Programme on Ecosystem Change and Society

Stockholm Resilience Centre
Sustainability Science for Biosphere Stewardship

Stockholm University

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ABSTRACTS

OPEN SCIENCE CONFERENCE PECS II

NOVEMBER 7-10 2017
OAXACA CITY
MEXICO

Welcome

PECS

The Programme on Ecosystem Change and Society (PECS) was launched in 2011. The principal approach of PECS research is an in-depth understanding of the social-ecological dynamics at landscape scale in a wide variety of situations. PECS uses a broadly set of conceptual frameworks and tools that eventually leads to comparisons of place-based, long-term social-ecological case studies, and reveals general principles for sustainable resource management. Since 2014, PECS is officially part of Future Earth, the newly created global research platform that aims to provide the knowledge and support to accelerate our transformations to a sustainable world.

PECS 2017

The first Open Science Conference of PECS was held in South Africa in November 2015. PECSII- 2017 will advance from the momentum and insights gained during the PECS 2015. Eighteen transdisciplinary projects and five cross-cutting working groups have been endorsed within PECS projects, which together cover a wide range of social-ecological case-studies around the world.

Research across these case studies is adaptive and transdisciplinary and combines different knowledge systems and perspective. These features will ultimately, and ideally, allow for the guiding research questions of PECS to be co-designed and co-evolved together by researchers and stakeholders.

PECSII- 2017 will host more than 300 participants from more than 30 countries, from academic, governmental and societal organizations.

WELCOME TO PECS-II

Dear Friends

Welcome to the Second Open Science Conference of the Programme for Ecosystem Change and Society (PECS), in Oaxaca, Mexico, November 7-10 2017 (PECSII). The emphasis this year is on "Transdisciplinary place-based research for global sustainability". As a network of place-based research, PECS strives to foster interactions and gaining insights from comparisons across sites. Place-based research allows for a better understanding of global social-ecological dynamics, and how transformations towards sustainability are often triggered at the local scale through the co-construction of local solutions.

PECSII will build on previous PECS efforts to synthesize across sites and will highlight recent advances towards more successful transdisciplinary place-based research. Early PECS efforts were aimed at establishing a conceptual and methodological framework and at fostering the endorsement of projects as well as the establishment of working groups. Workshops held in Stockholm in 2013 and in Montpellier in 2014 led to a PECS special issue in Ecology and Society. The first PECS Opens Science Conference in 2015 in South Africa expanded the community and the range of projects and working groups, and was instrumental for quick starting new research approaches and fostering synthesis publications.

PECSII will welcome 350 participants from nearly 200 organizations, including research institutes, schools, universities, environmental NGOs, governments, consultants, as well as organizations of rural producer, of indigenous groups, of civil rights defenders and artists, from 35 countries spanning all continents.

We are looking forward to our very intense three-day program that is designed to foster debate, the discussion of new insights, the development of conceptual and methodological approaches, and the strengthening of a global community of practice. Plenary sessions, symposia, flash workshop, innovative and immersive sessions, speed talk sessions and posters sessions are all set up in ways to promote active exchanges among participants.

We have also set up additional activities to unravel interactions in a wide range of contexts. Pre- and post-meeting workshops and courses, field trips, and cherry picked cultural activities will further nourish our interconnections.

Enjoy this wonderful academic setup developed for you and by you and please make sure to take advantage of the wonders that the city of Oaxaca offers.

Albert Nörstrom
Executive Director of PECS

Patricia Balvanera
Chair of the Local Organizing Committee of PECSII

The means determine the end in pursuing integrated valuation in practice (181)

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In environmental valuation, although it is well recognized that the choice of method heavily affects the outcome, little is known on how existing valuation methods actually elicit the different values. Through the assessment of real-life applications of valuation, this study tracks down the suitability of 21 valuation methods for 11 value types and assesses the methodological requirements for their operationalization. We found that different valuation methods have different suitabilities to elicit diverse value-types. Some methods are more specialized than others, but every method has blind spots, which implies risks for biased decision-making. No single valuation method is able to capture the full spectrum of values of nature. Covering the intrinsic, relational and instrumental value dimensions requires careful selection of complementary valuation methods. This study also demonstrates that performing such an integrated valuation does not necessarily entail more resources, as for every value dimension, methods with low to medium operational requirements are available. With this study, we aim to provide guidance for selecting a complementary set of valuation methods in order to develop integrated valuation in practice that includes values of all stakeholders into environmental decision-making. Moreover, the 'diverse method requirement' for valuation has repercussions for assessments on larger scales, and could form a criterion to check validity of value conclusions from global or subglobal assessments or natural capital accounting attempts.

Ecosystem based Adaptation for smallholder farmers: perception of benefits (179)

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Many smallholder farmers use Ecosystem-based Adaptation (EbA) practices (e.g. shade trees in coffee plantations, or live fences) to improve the sustainability of their farming systems and to help crops adapt to climate change, yet little is known about the benefits and drawbacks of EbA practices that smallholder farmers perceive. In order to better understand how and why farmers use EbA practices, we characterized EbA practices commonly found on coffee and basic grains agroforestry systems (shaded coffee, dispersed trees in annual crops, forest fragments, riparian forests, and live fences) in 6 landscapes of Central America, using farmers' structured interviews. Specifically, we documented farmer perceptions of the benefits and drawbacks of individual EbA practices in 300 farms in Costa Rica, Guatemala and Honduras. Our study finds that the prevalence and type of EbA practices present on individual farms were related to farmer socioeconomic conditions, including farmer experience and access to training. Farmers indicated that the main benefits of EbA practices were avoiding erosion, improving soil fertility and organic matter, and regulating temperature, among others. The drawbacks of establishing and maintaining some of these practices, are the cost of maintenance and the intensity of labor required. Our study highlights key factors that influence the adoption and use of EbA by smallholder farmers, and provides insights into how governments, donors and development agencies could more effectively promote the broad-scale use of EbA practices in agricultural landscapes.