



4th Open Science Meeting of the Global Land Programme

April 24-26, 2019 | Bern, Switzerland

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Conference Time: 30/Jan/2020 10:28am CET

Conference Agenda

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Session Overview

Session

205R: Sustainable rainforest communities: Supply chains, trade-offs and emerging technologies

Time: Thursday, 25/Apr/2019: 10:45am - 12:15pm

Location: UniS-A -122

Session Chair: Izabela Delabre

UniS Building, room A -122, basement, 72 seats

Session Chair: Pedram Rowhani

Session Topics: What do people want from land?

Session Abstract

Deforestation continues across the tropics, with 15.8 million hectares of tropical tree cover loss recorded in 2017 (World Resources Institute, 2018). Tropical rainforests are locally and globally significant in terms of environmental, social, and economic values. Understanding and addressing the important trade-offs between these values and competing land uses is critical for meeting the UN Sustainable Development Goals (SDGs). This session brings together a series of presentations on approaches, solutions and supportive innovative technologies needed to meet the needs, and value the priorities of, communities living in rainforest landscapes, whilst maintaining forests and ecological wellbeing, and ensuring economic sustainability.

This session will examine the synergies and trade-offs between SDGs 9 (integrate small-scale business into value chains and markets), 12 (ensure sustainable production and consumption), and 15 (protect, restore and promote sustainable use of forest ecosystems).

Abstracts are invited that reflect on issues related to the following themes:

Sustainable supply chains: How can local communities in tropical rainforests develop viable forest-based economies extracting non-timber products that secure economic benefits and wellbeing? How can non-timber forest products be integrated into sustainable supply chains, in ways that meet the needs and priorities of communities? How do such forest-based economies affect forest ecosystems, and do they present opportunities to help restore previously degraded areas? What emerging methodologies are there that give voice and ownership to communities in developing sustainable supply chains?

Technologies: What are the emerging technologies for monitoring biodiversity, forest cover, and carbon stock? How can drivers of small-scale and/or large-scale deforestation be monitored on the ground and remotely? How can methodologies integrate new technologies and traditional ecological knowledge for the development of sustainable livelihoods?

Presentations



Full talk

ID: 743 / 205R: 1

205R Sustainable rainforest communities: Supply chains, trade-offs and emerging technologies

Keywords: ecosystem services, palm oil landscape, local communities, livelihood, Kalimantan, participation, role playing-game

Beyond oil palm: Perceptions of local communities of environmental change

Nur Hasanah¹, Anne Dray², John Garcia¹, Heru Komaruddin³, Claude Garcia², Jaboury Ghazoul¹

¹Ecosystem Management, ETH Zurich; ²Forest Development (ForDev), ETH Zurich; ³CIFOR Bogor Indonesia

Involving local communities in ecosystem service research can improve the relevance, quality and, ultimately, outcomes of natural resource management. Local engagement can also contribute to solutions to ecosystem management challenges by diversifying the range of options, and contextualizing their applicability. The benefits to local communities of ecosystem service-based policies relative to other interventions, such as oil palm development, are therefore best understood from the perspectives of the local communities themselves. We used observations, focus group discussions and interviews in four villages along Belayan river, East Kalimantan, Indonesia, to explore how ecosystems are perceived by local communities in different oil-palm development contexts. We also used novel, table-top role-playing games to understand how these communities make land-use management decisions to meet their livelihood's needs.

The main livelihood activity differed across these villages, which were either a fishing community, oil palm smallholder communities, or a forest-dependent community. Perceptions about ecosystem services varied across villages, though three services were perceived to be crucial in all four villages, namely fish provision, water quality, and land availability. These services can be a common concern entry point for discussions on landscape management. Despite common recognition of the negative impacts of oil palm development on these crucial services, all communities are nevertheless choosing to expand oil palm. This was evident in the game sessions, where most players chose to expand oil-palm in their landscapes. A wide array of direct and indirect drivers were identified by communities as underlying this trend, including social influence, financial capital, ecological factors, and subsidies from local government. Engaging local policymakers and oil palm companies with local people from the beginning is essential if crucial and widely recognized ecosystem services are to be maintained in oil palm landscapes.

