UNIVERSITÀ DEGLI STUDI DI CAGLIARI

**DOTTORATO DI RICERCA**

IN INGEGNERIA DEL TERRITORIO

CICLO XX

SETTORE SCIENTIFICO-DISCIPLINARE DI AFFERENZA: ICAR 20

# LANDSCAPE PLANNING IN THE CONTEXT OF EUROPEAN SPATIAL PLANNING: INTEGRATION, COOPERATION, PARTICIPATION AND PERCEPTION.
## A CASE STUDY FROM SARDINIA (ITALY).

## LA PIANIFICAZIONE DEL PAESAGGIO NEL CONTESTO DELLO *SPATIAL PLANNING* EUROPEO: INTEGRAZIONE, COOPERAZIONE, PARTECIPAZIONE, PERCEZIONE.
### UN CASO DI STUDIO DALLA REGIONE SARDEGNA.

PRESENTATA DA: SABRINA LAI

COORDINATORE DOTTORATO: PROF. GIORGIO QUERZOLI

RELATORE: PROF. CORRADO ZOPPI

ESAME FINALE ANNO 2008

# Abstract

*The Sardinian Regional Plan for the Landscape (PPR) was approved in 2006 as a response to statutory requirements and urgency to manage conflicts between environmental and economic needs in coastal areas. For these areas, the Sardinian PPR sets rules and policies to protect landscape and cultural identity. In order to achieve these aims, it provides prescriptive rules and indicative policies to be implemented by means of other plans, among which great importance is given to municipal master plans.*

*This study seeks to understand the nature of the Sardinian PPR by examining its contents and process, and to evaluate to what extent it achieves its aim, that of delivering a balanced, sustainable development in coastal areas. The plan has been studied by using different tools: an extensive study of the documents of the PPR, a literature review on spatial planning to assess its nature, in-depth interviews which provided insights on the preparation, contents, strengths and weaknesses of the plan.*

*The research succeeded in putting the Sardinian PPR in the context of spatial planning by assessing its (partial) fulfilment of four criteria, identified from literature as key features of spatial plans: ability to provide a framework for other plans, vision, inclusiveness, and deliverability. The assessment of the potential delivery of sustainable development in the island by means of qualitative research proved to be challenging. While there is some evidence of commitment to environmental sustainability, economic and social effects were questioned, especially with reference to issues of participation and cooperation between different institutions.*

*Although this study examines only a particular plan approved in Italy in compliance with the national law 'On Cultural Heritage and Landscape', the finding of this research can provide useful suggestions to enhance the delivery of sustainable development by means of other similar plans.*

# Acknowledgements

# List of abbreviations and acronyms

DEL42/2004 National (Italian) Decree Enacted by Law 42/2004, 'On cultural heritage and landscape'

ELC          European Landscape Convention

ELCAI        European Landscape Character Assessment Initiative

ESDP         European Spatial Development Perspective

LANDMAP      Landscape Assessment and Decision Making Process

LCA          Landscape Character Assessment

GIS          Geographic Information Systems

PPR          Regional Plan for the Landscape (*Piano Paesaggistico Regionale)*

PSTD         Plan for Sustainable Tourism Development

PTP          Landscape Planning Scheme *(Piano Territoriale Paesistico)*

SEA          Strategic Environmental Assessment

# List of Figures, Boxes and Tables

# Table of Contents

# 1  Introduction

## 1.1  Planning for sustainability

'Sustainable development' has become a leitmotiv since the World Commission on Environment and Development defined it in 1987 (WCED, 1987), and especially after the 1992 Earth Summit held in Rio.  Stemming from these earliest efforts to define sustainability and to set and promote its principles, a large number of international documents have been produced and agreed.  In some countries, the quest for a balance between preservation of the environment, economic growth and social equity is increasingly demanding that laws and regulations should put constraints on human activities so as to preserve natural and social capital.

Spatial planning – meant in its broader definition as a collection of methods, processes and acts which regulate the distribution of human activities in a certain space – is therefore recognised as a 'key vehicle' (Selman, 2006:1) for the delivery of sustainable development, so much so that in the United Kingdom the latter is regarded as 'core principle underpinning planning' (ODPM, 2003:2) or, in other words, 'planning has the purpose of contributing to the delivery of sustainable development' (Tewdwr-Jones, 2004:561).

A similar formal commitment is not found in Italian laws and regulations on planning systems, with the notable exception of the implementation of European Directives concerning Environmental Impact Assessment and Strategic Environmental Assessment (SEA), contained in Decree enacted by law number 152/2006, 'National Code of the Environment', modified by

two recent decrees enacted by law, number 4/2008 and number 59/2008. In particular, following the European Directive 2001/42/EC (CEC, 2001), article 4 of this law requires that, in order to promote sustainable development, environmental considerations be taken into account when preparing, adopting and approving certain kinds of plans and programs. For such plans, an environmental assessment must be carried out before their approval, in order to guarantee that their effects on the environment are assessed prior to their implementation. Hence, the relationship between spatial planning and sustainable development is defined in a negative way (by assessing their impact) rather than in a positive one (by assessing their contribution).

In Italy the role of the State, as far as spatial planning is concerned, is limited to guidance, coordination and issuing of frameworks (CEC, 2000:35), while a series of competences have been given to lower tiers of government, that is regions, provinces and municipalities. Regions are of particular importance, because their powers on planning are granted by the Constitution (CEC, 2000:39); on this basis, they are responsible for the preparation and approval of regional plans. In addition, regions approve laws on planning. A number of regional laws on planning (for instance, those approved by Liguria, Basilicata, Lazio, Lombardy, Tuscany, Campania) have included sustainable development among the objectives to be pursued by means of their regional spatial plans.

The main aim of this research consists in studying whether spatial planning can be effective in delivering sustainable development in a rigid and normative system, such as the Italian one, where various levels of government share powers and responsibilities on planning, and where plans have to conform themselves to laws and other plans. In particular, this research investigates how spatial planning is being used as a tool to deliver sustainable development by the Regional Administration of Sardinia, and its potential effectiveness. By considering the traditional 'triangle of objectives' (CSD, 1999:10), according to which sustainable development

cannot be achieved without a balanced achievement of environmental, economic and social goals, as a starting point, this research aims to explore the relationship between spatial planning and sustainability as it can be understood in the Sardinian 'Regional Plan for the Landscape' (PPR, *Piano Paesaggistico Regionale*), approved in 2006 in accordance with both the Italian law concerning cultural heritage and landscape, and the European Landscape Convention (ELC).

As shown in Figure 1, the plan concerns coastal areas only.
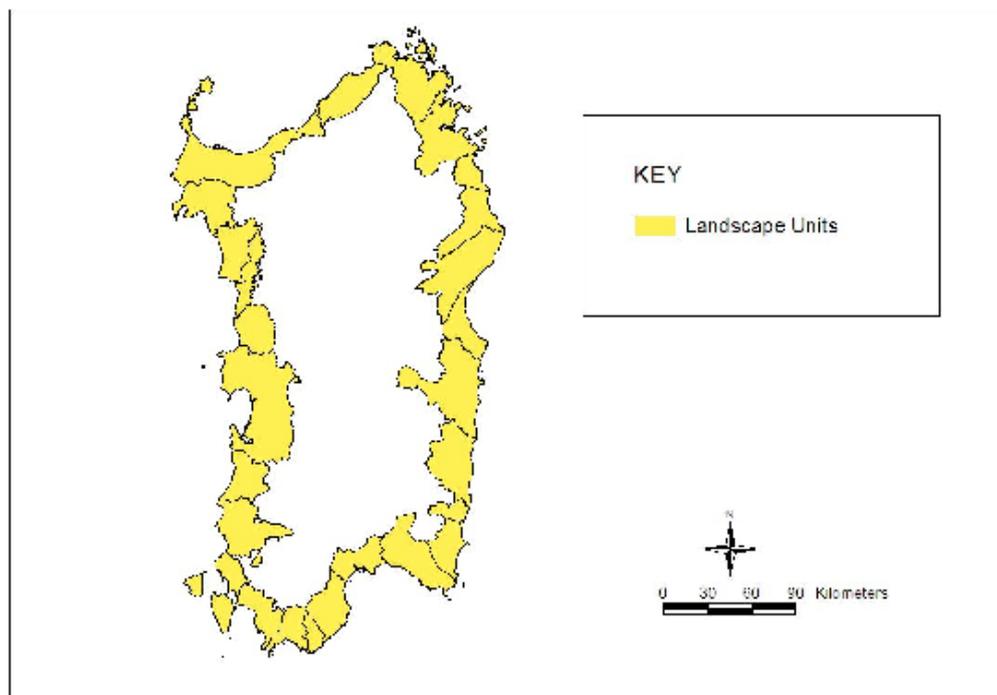


*Figure 1. Coastal area planned by the Sardinian PPR,
as divided into 27 homogeneous zones
('Landscape Units') (Map by the author, based on RAS, 2006).*

## 1.2 Coastal areas in Sardinia: a conflict between economic opportunities and environmental protection

One of the major islands in the Mediterranean Sea, Sardinia has a territory of 24,089.89 square kilometres (ISTAT, 2001) and a coastline of about 2,400 kilometres (RAS, 2003). Its population (1,631,880 according to the latest National Census, see ISTAT 2001) is unevenly distributed, and mostly concentred near the sea (Hospers, 2003:630); main industries and main transport infrastructures are located close to the coastline; furthermore, coastal tourism has been one of the drivers of regional economy for decades (Hospers, 2003:636). As a consequence, Sardinia has experienced an imbalanced development between coastal areas and inland, and great pressure has been put on natural resources near the sea.

The economic structure of the island is mainly based on the tertiary sector. Within tertiary sector, tourism is regarded as a 'strategic' and at the same time as a 'risky' sector for the economic growth of the island.[1] On the one hand, tourists are attracted by distinguishing nature, environment, and cultural identity of Sardinia (Hospers, 2003:629); on the other hand, tourism activities are mainly concentrated in coastal areas and in summer, a relatively short period of the year (RAS, 2006d:20). Furthermore, along the coastline, private houses for rent can accommodate (legally or illegally) four times as many tourists as hotels and resorts (RAS, 2006d:20), contributing significantly to a particular kind of informal economy of the island which, in the absence of proper plans or of their enforcement, results in consumption

---

[1] These adjectives ('strategic' and 'risky') appear in the first speech given shortly after his election by the new President of the Autonomous Region of Sardinia, Renato Soru, to the Regional Assembly of Sardinia (available at http://www.regione.sardegna.it/ documenti/ 1_18_20050104115857.pdf, accessed October 2008), somewhat anticipating the new regional law (so-called 'Coast-saving law') which was to be approved a couple of months later, and which made it compulsory to prepare a regional plan for the landscape within one year.

of land and 'strip development' (Kay and Alder, 1999:22) in many parts of the region close to the coastline.

Hence the twofold role of coastal areas, as one of the greatest economic attractor assets of the whole island and, at the same time, a threatened resource.  Coastal areas, although variously defined in the literature (Kay and Alder, 1999:2-4; Taussik, 2001:142), have generally been considered as areas to be planned and managed in a special way because of the number of activities and range of land uses found, much higher than those of inland areas, and, especially, of the fragility and peculiarity which intrinsically characterise coastlines.  As a result of these activities, in coastal areas various interests (those of residents, developers, investors, environmentalists) meet and conflict the one with the other.  Because of this relationship between one of the key sectors of Sardinian economy and the need to safeguard coastal areas, it was decided by the regional executive committee that the Sardinian PPR had to be prepared together with a 'Plan for Sustainable Tourism Development' (PSTD) (RAS, 2004).  Contrary to this decision, the two plans eventually followed two different paths, and the PSTD was presented for its approval several months after the approval of the PPR (RAS, 2007b).

## 1.3  Research gaps

The Sardinian Regional Plan for the Landscape is the first regional plan approved in compliance with the national law on cultural heritage and landscape; moreover, the plan has come into force very recently, therefore very little research exists on it.

Costa (2006) has studied the definition of the boundary of the coastal strip in the Sardinian PPR.  This research is restricted to a very specific topic, that of the application of scientific criteria in defining the boundaries of

areas where special restrictions on rights to develop land apply. Manca (2008) has shown how principles contained in the Sardinian PPR relate with both those contained in the European Spatial Development Perspective (ESDP) and with the political priorities of the regional government; he has also examined the significance of the coastal strip as a natural asset and the meaning and problems of the definition of a physical boundary of the strip. Roggio (2007) has looked at plans for coastal areas in Sardinia as a cultural and political response to modifications and environmental impacts deriving from economic activities (tourism and construction in particular) and to cultural and political priorities. Zoppi (2007 and 2008) has investigated the consequences of the rules contained in the Sardinian PPR with reference to required adjustments of municipal master plans, and possible subsequent conflicts, by evaluating the degree of consensus of the citizens of a specific town on such modifications.

To the best of the researcher's knowledge, no research has explored the nature and the effects of the PPR by putting it in the context of spatial planning and by examining its understanding of sustainability and potential effectiveness. Not only can such an assessment be regarded as a learning tool, useful to improve the making of the other regions' plans, but it could also contribute to enhance the implementation of the plan itself.

## 1.4  Aims and research questions

If this research were to assess the plan having regard to its outcomes, it would be necessary to examine the consequences and the changes produced by the plan, possibly in a quantitative way. Although possible, this would be extremely difficult, especially because the implementation of the plan is carried out through required alterations of other plans. For instance, urban master plans have to revise their zoning systems and

redefine areas previously designated as residential expansion zones or as zones for tourism developments, thus producing both positive and negative impacts, which can be estimate by means of appropriate assumptions, as previous studies have demonstrated (Zoppi, 2007 and 2008).

However, as some scholars (Albrechts, 2004:747; Tewdwr-Jones, 2004:563) have pointed out, spatial planning has to do not only with implementation and performance, but also with processes (Faludi, 2000b:299). It is therefore appropriate to evaluate the Sardinian PPR, and especially the way in which sustainability is understood and pursued, by making reference to its contents (albeit only partially put into practice) and to the making of the plan.

In its premises, the regional Plan for the Landscape declares that its principles 'constitute a framework and a reference for the sustainable development of the regional territory, based upon a balance between social needs, economic activities and environment' (RAS, 2006a: article 3). However, nowhere does the plain provide a definition of 'sustainable development', nor does it clearly relate its policies and actions with these three components of sustainability. Furthermore, a reading of the documents contained in the plan suggests the idea that sustainable development, as pursued in the plan, is imbalanced towards the environmental component, while economic and social aspects seem not to be given the same importance as the environmental ones. The interpretation of the plan is explored further in chapter 4.

Therefore, in order to establish whether a regional plan for the landscape can contribute to sustainability, this research will attempt: (i) to understand if the PPR constitutes a specific example of spatial planning, (ii) to evaluate whether its contents, both rules and policies, are consistent with the declared aim of its principles, that of pursuing a sustainable, balanced development, by looking especially at the issue of participation. These questions will be broken down into the following research questions:

**Q1:** Which features, if any, does the Sardinian PPR share with spatial planning, as promoted by the European Union and understood by the literature?

**Q2:** To what extent does the plan integrate environmental, social and economic concerns?

**Q3:** What kinds of policies does the plan set for the making of spaces? What vision do they propose?

**Q4:** What types of rules does the Sardinian PPR set for its coordination with other policies, plans or programs? What type of governance do these rules imply?

**Q5:** What type of landscape characterisation has the Sardinian PPR utilised, and how does it compare with the approaches currently in use in Europe? Are there any suggestions for improving the process?

## 1.5  Research methodology

The main aim of this research, that of studying whether the PPR is a spatial plan and what type of sustainability it delivers, stems from the international debate on what '(regional) spatial planning' and 'sustainability' are. Personal values and beliefs, as well as professional expertise, affect the way these two concepts are understood, which in turns affects the way their actual or ideal relation is perceived.  Therefore, the idea of a 'logically ordered, objective reality that we can come to know' (Babbie, 1998:50) does

not hold in this case, since many different and contrasting points of view exist. In other words, this research is socially and culturally grounded.

The overall aim was approached by means of a selected case study (the Sardinian PPR). The choice of a case study made it possible to carry out the research integrating different sources of information and research methods (Denscombe, 1998:31), that is a literature review, a study of documents and policies, and some in-depth interviews with privileged respondents, including planners, civil servants and academics who took part in the preparation of the plans. The research methodology is described in more depth in chapter 3.

## 1.6  Structure and contents

This research consists of 7 chapters.

Following chapter 1, which sets out the context, introduces the general aim of the research and formulates the research questions, chapter 2 contains the literature review. After a basic introduction on spatial planning in Italy, it explores different ideas about spatial planning and identifies, building upon previous research, some key features of spatial planning. The second part of the chapter presents the principles contained in, and actions recommended by, an official (governmental) decision setting a strategy for the delivery of sustainability.

Chapter 3 describes the research methodology in detail. It accounts for the choices made, both for the method and for the selection of the interviewees, describes the planning and the making process of the interviews, and relates questions asked during the interviews with the research questions.

Chapter 4 contains some relevant information about the Sardinian PPR. After explaining its statutory character, which stems from a national law, the chapter looks at protection of coastal areas in Sardinia before the approval of the PPR, and highlights a gap in the planning system as the second driver for the preparation of the plan (the first one being the conflict between economic and environmental concerns, presented in section 1.2). The 'descriptive, prescriptive, and indicative' content of the Sardinian PPR is then briefly described in general and with a specific example, that of the 'coastal strip'.

Chapter 5 presents the results of the research, and is divided in two parts. The first one analyses, on the basis of information and opinions provided by the privileged observers, how the Sardinian PPR relates to sustainability. The second one, based both on the literature review and on the interviews, discusses to what extent some key elements of spatial plans belong to the Sardinian PPR.

Drawing upon some comments arisen during the interviews, regarding the landscape character assessment procedure utilised within the making of the PPR, chapter 6 explores how landscapes are defined and classified by providing the reader with some excerpts from the European Landscape Convention, developing a reference framework, and analysing some recent experiences from Great Britain. These experiences shed some light on possible future improvements for the inclusion of communities' perceptions in defining landscapes.

Finally, chapter 7 summarises the main findings of this study, answers the research questions and draws the conclusions.

# 2 Literature review: spatial planning and sustainability

*If you steal from one author, it's plagiarism;*
*if you steal from many, it's research.*
*(Mizner, as cited in Boyle and Flowerdew, 2003:295)*

## 2.1 Introduction

In order to evaluate the Sardinian PPR both as a spatial plan and with reference to its contribution to sustainability, this chapter aims to pinpoint some key characteristics of spatial plans by looking at the international literature on the topic, and to identify some principles and recommended actions for a plan aimed at delivering sustainable development.

Spatial planning in Italy is 'based on an approach typical of urban and physical land-use planning' and regulated by a fairly complex system of numerous national and regional laws (Khakee and Barbanente, 2003:189; CEC, 2000:18), and it is aimed both at regulating development of land, and at protecting the environment (CEC, 2000:35). Different types of plans are drawn up by different administrative tiers, in a somewhat hierarchical system; as a general rule, 'higher' (regional and provincial) plans establish principles, provide guidelines, and coordinate 'lower' (municipal) plans (CEC, 2000:35). Therefore, while regional plans are usually strategic and provide frameworks for sectoral policies and urban plans (CEC, 2000:101), the municipal plans are legally binding master plans, consisting of detailed zoning schemes aimed at controlling land uses and at providing civil

servants with a system of rules to decide upon the granting or refusal of planning permits.

In this normative context, planners are faced with an extremely complex activity, which must take into account not only all the plans which are in force in a certain space, but also rules and limitations imposed by law on spatial planning.  Because of this regulatory and hierarchical approach, the Italian system of planning is usually considered as a technical activity, quite distant from the mainstream concept of 'spatial planning'.

In order to assess to what extent the Sardinian PPR can be considered a spatial plan, despite such rigid and normative context, this chapter aims to understand whether a shared idea of what 'spatial planning' is, both in theory and in practice, exists among practitioners and academics, and to identify what features distinguish spatial plans from other types of plans.

The chapter commences with a general overview of how the expression 'spatial planning' is currently understood and utilised at the international level (section 2.2).  Next, some common features of spatial planning are identified (section 2.3) to allow for a subsequent assessment of the nature of the Sardinian PPR, which, however, needs to take into account influence of planning tradition and laws in the Italian planning system.  Finally, some principles to be incorporated into planning in pursuit of sustainable development are presented (section 2.4).

Although much has been published about sustainability, and various definitions, principles, actions, have been proposed by academics, governments, and supranational organisations, section 2.4 looks at the principles and actions recommended by the 'Strategy for Environmental Action to Pursue Sustainable Development in Italy', a governmental decision approved in 2002, which appears to be the only national official strategy concerning sustainability.  The selection of actions presented here summarises all the recommendations in this document that relate to spatial

planning and seek to ensure that it makes provisions for a sustainable management and transformation of space.

## 2.2  Defining 'spatial planning' in practice

Spatial planning has been defined by the European Commission (CEC, 1997:24; CEC, 2000:13) as 'the methods used largely by the public sector to influence the future distribution of activities in space', aimed at:

- Organising and coordinating different types of activities undertaken in a certain place;
- Pursuing sustainable development by managing possible conflicts between development and protection of the environment;
- Avoiding social and economic imbalances.

Four main approaches to spatial planning in Europe have been identified by the European Compendium of Spatial Planning Systems and Policies (CEC, 1997), in an attempt to classify different planning traditions and systems, and to allow for a comparison between the member states' (at that time, only fifteen) planning systems (Faludi, 2000a:244-245; Dühr, 2007:41):

- A 'regional economic planning approach', which aims primarily at social and economic objectives, such as developing conditions to attract firms and investment, or reducing imbalances between different areas;
- A 'comprehensive integrated approach', which focuses on the creation of a framework to integrate and coordinate sectoral policies with a spatial impact;
- A 'land use management tradition', aimed at controlling development and change in land uses;

- An 'urbanism tradition', which pursues the same objectives as the previous one, but is more concerned with urban design and building control, leading to a regulatory system based on zoning and limits.

Both the definition and the classification suggest that the expression 'spatial planning' has been used so generally that the great majority of plans could be referred to as 'spatial plans', provided that they (i) affect a specific space, place or site, or, as Albrechts indicated (2004:748-9), they 'bring into focus the "where of things"'; (ii) set rules to protect particular sites; and (iii) are able to understand, influence, and transform spatial relations between places, activities, networks and nodes (Healey, 2004:46).  Therefore, it has been argued that spatial planning 'took, and still takes a variety of paths' (Albrechts, 2001:293), and this absence of a 'univocal definition' (*ibid*.) of what spatial planning is (or should be) has been emphasised by many scholars (Harris *et al.*, 2002:555).

There are manifold reasons why spatial planning is understood and carried out in different ways.  The influence of planning tradition and, particularly, presence or absence of statutory requirements have been cited by Albrechts (2006:1150) and Dühr (2004); economic and institutional relations and policy agendas have been studied by Healey *et al.* (1999); political reasons, such as devolution and decentralisation, have been put forward by Counsell *et al.* (2006:243), Faludi (2004:400), and Harris *et al.*  (2002:564); issues of status have been examined by Zonneveld (2005:144), as well as the function of the plan, whether more aimed at communicating or at programming (Zonneveld, 2005:151), at providing a learning process or at achieving results (Faludi, 2000b:300).  As a consequence, under the expression 'spatial planning' a wide range of plans is encompassed, since it is 'not a single concept, procedure, or tool.  In fact, it is a set of concepts, procedures, and tools that must be tailored carefully to whatever situation is at hand if desirable outcomes are to be achieved' (Albrechts, 2004:747-748).

