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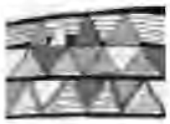

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The importance of terracing in the traditional cultural landscapes: the case study of Sicily (Italy)

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Abstract

The landscapes formed by agricultural terraces are the natural result of the encounter between the characteristics of an environment and the creative force and genius of man, the slow evolution of this relationship between nature and culture, a collective project that balanced the need for producing with the resources available and the native character of the environment. These cultural processes produced a great variety of landscapes. However, they are not supported or confirmed by common inventories allowing to identify and classify the typical Main Traditional Landscape (MTL) within which very important is the role carried out by terraces and related man-made structures, both for natural and cultural aspects and functions.

Terraced farming systems are considered not only the most representative cultural landscapes of the Mediterranean, but also among those at greatest risk. The crisis of traditional agricultural landscapes particularly concerns, in fact, those most affected by the costs of cultivation in regards to how small the land unit is, as well as the difficulties regarding access and mobility. Concerns about their disappearance and deterioration are due to their environmental, cultural, economic and social characteristics.

The large number of terraced landscapes in Sicily are in accord with the complex nature and history of the island. Many important features of these landscapes can be recognized, such as: production, soil conservation, improvement of the microclimate, fire protection, conservation, biodiversity protection and the enhancement of the cultural, aesthetic and ethical aspects of agriculture.

The study carried out in Sicily addresses the problem of protecting the landscape, not by considering the legacy of terraced cultivation systems obsolete and therefore inevitably subject to abandonment or to a reduction by mainstream culture to a "landscape museum," but, on the contrary, as an exemplary manifestation of the opportunities offered by the enhancement and preservation of traditional cultural landscapes.

On the basis of these considerations, the objective of the present paper is to draw up the importance of terraced-land within the MTL of Mediterranean context, by the study-case of Sicily (S-Italy), in terms of: (i) cross-landscape distributive importance; (II) main structural characters and functions; (iii) ongoing driving-actions in land-use change. A study case that can be of great interest for such regions, as the Konso in Ethiopia, were terraced systems are of interest for reasons together productive, environmental, cultural.

Keywords: Cultural landscape; Terraced landscape, multifunctional agriculture, Landscape characters; Ecological-cultural diversity; Land-use change; landscape conservation

Introduction

Cultural landscapes are particularly widespread around the Mediterranean Basin (MB), due to the diversity of its ecological features, great biodiversity, and millenary contact with the most important farming civilizations and their heritage of plants, animals, techniques, customs and social relationships. The Mediterranean regions show a high degree of both physical and climatic unity despite the landscape differentiation every time produced by mountains, plateau, and plains along their shores. Such environmental and ecological diversity is the obvious consequence of three different continents intertwining, with their genetically different flora and fauna and different rural civilizations crossing each other through their vegetation and technical knowledge (Di Castri *et al.*, 1981; Grove *et al.*, 2002, Braudel, 2002). The island of Sicily, the biggest in the MB and the southernmost administrative region of Italy, is particularly representative of this landscape richness (Barbera *et al.*, in press), especially when conveyed by its agricultural landscapes that are truly representative of different natures and histories. The wide biological and environmental diversity, as well as the complex history of its human settlements, make Sicily a symbol of the typically Mediterranean diversity (Grove *et al.*, 2002; Mazzoleni *et al.*, 2004).

In the historical point of view, starting from the Neolithic Age, Sicily was the site of continuous farming (Sereni, 1961) that has enriched the landscape with native species along with introductions from other regions following the various phases of the island's history (Greek and Carthaginian domination, the Roman Empire, the Arab agricultural revolution of the Middle Ages; the advent of American species, the work of the scientific institutions during the eighteenth and nineteenth centuries, etc.). In addition, human selections, based on suitability to the environment and crop requirements or market economies, have contributed to enormous differentiation of intra-specific biodiversity within the species (Barbera *et al.*, 2005).

