

BOOK OF ABSTRACTS



PECS 2015 CONFERENCE

Social-ecological dynamics in the Anthropocene



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Participatory approaches, such as participatory workshops, to involve a broad variety of stakeholders influencing decision-making regarding urban adaptation, have been organized in the pilot cities. The results of the participatory workshops indicate that most of the EBA measures have a very high priority among stakeholders. However, the current governance system lacks any legal framework or regulations to support these adaptation measures. In this respect, increasing institutional adaptive capacity would be essential to mainstream EBA adaptation in local decision-making. References: Jones, H. P., Hole, D. G. & Zavaleta, E. S. 2012. Harnessing nature to help people adapt to climate change. *Nature Climate Change*, 2, 504-509. Gómez-Baggethun, E. and Barton, D.N., 2013. Classifying and Valuing Ecosystem Services for Urban Planning. *Ecological Economics* 86: 235–245.

Talk Title DO POLICY NETWORKS CONNECT ACTORS WITH DIFFERENT AGENDAS RELATED TO LOCAL AND GLOBAL ECOSYSTEM SERVICES? CASES OF PERU AND BRAZIL

Theme How governance and institutions affect social-ecological systems, including capacity for learning and transformations.

Presenter Dr Bruno Locatelli

Organisation CIRAD-CIFOR

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Country Peru

Abstract We analyzed the policy networks related to climate change and ecosystem services in Peru and Brazil to understand how actors working on local or global ecosystem services interact. Climate change requires responses at different scales: at the global scale for mitigation (i.e., limiting the increase of greenhouse gases in the atmosphere) and at local scales for adaptation (i.e., addressing the local impacts of climate change on people and ecosystems). Although many activities can jointly contribute to the climate change strategies of adaptation and mitigation, climate policies have treated these strategies separately. In recent years, there has been a growing interest by practitioners in agriculture, forestry and landscape management in the links between the two strategies but policies rarely address adaptation and mitigation together. Some agriculture and forestry policies, such as REDD+ (Reducing Emissions from Deforestation and forest Degradation), focus on one global ecosystem service for mitigation (carbon sequestration), while others emphasize local or regional ecosystem services for adaptation (e.g. flood reduction in watersheds, coastal protection by mangroves, microclimate regulation in agriculture and cities). Policies for adaptation and mitigation are generally implemented by different agencies, which can lead to undesirable outcomes: because of potential trade-offs between adaptation and mitigation, a REDD+ project for global emission reductions can increase the vulnerability of local social-ecological systems; similarly a local adaptation project can increase carbon emissions. There is a lack of information on how climate change policy arenas are polarized along the adaptation-mitigation continuum and how policy actors dealing with local and global issues and ecosystem services interact. We conducted a policy network analysis (PNA) study on the synergies between adaptation and mitigation in Peru and Brazil. The PNA aimed to delineate the relationships (and their structural aspects) between the actors involved in policy processes related to climate change adaptation and/or mitigation in land use sectors (e.g. forestry, agriculture). Results provide a broad picture of actors participating in climate policy processes and identify the relationships of influence and the communication flows between organizations. They reveal how actors concerned with local or global ecosystem services interact differently in terms of communication and collaboration. The PNA is a useful tool for improving policy integration and coherence by mapping out partnerships, identifying new opportunities for collaboration, and detecting bottlenecks. Dialogue and coordination between the different actors (who have different objectives) are essential to balance potential trade-offs and enhance the co-benefits between adaptation and mitigation.

Talk Title NATIVE TREE SPECIES IN FOREST CARBON PROJECTS AS A MEANS TO RECOVER AND ADVANCE SOCIO-ECOLOGICAL SYSTEMS IN AFRICA

Theme Social-ecological dynamics of ecosystem services: synergies, trade-offs and links to human wellbeing.

Presenter Dr Anne Mette Lykke

Organisation Aarhus University

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Country Denmark

Abstract Objective: To find best practices for tree species selection in forest carbon establishment in order to make forest carbon projects a means to recover and advance socio-ecological systems in Africa. Background: Landscapes traditionally provided a diversity of ecosystem services that ensured people clean water, fertile soils, shade, wood and a variety of food, medicinal and cosmetic products. During the Anthropocene increasing population density and agricultural intensification gradually reduced the variation of ecosystem services and made people more and more dependent on a few of them with reduced economic and nutritional security as a result. People in rural Africa are often aware and concerned of these changes, but in most cases lack notions and opportunities for action. Planting native tree species in forest carbon projects is a simple, low-cost means to sustain ecosystem services, human wellbeing and favorable planetary conditions at the same time. Methods: A practical approach is taken where research and application is combined. A forest carbon project (called Arlomom) is established as part of an EU financed research project (Undesert). Rural people's priorities for tree species selection are gathered via highly structured quantitative ethnobotanical questionnaires. Data are stored in a database (UseDa), which allows for regional analyses. Present and future species distributions are analyzed using species distribution modelling based on IPCC climate scenarios in order to know if the prioritized native species will be able to grow under future climate