	Mike Dunn	Forest Research, UK	michael.dunn@forestry.gsi.gov.uk
Co-host:	Dr.	Sander Jacob	INBO, Belgium and ESP	sander.jacobs@inbo.be
Co-host:	Dr.	Benjamin Burkhard	Kiel University, Germany and ESP	bburkhard@ecology.uni-kiel.de

* This session will be jointly hosted by the ESP mapping and integrated valuation working groups and the Natural Capital Initiative <http://www.naturalcapitalinitiative.org.uk/>

Abstract:

The Convention on Biological Diversity's Ecosystem Approach mandates stakeholder participation in (spatial) planning, decision making and priority setting to help preserve ecosystem function. This session will examine the success, and also the limitations, of modelling and mapping focussed on ecosystem services when used to inform participatory planning for sustainable development, valuation, or similar decision making processes. We particularly seek to share experiences in real cases, whether undertaken at national, regional or local scale. We will examine case studies from around Europe and beyond to learn lessons about factors influencing the level of success, how to measure it, and what we can learn from our mistakes. There is a wide literature on decision support tools across a number of domains that we can draw on. However, the Ecosystem Approach, with its transdisciplinary, multi-scale and systemic ethos provides additional challenges. Therefore, we seek to consolidate the lessons learnt within this community so we can move forwards on the basis of best practice. This session is aimed at multi-disciplinary audience including (but not limited to) landscape planners, landscape ecologists, social scientists, land managers, nature conservation officers, and policy makers.

Proposed Format (duration, methods, (technical) requirements):

Duration: 3hrs. We invite 10 minute presentations (7 minutes + 3 for reflections from the floor). The talks session will be followed by a session where break out groups will summarise lessons learnt and suggest how the use of ecosystem services can be made more effective in real-world decision making. We will conclude with a final discussion of the break out group results.

Goals and objectives of the session:

To share lessons about best practice to make an impact on practical decision making.

Planned output / Deliverables:

Summary document with best practice suggestions. Paper in a leading journal if there is enough interest.

Voluntary contributions accepted: YES

Session program

Date of session: Thursday, September 22, 2016

Time of session: 14:00–15:30 and 16:00–17:30

Speakers

Time	First name	Name	Organization	Title of presentation
14:00	Alessandro	Gimona	The James Hutton Institute, UK and ESP	Session introduction
14:07	Emilie	Crouzat	Laboratoire d'Ecologie Alpine, CNRS, Université Grenoble Alpes, Grenoble, FR	Ecosystem Services as an operational tool for integrating environmental resources in land planning processes – feedbacks from the ICARE research–action project in the French Alps
14:14	Alessandro	Gimona	The James Hutton Institute, UK	The use of ecosystem services models and interactive tools to elicit stakeholders' views and inform land use policy in Scotland
14:21	Agnieszka	Olszanska	Institute of Nature Conservation Polish Academy of Sciences, POL	Which ecosystem services are perceived as crucial for local well–being and where are they generated – insight from mapping workshops with conservation professionals and local leaders.
14:28	Katherine	Irvine	The James Hutton Institute, UK	Developing shared understanding for decision–making through participatory mapping, modeling and deliberation: A marine ecosystem services case study
14:35	Markus	Meyer	Bavarian State Institute of Forestry, DEU	How can we benefit from the ecosystem service concept in forestry?
14:42	Tatiana	Klůvankova	SPECTRA Slovak University of Technology and Slovak Academy of Sciences, SVK	Green Infrastructure: Collective action for the well–being of European cities?
14:49	Rik	De Vreese	BOS+ ngo/Vrije Universiteit Brussel, BEL	Images of Nature & Social Landscape Indicators – lessons learnt for participatory ES and planning from the Belgian VOTES project
14:56	Louise	Bond	Scottish Environment Protection Agency	Strathard: a landscape to live, work and play' – community engagement in environmental decision making
15:03	Jan	Dick	Centre for Ecology and Hydrology, UK	Testing the ecosystem service cascade framework and QUICKScan software tool in the context of land use planning in Glenlivet Estate Scotland

T. Thematic sessions

Time	First name	Name	Organization	Title of presentation
15:10	Bruce	Howard	Joint Nature Conservation Committee, UK	Tool Assessor: Selecting the right tools for bringing natural capital and ecosystem services into decision making
15:17	Sander	Jacobs	Research Institute for Nature and Forest INBO // Belgian Biodiversity Platform BBPF, BEL	Road-testing ecosystem services in three real world situations
15:30	Break			
16:00– 17:30	Discussion in break-out groups & reporting			

