

# ESP EUROPE

2018 REGIONAL CONFERENCE

Ecosystem services in a changing world:  
moving from theory to practice

SAN SEBASTIÁN, SPAIN

15-19 OCTOBER 2018

## BOOK OF ABSTRACT

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### I. SESSION DESCRIPTION

#### ID: T18a

What happened to the silver bullet – big promises and real world performances? Taking stock of a decade of empirical Payments for Ecosystem Services research around the world

#### Hosts:

	Title	Name	Organisation
Host:	Dr.	Lasse Loft	Leibniz Centre for Agricultural Landscape Research (ZALF), Müncheberg, Germany
Host:	Dr.	Claas Meyer	Leibniz Centre for Agricultural Landscape Research–ZALF, Müncheberg, (Germany)
Co-host:	Dr.	Claudia Sattler	Leibniz Centre for Agricultural Landscape Research (ZALF), Müncheberg, Germany
Co-host:	Prof.	Carsten Mann	Chair for Sustainable Forest Resource Economics, Eberswalde University for Sustainable Development

#### Abstract:

Since the beginning of the new millennium, Payments for Ecosystem Services (PES) have been considered as a novel and innovative approach in conservation to address negative environmental externalities. Proponents of the PES approach argue that the internalization of externalities can be achieved through the creation of market and market-like mechanisms. However, PES remained a contested approach with lots of different definitions used for the term and a great variety of different institutional designs included under this label. Many different PES cases from all across the world have been analyzed and discussed in the literature so far, with a major increase from 2004 onwards. Research evolved from an initial focus on tackling general, particularly conceptual questions towards more specific issues of



design, implementation, and concrete outcomes. Thus, 10 years after the seminal Special Issue in Ecological Economics “Payments for Environmental Services in Developing and Developed Countries” this session aims at taking stock of the big promises and real world performances of the “silver bullet” PES. Our aim is i) to determine what we have learned from the experiences during the past decade so far and ii) to identify what the remaining as well as new challenges are.

### **Goals and objectives of the session:**

We consider this session as an integral part of the activities conducted under ESP’s TWG 18 on Governance and Institutional Aspects (which is co-led by the session hosts) and TWG 16 on ES Financing Mechanisms. The goal of the session is to get a status quo of where we are at with research and implementation of PES, and to identify the current and future research needs.

We invite papers that present on empirical evidence on the effectiveness, efficiency, and/or equity of PES implementation in either developed or developing countries. The papers shall clearly show which outcome variable/s has/have been investigated (effectiveness, efficiency, and equity) and what the outcome of the PES is. Further, it should be made clear how the research has been carried out: Indicators, data, methods, and how the research is comparable to other PES case to finally create a larger data base on PES impact studies. The format will be 12 minute talks on empirical evidence, followed by group discussions on similarities, trends along the cases presented, taking up the issues highlighted in the discourse presentation.

### **Planned output / Deliverables:**

With the speakers of the session, we aim to lay the ground for writing a joint paper targeting the future development of PES around the world to outline agreed overarching research agenda. We aim to structure the discourse by contrasting the developments in developing countries against those in industrialized countries. Furthermore, we would like to explore the feasibility of setting up a database on PES impact studies.

The session is planned to be the kick-off for a follow-up 2–3 days writing workshop to be organized by the session hosts 2–3 month after the conference.

### **Related to ESP Working Group/National Network:**

[Thematic Working Groups: T18 – Governance & Institutional aspects](#)

