SESSION DESCRIPTION

ID T7

Title of session:

Ecosystem services for poverty alleviation

Hosts:

	Title	Name	Organisation	E-mail
Host:	Dr.	Pedro Zorrilla-Miras	The University of Edinburgh	pedro.zorrilla-miras@ed.ac.uk
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Co-host:	Dr.	Marc Metzger	The University of Edinburgh	marc.metzger@ed.ac.uk
Co-host:	Dr.	Janet Fisher	The University of Edinburgh	jfisher2@staffmail.ed.ac.uk
Co-host:	Ms.	Becky Murray, Bouchra Chakroune	Ecosystem Services for Poverty Alleviation Directorate	impact@espa.ac.uk
Co-host:	Dr.	Ken Norris	Institute of Zoology Zoological Society of London	Ken.Norris@ioz.ac.uk
Co-host:	Dr.	Natasha Ribeiro	Universidad Eduardo Mondale	joluci2000@yahoo.com
Others involved:	Dr.	Bjorn Schulte-Herbruggen	Stockholm Resilience Centre, Stockholms universitet	bjorn.schulte-herbruggen@su.se
	Dr.	Carlos A Torres-Vitolas	University of Southampton	C.A.Torres-Vitolas@soton.ac.uk
	Dr.	Mark Hirons	University of Oxford, Environmental Change Institute	mark.hirons@ouce.ox.ac.uk

Abstract:

Ecosystems services contribute to human wellbeing as clearly stated in the Millennium Ecosystem Assessment project (MEA 2005). Empirical research highlights how ecosystem services act as a subsistence based “safety net” on which local populations rely on to support their livelihoods (e.g. firewood, construction materials, food), and cases in which are used as a “pathway out of poverty” through commercialization of ecosystem services (e.g. eco-tourism, fisheries, charcoal production, NTFP) or through payment for ecosystem services schemes (Barbier 2012, Cavendish 2010, Dasgupta et al. 2005, Ekbom and Bojö 1999, Sunderlin et al. 2007). To accelerate the research agenda, it is recommended to (a) identify how differentiated social groups benefit distinctively from ecosystem services (Daw et al. 2011, Fisher et al. 2014, Suich et al. 2015); (b) to use a multidimensional poverty concept over the classical income (monetary) concept (Duraiappah 2011, Pascual et al. 2010, Wu 2013, Summers 2012); (c) to take into account the manner in which access mechanisms to ecosystem services impact the creation of value chains and the benefits that different social groups obtain from them (Suich et al. 2015, Daw et al. 2011, Kalaba 2014); and (d) to find clearer evidences of how ecosystem services can serve as a sustainable way out of poverty (Suich et al. 2015). This session seeks

contributions to these questions and to the overall influence of ecosystem services on poverty alleviation, with a special attention given to tangible demonstrations on the science-policy-practice interface.

Proposed Format (duration, methods, (technical) requirements):

A session with one opening lecturer, followed by individual presentations of projects, researches, experiences, tangible demonstrations and results. After a break, a working group can work on issues of common interest, which will be able to work on a common result: briefing note to address the European audience or a future publication.

Goals and objectives of the session:

To share knowledge and the newest and advance findings on the questions addressed in the abstract.

Planned output / Deliverables:

A briefing note that sets out the ways in which ecosystem services contributes to poverty alleviation with evidences from the session, to address the European audience. It will be the result of a discussion on how to translate research results into practical implementation.

A possible future publication, in the form of paper, special issue or any other format proposed during the session.

Voluntary contributions accepted: YES

Session program

Date of session: Thursday, September 22, 2016
Time of session: 09:00am-10:30am and 11:00-12:30

Speakers

Time	First name	Name	Organization	Title of presentation
09:00-09:15	Paul	van Gardingen	Ecosystem Services for Poverty Alleviation Programme	From Ecosystem Services for Poverty Alleviation (ESPA) to delivering nature based solutions to deliver the Sustainable Development Goals (SDGs).
09:15-09:30	Jean	Lee	Colorado College	Farmer Participation in a Climate-Smart Future: A Case Study of the Kenya Agricultural Carbon Project
09:30-09:45	Paphaphit	Wanasuk	University of Nottingham	The impact of Mulberry sericin soap production on ecosystem services and community well-being in Thailand.
09:45-10:00	Björn	Schulte-Herbrüggen	Stockholm University	The choice of poverty framework matters when assessing the contribution of ecosystem services to poverty alleviation
10:00-10:15	Emily	Boyd	Lund University / Reading University	Chronic poverty and ecosystem services