Type of submission: Invited speaker abstract

T10 How useful is an ecosystem services approach in participatory decision making? Lessons learnt

The use of ecosystem services models and interactive tools to elicit stakeholders' views and inform land use policy in Scotland

First author(s): Alessandro Gimona, Kirsty Blackstock

Other author(s): Kirsty Blackstock, Anja Byg, Andrea Baggio, David Donnelly, Laura Poggio, Marie Castellazzi, Justin Irvine

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We present results from a pilot project (the Aberdeenshire Land Use Strategy Pilot) aimed at providing guidance for rural land use change, and at informing the new version of the Scottish Land Use Strategy. The key objective was to create a spatial framework to assess where particular types of land use change might be beneficial or detrimental, in line with policy goals promoting multi-functional land use, the provision of key ecosystem services, and climate change mitigation/adaptation.

The project operated at two geographic scales, namely the whole of the Aberdeenshire local authority area, and the two local 'focus areas'. We engaged with stakeholders at both scales. At the regional scale they were mainly agencies, NGOs and local authorities staff members. In the local focus areas, we carried out community and landowner engagement on land use change issues.

Different types of stakeholders had different levels of engagement and acceptance of the results. We discuss to what extent the project outcome matched expectations of different stakeholders and highlight factors likely to explain differences.

Keywords: InVEST, stakeholders, workshops, land use, multi-functional landscape

Type of submission: Abstract (voluntary contribution)

T10 How useful is an ecosystem services approach in participatory decision making? Lessons learnt

‘Strathard: a landscape to live, work and play’ – community engagement in environmental decision making

First author(s): Louise Bond

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The Strathard ecosystem services project is a collaborative initiative working with partners and the community to engage and capture the views of everyone who benefits from and interacts with this area[i]. The project partners [ii] are applying an ecosystems approach to identify land management solutions in Strathard to reduce flood risk, deliver benefits for people and ecosystems, and to seek to manage these natural resources sustainably in a changing climate. Throughout 2016 project partners have been actively seeking community involvement in the Strathard project. Community engagement is at the heart of an ecosystem approach, working with the Community Partnership (an independent charity) to engage the community in raising awareness of the benefits people derive from the landscape. <http://www.thecommunitypartnership.org.uk/project/strathard-a-place-to-live-work-play/>.

The project strapline ‘Strathard – a landscape to live, work and play’ was selected to reflect the collaborative approach and aim to improve closer working relationships between partners and the community. As part of the decision making process we are asking residents, visitors, landowners and local businesses to identify issues, areas of common interest, and potential solutions, exploring both land and natural flood management options. One of the first approaches to raise awareness of the project amongst the community was the production of a community film in February 2016, featuring the people who live, work and visit the Strathard landscape. <https://youtu.be/vML9a1Wu9eU>

A key outcome of this project being to improve working relationships between agencies, land owners and the community, resulting in more effective joined-up delivery of land and water management and action on the ground.

[i] Strathard Project area, Aberfoyle, Stirlingshire, Scotland. Includes the Duchray Water and Loch Ard catchments.

[ii] Partnership steering group includes Scottish Environment Protection Agency, Forest Enterprise, Loch Lomond & Trossachs National Park, Stirling Council, Scottish Natural Heritage, Forest Research and the Community Partnership.

Keywords: community engagement, ecosystems approach, collaboration

Type of submission: Abstract (voluntary contribution)

T10 How useful is an ecosystem services approach in participatory decision making? Lessons learnt

Ecosystem Services as an operational tool for integrating environmental resources in land planning processes – feedbacks from the ICARE research-action project in the French Alps

First author(s): Emilie Crouzat

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Understanding how knowledge on ecosystem service (ES) can inform and eventually influence decision making is an enduring challenge for the ES community. We will present learnings from our recent experience in operationalising the ES approach at local scale in the French Alps. Land planning challenges in the inter-municipality of interest, characterised by urban sprawling, include maintaining mountainous agricultural and forestry activities and conserving patrimonial landscapes and species. In an attempt to implement a transdisciplinary and research-action approach, we co-designed and co-implemented the ICARE project together with local nature conservation managers and policy makers. In short, ICARE aims at exploring locally-tailored governance measures to enable a greater consideration of ES in land planning at the inter-municipal scale, based on the identification of the bundles of ES supplied and of the threats to their delivery. After an initial co-design phase, we carried out a biophysical assessment through the modelling and mapping of a set of eight ES identified by the project partners as critical for land planning. Considering these eight ES, we characterised three social-ecological profiles within the study area and linked each of them to a specific bundle of ES. In a third phase, these results were proposed to stakeholders of varied expertise during two focus groups. The stakeholders identified important pressures and threats influencing the supply of ES bundles locally and produced a list of governance options appropriate to manage and mitigate them. Finally, results from the ES biophysical assessment and the stakeholders' list of governance options were discussed with local decision makers. This last phase enabled identifying the options that seemed relevant and applicable in upcoming land planning processes. This presentation will deliver our main feedbacks and perspectives on this local experience seizing the ES concept as an operational tool for integrating environmental resources in land planning processes.

