

Human activities have driven environmental changes such as soil warming, nitrogen enrichment, and non-native plant invasions, and all three of these global change drivers have been shown to alter soil fungal communities. Soil fungi play important roles in decomposition, carbon sequestration, and nutrient cycling processes so it is important to understand how fungal communities are impacted by different global change drivers. To further understand the impacts of soil warming, nitrogen enrichment, and non-native plant invasions on soil fungi, I sought to analyze seven previously published studies together to look for generalizable patterns in how fungal communities respond to these global change drivers. I analyzed sequence data from seven studies and measured species richness, community composition, effect sizes of indicator species, and the distribution of trophic modes across treatments. I found significant variation of species richness in one study, significant variation of community composition in two studies, five key indicator species (none were common across all treatments), and no significant variation in trophic mode distribution. These results suggest that fungal responses to disturbance are highly dependent on the type of disturbance and site conditions.