

Biogeochemistry Cycles: Soil, microbe and human

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The Soil Biogeochemistry Lab investigates the factors that control carbon and nutrient dynamics in desert soils, with a focus on the biotic component, both microbial and invertebrate. We focus on how these patterns apply across ecosystems, including hot deserts (Sonoran Desert), polar desert (Antarctica), and Arctic ecosystems. The overall goal of the research is to improve our mechanistic understanding of soil biogeochemical processes to improve predictions of the impacts of human-induced environmental change. By observing how processes change in response to human activities, we identify the drivers, controls, and pathways that are important in nutrient cycling.