Understanding challenges and opportunities facing a transition to more sustainable land-use systems in the Eastern Amazon

Joice Ferreira¹, Toby Gardner⁎², and Emilie Coudel*

¹Embrapa Amazonia Oriental (Embrapa) – Belem, Pará, Brazil
²University of Cambridge – United Kingdom

Abstract

Organizers: Joice Ferreira, Toby Gardner & Emilie Coudel
The session will be composed of four ten minute presentations that will be followed by a panel-led debate on transitions to more sustainable land-use

Talk 1: Trade-offs in the social-ecological values associated with different land-uses in the eastern Amazon (Toby Gardner)

Talk 2: Environmental compliance in the Brazilian Amazon: awareness, motivations, capacity and opportunities (Emilie Coudel)

Talk 3: Land management and social context (Rachael Garrett)


The Amazon represents a major sustainability challenge. As well as being the world’s largest remaining tropical forest, the Amazon biome is home to more than 30 million people, and provides locally, regionally and globally significant human-welfare benefits including economic goods and non-market ecosystem services, such as climatic regulation and biodiversity conservation. The Sustainable Amazon Network (RAS; Rede Amazônia Sustentável in Portuguese) is a multi-disciplinary research initiative established in 2009 and involving more than 30 research institutions and partner organisations to improve our understanding of some of the challenges and opportunities facing a transition to a more sustainable system of land-use in the eastern Brazilian Amazon. This session will present a set of 4 inter-related talks that seek to synthesise key findings and insights of the work by RAS and provide the basis for a critical discussion on the possibilities for making such a transition.

First, we will summarise the relative ecological and socioeconomic costs and benefits (including levels of agricultural production, and differences in biodiversity conservation, soil conservation and carbon storage capacity) of alternative land-use choices drawing on field data from nearly 500 farms distributed across a gradient of land-use intensity and producer wealth at farm and landscape scales. Drawing on this understanding we will then focus on three key areas of challenge and opportunity facing sustainable development in the region:

*Speaker
(1) institutional and legislative context, and barriers facing compliance with environmental regulations (2) intra-regional variability in land management approaches and the social and technical barriers facing the development of a more responsible agricultural sector, and (3) the options for facilitating a shift towards fire-free agriculture based policy changes and access to technology through the private sector.

Individual presentations of ten minutes each will be followed by a twenty minute panel debate. Debate will be facilitated by asking audience members to focus on the headline theme of challenges and opportunities facing transitions towards a more sustainable land-use system. Participants will be encouraged to note down key challenges and opportunities that they perceive to be of the greatest relevance to realizing such a transition. The first five minutes of the panel debate will be spent compiling a list of each set of priority issues on two white boards to help stimulate and focus ensuing discussion. Debate will be facilitated to try and identify issues that share common drivers and solutions and identify where trade-offs and perverse or unintended outcomes may lie within the broader political and institutional context of sustainable development in the Amazon.

**Keywords:** Amazon, trade-offs, forest, agriculture, transitions, land, use, production, governance