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### The Italian National Register of Historical Rural Landscapes

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## Chapter 2

# The Italian National Register of Historical Rural Landscapes



Mauro Agnoletti and Antonio Santoro

**Abstract** In recent years, the role assigned to rural landscapes has gained importance in Italy, both at scientific and political levels. Some political decisions in the field of agriculture and planning have recognized the multifunctional role of traditional rural landscapes. It is widely recognized by the scientific community that these landscapes can be of fundamental importance for the economy of many rural areas, for their connections with tourism, for high-quality productions, for the conservation of agrobiodiversity and for reducing hydrogeological risk. In Italy, one of the main changes concerning the Italian rural landscape is the Decree n. 17,070 of 2012 by the Ministry of Agriculture Food and Forestry Policies about the institution of the “National Observatory of Rural Landscape, Agricultural Practices and Traditional Knowledge”. Among the tasks of the National Observatory of Rural Landscape can be found the surveying of landscape, of agricultural practices and of traditional knowledge considered to be of particular value, and the promotion of research activities for studying the values associated with the rural landscape, its preservation, its management and planning and even advancing the goal of bio-cultural diversity. It must also develop general principles and guidelines for the protection and enhancement of the rural landscape with particular reference to action taken under the Common Agricultural Policy. In addition to the landscape, the decree is aimed at the preservation and enhancement of “agricultural practices and traditional knowledge”, defined as “complex systems based on ingenious and diversified techniques, on local knowledge expressed by rural civilization, which have made a major contribution to the construction and maintenance of traditional landscapes”. This decree has also established the “National Register of Rural Landscape, Agricultural Practices and Traditional Knowledge”. Through this Register, the Ministry identifies and catalogs “the traditional rural landscapes or landscapes of historical interest present within the national territory and connected traditional practices and knowledge, defining

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27 their significance, integrity and vulnerability, taking account both of the opinion of  
28 scholars and of the values ascribed to these landscapes, practices and knowledge by  
29 the concerned communities, subjects and populations”. There are currently 13 land-  
30 scapes and 2 traditional practices inscribed in the Register. The Register is also the  
31 first step to access international programs, such as the Globally Important Agriculture  
32 Heritage Systems (GIAHS) program developed by FAO or the UNESCO World  
33 Heritage List.

34 **Keywords** Cultural landscape · Rural development · Landscape monitoring ·  
35 Historical landscape

## 36 2.1 Introduction

37 Italy still boasts a rich heritage of rural landscapes built up over thousands of years:  
38 landscapes that, while continuing to evolve, still retain evident testimonies of their  
39 historical origin and maintain an active role in society and the economy. These land-  
40 scapes are indissolubly tied to traditional practices handed down from one genera-  
41 tion of farmers, shepherds and woodsmen to the next, complex sets of ingenious and  
42 diversified techniques that have contributed in a fundamental way to the construction  
43 and conservation of our historical, cultural and natural heritage. These techniques  
44 were a means to continuously adapt to difficult environmental conditions to provide  
45 multiple goods and services, thereby improving people’s standard of living as well  
46 as giving rise to landscapes of great beauty. Landscape heritage and the related tradi-  
47 tional knowledge are fundamental resources that need to be safeguarded. The speed  
48 and extension of the technological, cultural and economic changes that have taken  
49 place over the last few decades are threatening landscapes and the rural societies  
50 associated with them. Multiple pressures are constraining farmer innovation and  
51 this often leads to unsustainable practices, resource depletion, productivity decline  
52 and excessive specialization, making the preservation of landscapes an economic,  
53 cultural and environmental resource in serious jeopardy. The result is not only an  
54 interruption in the transmission of the traditional knowledge required for local land-  
55 scape maintenance but also socioeconomic destabilization of rural areas and a loss  
56 of competitiveness of agriculture.

## 57 2.2 The National Register

58 The research for the development of the National Register of Historical Rural Land-  
59 scapes was meant as a testimony, not only of the importance of the Italian landscape  
60 as one of the most representative historical expressions of the country’s cultural  
61 identity, due to the prevalent role of rural civilization in its history, but also of the  
62 universal value of the Italian rural landscape in the cultural heritage of humanity

(Agnoletti 2012). This is a value that seems to have been often forgotten today. The research intended to lay a foundation for the identification, conservation and dynamic management of historical landscape systems and traditional practices, in the face of economic and cultural globalization, climate changes and inappropriate policies, favors the creation of a national register of historical landscapes. Actually, the term “historical” in itself is not especially significant semantically. All areas that have been anthropized for a few decades can be legitimately said to have a historical footprint. But the landscapes of Italy, as we well know, reach back far beyond this minimal threshold. What distinguishes the complexity of the historical character of the Italian peninsula’s landscape—even compared to other European landscapes that were anthropized in ancient times—is the multiplicity and stratification of the footprints left by so many distinct civilizations on our countryside. We only have to think of the changes determined by land reclaiming works carried out by Greek settlers, Etruscans, Romans and Arabs. In the course of time, these same civilizations provided such an incomparably vast contribution to our agriculture, in the form of new plant species, cultivation techniques, plantation and land delimitation methods, water collection and use, and buildings and land works that the historical character of our landscape acquired a special value compared to that of other European countries. We should also not forget that, just as a landscape merges in an original synthesis the beauty of a site or plantation with the historical character of its use and manipulation for economic purposes, the buildings scattered in our countryside, immersed in the most diverse habitats, are at once documents of past agrarian civilizations and artistically valuable constructions, aesthetically prestigious works, admirable for their magnificence and the genius of their builders.

Nowadays, we are witnessing increasing interest in the subject at the European level, as stated by the European Landscape Convention,<sup>1</sup> signed in Florence in 2000, which addresses the deep changes in course in modern society. As Roberto Gambino explains, the need to preserve the identity and meaning of places expressed by the current “demand for landscape” reflects a deeper malaise that certainly has to do with globalization processes and their effects: on the one hand, homologation and modernization, on the other, imbalances and inequalities that need to be addressed (Gambino 1994). In this perspective, the introduction of landscape in the national rural policies reflects a change in the conception of the role of this resource, as well as that of rural territory in general. The role of landscape and its perception has indeed changed over time. Today it is no longer an elite aesthetic and cultural construct, isolated from its socioeconomic context; it has become, instead, an essential element in the definition of an adequate development model for the national rural context.

