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Introduction

The concepts of governance and sustainable development on which this dissertation[1] is based, are present in the literature with various meanings and are often used in everyday language, so as to be regarded by many as words full of rhetoric, ambiguous, devoid of any real content, used to express everything and nothing. The likely cause of this misuse is that they are concepts related to complex systems and processes, in terms of problems and implications, with a variety of people involved in different ways and whose number has increased over time.

The dissertation examines the mechanisms of regional governance, defined as the process involving the formation and implementation of decisions (UNESCAP, 2007). The object of this study is to analyse the relationships between the various stakeholders and governmental institutions, with the aim of defining in what terms, with reference to regional governance, the theoretical principles of sustainable development (in terms of managing the relationship between natural resources and economic development) can be applied to the planning phases.

The territorial dimension is the main point around which the processes of governance are developed, both vertically (relationships between levels of government and institutions) and horizontally (the relationship between stakeholders and the institutional components). The concept of governance refers to patterns of interaction in which the coherence and effectiveness of local government processes depend not only on the political and administrative activities, but also and in particular on the horizontal and vertical coordination among various players, institutional and social, and on their ability to negotiate agreements, share objectives and work together to achieve them (Governa, 2004).

The analysis referring to the relationship between levels of government shows how, following the constitutional reform,[2] the legislative and planning role of the Regions has been strengthened on one hand (Article 117 of the Constitution), while on the other hand most of the administrative functions now allocated (inappropriately) to the regional level have been moved to the provincial level (Article 118 of the Constitution). Although from a regulatory point of view there is the recognition of provincial functions as functions of regional governance practices, the regions have,

[1] The thesis' work is part of the research conducted and supported by the Autonomous Region of Sardinia through a Fellowship co-financed with funding from the Regional Operational Program of Sardinia on the European Social Fund 2007-2013 in implementation of the Regional Law 7 / 2007 "Promotion of scientific research and technological innovation in Sardinia."
[2] Reform of the Fifth Title of the Italian Constitution, as implemented by the Constitutional Law 1 / 99 and 3 / 2001.

however, confirmed their centralism, while the provinces, having reinforced their institutional positions, are still struggling to identify their function.

The definition of governance, as model of policy formulation and management, provides that decision-making be the result of the widest possible participation of all parties involved, directly or indirectly. Through the relational structure and interests of various stakeholders who, with their knowledge and their conflicts could be important in defining strategies, the "capital stock" has little influence in governing of the territory (Mazzucato, 2009).

The principle of subsidiarity, according to which actions by public institutions (regions, metropolitan areas, provinces and municipalities) with respect to citizens and governments should be implemented only as a subsidy in case the citizen or entity are unable to act on their own, is not applied consistently in practice.
Regional governance is affected by environmental policies, developed in connection with sustainable development practices and planning policies that must take into account the community's desire to protect the environment.

An important governance tool, useful in guiding the plan of action to the paradigm of sustainable development, is the Strategic Environmental Assessment (SEA). Compared to its relationship with governance, the SEA could be defined as a set of rules, principles, techniques and tools with the function of continually supporting the decision making process in order to generate consensus on actions to be taken and, above all, to ensure that such consent will last over time and become a network of stable relationships that can ensure continuity and consistency in the planning process.

The 2001/42/EC Directive has introduced a change of perspective in approaching spatial planning, which views the SEA as a flexible, transparent, participatory and systemic tool for building knowledge. The integration of the SEA within the planning process and programming, participation, sharing, acceptance and consideration of environmental concerns, are aspects that should characterise the SEA, but as we shall see in later chapters, in practice they are often lacking or ineffective.
The cause is attributed primarily to the lack of culture regarding environmental assessment, intended as a further complication of decision-making processes rather than as an essential tool for planning and programming. Its widespread use in several countries much earlier than in Italy should make us reflect on the potential of this tool.