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## II. SESSION PROGRAM

**Date of session:** Wednesday, 17 October 2018

**Time of session:** 8:45 – 13:00

### Timetable speakers

Time	Title	Presenter
8:45– 8:50	Intro	Meyer & Loft
8:50–9:10	Key Note I: Designing payments for environmental services: Theory meets practice	Stefanie Engel
	Block I: Developing country PES performance	
9:10–9:30	Key Note II: Assessing the "success" of Payments for Ecosystem Services from different epistemic perspectives	Gert van Hecken
9:30–9:45	Economic impacts of payments for environmental services on livelihoods of agro-extractivist communities in the Brazilian Amazon	Alves-Pinto et al.
9:45–10:00	Respect Existence or Expect Resistance: an Equitable Implementation of Payments for Ecosystem Services	Lliso et al.
10:00–10:15	Impacts of Payment for forest Environmental Services in Vietnam: A case study from Son La Province	Pham et al.
10:15–10:45	<i>Official coffee break</i>	
10:45–11:00	Fairness in incentive-based conservation? Contextual and distributive equity in Vietnam's Payments for Forest Environmental Services Program	Loft et al.
11:00–11:15	Global assessment of factors determining expected carbon performance of REDD+ projects	Förster et al.
	Block II: Developed country PES analysis	
11:15–11:35	Key Note III: PES in Developed Countries – Status and future research needs	Bettina Matzdorf
11:35–11:50	The potential of collaborative governance approaches to improve institutional fit of governance solutions at landscape scale: PES case studies from across Europe	Sattler et al.
11:50–12:05	Analysing distributional equity: a multi-actor perspective on the desired implementation impacts of biodiversity offsetting	Varumo et al.
12:05–12:20	The state and voluntary markets for ecosystem services: Going beyond CO2 in Germany's land use sector	Meyer et al.
10 mins	<i>Short Break</i>	

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Time	Title	Presenter
	Block III: What's the future of PES research	
12:30–12:55	Panel: Knowledge gaps in research and implementation of PES... <ul style="list-style-type: none"> <li>• Gert van Hecken (University of Antwerp)</li> <li>• Bettina Matzdorf (Leibniz Centre for Agricultural Landscape Research)</li> <li>• Pham Hong Luong (Director of the Department of Planning and Finance, Vietnam Administration of Forestry)</li> <li>• Pham Thu Thuy (Center for International Forestry Research)</li> </ul>	
12:55–13:00	Outro	Loft & Meyer

### III. ABSTRACTS

The abstracts appear in alphabetic order based on the last name of the first author. The first author is the presenting author unless indicated otherwise.

#### 1. Type of submission: **Abstract**

T. Thematic Working Group sessions: T1 8a What happened to the silver bullet – big promises and real world performances Taking stock of a decade of empirical Payments for Ecosystem Services research around the world

#### Economic impacts of payments for environmental services on livelihoods of agro-extractivist communities in the Brazilian Amazon

*First author:* Helena Alves-Pinto

*Other author(s):* Joseph E. Hawes, Peter Newton, Rafael Feltran-Barbieri, Carlos A. Peres

*Affiliation, country:* University of Cambridge, United Kingdom

Rural communities in the Brazilian Amazon rely on manioc, produced in a swidden-fallow system that uses land cleared from forest areas. Increased agricultural production could reduce fallow period length with implications for manioc flour (farinha) production. We hypothesize that payments for environmental services (PES) programs may exacerbate reduction of fallow periods, thereby reducing per stem farinha productivity. To understand the household scale economic impacts of avoided deforestation under PES programs, we conducted interviews in 200 households from 32 communities in the Brazilian state of Amazonas. Using regression models, we assessed which variables most influenced farinha production, and calculated production costs and total revenues, with and without a PES program. Manioc yield increased by 22.83 kg per household per year for each additional year that the forest was left to recover before being cleared. Although production costs were higher for land cleared from older secondary forests, net profits on land cleared from



primary forests were still higher. Total income from PES programs, when added to the secondary forest manioc profit, were higher than the foregone production in primary forest areas. However, when we considered only direct cash payments, we identified potential trade-offs. We conclude that PES programmes should consider possible long-term effects of payments on the livelihoods of participants.

**Keywords:** Agriculture, Bolsa Floresta, Bolsa Verde, deforestation, manioc, PES

*2. Type of submission: Abstract*

T. Thematic Working Group sessions: T1 8a What happened to the silver bullet – big promises and real world performances Taking stock of a decade of empirical Payments for Ecosystem Services research around the world

**Global assessment of factors determining expected carbon performance of REDD+ projects**

*First author:* Johannes Förster

*Other author(s):* Tomáš Václavík, Gillian A. Cerbu, Elizabeth A. Law, Ralf Seppelt

*Affiliation, country:* Helmholtz Centre for Environmental Research – UFZ, Germany

Reducing emissions from deforestation and forest degradation (REDD+) is critical for mitigating climate change. We analyzed REDD+ projects for factors determining their expected carbon performance using meta-analysis. We identified 66 certified REDD+ projects aiming to conserve 9.1 million hectares of forest expecting net emission reductions of 1.6 GtCO<sub>2</sub>e. Expected carbon performance was positively associated with historical deforestation rates, government effectiveness and avoiding planned deforestation. Projects seeking multiple ecosystem services traded off this multifunctionality with lower emission reductions. 52.2% of expected emission reductions originated from 16 (24%) projects avoiding planned deforestation. Carbon rights to emission reductions were owned 10.4% by forest communities and 75.8% by private actors. Our findings emphasize the risk of REDD+ projects driving privatization of forest resources and the risk of global relocation of deforestation. Hence there is the need for safeguards ensuring equity and mitigating leakage.

