BOOK OF ABSTRACTS

I. SESSION DESCRIPTION

ID: T18a

Bridging Ecosystem Services and Policy Design: Coproducing in the interface of science and practice

Format: Hybrid

Hosts

	Name	Organisation	E-mail
Host	Patricia Ruggiero	University of São Paulo	pruggiero@usp.br
Co-Hosts	Nathalia Nascimento	University of São Paulo	nnascimento@usp.br

Abstract

Global communities are increasingly aware of the need to maintain and improve ecosystem services provision around the globe and at different scales. However, to move from environmental awareness to actual transitions towards more sustainable systems on the ground has been a great challenge. Nature-based Solutions (NbS) are interventions that are supported by ecological processes and its accruing ecosystem services to solve a wide range of socio-ecological problems. Given its nature, those interventions must be conceived and implemented largely based on both science and practical knowledges, which requires the joint work of scientists and non-scientists. Coproduction has been pointed as the main promising dynamic to proximate the best of these two worlds and an increasing number of scientists, decision makers and environmental managers are creating boundary spaces to work together in search for environmental and social innovation. We recognize that these processes have some predictable and some unpredictable challenges and a set of caveats, and we propose a standard session (with a discussion forum embedded) to share different coproduction experiences in the Latin America and the Caribbean and to discussion failures and successes of such experiences to promote social and scientific learning on this topic.

Goals & Objectives

The main objectives of our session are to share coproduction experiences and to create a network of coproducing engaged scientists and policy makers in Latin America and the Caribbean.

Planned Output

We plan to produce a short communication paper on best practices of coproduction in the Latin America and the Caribbean based on the session discussion.

Session Format

We propose a 3 hour session with 6 to10 oral presentations. Each participant has 10 minutes for work presentation, followed by 10 minutes for 1 or 2 questions from the audience. Remaining 20-30 minutes will be used for formulating responses to our two major questions (lessons learned up to now and main directions both for researchers and practitioners).

Acceptance of voluntary contributions

Yes, I allow any abstract to be submitted to my session for review.

Relation to ESP Working Groups or National Networks

Thematic Working Groups: TWG 18 – Governance & Institutional aspects.

II. SESSION PROGRAMME

Date of session: Thursday 9
Time of session: 11:00-12:30 and 14:00-15:30 (3h divided in two periods)

Timetable speakers: 15 min for presentation and 5 min for debate

Time	First name	Surname	Organization	Title of presentation
11:00 – 11:05	Patricia	Ruggiero	University of São Paulo	Welcome
11:10 – 11:30	Gabriel-Alejandro	Perila	Instituto de Investigación de Recursos Biológicos Alexander von Humboldt	The more we share, the more we know: Collaborative modelling of nature contributions with local citizenry aiming to design public policies
11:30 – 11:50	Svetla	Bratanova-Doncheva	Institute of Biodiversity and Ecosystem Research at the Bulgarian Academy of Sciences	Stakeholder involvement process in the ecosystem services assessment and management as part of Long-Term Socio-Ecological Research
11:50 – 12:10	Julia	Assis	Wageningen University and Research	A serious game to share knowledge about landscape tradeoffs between agriculture

Time	First name	Surname	Organization	Title of presentation
				and ecosystem services and to inform planning
12:10 – 12:30	Joachim	Spangenberg	SERI Germany	The European Green belt: a multi-purpose refugium
14:00 – 14:20	Fernando	Costa	Governo do Distrito Federal – Brasil	Adherence Of The Brazilian Environmental Zoning Regulations To The Concept Of Ecosystem Services
14:20 – 14:40	Nathália Nascimento	Nascimento	University of São Paulo	Coproduction in climate policy formulation: navigating challenges and achieving impact in São Paulo state – Brazil
14:40 – 15:10	Patricia	Ruggiero	University of São Paulo	Identifying ways of thinking about coproduction between scientists and decision makers using Q methodology
15:10 – 15:20				Close remarks