10:15-10:30	Caroline	Howe	University of Sheffield	Ecosystem services and poverty alleviation: exploring the debate between different epistemic communities
10:30-11:00	Coffe Break			
11:00-11:15	Carlos Alberto	Torres Vitolas	University of Southampton	Local perceptions of nature contributions to food security in the agricultural-forest frontier: An Actor-Network Approach
11:15-11:30	Frank Pedro	Vollmer Zorrilla-Miras	University of Edinburgh	Ecosystem services for poverty alleviation: a forest based case in Mozambique
11:30-11:45	Joyeeta	Gupta	Lund University	An equity argument for nature-based solutions to implement the Sustainable Development Goals
11:45-12:30	Working group with the objective to derive a briefing note and ideas for potential future publications			

Type of submission: Invited speaker abstract

T7 Ecosystem services for poverty alleviation

Chronic poverty and ecosystem services

First author(s): Emily Boyd
Other author(s): Mark Hirons
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Increasingly work on ecosystem services and poverty alleviation is focusing on understanding the multiple dimensions of poverty. In this paper we specifically aim to examine the overlooked area of chronic poverty in managing ecosystem services. We explore how chronic poverty and associated issues of discrimination, corruption, and inequality, embedded within power relations and gender issues, has been treated across the literature on ecosystem services and poverty alleviation. The paper presents preliminary findings from a novel review of the global literature. It draws on established chronic poverty frameworks as a lens through which to examine evidence from three sources: published literature, project and programme documents, and existing ESPA frameworks. The paper characterizes determining features of chronic poverty and crucially evaluates the integration if this concept within ecosystem services projects and programmes that have set out to address poverty challenges. The paper identifies gaps in our understanding regarding fundamental poverty dynamics in managing ecosystem services. The paper reflects on how chronic poverty is a broader governance challenge for managing ecosystem services and reflects on what efforts could contribute to addressing the challenges going forward.

Keywords: ES, chronic poverty, inequality, power

Type of submission: Invited speaker abstract

T7 Ecosystem services for poverty alleviation

The choice of poverty framework matters when assessing the contribution of ecosystem services to poverty alleviation

First author(s): Björn Schulte-Herbrüggen
Other author(s): Katrina Brown, Tomas Chaigneau, Sarah Coulthard, Tim Daw, Christina Hicks
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Ecosystem services are often considered to contribute to poverty alleviation. However, poverty is a multi-dimensional concept and substantial variation exists across studies in how poverty is assessed potentially affecting our perception of the linkages between ecosystem services and poverty alleviation with subsequent implications for policy recommendations. To empirically test the hypothesis that the choice of poverty framework matters when assessing linkages between ecosystem services and poverty alleviation, we use socio-economic survey data from >700 randomly selected rural and urban households from coastal Kenya. We compare household environmental income dependence of the poor across four different poverty frameworks (income poverty, asset poverty, basic needs deprivation and subjective well-being). We found that environmental income dependence among households classed as poor varied strongly across poverty frameworks, ranging from 27% to 50% among income and basic needs poor households, respectively. This was due to a strong effect of poverty frameworks on our understanding of who are the poor. First, the extent of poverty varied strongly across frameworks, ranging from 20% for income poverty to nearly 100% for basic needs deprivation. This was found to be strongly dependent on the poverty threshold set. Second, few households were poor in multiple poverty dimensions and overlap between frameworks showed complex interactions. Finally, the characteristics of households classed as poor varied strongly in terms of the significant predictor variables and non-linear response functions. Overall, our findings show complex interactions between ecosystem services and different poverty frameworks cautioning against management recommendations based on single poverty frameworks and calling for a wider uptake of multiple poverty frameworks.

Keywords: Well-being, Poverty, Africa, Fishing, Ecosystem Services

Type of submission: Invited speaker abstract

T7 Ecosystem services for poverty alleviation

Local perceptions of nature contributions to food security in the agricultural-forest frontier: An Actor-Network Approach

First author(s): Carlos Alberto Torres Vitolas
Other author(s): Kate Schreckenberg, Celia Harvey, Gisella Cruz-García
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Achieving food security and ending hunger, with a special focus on the poor, have been enshrined as part of the world's Sustainable Development Goals for 2030. Ecosystem-services research contributes to those objectives mainly through scientific assessments of trade-offs and synergies between diverse forms of natural-resource allocation (exploitation or conservation) in the face of growing population, market, and urbanisation pressures, and climate change. These initiatives aim to identify an optimal balance between production, intensification and sustainability so that food systems can fulfil people's nutritional requirements without further deterioration of the environment. These developments, however, largely overlook actors' values and understandings that shape their relationship with nature. This scenario is problematic since scientific proposals for sustainable food production may be at odds with local understandings of the subject and accepted modes of practice. In light of this challenge, this presentation will examine how local perceptions and understandings of nature contributions to food security vary across different stages of forest transition. A comparative thematic analysis of focus groups conducted in 25 poor villages from Malawi (deforested), Colombia (high-forest cover) and Peru (rapid deforestation) will provide the empirical evidence for this discussion. An Actor-Network-Theory framework will be used to argue that rural actors establish different configurations of meanings around the notion of 'food security' as a result of their different forms of access, use, and consumption of their surrounding natural and agricultural ecosystems. Results will showcase how human-nature interactions, embedded in communities' socio-cultural trajectories, transfer the 'food security' issue beyond the subject of nutrition to those related to lifestyles and local identity. Particular emphasis will be placed on identifying the pathways through which conservation discourses manage to become part of local perceptions of food security, deriving practical lessons for interventions. Implications for future multidisciplinary ES-research will be discussed in the discussion section.