**Keywords:** REDD+, forest carbon projects, carbon performance, tradeoffs, safeguards



### 3. Type of submission: **Abstract**

T. Thematic Working Group sessions: T18a What happened to the silver bullet – big promises and real world performances Taking stock of a decade of empirical Payments for Ecosystem Services research around the world

#### **Respect Existence or Expect Resistance: an Equitable Implementation of Payments for Ecosystem Services**

*First author:* Bosco Lliso

*Other author(s):* Unai Pascual, Stefanie Engel

*Affiliation, country:* Basque Centre for Climate Change (BC3), Spain

Payments for ecosystem services (PES) often face the challenge of having to consider and balance environmental outcomes with context-specific equity concerns. This paper uses the results of a survey sent to PES practitioners and implementers in Latin America to empirically test whether an equitable implementation of PES necessarily requires trade-offs with environmental effectiveness or if instead it might be a source of synergies that increase the sustainability and success of PES (Pascual et al., 2014). We find that PES that were more equitable also had greater success achieving their environmental and social goals. This approach does not seek to prove that both environmental conservation and poverty reduction can be effectively accomplished in unison using PES. Rather, it aims to support the notion that an equitable implementation that keeps the poor in mind can improve a PES program's socio-ecological outcomes (Bulte et al., 2008) and crowd in desired behaviors by aligning itself both with local contexts as well as with participants' social preferences regarding fairness (Miller et al., 2012). We approach equity from a multidimensional perspective (McDermott et al., 2013; Pascual et al., 2014) that looks at aspects of recognition, procedural and distributional equity.

**Keywords:** Payments for ecosystem services, Equity, Effectiveness, Tradeoffs



#### 4. Type of submission: **Abstract**

T. Thematic Working Group sessions: T18a What happened to the silver bullet – big promises and real world performances Taking stock of a decade of empirical Payments for Ecosystem Services research around the world

### **Fairness in incentive-based conservation? Contextual and distributive equity in Vietnam's Payments for Forest Environmental Services Program**

*First author:* Johannes C. Haas, Lasse Loft

*Affiliation, country:* Technical University Munich, Leibniz Centre for Agricultural Landscape Research, Germany

While incentive-based approaches like Payments for Ecosystem Services abound in current theoretical debates and practical efforts to nature conservation, their impact on resident communities is often unclear. In particular, it is highly relevant to ask if costs and benefits of such interventions are allocated equitably among locals, and if the distribution of payments is dependent on the socio-political context in which a policy operates. Existing literature speaks of distributive and contextual equity but never set out to study if and how these two dimensions of justice are causally linked. Thus, the present study investigates the nationwide Payments for Forest Environmental Services scheme in Vietnam and asks how costs and benefits implied by the policy are distributed among different social groups and individuals in communities affected by its implementation. Furthermore, political, economic, and social conditions pre-existing at the local level are examined for their impact on current payment allocation. Tackling these questions, semi-structured in-depth interviewing has been carried out in a multi-level approach comprising local, provincial, and national respondents to qualitatively investigate distributive and contextual equity for the case of six villages in Nam Đông district of Thừa Thiên-Huế province. Findings reveal that payments and other benefits entailed by the conservation scheme were distributed very unevenly among individuals with some community members being able to use their privileged position in local power and resource hierarchies to secure large parts of the profits available. Moreover, the study explores how other social groups were excluded from participating in the scheme and from tapping into funds. Such results hint to the importance of equity for the functionality of incentive-based conservation schemes. At the same time, they demonstrate that even well-intended environmental policies can reinforce existing asymmetries in power and wealth if they don't take account of the socio-political context they operate in.