III. ABSTRACTS

1. *Type of submission*: Abstract / Resumen

T. Thematic Working Group sessions / Sesiones del Grupo de trabajo Temáticas: T18a – Bridging Ecosystem Services and Policy Design: Coproducing in the interface of science and practice

The European Green belt: a multi-purpose refugium

First author(s): Joachim Spangenberg

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The story I offer is not from Latin America, but from Europe, and begins already before the collapse of the „iron curtain“. That time, the heavily armed border region was recognised as an area where different kinds of wildlife, at risk of extinction elsewhere, had found a safe retreat. When the wall came down, immediately activists from Eastern Germany and Friends of the Earth in Western Germany started a campaign for the former border region to become a protected area. We soon extended our efforts with partner throughout Europe, and today the European Green Belt stretches 12,500 km from the arctic to the Mediterranean through 9 biogeographical regions in 24 countries.

Besides being a wildlife refugium, allowing the migration of species under climate change, it offers leisure opportunities (hiking, biking, nature experience), educational activities and citizen science research (e.g. the NGO-organised butterfly monitoring), organic agriculture areas and – with the “branches” of the narrow belt – important ecosystem services by restoring soil quality and water table in drought prone regions. As the Green Belt preserves not only nature, but also the remains of the fortified border, it is also a cultural memorial; an application for recognition as UNESCO World Natural and Cultural Heritage Site is in preparation. This, and the collaboration between different civil society organisations, will further enhance its value as a touristic spot which has already resulted in a number of Hotels including “at the Green Belt” into their name, and even one city doing so.

What began as a NGO-led initiative has found much public support, and some regional governments stepped in with money, adding area to the Green Belt – and claiming it as their project, although it was be established against their initial fierce resistance. The challenge now is to safeguard the Belt’s character as a civil society project.

Keywords: Nature refugium, leisure, tourism, education, provisioning services

2. *Type of submission*: Abstract / Resumen

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Coproduction in climate policy formulation: navigating challenges and achieving impact in São Paulo state – Brazil

First author(s): Nathália Nascimento

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Other author(s): Pedro Brancalion, Rafael Chaves

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Global climate change imposes to society urgent challenges that demand a deep understanding of natural processes, measurement of impacts on human life, and the development of effective public policies for mitigation and adaptation. Addressing these challenges requires a collaborative approach between academia and governments. However, this collaboration entails complex interactions among diverse stakeholders with distinct perspectives, goals, and languages, all of whom must engage in the coproduction of knowledge capable of supporting public policy formulation. In this study, we share our experience in carbon mapping and strategies of carbon sequestration in São Paulo state, undertaken to support the formulation, implementation and monitoring of state-level public policies. The challenges we encountered revolved around the urgency for information to support governmental discussions and policy formulation while upholding the meticulous standards of scientific research. We found out that a synthesis science approach can be helpful in this context. Also, since the open nature of science results in many sources of information on carbon storage potential, a systematic science-policy effort to filter and select the most effective approach considering the state policy needs. Our experience suggests that collaborative efforts between academia and government offer a pathway to effortlessly integrate urgent policy demands with the time-intensive process of scientific knowledge production. However, finding a delicate balance between urgency and scientific rigor, although challenging, is critical for generating impactful policies. This case study related to the carbon theme demonstrates the challenges and opportunities inherent in the knowledge co-production, highlighting the importance of bridging the gap between immediate policy needs and the rigorous pursuit of scientific understanding.