Keywords: Food security, nutrition, actor-network theory, wellbeing, conservation

Type of submission: Invited speaker abstract

T7 Ecosystem services for poverty alleviation

From Ecosystem Services for Poverty Alleviation (ESPA) to delivering nature based solutions to deliver the Sustainable Development Goals (SDGs).

First author(s): Paul van Gardingen
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The Ecosystem Services for Poverty Alleviation programme (ESPA) is a global research programme launched in 2010. Over the last six years ESPA has funded over 100 research projects in over 50 countries. ESPA's research has shown that ecosystem services can make significant contributions to poverty alleviation when a range of key enabling conditions are present. These link natural and social systems in a way that can deliver a sustainable flow of ecosystem services that benefit poor people and their well-being. The paper will discuss some of the key lessons emerging from ESPA's research and how this has been turned into results and sustainable poverty alleviation in a number of countries. ESPA's approach to deliver truly interdisciplinary research designed to address the global challenge of poverty alleviation is equally well suited to the set of new global research challenges captured in the UN's Sustainable Development Goals (SDGs). The results from the ESPA programme provide a good platform to discuss how nature-based solutions can contribute to delivering the SDGs. Nature-based solutions will be shown to be directly relevant to SDG-1, "End poverty in all its forms everywhere", but equally important to a significant number of other SDGs. The discussion will use ESPA's results to help identify a set of emerging global research challenges.

Keywords: ecosystem services, poverty alleviation, sustainable development goals, impact research priorities

Type of submission: Abstract (voluntary contribution)

T7 Ecosystem services for poverty alleviation

An equity argument for nature-based solutions to implement the Sustainable Development Goals

First author(s): Joyeeta Gupta
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The Sustainable Development Goals (SDGs) adopted by all countries in 2015 aim to ensure that development strategies end the poverty cycle and enhance human well-being, while respecting the boundaries of the life-support systems of the planet. This is in contrast to the current paradigm, which focuses on increasing economic growth and affluence as the preferred mechanism to achieve development and overcome poverty. Achieving the SDGs will be difficult in the dominantly neo-liberal capitalist context of lean states, tax avoidance and capital flight, growing inequality, and with technology increasingly replacing employment opportunities (e.g., large ships that empty the oceans reducing work and access to fish for fisherfolk). Instead this paper argues that if the global community is serious about achieving the SDGs, it needs to adopt an inclusive development perspective, which implies that social well-being and ecosystem maintenance are intimately connected. Poorer people are highly resource-dependent (e.g., farming and fishing) in their local contexts for their livelihoods, living circumstances (e.g., drawing on surface water, living in poorly insulated shelters), and well-being. The increasing reliance on technology and the trend towards making public and merit goods like clean air, roads, parks and even health care systems into private market goods will put these services out of reach for the poorest, and require further capitalization away from services that nature often provides for free. Further, it is more expensive to clean up pollution (e.g., chemically treat dirty water) than to prevent it in the first place by allowing healthy ecosystems to perform their natural functions (e.g., natural water filtration by forests and wetlands). We argue that the Sustainable Development Goals will be most effectively and equitably reached through policies that promote nature-based solutions, rather than through the commodification of natural resources or the substitution of technological for natural capital.

Keywords: ecosystem services, poverty alleviation, commodification, inclusive development

Type of submission: Abstract (voluntary contribution)

T7 Ecosystem services for poverty alleviation

Ecosystem services and poverty alleviation: exploring the debate between different epistemic communities

