



## **Reconstructing past multiple land use systems: archaeological and anthracological sources from charcoal burning platforms. Case studies from Liguria and Tuscany (Italy) (14th -20th c. A.D.)**

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The ecology of present woodlands or wooded areas is the output of past woodmanship practices and multiple land use systems. Reconstructing the environmental content of rural landscapes, and their historical transformation processes represents the key to understand the driver of current forms of the landscape itself. The environmental resource management practices are the building blocks of the historical processes that underlie the function of current ecosystems. The environmental effects of such woodmanship practices leave specific bio-stratigraphic traces, archaeologically identifiable in the soil and in the present ecology of plant and animal populations.

This contribution aims to reconstruct past multiple land use systems and landscapes using charcoal burning platforms which are the main bio-stratigraphic archive involved in our research. Archaeology and anthracology (also dendro-anthracology) are considered the most apt tools to study past local production activity through the environmental effects on the present site ecology.

Different case-studies and sites are discussed with the aim of documenting local multiple production systems (that means that the site biostratigraphy and the current site ecology may document not only charcoal production, but also e.g. temporary cultivation, wood-pasture etc.) and the environmental heritage they left.

Such type of sites, not officially protected, have been named sites of environmental/archaeological interest in a perspective of enhancement for conservation purposes.

The first case study presents some results of a multidisciplinary research developed for the restoration of a farm house (Case Lovara) and its terraced landscape on the Punta Mesco cape in the Cinque Terre National Park (Liguria-Italy). In addition to other initiatives (e.g. restoration of buildings and recovery of historical crop production) and as a reference for these activities, the study of historical land and environment features of the site was planned by LASA (Laboratory of Archaeology and Environmental History of the University of Genoa - Liguria - Italy) since 2014 and it is still ongoing. A multiproxy approach was developed including archaeological investigations, charcoal and pollen analyses, vegetation surveys, radiocarbon chronology, in association with documentary and cartographic studies in order to reconstruct regressively the local past agro-sylvo-pastoral system and its changes. By applying this methodological approach, we would suggest opportunities for individual landscape restoration and a new approach to sustainable rural development and landscape management policies.

The second case study is focused on Poggio di Montieri (Tuscany - Italy), a mountain relief (1051 m a.s.l.) located in the Colline Metallifere, a well-known historically exploited area for the rich mineral deposits of mixed sulphides of copper, iron, silver, which were needed for coin production since Middle Ages. Here, archaeological and anthracological sources from charcoal burning platforms were contrasted with historical ecology observations (current woodland structure or features) and documentary sources, in order to reconstruct the local management system that involved multiple practices such as grazing, temporary cultivation etc.