BOOK OF ABSTRACTS

I. SESSION DESCRIPTION

ID: T8a

Ecosystem services and relational values – current state and the way forward

Hosts:

	Name	Organisation	E-mail
Host:	Johanna Schild	PBL The Netherlands Environmental Assessment Agency	johanna.schild@pbl.nl
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Abstract:

In 2022, IPBES highlighted the limitations of relying solely on intrinsic and instrumental values of nature in policymaking, urging a broader consideration of relational values (IPBES, 2022). While ecosystem services often focus on tangible benefits, relational values emphasize the emotional and cultural connection people have with nature. Recognizing these connections can lead to more holistic conservation approaches and enhance nature policy effectiveness (Mattijssen et al., 2020).

Various strategies exist for integrating relational values into ecosystem services assessments, as highlighted by researchers such as Chan et al. (2016) and Stalhammer & Thoren (2019). However, the concept of relational values is still in its conceptual phase, requiring further exploration into operationalization and application. Research on ecosystem services can play a pivotal role in supporting the inclusion of relational values in policy-supportive assessments, particularly in operationalizing relational values for land use and nature policy.

This approach aligns with the concept of transformative change, which emphasize broadening the understanding of nature to encompass multiple values of nature, including relational values. Recognizing and incorporating relational values can also contribute to mental health and well-being.

We invite speakers to present advancements in relational values in relation to:

- Conceptual development of relational values: Explore the theoretical foundations and conceptual frameworks underpinning relational values, and their integration into ecosystem services assessments.
- Linking relational values to ecosystem services: Investigate the connections between relational values and ecosystem services, and how understanding these connections can inform nature conservation and natural resource management strategies.
- Application of monitoring and models: Showcase real-world case studies where monitoring and modeling techniques are used to quantify relational values, and discuss their implications for stakeholders and end-users.
- Good and bad practices: Examine both successful and unsuccessful approaches to the development and application of relational values, highlighting lessons learned and best practices for future endeavors.
- Policy implications: Discuss how insights from relational values research can inform and influence nature policy, and explore avenues for incorporating relational values into decision-making processes at local, national, and international levels.

Goals and objectives of the session:

- To obtain an overview of the current state-of-the-art of making relational values operational and the relation between ecosystem services and relational values.
- To identify gaps and opportunities in measuring and quantifying relational values, through a discussion with the participants.
- To outline a research agenda for making relational values operational.
- To identify insights for policy and decision making.

Planned output / Deliverables:

An opinion or discussion paper about policy implications, and a research agenda outlining operationalization of relational values within the ecosystem services research field.

II. SESSION PROGRAM

Room: Expert Street 9

Date of session: 19th of November 2024

Time of session: 16:00-18:00

Timetable speakers

Time	First name	Surname	Organization	Title of presentation
16.05-16.15	Sander	Jacobs	Research Institute for Nature and Forest INBO	Scientist's relations with valuation of nature
16.15-16.25	Sjerp	de Vries	Wageningen University & Research	Relational values, nature connectedness and place attachment
16.25-16.35	Arjen	Buijs	Wageningen University & Research	Development of a scale to operationalize relational, instrumental and intrinsic values through the Nature Futures Framework
16.35-16.45	Mario	Balzan	Malta College of Arts, Science and Technology	Enhancing Ecosystem Restoration Through Nature-Based Tourism: Insights from the Maltese Islands
16.45-16.55	Martin	Bermudez-Urdaneta	Universidad de los Andes	Natural heritage inventories for understanding cultural ecosystem services in territorial planning: integrated heritage approach in Bogotá
16.55-17.05	Johannes	Langemeyer	Universitat Autònoma de Barcelona	Digital Relational Values: Insights from TikTok's Virtual Nature Experiences
17.05-17.15	Frans	Sijtsma	Rijksuniversiteit Groningen	The Relational Value of Nature: Insights from Fifteen Years of Empirical PPGIS Research
17.15-18.00				Targeted discussion & Wrap-up

III. ABSTRACTS

The first author is the presenting author unless indicated otherwise.