The diversity characterizing Sicily as well as the other Euro-Mediterranean areas could easily be detected until about sixty years ago, thanks to the great number of rural landscapes produced by either the available resources or multi-crop productive models (e.g. *coltura promiscua*) or, else, multifunctional patterns. Such landscapes, defined as "traditional" (Antrop, 1997; Bignal *et al.*, 1995; Vos *et al.*, 1999), are now undergoing steady degradation due to the increasing number of modern monoculture (whenever environmental conditions allow them) as opposed to the virtually disappearing marginal agricultural systems of polycultures, especially the mountain ones (Green *et al.*, 2001; Barbera *et al.*, 2005). Their importance, however, is widely recognized and specifically related to the following factors: still high levels of biodiversity, several environmental functions (soil, water cycle, and carbon conservation), local populations' sense of identity, an increasing cultural and tourist interest, typical products, possible future scenarios (Antrop, 2005; Barbera, 2007).

At present, reliable systematic data on these traditional multifunctional agro-forestry systems and cultural landscapes are still lacking in Mediterranean Europe (Eichhorn *et al.*, 2006; Zimmermann, 2006). General information concerning agricultural landscapes comes from the Meeus inventory (*Pan-European Landscapes*) drawn up in the mid-nineties and covering the entire European setting (Meeus *et al.*, 1990; Meeus 1995). However, because of the survey's continental scope, this analysis only identifies two traditional landscapes in Sicily ("18. Mediterranean open land" and "22. *Huerta*"), and few others for the whole Mediterranean area: "9. Mountains", "12. Mediterranean semi-*bocage*", "19. *Coltura promiscua*", "20. *Montados/dehesa*", "21. Delta", "30. Terraces".

Studying Italian and Sicilian traditional rural landscapes few data are available in the literature on a national scale (Blasi, 2005; APAT, 2003). Recently, at Sicilian regional scale, Barbera *et al.* (in press) drew up a first inventory and presented a brief characterization of the MTLs in Sicily in line with the multidisciplinary experiences and approaches implemented in Europe (Meeus, 1995; Zimmermann, 2006), with particular emphasis on the landscapes' riches, peculiarities, and current state of conservation.

In mountainous, hilly slopes and marginal areas of Sicily came out the importance of terraces, probably the most important and perceptible element of these traditional agricultural landscapes. Terraced farming systems are considered not only the most representative cultural landscapes of the Mediterranean, but also among those at greatest risk. The crisis of traditional agricultural landscapes particularly concerns, in fact, those most affected by the costs of cultivation in regards to how small the land unit is, as well as the difficulties regarding access and mobility. Concerns about their disappearance and deterioration are due to their environmental, cultural, economic and social characteristics.
This paper means to stress the importance of terraced-land in the main traditional cultural landscapes of Sicily, in terms of:

- their cross-landscape distributive importance,
- main structural characters and functions,
- ongoing processes in land-use change.

Study area

Since Sicily is the biggest region in Italy and one of the most biodiverse areas in the Mediterranean Basin due to its longstanding history of anthropogenic influence and the high variability of its geomorphological-climatic gradient, it has been chosen as the spot where to identify and classify landscapes in the area. Total land area in Sicily is ca. 25,710 km2, and the population is about 5 millions. About 62% of the Sicilian surface is characterized by hills, about 24% can be ascribed to mountains, and only about 14% to plains. The Northern and North-Eastern portions are the most heterogeneous also in terms of climate, natural vegetation, and land use types (due, here, to the mountain ranges of Madonie, Nebrodi, Peloritani, and Mt. Etna, with mountain tops around 1800-2000 m a.s.l..). Mount Etna is the highest mountain with its 3,350 metres. Rainfall gradient is strictly correlated to altitude, relief, and geographic position, including distance from the sea. Mean annual precipitation ranges from a minimum of about 450-500 mm in Southern Sicily and subcostal plains to about 1500-1700 mm in North-Eastern mountain areas facing the sea. Mean annual temperature ranges between about 18-20 °C near shorelines to 8-10 °C in the highest mountain areas.
According to the CORINE Land Cover 2000 database, land use in Sicily is predominantly typified by agricultural surface (about 63% of the whole territory), its main crops being grain and vine, olive, citrus, pure and mixed orchards, various traditional mixed agroforestry systems. At landscape level, about 31% of the Sicilian territory is characterized by semi-natural and natural vegetation, especially in the NE sector of the island.
The first major landscape change in the Sicilian setting was produced during the Classical Era, when both the Greeks and the Romans implanted extensive agrarian systems mainly orbiting around crops such as wheat (all over the island) and olives. Wine production became a major export source during the Roman Empire. The Arab agricultural revolution of the Middle Ages (900-1100 A.D.) implied the use of ingenious irrigation systems that spread the cultivation of specialized orchards like citrus. The great discoveries of the 15th and 16th centuries introduced exotic plants from America, thus engendering new traditional landscapes. During the 18th and 19th centuries, new agricultural techniques were adopted whereby all of the above (vineyards, orange and lemon orchards, terraces, etc.) became more widespread and therefore led to new landscape assessment patterns (e.g. patchiness in the land use mosaic).