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<sup>1</sup> The research has received the patronage of the Council of Europe for its contribution to the implementation of the European Landscape Convention. Article 6.C.1 of the convention requires identification and assessment, which states that each party undertakes.

- a. i to identify its own landscapes throughout its territory;
- ii to analyze their characteristics and the forces and pressures transforming;
- iii to take note of changes;
- b. to assess the landscapes thus identified, taking into account the particular values assigned to them by the interested parties and the population concerned.

100 The prevalence of aesthetic considerations in past conceptions of landscape, as  
101 well as their more recent superimposition on the concept of “nature”, has led to an  
102 emphasis on deterioration caused by urban dynamics, or criteria for the assessment of  
103 landscape quality based on its ecological characteristics, reductively understood as its  
104 flora and fauna, or as a series of natural habitats. All this has pushed in the background  
105 both the strong human print on our country’s landscape and the fact that, while urban  
106 expansion certainly played a role in this, the transformation of the rural landscape was  
107 largely endogenous, something that few have remarked. While it is evident, as Emilio  
108 Sereni explained (Sereni 1961), that the agrarian landscape is “the form that man,  
109 in the course and for the ends of his agricultural productive activities, impresses  
110 on the natural landscape”, it is equally evident that not all agricultures produce  
111 good landscapes. Unfortunately, ordinary conservation legislation based on protected  
112 area systems or landscape restrictions is ineffective as a means to preserve the rural  
113 landscape. It is this realization that persuaded all of the scholars who contributed to  
114 our catalog of the need to draw it up, that it is finally time for the issue to be addressed  
115 by agricultural policies. Conserving the quality of a rural landscape, which by its  
116 own nature is always evolving, can only be done by setting up a socioeconomic  
117 system capable of supporting and reproducing it; hence the decisive importance of  
118 strategies and actions undertaken in the framework of agricultural policies. The new  
119 guidelines for rural development policies associating them with local development  
120 are a major step forward in this direction. The objective is to make the most of all the  
121 resources of rural areas, emphasizing the local dimension, the new role of farmers  
122 and the involvement of new actors in the social and geographical space designated  
123 today as “rural” (Ploeg 2006). Important landmarks for the rise of this new vision  
124 of rural policies in Europe were the *Rural White Paper* published by the English  
125 government in 2000 and the *National Agenda for a Living Countryside* produced by  
126 Holland (2004)—a country where the preservation of the rural landscape is entrusted  
127 to the Ministry of Agriculture. Both documents indicate landscape conservation and  
128 restoration as a priority in national rural policies (Moreira et al. 2006).

129 In the local dimension of Italian rural policies, the landscape dimension plays a  
130 paradigmatic role, as it corresponds to the transition from individual business projects  
131 to projects at territorial scale, for which a landscape-oriented approach is undoubtedly  
132 more suitable, because of the peculiar characteristics of our country, than an  
133 industrial or environmental one, even in a development perspective. Indeed, today  
134 the notion that conservation is an obstacle to development in any form has given way  
135 to the realization that conservation is the new face of innovation in contemporary  
136 society. An authentic innovation is one that adds to a store of values slowly accumu-  
137 lated over the ages. Conversely, there can be no authentic conservation without  
138 the production of new values. In this perspective, the restoration and promotion of  
139 actions implemented in Italy by the recent National Rural Development Plan (2007–  
140 2013) have already introduced instruments by which the Italian regions can begin  
141 to modify the orientation of Rural Development Plans to address landscape issues,  
142 although at this initial stage the new landscape orientations of regional agricultural  
143 policies, especially in regions with vast and valuable landscape heritage, do not  
144 appear very effective (Fig. 2.1).



**Fig. 2.1** 1:250,000 map of the Italian territory resulting from an interpretation of Corine Level 4 data. The map highlights the polarization of the rural landscape, which today appears divided between forest areas (in green), prevalently located in mountain areas, and agricultural areas (in beige). Although the adopted scale overemphasizes the phenomenon, socioeconomic dynamics have indeed undermined the historical integration among woods, pastures and agriculture, reducing the complexity of Italy's landscape mosaic and biodiversity by favoring, instead, simplification and structural homogeneity (Agnoletti 2010)

## 2.3 The Investigations

Our research is not meant as an exhaustive overview of Italy's landscape heritage. Rather, it is intended to contribute to the development of a methodology for the identification and classification of landscapes of historical interest, and, at the same time,

149 to provide a preliminary sample of the substance and state of the country's landscape  
 150 heritage. This will hopefully be the first step in the drawing up of a truly compre-  
 151 hensive inventory of the Italian rural landscape, on the desirability of which there  
 152 appears to be a wide consensus today among both scholars and agricultural policy  
 153 makers. We decided not to focus on the strictly environmental features of Italian rural  
 154 landscapes—climate, geomorphology and vegetation—since these have been exam-  
 155 ined in depth in the existing literature. We strove, instead, to take a more detailed  
 156 look at the structure and organization of rural landscapes. Thus, we did not focus  
 157 on ecological and naturalistic aspects, nor aesthetic ones, although these are also  
 158 mentioned in the individual area descriptions. Rather, we adopted as our landmark  
 159 Emilio Sereni's pioneering work (1961), which examined the "forms" impressed by  
 160 man on the natural substrate, but left open the question of their characterization and  
 161 conservation at a national scale. Our purpose was to carry forward Sereni's work by  
 162 combining traditional historiographies of agriculture, forestry and, more in general,  
 163 the landscape with approaches highlighting the material elements of landscape struc-  
 164 ture, as found in important studies by European scholars, especially English ones such  
 165 as Oliver Rackham (1986), and also in some remarkable investigations conducted  
 166 in Italy by workgroups led by Moreno (1988) on the agropastoral sector and Pietro  
 167 Piussi on forests (1990).

168 Our project's board of advisors gathered scholars with competences in the domains  
 169 of history, geography, agrarian and forest science and architecture. Coordinators  
 170 were nominated for one or more regions, each of whom selected collaborators to  
 171 conduct investigations at a local scale. About 80 researchers from 14 universities  
 172 thus contributed to the catalog, as well as some professional studios and independent  
 173 researchers. An international committee of experts was formed to assess the work.  
 174 Some foreign institutions were also involved in the project, including the Committee  
 175 for Cultural Heritage and Landscape of the European Council, the European Society  
 176 of Environmental History (ESEH) and the International Union of Forest Research  
 177 Organizations (IUFRO).