## 2.3  Common features in spatial planning?

The differences have been widely explored, but only a small number of studies have attempted to identify common objectives, features, and processes.  After briefly presenting three frameworks for spatial planning found in the literature, this section goes on to discuss some of their key features in order to focus on a set of criteria as a basis for assessing whether, or to what extent, the Sardinian PPR can be considered an example of spatial planning, and what distinguishing features can be identified.  As such, it provides the grounds to answer research question number 1; however, some of these factors will also help to answer the other research questions (number 2, 3, and 4).

---

1. Rationale for the spatial strategy: providing a framework for policy integration and setting out general spatial pattern of development.
2. Purpose: form a context within which more detailed local development plans could be drawn up.
3. A statement as to guiding principles or strategic objectives. Principles of sustainable development are a key component..
4. An agreed status (statutory or non-statutory for example).
5. The nature of presentation (maps, text or both).
6. The nature of the approach (topic based, such as housing or thematic, such as balanced development).
7. The relationship to the wider planning system (for instance, providing a context or acting as guidelines).
8. The relationship to other strategies (especially sectoral ones).
9. The type of background work undertaken to develop the strategy (depth and breadth of background analysis).
10. Whether the strategy is broadly analytical, sets out strategic policies or is a means of implementing policies.
11. The degree of consultation undertaken (depending on the country).
12. Whether the strategy is subject to independent review and/or sustainability appraisal.
13. The timescales involved in developing the strategy (depending on the level of analysis and, especially, on the extent of the consultation exercise).
14. Monitoring and review procedures.

*Box 1.  Common components of spatial planning methodologies*
*(based on Cardiff University and ECOTEC, 2001:8-17).*

---

The first framework identifies 14 'components' of spatial plans (Box 1), and was prepared by Cardiff University and ECOTEC (2001) for the National Assembly for Wales in the early stages of the making of the Wales Spatial Plan. This framework draws on the basis of a comparative piece of research on six selected case studies (national and regional spatial plans, all from the North-West of Europe), in order to suggest possible approaches for the Wales Spatial Plan.

The second framework (Box 2) shows the 5 characteristics of (strategic) spatial plans, as listed by Albrechts (2006). These characteristics were also identified on the basis of comparative research, this time on nine selected case studies of municipal, regional and national spatial plans, mostly from Western Europe. The aim of this framework, called by the author 'normative view', was to 'frame activities of actors' (Albrechts, 2006:1165); consequently, if compared to the contents of Box 1, the elements in Box 2 focus more on the 'political process' of spatial planning (actors, roles, aims, activities) and less on the contents of the plans.

---

1. Selective, oriented to issues that really matter.
2. Relational-annex-inclusive, focusing on relations and processes, participative.
3. Integrative (both vertically and horizontally) as for different levels and parts of government, capable of creating synergies.
4. Visioning, providing a detailed picture of some desired end state to be achieved in a certain number of years.
5. Action oriented, active force in enabling change.

---

*Box 2. Characteristics of spatial plans*
*(based on Albrechts, 2006:1155-1161).*

Finally, the third framework (Box 3) shows five characteristics of spatial planning, as identified by Tewdwr-Jones (2004). In contrast to both the previous frameworks, this one does not stem from a review of existent plans; in fact, it lists 'desired' qualities of spatial plans from a purely theoretical perspective. However, all the points contained in Box 3 can be found either in Box 1 or in Box 2.

1. Broad-ranging, concerning the assessment of the spatial dimensions of various activities and sectors, and interactions between them.
2. Visionary, by opening up to a range of participants, and by relating processes of planning policy-making to notions of place .
3. Integrating, through the bringing together of both spatial issues relating to the development and use of land, and the users of planning.
4. Deliverable, applying strategy to programmes for action, through proactive processes, involving coordination and choreography between different over-lapping sectors and resources.
5. Participative, where planning is a facilitator and dependent on new forms of partnership and engagement with a range of bodies, stakeholders, businesses and communities.

*Box 3. Characteristics of spatial plans*
*(Tewdwr-Jones, 2004:563).*

Drawing upon the previous three frameworks, four characteristics have been selected in order to assess the nature of the Sardinian PPR and are presented in the following three sub-sections.

### 2.3.1  More than just land-use oriented

This section relates to the idea of spatial planning as a strategic framework, capable of integrating policies and plans, and in particular of providing a context for the preparation of land-use plans.  This concept synthesises contents developed in points 1 (framework), 2 (context for development plans), 3 in Box 1(guiding principles) and points 1 (broad ranging) and 3 (integrating) in Box 3.

'Spatial planning' is the expression currently used in contrast to the term 'physical planning' (Counsell *et al.*, 2006:243), or to describe an activity that is far broader than planning (Tewdwr-Jones and Williams, 2001:7), in that it deals both with physical location of development, and with any kind of activity which can affect, or may take place in, a certain space.

According to Hull (1998:328) only two roles can be performed by traditional land-use planning, that is (i) management of possible conflicts over land

uses and development of land, and (ii) promotion of distinctive qualities of places. However, there are arguments which diminish the significance of these functions and raise doubts on the effectiveness of land-use planning.

First, it has been argued that land-use plans mainly 'focus on "physical" aspects, providing "physical" solutions to social or economic problems' (Albrechts, 2004:745) or to environmental ones, while participation of social and economic stakeholders, as well as that of common citizens, is rather limited. Because of this 'strict', 'narrow' (Tewdwr-Jones and Williams, 2001:7) and regulatory focus on physical aspects and solutions, land-use planning has been regarded as an 'inadequate' approach (Upton, 2006:112) to provide solutions to environmental, social and economic needs and conflicting demands on land and is thus said to be 'insufficiently equipped to stimulate sustainable development' (Dijst *et al.*, 2005:1332).

Second, according to Albrechts (2004:745), land-use plans can be questioned on the grounds of lack of means to guarantee that they are actually implemented: while land-use regulations are able to prevent undesired developments, they cannot ensure that places are transformed according to the plans. In particular, this holds true in the Italian planning system, where land owners have the right, but not the obligation, to develop their land in line with the zoning system of master plans; in other words, it is up to them to develop their land or to maintain the *status quo*.

Third, as Couclelis (2005:1355) has pointed out, land-use planning is 'a hopelessly complex human endeavour' and, despite the fact that it affects common citizens' activities, it is highly specialised and principles or values underpinning plans are rather difficult for the general public to understand. Consequently, in a system, such as the Italian one, where criteria and guidelines are provided by the political system, and land-use plans are drawn by technical and administrative staff on the basis of those guidelines (CEC, 2000:27), public participation is restricted to written remarks

(presented after the adoption of a plan and before its approval), despite the fact that master plans affect nearly every citizen's activities.

Advocates of spatial planning argue that a shift from a regulatory system to a 'less formal, more creative [and] more integrative approach' (Upton, 2006:112) provides a more effective means to deal with management and transformation of spaces, and at the same time allows for integration of different policies and greater participation both of key actors and of general public (Tewdwr-Jones, 2004:562). It seems, therefore, that spatial planning, far from opposing land-use planning, ought to be considered a broader concept (Allmendiger and Haughton, 2007:1478; Harris *et al.*, 2002:555), a more strategic activity, a 'spatial logic' (Albrechts, 2004:749) which consists in setting frameworks (Healey *et al.,* 1999:340) and in providing context, principles, aims and directions both for land-use plans and for other sectoral strategies. However, it has been argued that measures contained in spatial plans do 'not always sit easily with traditional land-use regulations' (Harris and Hooper, 2004:148).

### 2.3.2  Visionary and inclusive

This section develops the idea of spatial planning as a participative process, capable of creating consensus on a shared vision in order to tackle a set of issues, selected on the basis of shared priorities. This concept synthesises contents explored in points 1 (selectivity), 2 (inclusiveness), 3 (integration), 4 (vision) in Box 2 and points 2 (vision) and 5 (participation) in Box 3, and it also relates with points 7, 8, 9, 11 in Box 1.

It has been suggested (Thompson, 2000:127-128) that 'spatial planning' conveys the idea of a cross-sectoral and long-term approach, because of the different types of integration which are necessary. These include: horizontal cooperation between different departments of the public administration (against the so-called 'silo' mentality) (Harris and Hooper, 2004:150); vertical cooperation between different tiers of government

(Counsell *et al.*, 2006:243); coordination of various strategies and policy sectors (Hull, 1998:328; Tewdwr-Jones and Williams, 2001:7; Tewdwr-Jones, 2004:563), and integration of stakeholders and communities in the process (Counsell *et al.,* 2006:243). This inclusiveness needs to accompany the plan throughout the process, from the definition of aims to its implementation and monitoring.

Such a challenging and complex process requires a careful selection of 'issues that really matter' (Albrecths, 2006:1155), so that it does not again become comprehensive planning (Counsell *et al.*, 2006:245; Harris and Hooper, 2004:151) by integrating '"everything" in policy terms' (Friedmann, in: Friedmann *et al.*, 2004:52). This selection of issues to be dealt with by means of a spatial plan is strategic in itself, and cannot be made without a vision of 'what a place is and may become' (Albrechts, 2004:747 and 2006:1152). This, in turns, requires a sound understanding of the meaning of places, flows of activities, and functional relationships between spaces (Haley, 2007:208), which raises questions about roles and responsibilities of politics, experts, and communities, about who needs to be involved, when, and in what way, in building a vision, identifying meanings and functions of places, selecting issues to be tackled.

### 2.3.3  Deliverable

The concept of deliverability is inherent in points 4 and 14 in Box 1, point 5 in Box 2 and point 4 in Box 3, as discussed below.

Apparently, the implementation of a spatial plan is affected by the status of the plan itself. Statutory and binding documents set formal administrative procedures which rule over the implementation of the plan, while an indicative framework relies on voluntary cooperation and participation. Therefore, if not clearly defined, the implementation of a statutory plan might seem at least more likely than that of an indicative one. Nevertheless, it has been suggested (Zonneveld, 2005:144) that the

ratification of a plan by a political body and its binding status on lower plans are neither a necessary condition for the plan to be put into practice, nor a guarantee that implementation of the policies will take place.

Two ingredients have be found to be much more important than the legal status of the plan. First, plans need to address resource allocation and financial issues (Tewdwr-Jones, 2004:565). Second, wide consensus of those sectors which are directly involved in transforming policies into actions, for example within the local economy, is a key factor in delivering strategies. As a consequence, indicative plans can be even more 'deliverable' than binding ones if they succeed either in influencing the making of other policies which allocate funds, or in creating conditions and setting mechanisms to attract investors who can carry out the implementation of the plan.

It has also been argued that spatial plans can achieve their aims only through partnership (Tewdwr-Jones, 2004:563); however, spatial plans which rely only, or almost exclusively, on attracting investment from the private sectors have been questioned (Jensen and Richardson, 2001:712) because they risk threatening both environmental sustainability, by favouring growth over development, and social equity, because of the presence of 'privileged' actors and interests.

## 2.4  Spatial planning for sustainable development

As earlier said, contributing to sustainable development is one of the aims of spatial planning according to the European Commission (see section 2.2).

In Italy, only recently has the principle of sustainable development has been granted a legal status. Article 3-*quarter* of Decree enacted by law number

152/2006, as modified by Decree enacted by law number 4/2008, states that every human activity which is relevant to the object of this law (that is, every activity which can have an effect on the quality of the environment) must conform to the principle of sustainable development, so as to ensure that future generations can enjoy a fair level of the quality of the environment. The article goes on to affirm that activities of public administrations must aim to create the conditions to put this principle into practice, and it clearly states that, when choices and decisions require an evaluation of, and comparison between, private and public interests, public administrations have to give priority to protection of the environment and of cultural heritage. Next, in order to guarantee that resources are available in the future, this article advocates finding a balance between resources to be conserved and to be consumed. Finally, correct functioning and evolution of natural ecosystems must be preserved from negative impacts deriving from human activities.

These general principles have a clear, although not explicitly stated, relationship with planning, both as a human activity which impacts on the environment (resources and ecosystems included) and as the arena where decisions which affect private and public interests are made.

Prior to this very recent bringing of the principle of sustainability into the legal system, some principles and actions linking sustainable development and planning could be found in a decision of the Inter-Ministerial Committee for Economic Programming, which proposes a path towards sustainability in Italy. This decision in 2002 approved a document proposed by the Minister of the Environment, the 'Strategy for Environmental Action to Pursue Sustainable Development in Italy'. The decision lists actions to be taken, sets targets to be achieved, and identifies some indicators to monitor the implementation of the strategy. As for the principles, they are contained in the Strategy, which is a part of the decision.

Since such principles do not specifically refer to planning, only those statements considered relevant to spatial planning will be presented in the remainder of this section. Furthermore, these principles and actions adhere to mainstream definitions of, and approaches to, sustainability; there is not an 'original' vision or an 'Italian way' to sustainability. However, reference is here made to this document because it is a governmental decision, which has a quasi-legal role and strength.

The first principle (MATT, 2002: article 8) urges that pressures deriving from human activities on the *environment* be reduced; different actions are listed as necessary in order to achieve this aim. Relevant to planning, it is recommended that non-renewable resources should not be exploited, biodiversity should be protected, and landscape and habitats should be safeguarded.

The second principle (MATT, 2002: article 11) deals with *economic sustainability*, considered as a 'long-term, enduring development', for which high levels of employment are considered necessary.

The third principle refers to *social sustainability*, which is regarded as synonymous with equity among persons and groups (MATT, 2002: article 13). In particular, it is advocated that all the social actors take part both in defining objectives and in assuming responsibilities.

Stemming from the above principles, a number of action are proposed. Among these actions, four have been selected for their relevance to planning, and in particular to planning for sustainability at the regional level:

- Avoiding considering environmental policies as sectoral. In accordance with the Treaty of Amsterdam, this entails that all the other policies need to integrate environmental concerns (MATT, 2002: article 28);
- Carrying out a Strategic Evaluation Assessment when preparing policies, plans and programmes (MATT, 2002: article 29);

- Vertical integration, both between different administrative tiers, and between public and private actors. This also requires that all the stakeholders be involved and participate in decisions which may affect them (MATT, 2002: article 30);

- Reform of the planning system, in order to redefine roles and competences of different tiers and to incorporate environmental concerns in plans (MATT, 2002: article 31). In particular, when rights to develop a site are restricted, or any transformation is prohibited in a certain area, be it for environmental, archaeological, landscape qualities, the decision must be justified and the criteria upon which the decision is based must be made public.

## 2.5  Conclusions

This chapter has shown that, in spite of the existence of many definitions of 'spatial planning', some common features emerge. Drawing upon previous studies, four key elements (broad content, construction of a vision, inclusiveness and possibility to put the plan into practice) have been identified as necessary for a spatial plan.

It has also identified, on the basis of the three classic 'pillars' of sustainability (environment, economy, society), some recommendations to be incorporated in a plan.

Both characteristics of a spatial plan and principles of sustainability, together with the recommendations, will be used in the design of the interviews (section 3.5) and in the evaluation of the Sardinian PPR (chapter 5).

# 3 Research methodology

*Though this be madness,*
*yet there is method in't.*
*(Shakespeare, as cited in Boyle and Flowerdew,*
*2003:296)*

## 3.1 Introduction

The aim of this piece of research consists of (i) evaluating the nature of a plan by examining its objectives and contents, and (ii) assessing whether its process is consistent with one of its stated objectives, that of providing a framework to deliver sustainable development.

This chapter accounts for the research methodology, and in particular it describes in detail the interviewing process. After a general introduction of the overall research strategy, contained in section 3.2, section 3.3 provides an explanation about how and why the interviewees were selected, while section 3.4 describes how the interviews were conducted; finally, section 3.5 presents a list of topics discussed with the interviewees. Because of the flexibility that characterises semi-structured interviews, there is not a standard set of questions with a precise wording and order; however, questions asked have been grouped by topic. Section 3.5 also relates topics and questions asked during the interviews to the research questions. Finally, some comments about the interviewing process are presented in section 3.6.

## 3.2  The research strategy

In addition to a necessary analysis of documents which compose the Sardinian PPR (see paragraph 3.4), in order to address the research questions presented in paragraph 1.4, an understanding of meanings, both of the principles and policies within the plans, and of the processes involved in their preparation are required.   As Denscombe (1998:207) argues, meanings 'need to be analysed as a "text" [and] to be interpreted' by the researcher'.

Both the ontological and epistemological position of this piece of research (see section 3.1) and the research questions, which require an evaluation of contents and process of the Sardinian PPR, lead to qualitative research, and more specifically to the collection of 'data based on privileged information' (Denscombe, 1998:111).  This choice has been judged as the best possible one, since the process of the plan, the complexity of its language, and the relationship to the wider planning system can be understood only by informed testimonies with a 'high degree of credibility' (Denscombe, 1998:133).  By attempting to 'see things from that person's [an expert] point of view' (Bogdan and Taylor, as cited in Bryman, 2001:14 and in Prior, 1997:64) about the essence and possible consequences of the rules and measures of the Sardinian PPR, this research has focused on 'how people interpret the world' (May, 2001:14).  The following sections briefly explain how the research problem was approached, by providing reasons for, and acknowledging limitations of, the methodological choices here made.  Several research methods were used, including the literature review, a case study approach, selection of documents relevant to the case study and key informant interviews.  The merits of each are discussed briefly below.

### 3.2.1  Literature review

The literature review provides a context for the present research.  It covers two topics, related but not overlapping, those of spatial planning and of sustainability.  This section serves the purpose of helping the researcher to understand the state of knowledge (Denscombe, 1998:158), to bring together different points of views, and to identify common features and criteria which are next used to evaluate the plan, thus also helping to narrow the scope of the investigation.

### 3.2.2  Case study

The greatest advantage of using a case study is that it 'illuminates the general by looking at the particular' (Denscombe, 1998:30), allowing for a detailed study of a complex problem by concentrating on one specific instance, instead of covering a wide range of examples.  In doing so, it also helps the researcher to focus on processes and understand under what circumstances certain outcomes might happen, rather than simply finding what the outcomes are (Denscombe, 1998:31).  The choice of a small number of case studies (in this case, only one plan was considered) is also more convenient because of constraints on time and length of the dissertation, which would make it impossible to study a wider range of complex plans with the same level of detail.

In this research, the relationship between spatial planning and sustainability is explored with reference to a specific regional plan, the Sardinian PPR. The Sardinian PPR is called a 'landscape plan' but its breadth means that it is effectively a spatial plan (see section 4 below).  Given the normative context of the Italian planning systems, where all the regions are required by law to approve a landscape plan, whose contents and procedures are specified in the legislation, the selection of this particular case study does not undermine the credibility of the research and potential to generalise the results (Denscombe, 1998:41; Bryman, 2001:50).  Furthermore, as mentioned in section 1.3, since the Sardinian PPR is the first plan for the

landscape approved in compliance with the law, the outcomes of this assessment could be of help in the making of other regional plans.

### 3.2.3  Study of documents and policies

The assessment of a plan requires that the documents which comprise the plan itself be studied and their contents be analysed.  As shown in section 4.4, the Sardinian PPR consists of many documents, aimed at specialists both in their content and technical language.  All of these documents are publicly available on a dedicated website,[2] therefore access did not pose any problem of cost, or need for authorisation (Denscombe, 1998:165).

### 3.2.4  In-depth interviews

The use of qualitative research has been considered to be necessary in order to obtain information from privileged observers 'in a special position "to know"' (Descombe, 1998:111), who are the only ones able to add extra information about the preparation of the plan.  Moreover, only from this kind of actors can 'an in-depth insight to the topic' (Denscombe, 1998:111) be provided, because of the technical and complex language and structure of the plan, and especially because likely effects of the Sardinian PPR on other plans were investigated, which requires a high level of either theoretical knowledge, or professional expertise, as far as the Italian planning system is concerned.

---

[2] http:// www.sardegnaterritorio.it/ pianificazione/ pianopaesaggistico/ [accessed October 2008].

## 3.3  Selection of the interviewees

It was believed that only people who had participated in the preparation of the plan would be able to provide information about the making of the plan, beyond that which can be understood from the documents.  Therefore, five privileged testimonies were selected among academics and civil servants currently working for the Regional Administration of Sardinia who took part in the process.

About one hundred civil servants, academics and consultants, with different roles, competences and responsibilities, composed the technical team which prepared the plan.  Among all those, five interviewees were chosen on the basis of three criteria:

- Their specific area of competence, as far as the Sardinian PPR is concerned,
- Their availability,
- Their likely contribution to the interview.

Regarding the first point, the main concern was that of approaching the research with a global perspective, not restricted to landscape quality or environmental matters only.  The PPR's contents (both descriptive and prescriptive ones) have been divided into three categories (natural assets, cultural heritage, and built environment) (see section 4.2).  During the plan preparation, the technical team was divided into four working groups, one for each of the three categories, plus one specifically dealing with landscape.  A coordination scheme was also set up to link contributions from the thematic groups.  However, for this research it was considered that members of different working groups would have different insights and specific points of view about approaches to sustainability, so respondents were also selected from different working groups.

As for the second point, it is worth pointing out that not all the professionals involved in the making of the Sardinian PPR live in Sardinia. This particularly applies to the members of the scientific committee. However, their contribution to the PPR mainly focussed on providing guidance about the form of the plan, and on giving suggestions and opinions to ensure the compliance of the plan to both the ELC and the DEL42/2004 (RAS, 2006e:1), which, although significant, is not among the topics of this study. Therefore, issues of availability, together with constraints on time and scope of the research, suggested a course of action in which members of the scientific committee would not need to be interviewed.

The third point, that of contribution of the interviewees to the research, was the greatest concern in selecting the interviewees. Different issues needed to be considered. First, they were all involved in the making of the plan, so there was a risk that their opinion could be somewhat sympathetic towards the plan, and that they would tend to justify its choices, rather than provide an objective insight. Second, and related to the previous point, some of the interviewees are senior officers and managers, so there could have been an issue of power relations (Valentine, 2005:114;122), which means that some informants could have tried to control access to information. Finally, there was a concern about the impact of the researcher's identity (Denscombe, 1998:116), caused by the fact that the researcher worked for the Regional Administration in 2003/2004, shortly before the beginning of the preparation of the Sardinian PPR, therefore four out of five interviewees were previously known by the researcher. However, rather than a threat, this similar professional expertise and educational qualification (Denscombe, 1998:116) and shared membership with their social group (Miller and Glassner, 1997:100) proved to be an opportunity for the research, since it made it easier to make arrangements for the interviews and to obtain the respondents' availability; furthermore, this already established professional relationship, which could have biased the interviewees' statements, was in fact discovered to affect positively the responses from the informants (Denscombe, 1998:137; Valentine, 2005:113), some of whom gave

information they may not have revealed to somebody they did not know or trust.

The five selected interviewees were architects, engineers and planners, involved in the plan preparation with different roles and responsibilities. Three of them were selected from the working parties dealing respectively with natural assets, cultural heritage and built environment, while the other two are an academic and a senior civil servant of the regional administration.

## 3.4  Fieldwork: the making of the interviews

Five interviews were carried out in August, 2007.  They were conducted in the interviewees' workplaces, therefore issues of safety (Valentine, 2005:114) did not affect the research, nor did concerns of limited resources and travel cost (Denscombe, 1998:111), since all the offices are based in the same city.

The method chosen, as far as the interviews were concerned, was that of one-to-one semi-structured interviews (Denscombe, 1998:113; Valentine, 2005:110), with 'a general plan of enquiry but not a specific set of questions that must be asked in particular words and with a particular order' (Babbie, 1998:290).

Not only does this type of interview allow to collect 'an in-depth insight to the topic' (Denscombe, 1998:111), but it is also extremely flexible (Babbie, 1998:291), since it lets the interviewee free to explain 'all the complexities and contradictions' (Valentine, 2005:110) of the phenomenon observed and to raise issues which were not thought of by the researcher (Valentine, 2005:111).