**Keywords:** Payments for ecosystem services, Empirical equity, Contextual influence, Vietnam



5. Type of submission: **Abstract**

T. Thematic Working Group sessions: T18a What happened to the silver bullet – big promises and real world performances Taking stock of a decade of empirical Payments for Ecosystem Services research around the world

**The state and voluntary markets for ecosystem services: Going beyond CO2 in Germany's land use sector**

*First author:* Claas Meyer

*Other author(s):* Lasse Loft, Alexandra Konzack

*Affiliation, country:* ZALF, Germany

Designing payments for ecosystem services (PES) approaches for voluntary markets requires an understanding of differences to, overlaps with, and complements to governmental policy instruments. So far, voluntary markets are most developed in the field of climate protection, monitoring, reporting, and verification regarding payments for climate related ecosystem services (ES). Thus, the analysis of climate related ES governance provides a good opportunity to target general questions regarding delimitations and interactions of state and voluntary markets. Since the voluntary market is rapidly developing, especially challenges of certification, interaction with the compulsory market, and impacts on environment and society have to be addressed. Correspondingly, this paper analyzes how effects of climate protection can be defined, measured, and certified for the voluntary market. It furthermore determines the challenge of double counting within mitigation measures and what solutions could be appropriate. Finally, it identifies options for bundling climate protection with other ES. It is based on a Berlin workshop "How much government does the market for ES need? Experiences from climate protection" in 2016, with 20 experts from politics, administration, and science. The example of land use related to climate protection measures showed how a regulative stimulus could generally create a framework for private markets by changing the perspective on ES provision and compensation. However, already existing regulatory systems need to be further developed and adapted to present environmental, political, and social challenges. Options for co-existence of private and governmental measures need to be strengthened and developed in particular. The bundling of climate protection services and other ES has been understood as an opportunity to enhance the market reputation on the one hand and introduce further ES into generally accepted systems on the other hand.

**Keywords:** Payments for ecosystem services, land use measures, climate protection services, voluntary markets





6. Type of submission: **Abstract**

T. Thematic Working Group sessions: T1 8a What happened to the silver bullet – big promises and real world performances Taking stock of a decade of empirical Payments for Ecosystem Services research around the world

**The potential of collaborative governance approaches to improve institutional fit of governance solutions at landscape scale: PES case studies from across Europe**

*First author:* Claudia Sattler, Rena Barghusen

*Affiliation, country:* Leibniz Centre for Agricultural Landscape Research (ZALF), Germany

Environmental problems often occur over large geographic areas and require the collaboration of all concerned actors within a given landscape to derive viable governance solutions. Thereby it is crucial that the governance structure aligns well with the spatial, temporal, and functional characteristics of the ecosystems and natural resources it is meant to govern. This is referred to as the problem of institutional misfit which results in reduced effectiveness and efficiency of the governance system. In this context, collaborative governance is promoted as a suitable approach to address misfit. Stated benefits of collaborative governance include better integration of knowledge, improved access and utilization of resources, and mutual learning processes. For this study we analyzed ten case studies from across Europe where collaborative governance approaches were implemented. Investigated approaches all represent payments for ecosystem services (PES), covering a wide spectrum of different arrangements including collaboration across value chains, at watershed level, within protection areas, or in agri–environmental schemes. For the assessment we used institutional analysis employing a three–tiered approach: First, we describe and compare the institutional design characteristics of the individual governance approaches. Characteristics include details on the ecosystem services (ES) addressed (e.g. one vs. several ES), types of actors involved (ES providers, ES beneficiaries, intermediaries), level at which actors interact with each other and at which ES provision occurs (local to global), contractual design between parties (e.g. individual vs. group contracts, contract length), payments specifics (e.g. input– vs. output–based payment), etc. Second, we assess how these characteristics help to mitigate different forms of institutional misfit, differentiating between spatial, temporal, and functional misfit. Third, we show how improved fit impacts further on overall effectiveness and efficiency of the approaches. Results confirm the assumption that collaborative approaches can improve institutional fit. Improvements can be reached through better targeting and spatial configuration of measures reducing spillover effects between areas and trade–offs in the provision of several ES. If collaboration occurs long–term, learning effects can lead to improved adaptation and continuous optimization to the local context.