Main Traditional cultural landscapes (TCL) of Sicily

For an inventory of the main traditional Sicilian agricultural landscapes, we must first consider the definition of a "traditional" landscape. According to Antrop (1997), "*Traditional landscapes can be defined as those landscapes having a distinct and recognisable structure which reflects clear relations*

between the composing elements and having a significance for natural, cultural or aesthetical values". "Traditional" "*refer to these landscapes with a long history, which evolved slowly and where it took centuries to form a characteristic structure reflecting a harmonious integration of abiotic, biotic and cultural elements*". Traditional landscapes are partly natural and partly cultural, as the result of long-term interaction of humans and nature (Farina, 1998; UNESCO, 1999). By so doing, traditional landscapes are included in the "cultural" landscapes; the last concern with all human places and the process of making them and inhabiting them (Taylor, 2009).

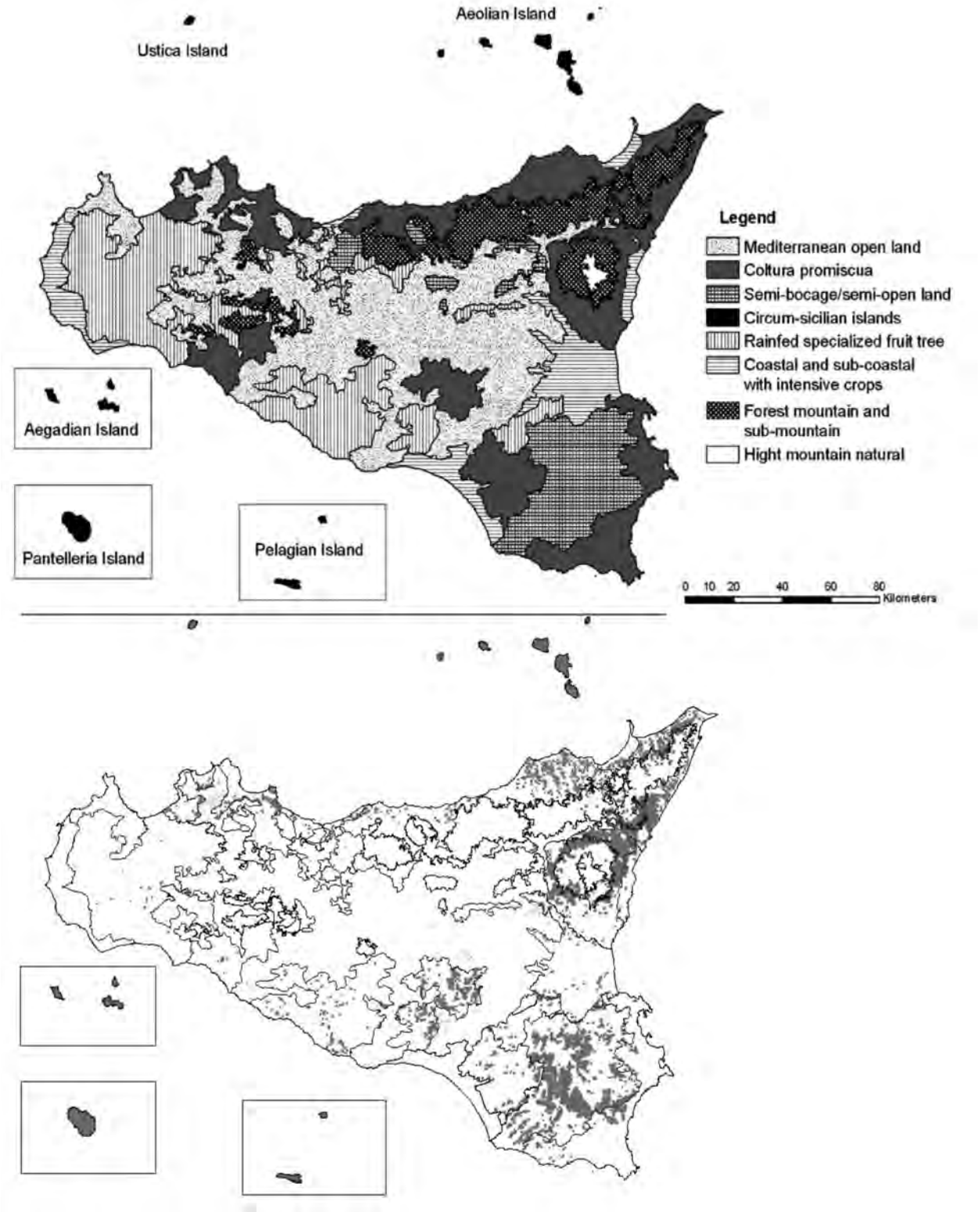
An integrated and multidisciplinary approach is essential for the inventory, the classification, and the analysis of traditional landscapes (Zonneveld, 1995; Farina *et al.*, 1993; Cullotta *et al.*, 2011), with the aim to identify more comprehensive strategies and tools allowing a holistic landscape planning and a dynamic conservation management (e.g. Farina, 1998; Green *et al.*, 2001; Naveh, 1993, 2005). Recently, an inventory approach to the assessment of MTLs in Sicily has been realized (Barbera *et al.*, in press), based on several experiences developed all over Europe, and using a wide accepted terminology with entries such as: *bocage/semi-bocage*, open field, *coltura promiscua*, Mediterranean open field, mountain landscape, *huerta*, terrace landscape, etc. (*e.g.*: Sereni, 1961; Meynier, 1970; Lebeau, 1972; Meeus *et al.*, 1990; Meeus, 1995; Zimmermann, 2006). However, other landscape denominations (*Circum-Sicilian islands landscape, Mediterranean semi-bocage/semi-open land, Rainfed specialized fruit tree landscape, Coastal and sub-coastal landscape with intensive crops, High-mountain natural landscape* – to give some examples) have been defined on an *ad hoc* basis (Barbera *et al.*, in press).