178 One of the methodological problems we had to deal with in the initial stage of  
 179 our research was the definition of its spatial and chronological scale. As regards the  
 180 chronological scale, no limits were set. The origins of the landscapes under investi-  
 181 gation were traced as far back as available sources allowed. As regards the spatial  
 182 scale, we decided to analyze areas with extensions between 300 and 5000 ha, large  
 183 enough, that is, to include management units such as the typical Italian sharecrop-  
 184 ping farm or the *latifundium*, and to encompass spatial relationships between land  
 185 uses, in consideration of the importance of the spatial scale in UNESCO parameters  
 186 for world heritage sites. In the area descriptions, we decided to indicate only the  
 187 geographical coordinates of the center of each area, ~~leaving the construction of a~~  
 188 ~~GIS database to a later stage.~~ The main reason for this was the difficulty, which we  
 189 will discuss further on, of accurately determining the geographical boundaries of  
 190 areas with non-contiguous cultivated zones.

191 Each area was illustrated in a separate descriptive text. ~~The information provided~~  
 192 ~~in the individual area descriptions was then summarized in the texts that appear in~~  
 193 ~~the present book.~~ Although the area descriptions were based on a common template,

194 due to the many different competences of the scholars involved in the research, there  
195 were differences in individual sections of each description. The collected information  
196 was hence homogenized to make published descriptions of equal length and make  
197 sure they contained the same kind of data, also for the purpose of making them more  
198 easily comparable. It is important to specify that the photographs ~~in the present book~~  
199 are meant as an accompaniment to the text, but are not themselves the object of the  
200 catalog. They are merely meant as a support to the descriptions, not having been  
201 taken with the highlighting of aesthetic parameters in mind. This reflects the general  
202 approach followed in this work, which is to highlight mostly the historical character  
203 of landscapes in connection with aspects such as aesthetic quality, typical products,  
204 tourism and biodiversity.

205 By the end of the first 12 months of the project, 123 areas had been singled out.  
206 The number of areas per region ~~in the present volume~~ varies from a minimum of 2  
207 to a maximum of 8, which were the limits we set for local researchers in their choice  
208 of representative areas. We tried to reduce the effect of differences in the relative  
209 abundance of historical landscapes between one region and the other by carefully  
210 employing selective criteria.

## 211 **2.4 The Major Transformations of the Rural and Forest** 212 **Landscapes of Italy from Its Unification to the Present** 213 **Day**

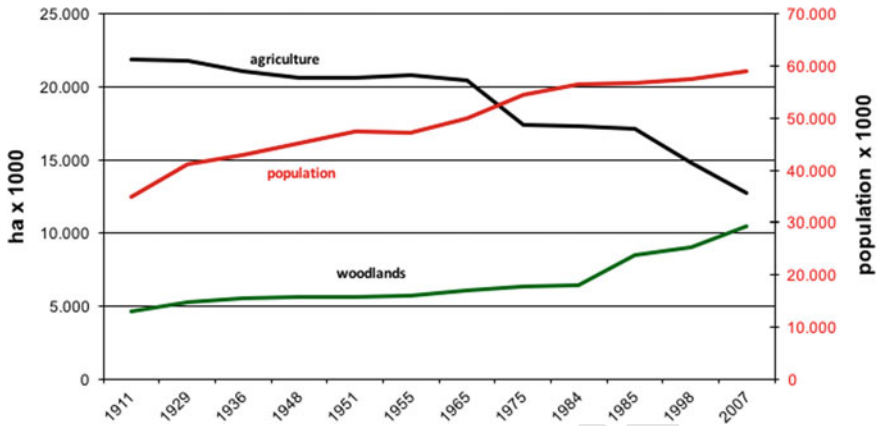
214 For the reader to fully understand not only the situation “photographed” by our  
215 catalog but also the urgency of such an investigation, we need to briefly go over the  
216 evolution of the Italian rural landscape since the country’s unification, not so much in  
217 terms of socioeconomic changes, but rather as regards land use, which gives a measure  
218 of the dramatic changes that occurred in this period. It is undoubtedly a limited time  
219 frame, considering the remote historical origins of the Italian landscape. However,  
220 as environmental historians have shown, this is the period when the abundance and  
221 intensity of changes at the global level occurred with a speed that had no precedent  
222 in the history of human civilization, and Italy is no exception (McNeill 2000). At  
223 least until the second postwar period, much of the country’s rural landscape was still  
224 strongly influenced by traditional agro-silvo-pastoral models developed during the  
225 previous century, and sometimes going all the way back to the Etruscan period and  
226 Greek civilization. The following decades, however, witnessed deep transformations.  
227 Due to demographic growth and the expansion of agriculture into mountain areas, the  
228 rural landscape attained the peak of its development in the decades between the late  
229 nineteenth and early twentieth centuries. The resulting landscape was one of great  
230 complexity, enhanced by the stratification of the prints left by so many civilizations on  
231 the land, and the country’s complex orography and climatic variability. In the second  
232 postwar period, however, we observe a gradual simplification and homogenization  
233 of the rural landscape that can be analyzed in terms of its effects on its two main  
234 components: woods and crops (Agnoletti 2010).

### 235 2.4.1 The Evolution of Agricultural Surfaces

236 The image of rural Italy at the time of the country's unification is one of great  
 237 complexity. Adaptation to different and difficult local conditions, as well as differ-  
 238 ences in economic and social structures, had diversified the national territory over  
 239 the centuries. Except in a few limited areas in the country, the history of Italian  
 240 agriculture had been one of continuous and laborious adaptation to a difficult natural  
 241 environment, mostly made up of mountains and high hills, originally covered with  
 242 impenetrable forests and extensive marshes, to create favorable conditions for agri-  
 243 culture. The result was an extraordinary landscape whose value has been recognized  
 244 by the Western culture at least since the sixteenth century. At the end of that century,  
 245 Michel De Montaigne, going through the Garfagnana in Tuscany, observed in amaze-  
 246 ment that the land was cultivated and terraced from the foot of the mountains to their  
 247 summit, appearing to him as a garden (Trechmann 1929). Those who followed in  
 248 his wake echoed his admiration, from Grand Tour travelers of the eighteenth and  
 249 nineteenth centuries—who were impressed not just by Italy's monuments but also  
 250 by its rural and forest landscapes—down to present-day tourists.

