BOOK OF ABSTRACTS

I. SESSION DESCRIPTION

ID: T16

In search of policy instruments for ecosystems conservation: a decision-tree approach to PES, REDD+ and Biodiversity Offsets practices

Hosts:

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Abstract:

The choice of an adequate policy mechanism for dealing with conservation conflicts, urban expansion and resource extraction by local communities are an increasingly complex problem worldwide. Payments for Ecosystem Services (PES), Biodiversity Offsets and REDD+ (Reducing Emissions from Deforestation and forest Degradation and enhancement of carbon stocks) are three environmental policy frameworks that seek to implement economic incentives based on ecosystems accounting on different levels. Under this conceptual umbrella, the number of methods and tools that have been developed for assessing ecosystem services in specific situations is multiplying.

The selection of a particular one of them to be applied in a specific case can depend on several factors, including the decision-making context, and strengths and limitations underpinning it, the ecosystem services at stake, and pragmatic reasons such as available data, resources and expertise. Given this trifurcation, guidance is essential to help policymakers, who are new to the scientific area of ecosystem service valuation, to be able to select and test relevant

approaches that take their needs and constraints into account. Furthermore, the performance approach of these policy frameworks on their various governance and impact levels (from global to local) and political and socio-economic dimensions are also important to consider in order to assess the feasibility of implementing these practices.

In this Session we aim to provide more comprehensive guidance for coordinated selection of PES, REDD+ or Biodiversity Offsets for ecosystem services conservation, considering case studies covering different land, water and urban decision-making contexts. Training and guidance will be provided to the case study teams (invited and voluntary submissions) to co-create and practice a decision-tree approach. We will then discuss the elaborated material of the case study teams to understand the reasons why in their case each particular mechanism was selected and find commonalities and related characteristics, advantages and limitations, according to data availability. We will also discuss the feasibility of these practices by assessing the performances from a global to national and local approaches. This information will be then used to develop a structured approach for policy selection of ecosystem valuation, based on a set of interlinked decision-trees.

- The methodology that guides this interactive workshop that includes:
- An introduction to the frameworks
- The presentation of the submitted and prepared case studies by the participants Teamwork of commons challenges and suggestions for a decision-tree
- Group discussion between the different cases
- Conclusion and final debate

This session is open for abstracts about case studies of local implementation of one of the three mechanisms (and similar approaches) that add to the debate. For the workshop we encourage interested participants to present practical challenges, socio-economic and environmental data, as well as photo material (if available).

Goals and objectives of the session

This Open Session is a practical workshop that proposes to make use of a decision tree approach that will be applied to several (submitted and prepared) case studies in order to identify common challenges and help local policy makers choose the most appropriate environmental policy framework (among them PES, REDD+ and Biodiversity Offsets) to be applied in their local cases. The intended audience of the workshop are practitioners involved in the creation and application of ecological compensation tools, academics with field work experience (or who are planning field work) and policy makers from all levels of governance. Also, we aim to involve academics in a simulation of the policymakers' routine and roles, presenting which kinds of resources and information are available to them in the local context. Using evidence from scientific literature and real life contexts combined with local information and the flows, mishaps and obstacles the final outcome of this exercise will produce a more realistic model for joint decision-making processes.

Planned output / Deliverables

Based on the discussed cases, we plan to publish the elaborated decision trees and discuss the set of factors brought forth in the workshop as a discussion paper. The aim is to make the

developed exercise of the decision-tree available to foster partnerships between local policy makers, academics and practitioners from the Global North and the South. As the success of their implementation depends on such cooperative mechanisms on a global scale, we aim to share common challenges and develop a network that facilitates local responses, project development and possible funding channels.

a) Identification of key-factors and key-questions that establish similar embranchment of the respective mechanisms in each case;
b) Three decision-trees that lead to each one of the mechanism: PESS, REDD+ and Offsets;
c) A unified decision-tree based on the overlapping experiences and group discussions.

