Presentation of the speakers & their topics:

Landscapes in a carbon focused world

26th October 2012

Claudia Ituarte-Lima - Stockholm Resilience Centre/Swedbio

Legal landscapes in biodiversity and social safeguards

Summary: Safeguards have gained momentum in the international environmental arena especially in action for REDD+ under the UN Framework Convention on Climate Change (UNFCCC). This presentation will address the way safeguards can be related to different biodiversity financing mechanisms, and learn from the REDD+ discussions under the UNFCCC. While scaling up biodiversity finance is key for achieving the three goals of the Convention on Biological Diversity (CBD), the development of new biodiversity financing mechanisms has also generated concerns over the potential problems, which span from generating financial speculation to affecting the rights of indigenous peoples and local communities. The presentation will examine legal landscapes that can be useful for developing and implementing safeguards related to biodiversity financing mechanisms in an equitable way.

Claudia Ituarte-Lima is Legal Advisor at the Resilience and Development Programme (Swedbio), at Stockholm Resilience Centre. She is an international public lawyer with theoretical and applied

experience in both multilateral and community environmental issues. She holds a PhD from University College London, an MPhil from University of Cambridge, and diplomas from Bourgogne University in France, among other. Her distinctions include the Human Rights Award by American University, Washington College of Law. Her current interests are climate change and biodiversity laws and policies in relation to poverty alleviation, livelihoods and development. She holds visiting status at the Environmental Change Institute, University of Oxford and the Stockholm Environmental Institute.

Christel Cederberg - Chalmers University of Technology/SIK the Swedish Institute for Food and Biotechnology

Potentials for soil carbon sequestration in different cattle feeding strategies

Summary: Grassland for silage, hay and pasture has for long been the traditional roughage feeding strategy for cattle in northern Europe. There is an increasing interest for substituting this with maize silage and more concentrates which probably lead to different soil carbon balances. There are great difficulties to calculate such changes in estimates of GHG emissions from livestock production systems which will be discussed in this section.

Christel Cederbergs research is mainly about environmental impact of livestock production systems in developed countries and focus on GHG emissions and land-use issues. Cederberg has a Master in Agriculture, a PhD in Environmental Science and now works at SIK and is adjunct professor at Chalmers.

André Gonçalves - Professor Agroecology at Instituto Federal Catarinense and Technical Advisor at the Centro Ecologico in Brazil

Agroforestry and Conservation projects in Brazil: Carbon, Biodiversity, Climate, and People

Summary: As Brazil has been wrestling with the need to reconcile economic development with poverty reduction strategies and environmental conservation, AgroForesty Systems (AFS) have emerged as a promising alternative to industrial farming systems aimed at producing commodities. AFS have been championed by environmental groups, NGO networks and organizations representing family farmers due to their high potential for increasing food security and generating income, while also providing key environmental services. These groups contend that AFS can reduce the vulnerability of family farmers to external factors such as market forces, shifting government policies and the effects of climate change. While the Brazilian government has drafted a series of policies directly and indirectly promoting the development of AFS, farmers still face significant barriers to implementing and maintaining these systems over time. The objective of this presentation is to examine these drivers and barriers so as to provide policy inputs by drawing out lessons learned from different experiences of AFS as well as from Conservation Projects implemented in Brazil.

André Gonçalves is an agronomist with a PhD in Natural Resources from Cornell University, USA; he is a professor of agroecology at Instituto Federal Catarinense; technical coordinator of a local NGO called Centro Ecológico; and he has more than 20 years of practical experience working directly with organic smallholders in Southern Brazil. Recently, he has leading some studies related with agroforestry systems and promotion of environmental services.

Dr. Hailu Araya – Team leader at ISD (Institute for Sustaibanle Development) and co-founder of the Best Practice organisation, Ethiopia

Smallholder farming: a way towards sustaining food security and adapting to climate change

Smallholder farming, the dominant in Ethiopia, has a multi-functional dimension. Research results show improvement of ecosystem services such as: tremendous increase of the agricultural yield (human food and animal feed) ecologically. Environmentally it is improved by SLM; agroforestry, ecological farming, intercropping, etc, which is resulted in boosting agrobiodiversity, underground water-retention, regeneration of vegetation and then transferred into micro-irrigation and diversity in the farm such as apiculture. Practically agroforestry has a significant and diverse environmental and socio-economic importance. Family income increment consequently enhanced their socio-cultural and religious participation in communities. These all activities are known for their build up of soil organic matter and humus, low GHG emission and carbon sequestration.

