

Biodiversity and Resilience of Agroecosystems

**Workshop
March 7 & 8, 2013**



This workshop is the first of a workshop series in preparation for the 2014 Resilience Conference to be held in Montpellier, France¹. The objective of the workshop series is to bring together French and international scientific communities together for an in depth exploration of the multiple dimensions of resilience following the theme of the 2014 Resilience Conference: “*Adaptation, Transformation and Development*”.

This specific workshop, organized by CIRAD and Bioversity International, will focus on the role of biodiversity in the management of multiple agroecosystem services in development contexts, and contribution to resilience. Harnessing biodiversity’s role in the resilience of multiple ecosystem services demands a clear understanding of the biophysical factors that drive ecosystem service delivery (from genes to landscapes), as well as a strong understanding of socio-cultural dimensions and governance structures that shape agricultural systems and landscapes, and that drive these systems. Key interdisciplinary themes of the workshop will consider the critical contribution of scales, interactions and feedbacks, tradeoffs and synergies, and the role of spatiotemporal heterogeneity in determining the impact of biodiversity on regulatory processes. We will also consider key contributions from the social sciences, specifically perspectives relating to human well-being, and the role of institutions, including governance structures, markets, and public policy as they relate to supporting biodiversity’s impact on resilience. Key questions include: whether crop productivity and diversified and resilient systems are inherently antagonistic; at which scales does biodiversity offers resilience in a form that can be taken up by society; and how does as focus on systems multifunctionality translate to either adaptation, or transformation of these systems in the face of change?

Objectives:

1. To provide a meeting space for interdisciplinary scientists to meet, discuss and identify session themes on “Biodiversity and resilience of agroecosystems” for the 2014 Resilience Conference.
2. Select 1 or 2 of these themes to develop the outline for one or more key papers to be submitted for a special issue of *Ecology and Society on Adaptation, Transformation and Development*.

Location: the workshop will take place at Agropolis International, Montpellier, France (amphitheater for the keynote presentations, room B06 & B01 for other activities)

¹ See the attached description of the conference and the conference website:
<http://www.resilience2014.org/>

Meeting Structure:

We offer a two-day meeting that will mix formal presentations given by two keynote speakers (introducing point of view from both Biophysical & Social Sciences), an overview of the collective experiences of the participants on the theme of biodiversity and resilience, and structured dialogue on central themes regarding the role and use of biodiversity in the context of socio-ecological resilience for agriculture and development. **The Keynote presentations of the first morning are public; the rest of the workshop will be in small committee.**

PROGRAM

Thursday the 7th of March:

- 09:00** Welcome & Introduction (public)
- 09:15** Keynote presentation by Unai Pascual (public)
- 10:00** Keynote presentation by Shahid Naeem (public)
- 10:45** Break (public)
- 11:00** Question, Answer, Dialogue with keynotes (public)
- 12:30** Lunch
- 02:00** Review and discussion of our collective experiences within the contexts of biodiversity, agroecosystems, ecosystem services (bundling), multifunctionality, and resilience
- 04:00** Walk and Talk: Identification of Key Questions to be addressed by interdisciplinary teams.
- 05:00** Synthesis of the Key Questions
- 07:30** Dinner

Friday the 8th of March:

- 09:00** Introduction to Day 2 and review
- 09:30** Breakout interdisciplinary groups charged with addressing a specific question.
- 01:00** Lunch
- 02:00** Plenary session to summarize group results and organize follow-up for 2nd 2013 workshop and the Resilience 2014 Conference

Selection Process of the small committee part of the workshop:

To foster discussion, the number of participants to the second part of the workshop is limited to 30. To reserve your space, please send a brief (200 words *maximum*) description of your experience and your potential contribution to the workshop to the organizers. Documents can be provided in either French or in English, although the workshop will be in English.

Workshop Organizers:

1. Aurelie Botta, CIRAD (aurelie.botta@cirad.fr)
2. Fabrice DeClerck, Bioversity International (f.declerck@cgiar.org)
3. Charles Staver, Bioversity International (c.staver@cgiar.org)

The Keynote Speakers:

Pr. Unai Pascual, Ikerbasque Research Professor at the Basque Centre for Climate Change (BC3) and Senior Lecturer at the University of Cambridge (since 2003)

Pr. Unai Pascual is an ecological economist with more than 15 year experience who bridges the social and natural sciences for understanding complex social-ecological systems. His research

focuses on the interconnectedness between global environmental change and economic development paying special attention to the evolutionary role of institutions, markets and environmental governance across scales. He has conducted research projects in many countries around the world, including Europe, the USA and in developing countries such as Mexico, Peru, Bolivia, India, Ethiopia and Malawi. Prof Unai Pascual has an active role as advisor to international environmental policy bodies, including the European Commission, the United Nations Environmental Program (UNEP), and the UN Food and Agricultural Organization (UN-FAO). He is member of the AgroBiodiversity scientific committee of Diversitas International, of the European Board of the European Society of Ecological Economists (ESEE) and editorial member of international journals in Environment and Development Economics. He has been a Coordinating Lead Author for the Ecosystem Services and Biodiversity (TEEB) initiative and has also been involved in the Millennium Assessment exercises in the UK (UKNEA) and Japan. Prof. Unai Pascual has lectured in several universities in Europe (Cambridge, Manchester, York, Barcelona, Bilbao) and in Latin America (Argentina, Dominican Republic, Mexico, Colombia).

Dr. Shahid Naeem, Director of Science, Center for Environmental Research and Conservation (CERC) <http://www.earth.columbia.edu/articles/view/2580>

Dr. Shahid Naeem studies the ecological and environmental consequences of biodiversity loss. He is interested in how changes in the distribution and abundance of plants, animals, and microbes affect ecosystem functions and, by extension, how ecosystem services are affected. His work combines theoretical, observational, and experimental studies under field and laboratory conditions to uncover the mechanistic bases for the impacts of biodiversity loss on ecosystems. His work has demonstrated how the loss of species from ecosystems affect their ability to resist invasion by other species, affect production and nutrient cycling, and affect the reliability and stability of ecosystems. His current field work includes American northeastern deciduous forests and Inner Mongolian grasslands in China. He is actively involved in bringing the science of biodiversity and ecosystem functioning to conservation, restoration, and policy development. Dr. Naeem's activities include training, teaching, and outreach, sharing with both the scientific and non-scientific community current theory and findings concerning how biodiversity loss may impact our environment. Naeem is a member of the American Association for the Advancement of Science the American Institute of Biological Sciences, the American Society for Microbiology, the American Society of Naturalists, the British Ecological Society, the Ecological Society of America, the Society for Conservation Biology, the Society for the Study of Evolution and Sigma Xi.