

Special Issue

Unravelling the Diverse Effects of Fire on Soil Processes

Message from the Guest Editor

The topics are related to fire effects on ecosystems through a belowground lens focused on the responses of soils. Such topics may include: the response of decomposer communities, such as the dominant taxa sensitive to fire, what factors determine community recovery, and how changes in microbes influence biogeochemical cycling. Along these lines, the effect of fire on soil organic matter is highly variable and controlled by several processes such as the physicochemical properties of soil minerals and organic matter. Additionally, fire can lead to changes in soil water retention and cycling, as burning shifts pore structure, wax formation, soil compaction, and evapotranspiration. Changes belowground have important implications for aboveground processes, such as nutrient availability affecting the composition of plant strategies and plant productivity. The responses of plants can have cascading effects on animal populations, as palatability and biomass production changes. Consequently, understanding the mechanisms leading to the widespread variability in fire effects on soil properties and processes has broad implications for ecosystem functioning.

Guest Editor

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