At the beginning of each interview, each participant was asked for 'freely given informed consent' (BSA, 2002: article 16) to take part in the research. All the respondents, prior to the interview, were read a form that included the following points:

- The interview was being done for research purposes only;
- For each specific question, the interviewees could choose whether to answer or not;
- Their consensus could be withdrawn in any moment;
- Anonymity would be guaranteed, not only with reference to their name, but also to their professional role, which could have given away their identity;
- The interview would be recorded for the sole reason of easing the analysis of the materials and no one, apart from the researcher and her supervisors, would have access to the recordings.

The respondents were finally asked whether they objected to any of the statements contained in the form, and whether they agreed to be interviewed. No objections were raised, and all of the interviewees gave their consensus.

## 3.5 Design of the interviews and questions asked

As said in section 3.1, semi-structured interviews are not carried out not on the basis of a specific and rigid set of questions to be asked in a certain order and with particular words. On the contrary, they are conducted in a flexible way, and tailored to the interviewees and to their responses to previous questions, having always consideration to the aim of the research.

For this reason, a general list of topics of interest and some questions were prepared prior to the interviews. The following sections present a general

framework for the topics covered and the questions raised. It should be noticed, though, that some areas investigated (in particular, the issue of public participation, as well as that of relation between different tiers of government) overlap in some respects. All interviews were carried out in Italian.

The first topic covered the treatment of sustainability in the plan, and was always preceded with a reading of article 3 of the planning implementation code (RAS, 2006a), which advocates 'a balance between social needs, economic activities and environment' (see section 1.3). The interviewees were then asked what kind of sustainability, in their opinion, the plan pursues, and whether the code only affirms a theoretical principle, or provides the means to put this statement into practice. On the basis of individual responses to the previous question, a series of detailed questions were then asked, to allow the respondents to expand upon the topic, to give reasons for their answers and, when possible, to make reference to specific examples. Among these questions, which were drawn from the literature review, and in particular on the documents which compose the Sardinian PPR (see section 4.4) and on the Italian 'Strategy for Environmental Action to Pursue Sustainable Development' (see section 2.5):

• How did the plan address the issue of consumption of renewable/non renewable resources, protection of biodiversity and safeguard of the landscape?
• How were economic activities considered by the plan?
• How were participation and information sought?
• Why was an SEA not performed?
• Does a plan for the landscape really need to tackle economic, social and environmental problems?

The second general topic examined the plan preparation process of the Sardinian PPR, especially the decision-making process, examining to what extent participation and integration of different stakeholders in the making of

the plan were looked for.  This topic was developed by means of a series of specific questions, depending on the responsibilities of each respondent in the preparation and implementation of the plan, and, when possible, it was broadened by making explicit reference to laws, literature or good practice. Building upon previous work of Costa (2006) and Manca (2008) (see sections 1.4 and 3.6) about the method chosen by the Sardinian PPR to define the coastal strip, the relation, or conflict, between the so-called *'technical knowledge'* (scientific and technical expertise) and *'common knowledge'* (owned by common people who live in a particular place, and stemming from their experience and perception of issues and concerns related to that place) in deciding upon the meaning, quality, and future of places and spaces was also investigated.  Among these questions:

- In what phases of the plan-preparation, and in what ways, were municipalities, provinces, private sector and other stakeholders involved?
- What level of participation has been achieved? Was it appropriate?

The third general topic examined the idea of governance (Vigar *et al.*, 2000:285) reflected in the Sardinian PPR, building upon previous work by Zoppi (2007 and 2008).  The relationship between the PPR, the provincial plans and the local master plans is here assumed to be a reflection of the relationship between different administrative levels, that is region, provinces and municipalities.  In particular, three of the interviewees, who are also working on the implementation of the plan, were asked to talk about the consequences of possible inconsistencies between the Sardinian PPR and the local master plans, and to explain possible conflicts between the regional and the municipal administrations, where possible providing specific examples they had encountered.  The other two interviewees, who took part in the preparation of the plan but not in its implementation, were given by the interviewer some of those examples as inputs, so as to stimulate a theoretical reflection on the relation between different tiers of government as implied by the PPR.

The three topics above are directly related to research questions number 2, 3, and 4. In particular, the first topic provides a general overview about the way in which the Sardinian PPR approaches sustainability (research question number 2), by touching upon environmental, economic and social issues, which were investigated in more detail according to the answers provided by the respondents. Furthermore, since the interviewees were asked to make specific reference to aims, policies and rules contained in the plan, it also helps, together with the study of documents, in answering research question number 3. The second and the third topic, which deal respectively with the process of the plan and with cooperation and participation, help answer research question number 4. Finally, research question number 1 is addressed by means of the framework developed from the literature review and of the insights provided by the respondents on topics 2 and 3.

## 3.6  Some critical aspects of the research strategy

Qualitative research methods are not concerned with issues of generalisation, therefore the insights provided by the interviewees should not be considered as representatives of those either of the regional administration or of the academics. Moreover, different insights could have been provided if the research had included, for instance, representatives from city councils, environmental groups, economic sector (especially tourism and construction).

Another factor which limits the breadth of this study is its focus on the contents and on the plan preparation, therefore on potential, rather than actual, effects. This is partly due to the fact that the implementation of the plan has started only in the very recent past, and partly to the complexity of data which would have been required to perform such analysis. Such an

approach would have required, in fact, a careful assessment of the inconsistencies between the Sardinian PPR and some local master plans, which would be possible only by means of extensive GIS analysis based on databases containing both zoning systems of the master plans and spatial distribution of the rules of the regional plan.

As for the interviewing process, each interview lasted from about 60 to about 80 minutes, including both formalities at the beginning of the interview and courtesies at the end (Denscombe, 1998:129). To control the progress of the interviews, and especially the transition from a topic to the following one, was not always easy. Each of the interviewees felt quite passionate about the topic, and nearly all of them added extra information, sometimes beyond the scope of this research. Occasionally, it was also difficult to maintain a neutral position towards the answers, especially during the last interviews, when opposing points of view began to emerge. The discussion was often monitored by the interviewer, either echoing the answer, or paraphrasing it, sometimes also oversimplifying and taking answers to the extremes, to check whether the interviewee's message had been correctly understood.

# 4 Background: The PPR and regional planning in Sardinia

*There is not in Italy what there is in Sardinia,*
*nor in Sardinia what there is in Italy.*
*(Cetti, as cited in Hospers, 2003:629)*

## 4.1 Introduction

This section explains what a 'Plan for the Landscape' is in the Italian planning system and describes its statutory character and content. In doing so, it provides a normative context for the Sardinian PPR.

According to the Italian national law (Decree enacted by law 42/2004, DEL42/2004 'On cultural heritage and landscape'), all of the 20 Regional Administrations in which the state is divided must guarantee that the landscape be protected and managed by means of a specific plan, which can be either a '*Piano Paesaggistico*', ('Plan for the Landscape') or a '*Piano Urbanistico-territoriale con Specifica Considerazione dei Valori Paesaggistici'* ('Regional Spatial Plan for Land Management with Specific Consideration of Landscape Values'), both referred in the remaining of the law as '*Piano Paesaggistico*' ('Plan for the Landscape'). These two plans differ in that they originate from two different traditions in the Italian planning system: while the former has its origins in landscape planning, aimed at preserving both cultural and natural assets, the latter has its roots in city planning, regulations of land uses (D'Angelo, 2007), and on spatial distributions of activities. According to Salzano (2007:155), the latter is

preferable only in those contexts where safeguard of cultural and environmental values is deeply rooted and established as common practice, and provided that all the features (be they natural or built) which deserve to be protected are listed and reserved for future generations.

Whichever the type chosen by the Regions, the national law in force at the time the PPR was being prepared stated that the plan had to cover the whole regional territory,[3] irrespective of the type and quality of the landscape. Hence, such plans must address not only areas of exceptional landscape or scenic quality, but also problems of environmental degradation, such as brownfields or derelict lands (Casu, 2005), by defining what actions can be undertaken in order (i) to preserve and enhance both cultural assets and the landscape and (ii) to pursue sustainable development (article 135).

Article 135 of DEL42/2004, as modified by decree 63/2008, states that plans for the landscape have to identify distinctive aspects of the landscape and have to identify (in maps) areas characterised by such distinctiveness. For each area, they also need to identify suitable regulations on human activities and uses, in order to pursue conservation and enhancement of the landscape itself, and, as a consequence, of cultural values connected to unique landscapes.

In its original version, that in force at the time the making of the PPR started, article 143 of DEL42/2004 detailed the content of a 'Plan for the Landscape'. According to this article, recently modified,[4] the whole regional

---

[3] Article 135 of the DEL42/2004 has been recently modified by decree enacted by law number 63 of March 2008. The article commences by declaring that both the state and the regions ensure that the whole territory must be planned and managed according to its [landscape] values, then it states that regions have to prepare their landscape plans to regulate uses and transformation of land. Reference to the fact that the plans must cover the whole regional territory has disappeared in the national law.

[4] Similarly to what happened to article 135, also the contents of article 143 of the DEL42/2004 have been changed by decree enacted by law number 63 of March 2008. In the form currently in force, the article does not describe all of the steps that must be taken

territory had to be studied, analysed and divided into different character areas, according to the value of the landscape. Next, on the basis of a series of required analyses, which had to take into account history, nature, trends, risks, presence of other policies or plans (especially river basin and water catchment area plans, aimed at reducing hydro-geological risk), specific objectives had to be set for the quality of the landscape in each character area. These objectives were to be pursued by means of different kinds of measures, some of them aimed at identifying and protecting conservation areas, some at regulating investment and development, and others at identifying buildings and areas to be managed in a special way, even if they were not included among listed buildings or conservation areas.

The relations of the 'Plan for the Landscape' with other plans and policies is regulated, as well as its content. Article 145, in its version in force at the time the making of the PPR, stated that 'Plans for the Landscape' had to contain provisions for the integration of measures with those of other spatial plans, sectoral plans, and policies for economic development.[5] Of particular importance is the fact that the 'Plan for the Landscape' is declared to be legally binding for municipal master plans and provincial plans. The same article provides a deadline for urban plans to conform with the 'Plan for the Landscape'; in case master plans allow actions forbidden by a 'Plan for the Landscape', the latter prevails, and its safeguard measures and restrictions on various human activities come into force automatically, until master plans conform.[6]

---

when preparing the plan; instead, it lists a minimum required content (for instance, it touches upon the necessity of integrating natural and historical analyses, upon listed buildings and conservation areas, upon the necessity to identify further areas in need of conservation, and so on).

[5] This part of article 145 has subsequently been modified by two decrees (157/2006 and 63/2008). As a result, integration of measured contained in plans for the landscape with those contained in national and regional plans, programmes or projects aimed at spurring economical development is now optional and not mandatory.

[6] Also this part of article 145 has slightly been modified by decree 157/2006 and decree 63/2008, but restrictions cited in the main text above still hold true. The article now in force

---

The remaining of this chapter examines the Sardinian PPR. Section 4.2 looks at the origins of the plan, and identifies a third reason for the lack of an appropriate regional planning instrument (besides the conflict between economic and environmental objectives discussed in section 1.2 and statutory requirement introduced in this section) which justified the priority given to coastal areas. Section 4.3 introduces aims and principles of the plan, while its contents are briefly summarised in section 4.4 and analysed in more detail in section 4.5, with reference only to a particular area, called the 'coastal strip'.

## 4.2 Protection of coastal areas in Sardinia as trigger for the Sardinian Plan for the Landscape: Regional Law 8/2004

The Sardinian PPR was approved in 2006. A speech given at the beginning of its preparation by the President of the regional executive committee clarifies that the PPR in Sardinia reflects a political priority, that of 'defending nature, land and resources … maintaining diversity … preserving all the memories, even the weakest ones, which attest our history and our nature.'[7] This priority had been included at the top of the electoral agenda during the 2004 electoral campaign, and the new regional government passed Regional Law 8 (RL8/2004, the so-called 'Coast-saving law') only a few months after its election. This law made it compulsory for the regional government to approve a plan for the whole island (article 1.1), in order (i) to establish a reference and a framework for coordinating

adds that national and regional plans, programmes and projects for economic development must comply with plans for the landscape, as well as management plans for parks and other protected areas.

[7] Excerpts of the speech, given by Renato Soru on the day the scientific committee (responsible for providing guidelines for the plan) began their work, are available on the Internet at http://eddyburg.it/ article/ articleview/ 2877/0/168/ [accessed October 2008].

regional, provincial and local policies and plans, and (ii) to pursue sustainable development in the whole regional territory (article 1.2). Explicit reference is made by RL8/2004 to DEL42/2004, therefore the plan had to provide, for each area in which the island is divided, (i) a descriptive picture of issues to be tackled; (ii) a system of rules; (iii) a series of objectives and guidelines.

Less than two years after the approval of RL8/2004, the Sardinian PPR was approved. The PPR affects the coastal area only, divided into 27 character zones (the so-called 'landscape units') while the plan for the inland areas is currently in preparation. To split the island into two (or more) parts, and thus to prepare two (or more) plans, is consistent with the RL8/2004 (article 1.3). Two reasons can be put forward to explain this choice and the fact that priority was given to coastal areas. First, the amount of time set by law (one year from the approval of the regional law, article 1.1) for the approval of such a detailed and comprehensive plan was too short to make it possible to deal with all the complexities associated with a plan for the whole island. Second, because of the pressures of conflicting demands on land (section 1.2), coastal areas had been in urgent need of a plan other (broader in scope and of higher tier) than municipal master plans since 2003, when the *Piani Territoriali Paesistici* (PTPs, Landscape Planning Schemes, see CEC, 2000:48) were declared illegal, thus no longer in force.

Inappropriate management of ecologically or hydro-geologically sensitive areas had led the Italian government to approve National Law 431/1985. This law, as well as the subsequent Sardinian regional law on spatial planning (Regional Law 45/1989), imposed restrictions or prohibition on building activity in some areas identified as worth protecting for aesthetic or environmental reasons. In particular, building was forbidden within a 300-metre wide strip along the coastline, with the exception of urban areas already classed as historical centres or areas designated for new development by the local master plans. In addition, both these laws

required that the regions prepare one or more Landscape Planning Schemes (PTPs).



1 - Areas where distinct natural, historic and morphological features (or their combination) must be conserved.

2 - Areas where transformation is allowed under specific criteria and within limits set by each PTP.

3 - Areas where environmental restoration is needed. For each area, the type and aims of restoration projects are detailed by the PTPs.
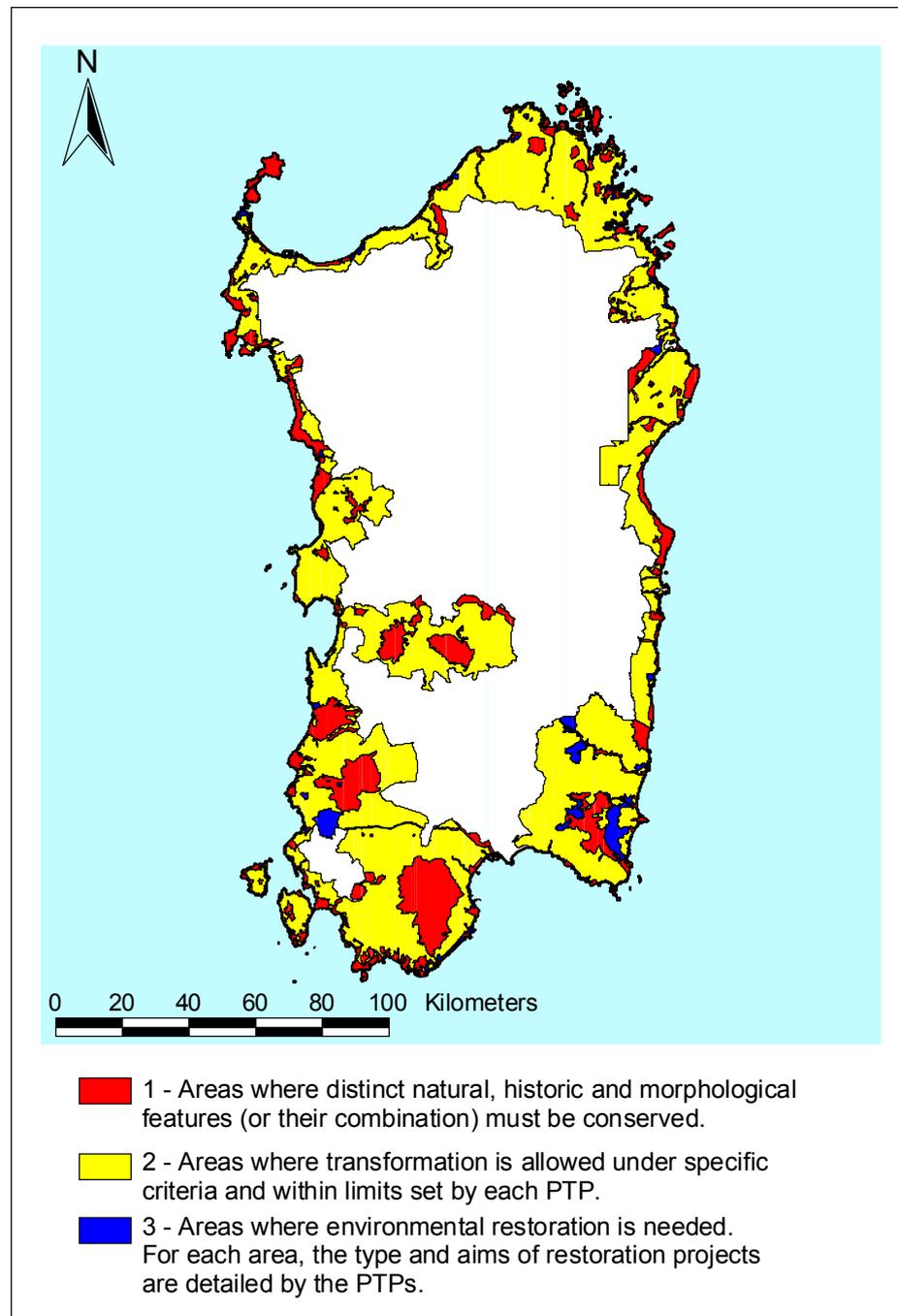
*Figure 2. Areas formerly planned by the PTPs: zoning system (Map by the author, based on data from RAS, 2003).*

Unlike the Plans for the Landscape, these regional plans addressed only those areas where restrictions on development of land or on changes in land uses had been imposed by law, either because they were classified as conservation areas, or because they belonged to those categories listed by the law (for instance, wetlands, tops of the mountains, common lands, buffer zones around rivers and lakes).

As a consequence, fourteen PTPs were approved in Sardinia by the regional government at the beginning of the 1990s (Marchi, 1992:23-24), and local master plans had to make their zoning system consistent with that of the PTPs.  However, in a dramatic move, thirteen out of those fourteen plans were declared illegal by the Regional Administrative Court of Sardinia in 2003 (Abis, 2004; Balletto *et al.*, 2005; Boca, 2007) in a trial initiated by some of the most important environmental associations in Italy.

According to Casu (2005), the main reason for the Sardinian PTPs being judged unlawful lay in their dual, 'illogical' and 'contradictory' character: on the one hand, they stated that any building activity in areas identified as worth protecting was forbidden; on the other hand, some public and private developments and infrastructures were allowed by the PTPs in spite of their environmental impacts (Murru, 2006; Roggio, 2007:43-45).

Once the PTPs, with their (albeit 'illogical' and 'contradictory') restrictions and prohibitions on transformation of land had disappeared, there was a risk that development could take place in environmentally sensitive areas, especially because not all the local master plans had been made compliant with the PTPs, as far as safeguard measures were concerned.  For this reason, RL8/2004 temporarily forbade any kind of new development in a buffer zone of 2000 metres along the coastline in the main island, reduced to 500 metres in the smaller ones (article 3.1).  This temporary prohibition could only be in force until the approval of the PPR (article 3.1), hence the short amount of time given for its preparation and approval.

## 4.3  Aims and principles of the Sardinian PPR

The role of the Sardinian PPR consists of establishing rules to protect and enhance the 'Sardinian landscape', defined as the complex of nature, history, local culture and their mutual interactions, and as an essential ingredient for local development (RAS, 2006a: article 1.1).  This definition is consistent with the mainstream approach, and in particular with the ELC, which defines the landscape as an 'area, as perceived by people, whose character is the *result of the action and interaction of natural and/or human factors*' (CoE, 2000: article 1; emphasis added).  No longer valued for its aesthetic qualities only, landscape is currently being referred to as a 'holistic entity within which natural and human processes merge' (Selman, 2006:1).

Within the context set by the previous definition, the Sardinian PPR aims to (RAS, 2006a: article 1.4):

- Preserve Sardinian cultural and natural landscape, as well as biodiversity;
- Protect and enhance the uniqueness of Sardinian environment, history, culture and built environment;
- Safeguard its territory and promote its sustainable development.

In accordance with both DEL42/2004 (see section 4.2) and RL8/2004 (see section 4.3), the Sardinian PPR declares itself both reference and framework for the coordination of other policies and plans (RAS, 2006a: article 1.3) and forcefully affirms its legally-binding status on plans drawn by the municipalities and by the provinces (RAS, 2006a: articles 4, 106, 107). The plan is aimed not only at public authorities, but also at all those who have interests in Sardinian territory, and can play a role in changing it, 'including universities, research centres and private sector' (RAS, 2006a: article 1.2).

While the Sardinian PPR's contents are based upon those provided by DEL42/2004 (in its version in force at the time) and RL8/2004 (RAS, 2006a: article 2), its principles are said (RAS, 2006a: article 3) to have been established in accordance with the ELC, agreed by the Ministers of Council of Europe in 2000 and in force in Italy since 2006, and with the ESDP, agreed at the informal Council of European Ministers responsible for spatial planning in 1999.  Among these principles, in addition to those specifically concerning ecologically sensitive areas, the Sardinian PPR includes:

- Prevention of urban sprawl;
- Precaution in managing natural and built environment;
- Protection of natural assets and cultural heritage;
- Minimisation of pressure on coastal areas;
- Compatibility between actions aimed at development and landscape protection;
- Regeneration of spoilt landscapes.

## 4.4 Contents of the Sardinian PPR: description, prescription and policies

As stated by both DEL42/2004 (article 143 of the original version) and the Sardinian PPR itself (RAS, 2006a:article 2.2), the plan has a 'descriptive, prescriptive and indicative' content.  The Sardinian PPR consists of several documents, which include:

- A report (RAS, 2006b), which justifies and explains the choices made by the plan;
- A code (RAS, 2006a), which provide the rules and details the implementation of the plan;
- About 200 maps (scale 1:250,000 to 1:25,000);

- 27 short reports, one for each of the 27 landscape units. For each unit, these reports provide a picture of some relevant issues (environmental characteristics, demographic and economic data), briefly analyse strengths and weaknesses, and contain some policies, guidelines, and proposed actions.

The descriptive part, contained mainly in the report and in the maps, is based upon extensive GIS-based analyses carried out between 2004 and 2005. Such a short amount of time was due to the fact that the regional law had imposed that the plan had to be produced within a year. This would not have allowed planners to collect new data, therefore these analyses made use of data-bases already available to various departments of the Regional Administration. Among the information collected, particularly relevant were:

- Digital Terrain Model (RAS, 2003:12-13) and aerial photographs of the island (RAS, 2003:5);
- Land uses, classified according to the European project 'Corine Land Cover' (RAS, 2003:10; Cilloccu and Cumer, 2002);
- Parks[8], conservation areas, Sites of Community Interest[9], Protection Zones[10], and other areas affected by restrictions on transformation and/or prohibition on building activity (RAS, 2003:17-23);
- Cultural heritage, historic buildings, archaeological sites;
- Existent infrastructure (transport, waste management, aqueducts, power plants and supply network);
- Data collected for the making of the four provincial plans in force or in progress (this was already envisioned in RL8/2004, art. 2.2).

