
Wildfire and Water Quality: Processes, Impacts and Challenges
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The applicability of black carbon for tracing soil erosion: fire impacts on landscape dynamics in Cyprus

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Abstract On the Mediterranean island of Cyprus, a series of both natural and anthropogenic factors has led to severe land degradation in the past, which now results in water shortage during the summer months. A combined approach of terrain mapping, unmanned aerial system (UAS) flight missions and chemical characterization of black carbon will permit the classification of hazardous locations in terms of potential fires and erosion processes. The emphasis of the upcoming surveys is concentrated on those catchments that are connected to one of the numerous valley dammed reservoirs. There, the use of black carbon as an erosion indicator will be examined to trace the paths of eroded material inside the watershed and to enable a reconstruction of process dynamics and local fire history.

Key words Mediterranean; post-fire erosion; unmanned aerial system; black carbon; Cyprus