Keywords: participatory assessment, governance options, ES bundles, French Alps

Type of submission: Abstract (voluntary contribution)

T10 How useful is an ecosystem services approach in participatory decision making? Lessons learnt

Images of Nature & Social Landscape Indicators – lessons learnt for participatory ES and planning from the Belgian VOTES project

First author(s): Rik De Vreese

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The VOTES (Valuation of Terrestrial Ecosystem Services) project was aimed at developing a model for integrated valuation of ES in a peri-urban landscape. The presentation will focus on the social assessment pillar from the project (Images of Nature approach; use of Social Landscape Indicators) and how the social assessment was integrated with the biophysical and economic assessments in the project. We will introduce the Images of Nature concept and the Social Landscape Indicators used, and we will discuss the use, potential, (dis)advantages and lessons learnt for participatory ES and landscape planning.

Keywords: social assessment, integrated assessment, images of nature, participatory GIS, landscape metrics

Type of submission: Abstract (voluntary contribution)

T10 How useful is an ecosystem services approach in participatory decision making? Lessons learnt

Testing the ecosystem service cascade framework and QUICKScan software tool in the context of land use planning in Glenlivet Estate Scotland.

First author(s): Jan Dick

Other author(s): Peter Verweij , Esther Carmen, Romina Rodela, Chris Andrews

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The concept of ecosystem services has been extensively studied in recent decades. Most studies have focused on describing the specific aspects such as production, spatial extent, valuation of services and the trade-off between services. Few studies however assess the practitioners' views on the frameworks, models or tools developed. In this paper we report on a multi-stakeholder workshop where two tools were tested (i) the ecosystem service cascade framework was tested as a means to frame the issues and (ii) a participatory-spatial modelling method, QUICKScan, was tested as an aid to support discussion over a multi-use landscape for natural resource management and planning. A focused group discussion was utilised to determine stakeholders' views of the cascade framework and a pre- and post-workshop questionnaires quantified the stakeholders' views of the QUICKScan method. The stakeholders identified both positive and negative aspects of both tools. The diversity of views expressed were associated with (i) the past experience of the individual with the issues discussed (ii) the technical aspects of the tools .i.e. ability with GIS and (iii) the level of new shared knowledge they reported acquiring on the day which was related to their initial knowledge of the issue and area studied. Understanding the practitioners' perspective allowed researchers learn about the operationalisation of the concept.

Keywords: Spatial decision support system, knowledge integration, ecosystem service tools

Type of submission: Abstract (voluntary contribution)

T10 How useful is an ecosystem services approach in participatory decision making? Lessons learnt

Tool Assessor: Selecting the right tools for bringing natural capital and ecosystem services into decision making

First author(s): Bruce Howard, Jessica Neumann

Presenting author: Matt Smith

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Natural capital, green infrastructure and ecosystem services are terms used to help ensure that the environment is managed as an asset of value to all society. A range of analytical tools used to assess the role the natural environment plays in society are emerging.

The Ecosystems Knowledge Network and Joint Nature Conservation Committee co-designed 'Tool Assessor' which is an information resource on these tools that focuses on user requirements and is designed to aid the practical application of the natural capital, green infrastructure and ecosystem service concepts in decision-making.

Following a scoping exercise that examined analytical tools alongside other forms of decision support, 12 tools were reviewed. The tools assessed ranged from those that examine the functions of trees in urban areas to those developed for use in landscapes where natural features dominate. Some are spreadsheet-based while others use GIS. The review collected information about tool requirements, capabilities and where they have been used.

Engagement with different tool users provided insight into their current tool usages and their requirements of Tool Assessor. This showed the strong interest in tools, but also concerns regarding the reliability of results and transparency of underlying assumptions and the perception that the costs of investigating and using tools may outweigh the benefits.

