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A survey of landscape planning in Italy, where application is utopia. An updated proposal for a shared landscape analysis model

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Abstract
Landscape is known to be an across-the-board issue. Italy is one of the 14 signatories of European Landscape Convention and has enacted a specific law (Urbani Code) devoted to regulating landscape planning and management. Despite this, landscape planning in Italy is far from being a clearly defined field based on standardized and shared procedures. Only a small fraction of the Landscape Plans has so far been completed and they tend to be completely unrelated to each other. The existence of too many authorities having a say in the drawing up and supervision of the Plans leads to the accumulation of absurdly long delays in obtaining approval for the Plans. The vagueness of the Italian laws concerning landscape prevents the development of National models and strategies for landscape management and safeguard. A detailed analysis of the Italian situation of landscape planning and proposals aimed at improving the existing system are presented.

Key words: European Landscape Convention, hierarchy, landscape categories, Landscape Plan, Urbani Code.

Abbreviations used in the text:

ELC:	European Landscape Convention.
ELCAI:	European Landscape Character Initiative.
RECEP-ENELC:	European Network of Local and Regional Authorities for the Implementation of the European Landscape Convention
EUAP:	Official List of the Italian protected areas.
L-CAT:	Landscape Categories.
PP:	Landscape Plan.
PTP:	Territorial Landscape Plan.
PTPR:	Regional Territorial Landscape Plan.
SIC:	Site of Community Importance.
ZPS:	Special Protection Area.

Introduction

The re-birth of environmental awareness during the last decade at both a global and a local level has led to "Landscape" assuming increased importance across a range of applied fields, including Arts and Architecture, Environmental Planning and Design, Nature Conservation and Vegetation Science, Enhancement of Environmental and Cultural Heritage Politics and Economics (Avis, 1994; Hooper *et al*., 1999; Sowman & Brown, 2006; Rega & Bonifazi, 2014). Landscape, interpreted as the result of interposition and alternation of anthropic actions and natural events, on which continuous transformation and changing of components and forms is depending (Clément, 2013; Settis, 2012, 2013).

In Italy the question of who, precisely, should be empowered to deal with landscape issues sparked off an institutional debate which is still very heated. However, leaving aside for the moment such questions, it is evident that the word "landscape" has had a rapid and ever increasing appeal in Italy, especially amongst politicians, who have adopted it to replace terms such as "nature" or "environment" which were once flaunted as the symbols of sustainable management but soon af-

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terward became branded as worn-out and untrendy. In the “land of bureaucracy” (as Italians themselves dub their country), the beautiful and much eulogised Italian landscape has over the last decade become boxed into a series of meticulous regulations, the majority of which concerns its planning and management. These regulations do not match at all with the aesthetic concept of “landscape” which, as it is not based on quantitative parameters, has always remained ambiguous, and susceptible to being interpreted in different ways. Indeed, in the last decades, the value assumed by the relationship between the quality of the landscapes and their functionality has helped to distance the "aesthetic" idea of "natural beauty" (Croce, 1922; L. 1497/1939). The lack of synergy between the multiplicity of official planning tools and the tools provided by the environmental sciences (e.g. Landscape Ecology, Vegetation Science, Conservation Biology, etc.) has prevented a further evolution of the concept of landscape.

All the foregoing issues are reflected in the current lack of coordination and coherence amongst the landscape Plans of the various Regions, the Administrations of which have adopted their own individual criteria for identifying their landscape environments, units and structural invariant. Indeed, there is a stark lack of a shared National list of concepts, criteria and nomenclature (for the questions about the lexical in Landscape topics, see Aprile 2012). The typical “overlap of responsibilities,” which involves the far too many authorities in the drawing up of a landscape Plan (Banchini *et al*. 2017), has resulted in a normative framework of detailed regulations, that are extremely difficult to apply in practice. This is particularly evident in the Regional and National Parks, where the vague procedures established for the landscape planning at the regional level have to be merged with those pre-established for the management of a protected area. In such areas, the regulation of problematic issues like urbanization, land-use, forestry, nature conservation is independently defined by specific laws that often are not compatible with the ”legal superstructure” established at the Regional level. The conceptual and decisional entropy which results from this crisscrossing of responsibilities is only partially solved by *ad hoc* legal sentences and inevitably leads to heavy delays in the approval and application of landscape Plans, and consequently severely hinders effective management of the territory.

In this paper an overview of landscape planning in Italy is provided, based on qualitative and quantitative analysis of the landscape Plans of all the Italian administrative Regions (these are the only Plans where the word “landscape” is used explicitly) and of the Plans of the Regional and National Parks. The main objectives of this paper are the following: a) to identify the critical issues currently afflicting the Italian landscape Plans which lead to stagnation in the planning “adoption-approval-application” procedure; b) to put forward a common framework for Landscape Plans using clearly identifiable categories based on unambiguous criteria, which can be adopted by the different administrative regions of Italy (and possibly by other European countries, too).

Historical background

The development of territorial laws enacted in Italy over the last century reflects a changing concept of landscape planning over the years. Initially, Landscape was associated with the idea of a beautiful view and with the necessity of considering it as a whole and indivisible. The first National law regarding the landscape (L. 1497/39) was drawn up in 1939 and, in addition to introducing the possibility of using protective restrictions for preserving "natural beauties", this law was the first one which shed light on the real meaning of a Landscape Plan (at that time named as “Territorial Landscape Plan”: PTP). The main aim of these PTP was to protect single landscape elements or combined ones linking aesthetic, cultural, and geological values (e.g., farmhouse, historic villas and gardens, etc. or panoramic viewpoint). Law no. 1497 was subsequent to the establishment (1922) of the first Italian National Park (Gran Paradiso), where, for the first time, the requirement of mandatory prior authorization for human activities in areas of landscape value was introduced.

In 1942 another national law (no. 1150) defined the planning tools (Plans) for the Italian territory and their hierarchical relationships. These relationships worked as a sort of "inverted pyramid", with the Plans of the larger areas (e.g. regional Plans) prevailing over local Plans. A new global environmental awareness flowered across Europe after the 2nd World War. However, this awareness was only slightly perceived in Italy where the post-war economic recovery and the subsequent urban and industrial expansion led to environmental conservation issues being almost completely ignored by the legislative system. Entrance into the EEC (1957) obliged Italy to recognize all the European directives regarding biodiversity conservation, ecological networks, sustainable management, environmental impact, etc.

The years between 1985 and 1991 saw the enactment of three fundamental laws:

1) the L. 431/85 which was the first law regulating the protection of areas of particular environmental interest at the National level. According to this law, the role of the newly named “Landscape Plans” (Piani Paesaggistici: PP) passed from the protection of single elements to that of wider areas, such as lakes, rivers, forests, wet areas, volcanos, coastal areas, archeological areas, National and Regional Parks (etc);

2) the L. 183/89 which introduced the "River basin Plan" as the highest level in the hierarchy of planning tools;
3) the L. 394/91, which established the Park Plan as the tool aimed at the coordination, implementation, development and management of all Italian Parks and Natural Reserves [see Albanese 2012, 2012 for details about the relatioship between this Law and Urbani Code (Legislative Decree 42/2004) which refer to the Landscape].

In 1997 Italy acknowledged the Habitat Directive and the Natura 2000 network. The Habitat Directive established for the first time the principle of conservation policies that were not restricted to protected areas only (see also Bunce *et al*., 2008, 2011). Moreover, the Directive also specified the criteria for the simultaneous management of ecosystem preservation and economic development. Subsequently, two further Acts represented significant advances in the tools available for landscape management. In 2000, the Council of Europe adopted the European Landscape Convention (ELC). This extended the protection to all types of landscape (including ordinary and degraded ones), promoted the management and planning of the European landscapes and provided for the organization of European co-operation on landscape issues (Déjeant-Pons, 2006). In order to implement the ELC principles a group of European Landscape Networks (RECEP-ENELC; CIVILSCAPE; UNISCAPE) was established. The RECEP-ENELC was aimed at providing scientific, technical and political support for its members (there are currently 31 members coming from both European Regions and Provinces, 16 of which are Italian) for the implementation of the ELC at local and regional level. In Italy, another important Act was the Legislative Decree 42/2004, known as "Urbani Code" (and the subsequent updatings). This was intended as the fulfilment in practice of the ELC, extended landscape planning to the entire Italian territory and provided indications regarding Landscape development and management in addition to those concerning protection. It also specified the main contents of a landscape Plan and the relationships of this Plan with the other planning tools. It also introduced, for the first time, the word "ambit" (Art. 143), presumably to be understood as a "landscape ambit", although this association of terms is never explicitly adopted in the text of the code.

The Water Framework Directive (Directive 2000/60/EC of the European Parliament and of the Council establishing a framework for the Community action in the field of water policy) introduced the concept of "River Basin District" and River Basin Management Plan considered as hierarchically the most important, i.e. to be followed by all the other planning tools. In 2007 the minimum criteria for the definition of the conservation measures to be adopted in the Natura 2000 Italian sites were established. Between 2008 and 2013 six different legislative decrees, each concerning the identification of the Natura 2000 sites at National level, were published. In 2010 the 6th Official List of the Italian Protected Areas was published. In this same year Italy approved the National Strategy for Biodiversity to be executed in the period 2011-2020.

Materials and methods

The research analysed the methods used by Italian administrative Regions to carry out either their Landscape Plans (PTPR), or similar Plans having equivalent aims but bearing a different name. Each Region was requested to produce a single PTPR. Only the Trentino-Alto Adige Region produced two different Plans, owing to the fact that this Region is composed of two autonomous administrative Provinces (Bolzano and Trento).

In total 21 Landscape Plans were analysed (Tab. 1) on the basis of their:

- *Status*:
  - o Approved: plan officially accepted by the Regional governance and directly usable for landscape management actions.
  - o Pre-adopted.
  - o Adopted: final draft of the Plan produced by the Regional governance, open to public consultation and therefore still amenable to being partially modified and/or improved.
  - o Provisional: the plan includes only pleliminary documents so it is as if it was in an editing phase yet.
  - o Revoked: the plan includes documents which are no longer in effect.
  - o Updated: plan that contains documents that have already been approved but that have subsequently been updated with more recent information.
- *Structure* (hierarchical, non-hierarchical). We considered as "hierarchical" a structure based on an arrangement of landscape units into a pyramidical system of levels.
- *Number of hierarchical levels*.
- *Total number of Landscape Categories* (L-CAT).
- *L-CAT Nomenclature*: when we came across Plans legends reporting L-CAT named using multiple terms, only the first of them was considered by us as the reference diagnostic term (e.g., categories named "ambits of landscape", and "systems of landscapes" have been here classified as "ambits" and "systems" respectively).
- *Criteria originally used in the PTPR to identify the different L-CAT* (e.g. geomorphological, historic-cultural, social etc.). When found that two or more criteria were originally used to identify a given L-CAT, we classified this identification system as

Tab. 1 - Synoptic scheme of the PTPR Plans in Italy. The administrative Regions were listed according to the chronological order of Plan's approval or adoption (see third column). The Plans which are marked with an asterisk (*) are those referred to the L.R 29/07/1939 no. 1497 while the other Plans refer to the D.Lgs. 42/2004. Hierarchy column (6th) was marked with "Yes" for those Plans whose Landscape categories (L-CAT) follow a hierarchical system, "No" for those Plans that do not follow a hierarchical system. When the number of elements per category is not available in the Plan, the symbol "–" was reported. The 7th column ("Name") lists the first term of each (L-CAT) used in the Plans.