The outcome of these analyses was a sophisticated analytical tool consisting of several maps, which categorise environmental assets, cultural

---

[8] Established according to Regional Law n. 31/1989.

[9] Proposed according to the Council Directive number 92/43/EEC, on the conservation of natural habitats and of wild fauna and flora.

[10] According to the Council Directive number 79/409/EEC, on the conservation of wild birds.

heritage and built environment, and include pre-existent restrictions and prohibitions on land uses.  It has been suggested (McCall, 2003:564) that to present patterns instead of processes is an intrinsic weakness of the way GIS is commonly being used; this can be said also for the Sardinian PPR's maps, which, rather than a representation of issues and trends at that time, can be compared to a snapshot of current (in 2004) situation both for natural and built environment.

These analyses, and especially their outcomes in form of maps, also served as a starting point to provide a spatial representation of prescriptions contained in the Sardinian PPR.  An example of these maps is shown in Figure 3.
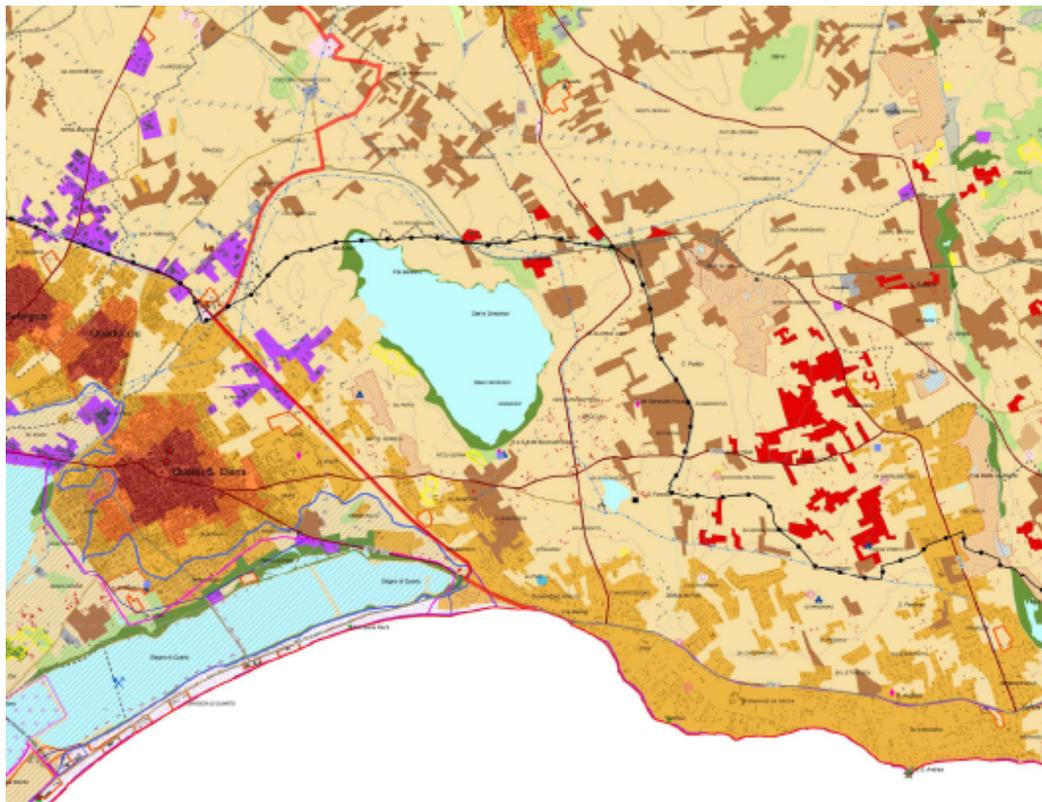


*Figure 3. Sardinian PPR: Spatial visualisation of policies and measures (Source: http://www.sardegnaterritorio.it/documenti/ 6_34_20060928105333.zip, accessed October 2008).*

Such maps, based on descriptive analyses, provide, in fact, a spatial visualisation of the prescriptive content of the Sardinian PPR, since they classify the territory into different types of landscape, organised into three categories: 'natural assets', 'cultural heritage', and 'built environment'. Rules and measures are detailed in 114 articles. After a general introduction containing, among other, general principles and definitions already mentioned in the previous section, the main core of the PPR is contained in part 2, which is in turn divided into three parts, dealing respectively with environment, cultural heritage, and built environment; therefore, it parallels the classification of landscape as displayed in the maps. As an example of the type of rules contained by the Sardinian PPR, and of the type of issues arising from the process of analysis and definition of measures, the following section deals with the definition of the coastal strip.

## 4.5  The coastal strip

The Sardinian PPR plans only the part of the island of Sardinia closest to the sea (section 4.2). As shown in Figure 4, this part, called 'coastal area', in turn contains the so-called 'coastal strip', defined by means of a boundary in detailed maps contained in the plan.

The coastal strip, classed by the Sardinian PPR as a 'unitary' and 'continuous' (RAS, 2006c:175; Costa, 2006) natural asset, is considered as the 'crucial strategic resource for a sustainable development of the island' (RAS, 2006a: article 19.1), and it is thus subject to specific rules. These rules affect the whole strip, with only a few exceptions, concerning:

- Historic centres and already built-up residential zones, as defined in local master plans;

- Areas where all the following three conditions are met: (i) detailed development plans have been approved; (ii) building permits have been granted; and (iii) building activities have already started, thus irreversibly modifying the original aspect of places. Residential developments are permitted only in areas immediately adjacent to the existent urban fabric; the same condition is not imposed for industrial areas and public services and facilities of general interest.
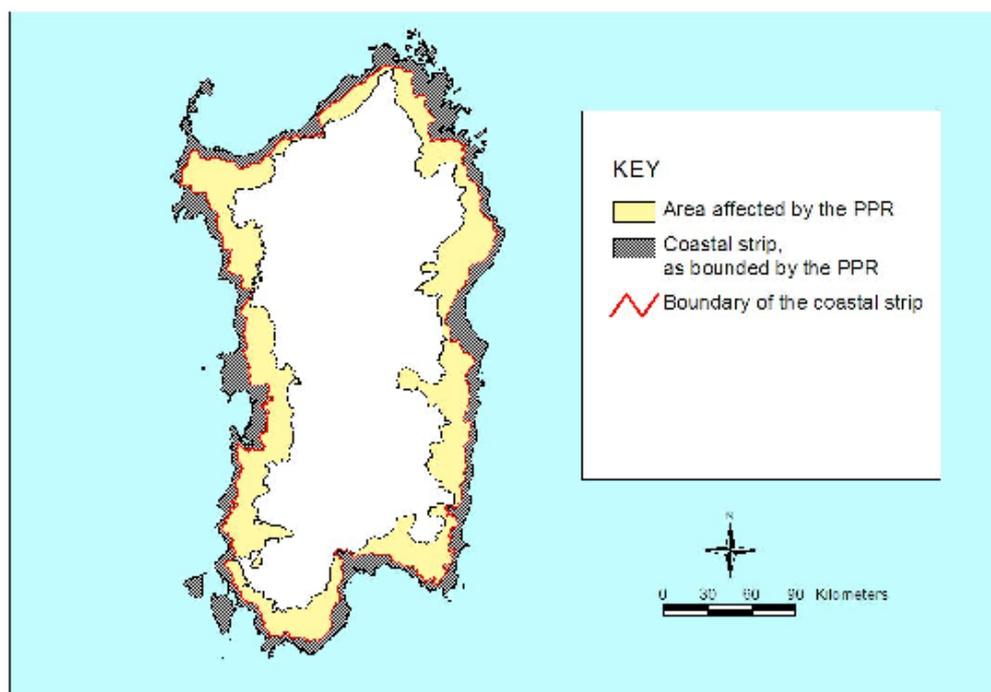


*Figure 4. Area planned by the Sardinian PPR. In evidence, delimited by means of a red line, the coastal strip (Map by the author, based on RAS, 2006a).*

Various types of developments of undeveloped areas contained between the coastline and the border of the coastal strip as drawn in the maps are forbidden. In particular, under no circumstances are new trunk roads (apart from the ones already planned and for which an Environmental Impact Assessment process is currently being carried out), shopping centres, camping sites and golf courses allowed (RAS, 2006a: article 20.1).

As for permitted developments, new buildings (for residential or tourism purpose) are allowed only in areas adjacent to existing cities, towns and villages, and provided that (i) they are proved to be necessary, with reference either to demographic trends or tourism needs, and at the same time that (ii) they do not exceed the carrying capacity of the coastline. In order for the transformations of land or changes in use to be allowed, local master plans must be made compliant with the PPR. Prior to the adjustment of municipal master plans to the rules of the Sardinian PPR, such developments may take place only if agreements between regional, provincial and local government ('*intese*') are reached, (RAS, 2006a: article 20.3) on a case-by-case basis.

No new developments are allowed in areas previously designated by the local master plans as zones for tourism developments, where only regeneration of former tourism and industrial sites, and completion, refurbishment and change in use (from residential to tourism) of existent buildings are permitted (RAS, 2006a:article 20.2). These restrictions aim to spur the tourism industry to invest in urban and inland areas and to make use of previously developed land (RAS, 2006b:6), so as to minimise consumption of land and avoid the consolidation of a ribbon development along the coastline.

It is important to note that, although similar prohibitions and restrictions were contained in the old PTPs, they affected a narrow buffer zone set by law and geometrically defined: prohibitions affected areas within a 300-metre strip along the coastline, while restrictions concerned areas within a 2000-metre zone. Thus, with the Sardinian PPR, the definition the 'coastal strip' has changed from an (apparently) objective definition to an (apparently) subjective one, affecting a much wider territory (RAS, 2006b:17), effectively a shift from a geographical specification to a criteria-based definition. Planners and civil servants responsible for the Sardinian PPR justify this choice with 'scientific' reasons, by arguing that, because of the complexities and interactions among processes which take place where

land and sea meet, it is necessary to regard the 'coastal zone' as the whole area affected by these processes (RAS, 2006c:175). This would require that both portions, above and under the sea level, be planned by a plan for the coastal area. However, due to merely 'administrative' and 'juridical' (RAS, 2006c:90) reasons, the PPR affects only the first one.

The boundary of the coastal strip is said to have been drawn on 'scientific and environmental bases' (Costa, 2006) and according to 'criteria tested in practice' (RAS, 2006c:175) by the scientific committee responsible for making the plan. To replicate the outcomes of the analyses which led a team of experts in various environmental sciences (geology, geomorphology, hydrology, flora, fauna) to the actual definition of the boundary of the coastal strip is not a simple task, even making use of the same set of data listed earlier in this section.

The lack of transparency and communication in the definition of the coastal strip, together with restrictions on powers of lower administrative tiers and on private rights of development of land, during the consultation phase led to strong criticism and opposition by local authorities concerning the definition of the boundary of the coastal strip (RAS, 2006b:17). However, since the Sardinian PPR's maps have been represented at the regional scale (1:200,000 to 1:25,000), and some cartographic elements (such as rivers, streets, administrative boundaries) have been utilised to draw the boundary of the coastal strip, it has been envisaged that municipalities can make minor alterations to this limit (RAS, 2007a:5-6). Such alterations, which can be proposed by the municipalities and must be agreed with the regional administration, can be made together with the modification of the local master plans and are allowed because of issues of scale, since local master plans maps are more detailed (1:4,000 to 1:500) than the PPR's one.

A detailed exam of the Sardinian PPR's measures and policies would take too much space and would be beyond the scope of this research. The

problem of the coastal strip has been described in detail because it effectively raises and sums up some of the issues here investigated:

- First, with reference to the classification of landscape, whether a scientific method, such as the one utilised by the Sardinian PPR to define the border of the coastal strip, conflicts with the definition of landscape provided by the ELC, whose principles have been said to have been assumed by the plan. Article 1 of the ELC defines landscape as 'an area, *as perceived by people*, whose character is the result of the action and interaction of natural and/or human factors' (emphasis added).
- Second, whether a perceived attitude towards prohibition conflicts with the essence of a planning tool, that is guidance of transformation of a certain space towards a desired quality, status, or function.
- Third, what type of relationship between the Regional Administration and stakeholders, be they local municipalities, investors or developers, is suggested by the PPR.

## 4.6 Conclusions

This chapter has shown that the Sardinian PPR was a response to three independent causes: a statutory requirement stemming from a national law, the absence of regional plans in force after the PTPs were declared illegal (which, in turns, resulted in a regional law aimed at safeguarding coastal areas, previously planned by the PTPs), and the need to control pressure and conflicting demands of land on a complex and sensitive environment.

Rules ('prescriptive content') and policies ('indicative content') contained in the Sardinian PPR are based on complex analyses ('descriptive content') and provide directions to protect and preserve both natural landscape

('natural asset') and landscape modified by human activities ('cultural heritage' and 'built environment').

By analysing the definitions and rules that affect a specific part of the coastal area, the 'coastal strip', this chapter has also explored three issues: a conflict between science and common knowledge in the definition of the landscape, the relation between the PPR and local master plans, a perceived orientation of the rules contained in the Sardinian PPR towards general prohibition.

# 5 Study, presentation and analysis of the results

*If we do not find anything pleasant,*
*at least we shall find something new.*
*(Voltaire, as cited in Boyle and Flowerdew,*
*2003:297)*

## 5.1 Introduction

This chapter sets out the findings from the qualitative research carried out in order to obtain more detailed information about the process of the Sardinian PPR, so as to evaluate its potential effectiveness and failures in delivering sustainable development, and to assess whether the elements considered as characteristics of a spatial plan can actually be found in the Sardinian PPR.

Section 5.2 presents a first set of findings from the interviews. As expected, different opinions and judgements about the contribution of the PPR to sustainable development emerged from the interviews, therefore similarities and dissimilarities were looked for (Babbie, 1998:297), in order to understand whether a shared perception of the issue exists and to find out why different respondents disagreed on the likely effects of the PPR. Section 5.3 discusses the Sardinian PPR in the light of the four criteria (framework, vision, inclusiveness and delivery) identified as key components of a spatial plan on the basis of the literature reviewed (section 2.3). .Section 5.4 draws the conclusions.

## 5.2 The Sardinian PPR and sustainability

Explicit reference to sustainable development, and to its three traditional components, is contained both in the regional law which preceded and required the preparation and approval of the Sardinian PPR (see section 4.2), and in the plan itself (see section 4.3).  However, from a mere reading of the documents of the plan, it is not clear how this formal commitment relates to policies and rules contained in the plan, especially as far as economic and social sustainability are concerned, and whether a 'Plan for the Landscape' is an appropriate means of delivering balanced, sustainable development.  This ambiguity was reflected in the interviewees' answers, since the respondents provided different, and sometimes opposing, point of views, which can be grouped into two categories.

The first group of interviewees believed that, in spite of the formal commitment contained in the plan and anticipated by the regional law, social and economic development lie beyond the scope of a 'Plan for the Landscape', which should be restricted to environmental objectives, aesthetic concerns, and land-use related issues.  For this reason, they argued that a careful selection of principles deriving from the ESDP and the ELC (see section 4.3) was necessary, and that this selection should leave out other principles not directly related to the aim of a 'Plan for the Landscape' - that of laying down 'basic emphases, general principles and strategic choices by which decisions on landscape protection, management and planning are to be guided' (CoE, 2000: article 38 of the Commentary Report).

Among the principles set by the Sardinian PPR, and whose application was believed to contribute to sustainability, interviewees made explicit reference to safeguarding of habitats (Interviewee A) and to prevention of consumption of non-renewable resources (Interviewees B and C), especially water and land.  For example, it was emphasised that many of the rules contained in the Sardinian PPR prohibit new developments in

greenfield sites, and demand that new housing supply, if needed, be generated primarily by means of urban renewal (according to interviewee B, this also entails regeneration of abandoned areas and buildings, especially in town centres, thus indirectly contributing to economic development and social aims). Only when the regeneration of previously developed land is demonstrated, by means of demographic analysis, to be insufficient to meet the needs for new houses, can greenfield sites be developed (under restrictive conditions similar to those explained in section 4.5 with reference to the coastal strip only). These measures, which prevail over the zoning system of municipal master plans, are meant as a tool to prevent urban sprawl and consumption of land which could be reserved for agriculture, amenities, or other activities, if judged to be eco-friendly.

To sum up, according to this first group of interviewees, a plan for the landscape must not be considered a comprehensive planning tool, since its scope would be restricted to environmental matters. As a consequence, rules and policies contained in the plan were regarded as effective in promoting environmental sustainability, since they are consistent with those principles (dealing with environmental sustainability only) contained in the national strategy for sustainable development and presented in section 2.4.

A completely different opinion emerged from the second group, which comprised two interviewees. Despite adopting two different approaches to the topic (one more theoretical and academic, the other more practical and grounded on planning practice in Italy), they both judged the plan to be inconsistent with its statement of intent. The various reasons they put forward to justify this opinion are grouped here according to the three traditional components of sustainability.

## 5.2.1 Environmental sustainability

In the opinion of the interviewees, the plan is somewhat ineffective if reference is made to sustainability in general, but it is stronger in terms of

environmental sustainability. Some positive aspects of the plan were identified; however, each of them was somehow diminished by stressing omissions and failures.

The analysis of the elements which constitute Sardinian natural environment and landscape was regarded as 'strong'. Commitment to protection of current levels of quality of places was considered to have been consistently put into practice by means of a series of rules aimed at preventing loss of natural assets and cultural heritage, and at preserving or recreating identity and vibrancy in town centres. It was noticed, though, that the plan pursues 'landscape protection' (CoE, 2000: article 1.d) rather than 'landscape management' (CoE, 2000: article 1.e), or, in other words, that the rules and policies of the Sardinian PPR 'freeze' natural and built landscapes (Interviewee D) by 'impeding that any transformation could take place' (Interviewee E). Such an approach, in the opinion of Interviewee E, can be tolerated only in a context, such as the Sardinian one, where environmental problems are not serious (with only few, circumscribed exceptions) and diffuse. On the contrary, in other regions of Italy, where widespread environmental risks exist (because of either natural phenomena or human activities), this commitment to protect the present situation of places rather than to manage their change can produce adverse effects and exacerbate the situation: 'the more environmentally sensitive and fragile a landscape is, the more you need to give directions and rules to guide processes of transformation' (Interviewee E).[11]

---

[11] Here is an excerpt of the original transcript (in Italian): *"Io mi chiedo cosa voglia dire la propensione alla conservazione assoluta e non alla progettualità per un assetto ambientale non salubre ma a rischio. Perché se io sono in Sardegna tutto sommato mi va abbastanza bene … qui siamo in una situazione di rischio territoriale e ambientale molto basso, tranne che in alcune conclamate zone con necessità di disinquinamento. Dal punto di vista della stabilità, non è che siamo in una situazione con terremoti, frane, smottamenti … Allora, io mi chiedo: se noi avessimo preso le stesse decisioni anche in Campania, con la stessa intensità, lì devi blindare tutto. Se da noi imponi questo tipo di vincolistica, perché altro non è, lì che cosa avresti fatto? Freezer! E si sarebbe frantumato tutto, perché invece in posti dove il rischio è alto devi avere un'alta progettualità di tipo ambientale e di tipo, diciamo, recuperativo."* (Interviewee E)

Finally, as for the absence of an SEA of the plan, some interviewees appeared reluctant to go into details. An appraisal procedure was said to have been studied (Interviewee A and E), but the study was not completed. Lack of time (Interviewee B) and absence of legal requirement (Interviewee A) were put forward as an explanation. This latter justification stems from the absence, at the time the Sardinian PPR was approved, of a national law requiring a formal assessment of the effects of plans on the environment;[12] however, it was also admitted that there was a statutory requirement, deriving from the European Directive 42/2001, even in the absence of a national law (Interviewee A).

## 5.2.2  Economic sustainability

As for economic sustainability, two main deficiencies of the plan were identified. The first one concerns the absence of any reference to economic issues (Interviewee D), the only exception being some economic data contained in the reports concerning the economic structure of the landscape units (see section 4.4). These data, however, have been judged as 'a mere repetition of data already available in any report published by the National Census'[13] (Interviewee D). It was suggested that a certain neglect of economic concerns was embedded in the very early stages of the planning process, that of the selection of the more appropriate type of plan.

---

[12] Strategic Environmental Assessment was introduced in the Italian legal system only in 2006 by Decree enacted by law number 152/2006, subsequently modified by two others decrees (4/2008 and 59/2008). At the regional level, a decision of the regional committee concerning the SEA (Decision number 24/23 of April, 23rd 2008) was approved only in 2008.

[13] Here is an excerpt of the original transcript (in Italian) "*Se uno prende le schede d'ambito, allora, nelle schede d'ambito ci sono: i dati territoriali … i dati demografici, posto che, appunto ogni ambito è descritto in maniera meticolosa … prendiamo un ambito a caso … c'è la popolazione, l'indice di dipendenza, l'indice di senilità, i dati demografici. Cosa interessi questo se non viene collegato agli indicatori socio-economici non si sa bene … Dal punto di vista ambientale, c'è una buona descrizione: la natura del paesaggio, gli elementi costituenti il paesaggio … ma le criticità economico sociali di questo ambito quali sono? Il nodo da sciogliere è capire quali sono gli elementi di criticità economica e sociale che vanno a intaccare l'ambiente, cioè quali sono le linee di conflitto. Ora a leggere questo sembrerebbe che non ci siano linee di conflitto, o meglio, il problema non viene assolutamente analizzato.*" (Interviewee D)

As shown in section 4.1, regional governments are required by law to approve either a 'Regional Spatial Plan for Land Management with Specific Consideration of Landscape Values', or a 'Plan for the Landscape', but the choice of which one is left to the discretion of the regions. As stated by Interviewee E, while the former is more capable of envisioning and guiding transformation and development, the latter is more focused on protecting and enhancing landscape.[14] As a consequence, it would be the choice of the type of plan itself that leads towards a limited consideration of economic issues.