Keywords: coproduction, public policy, carbon, synthesis science approach

3. *Type of submission*: Abstract / Resumen

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Stakeholder involvement process in the ecosystem services assessment and management as part of Long-Term Socio-Ecological Research

First author(s): Svetla Bratanova-Doncheva

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Two scales are important when considering who are the right stakeholders when mapping and assessing ecosystems and their services: ecological scale and institutional scale. Ecosystem services are generated at a range of ecological scales and are supplied to stakeholders at a range of institutional scales. Stakeholders at different scales may benefit from and value ecosystem services differently based on, for example, their dependence on the given services for livelihoods. In addition, it is necessary to identify scales and stakeholders to avoid potential conflicts between different scales because the demand for specific ecosystem services in one scale may restrict or impede the use of the same or other ecosystem services in another scale. Different policy questions also relate to different ecological and institutional scales.

Based on the Whole System approach in the Long-Term Ecosystem Research and its interdependence with ecosystem services mapping and assessment, we discuss the different steps in the engagement process – identification, information, categorization, motivation, discussion, negotiation, conflict management, decision. The management of the process reflects the adaptive management approach and considers our previous research on downscaling ecosystem integrity and services indicators.

Keywords: Stakeholder engagement, Trade-offs in cross-scale use of ecosystem services, Long-term socio-ecological research, Whole System approach

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A serious game to share knowledge about landscape tradeoffs between agriculture and ecosystem services and to inform planning

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In the face of the complex challenges that influence the provision of ecosystem services, decision-makers have been striving to manage landscapes to balance tradeoffs and achieve sustainable outcomes. Spatial relationships play a fundamental role in the delivery of several ecosystem services. However, the role of landscape structure in the spatial flows of ecosystem services is not easy to understand. A serious game was developed as a tool to create a common understanding of such processes among diverse stakeholders. Further, this game can help spatial planners to communicate the reasons and potential effects of their policies to a wider audience. This game is a digital adaptation of the “Tradeoff: Agriculture Edition!” from The Natural Capital Project, currently available as a board game. In the new version, the game invites players to allocate different agriculture types and nature to a partially unoccupied landscape, based on their productivity. Fixed land uses such as urban areas, industries, transportation infrastructure, water bodies, and protected nature areas cannot be modified. When the time is up, players can visualize the spatial consequences of the designed landscape for human health (based on air quality), nutrient deposition, habitat quality, water availability to nature, and recreation opportunities. After interpreting these consequences, players can modify their choices and explore the tradeoffs between agricultural production and ecosystem services in the landscape. The game debriefing allows players to reflect on their experiences and learn from each other. Complementary research instruments are used to draw insights into the outcomes of the game session: a pre/post-conceptual mapping exercise, and a structured interview. To make the game transferable to diverse contexts, an open-access game configurator was developed. It provides the opportunity to explore the game's functionality and its effectiveness for knowledge sharing in other regions by organizations or individuals engaged in co-production and participatory planning approaches.

Keywords: spatial planning; landscape configuration; learning; transdisciplinary

5. *Type of submission*: Abstract / Resumen

T. Thematic Working Group sessions / Sesiones del Grupo de trabajo Temáticas: T18a - Bridging Ecosystem Services and Policy Design: Coproducing in the interface of science and practice

Adherence Of The Brazilian Environmental Zoning Regulations To The Concept Of Ecosystem Services

First author(s): Fernando Almeida Costa

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This study investigated the Brazilian regulations related to environmental zoning, regarding their adherence to the concept of Ecosystem Services - ES. The 10 main norms related to environmental zoning at the federal level in Brazil were selected, including related methodological guidelines.

Quantitative content analysis involved locating the relevant parts in the documents, coding them according to the Common International Classification of Ecosystem Services - CICES V5.1 (MAES et al., 2016) and using the NVIVO® 12 software for analyzing terms- key, coding and frequency calculation, as proposed by MACZKA et al., (2016). A total of 139 key terms were used to identify parts of the documents with explicit and implicit references to ES.

The results of the analysis showed the presence of the ES concept, even if implicitly, in the normative basis of Brazilian environmental zoning. Throughout the sampled content, 1283 references were encoded in the documents. The highest frequency of references was observed in land use and occupation escope regulations, such as the Forestry Code. The predominant CICES category was Regulation and Maintenance, followed by Provision Services and Cultural Services.

