



BOOK OF ABSTRACTS

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I. SESSION DESCRIPTION

ID: T16a

Ecosystem service valuation to identify investment opportunities, risks, and stakeholders:
Experiences from case studies

Hosts:

	Title	Name	Organisation	E-mail
Hosts:		Vince van 't Hoff	FSD	vince.vanthoff@fsd.nl
		Mieke Siebers	FSD	mieke.siebers@fsd.nl
Others:		Wijnand Broer	Crem	
		Caroline van Leenders	Dutch Enterprise Agency (RVO)	
		Roel Nozeman	ASN bank	
		Peter Roebeling	Wageningen Economic Research (WEER)	

Abstract:

After several case studies with financial institutions, the **Ecosystem Service Valuation Database (ESVD)** development team has gained insights in aligning the monetary valuation of ecosystem services with impact assessments and risk analysis of financial institutions. Through their investments, **financial institutions** can be heavily dependent on ecosystem services and therefore, deterioration of nature causes risks for financial institutions: physical risks, transitional risks and reputational risks.

In several case studies, we assessed (possible) investments in land cover changes and how these land cover changes impact the **flow of ecosystem services** by means of **monetary valuation** using the ESVD. These case studies shed a new light on the importance of providing a place for nature on the equation of financial assessments, on the link between risk categories and ecosystem services and on the monetary impacts of financial investments on ecosystems.

One of the most important take-aways of these case studies is the understanding that different land covers and the corresponding difference in monetary value of ecosystem services (market vs non-market) are not distributed evenly. The ecosystem services benefits and losses therefore pinpoint to the direction of which **stakeholders** (private/public) are



impacted. Subsequently, this delivers insights in **the risks and opportunities for financial institutions** which provides a direction of (needed) change towards sustainable management of ecosystems.

The case studies underline urgency and they support the development for financial institutions, businesses and policy makers to create new financial products, different PES mechanisms, as well as creating a larger and much broader stakeholder engagement.

Goals and objectives of the session:

Overall objective is to give a taste of the possibilities of using monetary valuation data in impact assessments for financial institutions, governments and other organizations, and the relevance and the importance of doing so. We would like to discuss the significance of stakeholder engagement, the why of integration of monetary valuation in decision-making and possible future developments.

Specific objectives:

- Present the methodology of the case studies and discuss the interpretation of the results, of assessing the impact that financial investments have on land cover change and ecosystem services using the ESVD, from different perspectives (science, business and financials). *By FSD & ASN*
- Present and discuss the integration of monetary valuation in the current risk assessment methods from financial institutions, the progress that has been made by the Partnership for Biodiversity Accounting Financials (PBAF) and what steps are to be taken in the near future. *By Crem*
- Discussion on the engagement of the variety of stakeholders influenced by this type of financial decision-making and the needed development of new policy. *By RVO*
- Discussion on the needed next developments to improve monetary valuation methodologies for risk and impact assessments such as value transfer functions. *By WECR*

Planned output / Deliverables:

Understanding of how monetary valuation of ecosystem services provides a language for including nature in impact assessments and cost-benefit analyses

Develop a 2-pager on ecosystem services and how it informs stakeholder engagement for a better due diligence and blended finance products

Publish the rapport: Ecosystem Services in the ASN Biodiversity Fund

Development/ application of Value transfer functions within projects: TEER and Koevoet



Session format:

Other (Presentations with subsequent discussion forum)

Voluntary contributions accepted:

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

Related to ESP Working Group/National Network:

[Thematic Working Groups: TWG 16 – ES Financing mechanisms](#)

