

# MÁS ALLA DE LA PERCEPCIÓN: HACIA UNA ECOLOGÍA HISTÓRICA DEL PAISAJE RURAL EN ITALIA

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**PALABRAS CLAVE:** Paisaje rural, ecología histórica, arqueología del medio ambiente.  
**KEY WORDS:** Rural landscape, historical ecology, environmental archaeology.  
**MOTS-CLÉS:** Paysage rural, écologie historique, archéologie environnementale.

## RESUMEN

El Convenio Europeo del Paisaje (CEP) utiliza diferentes definiciones de las que derivan estudios en los que el contenido cultural e histórico de los paisajes se reducen a su «representaciones» o «percepciones» visuales. Este enfoque «perceptivo» del paisaje oscurece, o incluso con frecuencia enmascara bajo una falsa apariencia «natural», los elementos vivos medioambientales y materiales del propio paisaje. Éste es el caso de los paisajes rurales que se consideran, por el contrario, actualmente, producto de una amplia herencia rural europea. Ciertos factores específicos, medioambientales (ecológicos) y culturales (históricos), han sido identificados a partir de una «aproximación histórica» que controla en cada caso esta herencia histórica. Estos factores son los procesos histórico-ambientales que en cada época han configurado una variedad de paisajes agrarios, ganaderos y forestales; paisajes que queremos conservar. El actual enfoque ecológico-histórico enriquece el legado de Emilio Sereni (1961) (sobre los aspectos económicos del paisaje agrario) con nuevos instrumentos para identificar cada paisaje, su estratificación histórica y los proyectos de ordenación adecuados. Este artículo intenta ilustrar todo esto a partir de unos pocos ejemplos, relativos a estudios realizados y en curso en Liguria (Noroeste de Italia). En cada una de las instituciones presentadas que estudian paisajes en escala del lugar correspondiente, vemos cómo interactúan a escala local historia, geografía, arqueología y ecología. En este proceso se pone a prueba una arqueología medioambiental, basada en los métodos de la ecología histórica y enfocada a la reconstrucción de la historia «individual» de los paisajes agro-silvo-ganaderos, de sus recursos ambientales y sus prácticas de gestión.

## SUMMARY

The European Landscape Convention (ELC) uses various definitions in which the cultural and historical contents of the landscapes are reduced to their «representation» or «visual perception». The «perceptive» approach to the landscape obscures, in a false «natural» dimension, the living environmental features of the landscape itself. This is the case with rural landscapes which are, on the contrary, nowadays considered part of a wider European rural heritage. Spe-

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cific environmental (ecological) and cultural (historical) factors have been identified, based on a «historical approach», to manage such a heritage. These factors are the historical-environmental processes that over time have shaped a variety of agrarian, pastoral and forestry landscapes, landscapes that we would like to be preserved. Current historical ecology approach enriches Emilio Sereni's legacy on the economic side of agrarian landscape with novel tools for identifying single landscapes, their historical stratification and for management projects. This paper intends to illustrate few examples concerning studies already carried out and still in progress in Liguria (NW Italy). In such researches of local history, geography, archaeology and ecology have interacted, studying landscapes at the scale of the single site. In the process, an environmental archaeology approach has been tested, based on the methods of the historical ecology and devoted to the reconstruction of the «individual» history of agro-sylvi-pastoral landscapes, of their environmental resources and management practices.

## RÉSUMÉ

La Convention Européenne du Paysage (CEP) utilise diverses définitions provenant d'études dans lequel le contenu culturel et historique des paysages est réduit à des «représentations» ou «perceptions visuels». Ce type d'approche - en simplifiant «perceptive» - nuances, ou plus souvent masque sous un faux «naturel», la dimension, environnementale matérielle et les éléments géographiques vivants du paysage lui-même, qui sont bien détenteurs de contenu historique, même si cette dimension historique de l'environnement n'est pas toujours facilement reconnaissable en Italie par le planificateur. C'est le cas des paysages ruraux, qui peuvent se situer aujourd'hui dans le cadre plus large du patrimoine rural européen. Cela devait pas être sans conséquence pour la gestion des paysages qui sont identifiables par le biais d'une «approche historique», uniformisé, a leurs facteurs écologiques et culturels. A leur tour cet approche dégage les processus historique-environnementaux qui, dans le cours du temps ont façonné la variété de paysages agricoles, forestiers et pastoraux, qui nous tient à pérenniser. A partir de la leçon d' Emilio Sereni (1961) concernant les processus économiques-historiques comme facteurs de transformation du paysage agraire de l'Italie, de nos jours, l'approche de «écologie historique» ajoute de nouveaux outils pour l'identification de paysages «individuels», de leur stratification historique et la formulation de projets de gestion. Notre contribution a pour objectif de présenter quelques exemples concernant les études réalisées et en cours en Ligurie (NW Italie), où les recherches d'histoire locale, de géographie, l'archéologie et l'écologie ont mis au point des analyses du paysage à l'échelle du site. Une approche qui fonde une archéologie des ressources environnementales, consacrée à la reconstruction de l'histoire «individuelle» (ou bien topographique) des paysages agro-sylvo-pastoraux, de leurs ressources environnementales et des pratiques de gestion, a été testé.

## 1. INTRODUCTION<sup>1</sup>

It is certainly not our intention to make a general framework, nor to attempt a typology of Italian landscapes even if only concerning the rural ones: this has already been done in a former season of geographical and historical studies to which belong

1. This paper is an updated English version of a chapter already published in the book AAVV, *Riconquistare il paesaggio*, Roma, 2008 págs. 159-175, in the frame of the results dissemination of the project PAHF.

ged also the leading figure of Emilio Sereni. To update those results would require an entire volume, and we are not certain, however, that a typological approach would be useful for planning the rural landscapes of the European Union which is at present attentive to a new local dimension of this heritage. Moreover, we know that this early historical studies have not protected, in Italy, in the research field on the geographical landscape, against the lacking of concreteness produced in the last twenty years of development by the «perceptive approach». An example come out after the Italian text of the European Landscape Convention (ELC) signed in Florence (Italy, 2000), has adopted various definitions coming from studies in which the cultural and historical contents of landscapes are contoured, circumscribed to their «representations» or «visual perceptions». The «perception approach» to the landscape shades, often in a false «natural» dimension, the living environmental features of the landscape itself, which are holders of precisely located historical contents, even though not always easily recognizable by the planner. We consider more useful to propose a methodology called «environmental-historical approach»: it is capable of detecting the components shaping in the past (and possibly managing in the present) the living part of rural landscapes and their dynamic environment, so that geographical landscapes can be outlined in their complexity, stratification and then, at the time of planning, also correctly interpreted, valued and managed.

