

## Multifunctional agriculture as a coupled human-natural system

We call for papers that analyze multifunctional food and agricultural systems as coupled human-natural (eco-social) systems, for a session at Agriculture In An Urbanizing Society, an international conference on multifunctional agriculture and urban-rural relations to be held in Wagingen, the Netherlands 1-4 April 2012, (http://www.agricultureinanurbanizingsociety.com/UK/).

We are interested in quantitative, qualitative, conceptual or multi-methodological analyses of any aspect of multifunctional agriculture that substantively advance our understanding of such systems. For instance, abstracts could present analyses of links between the functioning of multifunctional agroecosystems, ecosystem service production, and human outcomes and behavior, or alternately the impacts of human outcomes and behavior on biophysical aspects of multifunctional systems. These might include work relevant to the following concepts related to complex eco-social systems:

- Biocomplexity or complex systems (applying the emerging conceptual and analytical framework of biocomplexity to multifunctional systems and their dynamics).
- Reciprocal feedback loops (feedbacks between social and biophysical factors); e.g. the potential for 'virtuous circle' positive feedback to promote multifunctional systems.
- Nonlinearity (non-linear changes in ecosystem services as land use & land cover changes).
- Thresholds (transition points between alternate states of human-natural systems).
- Legacy effects of previous human-natural interactions (e.g., institutions with a shared interest in multifunctional systems (e.g., food, environment) are isolated from each other.
- Time lags (lags between human-natural interactions and ecological or socioeconomic consequences), e.g., lags in cumulative effects of agricultural land use and land cover on water quality and hydrology
- Resilience (ability of human-natural systems to resist disturbances), e.g., resistance to change in dominant production/land-use/marketing systems?
- Heterogeneity (spatial, temporal, and institutional variation in human-natural interactions), e.g., local conditions may create 'hot-spots' where new production systems can establish?

We emphasize that this list is non-exclusive and we invite papers on other aspects closely relevant to the coupling of human and non-human factors in multifunctional systems, including phenomena that serve to establish such coupling.

## Abstracts for this working group can be submitted by January 15, 2012 to:

Nicholas Jordan | University of Minnesota, USA | jorda020@umn.edu

## Convenors:

Nicholas Jordan	University of Minnesota, USA
Kate Sherren	Dalhousie University, Canada