REGION	Acronym	Status	n° L-CAT	L-CAT (n° of sub-divisions in each L-CAT)	Hierarchy	Name
*MOLISE	PTPAAV	Approved (1989)	1	1. Wide area (8)	No	"Ambit"
*BASILICATA	PTAV	Approved (1990)	1	1.Homogeneous landscape items (−)	No	"Ambit"
*EMILIA-ROMAGNA	PTPR	Approved (1993)	4	1. Landscape units (23) 2. Territorial systems (−) 3. Areas and elements (−) 4. Areas (−)	No	"Ambit" "Unit" "Ambit" "Unit"
*AOSTA VALLEY	PTP	Approved (1998)	1	1. Environmental systems (9)	No	"System"
*SICILY	PTPR	Guidelines (1999), 5 ambits approved, 4 ambits adopted	1	1. Territorial items (17)	No	"Zone"
*TRENTINO (Province of Bolzano)	LEROP	Adopted (2002)	2	1. Territorial typologies (4) 2. Landscape bands (7)	Yes	"Area" "Ambit"
LAZIO[2]	PTPR	Approved (2019)	3	1. Landscape systems (3) 2. Landscapes (12) 3. Geographic units (19)	No	"System" "Landscape" "Unit"
CAMPANIA	PTR	Approved (2008)	1	1. Landscape items (51)	No	"Level"
TRENTINO (Province of Trento)	PUP	Adopted (2008)	2	1. Complexes systems of landscape (5) 2. Typologies (9)	Yes	"Level" "Ambit"
VENETO	PPR	Provisional (2009)	1	1. Landscape items (14)	No	"Ambit"
ABRUZZO	PPR	Provisional (2010)	3	1. Regional landscape items (21) 2. Landscape items of wide area (64) 3. Local landscape items (not yet defined)	Yes	"Area" "Ambit" "Unit"
LOMBARDY	PTR	Approved (2010)	2	1. Geographic items (23) 2. Landscape typological units (16)	No	"Region" "Ambit"
MARCHE	PPR	Provisional (2010)	2	1. Macro-items (7) 2. Landscape items (21)	Yes	"Figure" "Region"
*UMBRIA	PPR	Pre-adopted (2012)	3	1. Landscape of regional identity (−) 2. Wide areas landscape (−) 3. Local landscape (−)	Yes	"Complex" "Ambit" "Ambit"
CALABRIA	QTRP	Adopted (2013)	3	1. Territorial-landscape components (4) 2. Regional and territorial landscape items (16) 3. Territorial landscape units (39)	Yes	"Ambit" "Ambit" "Type"
SARDINIA	PPR	Approved for coastal ambits (2013)	4	1. Historical regions (8) 2. Territorial complexes with historic-cultural importance (14) 3. Landscape items (27) 4. Local items of environmental planning (76)	No	"Belt" "System" "Type" "Landscape"
APULIA	PPTR	Approved (2015)	3	1. Historic-geographical regions (10) 2. Landscape items (10) 3. Territorial and landscape figures (40)	Yes	"Landscape" "Ambit" "System"
TUSCANY	PPR	Approved (2015)	1	1. Landscape items (20)	No	"Ambit"
PIEDMONT	PPR	Approved (2017)	2	1. Landscape items (76) 2. Landscape units (535)	Yes	"Unit" "Ambit"
FRIULI-VENEZIA GIULIA	PPR	Approved (2018)	1	1. Landscape items (18)	No	"Ambit"
LIGURIA	PPR	Provisional (2019)	2	1. Landscape items (11) 2. Landscape units (109)	Yes	"Ambit" "sub-Ambit"

[2] Only a small part of the Plan (Table B) is currently to be considered as approved (see the footnote in the paragraph "Results")

"mixed criterion".

As regards the landscape planning in the Italian protected areas, only the National Parks and a selection of natural Regional Parks were considered in our analysis. The Italian law 394/91 (Art. 5, comma 2), defines protected areas only those registered in the "Official List of the Italian protected areas" (EUAP). This list is periodically updated by the Ministry of the Environment and includes the following types of protected area: National parks, Regional Natural parks, State reserves, Marine preserved areas, Humid areas of International importance (Ramsar Zones), Minor protected areas (Natural monuments, Sub-urban parks, Oases managed by environmental associations, Natura 2000 network protected areas such as ZPS and ZSC). The Plans of the twenty-four National Parks were analyzed according to their current *status* of approval/adoption, number of L-CAT and the criteria used for the identification/definition of these L-CAT. The study of the Regional Natural Parks was based on the list published in the EUAP latest version (2010) and was restricted to those Parks which were equipped with a Park Plan and which exhibited a landscape classification based on the identification of L-CAT.

All the Plans here consulted derive from public documentation available online or directly from the respective Offices (Online Appendix I for PTPR; Online App. II for National Park Plans; Online App. III for Regional Park Plans).

Results

Regional Territorial landscape Plans (PTPR)

As summarized in the previous paragraphs, use, name and authorities deputed to manage Landscape Plans have progressively evolved since the first half of the XX century. The Law no. 1497 of 1939 established that the administrative Provinces were the authorities deputed to produce "Territorial Landscape Plans" (PTP) whereas, the updating of these latter was reserved to the Ministry for National Education. The Galasso Law (L. 431/1985) assigned to the administrative Regions the obligation of producing the "Landscape Plans" (PP). Finally, with the Urbani Code, the name "Regional Territorial Landscape Plan" (PTPR) was officially adopted (see Tab. 2).

Status

Although the Urbani Code required that all the Italian Regions (19 plus one divided into two autonomous Provinces) had to have an approved PTPR based explicitly on the rules established by this Code until December 31st 2009, only few Regions have reached this goal at present (see Fig. 1). In fact, three Plans (Calabria, Sardinia, and Trentino-South Tyrol) exhibit currently the status of adopted while eleven Plans (Apulia, Aosta Valley, Basilicata, Campania, Emilia-Romagna, Friuli-Venezia Giulia, Molise, Lazio[1], Lombardy, Piedmont, and Tuscany, together with Sicily for some specific ambits) that of approved. As regards Sardinia, only the "First homogeneous ambit"of the Plan, which is that concerning the Coastal areas, is approved at present according to regulations. All the other Regions are still working to complete the first draft of their Plans, and the status of works can be summarized

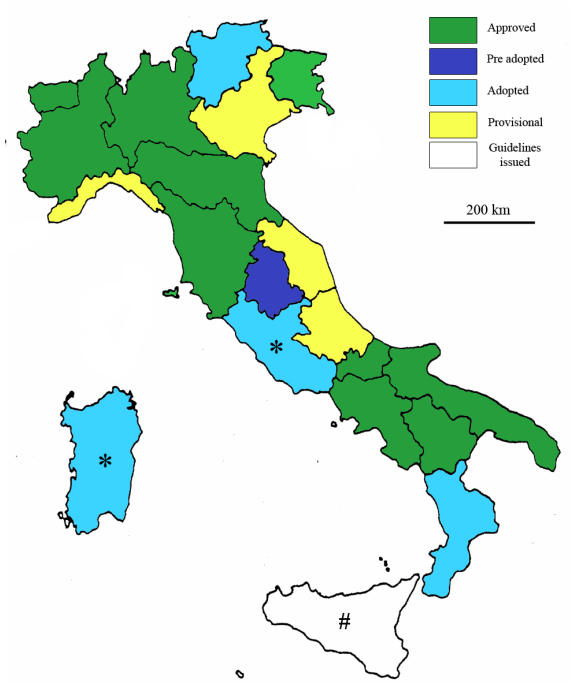

Fig. 1 - Map of Italy according to the status of the regional PTPR Plans.
*: adopted plan with some parts approved.
#: only guidelines available at present with a limited number of landscape ambits already approved and few others already adopted.

[1]The number of L-CAT, their subdivisions and names (columns 4, 5, and 7) and information about the use of a hierarchical system in Landscape categories (column 6) still refer to the Adopted version of the Lazio Region Plan (year 2007). In fact, although the PTPR of Lazio was approved in August 2019, only a small part of this Plan (Table B) was published in the BUR (Official Bulletin of the Lazio Region), which is the prerequisite for the plan to be considered valid and in force in all respects. The major part of the Lazio PTPR Plan, that is the part more specifically concerning the landscapes types identified in the Region, their definition and constraints (Table A) is currently undergoing a critical revision, for which the documentation is not available yet, neither for professionals and experts nor for scientific institutes.

Tab. 2 - Synoptic view of the three types of Landscape Plans according to the Laws nos. 1497/1939 (Territorial Landscape Plan, PTP), 431/1985 (Landscape Plan, PP), and 42/2004 (Regional Territorial Landscape Plan, PTPR).

	PTP	PP	PTPR
Authority that prepares the Plan	Ministry for National Education which, however, is not obliged to carry out a PTP Plan (Art. 5)	Administrative Region authority. It is obliged to carry out and publish a PP Plan (Art. 1bis)	Administrative Region authority. It is obliged to carry out and publish a PTPR Plan. The part of the PTPR Plan concerning the so called "Landscape values" is prepared by Regions in collaboration with the Ministry of Environment and Sea/Territory Protection (Arts. 135)
Authority that approves the Plan	Ministry for National Education (Art. 5).	Administrative Region authority (Art. 1bis)	Administrative Region authority (Art. 143)
Landscape values considered during the prepatation of the Plan	Real estates characterized by aesthetic and traditional importance; Landscape views of particular aesthetic relevance [Art. 5 1(3-4), 5].	Coastal areas, watercourses and lakes; mountainous areas; glaciers; National and Regional Parks; forests; Areas managed by Agricultural Universities and Institutes; wetlands; volcanos; archeological sites (Arts. 1,	Natural, historical, and asthetic elements of the Landscape (Art. 143)
Criteria used to identify the different L-CAT	Aesthetic, cultural, geological.	Environmental, and historic-cultural	Geomorphologic, historic-cultural, Land Use, Environmental, Social

as follows: one Plan is pre-adopted; two Plans are just at the stage of a preliminary report; three Plans are in a phase of updating; three Plans are "in preparation", having still not been submitted for their first approval. Regarding one Plan (Sicily), only the guidelines have been produced since 1999 so that it is still to be considered as "in preparation". Some Plans (such as Molise, Trentino-South Tyrol and Aosta Valley) are to be considered as "undefined", since the official sources have not produced data yet that can be used to assess the ongoing progress.