Related to ESP Working Group/National Network:

Thematic Working Groups: TWG 16 - ES Financing mechanisms (incl. PES)

II. SESSION PROGRAM

Date of session: Monday, 7 June 2021

Time of session: 13:30 - 15:00

Timetable speakers

Time	First name	Surname	Organization	Title of presentation
13:30 13:35	Niklas	Weins	UNICAMP	Opening
13:35 13:40	Bosco	Lliso	BC3	Brief presentation of instruments
GROUP A 13:40 - 14:30				
A1	Armin	Deitenbach	Deutsche Gesellschaft für Internationale Zusammenarbeit	Elaboration of seven Municipal Plans of the Atlantic Forest in Lagamar (Parana) Mosaic region considering ecosystem-based adaptation to climate change
A2	Helena	C. Von Glehn	Secretariat of Infrastructure and Environment of São Paulo	Payment for environmental services as an inductor of land use change in rural areas in São Paulo State, Brazil: Conexão Mata Atlântica Project
A3	Rafael	Borges	Instituto Tecnologico Vale	Policies scenarios for halting forest loss in the Brazilian Amazon
GROUP B 13:40 - 14:30				
B1	Giacomo	Cozzolino	Servizi Tecnici Infrastrutture	Assessing the values of Cape Verde' ecosystems: an ecosystem services-based approach to

Time	First name	Surname	Organization	Title of presentation
				understand the environmental impacts of spatial plans and suggest biodiversity off-set measures
B2	Mora	A. C. Teixeira	CEPAGRI, UNICAMP	Ecosystem services and aspects of the economy and cultural identity of the Amazonian population in the face of global climate changes
B3	Christoph	Schulze	Leibniz Centre for Agricultural Landscape Research	Tailor-made agri-environmental program design based on stakeholders' attitudinal profiles
14:30 14:50				Regrouping - Teamwork
14:50 15:00				Discussion

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: T16 - In search of policy instruments for ecosystems conservation: a decision-tree approach to PES, REDD+ and Biodiversity Offsets practices

Elaboration of seven Municipal Plans of the Atlantic Forest in Lagamar (Parana) Mosaic region considering ecosystem-based adaptation to climate change

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Municipal Plans for the Conservation and Recovery of the Atlantic Forest (PMMAs) - provided by Federal Law 11,428/2006, known as Atlantic Forest Act, and regulated by Federal Decree 6,660/2008 - constitute an instrument for planning and managing actions aimed at conservation, recovery and sustainable use of the Atlantic Forest at municipal level. Since 2010, several municipalities have started their PMMA elaboration processes, in some cases,

carried out jointly and integrated with adjacent municipalities within the same regional context. To encourage the joint and integrated development of PMMAs, Atlantic Forest project promoted the development of seven PMMAs in Lagamar Mosaic region on the coast of Paraná state, including the climate change approach and Ecosystem-based Adaptation measures (EbA). The project aimed to support the design and participatory implementation of PMMAs, considering climate change and EbA measures in the seven municipalities that make up the coast of Parana state, namely: Guaraqueçaba, Antonina, Morretes, Paranaguá, Pontal do Parana, Matinhos, and Guaratuba. The seven PMMAs on the Parana coast were prepared following the Guidelines for the Elaboration and Implementation of Municipal Plans for the Conservation and Restoration of the Atlantic Forest and the term of reference for hiring the specialized consultancy. The steps included preparation for the process, diagnosis, climate risk assessment, and elaboration of the action plan. As the main result of the project, seven PMMAs were prepared, covering the entire territory of the Mosaic of Conservation Units of Lagamar in Parana state with the integration of climate change and EbA approach.

Keywords: climate change, ecosystem-based adaptation, public policy, atlantic forest, local government

2. Type of submission: Abstract

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Payment for environmental services as an inductor of land use change in rural areas in São Paulo State, Brazil: Conexão Mata Atlântica Project