The second weakness was identified in the fact that the plan failed to keep its promise of bringing economic development because of the lack of coordination between the Sardinian PPR and the PSTD (Interviewee D).[15] The PSTD (which is a sectoral plan, not a spatial one) aims to control tourism, which is the main cause of pressure on the environment in Sardinia

---

[14] Here is an excerpt of the original transcript (in Italian): "*Quando veniva presentato il PPR, anche in sede politica, così, di dibattito politico, tutti dicevano "ma no, vedrai che ci sarà sviluppo eccetera" perché ci si è sforzati fino all'ultimo di rassicurare sul fatto che questo piano paesaggistico in realtà avrebbe avuto anche valenza territoriale, di PTC [Piano Territoriale di Coordinamento], che è un piano tradizionalmente, diciamo, tra virgolette, sbilanciato verso le occasioni di sviluppo anche in senso classico, sempre compatibile, siamo d'accordo … con una certa predisposizione a ragionare sul reddito, sulla perequazione urbanistica, sui vantaggi, sugli svantaggi, chi ci guadagna, chi ci perde e così via. Questo aspetto di tipo territoriale, totalmente, cioè in gran parte a vantaggio delle popolazioni insediate, a mio modo di vedere in sede di PPR è stato debolmente perseguito, perché invece ha avuto, diciamo, ampio spazio un'interpretazione reazionaria del dettato sulla Conferenza Europea del Paesaggio, che invece promuoveva in maniera esplicita ad una territorializzazione del paesaggio.*" (Interviewee E)

[15] Here is an excerpt of the original transcript (in Italian): "*La delibera dell'agosto 2004 … che precede la legge 8, poneva una questione, il problema del piano paesaggistico in termini assolutamente corretti: da un lato diceva "occorre avviarci ad una pianificazione paesaggistica appunto sia per rispondere … alla nuova legge di tutela, ma anche per rispondere a tutte le varie sollecitazioni, tenendo conto anche dell'Unione Europea" … La delibera coglieva in piano e poneva il problema in termini corretti. Da un lato, diceva, occorre adeguare il piano paesaggistico regionale a queste esigenze; dall'altro però c'è anche l'esigenza di definire che cos'è per gli strumenti economici, territoriali, urbanistici e paesaggistici la sostenibilità, tanto è vero che accanto alla pianificazione paesaggistica regionale si doveva avviare anche il processo per la definizione di un piano per il turismo sostenibile. Perché per il turismo? Perché è chiaro che l'elemento in Sardegna è uno, non c'è bisogno neanche di spiegarlo con molte parole che l'elemento più impattante dal punto di vista dei detrattori ambientali, che il maggiore detrattore ambientale ovviamente è il turismo … È evidente quindi che era necessario avviare, e infatti la delibera lo poneva con molta forza, avviare entrambe le strade.*" (Interviewee D)

(especially in coastal areas), and at the same time an important opportunity for the economy of the island (see section 1.2).  Therefore, in the opinion of Interviewee D, the Sardinian PPR lacks one ingredient which would have been necessary, that is an appraisal of the impacts of economic and social activities in general, and of tourism in particular, on landscape and environment.[16]  Consequently, the making of the plan itself would be undermined by this deficiency, since rules and policies would have stemmed directly from a scientific analysis of the present situation without a prior evaluation of the factors which impact on the territory, and of the magnitude of this impact.

### 5.2.3  Social sustainability

As for social sustainability, this topic proved to be the most challenging one. As shown in section 2.4, the 'Strategy for Environmental Action to Pursue Sustainable Development in Italy' requires cooperation of different tiers of government, integration of public and private sector, inclusion of stakeholders in the decision-making process, transparency and information about decisions made on scientific and technical grounds.  These issues were tacked in all the three general topics presented as a framework for the interviews in section 3.4.

---

[16] Here is an excerpt of the original transcript (in Italian): *"È chiaro che erano due piani che si dovevano incrociare, che dovevano trovare un loro momento di confronto.  C'è stato? Risposta secca: no, non c'è stato, perché in realtà il piano per il turismo sostenibile ha avuto lunghe vicissitudini, lunghi travagli.  È in realtà è venuto dopo, molto dopo la pianificazione paesaggistica.  Aveva una impostazione non territoriale, era orientato alla definizione del turismo sostenibile in Sardegna, quindi alla definizione di criteri, di principi, di obiettivi e di politiche, ma certamente non aveva alcuna ricaduta territoriale.  [Il piano per il turismo sostenibile] è stato fatto … però di fatto non c'è stato un confronto vero.  Se è mancato questo, è evidente che è mancato un momento fondamentale, che è quello del confronto … tra il maggior detrattore ambientale in Sardegna e lo strumento che dovrebbe tutelare maggiormente [il territorio] …  Se è mancato questo, è evidente che il concetto di sostenibilità nel piano è poco sviluppato, cioè è un concetto che si limita alla definizione in termini di vincolo dei vari sistemi ambientali che compongono il paesaggio in Sardegna."* (Interviewee D)

*5.2.3.1 Cooperation, participation and integration: the making of the plan*

Aims and objectives of the plan have been defined in a political and technical process which involved the Regional Administration only (interviewees A and C). Only after the adoption of the plan (however, before its approval) were lower tiers of government and other stakeholders involved in public meetings (*'Conferenze di Co-pianificazione'*) on a territorial, rather than thematic, basis. A single meeting concerned one or two landscape units, so a total of twenty-three meetings were held.[17]

As for their role, it was admitted (Interviewee C) that the aim of the meetings was more informative than participative, so the consultation phase consisted of explaining principles, aims and contents of the Sardinian PPR to those key actors whose cooperation was needed for the implementation of the plan, that is, municipalities. Different reasons were put forward as a justification for such restricted interpretation of participation. First, one leitmotiv was that of lack of time (Interviewees B, C and E), since the plan had to be approved within the space of a year (see section 4.2).[18] Second, the absence of participation during the making of the plan was justified in terms of institutional competences (Interviewee E), which means that only the regional government would be responsible for the definition of regional policies and rules. Third, it was also suggested (Interviewee B) that the absence of a proper consultation phase was legitimised by the character of the PPR itself.[19] According to this interpretation, participation was not

---

[17] Transcripts of all the twenty-three meetings are publicly available on the Internet at http://www.sardegnaterritorio.it/ pianificazione/ pianopaesaggistico/ conferenze.html [accessed October 2008].

[18] Here is an excerpt of the original transcript (in Italian): *"L'unico momento di concertazione è stato quello delle conferenze di copianificazione … io non la chiamerei certo partecipazione quella, del resto nei tempi che avevamo, che aveva la regione… non è andata in porto questa cosa di un minimo, di sentire almeno i comuni quando si faceva il progetto."* (Interviewee B)

[19] Here is an excerpt of the original transcript (in Italian): *"Il piano paesaggistico … non fa scelte pianificatorie. Detta delle regole, che sono finalizzate alla tutela del paesaggio, però non fa delle scelte pianificatorie, e rimanda le scelte pianificatorie al comune … Adesso lasciamo perdere la provincia che sta in mezzo … le province sono un grosso problema,*

required because the PPR would simply set rules for other plans, and in particular for municipal master plans; as a result, wider participation would be required only when it comes to adjusting master plans, and especially their zoning schemes, to the PPR, because only in this phase would interests and expectations be affected in concrete terms.

### 5.2.3.2 Cooperation, participation and integration: the implementation of the plan

It was somewhat agreed that the process of adjustment of the municipal master plans to the rules of the Sardinian PPR, through which policies and rules contained in the regional plan are to be implemented, would compensate for the lack of consultation during the making of the regional plan (Interviewees B, C, and E). Participation, in this sense, would take two different forms. The first one concerns involvement of the general public in the making, or in the adjustment, of local master plans; the second one consists of individual agreements ('*intese*', see section 4.5) between regional, provincial and local governments. The following paragraphs provide some interviewees' insights about meanings and limitations of these two ways of pursuing both public participation and vertical integration between different administrative tiers.

As anticipated in section 2.3, public participation during the making of city master plans is, by law, carried out in the form of written comments on an adopted draft of the plan, so there appears to be the risk of a limited involvement of stakeholders and general public in the implementation of the Sardinian PPR, which would parallel that occurred in the preparation.

---

*anche perché le province non hanno gli uffici attrezzati per farsi i piani, e quindi allora in questo momento lasciamole un po' da parte … Cioè, il piano paesaggistico detta alcune regole, i comuni pianificano, capisci? quindi ce la caviamo col fatto che in fondo il PPR non pianifica. Riusciamo a cavarcela sul fatto che non ha avuto la partecipazione, non c'è stata la condivisione delle scelte e la partecipazione perché in fondo non fa scelte pianificatorie."* (Interviewee B)

---

However, since an SEA has to be carried out when preparing a new master plan or making an existent one compliant with the Sardinian PPR (RAS, 2007c), it has been argued that wide public participation will be sought in accordance to good practice already established for the SEA process (Interviewee B).  This would mean that municipalities should organise public meetings, taking, for instance, the form of *fora* and workshops; allegedly, though, the same municipal governments who complained about not being involved in the making of the Sardinian PPR seem not to be willing to allow their citizens to take part in the making of their master plans (Interviewee C).

As for vertical integration, both positive and negative sides of the '*intese'*, and of their consequences on relations between regional, provincial and municipal governments, have been pointed out by the interviewees.

On the negative side, it has been maintained that the Sardinian PPR provides only a few rules concerning landscape protection and prohibition of activities, and omits to give rules concerning transformation of land (Interviewees D and E).  This absence of a formal, standard, and complete set of rules to guide transformation, management, and development of land in compliance with the principles and aims set by the Sardinian PPR would force municipal administrations to make compromises about the contents of their master plans.  In other words, the '*intese*' risk allowing the regional administration to interfere with the making of municipal master plans, while this is actually an exclusive responsibility and power of municipal administrations (Interviewee D),[20] since it is only they who can define

---

[20] Here is an excerpt of the original transcript (in Italian): *"Ma ai Comuni quali regole sono state date?  E mi si dice: quelle contenute qui dentro [cioè nelle NTA del piano].  Si ma quelle contenute qui dentro sono indirizzi e sono vincoli.  Allora i comuni cosa devono fare? E poi, attenzione, il piano deve dare regole ai comuni, e poi lasciar fare ai comuni. Invece questo piano dice: le regole le stabiliamo insieme, ma questo fare insieme significa che siccome io ovviamente ho diritto di veto, sono io a dettare le regole, dove? In casa tua, cioè facendo la pianificazione comunale, cioè sono io, Regione, che intervengo pesantemente nella pianificazione comunale.  "Si, ma consensualmente" [dicono alcuni]. Ma io non voglio la consensualità, prima di tutto voglio regole. … Il piano, se vuol essere tale, deve dare*

programs and plans for development and transformation of land (CEC, 2000:24). As a consequence, there might be a risk that the regional administration, with the PPR, exerts absolute power on spatial planning, retaining its own power on spatial strategies (moreover, limiting participation, vertical integration and avoiding independent appraisal of the strategy) and compelling both municipalities and provinces to negotiate their plans with the regional administration. This also entails a risk of social inequality, because results of such compromises could be different for each municipality or province (Interviewee D), if affected by their bargaining powers and political or economic strength.

Advocates of the '*intese*' contend that this mechanism allows for an effective integration between regional and municipal governments. It is during the '*intese*', in fact, that inconsistencies between master plans and the Sardinian PPR can be justified on both technical and political grounds (Interviewee B) and development plans not allowed by the regional plan can justify their assumptions, methodologies, choices on the basis of their analyses. In this respect, the '*intese*' would address an issue of scale, since the Sardinian PPR based its policies and rules on analyses at the regional scale, while local master plans and development plans carry out their analyses at a much more detailed scale. Therefore, the '*intese*' would be a tool which, rather than constraining municipal powers, helps preserve them.

---

*regole ai soggetti che poi devono attuarle [...] Lo fa? Dice, "No, no, aspetti, sono indirizzi, non sono regole." Si, ma, se sono indirizzi, se non sono regole, allora non è un piano, è una serie di indirizzi, e allora il piano viene dopo. Se non è così, come è che gli indirizzi si trasformano in regole? E infatti lo dice il piano: si trasformano in regole secondo … le intese … un modo per interpretare quegli indirizzi e metterli in accordo con gli elementi che contrasterebbero quegli indirizzi, giusto? Sennò, altrimenti non ci sarebbe bisogno dell'intesa. L'intesa è quello strumento attraverso il quale io, per applicare gli indirizzi, verifico che cosa osta alla loro applicazione e vado a trovare una linea di compromesso tra ciò che osta alla loro applicazione e la salvaguardia dell'ambiente."* (Interviewee D)

### 5.2.3.3 'Common' versus 'expert' knowledge: transparency and information

An example raised by two interviewees when stimulated on public participation was that of the definition of landscape character areas. As reported in section 4.4, both the spatial distribution of coastal landscapes (shown in Figure 5) and the landscape units (shown in Figure 1) have been defined in scientific terms, by means of GIS-based analysis and interpretation of aerial photographs.
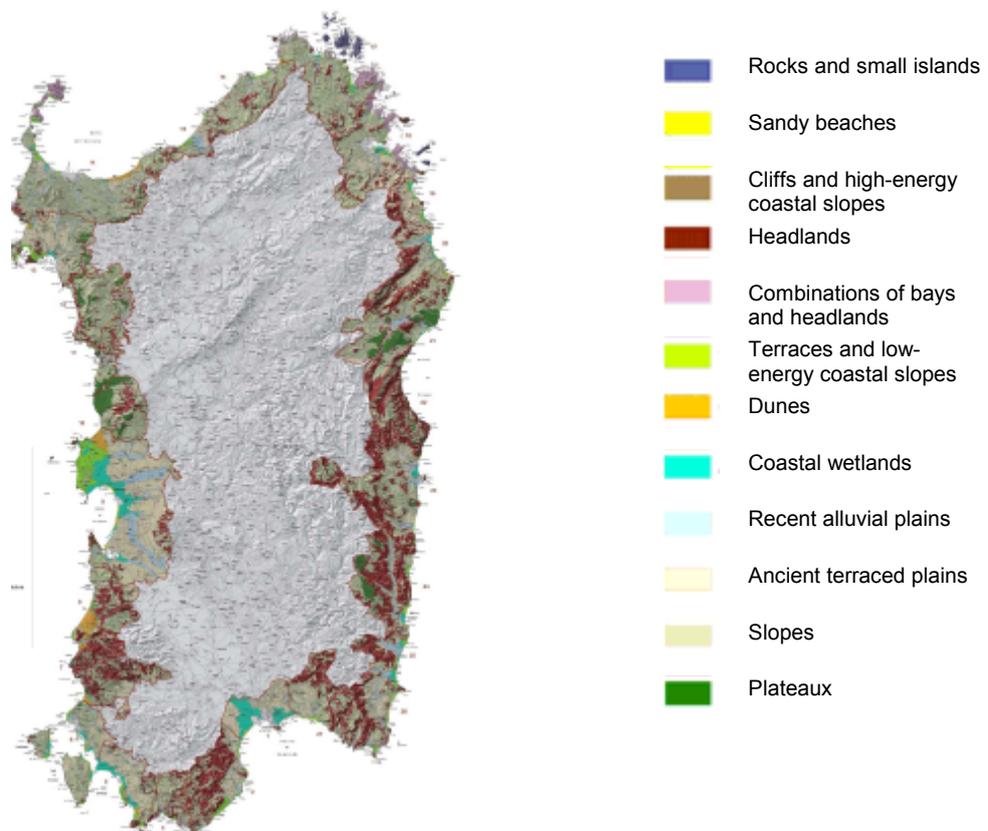


*Figure 5. Coastal landscape character areas, as identified by the Sardinian PPR (source: RAS, 2006c:166).*

It was suggested that this process of definition and identification of landscapes leads to a 'romantic' and 'old-fashioned' ('*à la* Humboldt', according to Interviewee D) interpretation, and interprets in a very narrow way the definition of landscape provided by the Council of Europe (see section 4.3).

As both Interviewee D[21] and E[22] remarked, the ELC clearly implies that landscape does not even exist without the mediation of people's perception (Selman, 2006:14). Landscape, according to the ELC, far from being defined by aesthetic qualities and scenic views, is shaped by people's experience and interpretation. However, landscape and landscape character areas were defined by experts and not by people (or municipal administration, who ought to represent their citizens) on scientific grounds.

It can be said, thus, that conflicts between common and expert knowledge deriving from the definition of landscapes emerging from the interviews parallel those discussed earlier about definitions of the coastal strip which were identified from the document review (see section 4.5). Both of these conflicts contrast with the actions proposed by the Strategy on Environmental Action, and specifically with the third and fourth actions presented in section 2.4.

## 5.3  The Sardinian PPR as a spatial plan

In this section, the extent to which the PPR can be regarded as a spatial plan is assessed, by making reference to: key features of spatial plans (section 2.3, aims), principles and contents of the Sardinian PPR (sections 3.4, 3.5 and 3.6) and interviews with privileged observers (section 5.2).

---

[21] Here is an excerpt of the original transcript (in Italian):  "*[… Il paesaggio] non è soltanto il paesaggio bello; è anche il paesaggio brutto, cioè è il paesaggio.  Qualsiasi cosa si presenti ai nostri occhi come elemento di sustanziazione, come elemento di permanenza della vita di tutti i giorni.  Questo è il paesaggio.*" (Interviewee D)

[22] Here is an excerpt of the original transcript (in Italian*): "Con la Convenzione Europea del Paesaggio c'è stata chiaramente una ri-territorializzazione del concetto di paesaggio. Ri-territorializzazione vuol dire che i territori, virgolette, locali, le comunità locali che vivono il territorio dicono che cos'è il loro paesaggio, perché la regione non è la regione di via San Paolo [in cui sono localizzati alcuni uffici regionali], la regione sono i cittadini sardi.  Questa cosa ancora alla regione non è entrata in testa.*" (Interviewee D)

### 5.3.1 How does the Sardinian PPR set a framework for other policies or plans?

Contrary to what it can be argued by looking at spatial visualisation of policies and rules (an example has been provided in Figure 3), the Sardinian PPR is not a plan aimed at simply controlling land uses. It was argued by Interviewee B that the Sardinian PPR does not spatially allocate land uses, thus it should not be qualified as a plan.[23] However, to put it with Interviewee E,

> The fact that somebody says that the [Sardinian] PPR is not a 'plan' does not surprise me, because it is, in fact, a 'meta-plan' [that is, a plan which controls other plans], although it is a rather weak meta-plan … When it affirms its principles, it mentions sectoral policies and plans, local master plans and provincial plans. But, when it comes to practice, it is only concerned about municipal master plans, land-use plans.[24]

This statement was indirectly supported by the fact that, when asked about the impact of the Sardinian PPR on other policies or plan, all the interviewees automatically referred to urban master plans, as if the PPR were a framework for land-use plans only. The only (negative) exception to such a limited consideration of the role of the Sardinian PPR in providing a context for other plans concerned the PSTD, mentioned by Interviewee D to prove the failure of the Sardinian PPR in influencing economic processes

---

[23] Here is an excerpt of the original transcript (in Italian): "*Il piano paesaggistico secondo me, e questa è una mia opinione, ha dalla sua un pregio che non pianifica, non fa scelte pianificatorie. Detta delle regole, che sono finalizzate alla tutela del paesaggio, però non fa delle scelte pianificatorie, e rimanda le scelte pianificatorie al comune. Il piano paesaggistico detta alcune regole, i comuni pianificano.*" (Interviewee B)

[24] Here is an excerpt of the original transcript (in Italian): "*[il PPR, in quanto] piano territoriale di coordinamento per definizione è anche un metapiano, però la natura di metapiano del PPR è in realtà molto debole. Molto poco esaurita … perché la biodiversità dei piani è prossima allo zero. Quali sono i piani contemplati in sede di PPR? … In concreto di che cosa si sta occupando la regione in questo momento? Dell'adeguamento dei PUC [i Piani Urbanistici Comunali] al PPR. Quindi a parole dico che [il PPR] è un quadro, poi quando vado dentro è molto se metto il PUP [Piano Urbanistico Provinciale], e quando vado a fare le cose esistono solo i PUC.*" (Interviewee E)

and in taking into account impacts of the economic sector on the environment (see section 5.2.2). Therefore, the Sardinian PPR sets a context for the master plans by providing a system of rules to comply with, albeit with all the risks already mentioned (possible interference of the regional government in the making of local plans and mechanisms to bypass the rules set by the Sardinian PPR).

Partly because of the Italian planning tradition, a mixture of land use management tradition and urbanism tradition (see section 2.2), and partly because it primarily addresses municipal master plans, the Sardinian PPR shares some features which, according to the literature (see section 2.3.1), belong to a land-use plan, rather than to spatial plans: its character is statutory, its approach is formal and normative, its vision of space and issues is 'physical', its language is specialised.

As for a judgement on the plan as a strategy, it has been argued that the plan lacks 'priorities, quantification of targets, and financial means for the implementation' (Interviewee E).

### 5.3.2  What vision does the Sardinian PPR contain?

According to the literature (see section 2.3.2), a spatial plan should propose a vision for the territory affected by the plan, and ought to create the conditions for this vision to turn into reality.

As for the Sardinian PPR, a part of its vision has been unanimously recognised, and appreciated, by the interviewees. This agreed vision (anticipated in section 5.2.1) consists in protecting cultural identity, landscape, biodiversity, environmental features. As commented by Interviewee D, 'nobody can disagree with this vision'; however, disagreement arose over the proposed path to achieve this vision, consisting mainly in prohibitions and rules imposed, and not discussed or agreed, about the management and transformation of landscape. It has been argued, in fact, that while current landscapes are the outcome of a

process occurred over thousands of years, the plan aims to maintain this current status, and hinder further evolution processes of landscape (Interviewee D).

### 5.3.3  Is the Sardinian PPR inclusive?

Inclusiveness, which comprises participation, integration, and cooperation, is at the same time both a component of social sustainability, and one feature of spatial planning.  Therefore, since this topic has dealt with in detail in section 5.2.3, only a few points will be summarised here.

Inclusiveness in the Sardinian PPR was restricted to meetings with key stakeholders, such as civil servants, political representatives, and interest groups, and designed to give information during the preparation of the plan. Any more significant cooperation between different tiers of government is expected to be achieved by means of the '*intese*'.  As for the general public, wider participation will be made possible, according to some of the interviewees, during the SEA of the master plans, when they will be modified in compliance with the PPR.

Therefore, until now, the Sardinian PPR cannot be qualified as an inclusive plan, since the bulk of opportunities to discuss over places, activities, and uses still has to come.

### 5.3.4  Is the Sardinian PPR deliverable?

Article 11 of the planning implementation code (RAS, 2006a) clearly states that the Sardinian PPR is to be implemented by means of other plans (such as municipal and provincial plans) and by means of the mechanism of '*intese*'.  Therefore, the plan relies on other planning tools to implements its policies.

Technical support and financial resources are available to allow every municipality to prepare a new master plan (Interviewees B and C).  All the

municipalities whose territory overlaps the coastal areas, that is around 100, are entitled to such funds, which were made available in December 2006. However, as of September 2007, only five municipalities had actually made request for these resources (Interviewee B). Reportedly, according to Interviewee B, the reason for such an 'omission' seems to be that a municipal government is obliged to approve its master plan in compliance with the Sardinian PPR within one year of the funds being granted.[25] This does not mean that municipalities can apply the rules of the PPR only if they wish, because, if they do not modify their plans, almost any development of land is forbidden by the regional plan, whose rules become immediately effective in the absence of a compliant land use plan (Interviewee B) or an agreement in form of '*intese'*.

This shows that, rather than drawing on consensus and wide participation (see section 2.3.3), which are considered as ordinary tools to facilitate the implementation of a spatial plan, the delivery of the Sardinian PPR relies on a normative approach, typical of a hierarchical planning system. The effectiveness of this kind of approach as a tool to implement a regional strategy has been questioned (Interviewee E) on the basis of an historical precedent, that of the small number of municipal master plans approved in compliance with the PTPs (see section 4.2).

## 5.4 Conclusions

This chapter has presented the results of the evaluation of the Sardinian PPR carried out by means of both a study of its documents and five semi-structured one-to-one interviews with key actors involved in the process of the plan.

---

[25] This deadline was set by Article 2.6 of the Regional Law 8/2004.

The contribution of the Sardinian PPR to sustainability, as perceived by the interviewees, was controversial. A generally positive opinion emerged about the Sardinian PPR as a plan capable of delivering environmental sustainability. As for economic and social aspects, either the plan was judged to be ineffective, or the disregard for these issues was justified on the grounds that they lie beyond the scope of a plan for the landscape. Even if this were true, however, the overall sustainability of the plan (evaluated only with reference to its content and process) appeared to be undermined by different aspects, such as:

- Lack of consideration of the effects of the economic sector as the main factor which impacts on the landscape;
- Lack of consideration of people's perception in defining what landscapes are;
- Absence of an appraisal of the plan's impacts on the environment;
- Problematic relations between different tiers of government both in the preparation (lack of integration) and in the implementation (possibility of applying the rules in different ways).