Structure, number and nomenclature of L-CAT

Nine PTPR Plans are organized according to a hierarchical system, while twelve are not. A total of forty-four L-CAT were identified; analyzing all the twenty-one PTPRs investigated (see Tab. 2) these L-CAT made reference to thirteen names. The most frequently recurring name was "Ambit" and "sub-Ambit" (19), followed by "Unit" (5); "System" (4), "Landscape of…" (3); "Level", "Area", "Region", and "Type" (2); "Complex", "Component", "Belt", "Figure", and "Zone" (1). Four (Abruzzo, Calabria, Apulia, and Umbria), out of the nine PTPRs which followed a hierarchical system exhibited their first hierarchical level divided into three L-CAT, while the other PTPR (Liguria, Marche, Piedmont, and the two Trentino-Alto Adige autonomous Provinces), exhibited this same level divided into two L-CAT only. The number of categories at the second hierarchical level turned out to be very variable. The Piedmont PTPR exhibited the highest number of categories found (611); it was followed by those of Liguria (120), Abruzzo (85), Apulia (60), Calabria (59), Marche (28), Trento Province (14), and Bolzano Province (11). The Umbria PTPR did not exhibit categories at the second hierarchical level.

Criteria used to identify/define L-CAT

Six main criteria of L-CAT identification/definition were observed: geomorphological, historical-cultural, based on land-use pattern, environmental, social, mixed (see Tab. 3). Thirty-five L-CAT (81.4%) were

Tab. 3 - Names of the Landscape categories associated to the criteria through which these were identified in all the original PTPRs analysed.

	Geomorphologic	Historic-cultural	Land use	Environmental	Mixed	Social	No criteria	
"Ambit" and "sub-Ambit"					17	1	1	19
"Unit"					5			5
"System"	1				3			4
"Landscape"		1		1	1			3
"Level"					2			2
"Area"			1		1			2
"Region"		1			1			2
"Type"				1	1			2
"Complex"					1			1
"Component"					1			1
"Belt"				1				1
"Figure"					1			1
"Zone"					1			1
	1	2	1	3	35	1		43

defined using a mixed criterion, while only eight (19.6%) using a single unequivocal criterion. Three L-CAT were described using environmental parameters, two (Umbria and Sardinia) using historical-cultural information, and further two (Emilia-Romagna and Umbria) using social and land-use information. One single L-CAT was found to be reported without there being any indication regarding the criterion adopted for its definition.

National Parks

Thirteen (out of twenty-five) National Park Plans have reached the status of "approved". Five are classified as "adopted", and five as "provisional". Two Parks (Golfo di Orosei e Gennargentu, and Isola di Pantelleria) are still not equipped with a Directive board, so no planning procedure has been activated. In theory the term of office for completing a Park Plan is thirty months, but in reality, the timetable is drastically longer (8−19 years). Eleven out of the twelve Parks which have an "approved" Plan, deal specifically with issues concerning the landscape and propose the division of the Park area according to L-CAT. These L-CAT are named "landscape units". Each unit is based on a dif-

Tab. 4 - List of the Italian National Parks (listed according to a chronological order of Plan's approval or adoption). The following information is reported (columns 1-6): 1) name of the Park; 2) Status of the Plan at present; 3) administrative Region(s); 4) number of L-CAT occurring in the Plan; 5) L-CAT name together with the number of items (reported in brackets) included in each L-CAT; 6) Reference category used for statistical purposes in this work to which the original name of the Plan's L-CAT was reported.
(*) refers to the terrestrial part of the National Park area.
(**) The first version of the Plan was approved while the decennial review process is still in progress.

NATIONAL PARKS	NATIONAL PARKS PLANS				
	Status (year)	Region(s)	n° L-CAT	(n° of L-CAT further sub-divisions)	Author's interpretation of the name
1	2	3	4	5	6
Golfo di Orosei e Gennargentu	-	Sardinia	-	-	-
Val Grande	Adopted (1999)	Piedmont	Plan's documentation not available on line		-
****Dolomiti bellunesi**	Approved (2001) [Updated (2013)]	Veneto	1	1. landscape sub-units (11)	"Unit"
Gran Sasso e Monti della Laga	Approved (2017)	Abruzzo Lazio	Plan does not contain the identification of landscape units		-
Monti Sibillini	Adopted (2006)	Marche Umbria	2	1. landscape units (29) 2. landscape sub-units (44)	"Unit" "Unit"
Stelvio	Adopted (2006)	Lombardy Trentino-South Tyrol	1	1. types of landscape (3)	"Type"
****Appennino Tosco-Emiliano**	Approved (2009)	Emilia-Romagna Tuscany	1	1. thematic layers (3)	"Level"
Aspromonte	Approved (2009)	Calabria	1	1. landscape units (34)	"Unit"
Maiella	Approved (2009)	Abruzzo	4	1. territorial units (3) 2. environmental-economic unit (1) 3. inter- municipality connection units (4) 4. cultural affinity unit (1)	"Unit" "Unit" "Unit" "Unit"
Abruzzo, Lazio e Molise	Approved (2010)	Abruzzo Lazio Molise	1	1. landscape units (16)	"Unit"
Arcipelago Toscano	Approved (2010)	Tuscany	1	1. Landscape units ≠ Geomorphological systems (13)	"System"
***Asinara**	Approved (2010)	Sardinia	3	1. landscape units (8) 2. urban units (3) 3. environmental units (21)	"Unit" "Unit" "Unit"
Cilento, Vallo di Diano e Alburni	Approved (2010)	Campania	3	1. macroclimatic region (3) 2. systems (12) 3. sub-systems (33)	"Region" "System" "System"
Cinque Terre	Revoked (2010)	Liguria	Plan's documentation not available on line		-
Foreste Casentinesi, Monte Falterona, Campigna	Approved (2010)	Emilia-Romagna Tuscany	Only protection zoning		-
Vesuvio	Approved (2010)	Campania	2	1. big landscape units (2) 2. elementary landscape units (12)	"Unit" "Unit"
Sila	Adopted (2012) [Provisional (2017)]	Calabria	1	1. landscape units (13)	"Unit"
Arcipelago de La Maddalena	Provisional (2016)	Sardinia	1	1. landscape units (4)	"Unit"
Alta Murgia	Approved (2016)	Apulia	1	1. landscape units (4)	"Unit"
Gargano	Provisional (2016)	Apulia	Plan's documentation not available on line		-
Pollino	Provisional (2016)	Basilicata Calabria	1	1. landscape units (15)	"Unit"
Appennino Lucano - Val d'Agri-Lagonegrese	Provisional (2017)	Basilicata	Plan's documentation not available on line		-
Circeo	Adopted (2017)	Lazio	4	1. macroclimatic region (1) 2. lithological systems (3) 3. morphological sub-systems (10) 4. environmental units (22)	"Region" "System" "System" "Unit"
Gran Paradiso	Approved (2019)	Piedmont Aosta Valley	1	1. environmental units (97)	"Unit"
Isola di Pantelleria	-	Sicilia	-	-	-

ferent criterion of definition (e.g. landscape unit, urban u., environmental u., big and elementary u. etc., see Tab. 3). The Foreste Casentinesi National Park Plan did not identify landscape "categories", although, in the Park Plan, the creation of a specific landscape Plan aimed at landscape protection was considered among the main priorities. The Cilento-Vallo di Diano Park also provides for the creation of a landscape Plan to be developed simultaneously to the Park Plan and equipped with a list of L-CAT. Although the Cilento-Vallo di Diano Park Plan was approved in 2010, the landscape Plan has not been drawn up yet.

Regional Parks

At present sixty-four Italian Regional Parks (out of 134) have a provisional, adopted or approved Plan, but only sixteen of these exhibit a classification in L-CAT (Tab. 5). Twelve out of the sixteen Plans equipped with

Tab. 5 - List of the Italian Regional Parks (listed according to a chronological order of Plan's approval or adoption). The following information were reported for each Park (columns 1-7): 1) Name of the Park; 2) Status of the Plan at present; 3) administrative region(s); 4) L-CAT number; 5) L-CAT name; 6) Hierarchy: "Yes" for those Plans whose Landscape categories (L-CAT) follow a hierarchical system, "No" for those Plans that do not follow a hierarchical system. 7) First term of each L-CAT used in the Plan.

REGIONAL PARKS (name)	REGIONAL PARKS PLANS					
	Status (year)	Region	n° L-CAT	(n° of L-CAT further sub-divisions)	Hierarchy	Author's interpretation of the name
1	2	3	4	5	6	7
Simbruini	Approved (2000) Updated (2015)	Lazio	2	1. sectors (2) 2. landscape units (8)	No	"Sector" "Unit"
Valle del Lambro	Approved (2000)	Lombardy	3	1. landscape units (-) 2. system (3) 3. ambit (11)	No	"Unit" "System" "Ambit"
Chiese rupestri del Materano	Approved (2005)	Basilicata	1	1. landscape units (5)	No	"Unit"
Spina Verde di Como	Approved (2005)	Lombardy	2	1 .landscape units (4) 2. territorial ambits (9)	No	"Unit" "Ambit"
Gola della Rossa e di Frasassi	Approved (2007)	Marche	3	1. territories (2) 2. landscapes (18) 3. environments (-)	Yes	"Landscape" "Environment" "Unit"
Sasso Simone e Simoncello	Approved (2007)	Marche	1	1. landscape units (6)	No	"Unit"
Maremma	Approved (2008)	Tuscany	2	1. landscapes (7) 2. *no name* (25)	Yes	- "Unit"
Conero	Approved (2010)	Marche	3	1. territorial homogeneous ambits (3) 2. sub-ambits (8) 3. elementary units (28)	Yes	"Ambit" "Unit" "Unit"
Monte San Bartolo	Approved (2011)	Marche	1	1. landscape units (4)	No	"Territory"
Molentargius-Saline	Provisional (2011)	Sardinia	1	1. landscape units (6)	No	"Landscape"
Portofino	Approved (2002)	Liguria	1	1. ambit (18)	No	"Ambit"
Alpi Apuane	Approved (2016)	Tuscany	3	1. territorial units (9) 2. landscape units (50) 3. landscape sub-units (100)	Yes	"Unit" "Sub-Unit" "Ambit"
Montevecchia e Valle di Curone	Adopted (2012)	Lombardy	3	1.landscape units (7) 2.ambits (37) 3. zones (19)	No	"Unit" "Ambit" "Ambit"
Costa Otranto-S. Maria di Leuca e Bosco di Tricase	Adopted (2019)	Apulia	1	1. landscape units (8)	No	"Ambit"
Dolomiti Friulane	Approved (2015)	Friuli-Venezia Giulia	2	1. landscape units (1) 2. sub-landscape units (8)	Yes	"Unit" "Unit"
Porto Conte	Adopted (2013)	Sardinia	2	1. macro landscape ambits (8) 2. micro landscape ambits (19)	Yes	"Ambit" "Unit"

L-CAT are currently "approved", three are "adopted", and one is "provisional". On average these Regional Park Plans reached the status of "adopted" within a period of sixteen years (ranging from a minimum of seven years made necessary for the Monti Aurunci Park, to a maximum of twenty-five years necessary for the Castelli Romani Park). The average time needed for a Plan to be only approved is generally lower (11 years) and ranges between five and twenty-five years. Only six Regional Park Plans were found to be based on a hierarchical system. As regards the L-CAT considered in the Regional Plans, the term "units" is the most frequently recurring one (14/30), followed by the term "ambits" (9/30).