The scientific focus of the «historical approach» is the identification of the historical-environmental processes at work, by studying the ecology of individual sites. The historical ecology has been consolidated during the 1970s as part of studies for environmental conservation, especially in Great Britain (PETERKEN, 1975; RACKHAM, 1976, 1980, 1982, 1986) and in Northern Europe. It is supported by a tradition of historical research - the «local» (or topographical) history - which was unrelated to geographical and historical studies in Italy until, recently, the re-working theory of a «new local history» has emerged.<sup>2</sup> At present, the topographical history offers an analytical approach, opens the research on historical and geographical landscapes to new sources and methods, reveals a historical meaning also for the material contents of places and their context (TORRE, 2002, 2008; CEVASCO and TIGRINO, 2008). The classic work of Emilio Sereni was revised, through the optic of this «new local history»; to him is due, during the 1950s, the foundation in Italy of a historiography of the rural landscape, which was only partly delivered in his «*Storia del paesaggio agrario italiano*» (SERENI, 1961). The scientific legacy of Sereni has been dispersed in the later studies of agriculture history or economic history not interested in the spatial dimension of agricultural practices and in their geographical-environmental shape, that is the agrarian landscape (MORENO and RAGGIO, 1999). Likewise, a rural history was not properly developed in Italy – an useful tool for the understanding

2. In Italy a «new local history» emerged as a result of scientific debate during the 1980s on the microhistory, never closed within the journal «*Quaderni Storici*» (Raggio, 2004). A contribution was given by the development concerning research in woodland history and archaeology (see Moreno *et al.*, 1982; Moreno, 1990).

of how agricultural landscapes did work - some exceptions made for the Tuscany, the Marches, Piedmont, Emilia Romagna and Liguria.

## 2. THE HISTORICAL ECOLOGY AT THE ROOTS OF THE PRESENT RURAL LANDSCAPES

According to the definition of the ELC, the landscape consists of «... *a certain part of territory, as perceived by the people ...*». Nevertheless, it is obvious that behind the perceived forms, that is the current visual characteristics of each area, there are (or can be detected) a number of environmental and social factors which made it the landscape what it is. Among them, there is a whole range of activities, from oldest to most recent, from general to specific, concerning the control and the use of local environmental resources.

Faced with a present landscape, these are almost obvious considerations, since they are precisely the driving forces of all the cultural landscapes which have been imprinted by such activities in their present form or morphological changes (e.g. terraces, earthworks, deviations of rivers, etc.), flora and fauna (introduction of alien species, loss of ancient species, etc.), vegetation (forests, grasslands and secondary scrubland, trees and herbaceous crops, etc.), infrastructures (roads, bridges, railways, etc.) and urbanization (residential buildings, factories, ports, airports, etc.). For a careless or not informed observer, a rural landscape may be less easily decipherable: meadows, heaths, secondary woods or even lakes and marshes can be misunderstood (and they are regularly) and exchanged for natural areas, that is landscapes whose ecology depends exclusively on the climate or territorial and biological features. When there are no clear signs of human intervention (of the «socialization» of nature), even the specialist himself (e.g. ecologist, botanist, forester, etc.) may be misled, and in fact this has happened and happens often.

Leaving for elsewhere broader discussions on what is natural and cultural heritage, we want to briefly explain here the criteria that can be taken into consideration, in order to highlight what were the factors, the forces, the complex dynamics which generated the current rural landscapes. Today, rural landscapes are brought to the general interest for their patrimonial value which has stimulated, *inter alia*, an international convention (the ELC) on a continental scale. Once again, however, it should be stressed that the «landscape» seems not to be seen as the content, the substance of the territorial reality, but only as its appearance, its form, the visible synthesis of an ecosystem working in a historical – social context.

Therefore, beyond ratings, categories, characterizations of these «effects», («perceptions» or «forms» of the rural landscape) we think it is more useful and interesting to define what are the performing «causes»: that is, after all, the approach making it possible to find a common ground for disciplines that many people still consider far between.

For instance, they who study the vegetation of a region, follow an «effects approach», trying to find relationships between existing structures and living communities

(animals, plants) and environmental factors that determined them. A similar goal is pursued by the historical-environmental approach, with the difference that in this case in the foreground there are economic and social factors that govern human communities and relationships between these and environment resources, rather than the environmental «natural» ones. It is clear that one and the other acted as a crucial cause and it is therefore also clear that neglecting that for the benefit of other interpretations can lead away from reality. Moreover, after an incorrect interpretation of the landscape, it is fatal to adopt forecasting and management wrong criteria, which can lead to effects not difficult to imagine in present Italian landscapes. Today, for instance, to redefine the criteria for land management in general (landscaping plans) and for protected areas in particular (e.g. Natura 2000 sites), it is realistically recognized that the strictly protectionist standards adopted in the 1970s have failed both in terms of social consensus (hostility from residents) and relative to preservation and enhancement of those assets that they aimed to protect (loss of natural values and of biodiversity). This happened because the naturalistic paradigm attributed solely to natural factors those environmental values which, on the contrary, have proved to be largely related to management practices of environmental resources and to their history (CEVASCO, 2007).