By so doing, Sicilian landscapes are strongly influenced by physiographic factors, which makes them different as one moves from the East to the West side of the island, and the same applies from the North to the South. Agricultural landscapes are distributed throughout the territory. The most extensive is the "Mediterranean open land", accounting for 29% of the region's area (Table 1) and dominating the central hills; only rarely does this type of landscape extend to the island's Southern and Western coasts (Figure 1).

Table 1. Breakdown of Main Traditional Sicilian landscapes and the respective types of main land cover according to the Corine Land Cover database (from Barbera *et al.*, in press; modified).

Main Traditional Landscape	Area (ha)	Area (%)	***Main land cover types***	*Area (%)*	*Area (ha)*
Mediterranean open land	771,176	29.2	*211 Non-irrigated arable land*	*53.9*	*415,344*
			321 Natural grassland	*13.0*	*99,880*
Coltura promiscua	603,266	22.9	*223 Olive groves*	*21.1*	*127,462*
			211 Non-irrigated arable land	*16.1*	*96,962*
Circum-Sicilian islands landscape	27,314	1.0	*323 Sclerophyllous vegetation*	*39.2*	*10,703*
			242 Complex cultivation patterns	*13.1*	*3,577*
Rainfed specialized fruit tree landscape	465,637	17.7	*211 Non-irrigated arable land*	*35.2*	*163,856*
			221 Vineyards	*24.3*	*113,293*
Coastal and sub-coastal landscape with intensive crops	208,140	7.9	*222 Fruit tree plantations*	*33.2*	*69,187*
			211 Non-irrigated arable land	*29.1*	*60,587*
Mediterranean semi-bocage/semi-open land	245,015	9.3	*211 Non-irrigated arable land*	*31.9*	*78,268*
			321 Natural grassland	*17.9*	*43,933*
Forest mountain and sub-mountain landscape	306,335	11.6	*311 Broad-leaved forest*	*31.3*	*95,741*
			321 Natural grassland	*18.8*	*57,591*
High-mountain natural landscape	9,872	0.4	*332 Bare rock*	*86.2*	*8,511*
			333 Sparsely vegetated areas	*8.3*	*819*
Total Sicily	2,636,755	100.0		/	/