**Keywords:** collaborative governance, payments for ecosystem services, agri-environmental programs, governance analysis, institutional misfit, effectiveness, efficiency

*7. Type of submission: Abstract*

T. Thematic Working Group sessions: T18a What happened to the silver bullet – big promises and real world performances Taking stock of a decade of empirical Payments for Ecosystem Services research around the world

**Impacts of Payment for forest Environmental Services in Vietnam: a case study from Son La province**

*First author:* Thu Thuy Pham, Hong Luong Pham

*Other author(s):* Dao Thi Linh Chi, Hoang Tuan Long, Nguyen Dinh Tien, Le Manh Thang, Nong Hong Hanh, Dang Thuy Nga

*Affiliation, country:* Center for International Forestry Research, Ministry of Agriculture and Rural Development Viet Nam

Payment for forest environmental services (PFES) is seen by Vietnamese policy makers as one of the breakthrough policies in the forestry sector. PFES aims to enhance forest quality and forest quantity, improve local livelihoods, contribute to overall socioeconomic development and reduce the burden on the state budget by forestry investment. Since 2008, PFES's contribution accounts for 22% of total annual investment for the forestry sector and is a stable and sustainable financial source. Although PFES has achieved much, a lack of rigorous scientific assessments on actual impacts of PFES on the environment and local livelihoods makes it difficult to confirm the effectiveness of this policy. Legal frameworks on monitoring and evaluation (M&E) of PFES in Vietnam is still in its infant stage. This paper describes approaches and processes in developing a PFES M&E framework in Vietnam using Son La Province as a case study and discusses evidence-based analysis on PFES impacts on institutional, social, economic and environmental outcomes in Son La. Guided by the government's framework on M&E principles and reporting requirements on PFES, this M&E system consists of 31 indicators (11 on institutional settings, 9 on environmental impacts, 8 on economic impacts and 3 on social impacts) and was developed based on intensive consultations with stakeholders and from existing scientific evidence. The system was also developed to ensure its relevance to political interests of the province, concerns of stakeholders (buyers and sellers) and its achievability (available personnel and financial resources devoted to M&E). This study offers primary and secondary data to evaluate the impact of PFES in Son La. Primary data was collected using the Before-After-Control-Intervention method as well as intensive and extensive approaches. Although this is the first pilot M&E system in Vietnam, the process has generated useful lessons learnt from the government and provides insight on the impact of PFES.



**Keywords:** Payment for forest environmental services, Vietnam, monitoring, impact

*8. Type of submission: Abstract*

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### **Analysing distributional equity: a multi-actor perspective on the desired implementation impacts of biodiversity offsetting**

*First author:* Liisa Varumo

*Other author(s):* Juha Kotilainen, Eeva Primmer

*Affiliation, country:* Finnish Environment Institute, Finland

Biodiversity offset schemes aim to balance the conflicting demands of development and conservation. The establishment of offset programs and their ecological and regulative guidelines has often required the engagement of different stakeholders across sectors and disciplines. Analyses of the programs tend to focus on specific processes of planning, implementation or monitoring, assessing effectiveness and outcomes. The performance of the offsets has often been evaluated as dissatisfactory, in particular as regards the ecological outcomes. Also the social equity implications of the programs have raised concerns, especially in developing countries. This dissatisfaction partially arises from the challenges of addressing differing expectations in the rules of implementation in practice. Finland has been devoting scholarly and administrative attention to a voluntary compensation mechanism. It is apparent that the emerging mechanism needs to be founded on a social contract to establish acceptability. This paper will outline a framework for analysing distributional equity through scenario visioning in a pilot case study of ecological compensation in Finland. Building on an initial analysis of national legislation and strategy documents and a literature review, we map the preconditions for feasible scenarios, paying attention to factors hindering or promoting distributional equity in offsetting contexts. The framework will be presented as a first step in deliberating models for a real life compensation pilot in a stakeholder workshop with representatives of landowners, business, administration and other stakeholders. Through analysing the workshop process we aim to see the actors' positions towards different implementation options and their desired impacts. This multi-actor approach allows us to evaluate what rights, benefits and costs arise as central to different stakeholders and what kind of arguments are used in deliberations. The outcomes of the workshop and the pilot case will reveal the conflicting interests and challenges that remain for harmonising expectations in the uptake of compensation schemes.



**Keywords:** ecological compensation, biodiversity offsetting, distributional equity, deliberation, multi-actor approach