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Natural and anthropogenic Holocene environmental changes in mountainous areas (Champsaur, southern French Alps) as evidenced in high-resolution pollen, NPP and macrofossil records.

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If palaeoecological studies had shown for a long time that general vegetation dynamics since the last glaciation was driven by climate variability, it is now widely accepted that human impact has been the most important factor effecting vegetation change, at least in Europe, during the last 6000 years. Conversely, human settlements and economic activity throughout the Holocene are often closely related to natural environmental changes induced by climatic variability. In France and Switzerland, there is now a growing body of evidence indicating that the ancient lacustrine cultures sensitively responded to rapid climatic modifications. However, very few works aimed to study the potential impacts of climate on populating dynamics and economic systems of mid and high mountainous environments (>1000 m a.s.l.), which are yet well-known to be particularly sensitive to climate changes.

In order to better understand anthropogenic/natural processes interactions in these mountainous ecosystems, an integrated research program based on a multi-proxy ap-

proach has recently been undertaken in a restricted area covering three neighbouring valleys of the southern French Alps. The fundamental aim of this interdisciplinary project, involving palaeoecology and archaeology, has been to define and explain the waxing and waning of settlement activity in a particular alpine environment.

Palaecological approach (mainly palynology, but also dendrochronology, plant macro-remains, fossil insects, micro-and macro-charcoal analyses, fungal spores and other microfossils) is developed in an attempt of reconstructing palaeoenvironmental evolution throughout the last ten thousand years in a small area at high spatial and temporal resolution, especially by distinguishing human impact from natural trends since prehistoric times. Cores were collected from several lakes and peat bogs situated in different vegetation structures and with respect to an altitudinal gradient in order to provide good examples of different landscape exploitations by mountain populations.

Reconstructed rhythms of landscape evolution and exploitation systems are finally related to the Holocene climate variable, inferred from lake level fluctuations in the Jura Mountains and the evolution of glacier advance in the Alps. The objectives are to detect and analyse possible interrelations between regional climate variability, human-induced changes in vegetation, and reactions of the social and economic systems.