Figure 1. Map of Main Traditional Landscapes of Sicily (from Barbera *et al.*, in press) and distribution of terraces within them (below).



The "*Coltura Promiscua*" (mixed cropping) is the second type of landscape, accounting for 23% of the total and mainly present along the coastal and sub-coastal hills; it can also be found in more inland areas whenever there are favourable pedological conditions. In the North-Eastern part of the island, this main landscape is in direct contact with forest areas ("Forest mountain and sub-mountain

landscape", 12%), while, in the South and West, *Coltura promiscua* is the most closed landscape, adjacent to open and semi-open lands.
The Mediterranean open land and the *Coltura Promiscua* are followed by the "Rainfed specialized fruit tree landscape" (18%) in the West; the "Mediterranean semi-*bocage*/semi-open land" (9%) mainly represented by the calcareous tableland of the Iblei mountains (South-Eastern Sicily), the "Coastal and sub-coastal landscape with intensive crops" (8%), which includes the principal coastal and sub-coastal plains, and, finally, the "Landscape of the Circum-Sicilian Islands" comprising all the small islands and archipelagos around Sicily (approximately 1%), where crops show a high level of fragmentation and fine-grained land mosaic.
The Corine Land Cover (CLC) vectorial data (APAT, 2005), level 3, allows to detect the most frequent types of land use/land cover for each MTL (Table 1). Actually, if some MTLs show the presence of only one or two main types of land use/land cover, in other cases several types of uses are fairly distributed. For instance, in the Mediterranean open land the matrix is clearly dominated by herbaceous grain crops (wheat) (54% - 211 Non-irrigated arable land), meadows-pastures only ranking second (just 13% - 321 Natural grassland). Similar considerations apply to the "High-mountain natural landscape", located mainly above the timberline. On the other side of the spectrum, *Coltura Promiscua* confirms, with its less clearly dominant matrix (21% olive groves), the greater heterogeneity and complexity of its typical eco-mosaic (Table 1).
In Table 2 the most important agricultural crops within each main traditional landscape is reported.

The importance of terraced land in TCL

Dry-stone walls probably account for the most significant man-made element, in both perceptive and environmental agricultural terms, in the context of traditional uses and structures of rural areas (Kizos *et al.*, 2006; Petanidou *et al.*, 2008). Moreover, linear features, precisely like dry-stone wall terraces and enclosures, have been indicated as one of the four most important components of a cultural landscape (Moreira *et al.*, 2006).
A recent region-wide inventory (Barbera *et al.*, 2010) reveals a terraced area of 69,600 ha, equal to 2.71% of the entire region. The terracing systems are mainly concentrated in the Eastern section of the island, characterized by abundant, compact rocky outcroppings (basalt, limestone, metamorphic rock). The small islands surrounding Sicily, as well as the Mt. Etna area (E Sicily), the Iblei Mountains (SE Sicily), and the Peloritani Mountains (NE Sicily) are, in fact, the richest in this respect (Figure 1).
By overlaying the map of terracing systems with the one of MTLs (Figure 1), a considerable presence of terraces can be detected within the Circum-Sicilian islands (Table 2), *Coltura promiscua* and Mediterranean semi-*bocage*/semi-open land landscapes (Figure 1, Table 2). In particular, *Coltura promiscua,* which also characterizes the Circum-Sicilian islands mosaic, is the landscape where terraces are most visible. The involved areas are mainly the Piedmont area of Mt Etna (from sea level to about 1000 metres), the Circum-Sicilian islands (especially the volcanic ones) and the sub-coastal area of the Peloritani Mountains (North-Eastern Sicily) (Barbera *et al.*, 2010). In South-Eastern Sicily, all the terraced areas are located within the Mediterranean semi-*bocage*/semi-open lands, where there are also dry stone walls enclosing the estates and cultivated fields (Figure 2). Furthermore (and interestingly enough) terraces are also present in the Coastal and Sub-coastal landscapes with intensive crops, in traditional citrus orchards (especially on the Tyrrhenian slopes of the North-Western shoreline, i.e. the hills around Palermo), and on the slopes of Mt. Etna facing the sea (E-Sicily).