Discussion

If some differences were expected from the comparison between the Plans drawn up under the Law 431/1985 and those in accordance with the D.lsg. 42/2004 (Urbani Code), we were somewhat surprised to ascertain that even greater incongruities came out when comparing the Italian Regional Landscape Plans drawn up under that same law (Urbani Code). The extremely heterogeneous nature of the Italian landscape planning situation, emerging from our research, did not only regard the structure of Plans, but also the methods adopted for the Plan arrangement, the criteria used to identify the landscape categories and the terminology used. The start was encouraging and testified to the will of the Italian government to comply with the main ELC objectives, especially those expressed in the guidelines for the implementation of ELC (Council of Europe 2008). This document focused on the importance of identifying "*clearly-defined and demarcated landscape units*" in order to "*emphasise the importance of systematically studying the places concerned from the landscape perspective*". To achieve this aim each Italian administrative Region was required, (on the basis of the Urbani Code), to divide the entire Regional territory into Landscape "*ambits*" (it is presumable that with "ambit" the Urbani Code intended to trace the concept of "landscape unit" as expressed in the ELC) which were categories established "*on the basis of the peculiar features and aspects and of the landscape characters*". Unfortunately, the vagueness

of this statement, together with the lack of any more specific guidelines in the Urbani Code, led to each individual administrative Region feeling free (independently of the other Regions) to choose its own criteria for the identification of its own "landscape categories" and to define/adopt its own nomenclatural system.

Another factor leading to greater heterogeneity arose from administrative Regions following to the letter the ELC explanation on what had to be understood as "landscape unit". A key passage, occurring in the 2008 ELC implementations, stated: "*...It would be wrong to focus solely on just one form of analysis (for example, ecological, geographical, historical, visual, etc.")... although several terms based on different forms of landscape description and site interpretation may be used...*". Now, it is clear that the intentions of the ELC in seeking to formalize the definition of "landscape unit" were good. Nevertheless, it seems probable that the problems arose precisely from the wide range of interpretations of the ELC's "landscape units" permitted by the Urbani Code with its introduction of the term "ambits", which resulted in increased vagueness of landscape classification. In fact, the Urbani Code associated the adjective "homogeneous" to the term "ambit". Each (landscape) "ambit" was intended to refer to a specific area characterized by homogeneous landscape features that were different from those of the adjacent areas if these latter were classified under different landscape ambits. Hence, it is evident that difficulties in identifying a homogeneous area (landscape ambit) are going to arise when such an area is identified on the basis of more than one parameter, and when the number and the topic of these parameters have not been established *a-priori*. It is intuitive that the possibility that two areas could belong to the same homogeneous landscape ambit is inversely proportional to the number of parameters considered. Rigid application of these concepts entails that areas which prove to be different in respect of just a single parameter must nevertheless be assigned to different landscape ambits (maybe this is why, in the latest, updated version of the Urbani Code, the word "homogeneous" has disappeared from the list of criteria usable to identify the "landscape ambits"). The impossibility of applying the rules and recommendations of ELC and Urbani Code, to the natural and historical complexity of the landscape, has led to the Italian planning system collapsing into profound methodological and nomenclatural deregulation.

The term "landscape ambit" is by far the most frequently utilized in the Italian PTPR (see Tab. 2). This is probably due to the fact that it was directly cited in the Urbani Code, probably as a free Italian translation of the ELC "Landscape unit" (AA.VV., 2014). This apparent consistency displayed by the administrative Regions in fulfilling the Urbani Code provisions to the letter is formal only. It hides the non-standardized procedure through which the landscape ambits were identified. As we have seen "ambits" were mostly identified using a "mixed" criterion, by which we mean a mix of characters combined, without following any shared and established rule (e.g. historical + environmental + aesthetic characters). The use of a mixed criterion would not be wrong in itself. On the contrary, it would even be in accordance with the main aims of the ELC. Unfortunately, the different Italian Regions made no attempt to use the same mix of characters, or at least a similar mix, in order to identify the same type of landscape "ambit". For instance, the Apulia Region identified landscape "ambits" using a geographical/economic mixed character, whereas the Marche Region used a geo-morphological/environmental/historical one. Moreover, such variability of interpretation is not limited just to the L-CAT identified as "landscape ambits", it is also to be found in the identification of "landscape units" (which is the second most quoted term in the Italian PTPR). Thus, landscape units were identified in the Lazio Region using the mixed Geomorphological/Social/Economic criterion, and in the Lombardy Region using the Environmental/Perceptive/Geomorphological one. The fact that, in the Plans of the Italian administrative Regions, the same term may refer to completely different contents and meanings carries enormous potential for misunderstanding, as well as rendering it totally impossible to make comparisons between the various PTPR. A similar degree of confusion arises overturning the situation, which is what happens when the same criterion (e.g. the geomorphological, the socio-economic or the vegetational one) is used to identify landscape categories bearing a different name. The Umbria Region uses the environmental criterion to identify the category "landscape type", whereas the Province of Bolzano (Trentino-Alto Adige Region) uses the environmental criterion to identify the "landscape belt". In this case "type" and "belt" are categories that cannot be compared since they do not belong to the same rank.

The Italian Landscape Plans also turn out to be very different as regards the number of Landscape categories identified, and whether or not these categories are classified according to a hierarchical system (Tabs. 1, and 2). This incongruity is a further factor of indefiniteness and contributes to making each Plan isolated and incapable of being compared with other, similar, Plans. For example, the Sardinia Landscape Plan does not provide for a hierarchical system and considers four main categories ("historical regions", "territorial complexes with a historical-cultural value", "landscape ambits", and "landscape design ambits") identified on the basis of different criteria (historic-cultural, social-economic, geographic, and public participation procedures, respectively). Instead, the Piedmont region provides for

a hierarchical system. Its PTPR considers two main categories ("landscape ambits", and "landscape units") both defined on the basis of a mixed criterion. Sardinia and Piedmont are administrative Regions that exhibit comparable total areas (24,500 km^2 vs 25,100 km^2). Nevertheless, the Sardinia Landscape Plan identifies 125 landscape units, while the Piedmont Lanscape Plan identifies 611 landscape units. A careful examination of these two Plans has led us to hypothesise that the marked difference in the number of landscape units identified was due to the different scales adopted by Sardinia and Piedmont for the definition of the minimal landscape unit mapped. As a result, the Sardinia Plan exhibits minimal landscape units that are larger than those exhibited in the Piedmont Plan. An interpretation of these results which is not informed and supported by appropriate knowledge of the local situations in the two Regions, however, could lead to completely different (and wrong) conclusions being drawn, such as to assume that the Sardinia landscape is quite monotonous compared to that of Piedmont. Such a consideration provides an alert to the risk of misinterpretation of the results and is not to be treated lightly, especially considering that some European countries or autonomous Regions use their total number of landscape units as a comparative parameter of landscape diversity at European level (even though it is well-known that a well-established and shared protocol for evaluation does not yet exist). A demonstration of this is represented by the 135 landscape units of Catalunja (Act 8/2005 of 8th of June for protection, management and planning of the landscape in Catalonia. Available at: https://rm.coe.int/16802fc129 and http://www.catpaisatge.net/eng/index.php) which are flaunted by the Barcelona administration as a sort of European record (see also Nogué *et al*., 2016).

In addition to being vague and useless for comparisons at National and European level, the Italian Landscape Plans exhibit a further point of weakness, and this is the limited extent to which they have been applied in practice. This is in large measure due to the many years required by the Regions to complete all the PTPR procedures of editing, adoption and approval. Although the Italian law for landscape planning has been in force since 2004, some Regions (e.g. Apulia) have already completed the entire process in 2015. Other Regions (e.g., Basilicata) have Plans which are still in the process of being edited, while others (e.g., Molise) have not yet gathered all the necessary materials to start the Plan procedures. The long delay which exists between the moment when the planning strategies are devised, and the moment when these strategies are actually applied, all-too-often makes a Plan already old and unreliable before it is put into practice. The initial conditions (especially the socio-economic and environmental ones) may well have changed, or even no longer exist. Thus it is possible, for example, to find Plans which provide for a detailed regulation of the grazing in pasture-lands when these pastures have already become shrublands, or even woodlands. In order to support remarks with practical examples, we can mention the striking case of the terraced human-made olive groves of the Volsci mountains in southern Lazio (Di Pietro & Filibeck, 2001). These groves were initially considered to be a "vanishing landscape" and therefore deserving of preservation by inclusion in the Red List of Mediterranean landscapes. However, the majority of them, after their abandonment, have already been replaced by natural vegetation communities, such as *Ampelodesmos mauritanicus* steppe-like grasslands mixed with *Tuberarietea* therophytic vegetation or *Brachypodium rupestre* lawn. Other abandoned terraced olive groves are covered by woody vegetation already, such as *Myrto-Lentiscetum* or *Roso sempervirentis-Rubetum ulmifolii* maquis, *Carpinus orientalis* microwoods or even *Quercus pubescens* and/or *Quercus ilex* woods (for taxonomic and syntaxonomic nomenclature, as well as for further details, see Blasi & Di Pietro, 1998; Blasi *et al*., 2000a; 2001; Di Pietro & Blasi, 2002). Now, the new vegetational mosaic resulting from the various phases of olive groves abandonment cannot be subjected to the same type of planning and management because some of the new vegetation types become even habitats of the 92/43/EEC Directive (e.g. the 6220* *Ampelodesmos mauritanicus* steppe like grasslands) while others (e.g. *Brachypodietum rupestris* or *Myrto-lentiscetum*) are extremely common in the territory. This example demonstrates that the time factor is absolutely crucial in the production of documents as well as in the implementation of environmental policies.