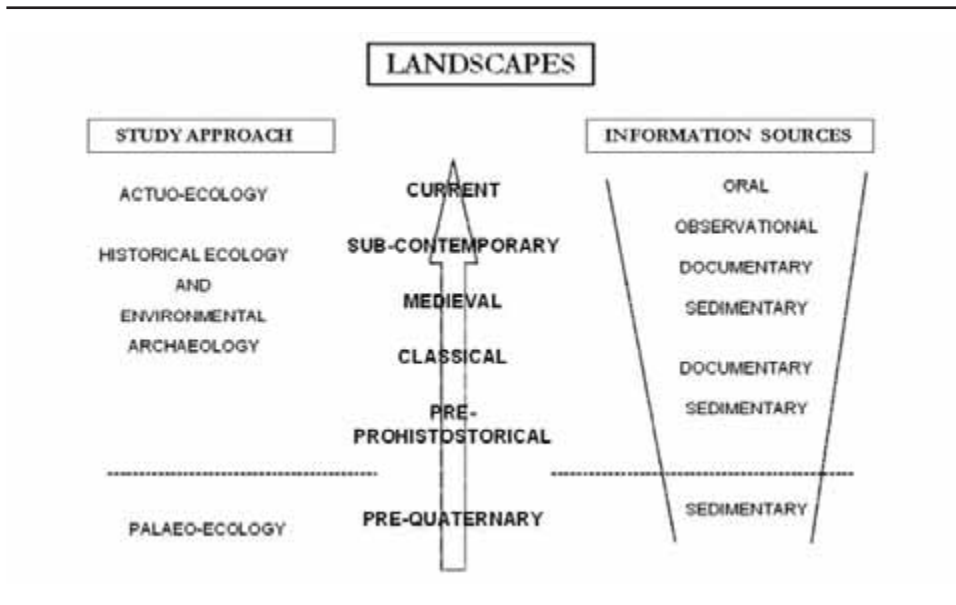
The most obvious effect of all this is the rapid change in agricultural landscapes which, due in a first moment to socio-economic causes (abandonment of rural areas) and in following periods to management policies («natural» protected areas of various kinds), became lacking the agro-forestry-pastoral practices that had shaped and maintained landscapes for generations as complex environmental organisations. It is strange, if not disturbing, that this crucial aspect had not been taken into account by those who are the professionals of ecosystems or in the ELC recommendations.

Perhaps even more surprising is that in reality there are no contradictions between the different approaches and that, on the contrary, collaboration between disciplines traditionally considered «humanistic» (e.g. history, archaeology) and «scientific» (e.g. ecology, environment sciences) is absolutely feasible and desirable. In addition, this does not mean the renunciation of consolidated study methods of each, since they are perfectly adequate to the objectives: it is simply necessary to apply them with a different mentality and availability, in a framework that is truly ecosystem-level and not limited only to few components.

Moreover, a spatial and temporal «micro-analytical» scale is needed, to reveal those historical relationships between societies and environmental resources that are often shaded, obscured by the countryside shapes (or forms) - but even by the perception that the urban society has acquired of them.

These are the conditions that led to the emergence in the early 1990s and later headed the activities of the Laboratory of Environmental Archaeology and History (L.A.S.A.) at the University of Genoa. Rather than an easily identifiable institution, it is a group of researchers (historians, geographers, naturalists, archaeologists, geologists) who, at the beginning of a widely interdisciplinary new degree course (Conservation of Cultural Heritage, since 1993-94), have held many educational and scientific activities in this direction. It is not a coincidence that Liguria, among few Italian regions, has experienced a geographical-historical study of its agrarian landscapes in continuity

Figure 1. *Scheme of the relationships within cultural landscapes, chronology, study approaches and main available sources*



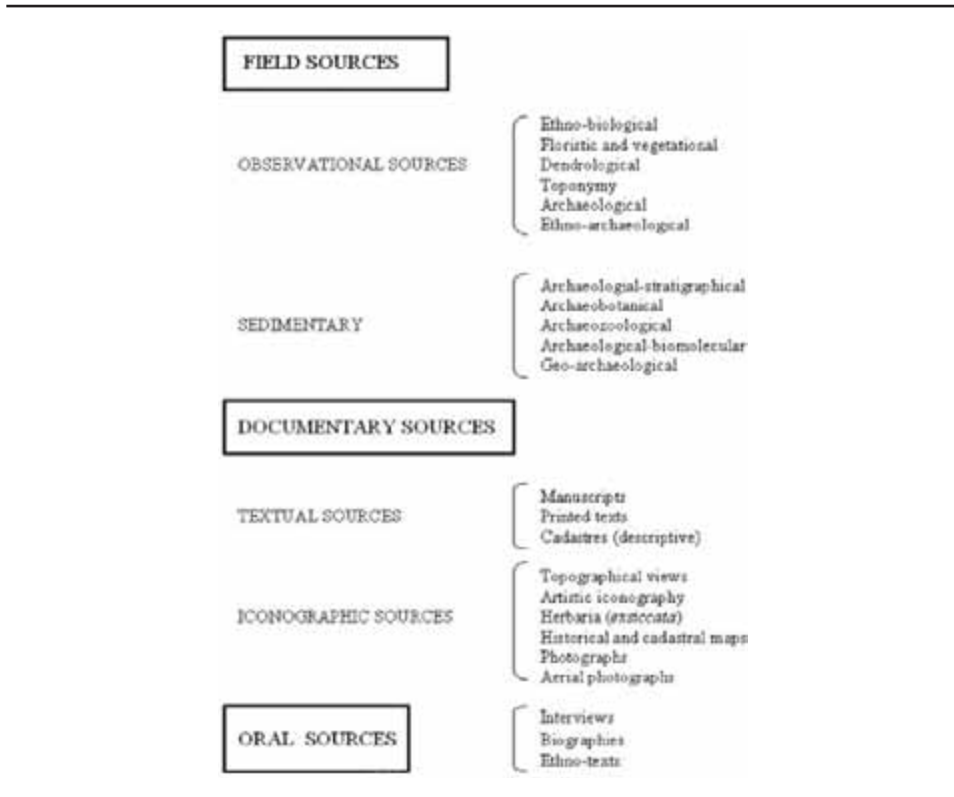
with the season of studies by Emilio Sereni (see QUAINI, 1973). Today the LASA is also supporting the activities of a specific doctoral school on «Geography and history for the study and valorisation of the historical-environmental heritage». Some of the results achieved are presented in this paper, as examples of methods and sources for the identification of rural landscapes.

In Fig. 1 are summarized schematically the relationships between chronological dimension of processes that have shaped the rural landscape and relevant approaches to study, flanked by the main categories of available sources that are listed in more detail in Fig. 2.

A key issue concerns the scale of study: as mentioned above, historical ecology proceeds with a regressive approach, from the observation of present environmental features to those that have preceded - and thus also determined - them. Therefore, it has to hand a wide range of documents, ranging from testimonies of the present producers (oral sources) to field work (observational sources), to accounts (archival sources, texts), to those coming from biological and mineral evidence preserved in sediments and soils (sedimentary sources).