It was possible to identify the ES prioritized in each regulation, allowing the verification of the specific categories covered by each document.

The results pointed to the need to more explicitly highlight the ES concept in norms and guidelines, as well as the incorporation of the ES approach in executive-operational scope regulations.

The results demonstrate that the Brazilian normative base provides conditions for the application of the ES concept, as a criterion for environmental planning and management in the public administration. It is also suggested to investigate the adherence/insertion of other instruments of the Brazilian environmental policy to the concept of Ecosystem Services, aiming to evaluate its applicability in scopes of different instruments, such as environmental impact assessment and environmental monitoring.

Keywords: Environmental Zoning Policy; Common International Classification of Ecosystem Services - CICES;Ecosystem Services;Land Use Policy; Protected Areas Planing

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The more we share, the more we know: Collaborative modelling of nature contributions with local citizenry aiming to design public policies

First author(s): Gabriel-Alejandro Perila

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Urban and peri-urban areas generate changes in land use and landcover in their territories, in most cases irreversible. Reducing the quantity and quality of nature's contributions to human well-being. As evidenced by aggravating phenomena such as heat island effect, carbon release into the environment, decline of water security, deterioration of habitats, increased environmental risk, worse scenic quality, among others, which collectively affects the welfare of the citizens. Currently there are various tools and methodologies that allow analyzing the contributions of nature, but there is still a lack of understanding when trying to link these tools to practical application in the territories, such as: public policies, citizen initiatives, private projects, etc. Additionally, there is not enough knowledge, or experience, regarding the integration of these scientific analyses with local knowledge and the appropriation of said contributions to the city and citizen identity. In this work we present the results and lessons learned on the modeling of some contributions of nature (carbon storage, thermal regulation, water supply, scenic quality, habitat quality and risk), in 6 Colombian cities (Montería, Bucaramanga, Yopal, Pereira, Villavicencio and Pasto), which have huge differences regarding climate, demography, geography, politics, etc. To do this, we carry out a collaborative exercise with each one of the cities, using freely accessible and public data, promoting the replicability of the models, so that local governments can ensure monitoring strategies, and citizen can carry out environmental surveillance. We attempt to highlight and recognize the differences of each city-region. And how these contrasts change the usefulness of the results in each context, emphasizing the local interests and methodological challenges, to effectively link the models to actual actions in each city. As well as translating these results into colloquial languages that allow greater citizen appropriation.

Keywords: Sustainable cities, ecosystem services, nature-based solutions, urban ecology, Colombia

7. *Type of submission*: Abstract / Resumen

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Identifying ways of thinking about coproduction between scientists and decision makers using Q methodology

First author(s): Patricia G. C. Ruggiero

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Other author(s): Fernanda Pardini, Gabriela Di Giulio, Renata Pardini

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Knowledge coproduction is a collaborative process between actors with different expertises and perspectives to attack complex problems. In the science-policy interface context, coproduction brings together scientists and non-scientists, mainly managers and decision makers, to find better solutions for society problems. During collaboration, it is expected that actors, who often present different power and risks, recognize each other's agency and the relevance of different knowledges, reframe problems and expand solution alternatives, to increase choices for decision makers. Coproduction has been increasingly adopted as a way to conceive more effective and legitimate solutions. However, due to previous experiences of collaboration and interaction, actors with different perspectives and backgrounds have often distinct predefined ideas, conscious or not, of what coproduction is and how it should work. This previous definition may vary as regard to its ontological, functional, operational and challenging dimensions. The objective of this study is to identify different ways of thinking about coproduction among the participants of the Biota Synthesis Project, a coproduction and synthesis center in São Paulo, Brazil. We use the Q methodology that allows for a qualitative and quantitative apprehension of such modes of thinking and discuss results in the light of coproduction implementation and success.

Keywords: collaborative work, Q methodology, policy-science interface, synthesis center