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Millennium drought and ecosystem multifunctionality

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Extreme drought events are projected to increase in frequency and magnitude in the near future – however there is not much known about their effects on plant community composition and ecosystem functioning.

We test the response of ecosystem processes to experimentally-increased frequency and magnitude of extreme drought with respect to regulating ecosystem services in grassland and shrubland including various parameters of primary productivity, nutrient cycling, gas exchange, water regulation, biological diversity, phenology, reproductive fitness and stability.

Our interdisciplinary results from the five-year experimental study suggest that millennium drought excites ecosystem regulating functions for maintaining overall stability in productivity.