

Submitted Abstract

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Title	The Last Two Thousand Years Ecological History In Valmalenco, Italian Alps. From Medieval Forest Fires And Livestock Foraging To The Current Phase Of Global Warming.
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Abstract

We present an example of trans-disciplinary research focusing on the last two thousand years of historical ecology and climate in Valmalenco (Italian Central Alps) that combines new co-registered microbotanical data, charcoal analyses and organic nutrients obtained from a peat bog natural archive with ad-hoc explored sources shedding light on cultural history of the site. Furthermore, the time framework benefited from geological mapping, glaciological monitoring, plant surveys, and dendrochronological archives published so far.

The aim of the research is to reconstruct the dynamic interaction between natural and cultural processes in the landscape history. Special attention was addressed to the role of soil geo-ecology, climate changes, and the stepping of pastoralism and of forest exploitation in the last millennium.

The Valmalenco natural history is primary driven by the aridity effects caused by extensive outcropping of serpentinite bedrock. This is an edaphic factor, permanent in the whole postglacial history. On the other hand, dynamic factors active in the last two thousand years, are (i) the cultural fire recurrency intervals affecting the forest composition in the Roman and in the Middle Age, (ii) the increase of human impact in the 15th and 16th centuries, and (iii) the effects of the cold culmination in the Little Ice Age. (iv) Finally, by the early 20th century acme, the post-World War II abandonment of traditional land uses and the last thirty years increasing trend in climate.