



PhD Position in Ecosystem Ecology and Biogeosciences



The Dryland Tree and Ecosystem Ecology Lab at the Hebrew University of Jerusalem in Israel has an opening for an outstanding and highly motivated PhD student in ecology and biogeosciences. **Project: Dryland-specific mechanisms of organic matter decay and their contribution to the CO₂ flux from decomposition in dry shrubland ecosystems.** This 4-yr project includes collaboration with researchers in Spain and labs in various biomes worldwide.



Background: Recent studies suggest that the long-term trend and the interannual variability in the terrestrial carbon cycle is driven by the carbon sink capacity of dryland ecosystems. This sink capacity depends heavily on the turnover of the produced biomass, a process that is driven by mechanisms unique to dry regions, but is still not well understood. The overarching goal of this project is to determine the impact of climate change on the

CO₂ flux derived from decomposition of organic materials in dryland ecosystems and to assess the contribution of the various decay mechanisms to the CO₂ flux. **Knowledge on degradation of organic matter in drylands is relevant to a new understanding of decomposition and CO₂ emissions in temperate and tropical regions experiencing an ever drier and warmer climate.**

Candidate: The successful candidate will gain experience in field studies of litter decomposition and CO₂ emissions, new analytical methods of gas exchange and its isotopic signature in the field and the lab, empirical modeling and multivariate statistics. Interested applicants must hold a Master's degree in a related science field (ecology, biogeochemistry, environment, plant sciences). They have to be fluent in English, have excellent communications skill, and have a strong aptitude for scientific writing. Applicants should send a cover letter outlining experience and specific interests related to dryland organic matter decomposition, a curriculum vitae, degree and transcripts of their academic record, contact information for two academic references, and past research publications (if available). The successful candidate will receive a scholarship fully covering living expenses in Israel. Starting date is January 2020, but earlier commencement of the thesis is possible.



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Further information: [Dryland Tree and Ecosystem Ecology Lab](#).