251 Morphological differences, farming systems, settlement patterns and local styles  
 252 of rural buildings placed their distinctive stamp on the landscape of rural areas. The  
 253 main agricultural systems, such as those revolving around local types of the farm-  
 254 house—the Lombard *cascine*, sharecroppers' farms and farmhouses, the farmhouses  
 255 of the grain-growing latifundia of Maremma, the Roman *casali*, or the *masserie* of  
 256 southern Italy—are the most visible manifestation of a much more complex reality.  
 257 In spite of Italy's great variability, however, there were some common traits, such as  
 258 the extension of arable land with a prevalence of cereal cultivation. Italy's vast "bread  
 259 lands" (*terre da pane*) reflected a strong orientation of agricultural production toward  
 260 self-consumption and maintained their prevalence in the agricultural landscape until  
 261 the 1960s, even in mountain areas. Another unequivocal sign of the importance of  
 262 production for self-consumption was the multiplicity of crops and mixed cultivation,  
 263 as well as the presence of extensive terracing providing horizontal surfaces to allow  
 264 crops to be sown in acclivitous areas, an enlightening example of ingenious adapta-  
 265 tion to difficult environmental conditions to solve the food problem. In this context  
 266 of low-intensity farming (Moreira et al. 2005), agriculture in the post-unity period  
 267 appears as the country's main economic motor, and displays strong continuity going  
 268 back several centuries (Fig. 2.2).

269 From the twentieth century onward, the percentage of the population employed in  
 270 agriculture, which used to comprise almost the total working force, slowly began to  
 271 decline under the impulse of great socioeconomic changes. Today, the sector employs  
 272 only 4% of the working population and its share of the GNP is equal to ca. 3%. These  
 273 changes, however, occurred with different speeds and intensities in different parts  
 274 of the country. The trend established itself much earlier in the industrial regions  
 275 of the Northwest, where between the two wars workers employed in agriculture  
 276 were already down to 35% of the total working population. In the rest of Italy, the  
 277 tipping of the scales between the primary and the secondary sectors only occurred



**Fig. 2.2** Evolution of agricultural, wooded and unproductive surfaces and of the Italian population from 1861 to 2007. One can observe the strong reduction of agricultural surfaces and the increase of woodland. The increase in woodland is due to the abandonment of farmed land and pastures

278 on the morrow of the Second World War. Accordingly, landscape transformations of  
 279 different areas of the country followed different timelines. As shown by the graph  
 280 on the evolution of agricultural, forest and unproductive surfaces, the importance of  
 281 cropland makes it a dominant element in the Italian landscape, down to the present  
 282 day. Nevertheless, today it has lost millions of hectares to the expansion of woods  
 283 and unproductive surfaces, a category that also includes urban areas. In their turn,  
 284 agricultural surfaces have undergone internal transformations that have changed the  
 285 landscape fabric.

286 From the second postwar period onward, available data show a sudden decrease  
 287 of agricultural surfaces, the symptom of a transformation reflecting the dominant  
 288 role of socioeconomic factors in the Italian landscape. The increase of unproductive  
 289 and urbanized surfaces, on the one hand, and the increase of forests, on the other,  
 290 are just different facets of the same problem, namely the abandonment of agriculture.  
 291 They are the result of an epochal transformation of our landscape that took place in  
 292 just one hundred years, and which has gone largely unnoticed.

293 Within agricultural surfaces, the most significant reduction was of arable land,  
 294 followed by that of meadows and pastures. The decline of grain-growing has special  
 295 significance and symbolic relevance in a country that fought a “battle for grain”  
 296 in the 1920s. The decrease of grain field surface was only partially compensated by  
 297 increases in productivity, so that today Italy imports most of its grain. Various factors  
 298 intervened in bringing about this deep mutation of the rural landscape. Among these,  
 299 especially worthy of mention are demographic evolution, the spread of important  
 300 technological innovations such as chemical fertilizers and pesticides and mecha-  
 301 nization, which ended up favoring rather than limiting the exodus from the coun-  
 302 tryside. The employment of mechanical farming equipment, which considerably  
 303 reduced labor requirements, along with the country’s industrialization contributed to

304 the abandonment of many cultivated surfaces, beginning with marginal mountains  
305 and high-hill areas. This evolution went hand in hand with a change in the structure  
306 of farming businesses, whose number declined sharply, although the average surface  
307 per farm has not changed much, a distinctively Italian trait that contrasts with the  
308 trend in countries like Spain or France. The low-to-middle size typical of sharecrop-  
309 pers' holdings and family-run farms has given way to a growing gap between large  
310 and small farms. An increasing trend to use externally hired rather than resident labor  
311 is breaking the bond between farmers and their holdings. From the 1970s onward,  
312 changes made to the Common Agricultural Policy (CAP) to limit surpluses favored  
313 the spread of non-food crops such as soy, colza and sunflower; vast industrial mono-  
314 cultures that have accentuated the simplification of the agricultural mosaic and are  
315 now facing a crisis.

316 In the second half of the twentieth century, along with the reduction of culti-  
317 vated surfaces, there were radical changes in crops, livestock and the activities of the  
318 agricultural sector. One of the most significant phenomena was the internal trans-  
319 formation of agricultural surfaces, with a trend toward specialized cultivations. This  
320 transition applied to all the typical sectors of agricultural and food production. New  
321 cultivation techniques were introduced to increase productivity and product quality:  
322 a quality, however, in which the landscape and its specific environmental contents  
323 played no role. Wine-, olive-, vegetable- and citrus-growing, as well as livestock  
324 and dairy farming, have all been impacted by these new trends, which have led to an  
325 intensification of production that is often incompatible with landscape quality. Slope-  
326 wise planting has replaced terraces (Romero Díaz et al. 2007). Tree rows, mixed  
327 cultivations and widely spaced cultivations have made way to intensive specialized  
328 cultivations with reduced labor costs.

329 In the years of postwar reconstruction, Italian agriculture adopted a development  
330 model aimed at maximizing production to meet internal food demand and compete on  
331 foreign markets. At first, the policies of the European Union had the same objective.  
332 However, today this "battle for production" has been lost. The sector has proved  
333 unable either to meet the national food demand or to compete on international markets  
334 in terms of quantity. Over recent decades, the fate of both the grain and livestock  
335 businesses has depended on the changing moods of CAP funding rather than on  
336 the free market. The livestock industry, in particular, has become almost entirely  
337 independent of meadow and pasture resources, once abundant in the Italian landscape  
338 and much reduced today. In the context of this "imperfect" market, influenced by the  
339 orientations of the CAP and external global phenomena, the need and opportunity  
340 have arisen to associate product quality with landscape quality, to take advantage  
341 of an added value that the competition cannot reproduce, and, at the same time,  
342 implement low-intensity agricultural models more compatible with environmental  
343 quality and revive extensive livestock farming methods.