II. SESSION PROGRAM

Date of session: 15-10-2022

Time of session: 16:00-17:30

Timetable speakers

Time	First name	Surname	Organization	Title of presentation
16:00-16:05	Vince	Van 't Hoff	FSD	Introduction: Relevance of monetary valuation, this first pilot report and the application of science for financial decision-making.
16:05-16:15	Vince	Van 't Hoff	FSD	Approach and main outcomes of the report.
16:15-16:20	Valentin	Yatsukhno	Belarusian State University	Ecosystem service assessments for Belarusian Peatlands.
16:20-16:35	Roel	Nozeman	ASN Bank	Relevance of this pilot report for financial institutions, possible ways of integration in decision-making and follow-up steps.
16:35-16:40	Stefania	Tonin	University of Venice	Willingness to pay as support from the public?
16:40-16:55	Wijnand	Broer	CREM	Placement of ESVD data in the larger context and coherence with other tools, initiatives such as PBAF
16:55-17:00	Zita	Izakovicova	Institute of Landscape Ecology Slovakia	Conflicts in the use of ecosystem services, which ES influences which ES



Time	First name	Surname	Organization	Title of presentation
17:00–17:15	Caroline	Van Leenders	Netherlands Enterprice Agency	From ecosystem perspective to stakeholder inclusion:solutions for the future
17:15–17:20	Emmanuel	Taye	University of Ghana	Valuing the ecosystem services of an urban Ramsar site in Ghana: Prospects for decision-making.
17:20–17:30	Peter	Roebeling	Wageningen Economic Research	Value transfer as a new future development

III. ABSTRACTS

Abstracts are ordered based on the session program. The first author is the presenting author unless indicated otherwise.

1. Type of submission: Abstract

T. Thematic Working Group sessions: T16a – Ecosystem service valuation to identify investment opportunities, risks, and stakeholders: Experiences from case studies

EVALUATING ECOSYSTEM SERVICES TO DETERMINATION ECOLOGICAL AND ECONOMICAL VALUE NATURAL AND POSTAGRICULTURAL PEATLANDS (AN EXPERIMENT OF BELARUS)

Presenting author: Valentin Yatsukhno

Other author(s): Elena Davydik,

Affiliation: Belarusian State University, Belarus

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On the territory of Belarus there are located natural peatlands by total area for about 850.0 thous.ha which provide an important ecosystem services through climate and water regulation, biodiversity, natural and cultural heritage preservation. More than 311.0 thous.ha natural peatlands included in nature protected areas. Besides, drainage of agricultural



reclamation in the middle of 20th century is responsible for an alteration of the ecological and hydrological functioning of peatlands.

In this context, it is relevant to determine the environmental and economic value for choosing alternative uses. Methodical approaches for valuation of natural mire ecosystems and post-agricultural peatlands leading to determination of the direct and indirect cost of use have been developed. Direct cost of use can be calculated by the income approach based on the ecotourism services as a main products of nature management. Indirect cost of use is proposed to determine on the basis of TCP «Methods of determination of the valuation of ecosystem services and the values of biological diversity» as the sum of a number of ecosystem services, taking into account the coefficient of ecological importance of peatland. There was also a comparative evaluation of economic efficiency in the area of 1000 ha named peat deposit as a source of raw material for mini-peat briquette factory and as an object of ecotourism. The calculations showed a higher economic efficiency of environmental appointment use with much lower initial investment for the development of ecotourism and conservation of natural marsh ecosystems in the undisturbed state. It has been established that the total income that determines the cost of direct and indirect natural mires ecosystems on an area of 1000 hectares is annually 87.5 million US dollars and postagricultural peatlands – \$32.4 million, which is many times higher than usage for production of briquette and cultivation of crops.

Keywords: mires, peatland, ecosystem services, value, cost

2. Type of submission: Abstract

[T. Thematic Working Group sessions: T16a – Ecosystem service valuation to identify investment opportunities, risks, and stakeholders: Experiences from case studies](#)

Assessment and accounting of environmental damage after forest fires in Attica and Ileia regions, Greece

Presenting author: Maria Anna Dimopoulou

Other author(s): Dr. Zefi Dimadama, Dr. Theodoros Chatzivasileiadis

Affiliation: Panteion University, Department of International and European Studies, Athens, Greece, Greece

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In the last decades, forest fires have increased significantly, due to various factors, including intensification of human activity, agricultural land abandonment and climate change.