Main structural characters and functions of terraces

Traditional agricultural and agroforestry landscapes are characterized by low-intensity systems and land-management activities, providing a high degree of multifunctionality (Vos *et al.*, 2000) in terms

Table 2. Most important agricultural crops and cross-cutting presence of terracing systems within the different landscape units.

Main Traditional Landscape	Most representatice crop / vegetation cover	Presence of terraces (just terraced area) %	ha
Mediterranean open land	wheat, natural pasture	1	6386
Coltura promiscua	mixed crop and orchard, olive, almond, citrus, orchards, vineyard, hazelnut, pistachio, ash tree, patches of natural vegetation	4	23403
Circum-Sicilian islands landscape	small mixed crop and orchard	44	11909
Rainfed specialized fruit tree landscape	olive, almond, vineyard	0.4	1752
Coastal and sub-coastal landscape with intensive crops	orange, lemon, mandarine, herbaceous crops	1	1783
Mediterranean semi-bocage/semi-open land	olive, carob tree, almond, patches of natural vegetation	7	17770
Forest mountain and sub-mountain landscape	forest, other wooded lands	4	11808
High-mountain natural landscape	open land, high-mountain shrubs	0	0

Figure 2. Dry-stones terraces and walls enclosing the estates and cultivated fields within the Mediterranean semi-bocage/semi-open lands (SE-Sicily).

of production (typical products), environment (e.g., soil protection and biodiversity), and culture (distinctive landscapes). These traditional land-management practices and techniques have formed these landscapes across centuries within which the terraced lands represent an important part. The agricultural, forestry, and agroforestry systems that have been employed show ecological stability over time, often maintaining a high level of diversity (at the species and structural levels) (see Table 1 in Cullotta *et al.*, 2011). Management practices and techniques include types of animal husbandry and livestock grazing, uses of local breeds (Moreira *et al.*, 2006), local agronomic tools, and crop rotation and mixing. Specific management practices and the best uses of land space (which are particularly important in the Mediterranean area for physiographical reasons) have produced various types of small (punctual) and linear rural heritage features. Usually constructed from local lithological or vegetal materials, these structures include stone-made elements as terraces, but also: dry-stone walls, dry-stone enclosures, stone towers, small animal and human shelters, hedgerows, tracks and footpaths, ponds, etc. (Barbera *et al.*, 1020; Cullotta *et al.*, 2011). Often, the result is a traditional landscape characterised by a fine-grained land mosaic, as for example in the *Coltura promiscua* and in *Mediterranean semi-bocage/semi-open land*, with high level of complexity (both physical and biological) that guarantee multifunctionality and ecological stability (Figure 3).

Figure 3. Fine-grained land-mosaic of agroforestry systems (*coltura promiscua*) dominated by vineyards, with widespread forest and pre-forest patches on terraces, now re-managed after decades of abandonment (N-E Sicily).

Land-use changes and conservation of terraced TCL

In Italy, like in many other Mediterranean countries (e.g. Portugal, Spain, Greece, etc.) (Grove *et al.*, 2002; Mazzoleni *et al.*, 2004), modern agricultural systems almost took over traditional land use prac-

tices in the second half of the twentieth century due to the strong industrial development, the latter having partially disappeared since then. Driving forces such as land abandonment, agricultural intensification, as well as afforestation and urbanisation are common threats to traditional landscapes biodiversity, coherence, and identity (Antrop, 2005) - Sicily being no exception (Figure 4).