After choosing a study area, taking a backward through time to discover ancient landscapes, the sources of information become more and more rare: first decrease those which are not deductible from living organisms (e.g. present flora and fauna, individuals and social groups controlling production and environmental resources, etc.) (Fig. 1). Secondly, diminish also those represented by various written and depicted

Figure 2. Details of the types of available sources for the study of the landscapes, according to the criteria of historical ecology and of environmental archaeology (after Moreno et al., 2005, modif.)



sources (e.g. texts, images, works of art, historical maps, etc.). Finally, in prehistoric periods mostly remain only sedimentary sources, real archives of the environmental history of cultural landscapes. On the other hand, it no longer makes sense to talk about rural areas where there are not urban spaces as counterparts; further back, along a scale of tens of thousands of years, the prospects and methods of palaeoecology are to be adopted.

Historical ecology is a search path open to those ecologists, geographers and historians who practice field observations, crossing the information obtained from different sources: it is therefore able to produce richer environmental scenarios, closer to the reality because a larger number of factors that have led to rural landscapes and their dynamics can be taken into account. The environmental archaeology has the same goals, as adopting an ecosystem approach to the study of past and reconstructs techniques but above all the practices actually used in a site (or in an area) for the exploitation (activation) of environmental resources. However, objectively it has a lower range of

sources. The palaeo-ecology, which deals mainly of time before the emergence of complex human societies, must do without well established archaeological sources, since only those we call sedimentary sources (in this case, the fossils) are available; nevertheless, it does not renounce the reconstruction of landscapes.

The study of the temporal aspect of social and environmental processes that concern us is closely linked to that of their geographical spaces: recent landscapes can be outlined with greater detail and their study should be addressed to the topographic scale of each site, as it is the rule in the conventional archaeological research involved in site study of the settlement history. The local scale is also the one adopted for the study of links between societies and resources (historical-geographical microanalysis) in evaluating and deciphering of archival sources, texts and maps: a method that historians of the «new local history» have precisely agreed to call «topographical» (TORRE, 2008).

The reconstruction of rural landscapes in sharp discontinuity with the forms of the present ones, or which are very ancient, is less spatially defined, both because of the wider geographic distribution of information (sites of fossils discovery) and the impoverishment of the sources, and also the difficulty of applying an actualistic palaeo-ecology criterion.

### 3. SOME SITES OF INTEREST IN THE HISTORICAL APPROACH TO THE RURAL LANDSCAPES OF LIGURIA

#### 3.1. *Evidence of temporary early-medieval agriculture (7<sup>th</sup>-8<sup>th</sup> C. A.D.) in the landscape of the common lands of the high Trebbia Valley (Genova, N-Italy)*

The contemporary rural landscapes always contain elements, traces and effects derived from previous cultural landscapes. Practice and local knowledge in use of resources that go back to previous generations until thousands of years: well-known aspects, especially in the Italian plains, are the geometries dating back to the Roman *centuriatio*, and medieval rural settlements scattered or concentrated around centres of power or defensive. Much less known are the effects of more or less local agricultural practices, both because confined to vegetation features or soils, and because a «historical observation» of these phenomena requires a scale - that we have already called the local or topographic history - that hardly finds space in an age of returning to the historiography of the great ideological and geopolitical issues to which an environmental history corresponds that takes a global scale. It is necessary to underline that taking a local scale of observation does not mean that the phenomenon - i.e. the landscape reconstruction - has only a local scale and the results could not be generalized.

For example, the practice of so-called «slash and burn» is probably one of the oldest agro-forestry activities, in use at least since the Neolithic Age; it still affects, in different forms, wide areas in West Africa where it produced extensions of savannahs landscapes, or as in the Amazon rainforest, where «natural» late-glacial fires were



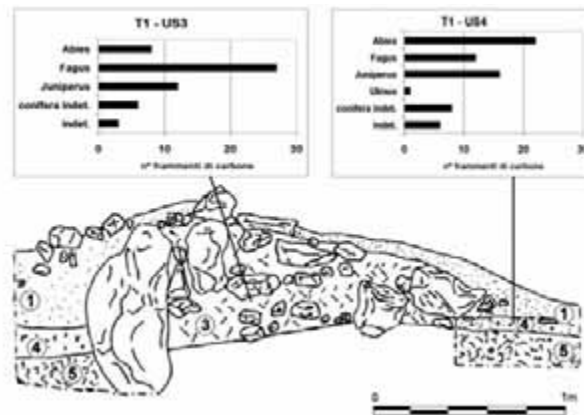
domesticated into a number of fire practices which consist in clearing and burning down trees and branches not used for other purposes to obtain open and relatively fertile ground at least for a few years, allowing the sowing of suitable species, mostly for human and animals food. With the local name of *ronco*, *runko* (attested by dozens of current place names) a similar practice of controlled fire in wooded areas was used also in NW-Appennines until the end of the nineteenth century and, with different local names such as SERENI (1981) reminds us, throughout the Appennines in medieval and post-medieval ages (BERTOLOTTI and CEVASCO, 2000; CEVASCO, 2007, MORENO *et al.* 1998). The practice of the *ronco* is proved to be - at least at the beginning of 19<sup>th</sup> C - at the basis of the fire regime determining the ecology of many different types of « landscapes of trees out of forest ». The legal dismissing of the fire practices long 19<sup>th</sup> and 20<sup>th</sup> C - with the adoption of forestry laws regime- cause the disappearing of many of TOF landscapes in the Liguria Appennines.

In Val Trebbia (Genoa), near the village of Casanova di Rovegno, about 1200 meters a.s.l., environmental archaeology research have identified traces of this type of temporary cultivation, practice dating to the early Middle Ages (7th-8th Century AD) (GUIDO *et al.* 2003, MORENO *et al.*, 2005). The site is inside the common land (*comunaglie*) of the inhabitants of the parish of Casanova di Rovegno. A series of dry-stones cairns a few decimetres in height - a feature which probably generated the vernacular name of the place, «Pian delle Groppere» that is «the cairns Plain»<sup>3</sup> - are now half-buried by soil and low-shrubs vegetation in a clearing with partially eroded soil. The stratigraphic excavation of some piles revealed their role as clearing stones piles and the observation of exposed sections of soil have led to the reconstruction of a phase of temporary cultivation, from cutting the mountain fir and beech forest (charcoal remains and radiocarbon dating is provided by dominant forest species), until the abandonment of cultivation (post-cultivation vegetation dynamics and re-growing of spontaneous heathland vegetation whose pollen was found in the recent soil (Fig. 3 and 4).