Some Regions (see Tab. 1) have Plans which were adopted several years ago, but which have not been approved yet. These Regions, which at first glance might appear as more fortunate since they are in possession of an "adopted plan", are, on the contrary, in deep trouble. In fact, they are experiencing all the contradictions which characterize the period between a Plan's adoption and its final approval. It is a typical "planning limbo of aware passivity". Moreover it is almost completely useless for administrations, freelance professionals and local populations, as only restrictions and prohibitions are put into force and no alternative path, planning action or development program are allowed to be activated.

The negative situation (in terms of methodological deregulation and delays) does not change very much as far as the landscape planning of National and Regional Parks is concerned. In fact, there are very few Park Plans which have turned out today in the form originally approved. The factors which are overwhelmingly responsible for this gap are: the complexity of the pro-

cedures for arriving at a conclusion, the high number of authorities involved and the lack of any clear indication concerning the time-scale within which the entire procedure has to be completed. The national Law which provides rules for Parks management in Italy (no. 394/1991) applies to both National and Regional Parks. From the date of its establishment, the Law considers 24 months as the deadline for approvals (Art. 12, comma 4). If a Regional Park authority does not respect the deadline, the higher National authority replaces it. The Italian law on protected areas embodied a conception of a Park Plan as having markedly different purposes to the ones established by the administrative Regions for their PTPR. Under the protected areas law, a Park Plan was conceived as a tool whose objective was to "*preserve the natural, environmental, historical, cultural, anthropologic values of a protected area and to marry the environmental safeguard with the social-economic development of the population living in it*" (see also Calzolaio, 2007). In order to put this ambitious and admirable objective into practice a Park's authorities are allowed to trace a territorial zonation on the Park map which identifies four main zones. These zones are identified according to a decreasing order of "environmental" importance and range from totally preserved zones (zones "A"), to zones open to urban expansion (zones "D"). Although the Park Plan is not directly aimed at landscape protection and management, landscape topics are not classed as issues of minor importance in it. In fact, the majority of Park Plans consider the identification of the L-CAT as a priority, although there are no specific laws which require this step to be fulfilled. If we read the "technical rules for the Plan realization" included in the Cilento-Vallo di Diano National Parks Plan (Campania Region, Southern Italy), the following actions are required: a) identification of the landscape units, b) evaluation of the landscape structure, c) monitoring and improving of the landscape quality, d) intervention strategies for the landscape units. It seems, therefore, that the attention paid by the National Parks to landscape questions in their Plans is not so different from that paid by the administrative Regions in their PTPR. Unfortunately, however, in the National Parks Plan there is a methodological or terminological deregulation as regards the L-CAT which gives rise to confusion. For example, in the Aspromonte National Park (Calabria Region, Southern Italy) the L-CAT were identified on the basis of "the visual characters of the environment", whereas in the Asinara National Park (Sardinia Region) on the basis of "vegetational characters" and in the Bellunesi Dolomites (Veneto Region, Northern Italy) on the basis of "physical, biological and anthropic" characters. Thus, the problem is always the same. There is no possibility for carrying out qualitative and/or quantitative comparisons among National Parks on the basis of a shared system of L-CAT. It is important to note, that such comparisons are indispensable for obtaining large-scale information about diversity, frequency, cover values, resilience degree (etc.) of these categories, which in its turn, is crucial for establishing a national strategy of landscape management and safeguard. Only in the Bellunesi Dolomites National Park is a faint attempt at creating interrelationships between different planning tools underway, with the decision of the Park's governance to maintain the same landscape categories as those already identified and mapped in the Regional Landscape Plan.

In the Regional Parks, landscape issues are not usually included in the prescriptive rules that have to be specifically defined before the zoning, except for a very few cases [e.g. Conero (Marche Region, Central Italy), and Apuan Alps Parks (Tuscany Region, Central Italy)]. As we have seen, in the Regional Parks the L-CAT are identified on the basis of different criteria (geomorphological, historical, perceptive, etc.). What is more, these criteria are often selected according to the experience/background of the particular people making up the workgroup, rather than on the basis of a well-established protocol or a pre-ordained scheme. Thus it is perhaps no wonder that these criteria are often to be found combined in the most varied ways [e.g. the ecological approach is used in the Porto Conte Park Plan (Sardinia Region), the geolitological/vegetational one is used in the Monte San Bartolo Park (Marche Region, Central Italy) and some undefined "ecological processes" are followed in the Molentargius-Saline Park (Sardinia Region)].

The addition of landscape questions/issues to those which already fall within the ambit of a National Park Plan generates more problems than advantages, and opens the door to problems of incompatibility between laws. In this case two different laws, the law on the protected areas (L. 394/91) and the Urbani Code come into contact. The doubling of the laws leads to the doubling of the authorities deputed to the governance of the territory and the halving of the possibilities of establishing the right balance between preservation and development in questions concerning the landscape and the environment. The Park Plan has priority over the PTPR for questions concerning the environment (see Albanese 2010, 2012), while the opposite is the case for questions concerning the landscape. It is precisely at this point that the vagueness surrounding the concept of landscape produces its worst effects; what is landscape and what is not? What are the L-CAT over which the PTPR acts as the highest authority and is called upon to assume the control over the Park Plan? If the landscape categories are in reality to be identified on the basis of aesthetic, ecological, historical, geomorphological, economic, and socio-cultural criteria - to put it bluntly - everything is landscape! This tends to

result in the PTPR hogging the right to take decisions on almost every form of land-use and human activity. This, in turn, leads to arguments and conflicts among authorities, giving rise to hard and endless legal battles whose only outcome is to enormously extend the time required for a Plan's approval, to the detriment of landscape, environment and the economic development of local populations. Emblematic is the case of the Natural Reserve of Tevere-Farfa (Lazio Region, Central Italy), where five administrative authorities, seven territorial authorities and ten different planning tools have been involved in the Plan procedures for the realization of the Park Plan. These procedures started at the beginning of the eighties and concluded in 2012, about thirty years later.

Some good practices from abroad

Landscape planning in Italy is beset by problems, and there are a multitude of factors that contribute to keeping procedures slow and muddled, as well as rendering positive outcomes unattainable. How to restart? In our opinion some weaknesses of the Italian system could be resolved, or at least improved, taking cue from some best practices currently in use in other countries. The landscape planning situation in France (Roche, 2007; Booth, 2009) is quite similar to the Italian one, although with clearer hierarchical systems, a more shared protocol for the identification of the elementary landscape units and a more malleable landscape framework at local level (Folinais, 2006; Tricaud, 2010, 2012; MEDDE, 2012). Some Spanish Autonomous communities have adopted a planning strategy which is directly in accordance with the ELC and which is defined by an authority deputed to prepare a base model to identify the landscape units (unfortunately, so far only three Communities have completed the whole procedure). In Slovenia, a National landscape law is lacking, but the whole landscape planning system, carried out in years 1991-1998 (by order of the National Office for Spatial Planning of the Ministry of the Environment and Spatial Planning of Slovenia), was based on a hierarchical classification that started with the identification of five broadest landscape units (landscape regions) which were defined according to three main criteria: climate, relief and land-use. Additional hierarchical levels were also considered in order to identify comparatively smaller but clearer units basing on the principle that "the units at the lowest level have mostly uniform landscape image or at least less diverse basic typological patterns" (see Hudoklin, 1994; Marušič & Jančič 1998; Hladnik 2012).

In the United Kingdom a "Landscape Character Assessment" was developed by the Countryside Agency and Scottish Natural Heritage (2002) for identifying landscape types at National and local levels, while the production of the "Guidelines for Implementing the European Landscape Convention in 2009" was delegated to an official non-governmental organisation (the planning system is under updating at present).

Germany has a National law that regulates both Nature conservation and landscape planning (Wilke *et al*., 2002; Christina *et al*., 2008) which is essentially based on the environmental safeguard criteria (Bastian, 2000; Mertins & Paal, 2009), and which could be adopted to great advantage and applied in the landscape planning of the Italian protected areas.

Proposals for future opportunities

It seems that both the ELC signer and non-signer countries (see Germany) have developed landscape planning procedures based on a hierarchical system, while Italy has not done so (or at least not officially, and not everywhere). Obviously, Italy does have a few points in its favour. The ELC has been completely accepted by the Italian government, and its legislative version, the Urbani Code, has resulted in all the Italian administrative Regions activating procedures for drawing up their Landscape Plans. The new step should be that of pushing all administrative Regions to complete their Landscape Plans rapidly and using, where possible, similar procedures. Such a commonality of intention would turn out as a point in favour of Italy, especially considering that not all European countries have a united, unambiguous set of strategies and procedures applied to landscape planning.

It is our opinion that a hierarchical model based on both environmental and anthropic criteria operating at different scales could represent the future of landscape classification. One solution could be to develop a hierarchical double-scale (step) system, composed of a series of macro and micro-ranks (Fig. 2). The macro-ranks (step one) would make reference to a well-established nomenclatural system, which in its turn is based on large-scale landscape analysis carried out through shared procedures for the identification of L-CAT. The micro-ranks (step two) would deal with small-scale analysis to be used at a regional or local level, according to a less restrictive system in respect of procedures for the identification of the L-CAT and their nomenclature. Vegetation science has proved very active in the proposal of innovative Landscape classification models and it has been teaching us for almost two decades now (Blasi *et al*., 2000; Blasi *et al*., 2017), that, environmental parameters, such as climate, lithology, geomorphology, vegetation (etc.), are probably the most suitable for characterizing the macro-ranks, which will be named environmental region, system, facet, unit, according to a hierarchical system. The key passage from the environmental system to the landscape system can take place with the introduction

of the land-use pattern, which is drawn up on the basis of a well-established international inventory (e.g. CORINE land cover, see e.g., Neumann *et al*., 2007; Feranec *et al*., 2010). Such use of environmental and land-use parameters would lead to the building of a "basic landscape model" of classification that is based entirely on quantitative data, and is thus free from being influenced by subjective opinions. Hierarchical systems of this kind have already been experienced in some Italian National Parks, such as Circeo and Cilento-Vallo di Diano (Blasi & Carranza, 1998; Blasi *et al*., 2000b, 2001), where the macro-ranks (landscape regions, systems, sub-systems and units) were hierarchically identified and arranged through the overlapping of different thematic maps (resp. macroclimatic, lithological, geomorphological, vegetational) in accordance with the ecological approach of Blasi *et al*. (2000c). As it was based exclusively on environmental factors, the Blasi *et al*. (2000c) system acted as a hierachical classification of the environment, more than of the landscape. Based on these premises, we suggest to slightly modify the system proposed by Blasi *et al*. (2000c) by adding further ranks, such as that based on the land-use (which still belongs to the macro-ranks), and the micro-ranks based on the historical, cultural, socio-economic or aesthetic features which complete and enhance the landscape vision. As far as the scale levels to be adopted to map the boundaries of macro-ranks are concerned (Fig. 2), these could broadly recall those already indicated in Blasi *et al*. (2000). It should be noted, however, that the environmental categories proposed in Blasi *et al*. (2000) which in the hierarchical scale come after "Regions" and "Systems", are identified on the basis of a mix of criteria for which they do not coincide perfectly with those proposed in our scheme in which each category is based on a single differential criterion with respect to the previous one. Regarding the reference scale to be adopted in the mapping of micro-ranks, our personal experience suggested that this should not exceed 1: 5000. The use of criteria such as the purely aesthetic or historical one can lead to extremely detailed zoning that in cartographic terms could translate into a complex pattern of polygons that would be difficult to read and interpret on a scale that was not of great detail. Clearly, as the landscape is an extremely complex matter (especially at the level of micro-pattern), exceptions to this general approach will always be possible and to be faced and solved, case by case, even proposing different solutions, taking care, however, that these are not completely divorced from the general hierarchical scheme defined first. The preliminary example of macro/micro hierarchical framework proposed here (Fig. 2) can act only as a declaration of intent at present. Indeed, it is a model which can certainly be improved upon and perfected and that needs to be subjected to a real field-test to test its applicability.

