



**Ben-Gurion University of the Negev**

**Jacob Blaustein Institutes for Desert Research**

**The Swiss Institute for Dryland Environmental and Energy Research**

**Mitrani Department of Desert Ecology**

Seminar

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MDDE

Tuesday, May 28, 2019, 12:00

Seminar Room, Old Administration Building



## **Climate Change, Grazing and Plant Interactions -**

### **Lessons from a Mediterranean Shrub**

Climatic conditions and human interference are crucial for the success of all species, but are particularly important for the establishment of perennial species. Therefore, it is expected that shrub seedling survival will be reduced in semi-arid regions, where climate-change models predict a reduction in rainfall availability. Additionally, the effect of rainfall on seedling performance is closely linked with the effect of neighbors. In particular, it is predicted that the negative impact of neighbors will weaken with decreased rainfall. Because climate change is expected to affect the whole community and not just individual species, predictions regarding its impact must be tested in relation to the effect on the interactions between species. Surprisingly, only few experimental studies have explicitly combined these factors. In this seminar, I will present garden and field experiments that test the potential effect of plant interactions on shrub establishment in relation to specific effects of both climate change and grazing impact. Interestingly, the results we collected throughout this study suggest that plant species growing in ecosystems prone to rainfall variability and dry conditions may be more resilient to climate change and grazing than previously predicted.