Mediterranean countries are of the most affected by wildfires, suffering human losses, ecosystem and landscape damage and loss of infrastructure; subsequently, wildfires are one of the most important impacts on Ecosystem Services (ES). In the frame of this assessment, two case study regions (Ileia and Attica) in Greece, severely affected by forest fires in 2007 and 2021 have been selected, where a variety of ecosystems (forests, shrubland, phrygana, agricultural land, settlements) were burnt. The extent of burnt area in Ileia (2007) and in Attiki (2021) has been calculated for the different ecosystem categories and has been used for comparison in the two study areas. For the assessment and documentation of the different categories of ES losses, after the wildfires the following parameters have been used: biodiversity (regulating and maintenance services), non-woody products (provisioning services), grazing (provisioning services), hunting and game (provisioning services), recreation in forests (cultural services). Finally, the economic loss in ecosystem services and environmental damage from the natural environments' restoration cost has been calculated and possible policy implications are suggested.

Keywords: Ecosystem Services, Economic Impact, Greece, Wildfires



3. Type of submission: Abstract

[T. Thematic Working Group sessions: T16a – Ecosystem service valuation to identify investment opportunities, risks, and stakeholders: Experiences from case studies](#)

Environmental attitude, perceptions and values for lagoon ecosystem services

Presenting author: Stefania Tonin

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This study explores people's environmental attitudes and perceptions for assigning economic values to ecosystem services improvement. Primary data were collected from a sample of 517 residents in the Veneto Region. Respondents' environmental attitude was measured using the New Ecological Paradigm (NEP) scale. Economic values were derived from a Choice Experiment survey. The results showed that respondents had a high level of environmental concern on most scale issues. The principal component analysis (PCA) applied in this study determined three dimensions of the NEP scale: anti-anthropocentrism (pro New Ecological Paradigm items), human domination (pro Dominant Social Paradigm items) and limits of nature. The multidimensional nature of the NEP scale revealed the complexity of analyzing environmental attitudes. A mixed logit model was used to estimate the relation between people's willingness to pay (WTP) for a hypothetical regional policy aiming at improving the lagoon ecosystem services with their socio-economic characteristics and the PCA results. We found that environmental attitudes, knowledge, and individual characteristics positively related to people's WTP.

Keywords: Environmental attitudes, ecosystem services, NEP scale, WTP, choice experiments

4. Type of submission: Abstract

[T. Thematic Working Group sessions: T16a – Ecosystem service valuation to identify investment opportunities, risks, and stakeholders: Experiences from case studies](#)

Valuing the ecosystem services of an urban Ramsar site in Ghana; prospects for decision making



Presenting author: Emmanuel N A Taye

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Ecosystems and the biodiversity they contain underpin all human life and activities. Ecological systems generate ecosystem functions and services, including vital life-supporting services essential to human society. The Densu Delta Ramsar site is the third largest of five coastal Ramsar sites in Ghana, located on the outskirts of the city of Accra. This study identifies and assigns value to this urban biodiversity hotspot's key ecosystem services, using ethnographic methods and interviews with national wetland managers. The critical interest groups at the site are the local communities, fisherfolk, the Weija Water Works, the Salt Company, and conservationists. Participants were sourced from within the Ramsar site and surrounding communities. Ecosystem services provided by the wetland include the provision of food (fish, mollusks, and grains) and other raw materials such as fuelwood that supports community livelihoods. The wetland is important also for flood and run-off control, and shoreline stabilization and provides nesting, roosting, and feeding habitats for internationally important populations of several waterbird species including Roseate tern, Black tern, Royal tern, Ringed plover, Curlew sandpiper & Little Stint. Industrial salt mining is carried out by a private company within the wetland which also provides significant employment. Despite the benefits and significant importance that people in surrounding communities assign to the ecosystem values of the wetland, the Densu Delta site has undergone severe encroachment and degradation from private developers, resulting in a drastic reduction in the core area of the wetland and its ability to provide benefits to people and biodiversity. The main barriers to the enforcement of regulations are inadequate staffing and lack of political will. Valuing the ecosystem services provides policy and decision makers incentive to ensure the proper resource management.

Keywords: ecosystem services, urban wetland, biodiversity, conservation, management