Concluding remarks

The careful analysis of the existing regional landscape plans in Italy and, above all, the criteria on the basis of which the different L-CATs were defined, led us to the conclusion that it is probably the "Urbani Code", due

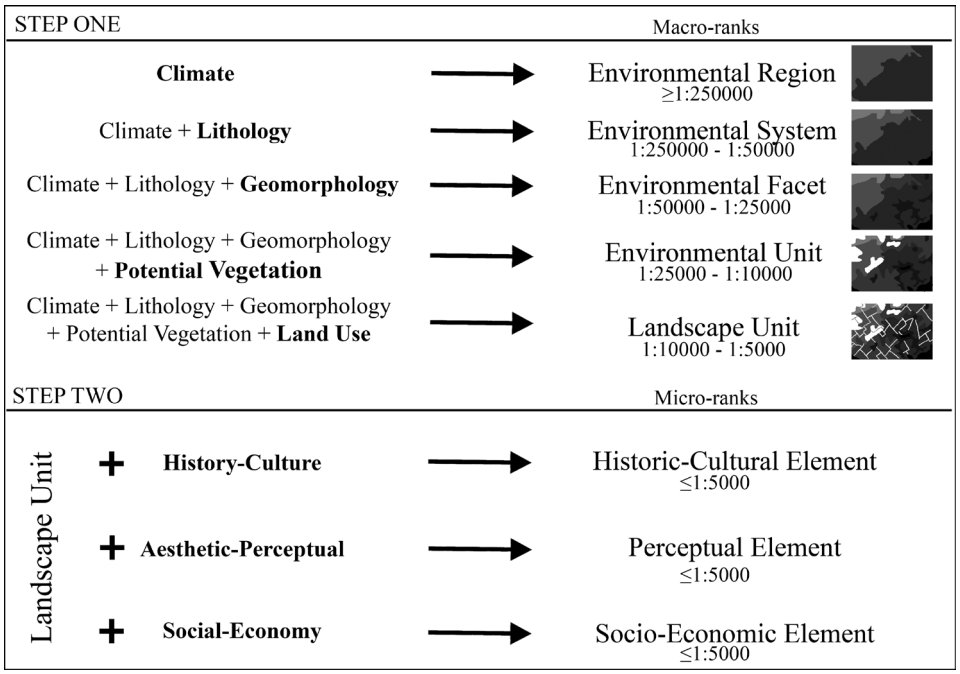

Fig. 2 - Hierarchical double-scale system showing the macro- (step one) and micro-ranks (step two) used for the landscape classification.

to its vagueness in defining the criteria of identification of landscape units, that is acting as the weak link of Italian planning. It would be a significant step forward if the vagueness of the system might be tightened up, and the proliferation of "multi-coloured" nomenclatural frameworks curtailed, without reducing the amount of information captured - in other words - driving the complexity of the landscape analyses in a system characterized by an unequivocal correspondence between names and criteria. A "renewed" paradigm where all the stakeholders involved are subjected to the same rules (in fact, this paradigm could not be considered as "new" when the majority of the Land Cover classification systems are already hierarchical). In such a renewed scenario, the sharing of a hierarchical system (such as that proposed in this paper) is to be viewed as a positive element. Hierarchy intended/conceived as a tool capable of breaking down the complexity of the landscape into a multi-system of primary components that are amenable/susceptible to being analysed separately when necessary. This could seem a sharp deviation from the concept of landscape understood as the result of a non-algebraic integration of disciplines. However, the contrary is the case - such a hierarchical system would work by taking into account that any change made on an individual landscape component produces effects on all the other components, as well as on the final overall result (landscape). The shared adoption of a hierarchical framework in landscape analyses would enable comparisons (in space and time) to be made between territories and/or countries. Comparisons which would preferably be based (at least in part) on quantitative parameters and producing accurate data-sets to be used for accurate interventions on the landscape. Once shared, this type of hierarchical system should be able to promote Plans and maps or even regulations which could really work as trans-national, going beyond the administrative boundaries in order to manage and preserve the landscape as human and environmental heritage. It would not be a matter of a landscape "globalization", viewed as simplification or banalization. Each country migth maintain its own order of priorities in landscape planning and management, in accordance with its own history and tradition. The difference would lie in considering a local landscape as a sub-system of habitats, traditions and socio-economic or cultural interrelationships, nested (as the nodes in the Ecological network are) in a wider landscapes system. Such a model could easily be used by different regions of the same country, as well as by regions of different countries, to produce landscape comparisons and to promote common strategies for landscape management and safeguard. After all, the demand for a common methodological framework to be used in landscape classification is increasing, and not only in Italy. The European network of landscape is currently considered to be the step following up on the Florence Convention for the conservation of biological and cultural diversity. The European Council through the ELCAI (European Landscape Character Initiative) in the period 2003-2005, reviewed the state of the art in landscape character assessment, with a view to realising sharable effective tools (https://cordis.europa.eu/project/id/EVK2-CT-2002-80021). The project involved 14 countries working to set up new methods for defining landscape characters including a wide range of dimensions, such as biophysical, socio-economic, aesthetic, political, etc. A similar work was carried out by RECEP-ENELC (http://www.paysmed.net/pays-urban/partner/recep_enelc.html), and it is probably not by chance that in Italy, six out of the seven members of the RECEP-ENELC (Abruzzo, Basilicata, Calabria, Campania, Piedmont, Tuscany, and Veneto), are using the same word "ambit" to define their main landscape unit.

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References

AA.VV., 2014. Council of Europe, Glossary of the Council of Europe information system of the european landscape convention, Secretariat of the European Landscape Convention.

Avis A.M., 1994. Integrated environmental management and environmental awareness in South Africa: where are we going?. Journal of Environmental Planning and Management 37(2): 227-242.

Albanese F., 2010. Il Piano Paesaggistico non può prevalere sul piano del Parco. Accessed on December 2019; http://www.lexambiente.it/beni-ambientali/169/6103-beni-ambientali-piano-paesaggistico-e-piano-parco.html.

Albanese F., 2012. La prevalenza le piano paesaggistico rispetto al piano del parco è attinente esclusivamente agli aspetti relativi alla mera tutela del paesaggio. Accessed on December 2019; http://www.lexambiente.com/materie/beni-ambientali/169-dottrina169/8258-beni-ambientali-piano-paesaggistico-e-piano-del-parco.html

Aprile M., 2012. Paesaggio, piano, progetto: problemi lessicali e altro (Landscape, plans, design: lexical and other problems). Territorio 60: 176-182.

Banchini R., Barbanete A., Marson A. & Scazzosi L., 2017. Rapporto sullo stato delle politiche per il pae-

saggio. Ministero dei Beni e delle Attività Culturali e del Turismo – MIBACT, Osservatorio Nazionale per la Qualità del Paesaggio – ONQP, MIBACT, Clan group, Roma.

Bastian O., 2000. Landscape classification in Saxony (Germany) a tool for holistic regional planning. Landscape and Urban Planning 50: 145-155.

Blasi C. & Carranza M.L., 1998. Unità ambientali e sottositemi di paesaggio del Parco nazionale del Circeo. In: Stanisci A. & Zerunian S. (Eds.): Flora e vegetazione del Parco nazionale del Circeo: 13-21. Ministero per le Politiche Agricole, Sabaudia.

Blasi C., Capotorti G., Copiz R., Guida D., Mollo B., Smiraglia D. & Zavattero L., 2014. Classification and mapping of the ecoregions of Italy. Plant Biosystems 148(6): 1255-1345.

Blasi C., Carranza M.L., Frondoni R. & Di Marzio P., 2000b. Classificazione gerarchica del territorio e definizione della qualità ambientale. Doc. 4, IAED, Conoscenza e riconoscibilità dei luoghi. GIS DAY, Roma, 15 nov. 2000. Ed. Papageno, Palermo.

Blasi C., Carranza M.L., Frondoni R. & Rosati L., 2000c. Ecosystem classification and mapping: a proposal for Italian landscapes. Applied Vegetation Science 3: 233-242.

Blasi C. & Di Pietro R., 1998. Two new phytosociological types of *Quercus pubescens* s.l. woodland communities in southern Latium. Plant Biosystems 132(3): 207-223.

Blasi C., Di Pietro R. & Fortini P., 2000a. A phytosociological analysis of abandoned terraced olive grove shrublands in the Tyrrhenian district of Central Italy. Plant Biosystems, 134(3): 305-331.

Blasi C., Di Pietro R., Filesi L. & Fortini P., 2001. Syntaxonomy, chorology and syndynamics of *Carpinus orientalis* communities in Central Italy. Phytocoenologia 31(1): 33-62.

Blasi C., Milone M., Guida D., De Filippo G., Di Gennaro A., La Valva V. & Nicoletti D., 2001. Ecologia del paesaggio e qualità ambientale del Parco del Cilento-Vallo di Diano. Documenti del territorio 46 anno XIV: 20-30.

Booth F., 2009. Planning and the Culture of Governance: Local Institutions and Reform in France. European Planning Studies 17(5): 677-695.

Bunce R.G.H., Metzger M.J., Jongman R.H.G., Brandt J., de Blust G., Elena-Rossello R., Groom G.B., Halada L., Hofer G., Howard D.C., Kovàř P., Mücher C.A., Padoa Schioppa E., Paelinx D., Palo A., Perez Soba M., Ramos I.L., Roche P., Skånes H. & Wrbka T., 2008. A standardized procedure for surveillance and monitoring European habitats and provision of spatial data. Landscape Ecology 23: 11-25.

Bunce R.G.H., Bogers M.M.B., Roche P., Walczak M., Geijzendorffer I.R. & Jongman R.H.G., 2011. Manual for habitat surveillance and monitoring and vegetation in temperate, Mediterranean and desert biomes. Wageningen, Alterra report 2154.