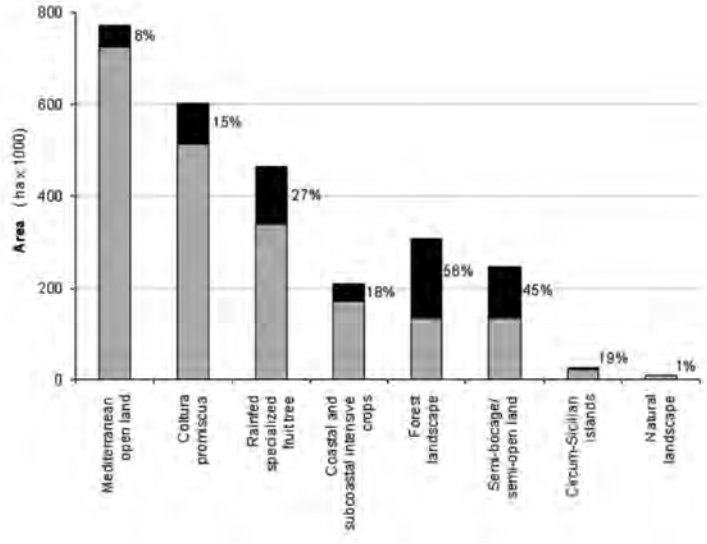
Figure 4. Abandoned terraces recovered by plant renaturation processes and increasing of stability problems of dry-stone walls (N-Sicily).

First of all, urbanization processes have extended beyond cities and along coastal and sub-coastal areas, due to high population density and recreational reasons. Such changes mainly affected the landscapes along the coasts - *Coltura promiscua* and Coastal and sub-coastal landscapes with intensive crops **-** where the loss of traditional farming systems due to urbanization processes accounts for about 10 % and 18 % respectively (Figure 5). In addition to this, 5% of the changes occurring in the c*oltura promiscua* MTL are due to the renaturation processes (plant recovering) that followed the abandonment of agroforestry systems (Barbera *et al.*, in press). A lot of terraces, very frequent within these MTLs, have been abandoned or directly removed by urbanization processes. Similar consideration could be extended to the *Circum-Sicilian island landscapes*, accounting for 19% approximately: namely, about 11% due to anthropic action (mainly connected to tourism) and 7.5% to land abandonment.

However, the most relevant changes regard the Mediterranean semi-*bocage*/semi-open land (about 45% of its entire area) (Figure 5). The reasons are different: on the one hand, the lower rate of arable land and, on the other, the increasing use of renaturation processes, especially natural pastures, garrigues, maquis, and shrublands of this MTL and therefore having a strong impact on traditional conservation agricultural practices (Figure 5) (Barbera *et al.*, in press).

Other important changes have taken place in the so-called Forest mountain and sub-mountain land-

Figure 5. Diffusion of recent non-traditional land-uses within Main Traditional Landscapes of Sicily (from Barbera *et al.*, in press).



scape. In this MTL, land cover by forests and pre-forest types (maquis, shrublands, garrigues) is about 80%; however, in the fifties the figure only amounted to about 24% (- 56%) as a result of the two world wars. Significant afforestation/reforestation programs were then developed, especially in public lands. In Rainfed specialized fruit tree landscapes, modern, more productive and specialized farming models have replaced traditional systems by about 27% (Figure 5). Vineyards, olive groves, citrus orchards, as well as other fruit plantations are now evenly planted, often involving a single variety and almost no micro-variability. Conversely, renaturation processes have become more relevant in marginal lands, thus mirroring a higher concentration of modern fruit plantations in plains or under particularly favourable topographic conditions. The analysis of land use changes over the past fifty years does not reveal any significant variations in the Mediterranean open land or in the High-mountain natural landscape.

In an overview, most important changes were detected in most marginal areas where terraces have been established in the past and where their support to the multifunctionality of these traditional systems is of particular importance. The mix of urbanisation processes, plant renaturation and the diffusion of the modern agriculture are all driving forces that often reflect the loss of terraced areas.