344 As mentioned above, urban expansion partially accounts for the increase of unpro-  
345 ductive surfaces in our country. Urban growth is often branded as the main enemy of  
346 the rural landscape, something on which there is usually a broad agreement among  
347 the public, farmers and environmentalists. While it is true that the permanence of  
348 agriculture acts as a barrier against urban expansion, it is equally true that the most

349 significant changes in the rural sector are due to abandonment, on the one hand, and  
 350 endogenous changes that are not as obvious, but much more in-depth and enduring,  
 351 on the other. Urban surface, according to the most up-to-date European mapping  
 352 system (Corine Land Cover 2000), does not exceed 5% of the total surface of Italy.  
 353 It is true, however, that scattered urbanization eludes Corine. The Italian Ministry  
 354 of Agriculture, Food and Forest Policies hence resolved to establish a new category  
 355 of the rural area labeled *poli urbani*, including areas still classified as rural, but with  
 356 high settlement densities. Table 2.1 details surface extensions for the five first-level  
 357 CLC classes in 2000 and 1990. As one can see, agricultural areas are not only the  
 358 prevalent category in terms of the total surface but also the category that changed  
 359 most significantly, with a 1434 km<sup>2</sup> decline. In relative terms, instead, the class that  
 360 evolved the most from 1990 to 2000 is that of artificial surfaces, with a 6% increase.

**Table 2.1** Land cover changes in Italy from 1990 to 2000 as recorded by the Corine satellite system, promoted by the European Environmental Agency

Land cover, CLC Level 2	2000 (km <sup>2</sup> )	1990 (km <sup>2</sup> )	2000–1990 (km <sup>2</sup> )	(2000–1990)/1990 (%)
Residential urban areas	10,819.60	10,315.70	503.9	4.88
Industrial and commercial areas, and infrastructure	2,631.90	2,377.90	254	10.68
Mineral extraction, construction and dump sites; artificial and abandoned areas	565.1	514.7	50.4	9.79
Artificial non-agricultural vegetated areas	299.6	281.1	18.4	6.56
Arable land	83,121.90	83,760.60	–638.7	–0.76
Permanent crops	21,780.00	21,871.20	–91.2	–0.42
Permanent pastures	4,475.30	4,552.20	–76.9	–1.69
Heterogeneous agricultural areas	47,075.60	47,702.90	–627.3	–1.31
Forests	79,025.60	78,190.40	835.2	1.07
Areas with shrub and/or herbaceous vegetation	36,685.90	36,969.50	–283.6	–0.77
Open spaces with little or no vegetation	11,112.30	11,065.00	47.2	0.43
Inland wetlands	159	158.5	0.6	0.36
Coastal wetlands	531.8	532.3	–0.4	–0.08
Inland waters	2,186.20	2,175.10	11.1	0.51
Marine areas	945.5	947.9	–2.4	–0.261

361 Extending the analysis to the second level of Corine, the land use class that expanded  
 362 the most in absolute terms is that of wooded areas (by over 800 km<sup>2</sup>). Interestingly,  
 363 over 900 km<sup>2</sup> of shrublands and herbaceous areas evolved into woods. Within the  
 364 class of artificial areas, although urban areas for residential purposes have expanded  
 365 the most in absolute terms (over 500 km<sup>2</sup>), in percentage terms the largest expansion  
 366 was that of industrial, commercial and infrastructure areas (10.68%). This bears  
 367 witness to the strong impulse to urbanization over the last years, whose visual impact  
 368 on the general public is higher than that of changes in agriculture, since these can only  
 369 be perceived by a trained eye, capable of interpreting changes in the rural landscape  
 370 mosaic. In other words, while the great majority of the public can perceive the higher  
 371 aesthetic quality of a Tuscan farmhouse compared to a suburban condominium, not  
 372 all can appreciate the difference between a mixed cultivation area and an industrial  
 373 monoculture area. This is why the solution of Italy's "rural landscape question"  
 374 depends on the degree of cultural maturity of its society and on its understanding of  
 375 landscape evolution.

#### 376 **2.4.2 *The Evolution of Wooded Surfaces***

377 The Italian forest landscape can be historically interpreted as the result of changes  
 378 brought about by human beings to the natural vegetation, following a well-defined  
 379 historical sequence of culturally determined landscapes. The beauty of Italian forest  
 380 landscapes was celebrated by Grand Tour travelers as much as that of the country's  
 381 rural landscapes. Stendhal and Shelley were impressed by the splendid, dense  
 382 chestnut groves extending down the slopes of the mountains around the Como Lake  
 383 almost to its banks. Edward Lear describes with admiration groups of huge oaks, as  
 384 well as the incredibly diverse landscapes he encountered during a journey to Calabria  
 385 in 1847, which he contrasts with the "forests dense as carpets" and "monotonous  
 386 expanses of greenery" found in other countries (Lear 1964). Like its agricultural  
 387 landscape, the wooded landscape of Italy today appears simpler and more homoge-  
 388 neous than in the past. Its diversity is presently mainly a matter of specific composition  
 389 rather than spatial arrangement. This is partially a result of the presently clear-cut  
 390 separation between the woods and agriculture, after many centuries of integration.  
 391 The natural substrate of the Italian forest landscape was modified long before the  
 392 Roman period, but the general public is largely unaware of our forests' historically  
 393 determined character. This is partly due to the scientific trends of recent years, which  
 394 have seen a prevalence of environmental approaches in the study and management  
 395 of forests, constantly looking for "natural areas" to be protected: a quest that fails to  
 396 take adequate account, however, of centuries of human influence. The truth is that  
 397 the actions of human beings in historical and protohistorical times constantly mod-  
 398 ified the ecosystem. Identifying truly "natural" landscapes in Italy is thus not an easy  
 399 task (Moreno 1988). The last few decades have witnessed a trend in forest studies to  
 400 relegate the historical reality of wooded landscapes to the background in favor of a  
 401 naturalistic interpretation. This of course has affected management policies and led

402 to conflicts with farmers and livestock breeders. Significantly, our catalog highlights  
403 many cases of woods that are losing their historical characteristics due not only to  
404 the abandonment of traditional practices but also to management policies aimed at  
405 transforming them into more natural formations.