The problems found in the applications of SEA are both methodological in nature and of governance. The latter relate to the players involved, their role, their skills and all aspects of good governance represented in *the octagon of a good governance* (UNESCAP, 2007), which constitute an important part of the reflection on the theory and practice of contemporary regional planning (Zoppi, 2007).

Using these considerations as a starting point, the aim of the dissertation is to highlight, in terms of issues, the question of relationship between governance, planning and evaluation, and, in particular, to define methodological and procedural requirements for a SEA fully integrated in urban and regional planning process at different levels of government.

The dissertation is structured in two parts: the first is a general analysis of theoretical and regulatory aspects related to the concepts of sustainability and governance. The second part is dedicated to and in depth analysis of the increasing problems of governance and the application of the SEA, with particular attention being given to the Region of Sardinia, which, since 2006, year of approval of its Regional Landscape Plan (RLP)[3] has been experiencing a new era of regional governance characterised by: a new understanding of environmental resources; and by a different relational approach among regional government bodies, as well as between them and local communities.

The first chapter examines the concepts of sustainable development, of the environment and territory, and on key elements to their successful integration in regional governance.

The second chapter examines the evolution of regional governance in Italy compared to the amendment of the Fifth Title of the Italian Constitution and the importance of environmental laws and plans of regional government.

The third chapter traces the theoretical path that led, in 2001, to the 42/2001/CE Directive and, subsequently, to its inclusion in the European Union and in Italy, at national and regional levels.

The fourth chapter discusses how the concept of sustainable development has influenced the content of the RLP and the governance mechanisms activated during its formation and revision, with particular regard to regional and provincial levels. In particular, the chapter focuses on the participatory process and collaboration at institutional levels, which led to the definition of the regulatory framework of the first draft of the RLP and of its current revision.

[3] With Resolution No. 36 / 7 of 05/09/2006, the Regional Council has approved the RLP- First homogeneous areas. The legislation governing twenty-seven Landscape Areas which constitute the first homogeneous areas, corresponding to the total coastal territory.

At the provincial level, we shall analyse the role and position of the Province in the decision-making dynamics, regarding regional planning and the municipal administrations' point of view in this regard. The chapter concludes with a series of reflections on the proper coordination of provincial and regional plans, which should be implemented through the integration of regional governance and landscape planning.

The fifth chapter focuses on planning at the municipal level and analyses the processes of SEA activated within the adjustment of city Masterplans to the RLP; in particular, it highlights some important methodological problems that are present in the SEA process.

The typical phases and steps of the SEA were analysed through a series of case studies, examining, for each phase of the process, the definition and rules of development indicated by the "SEA Guidelines for city Masterplans", drafted by the Region of Sardinia to assist municipalities in adapting their city Masterplans.

This analysis allows informed conclusions to be drawn and highlights emerging critical issues, for which potential solutions are presented in the chapter following.

The sixth chapter presents a procedural protocol aimed at defining guidelines for the development of the individual activities of the evaluation process related to regional and urban plans, which cover different levels of decision-making processes.

The practical steps and guidelines to be followed in formulating and implementing a SEA process constitute an operational framework that integrates original contributions as well as contributions of various application experiences analysed during the research. It is believed that these may contribute to an efficient definition of a transparent and inclusive decision-making process. The essential characteristics of the procedural protocol are its exportability and its usability by planners, evaluators and administrators.

The conclusions relate some of the reflections outlined in the dissertation and define a number of issues that lend themselves to furthering and developing future research.

SECTION 1: Sustainability and governance

Chapter 1: Sustainability and sustainable development in the regional governance

Premise

International and national documents constantly refer to sustainability and sustainable development (Fracchia, 2009); public decision makers work to elaborate strategies that reflect these documents, and politicians quote them as though they were dogmas to support their ideas.

"Whoever does not believe in cathartic revolutions rejects the term "sustainability" and the empty rhetoric it nourishes, thanks to the high degree of abstraction of this term known as a suitcase word, ready for any use" (Mininni and Migliaccio, 2011); according to others however, the term sustainability is not obsolete, but rather not very practical.