The analysis of soil profiles has revealed a truncated palaeo-soil (remains of a soil generated by a previous kind of vegetation) topped by a newer produced by the current heathland; also these more «natural» soils, which are only contiguous to the artefact (stone piles), contain small charcoal fragments and pollen that let follow the disappearance of the former Fir-dominated forest and its replacement with Beech wood, which is accompanied by cultivated species (Chestnut). A few hundred meters from the site, another profile of soil recorded Beech charcoal dated around 1200 AD; Silver Fir is absent, in agreement with its disappearance from the Ligurian Appennines during the Middle Ages.

3. It may be of interest to note that linguistic studies have established that the etymology of the vernacular word « groppo/groppe » that in the Ligurian local geographical terminology is referred to hill form - as derived from Germ. *\*kruppa* meaning «a sub-spherical accumulation» (Petracco Sicardi – Caprini 1981). Possibly a linguistic proxy evidence that the cleared landscape of Pian delle Groppere site was in place during the 7<sup>th</sup> c. Lombard settlement of the area.

Fig. 3. Site of *Pian delle Groppere* (1200 m, *Casanova di Rovegno, Genova*). Archaeological section of a cairn. Anthracological diagrams concerning two different stratigraphic units (US 4, before the medieval temporary farming, and US 3, more recent) reveal the environmental changes produced by the slash and burn practice. The silver fir (*Abies*), which had dominated the regional landscape until the Roman Age, disappears just in the Middle Ages (after Guido et al. 2003)

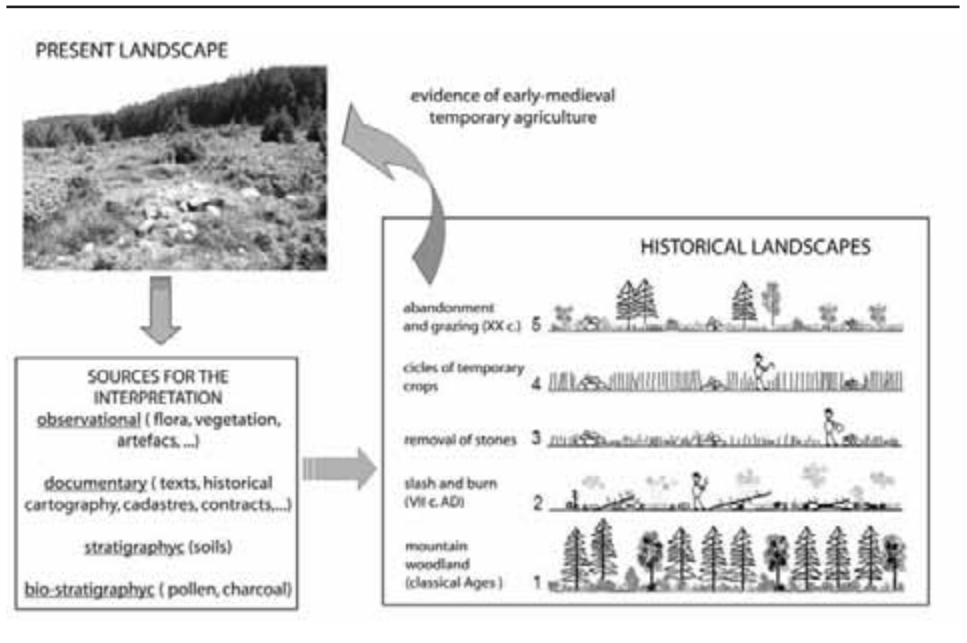


This information which derived from sedimentary sources, from plant remains embedded in the soil and preserved for several centuries, confirms, localizes and contextualizes in space and time practices of which existed only documentary evidence previously. It is noteworthy to record today the reluctance of elder generation of users of these common lands («comunaglie») to admit and describe the use of fire to maintain the pasture: none of the living commoners remember the temporary cultivation at *Pian delle Groppere* but there is memory of *ronchi* in sites of the adjacent *Val d' Aveto* slopes (CEVASCO, 2007). The study of this site of historical and environmental relevance, a true «field archive», opens a window on the medieval landscape of this Apennine valley, by recording the changes brought about by the use of environmental resources. Their evidence, as in this case, came up to us, including visible traces (clearance stones cairns) - therefore truly archaeological - which need to be interpreted.

### 3.2. Woodland landscape changes in high *Valle Scrivia* (GE) between 17<sup>th</sup> – 20<sup>th</sup> C. recorded by the remains of charcoal kilns

As in to a great extent in the world, even in Italy the countryside, although varying according with different bioclimatic belts, is by nature characterized by woodland vegetation, from sea level up to about 2000 meters. Therefore, woodland history is largely the history of Italian landscapes and of changes which were caused by different practices of exploitation of forest resources.

Fig. 3. Site of Pian delle Groppere (1200 m, Casanova di Rovegno, Genova). Archaeological section of a cairn. Anthracological diagrams concerning two different stratigraphic units (US 4, before the medieval temporary farming, and US 3, more recent) reveal the environmental changes produced by the slash and burn practice. The silver fir (*Abies*), which had dominated the regional landscape until the Roman Age, disappears just in the Middle Ages (after Guido et al. 2003).





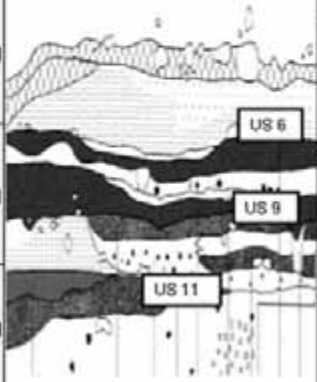



The wood is at the base of all production from prehistory to the present day but also the charcoal that can be drawn from the forest without any special technology and has been used for centuries both as domestic fuel, and as a basic energy for industry (in this mountains, already tied to the iron kilns activity yet in the 13-14<sup>th</sup> C., up to the opening of the industrial phase to the second half of the nineteenth century).

The charcoal is also one of the plant remains of archaeobotanical interest which are best suited to trace the history of the landscape: actually, it allows the identification of trees, it remains virtually unchanged for thousands of years and it can be found in many different environments.

Since billions of pieces of charcoal were produced and dispersed in time, these are an excellent source of information on the past environments, as evidenced by several anthracologic researches developed over more than a century; they rise today a renewed interest because of palaeo-environmental information, not just technological, that charcoal can provide in connection with its contexts.