It is clear that despite the existence of portals that make many datasets freely accessible, obtaining and using data required by the tools requires specialist technical knowledge. The data requirements for use in tools (including assessing the reliability of tool outputs) often necessitate specialist expertise and substantial time resource.

The Tool Assessor is available online and aims to provide the user community a platform that ensures cross-discipline experience and know-how associated with tool use is shared to help expedite the uptake of these tools in supporting decision making.

Keywords: Tools, Methods, Assessment, Decision Support

Type of submission: Abstract (voluntary contribution)

T10 How useful is an ecosystem services approach in participatory decision making? Lessons learnt

Developing shared understanding for decision-making through participatory mapping, modeling and deliberation: A marine ecosystem services case study

First author(s): Katherine Irvine

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This talk draws insight from the transdisciplinary project “Cooperative participatory assessment of the impact of renewable technology on ecosystem services: CORPORATES”. Using a real-world current issue – the co-location of wind farms, marine protected areas and industrial fishing – CORPORATES sought to develop a process for knowledge exchange around marine ecosystem services (ES) within the context of marine spatial planning decisions in Scotland. While stakeholder consultation is already integral to existing procedures, the project investigated the usefulness of embedding a participatory ES approach into decision-making.

The project design and delivery involved natural and social scientists, experts in law and policy and marine managers. The process brought together representatives of maritime industries and regulatory/advisory partners with a range of additional stakeholders (Non-Governmental Organisations, Small and Medium Enterprises, recreationalists, local government) to facilitate discussion about ES, benefits and trade-offs. Based around two workshops, the process incorporated mapping of different types of sector-specific activities and ES benefits, co-construction of a conceptual model of the social-ecological system and deliberation of future policy impacts on different sectors. Each workshop also included knowledge exchange about key ecological processes underpinning ES and about relevant laws and policies.

Stakeholder feedback highlighted the usefulness of the process for cooperative learning within the context of an ES framework. For example, the interactive ‘conversations’ about benefits and ES that occurred between stakeholders from different sectors uncovered a set of shared benefits (e.g. sense of identity), building rapport between sectors. The process also highlighted cross-sector concerns and produced new insights into possible trade-offs between activities and ES. We will draw further insight into aspects of the participatory processes that helped build a shared understanding of inter-linkages and interactions between different ES, benefits, activities, and economic and cultural values between emerging industries and existing stakeholders as well as limitations of the process for future use.

Keywords: marine spatial planning; ecosystem services; decision-making; participatory processes; cross-sectoral stakeholders

Type of submission: Abstract (voluntary contribution)

T10 How useful is an ecosystem services approach in participatory decision making? Lessons learnt

Road-testing ecosystem services in three real world situations

First author(s): Sander Jacobs, Fanny Boeraeve

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Applying the ecosystem service context in real world complex situations is challenging, especially for the scientists involved. Conceptual and methodological assumptions are adapted and loosely applied to accommodate local specificities. We look back on three comparable applications of local multi-stakeholder participatory ecosystem service valuation tests. In three different contexts, (a rural land use optimization plan, an urban park design and a river valley vision), ecosystem service quantification, mapping and valuation tools were applied to assist the process. This presentation shows the evaluation results of these applications, and draws some first critical conclusions on the applicability of the concept, the existing classifications, some valuation approaches and mapping methods. If further verified by cross-case comparison, shared lessons on applicability of various concepts and methods could start truly guiding and focusing ES research towards real world impact.

Keywords: real world application, CICES, IPBES, tool evaluation, participatory mapping and valuation

Type of submission: Abstract (voluntary contribution)

T10 How useful is an ecosystem services approach in participatory decision making? Lessons learnt

Green Infrastructure: Collective action for the well-being of European cities?

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The vulnerability of urban areas to global change is becoming key political challenge at EU level. In response to heat-waves, water scarcity, periods of draught, many European cities have been developing strategies for the management of risks and challenges that climate change brings. In this context, the crucial question is how to increase the adaptive capacity of biophysical systems against disturbances when such systems are faced by increased complexity and uncertainty? The key challenges are (i) the co-evolution of technological eco-innovations with institutional innovations to foster sustainable economy; and (ii) the mechanism for scaling down global issues and climate change policy objectives to local actions.