Discussion and conclusions

The aim of the present study, focussing on Sicily as a highly representative area of Mediterranean environmental variability, was to highlight the presence of terraced land as one of the most important elements within main Mediterranean traditional agricultural landscape. In Sicily, a total of eight MTLs have thus been identified and the cross-cutting presence of terracing systems within the different landscape units has been briefly tackled due to the importance of terraces as traditional rural elements, especially in marginal topographic sites. The widely man-made landscapes largely prevail (87%) over those where humans are not very influential, such as the High-mountain natural landscape**,** to be considered as totally missing human influence and mainly concentrated in the North-Eastern sector of the island on highest mountain tops.

The identified MTLs are considerably influenced by the land physiography: one example is the contrast between North-Eastern Sicily, with its mountain ranges, and Central-Southern Sicily with its rolling hills and plains. Moreover, the population, mainly living along the coasts, account for an important

factor insofar as it underlies both traditional landscape establishment and recent land use changes.
The open fields (Mediterranean open field and Rainfed specialized fruit tree landscape, especially with the new, extensively mechanized crops) show the lowest level of biological diversity (also terraces are here absent) and highest value of landscape uniformity. On the other hand, the more traditional farming practices, with their closed patched landscapes, the *coltura promiscua*, the traditional extensive mixed tree crops, and the hilly terracing systems, represent the most sustainable systems from the ecological viewpoint.
In the highly-patched landscape, i.e. fine-grained land mosaic, especially linked to marginal topographic conditions (mountains, hills, steep slopes) and presence of traditional mixed crops and agroforestry systems, the importance of terraces increase for several reasons. Terraces become important element of the landscape for their visible role, for the possibility to increase the cultivable surface for agriculture, for increasing the diversity (as a land-structural element) and biodiversity of the agroecosystem (especially for terraces made by dry-stones, because create niches for many plants and animals), for the important role in land stability and soil conservation, to increase the capacity of soil to retain water, and many other related positive effects on the environment. In one word, terraces strongly contribute to increase the multifunctionality of a cultural system and related traditional cultural landscapes.
However, today the conservation of these landscapes and related characters (e.g. terraces) is now an issue of growing importance. Important driving-forces in land-use change (land abandonment, urbanisation, modern agriculture) became important in the last decades. Although, a preliminary inventory is an essential reference for acquiring full knowledge of the consistency and variability of landscapes and related characters in a given area, either within a nation or throughout Europe. At European level, the European Landscape Convention of Florence 2000 precisely goes in this direction: actually, in contrast with past endeavours, it hints at the need for an overall knowledge of the European landscape. Abandonment processes of agricultural traditional systems as well as the increasing use of intensive growing systems are obvious. On the other hand, various action plans have been implemented to convert open lands in order to increase their environmental stability.
The policy and financial programmes implemented by the European Union have led to the drafting of specific projects for the Sicilian landscape and environment, as well as in European-Mediterranean countries. For example, the Agenda 2000 plan (*Piano di Sviluppo Rurale* – Rural Development Plan - 2000-2006) included several initiatives to deal with these issues. Specific grants were envisaged for the conservation of the traditional *coltura promiscua* or agro-forestry systems (e.g. systems with hazelnut crops, pistachio crops, citrus orchards, terracing systems), as well as for the increase of the structural and ecological diversity in the open lands (e.g. creation of green belts, adoption of farming practices with lower environmental impact, etc..). The current Rural Development Plan (2007-2013) seems to focus even more on these issues.
As focusing rural man-made element within more sustainable traditional agricultural systems and landscapes, terraces should have more attention in their conservation and specialistic actions in land-use planning should fully carried out.
Concerning that terraces are now considered as among more endangered agriculture areas worldwide, although they guarantee multifunctionality and environmental sustainability comparing to the more simplified modern agriculture, the study case of Sicily can represents a useful example of analysis. This is true for different and faraway environmental, cultural and social contexts as the Ethiopian region of Konso (Amsalua *et al.*, 2007; Förch, 2003; Tadesse *et al.*, 2008), listed by the World Heritage of UNESCO. This last with the aim to create links on specific topics and problematics with more peculiar and complex Mediterranean terraced landscapes.

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