



“Some like it hot

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In the Mediterranean region climate change scenarios suggest that intensity and length of summer drought periods will possibly increase the frequency and likeliness of fires. The burning of maquis leads to significant losses of carbon and nitrogen to the atmosphere and mineral nitrogen concentrations are increased in the uppermost soil layers. However, little information is available about post-fire effects on ecosystem C and N stocks and turnover rates, as well as the response of the microbial biomass and microbial community structure. We will present results from a burning experiment in Spain and discuss the response of soil microbial biomass, N-turnover and functional groups of soil microbes in the humus layer and the mineral soil. We also investigated the impacts of fire on potential GHG emissions and the temperature and moisture sensitivity of the involved processes.