The association of the words "sustainability and development" often refers to the environmental dimension of sustainability and its implementation in terms of compatibility of different human actions with the environment. It gives the term environmental "protection" a restricted sense, the preservation of its significant aspects and features: by this definition, sustainability is intended as in opposition to settlements and productive actions.

In the decision making process concerning the government and environmental planning, increasing attempts are made to overcome this opposition, through innovative forms of regional planning of the territory and the environment.

This chapter analyses the concepts of sustainability and sustainable development from different points of view: according to some interpretations in the literature (first paragraph), their relationship with the concepts of territory and environment (second paragraph), the identification of the key elements of planned coevolution between economic development, territory and environmental resources (third paragraph). The object is to understand whether sustainability and sustainable development are pure utopia, or whether it's at all possible to measure and quantify them.

1.1 The concepts of sustainable development and sustainability

The introduction of the concepts of sustainable development and sustainability (Brundtland, 1987)[4] as the main objectives of land management policies, has brought to the forefront interesting

[4] The Brundtland report (also known as Our Common Future) is a document issued in 1987 by the World Commission on Environment and Development (WCED) in which, for the first time, the concept of sustainable development is introduced.

questions about what course of action would allow this to be achieved, in order to prevent promising, yet not feasible ideas. The vagueness of the concepts "used" in political appeals, creates in fact doubts about their usefulness; there is in this sense the risk that various interested groups, quite different from one another, could come forward to interpret its true nature in order to pursue their own interests (Fracchia, 2009).

The consensus in which the paradigms of sustainable development and sustainability have become established on a world scale, was the United Nations Conference on Environment and Development (UNCED) in Rio de Janeiro in 1992, whose aim was to develop strategies and measures to stop the state of environmental degradation of our planet.

Today, there are more than three hundred definitions of sustainable development proposed in the literature by scholars and national and international bodies. Among these, one is provided by the British government for which sustainable development is one that "ensures a better quality of life for everyone now and for generations to come". According to the proposed definition, the concept of sustainability in the administration of the territory goes beyond the protection of the environment by including economic and social development as well as the environmental dimension.

In this sense, it highlights the need to make the demands of the economy compatible with environmental requirements (environmental sustainability), not by bending developmental needs to environmental protection, but through a simultaneous and balanced pursuit of social progress (the social dimension of sustainability) and the maintenance of high and stable levels of economic growth (economic dimension of sustainability).

Environmental sustainability is the ability to preserve the three environmental functions over time: the role of supplier of resources, the waste receptor function, and the function of a direct source of utility; economic sustainability can be defined as the ability of an economic system to generate sustainable growth of economic indicators, in particular, the ability to generate income and work for subsistence needs; social sustainability can be defined as the ability to guarantee conditions of human well-being (safety, health, education) equally distributed by class and gender.

Therefore, acting according to sustainability criteria should not lead us to believe that choices and actions identified are definitive, creating an immutable future scenario; but it is necessary to consider sustainable development as a process not only able to create a predictable scenario for the future, but also to keep it up to date (Cordini, 1997).

Sustainable development is not a predetermined state of equilibrium, but rather a concept based on "value", while its achievement is a matter of the choices made by people, groups, communities, organizations and governments (Hardy and Zdan, 1997; Devuyst *et al*., 2001). In this sense, the achievement of sustainability does not consist in a situation of stable equilibrium, rather it is a dynamic process in which, in turn, means and strategies are defined to make the use of resources compatible with current and future needs.

Studies on sustainability provide a series of interpretations on the nature of the relationship between the economy and the environment which can be classified into two theories. The first is the theory of an "ecological modernization", according to which economy and environment are not in conflict as economic well-being is considered essential to ensure good environmental outcomes. From this theory, sustainability is a concept of the utilitarian type and the environment is a warehouse of quantifiable, almost marketable goods.