If we limit our attention to the charcoal produced in the woods, we see that an environmental archaeology approach to the remains of charcoal burning sites returns

Fig. 5. Site of Case Fabio near Vobbia, upper Scrivia Valley (Genova). Analysis of charcoal remains which were preserved in carbonisation sites, daing back to the last three centuries allow to delineate the changes occurred in the local woodland landscape: from chestnut-growing to a polyphytic coppice

SITE	SOIL SECTION	LAYER	ANTHRACOLOGICAL SPECTRUM	FOREST LANDSCAPE
recent charcoal (XX c.)		surface		current aged coppice
historical charcoal UT1 (XVIII c.)		stratigraphic units US 6		coppice with at least 11 species
historical charcoal UT1 (XVII c.)		stratigraphic units US 9		coppice with at least 14 species
historical charcoal UT1 (XVII c.)		stratigraphic units US 11		chestnut grove

valuable information on the surroundings landscape, as well as with regard to knowledge and practices of the producers.

For the most part, the tracks of hundreds of charcoal burning sites are found in the woods of the Apennines go back to no more than 70-60 years ago, corresponding to the energy crisis caused by World War II. In the Mediterranean mountain have been studied much more ancient sites (protohistoric, medieval), mainly from the French school of anthracology, which is linked to studies of environmental geography (e.g. BONHOTE *et al.*, 1996; FABRE, 1996; DAVASSE, 1998; VERNET, 1997), especially in the Pyrenees.

On the Ligurian Apennines, in the city of Genoa hinterland, sites of historical charcoal production were the first ground of the LASA anthracological studies (MONTANARI *et al.*, 2000, LEOPARDI, 2002, MONTANARI *et al.*, 2002). In particular, a section of soil near the village of Vobbia (high Valle Scrivia, Genoa) analyzed archaeologically has revealed traces of several overlapped kilns, over three centuries of activity, from the mid-16<sup>th</sup> AD. The anthracological analysis of the various stages of production made it possible to follow the changes in the woodland composition of the surroundings in this long period, allowing also experimental linking to the most recent evidence of charcoal

burning sites and to the composition of the present forest stands (Fig. 5). The problems of interpretation which arose during this study have generated another type of test, which consisted in the experimental re-construction of a «traditional» charcoal kiln, expressly made up by a local old charcoal-man; each single stage of production has been studied, from cutting the woodland until to the charcoal residue of the kiln (MONTANARI *et al.*, 2000, 2002; LEONARDI, 2003; SCIPIONI, 2004; MORENO *et al.*, 2005). All research has been documented by a professional video produced by LASA in collaboration with the University of Toulouse, which is available on video tape in Italian and French<sup>4</sup>.

### 3.3. *The role of transhumance (17th-20th C.) in the Cinque Terre agro- ecosystem (La Spezia, Eastern Liguria)*

The *Parco Nazionale delle Cinque Terre* (La Spezia) is a National natural park established a few years ago as a development of the previous Regional Park, with the aim of preserving and promoting a quite characteristic landscape, almost completely shaped by its historical interpretation in terms of use. Actually, it is a well known example of «built landscape», in the sense that the relief itself is shaped by hundreds of miles of dry-stone walls that underpin continuous terraces, often rhetorically compared to the Great Wall of China, in terms of linear development. It is, therefore, a clearly artificial environment, not only concerning cultivations, but also with respect to the soil itself. However, what is not immediately obvious, if not through the observation of post-cultivation vegetation dynamics, is the fact that the current landscape is no longer connected with the social-economic system which produced it, since the latter has disappeared; better, it is quite evident that a form of control / balance no longer exists, but is not so clearly understood by planners.

At present, the two monocultures of vineyards and (in a less important surface) olive-rows widely prevail, while other cultivations, economically important until the early decades of the last century (citrus groves, orchards, chestnut groves, gardens), completely disappeared or survive only in small plots of negligible extension and value. Another type of land use also disappeared, which is a kind of plant resource, not included anymore within agricultural crops or resources, even if it also requires cultural cares: it is the scattered areas devoted to pasture that since late 19<sup>th</sup> C. were a key element of the local economy.

Nevertheless, what has disappeared as cultural landscape has not left empty: the areas abandoned by crops and pastures were quickly occupied by various aspects of spontaneous vegetation (especially Mediterranean scrub and woodland with maritime pine). Moreover, to some extent, new types of specialized crops (herbs, saffron, basil, peppers, lavender...) have been introduced through the National Park policy in an attempt to improve and regenerate the farming on terraces.

4. *Carbonai dell'Antola* (videotape) Parco Regionale Naturale dell'Antola - Université de Toulouse le Mirail (cf. Métaillé and Poggi 1999).

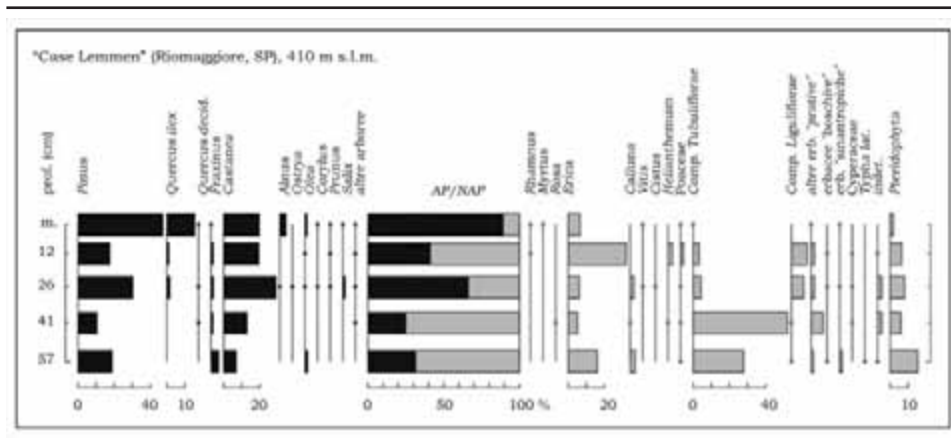
Under a pilot project sponsored by the Superintendence for Architectural Heritage and Landscape of Liguria (the local administration of the Italian Ministry of Cultural Heritage), and aimed to the environmental recovery of the *Parco Nazionale delle Cinque Terre*, essays on some sites of historical and environmental interest near Riomaggiore were performed by the L.A.S.A. The study has shown that different historical sources can be used and matched (MORENO *et al.*, 2005) to identify practices of production and activation of plant resources, reconstructing the past multiple purpose system that underpinned cultural landscapes and their dynamics over the past four centuries (AA. VV. 2003, MAGGI *et al.*, 2006).