Full talk

ID: 541 / 205R: 2

205R Sustainable rainforest communities: Supply chains, trade-offs and emerging technologies

Keywords: sustainable supply chains, zero deforestation, non-timber forest products, UN Sustainable Development Goals, agency

Supply chain management and the UN Sustainable Development Goals: opportunities and challenges for rainforest conservation at local and global scales**Anthony Alexander, Izabela Delabre, Pedram Rowhani**

University of Sussex, United Kingdom

In this paper, we draw upon case studies in Latin America to explore how non-timber forest products are integrated into supply chains, in ways that are intended to meet the needs and priorities of rainforest communities. By examining the on-the-ground strategies taken by grassroots organisations and NGOs to support the establishment of sustainable and resilient livelihoods based on agroecological principles, as well as the sustainable procurement processes and zero deforestation statements of large multi-national buyers, we discuss the opportunities and challenges for aligning supply chain management with the targets of the UN Sustainable Development Goals (SDGs). Examining the links between producers in rainforest communities, the strategies of large global enterprises and their socio-economic and spatial contexts reveals significant tensions which require careful attention for supply chain initiatives to effectively deliver sustainability outcomes. Finally, we examine opportunities for optimising synergies between the SDGs and consider the favourable governance conditions for supply chain management to contribute to rainforest conservation that takes into account issues of equity and agency of local people.

*Full talk***ID: 291 / 205R: 3****205R Sustainable rainforest communities: Supply chains, trade-offs and emerging technologies***Keywords:* citizen science, geographical information, environmental information, community consent process**Developing appropriate data collection and visualisation tools for forest communities****Mordechai Haklay, Jerome Lewis, Simon Hoyte, Michalis Vitos, Artemis Skarlatidou, Julia Altenbuchner, Marcos Moreu Badia, Dan Artus**

Extreme Citizen Science group, UCL, United Kingdom

The aim of the ERC funded project "Extreme Citizen Science: Analysis and Visualisation" is to develop the tools, methodologies, and approaches, that will support communities with limited literacy to be able to collect environmental information about their area and share it with trusted parties, including the development of visualisation tools that can allow them to see the information and understand the trends that are emerging within it. In particular, this approach is focusing on digital tools that allow the recording of information accurately.

In this paper, we will cover the challenges of developing tools that will assist participants to collect information accurately, some of the emerging visualisation tools, and the detailed social process that is used to ensure that the technologies are integrated in a culturally appropriate way.

*Full talk***ID: 566 / 205R: 4****205R Sustainable rainforest communities: Supply chains, trade-offs and emerging technologies***Keywords:* forest landscapes, supply chains, policy, governance**Non Timber Forest Products in the Brazilian Amazon: The role of socio biodiversity chains****Sónia Maria Carvalho Ribeiro, Britaldo Soares Filho**

UFMG, Brazil

One of major unsolved questions in Brazil still is how to keep Amazon forests biodiversity while enhancing wellbeing, education and economic growth for Amazon forests related livelihoods. In Brazil, Amazon forest biodiversity lives together with a variety of sociocultural groups: over 644,000 families of ribeirinhos agro-extractivists, 204 indigenous tribes of over 605,000 families and over 4,500 families of quilombola people, creating a rich cultural heritage, singular Traditional Ecological Knowledge (TEK), and skilled traditional abilities that are an important contributor to Brazilian forest identity. Traditional communities in Amazon use and trade raw materials of surrounding forests, a variety of Non Timber Forest Products (NTFPs) as part of their livelihoods. These products were awarded in Brazil as socio biodiversity chains acknowledging the diversity of Socio- Ecological Systems (SES) and land management peculiarities. Our approach couples knowledge on spatially explicit knowledge on productivity and rentability of Non Timber Forest Products (such as Rubber and Brazil Nut), with scenario planning and ecosystem services mapping for forging collaborative governance approaches in a set of predefined communities in the vast area of Brazilian Amazon. Our results show that livelihoods associated to NTFPs commodities market is only possible in high productivity areas that represent a small share of the Brazilian Amazon (<http://csr.ufmg.br/amazones/>). Even in these areas the collection of NTFPs does not provide reliable income for the vast majority of forest families. In the vast majority of the area of Amazon rainforest the socio biodiversity supply chains as proposed by the Ministry of Environment in 2009 still deal with implementation issues. Our work highlights that there is thus the need to forge new governance approaches beyond the traditional market chain approaches. Because our approach is spatially explicit we able to help at better target policy making in the areas were socio biodiversity supply chains can be enhanced as a way to contribute to the livelihoods in the biggest tropical forests in the world.

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