406 The statistical data available show that in the period between the unification of Italy  
407 and the years immediately preceding World War I there was a significant reduction  
408 of Italian forests, mainly due to the expansion of agricultural land and pastures as  
409 a consequence of increasing demographic pressure in mountain areas. One of the  
410 interesting elements highlighted by the graph in Fig. 2.1 is the relationship between  
411 forest surface and demographic trends. As we can see, from the unification of the  
412 country to ca. 1910, demographic growth went hand in hand with a shrinking of the  
413 wooded surface. This is a typical landscape trend in developing countries, where the  
414 woods give way to pastures and fields to meet the urgent food demands of a growing  
415 population. In spite of some not negligible problems in the data-recording criteria,  
416 it seems certain that from the 1920s onward there was a stable reversal in this trend,  
417 with a more than twofold increase of forest surface, although accurate statistics are  
418 not available (Agnoletti 2005). Thus, in this period the ratio between population  
419 and woods extension changed, since the latter continued to expand independently  
420 of demographic growth, an indication that Italian society's food supply no longer  
421 depended on the availability of cultivable land. The 1920s thus marked the end of  
422 the last phase of surface reduction in the history of Italian woods, which had seen  
423 several expansion and reduction cycles from the Roman period onwards. The new  
424 expansion was the result of the gradual abandonment of mountain and high-hill areas,  
425 a trend that is already apparent during the Fascist period and became unstoppable in  
426 the second postwar period. The secondary, post-cultural forestation process affected  
427 all of the country's regions, especially those where the abandonment of agriculture  
428 and animal husbandry was more intense, even extending to lower altitudes. This  
429 led to a gradual reduction of the pre-existing landscape mosaic, a strong and often  
430 uncontrolled increase of wild fauna and a strong decrease of cultivated land. Today,  
431 Italian agricultural products are grown on much smaller surfaces, thanks to yield  
432 increases. Above all, however, the country imports them massively from abroad,  
433 a model it shares with Europe, North America and other industrialized countries,  
434 including some in Asia. All these countries have been experiencing for years a gradual  
435 growth of forest surface, a concomitant shrinking of agricultural surface and growing  
436 recourse to external resources.

437 Along with the reduction of agricultural surface, to which it is indissolubly tied,  
438 reforestation is one of the most important phenomena to affect the Italian rural land-  
439 scape in the last century. The expansion of the woods from 10% of the national terri-  
440 tory in 1920 to the present 34% has changed the face of whole regions. This statistic,  
441 however, also partially reflects changes in the notion of "woods". The forest inven-  
442 tory of 2007 regards as "forest formations" populations of trees or shrubs meeting all  
443 three of the following requirements: a surface larger than 5000 m<sup>2</sup>, a foliage cover  
444 percentage higher than 10% and an area width higher than 20 m.<sup>2</sup> The inventory

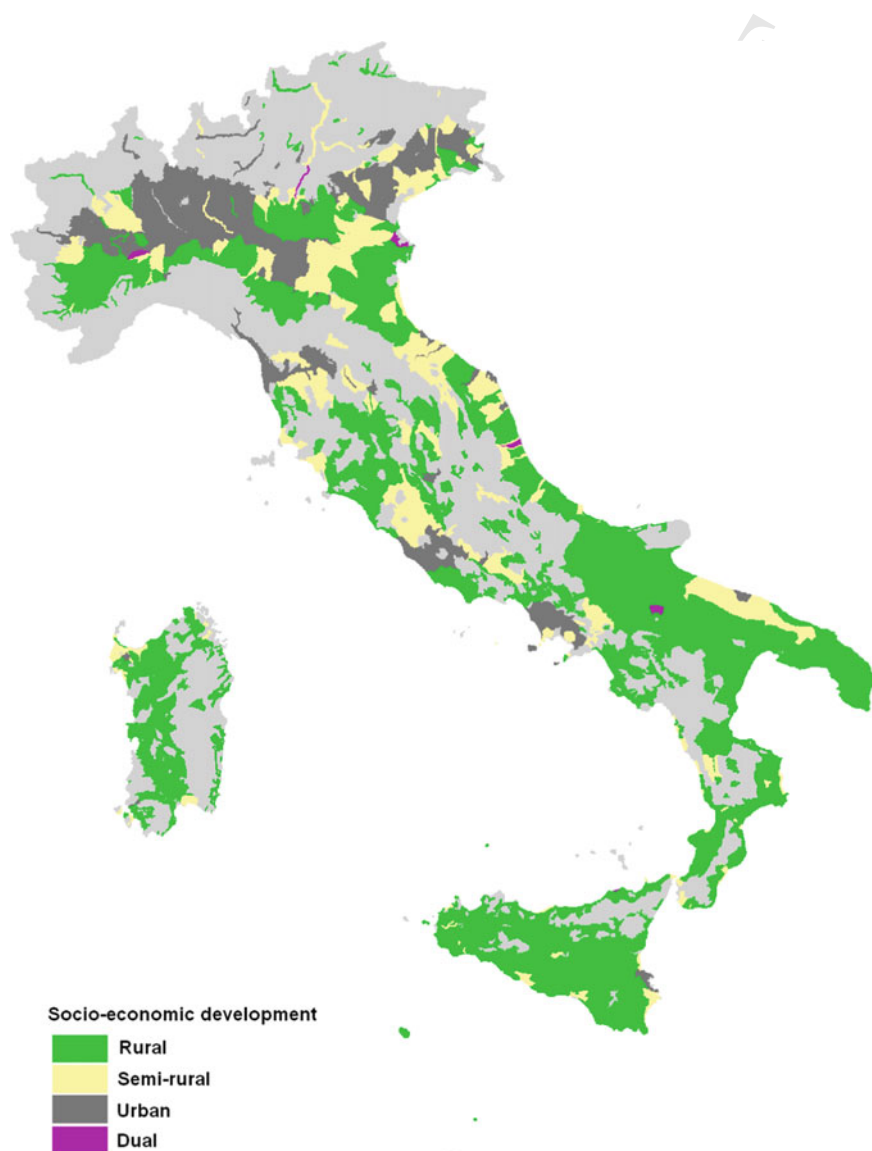
<sup>2</sup> Ministry of Agricultural, Food and Forest Policies, Inventory of Forests and Carbon Reserves, <http://www.sian.it/inventarioforestale/jsp/home.jsp>.

