



## **The effects of ash on the soil system in fire-prone environments: an overview of the state-of-the-art and research gaps**

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The balance between carbon emission and sequestration within fire-affected ecosystems depends, amongst other processes, on the rates of post-fire vegetation recovery, which in turn is dependent on soil quality. A key parameter in post-fire carbon dynamics is ash, which can (i) contain charred organic matter with an enhanced resilience against breakdown, (ii) affect soil quality through nutrient input, and (iii) provide some protection against accelerated runoff and associated soil erosion. This contribution aims to provide an overview of state-of-the-art in the role of ash in the soil system for fire-prone ecosystems and summarizes the major research gap in this field.