



## BOOK OF ABSTRACTS

### 1. SESSION DESCRIPTION

**ID: T15**

#### Title of session:

Trade-offs in ecosystem services for poverty alleviation

#### Hosts:

	Title	Name	Organisation	E-mail
Host:	Dr	Marije Schaafsm	University of Southampton	m.schaafsma@soton.ac.uk
Host:		Florence Bernard	World Agroforestry Centre (ICRAF)	f.bernard@cgiar.org
Host:		Kate Schreckenber	University of Southampton / ESPA Director	K.Schreckenber@soton.ac.uk

#### Session description:

In the development of sustainable development policies in low income countries, objectives of (maximum) poverty alleviation, conservation, ecological management and economic activities have been found to be



incompatible or mutually exclusive in some cases. 'Trade-offs' is a term with negative connotation (for different reasons) where it is perceived as rationalising losses for less powerful people or it emphasises the opportunity costs of decisions. At the same time, making trade-offs explicit arguably improves decision-making because it increases transparency and comprehensiveness of the outcomes and process.

Trade-offs are found across different people, places, scales and times, and can be measured and analysed in various ways. Interdisciplinary approaches are necessary to shed light on these different aspects. At least four different entry points for trade-off analysis are relevant in this context:

- The negotiation of trade-offs in governance and policy making and implementation;
- The choices made by stakeholders on how to engage with ecosystem services and their wellbeing
- The role of fairness and justice alongside efficiency and other decision-making criteria
- Different modelling approaches, and how they express and analyse trade-offs.

The tendency for potential ecosystem service sources to be located in landscapes often lived in by poor people with poor infrastructure and insecure land tenure, makes aspects of fairness and justice in governance, critical if people are to embrace interventions such as Payments for Ecosystem Services. At the minimum, such interventions should avoid making people worse off. Yet decisions in ecosystem management at the expense of vulnerable groups in society arguably contributes to sustained poverty; how can research help to avoid this?



## Goals and objectives of the session:

This objective of the session is to provide insight into trade-offs between objectives of sustainable ecosystem management and poverty alleviation. The aim is to better understand how these trade-offs can be better understood, addressed, evidenced and communicated through research, in support of more sustainable, equitable decision-making and ecosystem services governance.

## Planned output / Deliverables:

The session hosts aim to provide an in-depth overview of the above four topics, evidenced with research from low income countries.

## Related to ESP Working Group or National Network:

[TWG 15 - ES & Poverty alleviation](#)

### 2. SESSION PROGRAM

**Date of session:** 14 December 2017

**Time of session:** 10:30 - 12:30



## Timetable speakers

Time	First name	Name	Organization	Title of presentation
10:30	Introduction			
10:40	Thi Hong	Nguyen	Kyoto University	Understanding the household dependence on forest ecosystem services in the buffer zone of Bach Ma National Park, Vietnam
11:05	Lawrence	Mapemba	Lilongwe University of Agriculture and Natural Resources	Do Incentives and monitoring increase adoption of conservation agriculture for food security and poverty alleviation?
11:30	Marije	Schaafsma	University of Southampton	Multi-level trade-offs decisions on ecosystem services for poverty alleviation
11:55	Discussion			



### 3. ABSTRACTS

*Type of submission: Abstract*

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## **Understanding the household dependence on forest ecosystem services in the buffer zone of Bach Ma National Park, Vietnam**

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Bach ma National Park in Vietnam is one of the protected areas with high biodiversity of tropical rainforest ecosystem. Although local forest management agencies have made the efforts to conserve the biodiversity, the park has still faced with many threats. The buffer zone surrounding the park is the habitat of around eighty thousand people and the motherland of an ethnic minority