As for an assessment of the Sardinian PPR as a spatial plan, in theory it appears to have many of the characteristics identified for a plan to be a spatial plan. However, when looking at practical aspects, as they were explained by the key players interviewed, some distinguishing approaches to spatial planning emerged. In fact, the Sardinian PPR does set a framework, but its main objective was perceived to be that of shaping urban master plans, while other plans (especially the provincial ones, as well as plans for parks and other conservation areas) were though not to be paid due attention. It is not merely a land-use plan, but rules have been set so as to privilege preserving current qualities (mainly for environmental, cultural or aesthetic concerns) over guiding transformation of places in order to spur economic development and provide an answer to social needs. It does provide a vision, which, although not developed through participation, was at least considered agreeable. Two important aspects,

however, have been found to distinguish the Sardinian PPR from the common perception of what spatial plan is, that of means for its implementation (based on rules rather than on consensus) and that of public participation and institutional cooperation.

# 6 Landscape assessment

## 6.1 Introduction

As shown in section 5.2.3.3, some of the interviewees who participated in the qualitative assessment of the Sardinian Regional Plan for the Landscape have raised doubts about the methodology used in the making of the plan to characterise Sardinian coastal landscapes. Landscape assessment, in the Sardinian PPR, consisted in analysing landscapes according to three main themes (natural environmental, cultural heritage and built environment) in order to 'identify assets belonging to each of these three categories and worth protecting' (RAS, 2006e:5). The outcomes of such analyses were subsequently brought together to identify environmental and cultural assets,[26] both subject to prescriptions and restrictions (on development and transformation of land uses) contained in the planning implementation code. Another important step in the characterisation process was the identification of 27 coastal landscape units by means of a piece of 'analysis aimed at … recognising those landscape features which are uniquely associated with a specific context … a significant bridge which links landscape planning to land-use planning' (RAS, 2006e:5). In fact, a report and some planning directions, meant as guidelines for other types of plans (be they spatial or sectoral, and irrespective of the administration responsible for these), were produced for each coastal landscape unit. These analyses, aimed at identifying both landscape units and natural or cultural assets, as pinpointed by some of the

---

[26] '*Beni ambientali*' and '*beni identitari*', according to the terminology used in the PPR.

interviewees (section 5.2.3.3), were carried out by means of technical and scientific appraisals only, so they relied solely on the experts' points of view.[27]

According to the Italian law (DEL 42/2004, as modified by decrees 156/2006, 157/2006, 62/2008 and 63/2008) concerning cultural heritage and landscape, landscape protection must aim to 'recognise, safeguard, and, when necessary, restore cultural values' linked with landscapes (article 131.4). Therefore, the identification of landscape values, which requires a preliminary landscape characterisation, is a necessary step which must be undertaken to pursue landscape planning goals. These, according to the Italian law (article 135.4) are as follows:

- To preserve essential features of landscape assets[28] protected by law or by any sort of plan (included landscape plans);
- To restore spoilt or damaged areas;
- To safeguard landscape features in those areas which are not included in the above points (that is, they are neither protected nor spoilt or damaged), while also preventing further consumption of soil;
- To identify strategies and guidelines both for building activities and for development and transformation of land, which need to be compatible with landscape values as recognised by landscape plans.

As for landscape characterisation and assessment, Italian law on cultural heritage and landscape only states that landscape plans 'have to recognise

---

[27] The three broad types of analyses carried out, involving environmental features, built environment, historical and cultural assets, together with sources of data and methodologies, are described in the technical report (RAS, 2006c) which is part of the PPR. To the contrary, reports describing each landscape unit and containing planning directions were not included among the documents of the PPR, as listed in the decision of the regional government which approved the plan itself (Decision of the Regional Executive Committee no. 22/3 of May 24th, 2006).

[28] *Landscape assets*, as defined in the national law, are the manifestation of historical, cultural, natural, morphologic and aesthetic qualities of a certain area. As such, they comprise both 'cultural assets' and 'natural assets' as defined in the Sardinian PPR.

distinguishing aspects and characteristics of landscapes, and to define the borders of landscape units' (article 135.2). For these units, landscape plans must provide rules and directions on suitable land uses; for each landscape unit, they must also set appropriate targets regarding the quality of their landscapes (article 135.3).

As a consequence, planners are faced with the difficult task of assessing landscape character and identifying landscape units and their quality targets. This task, in the absence of more detailed indications provided by the law, also comprises the selection of the more appropriate methodology to analyse and define landscape. Contrary to what happens in other kinds of environmental plans, this is not a 'merely' scientific issue. In fact, while in *environmental planning* a homogeneous unit can be defined on scientific grounds (as reported in Steiner, 2000:7, for instance, in the United States of America river drainage basins have been traditionally considered as basic geographic units for planning at the regional level since the late nineteenth century), in *ecological planning,* which includes landscape planning,[29] a mediation between scientific knowledge and cultural traditions and values is required when defining landscape units (Selman, 2006:26).

The definition of landscape contained in the European Landscape Convention, signed in Florence in 2000, ratified by Italy in May 2006, and in force in Italy since September 2006, also emphasises this point by defining landscape as 'an area, as *perceived* by people, whose character is the result of the action and interaction of *natural and/or human* factors' (article 1.a; emphasis added). Therefore, according to the ELC, landscape

---

[29] Steiner (2004, 4-10) contrasts '*environmental planning*', defined by Soesilo and Pijawka (1998, as cited in Steiner, 2004) as 'the initiation and operation of activities to manage the acquisition, transformation, distribution, and disposal of resources in a manner capable of sustaining human activities, with a minimum distribution of physical, ecological and social processes' with '*ecological planning*', considered as 'the use of biophysical and sociocultural information to suggest opportunities and constraints for decision making about the use of landscape … a procedure for studying the biophysical and sociocultural systems of a place to reveal where specific land uses may be best practiced.'

characterisation, as well as identification of landscape units, requires that human perception of natural environment and the effects of human actions on nature be taken into account (Clemente, 1987:10).

This chapter, after touching upon the inclusion of local communities in the process of landscape characterisation and planning as requirements stemming from the signing of the ELC (section 6.2), provides the reader with a framework that comprises approaches and methods used to identify landscapes (section 6.3) and introduces some European experiences (sections 6.4, 6.5, 6.6) where people's perception has been included in the process of landscape characterisation and planning. Section 6.7 draws the conclusions.

## 6.2 The European Landscape Convention and the identification of landscapes

According to the Council of Europe (CoE, article 1.a), landscape is 'an area, as perceived by people, whose character is the result of the action and interaction of natural and/or human factors.' Some innovative ideas are contained in this definition.

Firstly, landscapes are localised and identifiable (Selman, 2006:5), which means that they are spatially defined or definable; as a consequence, each landscape is unique, although different landscapes share common features with each other. This entails both that a classification of landscapes is possible, and that within this classification each landscape can be differentiated from others.

Secondly, the ELC highlights the importance of including communities and their perceptions in landscape assessment and planning. In fact, not only are people mentioned in the above definition of landscape, but also their

role is emphasised in those articles dealing with commitments deriving from the signing of the Convention.  Article 5 ('General measures') requires that each country should 'establish procedures for the participation of the general public, local and regional authorities, and other parties with an interest in the definition and implementation of the landscape policies'. Furthermore, according to article 6 ('Specific measures'), each country must 'identify its own landscapes ... analyse their characteristics ... take note of changes'; after this process, an assessment of landscapes including 'the particular values assigned to them by the interested parties and the population concerned' is required.  With the ELC, therefore, the old-fashioned idea of landscape as something exceptional, related to scenic beauty, aesthetic qualities and visual perception (Hartshorne, 1939:160; Appleton, 1989, as cited in Brabyn, 1996:277; Brabyn, 2005:24), is abandoned in favour of a more holistic approach.  In fact, landscapes are regarded by the ELC as 'an essential component of people's surroundings, an expression of the diversity of their shared cultural and natural heritage, and a foundation of their identity' (article 5).  In this definition also urban areas are included, while they were previously not thought of as specific instances of landscapes (for instance, the definition of landscape provided by the Countryside Commission for Scotland, 1971:277, only refers to visual qualities and countryside).[30]

Thirdly, the above definition also puts an end to the long-lasting opposition between rural/natural environment on the one hand and urban environment on the other hand, as it clearly states that action of human factors and their interaction with natural factors shape landscapes.   This concept is nowadays commonly accepted, and the inclusion of human factors provides

---

[30] In the Italian planning system, the evolution of landscape plans reflects this change in approaching landscapes.  The first Landscape Plans, as produced according to National Law 1497/1939, were aimed at protecting natural beauties.  After the approval of National Law 431/1985, the second generation of Landscape Plans was aimed at protecting fragile and sensitive environmental assets.  With the approval of National Law 42/2004, Landscape Plans in Italy conform to the ELC, so every reference to aesthetic features and singular qualities has been lost.

the grounds for distinguishing between 'nature' and 'environment' (see, for instance, Phillips, 2002): only when nature is transformed by men, and man-induced modifications overlap natural ones and interact with them, can we talk about landscape.

Therefore, the relationship between people and their surrounding environment is vital in order to understand landscapes and the services it provides. While some of these have traditionally been considered in planning activities as they are necessary to support life ('basic services', such as food and water provision, or space for human settlements and economic activities), some are emerging factors, and increasingly regarded as significant ('cultural services', such as recreation, culture and community identity).

## 6.3 Characterising landscapes: role of experts and common perceptions

In this section, a taxonomic framework which synthesises some approaches and methods to identify landscapes found in the literature is provided (Figure 6).

Two main approaches to landscape characterisation are here recognised; while the first approach relies solely on expert judgements, the second also includes non-expert assessments (Zube *et al.*, 1982). These two broad approaches can be further divided into various categories; for each category, some methodologies are identified.

Landscape characterization based only on experts' knowledge comprises both *artistic* approaches and *scientific* approaches.

Artistic approaches consider landscapes as something to enjoy on the basis of their aesthetic qualities, and rely on teams of experts, who ought to interpret how landscape is perceived by the general public. These approaches have therefore been criticised as affected by 'landscape elitism' (Scott, 2003:125) and questioned both because of the subjectivity embedded in them, and, especially, because they lack representation.

Scientific approaches attempt to understand and classify landscapes by singling out their components. They are generally based on overlay mapping techniques, introduced in 1969 by McHargh (2007), which consist of creating a certain number of thematic maps, each representing a single component of landscape, and combining them together. For this reason, Geographic Information Systems are generally used, and are often combined with other methodologies and techniques (some examples in: Bishop, 2003; Llobera, 2003; O'Sullivan and Turner, 2001; Penning Rowsell and Hardy, 1973; Turner *et al.*, 2001; Weitkamp *et al.*, 2007). As well as artistic approaches, also scientific approaches have been criticised because of their reliance on a scientific elite, but they have also been praised because of their attempt to create an objective and robust representation of landscapes. However, it should be pointed out that also these types of assessments are affected by subjectivity; for instance, deciding which factors make up landscapes and need to be mapped is a subjective decision in itself.

The second approach here identified, as stated earlier, comprises those methodologies in which non-expert judgements are included. Three main approaches to landscape have been identified on the basis of the literature reviewed:

- A *psychophysical approach* (Zube *et al.*, 1982), according to which landscapes are characterised by their intrinsic qualities. These are aesthetic and objective, or, in other words, human perception is not needed for such qualities to exist. As a consequence, human

perception does not play any role in producing landscapes, which exist (and have their own qualities) in themselves, while humans can only act as passive observers. Methods based on this approach, therefore, generally assess landscapes by means of evaluations of dose-response relationships, by regarding human perception as a proxy indicator for landscape quality.

- A *cognitive approach* (Zube *et al.*, 1982), according to which human mediation is necessary in order to evaluate landscape character and quality. As a consequence, people's experiences, expectations and socio-cultural statuses in evaluating landscapes create meanings, qualities and values associated with a distinct landscape. In contrast to what happens with the previous approach, it is clear that here qualities and values depend on the observer (people) and not on the observed phenomenon (landscape).

- An *experiential approach* (Zube *et al.*, 1982), which considers landscape perception as the result of the interaction between people and their (physic and cultural) environment in a certain period (Brabyn, 1996; Scott, 2002:272 and 2003:125). Although similar to the previous one since they both consider landscape only existing because of its relationship with people, this approach is unique in that interaction between people and landscapes works in both ways, that is people shape landscapes and are in turn shaped by landscapes (Zube, 1987).
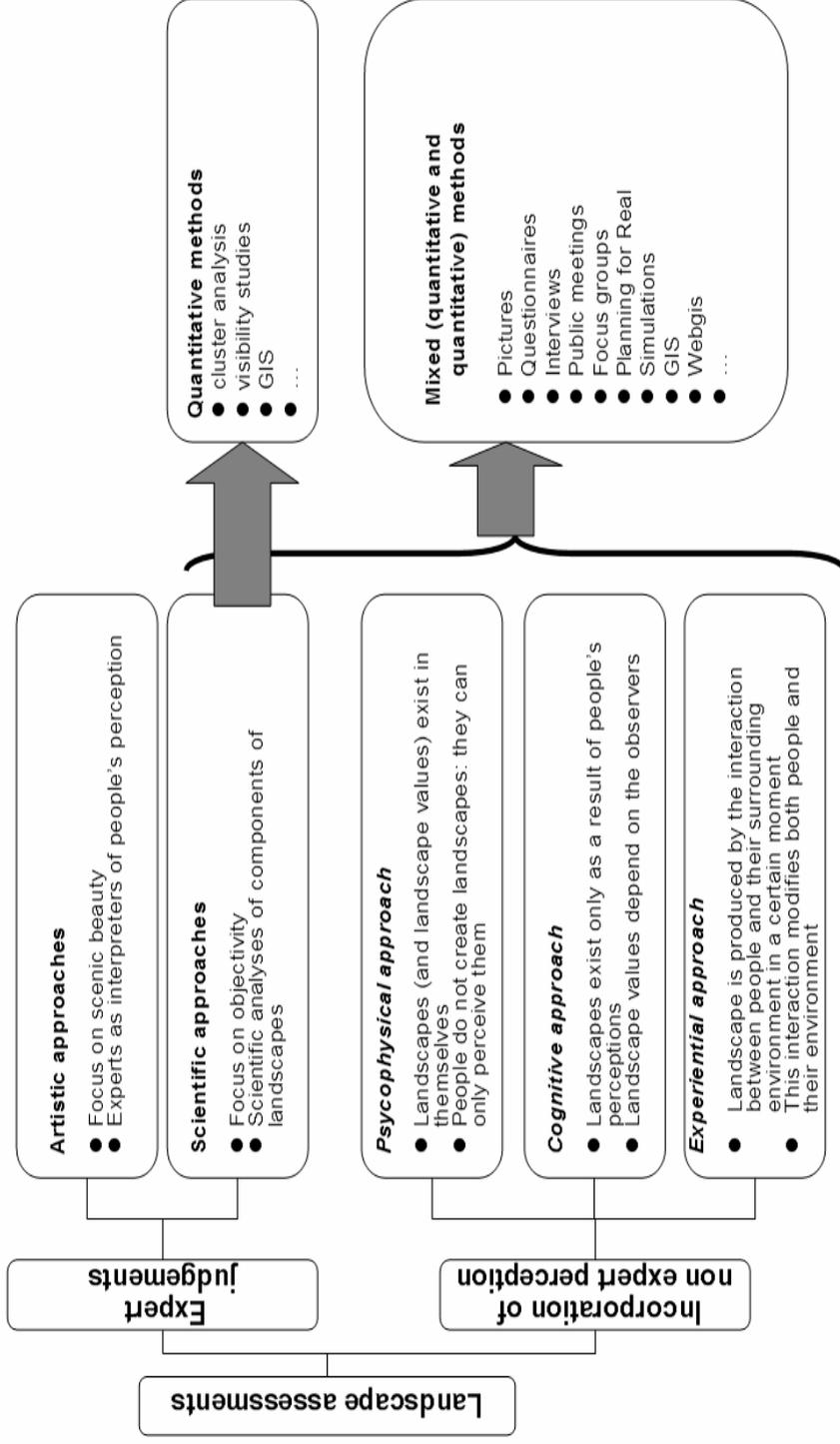
Figure 6. Approaches and methods for the identification of landscapes and the assessment of landscape quality: a framework (by the author)

Methodologies for landscape characterization and assessment associated with these approaches in which non-expert knowledge is incorporated generally combine two or more methods, and usually include qualitative research methods, typical of social science. For instance they can combine GIS-based analyses (Brooke 1994; Kliskey e Kearsley, 1993; Brabyn, 1996; Wherret 2001) with participative web-based GIS (Kingston *et al.*, 1999), focus groups (Henwood, e Pigeon, 2001; Scott, 2002), questionnaires (Byrne, 1979, House e Fordham, 1997, Zube, 1987), telephonic surveys (Zube, 1987) and visual simulation (Tress e Tress, 2000).

## 6.4 A characterisation project for Europe: the European Landscape Character Assessment Initiative and the European Landscape Classification

Between 2003 and 2005, sixteen research centres and universities from fourteen European countries took part in the European Landscape Character Assessment Initiative (ELCAI), funded by the European Union[31] and aimed (among other) at:

- Reviewing the state-of-the-art methodologies and techniques utilised in European countries (including, but not limited to, the participants in the project) for the identification and assessment of landscape character;
- Analysing the role undertaken by different stakeholders in the characterisation process.

[31] This programme was funded by the European Union under the Fifth Framework Programme, and consisted of four phases as follows: inventory of landscape character assessment methodologies in Europe; studies on indicators, maps and landscape types; identification of research gaps; dissemination of the results (http://cordis.europa.eu/ data/ PROJ_FP5/ACTIONeqDndSESSIONeq112362005919ndDOCeq762ndTBLeqEN_PROJ.ht m, accessed October 2008). The final report (Wascher *et al.*, 2005) only deals with the first phase.

The project did not aim to identify landscape units at the European level, or to propose a unified methodology for the characterisation of landscapes in the whole Europe. In fact, its aim was restricted to studying how landscape character is assessed, and particularly how GIS is being utilised and how cultural aspects and perceptions are being included in the definition of landscape types and landscape areas.[32]

This research project examined fifty-one case studies at various administrative levels (supranational, national and regional) by means of a qualitative piece of research which comprised two phases (Groom, 2005). The first phase was carried out by means of a survey: questionnaires (in form of checklists) were delivered to each administration or organisation responsible for data concerning landscapes (be they owners, responsible for gathering of data, responsible for their management and so on); this made it possible to review how the issue of characterising landscapes had been tackled in each country, and also to collect a series of information regarding available data (such as date of production, type, geographical scope, criteria taken into account, methodology, maps' metadata if available). These pieces of information were then used in the next phase, in which methodologies were compared with each other by means of standardised matrixes.

The outcomes of the ELCAI project can be summarised as follows (Wascher, 2005; Wascher *et al.*, 2005).

- Landscape classification in European countries is being used in planning processes in (at least) three main ways; it can be (i) a part of the preliminary analyses carried out in the making of various kinds of

[32] Although the nomenclature varies among different countries, there seems to be a general tendency to identify both *landscape types*, abstract categories of landscapes defined on the basis of scientific aspects (which generally include geology, topography and vegetation), which can be found in different geographic contexts, and *landscape areas*, subsets of landscape types which are closely associated with a specific geographic location.

spatial plans; (ii) a tool for the identification of areas which could or should be designated as conservation areas; and (iii) a tool to envisage and assess potential impacts on landscapes coming from the implementation of plans or projects, particularly those related with agriculture, forestry and tourism (de Blust *et al.*, 2005:113).

- Landscape classification in European countries is 'scientifically sound' (Wascher *et al.*, 2005:viii), but it lacks standard, agreed methodologies and consolidated techniques. This makes it possible to choose, or to develop, the (seemingly) most appropriate method, tailored for each specific case, depending on where the characterisation is to be carried out and on what stakeholders are to be involved in the process.

- GIS-based analyses are generally a significant part of every methodology for the classification of landscapes. However, they are judged not to be sufficient, on their own, to analyse such a complex phenomenon as landscape (de Blust *et al.*, 2005:98). They should be complemented with other types of analyses, such as fieldworks and workshops (Wascher *et al.*, 2005:viii).

- Landscape classification requires bringing together contributions and approaches from various scientific disciplines. However, qualitative methodologies typically used in social sciences (text analysis, interviews, questionnaires, workshops and so on) are needed as well, when it comes to involving stakeholders in the process.

- One of the main problems in landscape assessment methodologies currently used has been identified by Wascher *et al.* (2005:ix) in the absence of a strong cultural component, which questions the effectiveness of these techniques in representing landscapes as defined by the ELC. Therefore, the 'development of a more explicit cultural dimension appears as a high priority for future work' (*ibid.*).

As previously stated, the ELCAI project did not aim to propose a methodology, nor to identify European landscape types or areas. However, it was closely related to another project (the 'European Landscape Classification' project, also called 'LANMAP') in which had participated

many of the researchers who also took part in the ELCAI project. In fact, drawing upon an earlier review of methods carried out in only four out of the fourteen European countries later involved in the ELCAI's survey, a map of European landscape typologies was produced within the LANMAP project.[33]

## 6.5 The *Landscape Character Assessment* approach: experiences from England and Scotland

The *Landscape Character Assessment* (LCA) is an approach used in England and Scotland to identify landscapes; rather than a technique, it is a framework for the characterisation of landscapes that allows for a combination of various techniques. These techniques can be tailored to the level and scope of the assessment (municipality, county, region), to its aims, or to specific needs.

This methodology is grounded in three principles (Swanwick, 2002; Groom, 2005) listed below:

- The characterisation process and the decision-making process are completely separated;
- Both objective and subjective evaluations are included in the assessment;
- The methodology can be applied at different scales, from national and regional to municipalities or even smaller areas.

As shown in Figure 7, the process can be broken up in seven steps that are next briefly described on the basis of the LCA handbook (Swanwick, 2002),

---

[33] The European Landscape Classification was part of a bigger project, which also included the Environmental Classification of Europe (Mücher *et al*., 2003).

produced on behalf of the *Countryside Agency*[34] and of the *Scottish Natural Heritage*.[35]

The first (preliminary) step consists in defining aim, scope, scale and level of detail of the assessment. Depending on these factors, human and monetary resources required are estimated and stakeholders (possibly including local communities) to be involved, as well as the most appropriate phases in which to include their contributions, are roughly identified.

In the second phase, a draft of the characterisation is produced; at this stage, landscape is analysed by experts from various disciplines by means of a desk study which generally includes GIS-based analyses (overlay mapping of elements related both to physical structure of landscapes and to cultural factors, such as geology, landform, soil types, vegetation, land use, settlement patterns, enclosures) to identify landscape types, that is areas which share common features.

In the next (third) step, this characterisation draft is modified and refined by means of fieldwork; as it happens with the desk study, also this field survey is undertaken by experts.

In the fourth phase, landscape character types and areas are mapped and an explanatory report is produced.

---

[34] The *Countryside Agency* was established in England in 1999 to carry on the functions of the former Countryside Commission. It was a statutory body, funded by the government and responsible not only for advising the government on issues related to landscapes and rural communities, but also for the designation of national parks and other conservation areas. After the approval, in 2006, of the *Natural Environment and Rural Communities Act*, it was split into two parts; the divisions dealing with landscapes and protected areas are now part of *Natural England* (http://www.naturalengland.org.uk, accessed October 2008), the new government agency responsible for natural environment.

[35] The *Scottish Natural Heritage* (http://www.snh.org.uk, accessed October 2008) was set up in 1992 through the *Scottish Natural Heritage Act*. It is a government body, responsible for different tasks concerning conservation and sustainable use of natural heritage (including parks and other protected areas), such as carrying out research, producing policies and strategies, advising the Scottish government on issues related to protection and management of landscapes, nature, habitats, wildlife.

