

**sDiv Workshop**  
**“Plant diversity effects on ecosystem resistance to and recovery**  
**from perturbations”**  
**21.-23.10.2013**  
**Workshop Summary**

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## Summary

**Organizers:** Nico Eisenhauer, Forest Isbell

**Post-Doc:** Dylan Craven

**Objectives:** The principal objectives of this workshop were to determine whether plant diversity promotes the resistance and resilience of ecosystem functioning: *i)* during and after extreme climate events and *ii)* under experimental manipulations of global change drivers.

### Discussion Threads

Working Group 1: Extreme climate events & plant diversity

- Identifying extreme climate events that occurred during grassland plant diversity experiments, as determined by a drought index
- Identifying of patterns of asymmetry in measures of resistance and resilience
- Exploring the use of diversity-interaction models

Working Group 2: Resource alteration & diversity

- Focused on experimental alterations that increase or decrease resource availability (nutrient additions, drought)
- Hypothesis development for *i)* increasing resource availability and *ii)* reduction of resource availability
- Integration of functional trait and biogeographical data to analyses
- Standardization of resource alterations across studies

### Main Results

- Assembled extensive data from experimental grassland studies
- Established opt-out authorship agreement for workshop participants and data contributors for initial publications
- Assigned tasks and established initial timeline for planned publications

### Open Questions

- Construction of robust phylogeny across all study sites
- Acquisition of relevant functional traits from data contributors and trait databases
- Integration of studies using experimental and observation plant diversity gradients

### Additional Contributions & Potential Collaborations

- S. Naeem: multiple dimensions of diversity (functional, phylogenetic, taxonomic)

- E. Seabloom: NutNet
- S. Meyer: sensitivity of diversity effects to environmental variability
- K. Mueller: species-specific critical climate windows
- M. Loreau: developing new theory to better address resistance and resilience
- A. Hector: stability following drought and frost
- B. Wilsey: stability following drought in native and exotic plant communities
- Aleksandra Lewandowska: introduction to sStoichFun workshop (sDiv)
- Nathaly Guerrero: requested data for a meta-analysis of temporal changes in diversity effects in experimental forest and grassland systems

### **Participants**

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