According to the second theory, known as the "risk society" (Beck *et al*., 1994), there is an irreducible conflict between modes of production, consumption and environmental demands (Davoudi, 1999). In this sense, the concept of sustainability becomes more radical, with moral connotations. Environmental protection takes priority over other instances, binding human activity to the carrying capacity of ecosystems.

An important reference at the Community level in planning and economic programming is the European Landscape Convention[5], which introduced an ever stronger relationship between socio-economic development projects and exploitation of land resources, as well as a common search for integration between policies. In this case, an environmental and territorial resource such as the landscape is explicitly identified as a resource able to promote an increase in economic activities from a sustainable development point of view.

In the Convention, the landscape is not defined only in accordance with visual criteria, but according to a complex perception of stratified natural and human elements which define the cultural identity of different places.

The main innovative aspect of the Convention was founding its legislation on the idea that the landscape represents an "asset", regardless of the value assigned to it.

[5] Signed in Florence on 20 October 2000 by the Member States of the Council of Europe.

In this sense, the economic dimension is considered as important as the environmental dimension. Regional planning, is not only seen as a means of passive defense or protection but, where possible, as a means for the development of the project.
The intent is not to hamper socio-economic developmental processes, but rather to harmonize the transformations by integrating landscape into its regional and urban planning policies and in its cultural, environmental, agricultural, social and economic policies, as well as in any other policies with possible direct or indirect impact on landscape (Article 5 of the Convention).

1.2 The relationship between sustainability and environmental and land policies

In the processes of regional governance, the concept of sustainability interacts with the environment and to the territory, whose definitions sometimes coincide.

The concept of environment is subject to various interpretations. In a wider sense, the environment is seen as the interaction between natural components and socio-cultural processes, resulting from our relationship with the physical system. The environment as an active complex of elements that move within a common context, influencing each other. It is not only the set of elements that compose it, but also where the actions and the relations between the elements take place (Iovino, 2004).

According to this interpretation, the environment "includes" the territory, but ontologically it is independent because it operates in a broader, more general dimension; "Environmental issues are intertwined with territorial ones, and are both local and global, territorial and deterritorialized" (Endrici, 2005).

Another interpretation, which has found its way into recent legislation, defines environment the same as territory. The concept of territory and environment interacts with the processes of regional governance; environmental issues need to be addressed by “territorializing" the policies of intervention. The importance of the territorialization process and the risks involved from the increasing globalization of economic, social, and cultural forces, leads to decline sustainable development strategies based on local endogenous, self-governed development (Gambino, 2005).

The territorial approach, developed in the homonymous school[6], highlights how problems of sustainable development bring into the foreground territorial exploitation, in its environmental,

[6] The "territorialist school” was founded in Italy in the early 90s by a group of professors and researchers in urban planning and sociology who agreed to coordinate their research activities in universities and CNR: A. Magnaghi (University of Florence),G.

regional and urban planning, cultural and social components, as a key element for the sustainable production of wealth. In this approach, society and the environment intersect constantly, each including the other. The territory supports both and becomes the space where energy flow exchanges of all kinds take place. "Territoriality" is defined by Sack "as the attempt of an individual or a group to influence or control people, phenomena and relationships by delimiting and exercising control over a geographic area, defined territory" (Sack, 1986).
Entirely different is the position of Raffestin, who defines territoriality as "a set of relations that arise in a three-dimensional society-space-time system in order to achieve the greatest possible independence, compatible with the system's resources" (Raffestin, 1981). In this case, territoriality is not the result of human behavior in the territory but the process of "construction" of such behavior.

With respect to the territory, the three dimensions of sustainability can be classified in the following way: environmental sustainability is the ability to enhance the environment as a "hallmark" of the territory while ensuring the protection and renewal of natural resources and heritage. Economic sustainability is the ability to produce and maintain within the territory the maximum added value by combining resources efficiently, so as to valorize the specificity of territorial products and services. Social sustainability, within a territorial system, refers to the ability of individuals to act effectively together according to the same conception of the project, and encouraged by consultation between the various institutional levels.