First author(s): Caroline Howe
Other author(s): Adams, W.M.; Brockington, D.; Corbera, E.; Vira, B.
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We hypothesise that there are different epistemic communities undertaking research into the use/management of ecosystem services for poverty alleviation, each with their own set of definitions, metrics, values and approaches towards governance and action. This has resulted in a fractured debate about the outcomes of using ecosystem services for poverty alleviation, the remaining research gaps and an approach going forward. From the literature we identified a series of normative positions held by these different epistemic communities. We used these to produce a quantitative survey of practicing researchers and policy makers in the field, exploring the confusion and disagreements that drive debates about ecosystem services and poverty alleviation. We carried out a quantitative analysis on the belief and knowledge systems of these different epistemic communities and explored where the sources of confusion and/or conflict lie and to what extent these confusions/conflicts are important within the debate surrounding ecosystem services for poverty alleviation. We explored the definitions, metrics, values and approaches to governance and action define different epistemic communities and asked how much agreement there is within and between different epistemic communities. Where we found sources of disagreement, we explored whether these were sources of confusion (i.e. differences in definitions and/or approach to governance and action) or sources of conflict (i.e. differences in values and/or metrics used) and how substantial these sources of disagreement are (i.e. are they mutually exclusive). Finally, we looked for potential sources of synergy between different epistemic communities and asked how influential the sources of disagreement or synergy are in defining the debate surrounding ecosystem services for poverty alleviation.

Keywords: ecosystem services, epistemic communities; poverty alleviation; conflict and synergy

Type of submission: Abstract (voluntary contribution)

T7 Ecosystem services for poverty alleviation

Farmer Participation in a Climate-Smart Future: A Case Study of the Kenya Agricultural Carbon Project

First author(s): Jean Lee
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The global agriculture sector is responsible for up to 25% of the world's anthropogenic greenhouse gas (GHG) emissions though direct emissions from agricultural practices and indirect emissions from converting forests to cropland or pasture. Globally, these emissions are increasing most rapidly in the developing regions of the world. However, the need to address GHG emissions without compromising food security and the broader social goals of human development poses a problem for farmers who operate at the margin of subsistence. Pro-poor agricultural carbon market projects have emerged as a solution where farmers adopt sustainable agricultural land management (SALM) practices that both increase crop productivity and decrease GHG emissions. More recently, these projects have been proposed as a way to leverage climate finance for climate-smart agriculture projects, which hold the promise of achieving the "triple-win" of mitigation, adaptation, and food security. However, similar to other payment for ecosystem services projects with dual aims of environmental protection and poverty alleviation, the extent of farmer participation—and the delivery of benefits—in such projects remains highly questionable and uncertain. This research seeks to understand the extent of smallholder participation in the world's first smallholder agricultural carbon market project—the Kenya Agricultural Carbon Project (KACP)—by examining farmer eligibility, willingness, and ability to participate. In addition to discussing the institutional factors that enable participation in agricultural carbon markets, this study also adopts a participatory approach to identify the cognitive variables that explain farmers' willingness to adopt and adhere to SALM practices. Results show that adjusting project rules and requirements to accommodate for household characteristics is not sufficient for increasing participation. Findings suggest that focusing on changing farmers' perceptions of their land and strengthening existing social networks are key leverage points that not only increase their willingness to participate, but also their ability to adopt.

Keywords: agricultural carbon markets, Kenya, climate-smart agriculture, participation, smallholder farmers

Type of submission: Abstract (voluntary contribution)

T7 Ecosystem services for poverty alleviation

The impact of Mulberry sericin soap production on ecosystem services and community well-being in Thailand.

First author(s): Paphaphit Wanasuk
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In Thailand, sericulture (silk farming) has important cultural significance and the role of silk textiles in framing national identity is relatively well known. However, sericulture also involves the production of non-textile goods including sericin soaps. This research analyses the impacts on ecosystem services of soap production in small and micro sericulture community enterprises in Thailand. Semi structured interviews and participant observation was undertaken within four small and micro sericulture community enterprises in Chiang Mai, Nakhon Sawan, Nakhon Ratchasima and Buriram provinces in Thailand. Thai sericulturists were found to rely on their local environment for provisioning services that supply mulberry leaves, mulberries, silkworms, silk cocoons and silk fibres and these were found to provide income, increase self-esteem and strengthen social cohesion and mutual respect in sericulture communities. Sericulturists were found to express their identity and sense of place through silk- and mulberry-related products and through engaging with traditional approaches and this enhanced community bonding. The mulberry sericin soap production chain was assessed including mulberry cultivation practices, silkworm rearing and reeling, silk degumming to soap production. Traditional practices have negative ecosystem impacts focused on the widespread use of herbicides and the addition of chemical reagents to enable the degumming process which extracts sericin from silk fibres. The practice of discarding silk wastewater locally negatively impacts groundwater and drinking water supplies and also cropland and is likely to impact human health. Sericulturists are unaware of the negative impacts of sericultural processes on the environment and the tension between cultural significance and ecosystem services is explored.

Keywords: mulberry sericin soaps, sericultural ecosystem services, well-being, place-based analysis of ecosystem services, follow the thing approach