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Resilience of aboveground productivity in the face of reoccurring drought events

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With climate change, extreme drought events increase in frequency and magnitude – however there is not much known about their effects on biotic interactions, plant community composition and ecosystem functioning.
We test the effects of the experimentally-increased frequency and magnitude of extreme drought on plant community development over five vegetation periods. Although evidence suggest that drought affects plant productivity, the above ground net primary productivity (ANPP) of the experimental grassland communities remained surprisingly stable.
Here, we explore two potential mechanisms of the observed stability. First, we analyse above versus below-ground carbon allocation dynamics. Secony, we test for alterations in competitive balance among species.
The results of this research stand to reason that productivity of plant communities of temperate grassland and shrubland in central Europe is fairly resilient to extreme weather events.