1. Enhancing Ecosystem Restoration Through Nature-Based Tourism: Insights from the Maltese Islands

First authors(s): Mario V Balzan
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Nature-based activities have become increasingly important constituents of the tourism industry and include many outdoor activities, many of which are performed by individuals and communities within landscapes and seascapes. Propelled by improved purchasing power, digitalisation, and increased demand for nature-based interactions, this sector has considerable growth potential. Here, we examine nature-based interactions in an insular environment for their potential to align the goals of the tourism sector with those of ecosystem restoration in the Maltese Islands, including through the engagement of the public and private sectors. In this Horizon Europe SELINA demonstration project, we leverage various crowdsourced datasets to assess and map sites associated with high nature-based interactions and landscapes of unique social-ecological value. We use social media data to evaluate tourist preferences and behaviour. We extract and analyse geotagged social media posts to measure visitor engagement at sites of environmental importance, and compare this dataset to recent works conducting spatial assessments of nature-based tourism within the study area. By applying geospatial analysis and natural language processing, we map the distribution of nature-based tourism sites to provide an initial understanding of the relative amenity values of different landscapes based on site visitation. In addition to exploring the opportunities for nature-based tourism, participatory GIS surveys are conducted with businesses, residents, and tourists to evaluate the enablers and barriers for nature-based tourism and identify sites associated with different ecosystem services and amenity values. Results from this study are presented in more detail, and opportunities for the integration of biodiversity and natural capital in private and public decision-making are explored.

Keywords: recreation; ecosystem condition; ecosystem services; amenity values

2. Natural heritage inventories for understanding cultural ecosystem services in territorial planning: integrated heritage approach in Bogotá (Colombia)

First authors(s): Martin Bermudez-Urdaneta

Other author(s): Camilo Escallon-Herkrath, Ricardo Arias-Forero, Sol Gaitan-Martinez, Ana Milena Vallejo-Mejia, Elizabeth Barragan-Porras, Sol Camacho-Schlenker, Luisa Cardenas-Ovalle

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Although cultural ecosystem services (SES_Cult) have been part of the traditional conceptualization of ecosystem services in general, one of the greatest methodological drawbacks is the lack of official information on society-nature interactions and contributions at neighborhood and everyday scales that can be aggregated thereafter at larger scales of territorial planning.

From the District Institute of Cultural Heritage (IDPC) of Bogotá we have managed to include culture as a determinant in the Land Use Plan of Bogotá (2022-2034). Since 1980, the IDPC has protected cultural heritage in its architectural, urban, and monumental material versions. From 2020 onwards, it opened a natural heritage program to incorporate the environmental dimension into the territorial management of heritage at the district and local scales.

Through natural heritage inventories that include 20 spatializable variables, and socio-ecological fieldwork, we have integrated technical information on ecosystems with the daily experience of 300 people interviewed in 10 study areas representative of Bogota's landscapes over 4 years. The synthesis of information is part of the Heritage Integrating Structure (EiP) of Bogotá, which brings together primary and secondary information from official institutions of the environmental and cultural sectors of the district administration.

The combination of qualitative and quantitative information from both sectors facilitates quantifying cultural practices such as the appreciation of nature from citizen science and conservation in private and community gardens in urban or rural landscapes of the district. We have mapped over 100 polygons with the highest concentration of 250,000 citizen observations of nature, as well as the dynamism of networks for exchanging seeds, fruits, and knowledge in 4,000 private and community gardens that function as SES_Cult spaces in homes and public

spaces in the city. In doing so, we managed to integrate information representative of Bogota's territory that will be used in developing policies aimed at safeguarding this vital urban natural heritage.

Keywords: Natural heritage, cultural heritage - integrated heritages, cultural ecosystem services; territorial planning, high mountain ecosystems

3. Relational values, nature connectedness and place attachment

First authors(s): Sjerp de Vries
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In its framework for the valuation of nature, IPBES advocates relational values as a third type of value, next to intrinsic and instrumental values. This begs the question how this third type of value differs from the other two. Obviously, the answer also depends on how the other two types of values are defined. We argue that, at least for research purposes, it would be helpful to distinguish the three types of values more clearly. In this presentation, we propose tightened definitions for each type of value. For example, intrinsic value is defined as (and limited to) a moral value, the right to exist, regardless of nature's benefits and/or disbenefits to people. Relational value is defined as the emotional bond an individual has with a specific natural environment or element, next to possible intrinsic and/or instrumental value. While this bond may be shared with others, it can also be highly individual. And although intrinsic and relational values have in common that the nature in question is considered to be non-substitutable, we argue that they are so for quite different reasons. Next, we explore how to position the concept of relational value with regard to concepts such as nature connectedness and place attachment. Implications of the proposed tightened definitions for measuring the different values will be discussed as well.

Keywords: intrinsic value, instrumental value, relational value, IPBES

4. Digital Relational Values: Insights from TikTok's Virtual Nature Experiences

First authors(s): Johannes Langemeyer

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Nature experiences are on the decline, but does this necessarily mean that environmental values are diminishing as well? The reduction in direct interactions with nature is often cited as a contributing factor to a waning appreciation of the environment and a subsequent decrease in commitment to environmental stewardship. However, the internet, particularly social media, is an often-overlooked factor that can amplify (indirect) nature experiences and foster environmental values. With more than half of the global population actively using social media, it is crucial to better understand how physical-virtual nature interactions on these platforms can shape values that support sustainable global transitions.

