Title of the symposium:

Synergistic Effects of Climate and Management on Biodiversity

Detail of organizer(s):

Responsible

Name:	Robert
Surname:	Scheller
Email	rschell@ncsu.edu
Organisation/Affiliation:	North Carolina State University
Telephone:	1-919-513-3973
Country:	USA
Address:	

Co-organizer(s)

Co-organizer

Name:	Matthew
Surname:	Betts
Email:	matt.betts@oregonstate.edu
Organisation/Affiliation:	Oregon State University
Address:	
Country:	

Co-organizer

Name:	Melissa
Surname:	Lucash
Email:	lucash@pdx.edu
Organisation/Affiliation:	Portland State University
Address:	
Country:	

Symposium abstract

Although recent studies have estimated the interacting effects of land management and climate on plant and animal populations, there are still very few tests of the degree to which such interactions occur in nature and mechanisms for such effects are poorly understood. This research gap is due to the fact that vegetation data must be at sufficiently fine resolutions to match the spatial scales experienced by species, but such data are rarely available at the broad spatial scales associated with species' ranges and climate data. Second, climatic conditions and management tend to be highly correlated at broad spatial scales; climate is well known to influence vegetation, which makes it challenging to attribute proximate cause of species distributions to either climate change or land-use. It is only when climate and land management vary independently that the opportunity exists to identify interactive or additive effects (Sirami et al. 2016, Betts et al. 2018). Presenters in this symposium will provide a summary of leading-edge research that examines (1) the mechanistic bases for climate–management synergisms, (2) empirical studies on ecological responses to climate and management, (3) predicted (modeled) responses by organisms to climate–management synergisms.

How your symposia will improve landscape ecology science?

The interest in climate change has moved beyond understanding first-order effect and into discussion and research about potential management adaptations, if they exist. Landscape ecology is uniquely poised to lead this research and discussion because of its history integrating social and ecological dimensions of landscape change. We will provide an update on the latest research and hope to elicit inputs from across the global.

Broad thematic areas

Broad thematic areas 1st choice: Future: scenarios and new landscapes

Broad thematic areas 2st choice: Socio-economic-ecological systems

Free Keywords

climate change, management, biodiversity, adaptation