Considering the growing importance of environmental issues, with the territories as the reference point, thought must be given to their role, not only in traditional terms of competence allocation but also of governance (Endrici, 2005).

The local authorities are the first ones called on to respond to environmental problems, showing greater innovative capacity than central governments (Bobbio, 2000). The local systems, in particular, elaborate and manage a more sustainable and lasting development. "However, the enhancement of local players and their role in the development process depends on the true convergence of government policies at all levels" (Gambino, 2005).

Ferrara (Polytechnic of Milan), A. Peano (Turin Polytechnic), E. Trevisiol (IUAV), A.Tarozzi (University of Bologna), E. Scandurra (University of Rome “La Sapienza”), A.Giangrande (University of Rome), D. Borri (University of Bari) and B. Rossi Doria(University of Palermo).

In this sense, the territory has an essential role in establishing an equilibrium between social, environmental and economic sustainability (Fusco Girard and Nijkamp, 1997).

1.3 The programmed co-evolution between economic development, territory and environmental resources. Key elements

Reflecting on the integration of sustainability paradigms into planning and regional governance means believing that, at different levels of government, there is a need for an innovation gradient capable of affirming new logical conceptions, and also, more importantly, for the conviction that sustainability is not only a "plastic" and stereotyped term. So coming to grips with its measurement and quantification becomes absolutely necessary. If indeed the concept of absolute sustainability represents a “utopia”, actions taken towards sustainability and sustainable development needn’t be.

In order to create sustainable development a “planned” co-evolution is necessary between economic development, territory and environmental resources, which are a key element in the decision making processes. The evaluative practices can be of help from the preliminary stages, through a multidisciplinary and integrated approach to environmental, social, and economic problems.

The assessment of sustainable development has been widely discussed in the literature, sometimes as a tool and sometimes as a methodological approach (Devuyst *et al.*, 2001). Whatever the characteristics or label assigned to the specific instrument of evaluation, it should be noted that the assessment of sustainability can be meaningful only within an assessment structure which establishes indicators and values able to express a trend, whether positive or negative, of sustainable development. This implies that sustainable development as a long-term goal, if supported by a structure of values and choices, and by political responsibilities, can be used as a reference framework for the evaluation of strategic decisions (Partidário, 1996, 2000).

The timing of construction plans and programs is very important for the various proposals, so a conscious approach to planning based in the different components and their interrelationships becomes fundamental. The best framework for sustainable development is planning, with evaluation as its main activity (Pallone, 2004).

1.3.1 Integration and evaluation as a decision-making support system

For the integrated approach discussed above, all players involved need to conform in the decision making process. The environmental issue represents a privileged arena for experimenting new forms of public discussion and development of new decision-making tools. The importance of the

tools is highlighted by the national legislator who defines "the environment as a system of relationships between different factors as a result of the implementation of plans, programs, or projects on the territory in various stages of their construction, operation and decommissioning".[7]

In regional planning, segmentation and instrumentality create difficulties in overcoming the dichotomy between the two development and sustainability paradigms. In reference to the different plan levels, the principle of sustainability can materialize through a series of coordinated and complementary actions based on the assumption that the protection of the environment, the physical integrity of the territory and its cultural identity are key elements for the territorial and urban transformation. The sector plans and protection restrictions (of the environment, cultural heritage, soil protection, and risk of earthquakes) must be implemented and harmonized within territorial and urban planning.

Sustainability needs to be interpreted through quantitative evaluations capable of simulating alternative planning scenarios. In the literature there are cases of environmental models applied to different stages of development of regional and urban plans that have dealt with analytical and evaluative aspects. Traditional evaluation methods of cost benefit analysis of the planning processes, appear to be deficient because they are unable to provide interpretative tools of the environmental transformations. The route taken by the culture of sustainability can be a useful key to understanding the changes of environmental assessment.