Collective action with equal and transparent rights and responsibilities is seen as a promising and more effective strategy to behavioural change to sustainability. Users of common pool resource regimes by crafting their own institutions, cooperate to maintain their institution in a long run and minimise the costs for reaching their collective goals. Thus they have a more effective strategy than when an authority simply imposes rules. Self-governance, local knowledge, increase trust and willingness of commoners to follow own established rules as declared Lin Ostrom in her life journey. In such a context we argue that common pool resource regime can be seen as institution to enhance technological eco-innovation of green infrastructure to trigger behavioural change to sustainability in urban areas. We determine the potential of climate regulation and cultural services to contribute to the global CO₂ reduction objectives at local level via self-organised common pool resource regimes at semi-public greeneries in Bratislava city. Using Ostrom design principles we evaluate the management effectiveness of urban commons and how this effects the provision of ecosystem services, assessing also the willingness to contribute for maintenance of urban ecosystem services. Our approach contributes to the theoretical discussion on mechanism of multilevel governance legitimacy across the scales.

Keywords: collective action, urban ecosystem services, multilevel governance, climate change.

Type of submission: Abstract (voluntary contribution)

T10 How useful is an ecosystem services approach in participatory decision making? Lessons learnt

How can we benefit from the ecosystem service concept in forestry?

First author(s): Markus Meyer

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In forestry, the concept of ecosystem services (ESS) is less prominent than in agricultural or bioenergy studies. One reason might be that multifunctional forestry and the concept of forest functions, human benefits from forests, are well-established and legally required (e.g., in Germany, Austria and Switzerland). Forest functions partly overlap with the ESS concept. This overlap limits the obvious need for ESS as an additional concept to quantify the human benefit from forests. Forest functions have subgroups comparable to the ESS classification: use, protective and recreational functions.

This contribution will evaluate communalities and complementarities of forest functions and ecosystem services to identify improvement potential for both approach. In contrast to mostly theoretical studies, we empirically assess forest functions and ESS in an empirical case study in Bavaria (Germany). For forest functions, we rely on existing assessments by the German federal states as required in the German Forestry Act. For ESS, we quantify multiple ESS (timber, carbon sequestration, water availability and quality, noise reduction, recreation, etc.) and biodiversity. We assess forest functions and ESS for an urban and a remote rural forest. In contrast to the legally bound forest functions, which do not differentiate supply and demand, we analyze ESS supply and demand patterns. ESS demand patterns likely differ for both forest locations. For example, we expect a higher demand for cultural and regulating ESS in the urban forest. In that respect, we aim to analyze how forest management adapts ESS supply to the demand patterns. To identify societal relevant ESS, we select ESS with expert-based focus groups identifying and ranking provisioning, regulating and cultural ESS. Stakeholder consultation might help to identify deficits with respect to the current priority setting in the assessment of forest functions (e.g., missing quantification of human needs as done in the ESS approach).

Keywords: ecosystem services, forest functions, forestry, supply, demand

Type of submission: Abstract (voluntary contribution)

T10 How useful is an ecosystem services approach in participatory decision making? Lessons learnt

Which ecosystem services are perceived as crucial for local well-being and where are they generated – insight from mapping workshops with conservation professionals and local leaders.

First author(s): Agnieszka Olszanska

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Although the ecosystem services concept (ES) is widely applied in science and international policy, it is still not often used in local policy planning and implementation, due to e.g. difficulties with its operationalization or ambiguity of ES definitions.

In this presentation we offer an insight from participatory mapping workshops, the main aims of which were (1) to identify ES that were perceived as the most important for local societies well-being, (2) to identify areas providing those ES and (3) to recognize the differences in ES perception between professionals working on spatial planning and nature conservation and local leaders not professionally involved in nature conservation. We investigated five case study areas in Poland that varied in size, landscape and dominant habitats character, conservation regime and socio-economic context. At each site, we conducted focus group interviews with conservation professionals and local leaders separately. The two groups were asked to identify five ES perceived as crucial for local societies well-being, and consecutively through participatory mapping sketch the borders of the services providing areas. After one year we came back to three of the case studies areas and organized the same mapping workshops but with a mixed groups of both professionals and local leaders.

While conservation professionals indicated mostly provisioning and cultural services as the most important for local societies well-being local leaders selected mostly cultural services. To some extent, both groups recognized regulating services. The results of the joint workshops were significantly different both in terms of ES selection and distribution. According to participants the presence of representatives of both groups eased the process and enriched it with the new knowledge.

We discuss the choices on crucial ES and their distribution made separately and jointly by professionals and local leaders and provide the reflection on potential and limitations of participatory mapping of ES.

Keywords: participatory mapping, conservation professionals, local leaders, services providing areas, knowledge co-production