So far the policies, rules, regulations and the present CRGE plan of the Ethiopian government are in favor of smallholder farming. However, many international programs still are pushing governments of the developing world for high external input and monoculture, which are high in GHG emission and are unsustainable. Therefore, the aim of this paper is to indicate the need to recognize the contribution of the smallholder farming in the landscape management and integrating to the academics, extension, research and agricultural development of the country. It will also analyze the existing policy situation and draw policy recommendations locally and internationally.

Hailu Araya is a soil scientist with a PhD in Agricultural Sciences from the University of Hohenheim, Germany. He is a Team Leader (Ecological Agriculture) in an NGO called the Institute for Sustainable Development (ISD) and co-founder of Best Practice Association. He has an experience of 10 years teaching in Geography in High Schools and over 14 years of practical experience with smallholder farmers and extensionists. He trains and being trained by smallholder farmers from their practical work in preparing local inputs especially compost, crop diversification, IPM, agroforestry, farm innovation, etc.

Leif Klemedtsson – Professor at Department of Earth Sciences GU

Landscape Scale Investigation of Greenhouse Gas Exchange (LAGGE)

Summary: Forests are discussed as important globally widespread carbon sinks in the terrestrial landscape and it has recently been postulated that this view is valid for forests of all ages. However, this approach is inadequate to assess the carbon and greenhouse has (GHG) balances from the total forested landscape since transport of carbon from land to water and subsequent GHG emissions from aquatic habitats are typically not considered. Inland waters contribute large amounts of carbon dioxide to the atmosphere, and are important for the global warming potential. These findings indicate a disproportionate aquatic impact on the overall terrestrial GHG balance relative to the small freshwater surface area.In order to challenge the current view of the continental carbon or GHG sink a national Formas project LAGGE was started, with its main field activities during 2012-2013. With the hypothesis that the GHG sink is smaller than currently believed, the main objective is to quantify GHG balances at the landscape scale in forested regions that include land-atmosphere, land-water, and water-atmosphere exchange.

Leif Klemedtsson is heading the Gothenburg Greenhouse Gas Group (G4). G4 conducts flux measurements from tundra, peat, agriculture and forestlands, process studies, modelling followed by ecosystem analysis in order to find mitigation strategies. Hi is the coordinator for the LAGGE project.

Matilda Palm - Chalmers University of Technology/Focali

Reducing emission from all land uses - a broader perspective on REDD+ with examples from Vietnam

Summary: Vietnam has been targeted as one the REDD+ pilot program countries with great willingness to mitigate emission from carbon dioxide by avoiding deforestation. However, being a country with a diverse landscape and scattered deforestation and reforestation the REDD+ approach is not obvious. This study suggests a landscape approach to quantify emission from broadening the REDD+ scope to include other relevant landscapes. Land cover conversion and land use change in tropical forest margins affects both carbon stocks and profitability. Where the carbon stocks generally decrease during land use conversion and profitability (from the perspective of the actors) increases, the ratio of these changes is indicative of an opportunity cost of foregoing the change. The OPCOST model of Opportunity Costs Analysis used in this study combines information on land cover types (typical C stock densities and Net Present Value) with a land use change matrix for a certain period. This model has proven to be a very useful tool for providing a science-based carbon offset price estimation that is important for decision making for any conversion of forestland into non-forest land.

Matilda Palms research included financial mechanisms related to climate and forest as well as landscape rehabilitation in developing countries with a special focus on degraded and marginal lands. Palm has a masters and PhD in physical geography, did a postdoc at World Agroforestry Centre (ICRAF) in Vietnam and is currently doing a postdoc at Physical Resource Theory at Chalmers.