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The Conexão Mata Atlântica Project aims to promote ecosystem services of climate and biodiversity in the Southeast Corridor of the Brazilian Atlantic Forest in the States of São Paulo, Rio de Janeiro and Minas Gerais. With the support of the Global Environment Facility (GEF) and the Inter-American Development Bank and financial management of Finatec, the Project is carried out by the Ministry of Science, Technology and Innovations and environmental and research bodies of the three States. The Secretariat for Infrastructure and the Environment and the Forestry Foundation are responsible for implementing it in São Paulo, where two PES modalities are developed aiming at the ecological sustainability of rural properties, contributing to capture carbon, conserve biodiversity and water resources and promote income improvement. In order to contribute to the formulation of public policies, an innovation is tested in each of the modalities. 1) PES Protection: encourages ecological restoration and

conservation of native vegetation. The selection of participants was carried out through a reverse auction, which made it possible to contract the most advantageous proposals considering the environmental importance of the areas and the amounts paid. 390 contracts were signed for the conservation/restoration of more than 10,000 hectares, with annual values ranging from R$ 70 to R$ 500 per hectare. The wide range of amounts paid reflects the different opportunity costs and the provision of environmental services and the different perceptions of rural landowners. 2) Multiple Use: encourages ecological restoration, conservation of native vegetation and the productive conversion of degraded pastures and lands with low productivity, for uses with greater carbon storage and greater ecological and economic functionality, such as agroforestry and silvopastoral systems, forest consortia and agroecological cultures. The entire property is appraised and payments are conditioned to improvements in land use and management and to the efficiency of production processes.

Keywords: payments for environmental services, ecological restoration, conservation of forest remnants, multiple use of rural property, productive conversion

3. Type of submission: Abstract

T. Thematic Working Group sessions: T16 - In search of policy instruments for ecosystems conservation: a decision-tree approach to PES, REDD+ and Biodiversity Offsets practices

Policies scenarios for halting forest loss in the Brazilian Amazon

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Worldwide, both social and ecological systems suffer unprecedented pressures leading to the decline of nature and human well-being. In the Brazilian Amazon, infrastructure projects and agriculture expansion are increasingly threatening the conservation of forests and natural environments, requiring the implementation of policies and instruments for halting further losses of biodiversity and ecosystem services. Here, we investigate different scenarios leading to forest loss in Pará State, Brazil, and we propose policies for addressing the main drivers of forest cover change, influencing land management and consumption behavior in the region. We applied the IPBES conceptual framework for identifying direct (roads construction; forest degradation; hydropower projects; urban expansion; agriculture and pasture expansion; rural land occupation; mining and climate change) and indirect (energy demand; population growth; land prices; commodity demand; consumption behavior) drivers of forest cover change. We reviewed former policies applied in the region and their respective outcomes. Based on the IPBES Nature Future Framework, we then envision policies for supporting local transformative

changes. Our scenarios show that public policies require social learning for developing pathways leading to positive futures in Eastern Amazon. Future policy development must consider the basis of sustainable development, in which is fundamental to maintain the balance between social, economic and environmental values for safeguarding resources availability to future generations. Achieving local transformative changes requires collective development of actions, so that decision makers, stakeholders and local communities envision feasible and efficient polices that benefit both nature and society.

Keywords: deforestation, nature, society, scenarios, IPBES

4. Type of submission: Abstract

T. Thematic Working Group sessions: T16 - In search of policy instruments for ecosystems conservation: a decision-tree approach to PES, REDD+ and Biodiversity Offsets practices

Assessing the values of Cape Verde' ecosystems: an ecosystem services-based approach to understand the environmental impacts of spatial plans and suggest biodiversity off-set measures

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In Cape Verde, ecosystems provide great benefits to the Country: for instance, the territorial sea, rich in biodiversity and fish stock, offers national and foreign economic operators great fishing opportunities, lands offers to local operators important economic opportunities, while cultural services provide the conditions required to quickly develop the tourism industry. In the last years, many development initiatives, namely in the tourism sector, implied significant land transformations, with negative consequences on land use, ecosystems and their services. The Global Environment Found is financing a project on mainstreaming biodiversity and ecosystem conservation into tourism, that included also an analysis of the effects of land use changes on ecosystems and biodiversity. An ecosystem services assessment has been elaborated for the Cape Verde's islands, to give an economic value to the benefits that ecosystems currently provide. Moreover, the same approach has been adopted considering the effects on land cover of the spatial plans recently adopted or currently being adopted, to assess the environmental impacts on ecosystems and their services. This results of this assessment also suggest to introduce the Strategic Environmental Assessment (SEA) in the Country, with the most appropriate mitigation and compensation measures, including biodiversity offsetting. The main results show that:

- The current ecosystem services values reflect the different development scenarios of the islands: for instance, in Sal, the most important island for tourism, cultural services are the most valuable ecosystem services;
- Wetlands and coastal environments represent the most important ecosystems in terms of services' values;
- The main negative environmental impacts, due to land use changes, are located in those areas interested by touristic development plans, in Sal, Maio, Boa Vista and Sao Vicente.
- The introduction of the SEA and biodiversity offset could contribute avoiding the most significant impacts of plans on ecosystems and biodiversity

Keywords: ecosystem services, environmental assessment, small islands, tourism

5. Type of submission: Abstract

T. Thematic Working Group sessions: T16 – In search of policy instruments for ecosystems conservation: a decision-tree approach to PES, REDD+ and Biodiversity Offsets practices

Ecosystem services and aspects of the economy and cultural identity of the Amazonian population in the face of global climate changes

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The Brazilian Amazon is a powerful Ecosystem Service provider. Likewise, many Amazonian local communities still preserve an intrinsic economic and cultural relationship in this Social – Ecological System (SES). Paradoxically, the territory concentrates a relevant portion of national poor people, demonstrating the risks and susceptibility to socio-ecological vulnerability in the region. Therefore, the Amazon forest dieback hypothesis predicts that climate changes can convert the forest in landscapes similar to savannah, which would bring a new composition of Ecosystem Services (ES) and would reflect on economy regional social wellbeing. The research aimed to identify the adaptation strategies currently employed to replacement of scarce ES, in a climate change context. For this, it evaluated the effects on cultural identity of local people and risks in long term to territory sustainability in an economic-regional gradient in the Amazonia comprehending four municipalities as Silves, Itacoatiara, Manaus – Amazonas state, and Cotijuba Island in Belém – Para state. The preliminary results show that at the same time that local people still depend on many typical provisioning ES from the Amazonia basin as fishery, wild food, and ornamental resources to their income, these ES are declining rapidly due to climate and environmental shifts. Furthermore, the many of interviewed locals are adopting adaptation measures to maintain their income, which reinforce forest degradation,

for example, cattle farming, non-native agricultural production, or gathering from places where ES are abundant yet. These aspects have highlighted effects over conversion of dietary patterns (i.e regional cultural identities) what also aggravate pressures on resources. In conclusion, this research recognized that predict changes in forest ecosystems as much as to analyse social question promote theoretical framework to actions sustainable adaptation strategies in long term.

Keywords: climate changes, Amazon forest dieback, ecosystem services, socio-ecological vulnerability, cultural identities

6. Type of submission: Abstract

T. Thematic Working Group sessions: T16 - In search of policy instruments for ecosystems conservation: a decision-tree approach to PES, REDD+ and Biodiversity Offsets practices

Tailor-made agri-environmental program design based on stakeholders' attitudinal profiles

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Agriculture has large impacts on the environment, and agri-environmental schemes are considered a promising mechanism to achieve environmental policy goals. Different stakeholders are important players in developing and implementing these agri-environmental schemes. Their attitudes largely determine the institutional design of policies and drive farmers' uptake of these measures. Hence, in this paper we analyse subjective viewpoints of relevant stakeholders on the institutional design of agri-environmental schemes as important framework conditions to avoid policy mismatches. We apply Q-methodology with 25 individuals from Brandenburg, Germany, from the domains of farmers, policy administrators and intermediaries. We identify three distinct attitudinal profiles, not corresponding to the individual stakeholder groups. Instead, each profile matches a social perspective, spanning across different stakeholder groups. Results give evidence that general differences in viewpoints of policy designer and implementer of the one hand and farmers on the other hand are not source of policy mismatches. Rather, the attitudinal profiles can be used to develop different, adapted policy programmes with lightly different rationality behind. Policymakers should be aware of the different tailor-made options for the institutional design of agri-environmental programs and, where appropriate, implement different agri-environmental (sub-) programs in parallel. Our research strengthens the argument that stakeholders should be incorporated in the policy design, as each individual may incorporate personal arguments that may favour overarching social perspectives and thus strengthen these.

Keywords: social perspectives, stakeholder engagement, policy design, agri-environmental schemes, institutional economics