Calzolaio A., 2007. Il piano per il Parco – La pianificazione territoriale in area protetta. Ricerche e Redazioni, Teramo.

Clément G., 2013. Il giardino in movimento. Quodlibet, Macerata.

Countryside Agency and Scottish Natural Heritage, 2002. Landscape Character Assessment, Guidance for England and Scotland URL: https://www.nature.scot/sites/default/files/2018-02/Publication%202002%20-%20Landscape%20Character%20Assessment%20guidance%20for%20England%20and%20Scotland.pdf

Croce B., 1922. Relazione illustrativa della L. 11 giugno 1922, n. 778, Per la tutela delle bellezze naturali e degli immobili di particolare interesse storico.

Di Pietro R. & Blasi C., 2002. A phytosociological analysis of abandoned olive groves grasslands of Ausoni mountains (Tyrrhenian district of Central Italy). Lazaroa 23: 79-93.

Di Pietro R. & Filibeck G., 2001. Terrazzamenti abbandonati e recupero della vegetazione spontanea: il caso dei Monti Aurunci. Informatore Botanico Italiano 32(1): 17-30.

Feranec J., Jaffrain G., Soukup T. & Hazeu G., 2010. Determining changes and flows in European landscapes 1990-2000 using CORINE land cover data. Applied Geography, 30: 19-35.

Folinais C., 2006. Plans de Paysage, Eléments de bilan, Ministére de l'écologie, du développement et de l'aménagemet durables. Ministère de la transition Ecologique et solidaire, Rapport du MEDD.

Hladnik J., 2012. The distribution of landscape types in Slovenia. URL: https://rm.coe.int/16802fc13f

Hooper B.P., Mcdonald G.T. & Mitchell B., 1999. Facilitating Integrated Resource and Environmental Management: Australian and Canadian Perspectives. Journal of Environmental Planning and Management 42(5): 747-766.

Hudoklin, J., 1994. Landscape Typology and Defining of Outstanding Landscapes in Slovenia, master's thesis, Biotechnical Faculty, Ljubljana, 127 pp.

Marušič J & Jančič M., 1998. Regional distribution of landscape types: Methodological bases, R Slovenia, Ministry of the Environment and Physical Planning, National Office for Physical Planning, Ljubljana 1998.

MEDDE, 2012. Annexe 2: Éléments de cadrage méthodologique de la démarche «Plans de paysage. Republique Francaise, Ministère de l'Environnement, de l'Energie et de la Mer. Available at : http://www.reunion.developpement-durable.gouv.fr/IMG/pdf/annexe_2_elements_de_cadrage_methodologique_de_la_demarche.pdf

Mertins G. & Paal M., 2009. Regional Planning in Germany. Institutional framework, instruments and effectiveness. Investigación y Desarrollo 17(2): 31-49.

Neumann K., Herold M., Hartley A. & Schmullius C., 2007. Comparative assessment of CORINE2000 and GLC2000: spatial analysis of land cover data for Europe. Int J Appl Earth Obs 9: 425-437.

Nogué J., Sala P. & Grau J., 2016. The Landscape Catalogues of Catalonia. Methodology - Olot: Landscape Observatory of Catalonia; Barcelona: ATLL, 2016. (Documents; 3): 142 pp.

Rega C. & Bonifazi A., 2014. Strategic Environmental Assessment and spatial planning in Italy: sustainability, integration and democracy. Journal of Environmental Planning and Management 57(9): 1333-1358.

Roche A., 2007. Les unités et structures paysagères dans les atlas de paysages, Ministére de l'écologie, du développement et de l'aménagemet durables. Ministère de l'Ecologie, du Développement et de l'Aménagement Durables, Paris.

Settis S., 2012. Contro il degrado civile. Paesaggio e democrazia. La scuola di Pitagora, Napoli.

Settis S., 2013. Il paesaggio come bene comune. La scuola di Pitagora, Napoli.

Sowman M. & Brown A.L., 2006. Mainstreaming environmental sustainability into South Africa's integrated development planning process. Journal of Environmental Planning and Management 49(5): 695-712.

Tricaud P.M. (Ed), 2010. Unités paysagères de la région d'Île-de-France. Institut d'Aménagement et d'Urbanisme de la Région d'Île-de-France, Paris.

Wilke T., Schiller J. & Könze M., 2002. Landscape planning for sustainable municipal development, German Federal Agency for Nature Conservation (Bundesamt für Naturschutz, BfN). Federal Agency for Nature Conservation, Leipzig.

Appendix I - Sources from which information about current status and L-Cat names and number about Regional PTPR (see Tab. 1) were drawn

MiBACT – Ministero per i beni e le attività culturali (2018). Pianificazione e governo del territorio. Pianificazione paesaggistica - Quadro sinottico: Aggiornamento dicembre 2018. Available at: https://www.beniculturali.it/mibac/multimedia/MiBAC/documents/1541500351122_QUADRO_SINOTTICO_Pianificazione_paesaggistica_ante_e_post_Codice_aggiornamento_settembre_2018.pdf

Abruzzo Region (2010). Piano Paesaggistico, DLgs n. 42 del 22 gennaio 2004 e ssmm Artt. 142 e 143. Rapporto Preliminare, D.Lgs152 e ssmm e i, art 13: 17-22. Available at: https://www.regione.abruzzo.it/xAmbiente/docs/vas-SportelloInfo/RapportoPreliminare27_10.pdf

Aosta Valley Region (1997-1999). Relazione Illustrativa/Rapport Illustratif. Piano Territoriale Paesistico / Plan Territorial Paysager: 46-48. Available at: https://www.regione.vda.it/territorio/territorio/pianificazione_territoriale/ptr/pdf/relazione_illustrativa.pdf

Apulia Region (2015). Piano Paesaggistico Territoriale Regionale. Relazione Generale: 57-59. Available at: http://paesaggio.regione.puglia.it/PPTR_2015/1_Relazione%20Generale/01_Relazione%20Generale.pdf

Basilicata Region (1990). Regional law 12 February 1990, n. 3. Piani regionali paesistici di area vasta (1). Available at: https://www.consiglio.basilicata.it/consiglionew/site/Consiglio/detail.jsp?sec=107173&otype=1150&id=3387919&anno=1990

Calabria Region (2013). Quadro Territoriale Regionale Paesaggistico. a. Inidici e manifesto degli indirizzi. Available at: https://portale.regione.calabria.it/website/portalmedia/2016-09/ALLEGATO-A.pdf

Campania Region (2006). Piano Territoriale Regionale. Linee guida per il Paesaggio: 52-59. Available at: http://www.sito.regione.campania.it/PTR2006/PTR_All3.pdf

Emilia-Romagna Region (1993). Piano Territoriale Paesistico Regionale. Tavola n. 4. Unità di Paesaggio. Available at: http://territorio.regione.emilia-romagna.it/paesaggio/PTPR/strumenti-di-gestione-del-piano/unita-di-paesaggio

Friuli-Venezia Giulia Region (2018). Piano Paesaggistico Regionale. A. Relazione generale: 35. Available at: https://www.regione.fvg.it/rafvg/cms/RAFVG/ambiente-territorio/pianificazione-gestione-territorio/FOGLIA21/#id4

Lazio Region (2007). Piano Territoriale Paesistico Regionale. Relazione. Assessorato Urbanistica: 20-27. Available at: http://www.regione.lazio.it/rl_urbanistica/?vw=contenutiDettaglio&id=71

Liguria Region (2019). Piano Paesaggistico Regionale della Liguria. Documento Preliminare del Progetto di Piano (Art. 14, comma 1, l.r. 36/97 e smi). Rapporto Preliminare e Schema Di Piano (l.r. 32/2012 e smi - Allegato B lett. a): 57-60. Available at: https://www.regione.liguria.it/components/com_publiccompetitions/includes/download.php?id=33464:documento-preliminare-piano-paesaggistico.pdf

Lombardy Region (2010). Piano Paesaggistico Regionale. Cartografia di Piano. Tavola A - Ambiti geografici e unità tipologiche di paesaggio. Available at: https://www.regione.lombardia.it/wps/wcm/connect/882ccd74-b170-4562-a010-9b41c8436253/3PTR_PPR_TavolaA.pdf?MOD=AJPERES&CACHEID=ROOTWORKSPACE-882ccd74-b170-4562-a010-9b41c8436253-lFwOf.i

Marche Region (2009). Tav. 1. Ambiti di paesaggio e struttura amministrativa. Articolazione dei Macroambiti ed Ambiti di paesaggio. Available at: http://www.regione.marche.it/Portals/0/Paesaggio_Territorio_Urbanistica/Paesaggio/PPR/ambiti_limiti_comunali.pdf

Molise Region (1997-1999). Piani territoriali paesistico-ambientali di area vasta (P.T.P.A.A.V.), n. 1-8. Available at: http://www3.regione.molise.it/flex/cm/pages/ServeBLOB.php/L/IT/IDPagina/4818

Piedmont Region (2017). Piano Paesaggistico Regionale. Relazione: 49-61. Available at: https://www.regione.piemonte.it/web/sites/default/files/media/documenti/2019-04/a_Relazione.pdf

Sardinia Region (2006). Piano Paesaggistico Regionale. Legge Regionale 25 novembre 2004, n° 8. Primo ambito omogeneo – Area costiera. Relazioni. Available at: http://www.sardegnaterritorio.it/j/v/1123?s=6&v=9&c=7424&na=1&n=10

Sicily Region (1999). Linee Guida del Piano territoriale paesistico regionale. Available at: http://www.regione.sicilia.it/beniculturali/dirbenicult/bca/ptpr/lineeguida.htm

Tuscany Region (2014). Piano di indirizzo territoriale con valenza di piano paesaggistico. Relazione Generale del Piano Paesaggistico: 15-16. Available at: https://www.regione.toscana.it/documents/10180/12604066/Relazione+generale+del+Piano+paesaggistico.pdf/6f279657-b59f-4b9f-81be-8f13b24e863c

Trentino Region. Province of Bolzano (2002). LEROP - Piano di settore. Linee guida natura e paesaggio in Alto Adige: 63-101. Available at: http://www.provincia.bz.it/natura-ambiente/natura-territorio/downloads/Landschaftsleitbild_it.pdf

Trentino Region. Province of Trento (2002). Piano Urbanistico Provinciale. Available at: http://www.urbanistica.provincia.tn.it/pianificazione/piano_urbanistico_provinciale/

Umbria Region (2012). Piano Paesaggistico Regionale. Volume 1. Per una maggiore consapevolezza del valore del paesaggio. Conoscenze e convergenze cognitive. Relazione illustrativa. Available at: http://geo.umbriaterritorio.it/umbriageo/ppr/Relazione_illustrativa.pdf