Langemeyer & Calcagni (2022) introduced the concept of Digital Relational Values, which are fundamental and eudaimonic values triggered by indirect experiences of nature within virtual communities. This case study aims to identify Digital Relational Values within the TikTok virtual community. Specifically, we manually analyzed video content (n=650) portraying diverse landscapes to evaluate the types of relational values and human-nature connectedness reflected and disseminated on the platform.

Building on the classifications by Chan et al. (2016) and Riechers et al. (2022), we found that only a small proportion of commonly recognized relational values were dominant on TikTok—namely, stewardship, eudaimonia, and personal identity. Additionally, we observed that certain landscapes, such as forests, wetlands, and montane-polar regions, were more likely to reflect Digital Relational Values. These values were often underpinned by experiential-emotional connections between humans and nature.

In conclusion, our research demonstrates that the TikTok virtual community serves as an important hub for the production and amplification of indirect nature experiences and the creation of digital nature values. This study underscores the need to give greater consideration to how nature values are created on social media and to deepen our understanding of the interrelationships between real-world experiences, their digital representations, and the real-world (stewardship) actions that may be triggered by virtually produced relational values.

Keywords: Relational Values, Nature Experiences, TikTok, Crowdsourced Data, Environmental Stewardship

5. Development of a scale to operationalize relational, instrumental and intrinsic values through the Nature Futures Framework

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Considering nature and society as social-ecological systems is a prerequisite for understanding and shaping large-scale societal change processes (transformations). However, as recent European debates on e.g. the Nature Restauration Law has shown, transformations are inherently political and successful transformation critically depends on public support from society. This support, in part, depends upon peoples' perceptions, values and cognition. The IPBES Nature Futures Framework (NFF) is a tool designed to explore different pathways for bringing about transformative change, focusing on positive and diverse relationships between people and nature. The NFF integrates three value perspectives: (1) nature for nature, which prioritizes the intrinsic value of biodiversity; (2) nature for society, which emphasizes nature's direct and indirect contributions to people, including ecosystem services; and (3) nature as culture, which recognizes the reciprocal relationship between people and nature. In this presentation, we link these pathways to previous discussions on instrumental, intrinsic and relational value, with specific focus on relational values. Inspired by previous studies into the intrinsic, instrumental and relational values, we have operationalised the NFF into a psychometric scale for using in public surveys. This scale is the first validated scale to addresses values of nature from a transformative perspective. The scale is intended to capture different value perspectives seen in different societies and has been tested in four validations rounds with samples of the general public from the Netherlands, Denmark, Poland, Romania and Sweden. Here, we present the outcomes from a representative survey in these countries and the analysis of the validity and reliability of the scale. The scale can be used in scenario-studies and in national surveys into people's perception into nature-positive futures.

Keywords: relational values, Nature Futures Framework, sustainable transformations

6. The Relational Value of Nature: Insights from Fifteen Years of Empirical PPGIS Research

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The 2022 IPBES report clearly indicates that relational values to nature are underrepresented in policies and decision-making processes related to nature. This underrepresentation is partly due to a lack of systematic data on the relationship between people and nature. In this paper, we present fifteen years of empirical research on place-based relational values to nature. Our focus is on the Greenmapper software, a PPGIS (Public Participation Geographic Information System) tool, which serves a threefold function for the empirical assessment of relational values to nature.

First, the Greenmapper PPGIS software allows individuals to express place-based relational values to nature in a standardized, large-scale manner. Second, analyzing the individual data, it reveals the collective appreciation for various nature-related locations. Third, recent developments in the Greenmapper software aim to facilitate the organization of collective actions that support the management and governance of nature-related landscapes.

After discussing the nature and logic of individual value expression in Greenmapper, this paper focuses primarily on key empirical and conceptual results concerning the collective appreciation of nature-related places. We demonstrate the conceptual importance of working with a 'portfolio of loved nature places', the utility of Greenmapper data in assessing nature policy scenarios, the monetary valuation of nature via property prices, the role of Maslow's hierarchy of needs in relational values, and the use of community size as a measure of value.

The paper concludes by highlighting experimental possibilities and ideas for the third collective action function: using communities of fans of different nature areas and landscapes for idea generation and funding.

Keywords: Valuation, Place Attachment, PPGIS, Software, Spatial Planning