445 includes the following categories: woods and other wooded areas; prairies, pastures  
 446 and uncultivated land; sparsely vegetated areas; lumber farms, isolated groves and  
 447 linear formations (tree rows). The land classified as “woods” accounts for 83.7%  
 448 of the total forest surface, “other wooded areas” for 16.3%. According to this new  
 449 classification, the forest surface of Italy is about 10,528,000 ha. Clearly, however, the  
 450 above criteria also gather under the heading “woods” shrub and areas that are actually  
 451 pastures or wooded pastures with trees or shrubs. These would require distinctive  
 452 management approaches to adequately preserve their role in the landscape.

453 Among landscape changes induced by forestation, the almost threefold increase of  
 454 woods in Sicily and Emilia Romagna is especially remarkable. The Italian territorial  
 455 districts with the higher percentage of land surface classified as “woods” are Alto  
 456 Adige, Trentino, Friuli Venezia Giulia, Liguria, Tuscany, Umbria, Abruzzo, Calabria  
 457 and Sardinia. The most densely wooded regions are Liguria and Trentino, with a  
 458 respective cover percentage of 62.6 and 60.5%, while the less wooded regions are  
 459 Puglia (7.5%) and Sicily (10%). “Other wooded areas” are constituted by 58.0% of  
 460 shrubland, with a large component of Mediterranean maquis and shrubland. If we  
 461 consider the sum of all the surfaces classified as “woods” in the inventory, however,  
 462 the most wooded region in Italy is Sardinia, because here “other wooded areas”,  
 463 that is sparsely treed areas and areas with shrub vegetation, mainly used for grazing,  
 464 are the most extensive in Italy. The “woodland” of this region thus abounds with  
 465 features classified as “low woods”, “low-density woods” and “shrubs”, making it  
 466 very distinctive among Italian landscapes. This is a very interesting example of the  
 467 unsuitability of the traditional concept of “woods” to a situation where wooded or  
 468 treed pastures, maquis and pollarded groves—a vegetation perfectly adapted to the  
 469 needs of the local economy—dominate the landscape, rather than woods intended as  
 470 continuous and clearly bounded cover. Typically, this kind of vegetation is seen as a  
 471 deterioration of “natural” vegetation, intended as tall woods, and is hence frequently  
 472 steered to evolve in that direction.

473 Forestation is advancing in Italy at a rate of ca. 70,000 ha per year, which is also  
 474 indicative of the rate at which agricultural surfaces are being abandoned. The advance  
 475 of woods contributes to reducing the landscape diversity of complex rural landscape  
 476 mosaics, at such a rate that in Tuscany about 70% of this diversity has been lost  
 477 since the nineteenth century (Agnoletti 2007). This diversity, as indicated by studies  
 478 of the Tuscan landscape monitoring system on some mountain areas in the region,  
 479 arose from a great variety of land uses that have given way to a homogenization and  
 480 banalization of the landscape (Agnoletti 2002). It is true, although not always, that  
 481 the expansion of woods can increase biodiversity as a result of the increase in the  
 482 number of tree species. Concomitantly, however, there is a decrease in herbaceous  
 483 species associated with meadows and pastures, and in animal species populating  
 484 cultivated habitats, as well as a reduction of diversity at the landscape scale. Farina  
 485 (1993) provides significant testimony about this trend. His research indicates that  
 486 the replacing of olive groves with woods has determined a reduction of avifaunal  
 487 diversity. From a silvicultural and landscape perspective, it would be much more  
 488 desirable to have less woods, but better managed ones, with a higher level of spatial  
 489 diversity. Furthermore, reforestation occurred on dry stone terraces due to the crisis

490 of traditional agriculture which was identified as the main cause of failure during  
491 heavy rainfall events causing landslides in the Cinque Terre area (Italy) in 2011  
492 (Brandolini et al. 2018) (Fig. 2.3).

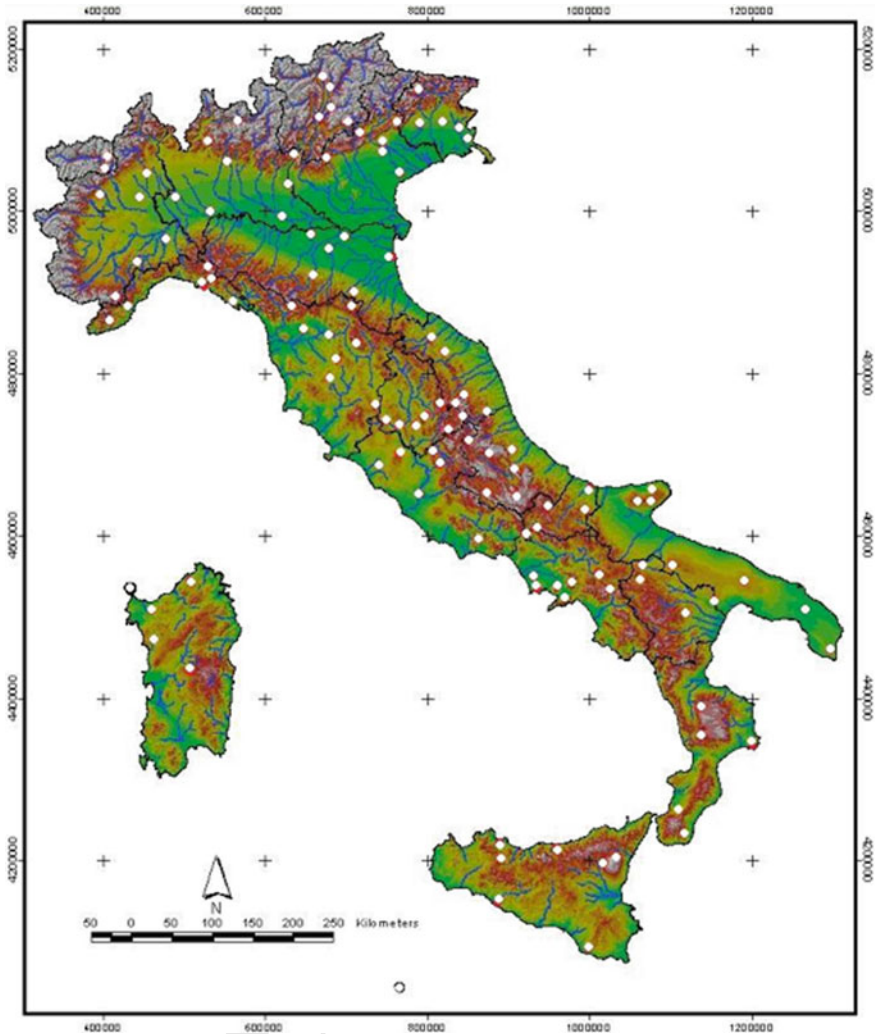


**Fig. 2.3** In prevalently agricultural areas (see map on Fig. 2.1), the development model is no longer entirely rural. There are now vast zones with diffuse urbanization and semi-rural settlement patterns. All this emphasizes the many functions of the rural landscape and the value assigned to it today, adding to the difficulty of adequate planning, but making it all the more necessary