At this stage, the characterisation process is completed, and the decision-making process, which comprises a fifth and a sixth phase, follows. The decisional process bridges landscape character assessment with spatial planning, in that the characterisation of landscapes can be used to support planning policies, guidelines for management and transformation of landscapes, designation of new conservation areas; it can also feed directly into development control procedures or environmental impact assessment procedures.

Although the process has here been described, for the sake of clarity, as a linear sequence of phases, feedbacks are possible, so some steps can be iterated in the process. Moreover, although not mandatory, participation is possible in each and every step of the assessment, not least the evaluation carried out by the experts. In fact, maps and reports produced can be subject to public consultation and debates.
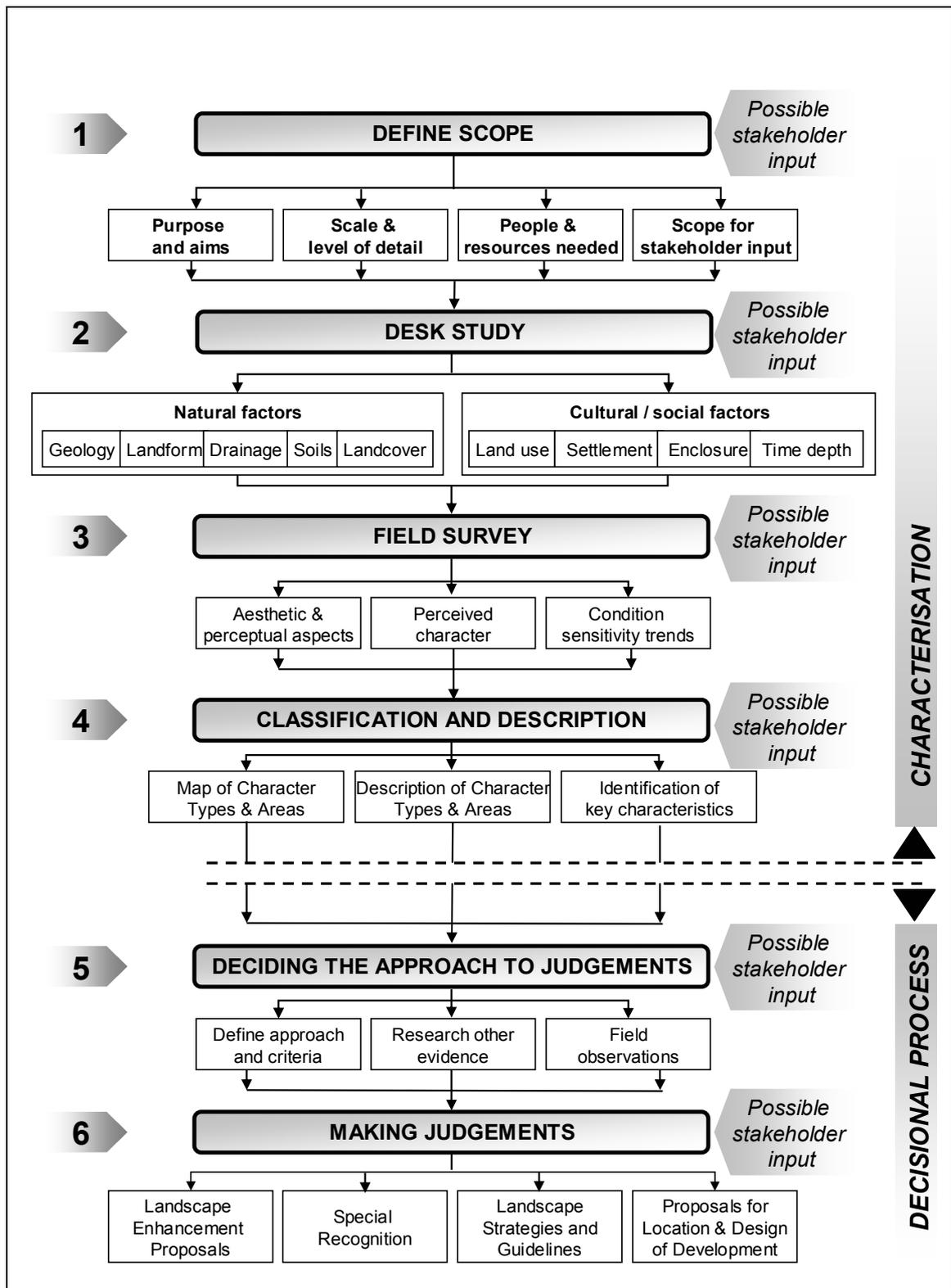
*Figure 7. Flow diagram of the Landscape Character Assessment methodology (based on Swanwick, 2002:13).*

## 6.6 The *Landscape Assessment and Decision Making Process* methodology: experiences from Wales

Funded by the European Regional Development Fund, the *Landscape Assessment and Decision Making Process* (LANDMAP) was introduced in 1996 (Scott, 2002 and 2003) in order to provide public administrations and private organisations with a powerful tool to support not only the making of spatial plans (such as landscape plans, land-use plans and development plans), but also that of sectoral plans (for instance, agricultural and forestry schemes) and even of economic strategies having a spatial dimension.

LANDMAP methodology[36] consists in defining[37] the so-called '*aspect areas*' for each of the following aspects:

- *Geological Landscape*: includes the study and mapping of physical factors (geological, geomorphologic, hydrologic) and the analysis of their influence on landscapes;
- *Habitats Landscape*: takes into account vegetation, natural habitats and their distribution;
- *Visual and Sensory Landscape*: describes those components of landscapes which are perceived by observers, such as landform and soil coverage;

---

[36] For a general description of LANDMAP, see their official website http://landmap.ccw.gov.uk [accessed October 2008].

[37] 'Define' is here used with a broad meaning.  In fact, the definition of each landscape area includes (i) describing its character in a report; (ii) mapping the area itself; and (iii) filling the cells in the database associated with the map.

---

- *Historic Landscape*: analyses not only historical and archaeological sites, but also all the qualities of landscapes which stem from their historic transformation (for instance, hedgerows or other traditional fencing);

- *Cultural Landscape*: considers the relationship between people and their environment, and attempts to identify meanings attached by local communities to their landscapes.

In LANDMAP, therefore, the way landscape is studied and represented takes into account both objectives and subjective components, which, however, do not include socio-economic factors.[38]

Each of the above aspects is studied and mapped on its own; the procedure to be followed has been established by the *Countryside Council for Wales* and published in a series of technical reports (CCW, 2003b; 2003c; 2003d; 2003e; 2003f) which detail every step. As a general rule, for each of the aspects, this procedure comprises:

- A hierarchical classification: since landscape types can be analysed and represented at different scales, the classification for each aspect is organised into different levels (generally, five). Elements of the upper levels ('parents') comprise a certain number of elements belonging to lower levels ('children'). For each 'children', only a 'parent' exists, which makes it possible to obtain broader landscape maps from generalisation of more detailed ones.

- A GIS system, including twelve themes,[39] in which attributes of the database need to be compiled in standardized way;

---

[38] Social and economic information, although not incorporated in the analysis, can be combined with LANDMAP data.

[39] These five general aspects, for which the technical reports provide a standard procedure for their description, arrangement in a hierarchy and evaluation, can be complemented with information relating to land-use and settlements. The latter, not being part of the character assessment process, do not play a role in the identification of character areas. However, they can be integrated in the LANDMAP database in order to provide the decision makers with a complete set of information, which ultimately means to improve their decisions.

- A description of landscape types;
- An evaluation of each landscape type and area (contrary to the previous steps, this one is optional) which can be broken into (i) an assessment of current conditions of landscape and trends of transformation; (ii) a management-oriented section, in which current managements of a certain area are analysed and appropriate measures for its conservation or its management are proposed; (iii) an evaluation of its capacity to tolerate changes;
- A technical report;
- A quality control, by means of which both the process and the data are evaluated.

This general procedure varies according to the particular aspect examined.

Both the fact that a standardised database must be compiled and the existence of a quality control and data validation procedure ensure that landscape assessments prepared at different levels (county or municipality, for instance), by different organisations, in different areas of the country are homogeneous and can therefore feed into a national archive.

Public participation is envisioned in the process by means of questionnaires and focus groups (Scott, 2002 and 2003). By using pictures, both these techniques aim to evaluate local communities perceptions and judgements on their landscapes (for instance, they can identify positive and negative features, as well as assets and aspects they regard as characteristic of some areas or even unique) and to provide decision makers with suggestions for the management of landscape and for spatial planning.

---

Taking into account land-use and settlements, the number of factors to be considered is seven; since some of these are described by means of more than one theme (for instance, geologic landscape includes three themes: geology, hydrogeology and geomorphology), a LANDMAP information system comprises twelve themes.

Answers from the interviewees or from participants in the focus groups directly feed into the GIS, so for each character area they can be visualised and queried. However, the whole process is still considered (Scott, 2002 and 2003) to be shaped by the experts, since the participation phase does not take place at earlier stages, but at the very end of the assessment, when characters areas have already been identified and mapped by the experts.

## 6.7  Conclusions

On the basis of some insights provided by the interviewees and concerning the way Sardinian landscapes were characterized in the PPR (section 6.1), this chapter has examined the inclusion of people's perception in the identification of landscape and public involvement in landscape evaluation and planning as mandatory requirements established by the ELC (section 6.2). Next, on the basis of a literature review, it has attempted to develop a conceptual framework for the classification of approaches and methods used in landscape assessment (section 6.3). This framework shows that both approaches that rely exclusively on experts' judgements (such as the one used in the PPR) and methods which include public participation are currently used. In other words, there are no standard procedures and methods for the identification of landscapes; rather, procedures and methods to be used depend on factors such as scope, scale and purpose of the assessment, as the review carried out within the ELCAI initiative (section 6.5) has proved.

Moreover, while scientific methods, which usually draw on the overlay mapping technique proposed by McHarg in 1969, are well established and have reached high standards, this does not apply to methods that include non-expert knowledge and communities' perception in the process.

Sections 6.5 and 6.6 have therefore presented two methodologies respectively used in England and Scotland (LCA) and in Wales (LANMAP). These, although in different ways, are both capable of including public participation in the identification of landscapes, and, with reference to the LCA only, also in those planning processes that concern, or have an impact on, landscapes.

# 7  Conclusions

*O most lame and impotent conclusion!*
*(Shakespeare, as cited in Boyle and Flowerdew,*
*2003:298)*

The logical structure of this research was designed to start from (i) an understanding of the characteristics of spatial planning, and (ii) from a selection of actions by means of which planning is thought to contribute to the aim of sustainability (chapter 2).  The fieldwork was designed and carried out (chapter 3) to evaluate a specific plan, the Sardinian PPR, and to understand whether it may be considered as a spatial plan and what type of sustainability it pursues, by making reference to both its contents and its process.  Afterwards (chapter 4), a preliminary study of the Sardinian PPR was carried out, having regard to the issues it was meant to address, its origins, its status in the planning system, and finally its contents, which were presented by looking at a particular example, that of the rules applying in the coastal strip.  Expert views from five interviewees were sought on the extent to which the plan is an effective vehicle for delivering sustainability: all of the interviewees had been involved in preparation of the regional plan, but from different disciplines (section 3.3).  The findings from the interviews and from the study of the documents were presented in chapter 5.

This chapter brings together the main conclusions, answers the research questions set in section 1.4, and concludes this study.

## 7.1  Main findings

A review of existent studies, contained in chapter 2, has indicated that spatial planning, as promoted by the European Union because of its perceived ability to shape policies and plans which have a spatial impact, takes many forms.  As Albrechts (2005:1150) argues, 'there is no one single way'.   However, as the extensive literature which draws on both comparative studies and academic research has suggested, some common features can be identified.  Following a comparison of the literature on three large-scale research projects which identified common components of spatial plans (summarised in Boxes 1, 2 and 3, chapter 2), three key elements of spatial plans were identified as the basis for analysis in this study (section 2.3).  Thus in this study a spatial plan has been considered as one that: (i) sets a framework for various types of policies and plans, especially for plans aimed at regulating land uses; (ii) builds a vision in a collaborative and inclusive manner; (iii) is deliverable, because it provides means for action, financial resources, and procedures to monitor the implementation.

In order to define the concept of sustainability in an Italian context appropriate to regional plans, the study identified the 'Strategy for Environmental Action to Pursue Sustainable Development in Italy', prepared by the Minister of the Environment and approved by a committee of ministers in 2002, as being the core document which set the framework for defining sustainability at the time the Sardinian PPR was approved (section 2.4).  From this analysis, the research identified the three classic 'pillars' of sustainability (environment, economy, society), together with some recommendations to be incorporated in a plan for the delivery of sustainable development.   These recommendations, aimed at spurring sustainable development by means of public-led policies, plans, and initiatives, include the consideration of environmental issues, the necessity of an appraisal of the impacts of the plan, a change in the planning system so as to increase integration, participation and information.

The Sardinian Plan for the Landscape (Sardinian PPR) is the first statutory plan with regional dimensions produced in Italy under the new legislation. Its statutory character stems from both a national law (DEL42/2004, section 4.1), which required that each regional executive committees should approve a plan covering all its territory, and from a regional law (RL8/2004, section 4.2), which required that the Sardinian PPR for the coastal areas be approved within one year since the approval of the regional law. The Regional Administration of Sardinian initially focussed on the coastal zone because of the resources needed to prepare a PPR, the complexity of development conflicts arising from tourism and other development, and the fact that thirteen of the fourteen the previous plans (Landscape Planning Schemes, PTPs) covering coastal areas which contained some restrictions on coastal development had been quashed in 2003 in a court decision (section 4.2).

Following adoption of the plan in 2006, restrictions and prohibitions (on development of land and on certain changes in land uses) stemming from the plan are currently in force, in order to protect a part of the island considered economically strategic and environmentally sensitive. Restrictions and prohibitions are set out by the plan by means of a system of rules (section 4.4). In particular parts of the coastal zone, these rules automatically prevail over the more detailed master plans – statutory plans prepared by Municipalities, and remain in force until the approval of new municipal master plans, whose zoning system must be made compliant with the contents of the PPR. Therefore, the implementation of the Sardinian PPR has to be carried out by means of other planning tools, of which the most important are the municipal master plans. Interestingly, the Sardinian PPR introduced criteria-based protection for the coastal area, stemming from an extensive GIS-based analysis of geological, geomorphologic, hydrological, and botanic characteristics, rather than the former 300m and 2000m protection zones contained in the PTPs (section 4.5).

As the first regional plan prepared under new national legislation (DEL42/2004), the Sardinian was innovating within a new policy context. Following the preceding analysis, it is appropriate now to address the research questions set in section 1.4.

**Q1:** *Which features, if any, does the Sardinian PPR share with spatial planning, as promoted by the European Union and understood by the literature?*

Key features of spatial plans have been identified (section 2.4) in: provision of a framework for both policies and plans; ability to develop consensus on a shared vision for a certain space; actual possibility to implement the plans.

As set out in Italian legislation, the rationale for a PPR, that of setting a *framework for other plans,* and in particular its purpose of guiding other lower-tier plans by providing them with a system of rules and policies, puts the PPR into the context of spatial planning.  The presence of statements of general principles and objectives is the second, important feature which the PPR also provides.  A third element is that of proposing an agreed *vision* aimed at preserving, through the safeguard of landscape and environment, also cultural identity of Sardinia.

However, distinguishing features, probably due to the normative and hierarchical character of the Italian planning system, have been identified, which diminishes the *deliverability* of the PPR process.  The key limitations are that the PPR almost exclusively addresses municipal master plans, and that its preparation process, at least as interpreted in the Sardinian PPR, has been characterised by an extremely low level of vertical integration and public participation.  As a result of such limited integration, the delivery of

the plan relies on a normative approach, rather than on consensus about principles, aims and vision.

From the analysis of the participation process adopted for the Sardinian PPR (sections 5.3), it appears that the participation process was i) limited to those organisations required by law to implement the PPR, and ii) was in the form of information giving, rather than consultation. Municipalities and other actors, therefore, had extremely limited chance to influence the plan. However, the *intese* system (section 4.5), whereby specific projects and developments can be approved prior to the adjustment of urban land-use plans provided that they are agreed by three different tiers of government (region, provinces and municipalities), allowed an opt-out clause, enabling specific developments to proceed in sensitive areas, thus possibly weakening the plan.

**Q2:** *To what extent does the plan integrate environmental, social and economic concerns?*

Although there was little or no agreement among the five interviewees on whether a plan for the landscape should pursue all the three components of sustainability (section 5.1), it can be concluded, from the opinions of privileged interviewees, that the plan is unbalanced towards environmental objectives.

Environmental sustainability of the Sardinian PPR (section 5.2.1) was primarily meant as potential effectiveness in protecting non-renewable resources and habitats, especially because it established a series of rules to contrast consumption of land (section 5.2.1). However, such rules, with their underlying conservative approach and understanding of landscape as something which needs protecting rather than managing, were believed not to be effective in addressing environmental problems and risks in sensitive contexts such as those of other parts of Italy. Another issue concerning

environmental sustainability was that of the lack of an SEA, considered not only as a statutory requirement, but especially as a tool which enhances the implementation of the plan by means of an appraisal of its potential effects carried out during the plan preparation.

Economic issues, although considered in the very beginning of the preparation of the plan, appear to have been overlooked, both because of the choice of the type of plan and because of the lack of coordination of the Sardinian PPR with a sectoral plan aimed at controlling tourism activities (section 5.2.2). Finally, as for social sustainability (section 5.2.3), here explored only with reference to issues of participation, integration and coordination, evidence suggests that participation in the making of the plan was meant as a simple delivery of information, in a top-down process. Institutional coordination has been moved from the plan preparation to its implementation, in the form of adjustment of the master plans, and of '*intese*', a technical and political mechanism aimed at approving specific projects and development plans by means of an assessment carried out on a case-by-case basis. The '*intese*' have a controversial nature, being judged both as a mechanism to bypass the rules contained in the regional plan and as a means to include institutional cooperation in the application of the Sardinian PPR. A greater involvement of the general public is envisioned in the implementation of the plan, both in the SEA process and in the modification of local master plans.


**Q3:** *What kinds of policies does the plan set for the making of spaces?*
    *What vision do they propose?*

Until the approval of the second part of the plan for the inland areas of Sardinia, the Sardinian PPR affects only coastal areas. Indicative policies are defined in reports, while rules are defined by the planning implementation code (as discussed in section 4.4). While the PPR does not contain a system of allowed land uses, by means of rules and maps

which visualise its descriptive content (that is, environmental assets, cultural heritage and built environment) and, by means of this, its prescriptive content, it imposes prohibitions and restrictions on activities which can be carried out in some areas. This shift to a criteria-based assessment represents a fundamental change in the nature of spatial planning policies in Sardinia, which until 2003 had been essentially normative in character (section 4.5). This will require a parallel shift in policy-making by the municipal authorities that have the statutory responsibility for making these plans, and the implications of the change have not yet been fully explored. Until a more robust participatory approach which involves wider consultation is adopted, together with analysis of the effectiveness of the criteria-based approach, such a tool may prove to be a relatively insensitive instrument in plan implementations.

Such limitations are meant to preserve current landscape values and qualities, and are to be complied with until either the approval or a new master plan compliant with the PPR, or a specific agreements ('*intese*') between different tiers of government.

**Q4:** *What types of rules does the Sardinian PPR set for its coordination with other policies, plans or programs? What type of governance do these rules imply?*

Even though the Sardinian PPR affirms that its contents, policies and rules need to be delivered by means of a series of other spatial and sectoral plans, this statement is currently being interpreted with reference to local master plans (land-use plans) only. Zoning system and rules contained in urban plans are generally (some exceptions apply) substituted by the PPR for its own system of rules until municipal plans comply with the regional plan. It has been suggested that such a dominant role of the regional administration is only partly justifiable on the grounds of competences and

powers stemming from the laws, and risks both interfering with powers of lower tiers of government and tailoring rules to specific situations.

**Q5:** *What type of landscape characterisation has the Sardinian PPR utilised, and how does it compare with the approaches currently in use in Europe? Are there any suggestions for improving the process?*

Landscape, in the Sardinian PPR, has been defined by means of an extensive GIS-based analysis where experts only were involved, without any public participation. Having regard to the framework presented in section 6.3, it is appropriate to say that this approach to characterisation was 'scientific', and as such primarily aimed at objectivity. However, since these analyses were made at the regional scale, it is possible for municipalities to amend them by analysing their landscapes at the local scale. Therefore, the assessment of landscape character areas can be improved by including people's perceptions, drawing upon the LCA and the LANDMAP experiences presented in sections 6.5 and 6.6, which make it possible to include subjective assessments in the characterisation process.

## 7.2  Concluding remarks

This study has analysed the nature and the potential effectiveness in delivering sustainability of the Sardinian Regional Plan for the Landscape (the Sardinian PPR). This plan was chosen because it is a prototype of a new generation of regional plans in Italy, since it is the first regional plan approved in compliance with the Italian national law on natural assets and cultural heritage.

The plan, whose implementation is currently in its earliest phases, has been evaluated with reference only to its contents and process, and by looking at

issues, such as spatial planning and sustainability, which are deeply affected by personal values and beliefs.  However, since based on insights provided by professionals and academic who took part in the process, the weak points highlighted in this study can provide useful suggestions both for the review of the first part of the PPR for the coastal areas, and for other Italian regional plans for the landscape, including the second part of the Sardinian PPR, currently in preparation for the inland areas.

The Sardinian PPR is a bold attempt to provide an integrated approach to the management of land use change in an extremely sensitive region.  It appears to have many of the components of a spatial plan, as defined in the literature, providing a vision and framework for deliverability of statutory master plans produced by lower tiers of government, but it also has substantive weakness in that deliverability is patchy.  Despite the weakness of consultation, it remains potentially the most effective vehicle for exploring and delivering the concept of sustainability in the Italian planning context. Its name as a 'Plan for the Landscape' is thus perhaps inappropriate, because it gives an undue emphasis to the environmental considerations in the plan, at the expense of the economic and social dimension of sustainability.  It will be interesting to see how the concept of PPR evolves in the second phase of the plan and elsewhere in Italy, as a wider range of agencies seek a voice in its implementation.

# 8 References

Abis E. (2004) Le attese per una nuova legge urbanistica in Sardegna [Awaiting a new regional law on planning in Sardinia]. *AreaVasta Online*, **8/9**, pp. 95-97. http://areavasta.provincia.salerno.it/ av_2004n8e9/ osservatorio_italia_pag95_97. html [accessed October 2008].

Albrechts L. (2001) In pursuit of new approaches to strategic spatial planning. A European perspective. *International Planning Studies*, **6**(3), pp. 293-310.

Albrechts L. (2004) Strategic (spatial) planning reexamined. *Environment and Planning B: Planning and Design*, **31**(5), pp. 743-758.

Albrechts L. (2006) Shifts in strategic spatial planning? Some evidence from Europe and Australia. *Environment and Planning A*, **38**(6), pp. 1149-1170.

Allmendiger P. and G. Haughton (2007) The fluid scales and scope of UK spatial planning. *Environment and Planning A*, **39**(6), pp. 1478-1496.

Appleton J. (1994) Running before we can walk: are we ready to map "beauty"? *Landscape Research*, **19**(3), pp. 112-119.

Babbie E. (1998) *The Practice of Social Research*, 8th edn. Belmont, CA: Wadsworth Publishing Co.

Balletto G., G. Mei, N. Meloni and A. Milesi (2005) Attività estrattiva e tutela costiera [Mining activity and coastal area protection]. *AreaVasta Online,* **10/11**, pp. 101-103. http://areavasta.provincia.salerno.it/av_2005n10e11/Osservatorio_italia_pag101_103. html [accessed October 2008].