A classic theme of the geography of rural landscapes, i.e. that of the rural dwellings and of their annexes, has been studied in the same area by a different team of the Faculty of Architecture which produced an inventory of the building heritage of the park. However, the possibility have failed of conducting parallel environmental-archaeological investigations on rural buildings on the terraces and on systems of water management that proved to be of interest in Liguria in the study of historical transformation of the rural landscape (CEVASCO *et al.*, 2008)

In short, the studies of historical ecology consisted of:

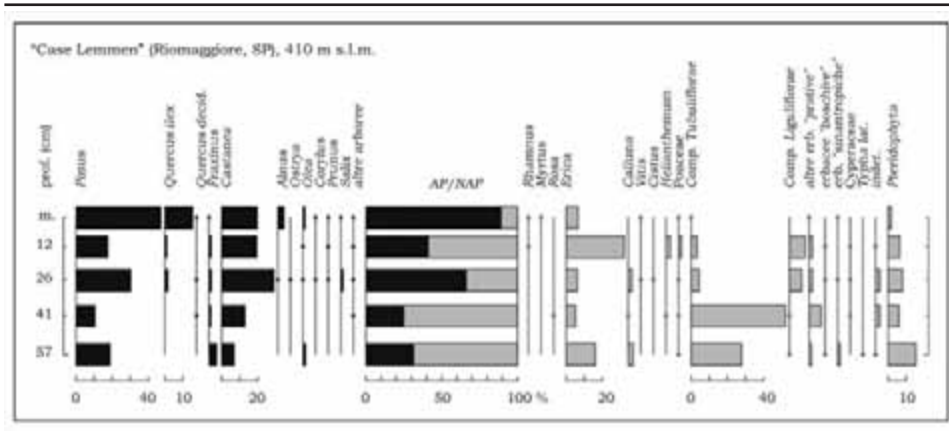
- Evaluation and analysis of documentary sources (historical and recent mapping, cadastral maps, texts, iconography, place names).

Fig. 6. *Cinque Terre (La Spezia) - site of Lemmen. Pollen diagram obtained by pollen analysis of soil samples from a terrace near Case Lemmen, 410 m (Riomaggiore - La Spezia)*



Even in a completely artificial environment like that, the pollen record allows following historical dynamics of the plant covering; they are linked to the abandonment of traditional cultural practices (e.g. diffusion of pine woods, ageing of the chestnut coppice and consequent disappearing of light demanding species, etc.). Comparison with the «pollen image» of the present vegetation is allowed by surface samples (pollen polsters, m) (after Moreno *et al.* 2005).

Fig. 7. *Cinque Terre – Site of Mount Verrugoli (685 m, La Spezia). Pollen diagram from a soil profile in a grassland overhanging the terraces of Riomaggiore. From the most ancient layers to the most recent ones a clear change in the cultural landscape can be seen: a rarefaction of grassland species occurred, while a post-cultural spreading of the Mediterranean maquis and of young woodland is apparent. (after Montanari et al., 2006)*

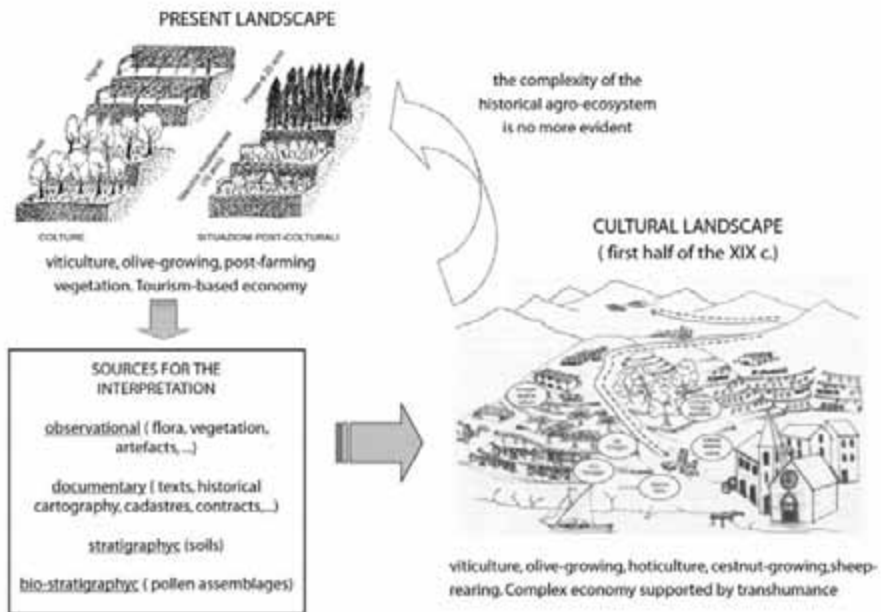


Again, the archaeobotanical information taken alone could be of modest utility, while combined with other historical sources has provided an environmental framework determined by a system integrating farming and winemaking, in which transhumance had to play a key role in terms of transfer of fertility (manure), sheep products (milk, dairy products, meat, wool), use of winter pastures (open grassland, olive groves and between crops) (Fig. 8).

- Production and analysis of observational sources (flora, vegetation, dendrology).
- Production and analysis of sedimentary sources (pollen stratigraphy in soils).

Starting from the current environmental situation (regressive approach), the results of these different sources have compared, regarding the plants cover, cultural destinations and the type of local vines economy, obtaining the image of a system, still active until the first half of the nineteenth century, far more complex than the present or even than the sub- contemporary (the first half of the twentieth century) system. The disappearing of an earlier landscape was documented, due to the abandonment of a fundamental component of the local economy, i.e. the transhumance, that is the grazing and staying in the winter of large flocks (thousands of heads), mainly sheeps and goats both in the space of terraced vineyard and littoral wasteland. This was possible because of the relatively widespread grassland, maintained especially along the ridges and margins of crops, of grazing in the olive and chestnut groves and also thanks to the exploitation of leaves fodder (pollarded and shredded trees, vine and figs leaves). Despite the proximity of the sea, also mesophile species like the chestnut were grown both for wood and fruits and because they did not subtract space to grazing.