## 493 2.5 The Analysis of the 123 Study Areas

494 The research has identified 123 areas, distributed in all the Italian regions, charac-  
 495 terized by the presence of historical landscapes. The aim of the research was not to  
 496 carry out a complete survey of the Italian historical landscapes but to give an idea of  
 497 their wealth and variety. The size of the 123 areas varies from 218 to 5,750 ha. All  
 498 these landscapes are characterized by forms of cultivations that date back to ancient  
 499 times, most of them to the Middle Ages, but some of them date back to Roman or  
 500 even pre-Roman times (Fig. 2.4).

501 The analysis of the landscapes of the 123 areas carried out on the 2007–2010  
 502 orthophotos represents the first database at the national level of historical rural land-  
 503 scapes. The data collected developing the first land use layer highlighted a differ-  
 504 entiation in landscape characteristics, according to the altimetric and geographical  
 505 localization and to the land use typology. It is possible to identify some charac-  
 506 teristics, which allow a possible grouping into homogeneous classes. Agricultural  
 507 activities are mainly located in hilly and flat areas, where agricultural activities are  
 508 more economically profitable. These areas are characterized by a fine-grain structure  
 509 of the landscape mosaic and by high complexity, with an average size of the patches  
 510 equal to 1.12 ha and the average number of land use equal to 22. Mountains are  
 511 mainly characterized by mixed landscapes, with grazing, forestry and agricultural  
 512 activities often distributed equally. Here, agriculture is practiced on small surfaces by  
 513 small-holder farmers, but the structure of the landscape consists on average of larger  
 514 patches (5.5 ha) due to forests and pastures. Mixed landscapes are also common in  
 515 the central part of Italy, where traditionally the landscape consists of the coexistence  
 516 of agro-silvo-pastoral activities due to the organization of the territory into small  
 517 farms (*poderi*). Overall, it is possible to state that the Italian historical landscapes  
 518 are characterized by a high number of different cultivations and land uses, often  
 519 carried out on small patches, as a consequence of the traditional management and  
 520 high fragmentation of the properties. The high-quality products that come from this  
 521 cultivation and from animal husbandry, which in some cases are found only on some  
 522 tens of hectares in the whole national territory, justify and guarantee their mainte-  
 523 nance, even if they are always products that risk disappearing in near future. The  
 524 results are landscape mosaics with high complexity and diversity of the landscape  
 525 structure. This complexity is a fundamental component of the bio-cultural diversity  
 526 expressed by these landscapes, which include animal and vegetal species related to  
 527 the traditional agricultural practices, as also described by the FAO GIAHS program.



**Fig. 2.4** The localization of the 123 areas (yellow symbols) selected for the National Catalogue of Historical Rural Landscape and the division of Italy into north, center and south (islands are officially part of the south)

## 2.6 The National Observatory and the Register of Historical Rural Landscapes

One of the main results of the previous study is the fact that the Italian Ministry of Agriculture Food and Forestry Policies established in 2012 the “National Observatory of Rural Landscape, Agricultural Practices and Traditional Knowledge” (Decree n. 17,070 of 2012). Among the tasks of the National Observatory of Rural Landscape

534 can be found the surveying of landscape, of agricultural practices and of traditional  
535 knowledge considered to be of particular value, the promotion of research activi-  
536 ties for studying the values associated with the rural landscape, its preservation, its  
537 management and planning, even in order to preserve bio-cultural diversity. It must  
538 also develop general principles and guidelines for the protection and enhancement of  
539 the rural landscape with particular reference to action taken under the Common Agri-  
540 cultural Policy. In addition to the landscape, the decree is aimed at the preservation  
541 and enhancement of “agricultural practices and traditional knowledge”, defined as  
542 “complex systems based on ingenious and diversified techniques, on local knowledge  
543 expressed by rural civilization, which have made a major contribution to the construc-  
544 tion and maintenance of traditional landscapes”. This institution finally acknowl-  
545 edged the threats to the conservation of these cultural landscapes, as also occur-  
546 ring worldwide due to land abandonment, agricultural intensification, afforestation  
547 and urbanization which constitute threats to their diversity, coherence and identity  
548 (Antrop 2005). Rural areas losing their traditional landscapes, characterized by a  
549 small spatial scale, mixed cultures, limited technology, low use of fertilizers and  
550 pesticides and high biodiversity (Vos and Klijn 2000), require effective intervention,  
551 while also requiring dynamic conservation as suggested by many researchers (Farina  
552 1998; Green and Vos 2001; Grove et al. 1994; Naveh 1993, 2005).

553 The same decree has also established the “National Register of Rural Land-  
554 scape, Agricultural Practices and Traditional Knowledge”. Through this Register,  
555 the Ministry identify and catalog “the traditional rural landscapes or landscapes of  
556 historical interest present within the national territory and connected traditional prac-  
557 tices and knowledge, defining their significance, integrity and vulnerability, taking  
558 account both of the opinion of scholars and of the values ascribed to these landscapes,  
559 practices and knowledge by the concerned communities, subjects and populations”.  
560 The Observatory, through the Register, has also the task of managing the “collection,  
561 analysis and classification of the data, ensuring its conservation for future genera-  
562 tions and accessibility to potential users through a dedicated website as well as other  
563 means”.

564 There are currently 13 landscapes and 2 traditional practices inscribed in the  
565 Register.

566 The Register is also the first step to access international programs, such as the  
567 Globally Important Agriculture Heritage Systems (GIAHS) program developed by  
568 FAO, the UNESCO World Heritage List and the UNESCO Network of Biosphere  
569 Reserves (MAB Program).

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# Author Queries

Chapter 2

Query Refs.	Details Required	Author's response
AQ1	The citation McNeill (2002), Moreno (1990) has been changed to “McNeill (2000), Moreno (1988)” to match the author name/date in the reference list. Please check here and in subsequent occurrences, and correct if necessary.	
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