Bishop I.D. (2003) Assessment of visual qualities, impacts, and behaviours, in the landscape, by using measures of visibility. *Environment and Planning B: Planning and Design*, **30**(5), pp. 677-688.

Boca G. (2007) Il PPR della Sardegna [Sardinian Plan for the Landscape]. http://eddyburg.it/ article/ articleview/ 9082/ 0/ 253/ [accessed October 2008].

Boyle P. and R. Flowerdew (2005) Designing the report. *In*: R. Flowerdew and D. Martin, (eds.) *Methods in Human Geography: A Guide for Students Doing a Research Project*, 2nd edn. Harlow; New York: Prentice Hall.

Brabyn L. (1996) Landscape classification using GIS and national digital databases. *Landscape Research*, **21(**3), pp. 277-300.

Brabyn L. (2005) Solutions for characterising natural landscapes in New Zealand using geographical information systems. *Journal of Environmental Management*, **76**(1) pp. 23-34.

Bryman A. (2001) *Social Research Methods*. Oxford; New York: Oxford University Press.

BSA (British Sociological Association) (2002) *Statement of Ethical Practice for the British Sociological Association.* http://www.britsoc.co.uk/ user_doc/ Statement of Ethical Practice.doc [accessed October 2008].

Byrne S.M. (1979) Perception of the landscape in the Lands End Peninsula. *Landscape Research*, **5**(1), pp. 21-24.

Cardiff University and ECOTEC (2001) *Comparative Spatial Planning Methodologies: Final Report Department of City and Regional Planning*. Cardiff, UK: Cardiff University.

Casu S. (2005) *Le Prospettive di Sviluppo Sostenibile per la Regione Sardegna [Perspectives for Sustainable Development in Sardinia]*. http://www.ambientediritto.it/ dottrina/ Dottrina_2005/ prospettive_sardegna_casu.htm [accessed October 2008].

CCW (Countryside Council for Wales) (2002) *An Introduction to LANDMAP: A Geographical Information System for Recording and Managing Landscape Quality and Character*. http://landmap.ccw.gov.uk/files/LANDMAPbrochure%5B5%5D.pdf [accessed October 2008].

CCW (Countryside Council for Wales) (2003a) *LANDMAP Information System*. http://landmap.ccw.gov.uk/files/CCW_FinalPDFEng.pdf [accessed October 2008].

CCW (Countryside Council for Wales) (2003b) *Geological Landscape Methodology.* http://landmap.ccw.gov.uk/files/GeologicallandscapeguidanceMASTer.pdf [accessed October 2008].

CCW (Countryside Council for Wales) (2003c) *Habitats Landscape. Methodology.* http://landmap.ccw.gov.uk/files/LandscapeHabitatguidanceMASTER.pdf [accessed October 2008].

CCW (Countryside Council for Wales) (2003d) *Historic Landscape Methodology.* http://landmap.ccw.gov.uk/files/HistoriclandscapeguidanceMASTER.pdf [accessed October 2008].

CCW (Countryside Council for Wales) (2003e) *Cultural Landscape Methodology.* http://landmap.ccw.gov.uk/files/LMAPCultLandMASTER10.03.pdf [accessed October 2008].

CCW (Countryside Council for Wales) (2003f) *Visual and Sensory Landscape Methodology.* http://landmap.ccw.gov.uk/files/VisualSensoryguidanceMASTER.pdf [accessed October 2008].

CEC (Commission of the European Communities) (1997) *The EU Compendium of Spatial Planning Systems and Policies*. Luxembourg: OOPEC.

CEC (Commission of the European Communities) (2000) *The EU Compendium of Spatial Planning Systems and Policies: Italy.* Luxembourg: OOPEC.

CEC (Commission of the European Communities) *Directive 2001/42/EC of the European Parliament and of the Council on the Assessment of the Effects of Certain Plans and Programmes on the Environment*. http://www.environ.ie/en/ Publications/ Environment/ Miscellaneous/ FileDownLoad,1805,en.pdf [accessed October 2008].

Cilloccu F. and A. Cumer (2002) La nuova carta dell'uso del suolo 1:25.000 della Regione Sardegna [Regional Administration of Sardinia's new land use map, scale 1:25.000]. *Documenti del Territorio,* **51**(15), pp. 13-16.

Clemente F. (1987) La cultura del paesaggio nel progetto del territorio. *In*: F. Clemente (ed.) *Cultura del Paesaggio e Metodi del Territorio.* Cagliari, Italy: Janus.

CoE (Council of Europe) (2000) *European Landscape Convention*. http://www.coe.int/ t/e/ cultural_co%2Doperation/ environment/ landscape/ presentation/ 9_text/ 02_Convention_EN.asp#TopOfPage [accessed October 2008].

Costa G. (2006) Il limite del territorio costiero nel Piano Paesaggistico della Sardegna [Boundary of the coastal zone in the Sardinian Plan for the Landscape]. *Ri-Vista. Ricerche per la Progettazione del Paesaggio*, **6**. http://www.unifi.it/ ri-vista/ rivista_6/09_articolo/ articolo.htm [accessed October 2008].

Couclelis H. (2005) 'Where has the future gone?' Rethinking the role of integrated land-use models in spatial planning. *Environment and Planning A,* **37**(8), pp. 1353-1371.

Counsell D., P. Allmendiger, G. Haughton and G. Vigar (2006) 'Integrated' spatial planning – is it living up to expectations? *Town and Country Planning*, **75**(9), pp. 243-246.

Countryside Commission for Scotland (1971) *A planning classification of Scottish landscape resource*s. *Occasional Paper No. 1*. Perth, UK: Countryside Commission for Scotland,.

CSD (Committee on Spatial Development) (1999) *ESDP, European Spatial Development Perspective: Towards Balanced and Sustainable Development of the Territory of the European Union*. Luxembourg: OOPEC.

D'Angelo G. (2007) Tutela del paesaggio: strumenti sovrapposti [Protecting landscape: overlapping planning tools] http://www.patrimoniosos.it/ rsol.php?op= getarticle&id=27888 [accessed October 2008].

de Blust G., T. Damarad, A. Nieto and B. Delbaere (2005) Landscape character in the context of policy and stakeholder interests*. In:* D.M. Wascher (ed.) *European Landscape Character Areas: Typologies, Cartography and Indicators for the Assessment of Sustainable Landscapes. Final Report as deliverable from the EU's Accompanying Measure Project European Landscape Character Assessment Initiative (ELCAI).* Wageningen, The Netherlands: Landscape Europe.

Denscombe M. (1998) *The Good Research Guide: For Small-scale Social Research Projects*. Buckingham, UK: Open University Press.

Dijst M., P.A. Burrough and P.P. Schot (2005) Guest editorial: Coping with uncertainties in integrative spatial planning*. Environment and Planning A,* **37**(8), pp. 1331-1334.

Dühr S. (2004) The form, style, and use of cartographic visualisations in European spatial planning: examples from England and Germany. *Environment and Planning A*, **36**(11), pp. 1961-1989.

Dühr S. (2007) *The Visual Language of Spatial Planning: Exploring Cartographic Representations for Spatial Planning in Europe*. London, UK: Routledge.

Faludi A. (2000a) The European Spatial Development Perspective - What next? *European Planning Studies*, **8**(2), pp. 237- 250.

Faludi A. (2000b) The performance of Spatial Planning. *Planning Practice and Research*, **15**(4), pp. 299-318.

Faludi A. (2004) The European Spatial Development Perspective and North-West Europe: Application and the Future. *European Planning Studies*, **12**(3), pp. 391-408.

Friedmann J., J. Bryson, J. Hyslop, A. Balducci, W. Wiewel, L. Albrechts and P. Healey (2004) Strategic spatial planning and the longer range. *Planning Theory and Practice*, **5**(1), pp. 49-67.

Groom G. (2005) Methodological review of existing classifications. *In:* D.M. Wascher (ed.) *European Landscape Character Areas: Typologies, Cartography and Indicators for the Assessment of Sustainable Landscapes. Final Report as deliverable from the EU's Accompanying Measure Project European Landscape Character Assessment Initiative (ELCAI).* Wageningen, The Netherlands: Landscape Europe.

Harris N., A. Hooper and K. Bishop (2002) Constructing the practice of 'spatial planning': a national spatial planning framework for Wales. *Environment and Planning C: Government and Policy*, **20**(4), pp. 555-572.

Harris N. and A. Hooper (2004) Rediscovering the 'spatial' in public policy and planning: an examination of the spatial content of sectoral policy documents. *Planning Theory & Practice,* **5**(2), pp. 147-169.

Hartshorne R. (1939) The Nature of Geography. A Critical Survey of Current Thought in the Light of the Past. *Annals of the Association of American Geographers*, **29**, pp. 173-658 http://www.colorado.edu/ geography/ giw/ hartshorne-r/ 1939_ng/ naturehome.html [accessed October 2008].

Healey P., A. Khakee, A. Motte and B. Needham (1999) European developments in strategic spatial planning. *European Planning Studies*, **7**(3), pp. 339-355.

Healey P. (2004) The treatment of space and place in the new strategic spatial planning in Europe. *International Journal of Urban and Regional Research*, **28**(1), pp.46-57.

Henwood K. and N. Pigeon (2001) Talk about woods and trees: threat of urbanization, stability and biodiversity. *Journal of Environmental Psychology*, **21**(2), pp. 125-147.

Hospers G.J. (2003) Localization in Europe's periphery: tourism development in Sardinia. *European Planning Studies*, **11**(6), pp. 629-645.

House M. and M. Fordham (1997) Public perception of river corridors and attitudes towards river works. *Landscape Research*, **22**(1), pp. 25-44.

Hull A. (1998) Spatial planning. The development plan as a vehicle to unlock development potential? *Cities*, **15**(5), pp. 327-335.

ISTAT (Italian Institute of Statistics) (2001) *Censimento della popolazione e delle abitazioni [Population and Housing Census].* Rome, Italy: Istituto Poligrafico dello Stato.

Jensen O.B. and T. Richardson (2001) Nested visions: new rationalities of space in European Spatial Planning. *Regional Studies*, **35**(8), pp. 703-717.

Kay R. and J. Alder (1999) *Coastal Planning and Management*. London; New York: E & FN Spon.

Khakee A. and A. Barbanente (2003) Planning in Italy and Sweden. *International Planning Studies*, **8**(3), pp. 181-200.

Kingston R., S. Carver, A. Evans and I. Turton (1999) Virtual decision making in spatial planning: Web-based Geographical Information Systems for public participation in environmental decision making. Paper presented at the *International Conference on Public Participation and Information Technology*, Lisbon, Portugal.

Llobera M. (2003) Extending GIS-based visual analysis: the concept of visualscapes. *International Journal of Geographical Information Science*, **17**(1), pp. 25-48.

Manca A. (2008) Alcune riflessioni sugli assetti del Piano paesaggistico regionale [Some reflections on the landscape aspects in the PPR]. *In:* C. Zoppi (ed.) *Governance, Pianificazione e Valutazione Strategica: Sviluppo Sostenibile e Governance nella Pianificazione Urbanistica* [*Governance, Planning and Strategic Assessment: Sustainable Development and Governance in City and Regional Planning*]. Rome, Italy: Gangemi.

Marchi M.R. (1992) *Paesaggio e Ambiente in Sardegna: Norme Regionali e Nazionali di Tutela.* [*Landscape and Environment in Sardinia: Regional and National Laws*]. Cagliari, Italy: Marchi Editrice Sarda.

MATT (Ministero dell'Ambiente e Tutela del Territorio [Ministry of the Environment and Protection of Territory]) (2002) *Strategia dì Azione Ambientale per lo Sviluppo Sostenibile in Italia [Strategy for Environmental Action to Pursue Sustainable Development in Italy],* approved by the Inter-ministerial Committee for Economic Programming (decision CIPE no. 57, August 2nd, 2002). http://www2.minambiente.it/ SvS/ svs/ strategia_azione_ambientale.htm [accessed October 2008].

May T. (2001) *Social Research: Issues, Methods and Process*, 3rd edn. Philadelphia, PA: Open University Press.

McCall M.K. (2003) Seeking good governance in participatory-GIS: a review of processes and governance dimensions in applying GIS to participatory spatial planning. *Habitat International,* **27**(4), pp. 549-573.

McHarg I.L. (2007) *Progettare con la Natura*. Padua, Italy: Franco Muzzio.

Miller J. and B. Glassner (1997) The 'Inside' and the 'Outside': finding realities in interviews. *In*: D. Silverman (ed.) *Qualitative Research: Theory, Method and Practice*. London, UK: SAGE Publications LTD.

Mücher C.A., R.G.H. Bunce, R.H.G.J ongman, J.A. Klijn, A.J.M. Koomen, M.J. Metzger and D.M. Wascher (2003) *Identification and Characterisation of Environments and Landscapes in Europe: Alterra Rapport 832*. Wageningen, The Netherlands: Alterra.

Murru M.G. (2006) Strategie turistiche in aree costiere marginali. Buone e cattive pratiche in Sardegna [Strategies aimed at tourism in coastal areas of secondary importance. Good and bad practice in Sardinia]. *AreaVasta Online*, **12/13**, pp. 78-85. http://areavasta.provincia.salerno.it/av_2006n12e13/Osservatorio_italia_pag78_85.html [accessed October 2008].

O'Sullivan D. and A. Turner (2001) Visibility graphs and landscape visibility analysis. *International Journal of Geographical Information Science*, **15**(3), pp. 221-237.

ODPM (Great Britain. Office of the Deputy Prime Minister) (2003) *Planning Policy Statement 1: Delivering Sustainable Development*. London, UK: TSO.

Penning-Rowsell E.C. and D.I. Hardy (1973) Landscape evaluation and planning policy: a comparative survey in the Wye Valley Area of Outstanding Natural Beauty, *Regional Studies*, **16**(2), pp. 97-112.

Phillips A. (2002) *Management Guidelines for IUCN Category V Protected Areas: Protected Landscapes/Seascapes*. Gland, Switzerland, and Cambridge, UK: IUCN World Commission on Protected Areas.

Prior L. (1997) Following in Foucault's footsteps. *In*: D. Silverman (ed.) *Qualitative Research: Theory, Method and Practice*. London, UK: SAGE Publications LTD.

RAS (Regione Autonoma della Sardegna [Regional Administration of Sardinia]) (2003) Il Sistema Informativo Territoriale della Regione Autonoma della Sardegna e la Cartografia della Regione [*Maps and Geographic Information System of the Autonomous Regional Administration of Sardinia*], http://www.sitos.regione.sardegna.it/ entilocali/ pianificazione_ territoriale/ html/ 008.htm [accessed October 2008].

RAS (Regione Autonoma della Sardegna [Regional Administration of Sardinia]) (2004) Deliberazione della Giunta Regionale n. 33/27 del 10.08.2004: Predisposizione del Piano Territoriale Paesistico Regionale e del Piano di Sviluppo Turistico Sostenibile *[Decision of the Regional Executive Committee no. 33/27, August 10th, 2004: On the Preparation of the Regional Plan for the Landscape and of the Plan for Sustainable Tourism Development]*. http://sed.regione.sardegna.it/ documenti/ 1_17_20050103182033.pdf [accessed October 2008].

RAS (Regione Autonoma della Sardegna [Regional Administration of Sardinia]) (2006a) *Piano Paesaggistico Regionale: Norme Tecniche di Attuazione [Regional Plan for the Landscape: Planning Implementation Code]*. http://www.regione.sardegna.it/ documenti/ 1_22_20060911101100.pdf [accessed October 2008].

RAS (Regione Autonoma della Sardegna [Regional Administration of Sardinia]) (2006b) *Piano Paesaggistico Regionale: Relazione Introduttiva [Regional Plan for the Landscape: Introductory Report]* http://www.sardegnaterritorio.it/ documenti/ 6_83_20060929095149.zip [accessed October 2008].

RAS (Regione Autonoma della Sardegna [Regional Administration of Sardinia]) (2006c) *Piano Paesaggistico Regionale: Relazione Tecnica Generale [Regional Plan for the Landscape: Technical Report]*. http://www.sardegnaterritorio.it/ documenti/ 6_83_20060929095149.zip [accessed October 2008].

RAS (Regione Autonoma della Sardegna [Regional Administration of Sardinia]) (2006d) *Documento Strategico Regionale Preliminare. [Regional Strategic Document: Draft]. http://www.regione.sardegna.it /documenti/ 1_84_20060608094009.pdf* [accessed October 2008].

RAS (Regione Autonoma della Sardegna [Regional Administration of Sardinia]) (2006e) *Piano Paesaggistico Regionale: Relazione Comitato Scientifico [Regional Plan for the*

*Landscape: Report of the Scientific Committee].* http://www.sardegnaterritorio.it/ documenti/ 6_83_20060929095149.zip [accessed October 2008].

RAS (Regione Autonoma della Sardegna [Regional Administration of Sardinia]) (2007a) *Piano Paesaggistico Regionale: Linee Guida per l'Adeguamento dei Piani Urbanistici Comunali al PPR e al PAI. Bozza Febbraio 2007. [PPR: Guidelines to Make the Municipal Master Plans Compliant with the Regional Plan for the Landscape and the Regional Plan for River Basins and Catchment Areas. Draft Document, February 2007].* http://www.sardegnaterritorio.it/ documenti/ 6_83_20070612104816.pdf [accessed October 2008].

RAS (Regione Autonoma della Sardegna [Regional Administration of Sardinia]) (2007b) Deliberazione della Giunta Regionale n. 19/1 del 09.05.2007: Presa d'Atto del Piano Regionale di Sviluppo Turistico Sostenibile *[Decision of the Regional Executive Committee no.19/1, May 9th, 2007: Presentation of the Regional Plan for Sustainable Tourism Development].* http://www.regione.sardegna.it/ documenti/ 1_72_20070509150833.pdf [accessed October 2008].

RAS (Regione Autonoma della Sardegna [Regional Administration of Sardinia]) (2007c) *Piano Paesaggistico Regionale: Linee Guida per la Valutazione Ambientale Strategica dei Piani Urbanistici Comunali. Maggio 2007. [PPR: Guidelines to Perform a Strategic Environmental Assessment of Municipal Master Plans. May 2007].* http://www.sardegnaterritorio.it/ documenti/ 6_83_20070706101540.pdf [accessed October 2008].

Roggio S. (2007) *C'è di Mezzo il Mare. Le Coste Sarde: Merci o Beni Comuni*? *[Dealing with the Sea. Sardinian Coasts: Goods or Assets?]* Cagliari, Italy: CUEC.

Salzano E. (2007) Postfazione [Postface]. *In:* S. Roggio, *C'è di Mezzo il Mare. Le Coste Sarde: Merci o Beni Comuni*? *[Dealing with the Sea. Sardinian Coasts: Goods or Assets?]* Cagliari, Italy: CUEC.

Scott A. (2002) Assessing public perception of landscape: the LANDMAP experience. *Landscape Research*, **27**(3), pp. 271-295.

Scott A. (2003) Assessing public perception of landscape: from practice to policy. *Journal of Environmental Policy & Planning*, **5**(2), pp. 123-144.

Selman P. (2006) *Planning at the Landscape Scale*. London, UK: Routledge.

Steiner F. (2000) *The Living Landscape: An Ecological Approach to Landscape Planning*. New York: McGraw-Hill Professional.

Swanwick C. (2002) *Landscape Character Assessment: Guidance for England and Scotland*. Cheltenham, UK: The Countryside Agency, and Edinburgh, UK: Scottish Natural Heritage.

Taussik J. (2001) The contribution of Town and Country Planning to the resolution of conflict in the coastal zone. *In*: R.W. Dixon-Gough (ed.) *European Coastal Zone Management: Partnership Approaches.* Aldershot, UK: Ashgate.

Tewdwr-Jones M. (2004) Spatial planning: principles, practices and cultures. *Journal of Planning and Environment Law*, **May**, pp. 560-569.

Tewdwr-Jones M. and R.H. Williams (2001) *The European Dimension of British Planning*. New York: Spon Press.

Thompson R. (2000) Re-defining planning: the roles of theory and practice. *Planning Theory and Practice*, **1**(1), pp. 126-134.

Tress B. and G. Tress (2000) Scenarios for the multifunctional use of landscapes in Denmark. http://www.tress.cc/scenario [accessed October 2008].

Turner A., M. Doxa, D. O'Sullivan and A. Penn (2003) From isovists to visibility graphs: a methodology for the analysis of architectural space. *Environment and Planning B: Planning and Design*, **28**(1), pp. 103-121.

Upton R. (2006) Spatial planning: here to stay? *Planning Theory and Practice*, **7**(2), pp. 111-114.

Valentine G. (2005) Tell me about …: using interviews as a research methodology. *In*: R. Flowerdew and D. Martin (eds.) *Methods in Human Geography: A Guide for Students Doing a Research Project*, 2nd edn. Harlow; New York: Prentice Hall.

Vigar G., P. Healey, A. Hull and S. Davoudi (2004) Planning, Governance and Spatial Strategy in Britain: An Institutionalist Analysis. Basingstoke: Macmillan.

Wascher D.M. (ed.) (2005) *European Landscape Character Areas: Typologies, Cartography and Indicators for the Assessment of Sustainable Landscapes. Final Report as deliverable from the EU's Accompanying Measure Project European Landscape Character Assessment Initiative (ELCAI)*. Wageningen, The Netherlands: Landscape Europe.

Wascher D.M., G. Groom, S. Mücher and A. Kindler (2005) Recent developments in mapping Europe's landscapes. *In:* D.M. Wascher (ed.) *European Landscape Character Areas: Typologies, Cartography and Indicators for the Assessment of Sustainable Landscapes. Final Report as deliverable from the EU's Accompanying Measure Project European Landscape Character Assessment Initiative (ELCAI)*. Wageningen, The Netherlands: Landscape Europe.

WCED (World Commission on Environment and Development) (1987) *Our Common Future*. Oxford: Oxford University Press.

Weitkamp G., A. Bregt, R. van Lammeren and A. van den Berg (2007) Three sampling methods for visibility measures of landscape perception. *In*: S. Winter, M. Duckham, L. Kulik and B. Kuipers (eds.), *Spatial Information Theory: Lecture Notes in Computer Science*, vol. 4736 (Proceedings of the Conference COSIT 2007). Berlin, Germany: Springer-Verlag, pp. 268-284.

Wherrett J.R. (2001) Creating landscape preference models using internet survey techniques. *Landscape Research*, **25**(1), pp. 79-96.

Zonneveld W. (2005) Multiple visioning: new ways of constructing transnational spatial visions. *Environment and Planning C: Government and Policy,* **23**(1), pp. 41- 62.

Zoppi C. (2007) Regional and city planning in Sardinia (Italy): conflictual issues analyzed through multicriteria analysis and contingent valuation. *Proceedings of the 47th Conference of the European Regional Science Association*. Paris, 29th – 2nd August, 2007. http://sadapt.inapg.inra.fr/ ersa2007/ papers/88.pdf [accessed October 2008].

Zoppi C. (2008) Questioni conflittuali nel processo di adeguamento del Piano urbanistico del Comune di Sinnai al Piano paesaggistico regionale: un caso di studio [Conflicts arising from the adjustment of the city masterplan of the municipality of Sinnay in compliance with the PPR: a case study]. *In:* C. Zoppi (ed.) *Governance, Pianificazione e Valutazione Strategica: Sviluppo Sostenibile e Governance nella Pianificazione Urbanistica* [*Governance, Planning and Strategic Assessment: Sustainable Development and Governance in City and Regional Planning*]. Rome, Italy: Gangemi.

Zube E.H. (1987) Perceived land use patterns and landscape values. *Landscape Ecology*, **1**(1), pp. 37-45.