(Co tu people) who have been classified into poverty groups during many generations and strongly depended on forest resources. However, the role of the resources in the local livelihood has not been investigated and evaluated. The study aims to clarify the importance of ecosystem goods and services provided by the forest to the local community. Dong Giang district, Quang Nam province was chosen as a case study. At first, the meetings with village leaders and local community representative who often access the forest were conducted to identify the principal forest ecosystem services, their distributions and crops there. The socioeconomic, demographic and family livelihoods data were then obtained by interviewing with local households in three administrative units using structure questionnaires. The economic values of utilized forest products were considered in the relationship with total incomes. As the result, we detected thirteen important forest ecosystem services to local community classified in three groups (food, material, and water). Averagely, forest-based income accounted for 70% of total income and significantly changed according to family size and type of the specific occupations. These results provide valuable information to understand the intensity of household



dependence on the forest ecosystem services surrounding the protected area, which would facilitate to develop forest management strategies based on community-based approach.

*Keywords:* ecosystem services, the dependence on forest resources, local livelihood, forest management strategy



*Type of submission: Abstract*

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## **Multi-level trade-offs decisions on ecosystem services for poverty alleviation**

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This paper addresses the question how different levels of decision-making in ecosystem management have impacted on poverty alleviation. At three levels (micro, meso and macro), we evaluate how trade-offs were analysed and decisions were taken in six different case studies from low-income countries. The first part of the paper characterizes trade-offs in decision-making for ecosystem services management for poverty alleviation. In this normative context, values and justice preferences in the trade-offs affect decisions, whilst the complexity of this





policy issue also requires attention to multi-scale modeling and measurement of poverty, ecosystems and their interactions. We elicit a set of key principles to guide trade-off analysis and reflect on these in our case studies. The second part of the paper presents the case studies, for which we describe how different actors have different incentives, constraints and motivations, and how that appeared to influence decisions. In the discussion, we elaborate on the trade-off analysis principles using the emerging lessons from the case studies, and reflect on the question whether multi-level analysis of trade-offs can help to improve decision-making that promotes ecosystem management for poverty alleviation.

*Keywords:* poverty, trade-offs, decision-making, ecosystem services, multi-level analysis



*Type of submission: Abstract*

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## **Do Incentives and monitoring increase adoption of conservation agriculture for food security and poverty alleviation?**

*Author(s):* Patrick Ward

*Affiliation(s):* Research Fellow, International Food Policy Research Institute

*Presenting author:* Lawrence Mapemba

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Conservation Agriculture (CA) is a farming practice that promotes minimum tillage, soil cover and crop diversification to restore soil fertility, attain sustainable yields and reduce soil erosion. Malawi's National Agricultural Policy prioritizes CA as an opportunity to achieve triple objectives of improving



food security and mitigating the effects of climate change while sustaining the biophysical environment. However, current CA adoption rates are very low with widespread partial adoption of individual practices, which impede farmers' realization of full benefits. Initial investment cost and adoption risk of CA are considered high, hence, provision of incentives has been suggested to lift CA adoption rates. While many different incentive structures could be conceptualized, one incentive design that leverages social externalities is agglomeration payment. Agglomeration payment structure encourage farmers to act as rural extension agent, receiving voucher for practicing CA on their own fields, and additional bonus for neighbours that also practice CA. This research evaluates the effectiveness of agglomeration payments and traditional vouchers in encouraging the diffusion of CA practices, while also considering the heterogeneity of these encouragements in tandem with program monitoring. This is achieved through randomized controlled trial conducted in Shire River Basin in southern Malawi.

Our results suggest positive effects of both



conventional vouchers and agglomeration payments on the adoption of CA as well as expanding area under CA. Consistent with expectations, there is evidence that agglomeration payments contribute to accelerated adoption due to enhanced peer-to-peer learning. Furthermore, the results show that areas with full monitoring have higher CA adoption rates than those with partial or no monitoring.

The evidence suggests that government policy should consider providing incentives in form of subsidies to farmers that encourage CA adoption at landscape scale. Therefore, farmers that have adopted CA and spur adoption among their neighbours should be given incentives to enhance peer-to-peer learning.

*Keywords:* conservation agriculture, adoption, agglomeration payment