Veneto Region (2009). PTRC adottato con DGR 372/2009. Variante parziale con attribuzione della valenza paesaggistica. Documento per la pianificazione paesaggistica. Allegato B3: 5-9. Available at: https://ptrc.regione.veneto.it/ppra

Appendix II - Sources from which information about current status and L-Cat names and number about National Parks (See Tab 4) were drawn

ISPRA – Istituto Superiore per la Protezione e la Ricerca Ambientale (2019). Repertorio dello stato di attuazione dei Piani per il Parco nei Parchi Nazionali. Available at: http://www.isprambiente.gov.it/it/banche-dati/repertorio-dello-stato-di-attuazione-dei-piani-per-il-parco-nei-parchi-nazionali

Parco Nazionale del Golfo di Orosei e Gennargentu (s.d.). Available at: http://www.parcogennargentu.it/

Parco Nazionale della Val Grande (2001). Available at: http://www.parcovalgrande.it/

Parco Nazionale delle Dolomiti Bellunesi (2013). Piano per il Parco, L. 394/91 art. 12. Norme tecniche di Attuazione. Available at: http://www.dolomitipark.it/doc_pdf/02_NTA.pdf

Parco Nazionale del Gran Sasso e Monti della Laga (2006). Il Piano del Parco. Available at: http://www.gransasso-lagapark.it/pagina.php?id=16

Parco Nazionale dei Monti Sibillini (2002). Piano per il Parco. Allegato A. Schede delle Unità di Paesaggio. Available at: http://www.sibillini.net/attivita/progetti/pianoPerIlParco/documenti/Allegato%20A.pdf

Parco Nazionale dello Stelvio (2018). Piano del Parco. Carta del paesaggio, n. 1-3. Available at: http://www.parcostelviotrentino.it/it/parco-aperto/piano-del-parco/130-25037.html

Parco Nazionale Appennino Tosco-Emiliano (2011). Relazione illustrativa: 122-123. Available at: http://www.parco-appennino.it/piano.del.parco/Documenti.di.Piano/Relazione.Illustrativa.pdf

Parco Nazionale dell'Aspromonte (2007). Piano per il parco. Relazione: 40-43. Available at: https://www.academia.edu/25147612/Piano_Per_Il_Parco_Nazionale_Dell_Aspromonte_Il_Patrimonio_Vegetazionale

Parco Nazionale della Majella (2009) . Piano del Parco. Available at: https://www.parcomajella.it/ente-parco/piano-e-regolamento/piano-del-parco/

Parco Nazionale d'Abruzzo Lazio e Molise (2010). Piano del Parco. Tav. 22. Unità di Paesaggio. Available at: http://www.parcoabruzzo.it/pdf/TAV22_Unit%C3%A0Paesaggio.pdf

Parco Nazionale Arcipelago Toscano (2010). Piano del Parco (Art. 12 L. 394/91). Allegato Ia. Sintesi Degli Studi Conoscitivi: 16-19. Available at: http://www.islepark.it/ente-parco/normativa/piano-del-parco

Parco Nazionale dell'Asinara (2008). Piano del Parco. Relazione generale: 20-28. Available at: http://www.parcoasinara.org/it/contenuti/articoli/dettagli/561/

P***arco Nazionale del Cilento e Vallo di Diano*** (2010). Piano del Parco. A. Relazione illustrativa: 4-5. Available at: http://www.cilentoediano.it/it/piano-del-parco

Parco Nazionale delle Cinque Terre (2010). Piano del Parco. Available at: http://www.parconazionale5terre.it/pagina.php?id=28

Parco Nazionale delle Foreste Casentinesi, Monte Falterona, Campigna (2009). Piano del Parco. Available at: https://www.regione.toscana.it/-/piano-del-parco-nazionale-delle-foreste-casentinesi-monte-falterona-campigna

Parco Nazionale del Vesuvio (2010). Piano del Parco. Relazione generale: 58-65. Available at: http://ww2.gazzettaamministrativa.it/opencms/export/sites/default/_gazzetta_amministrativa/amministrazione_trasparente/_campania/_parco_nazionale_del_vesuvio/190_pia_gov_ter/2014/Documenti_1413279313435/1413279317417_piano_relazionegenerale.pdf

Parco Nazionale della Sila (2015). Piano del Parco. Paesaggio.A5.0 Relazione: 29-33. Available at: http://old.regione.calabria.it/ambiente/index.php?option=com_content&task=view&id=1298&Itemid=116

Parco Nazionale di La Maddalena (2015). Regolamento del Parco. Relazione generale del Piano per il Parco: 31-34. Available at: http://www.lamaddalenapark.it/download/documenti/1447404382_4.pdf

Parco Nazionale dell'Alta Murgia (2014). Piano e Regolamento del Parco. Carta delle Unità di Paesaggio. Available at: https://www.parcoaltamurgia.gov.it/officinadelpiano/images/sit2016/24_unita_di_paesaggio_REV_2014.pdf

Parco Nazionale del Gargano (2016). Piano del Parco. Available at: https://www.parcogargano.it/servizi/Menu/dinamica.aspx?idSezione=616&idArea=17306&idCat=17737&ID=21618&TipoElemento=categoria

Parco Nazionale del Pollino (2011). Piano per il Parco. Relazione di Piano: 95. Available at: https://parcopollino.gov.it/it/l-ente-parco/vas-piano

Parco Nazionale dell'Appennino Lucano Val d'Agri Lagonegrese (2017). Piano del Parco. Available at: http://sit.

parcoappenninolucano.it/?page_id=1074
Parco Nazionale Gran Paradiso (2019). Piano del Parco. Relazione illustrativa: 90-96. Available at: http://www.pngp.it/folder/piano_del_parco/2019_Piano_Parco_relazione_illustrativa.pdf
Parco Nazionale Isola di Pantelleria (s.d.). Available at: http://www.parconazionalepantelleria.it/

Appendix III - Sources from which information about current status and L-Cat names and number about the Natural Regional Parks considered in this paper (See Tab. 5) were drawn

Parco Naturale Regionale del Conero (2010). Piano del Parco. Tavola q.P 02 Classificazione di ambienti territoriali. Tavola q.P 03 Classificazione Sub Ambiti Territoriali. Tavola q.P 04 Classificazione Unità Territoriali Elementari. Available at: http://www.parcodelconero.org/piani/piani-e-regolamenti/#fndtn-panel807
Parco Naturale Regionale Costa Otranto S. Maria di Leuca Bosco di Tricase (2019). Piano Territoriale Costa Otranto S. Maria di Leuca Bosco di Tricase Available at: www.parcootrantoleuca.it/index.php?option=com_content&view=article&id=42
Parco Naturale della Gola della Rossa e di Frasassi (2007). Piano del Parco Naturale della Gola della Rossa e di Frasassi: approvazione con prescrizioni legge regionale 28 aprile 1994, n. 15, articolo 15. Available at: https://www.consiglio.marche.it/banche_dati_e_documentazione/iter_degli_atti/paa/pdf/d_am56_8.pdf
Parco Naturale Regionale Molentargius-Saline (2011). Piano del Parco. Available at: https://www.parcomolentargius.it/servizi/canali/1087
Parco Naturale Regionale di Porto Conte (2015). Piano del Parco Naturale Regionale di Porto Conte. Dispositivi Areali. Available at: http://www.parcodiportoconte.it/piano-del-parco.aspx?ver=it
Parco Naturale del Monte San Bartolo (2011). Piano del Parco naturale del Monte San Bartolo. Available at: http://www.comune.gabicce-mare.ps.it/fileadmin/grpmnt/5514/Urbanistica/Piani/Piano_Parco_San_Bartolo_2011/2011-PianoDelParcoPubblicazioneGazzettaN.104.pdf
Parco Naturale Regionale Portofino (2002). Piano del Parco Naturale Regionale Portofino. Available at: http://www.parks.it/parco.portofino/PDF/piano-parco.pdf
Parco Regionale Alpi Apuane (2016) Piano per il parco (allegati deliberazione Consiglio direttivo 21/2016). Available at: http://www.parcapuane.toscana.it/DOCUMENTI/TRASPARENZA/trasparenza_pianificazione_governo_territorio_piano_parco_2016.htm
Parco Regionale Archeologico - Storico - Naturale delle Chiese Rupesri del Materano (2000). Piano del Parco Regionale Archeologico - Storico - Naturale delle Chiese Rupesri del Materano. Available at: http://www.parcomurgia.it/public/web/documenti/637201222094534Relazione_-_All.A)_DEFINITIVO.pdf
Parco Regionale delle Dolomiti Friulane (2015). Piano di conservazione e sviluppo del Parco Naturale Dolomiti Friulane. Available at: http://amministrazioneparcodolomitifriulane.insiel.it/fileadmin/user_amm_dolomitifriulane/allegati/amministrazione-trasparente/piano/pcs_pndf_norme_tecniche.pdf
Parco Regionale Maremma (2008). Piano per il Parco della Maremma, Deliberazione del Consiglio Direttivo dell'Ente Parco Regionale della Maremma n. 61 in data 30 dicembre 2008. Available at: https://www.parco-maremma.it/amministrazione-trasparente/disposizioni-generali/atti-generali/
Parco Regionale Montevecchia e Valle di Curone (2014). Variante generale al PTC del Parco. Tavola 1: Articolazione del Territorio. Available at: http://www.parcocurone.it/files/pianificazione/ptc2014/TAVOLA%201%20ARTICOLAZIONE%20DEL%20TERRITORIO%20a%20bassa%20risoluzione.pdf
Parco Regionale Sasso Simone e Simoncello (2007). Ente Parco Del Sasso Simone e Simoncello Piano del Parco. Available at: http://www.parcosimone.it/wp-content/uploads/2017/02/6_relazione-definitivo.pdf
Parco Regionale Spina Verde di Como (2005). Piano Territoriale di Coordinamento del Parco naturale Spina Verde di Como, ai sensi dell'art. 19 della l.r. 86/1983 e successive modifiche eintegrazioni. Available at: https://www.spinaverde.it/lib/File/08_albo_on_line/Parco_naturale_PTC.pdf
Parco Regionale Simbruini (2000). Approvazione del piano di assetto del parco regionale dell'Appennino Monti Simbruini ai sensi dell'articolo 26 della legge regionale 6 ottobre 1997, n. 29. Available at: http://www.parcomontisimbruini.it/pdf/Piano.assetto.Simbruini.pdf
Parco Regionale Valle Lambro (2000). Piano del Parco Valle Lambro è stato approvato con D.G.R. n° VII/601 del 28 Luglio 2000. Available at: http://www.parcovallelambro.it/sites/default/files/content/page/allegati/20120326/norme_tecniche_attuative_del_piano_territoriale_di_coordinamento.pdf