Fig. 8. *Cinque Terre*. Reconstruction of the rural landscape near Riomaggiore in the 18<sup>th</sup>-19<sup>th</sup> C., on the basis of textual, cartographic, toponymy and bio-stratigraphic sources. The presence of grassland used for sheep-rearing gives a more complex image of the local agrarian system, compared with the present one. The transhumance would have left evidence even in the surrounding toponyms (*Vernazza* from the latin *hibernatia*, means coastal winter pastures and *Zignago* from *juniacula*, upland summer pastures). The terraces-free coastal ridges would have acted as «grassland corridors» (highlighted by soil pollen analysis) for the winter pasture of thousands of sheep and goats (after Moreno et al. 2005)



The comparison of historical maps (preparation surveys for the *Gran Carta degli Stati Sardi di Terraferma* dated around 1820) and more recent topographic maps (up to the current regional thematic maps) have produced a dynamic image of the plant cover in the past two centuries. This was a specialist reading of these documents, in order to get information about the plant cover. In itself, there are not absolute methodological innovations, such as the case of the archaeobotanical analysis mentioned below; the innovation seems to be in the approach of the historical ecology, carrying out checks to a topographic scale, trying to contextualize the information enclosed in a mark or a symbol of a historical map and analyzing them at the light of filed and documentary data describing, explicitly or implicitly, practices using environmental resources (e.g. types and techniques for cultivation, purposes of drawing up maps until the need to know the biography of cartographers who worked on the ground, in order to give, for instance, a precise sense to «waste» that you see through reading their annotations).



In parallel, pollen analysis of the content of the soil of a terrace at the site of Case Lemmen and of the soil from a grassland (prairie) site invaded by shrubs (M. Verrugoli) have helped to document the final stages of the cultivation and post-cultivation dynamics (Fig. 6 and 7; AA. VV. 2003, MAGGI *et al.*, 2006).

Whether one likes it or not, these are the processes underlying the current cultural landscape of the Cinque Terre, a background very different from the generic «historical or traditional» identity claimed today to a landscape of vine-wine production that lost its commercial outlets for over three generations and presently knows an incessant abandonment. It is a simplification of the past derived from the urban vision of a tourist-residential economy that dominates the local socio-economic tissue and featuring (or finally will characterize) the entire modern landscape.

#### 4. CONCLUSION: ABOUT THE ELC RECOMMENDATIONS

The European Landscape Convention (ELC), though involving some «perception» risk, proposes once again a holistic approach which was possibly not so needed, even if it actually represents a common base within the agreeing countries (partners) towards shared and homogeneous aims and rules. The goal is to save, restore and exploit a good which is considered important for all European citizens and for humanity as a whole, according to the UNESCO directions which since 1998 included the «cultural landscapes» into its list of monumental sites.

Concerning rural landscapes, this document could open a new political phase and dimensions of a process of «patrimonialisation» which at present directly concerns landscapes as well as the living material heritage (and also the immaterial one) of vanishing European agricultures, geographically and environmentally so extensive. The process has started up: now a critic reflection is needed upon the tools for the individuation, knowledge and protection which are currently available in Italy in order that the historical heritage of agrarian, forestry and pastoral landscapes still surviving could become, in the next decades, cultural and environmental heritage in common within European citizens (KRZYWINSKI *et al.*, in press)<sup>5</sup>.

On the contrary, as we have noted in the ELC text, the definitions of this cultural heritage /concept seem to be derived from a fashionable cultural geography approach which cannot individuate the historical and cultural contents of the landscape itself without reference to a pure «representation» or as «visual perception»: also in the ELC recommendations, with respect to the landscape (as geographic object) its «mental image» prevails, despite the fact that sometimes it occurs for the cultural dimension and only rarely for the historical one.

5. This was generally the aim of the project *European Cultural Landscapes -Fields of Demetra* and the (DVD video) to both the LASA have collaborated in 2007 (cf. the web site: <http://ecl.cultland.org/>). On rural landscape patrimonialisation in Italy cf. Cevasco, in press.

Not accidentally, definitions of rural landscape and/or cultural landscape are not found. As direct consequence, also the recent Italian Legislation adopted on Cultural Heritage i.e. the *Codice dei Beni Culturali e del Paesaggio* (2004), dedicated for the entire part III to «*Beni paesaggistici*» and that previews norms for the location of the assets, does not contain explicit references nor to the «cultural landscapes» or to the «rural heritage». One can not find any reference neither limitedly to someone of the composite cultural, historical and environmental values of the rural heritage as in the European Union countries is now currently accepted (e.g. local genetic resources, naturalistic and agronomic local knowledge, etc.). Instead, we find in the *Codice* an amazing norm (art.149), where the exercise of the agri-silvo-pastoral activity is meant not too much differently from an admitted theatrical play, so long as it doesn't disturb the immutable scene in which it is set, and not at all as one of the fundamental historical-environmental factors that shape the landscape itself and which have controlled the ecological system for centuries.

With a more close regard to the recommendations<sup>6</sup> of the European Landscape Convention (ELC), on the basis of the historical-environmental approach we could suggest, among other things:

- That in the «legal recognition of the landscape» (chap. II, national measures, Art. 5, paragraph a) concepts of «cultural landscape» and «rural landscape» and their specifications in agricultural, forestry, pastoral landscapes, their complexity are clearly defined and that the landscapes are valued for their ability to bear witness to the environmental and social history contained in them;
- That in the «training and education» (chap. II, national measures, Art. 6, b) a cognitive component is included, in which the historical ecology of present landscape is basic, to be applied mainly to local and management actions;
- That in the «identification of their own landscape» (chap. II, national measures, Art. 6, C), in the rural landscapes are taken into account their location in the European rural heritage and therefore historical and cultural criteria are included which lead to the identification of practices and local environmental knowledge, as recently suggested, for example, for forest landscapes by AGNOLETTI (2007);
- That in the analysis of landscape dynamics («tracking changes», Chapter II, Art. 6 C, iii) the past history of each individual landscape would be taken into account by means of a historical-environmental professional approach, involving geographers, historians, ecologists and archaeologists.
- Since the ELC (chap. I, art.2) besides «rural areas» applies even to «natural areas», in order to avoid a split that has no scientific basis but long administrative tradition in our country, the historical-environmental approach should find convenient application - as it is already happening for some experience at a regional and sub-regional level (MAGGI *et al.*, 2003) - at different levels in planning of parks and protected areas of natural interest.

6. We refer here to the Italian translation not to the English original text of ELC.

In our experience, however, the issue of rural landscapes requires to overcome disciplinary separations at the level of scientific research, but also the fragmentation of political and administrative skills. Within Italian University, as compared to the rest of the European Union, it is still hard to find the cooperation which is necessary to the approach of historical ecology to the rural landscapes, since the wide disciplinary areas are not met, as well as the interests that they represent.

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