The Brundtland Report inspired the philosophy of environmental assessment, in particular it identified a series of principles and tools to pursue the goal of sustainable development. The principle of prevention is a key principle in environmental assessment; predicting the effects of a project or program helps in choosing the best solution, taking into account the environmental component. The Rio Conference has further strengthened this concept by showing that environmental issues cannot be disregarded in addressing human actions towards the achievement of forms of development.

The most effective tools for sustainability are those inspired by the *principle of integration*. The principle of integration implies that the objective of environmental protection is to be considered whenever any decision is made that can have any sort of consequence on the environment, and on

[7] Article 5, c. 1 letter. c) of the Decree. 4 / 2008.

equal terms as all other variables (economic, social or otherwise) which are the subject of the decision.

An essential element of the operation is the comparison, balance, or even compromise, between various objectives and priorities. Ensuring the choice of the best option in important decisions is very difficult, particularly where the margin of uncertainty regarding the predictability of the consequences of the options of development is very high. In these cases, it is necessary to ensure that choices are made rationally; that is, the choice must be the best one on the basis of assumptions.

It is necessary to define a procedural scheme for the decision making process. When the effects or impacts cannot be predicted, the choice must be adopted according to a set of procedural measures obtained on the basis of whatever knowledge was available at the time the decision was made.

This implies, there's a need for an ongoing updating process, considering the possibility that available knowledge may change over time.
In other words, certain initial rules may need to be put aside in favor of those not initially know.

Another principle introduced by the Brundtland Report is the principle of sharing of responsibilities among different players in the economic system, including private citizens. This assumes that private citizens be informed and participate in the choices regarding individual works, as well as the highest level of planning tools and even policies.

The most significant innovation introduced in recent years is the attempt to explain the concept of assessments so as to become topic of discussion and debate, as well as the foundation of shared strategic choices.

The disciplinary debate has made significant progress in this direction and it is hoped that there will be further rapid developments in the future capable of setting up an evaluation system. This system will be able to provide conditions and criteria to clarify policy objectives which emerge in the local debate, and represent specific references to evaluate if and to what extent the proposed measures are in accordance with the developmental objectives of the interested community (Minucci, 2005).

The SEA, if applied correctly, can ensure the adoption of an appropriate decision in terms of sustainability.

This implies that in addition to the consideration of the impacts of a decision, there's a need to respect some previously defined procedural parameters, such as the definition of an open dialogue

with the public, or the involvement of technical authorities able to provide suitable data which shall increase the wealth of knowledge available to the decision maker. It is necessary to leave the possibility of changing the decision parameters and the same procedure open in case additional evaluation factors become available.

It can be affirmed that the integration of environmental assessments in strategic decisions is a fundamental prerequisite for sustainable development, beyond the traditional idea of considering environmental policies as a specific area, separated from the others.

Governmental institutions of the territories have a strategic role; they are required for new modes of operation based the balancing of the various general and particular interests.

1.3.2 Participation of all relevant territorial players

During the Rio Conference, participation is identified as a key element for sustainable development. In the Agenda 21 document it is stated that sustainable development can only be achieved through a democratic and participatory process, and planning and proactive planning at all scalar levels from international to local.

The rights of citizen participation in public decisions regarding the environment, must be applied during the phases that constitute the process of decision making.

Citizen involvement is achieved first of all through knowledge of the choices that need to be made and the assessment of those elements in terms of their impact, and also through the possibility of "informed" participation in the decision-making process.

Through the Aarhus Convention[8] significant progress has been made in the regulatory field, in particular in sight of the participation required in defining public policies.

Local communities are involved at different levels, each of which increases the citizens' power to influence policies according to shared objectives. The aim of the first level is to increase civic activism through communication and information (informed participation). The next step should be to systematically and representatively record public opinion on issues, proposals and projects promoted by the local authority (consultative participation). The involvement becomes even more challenging when, with respect to a particular theme, one intends to create a shared project,

[8] The Convention was signed under UN/ECE (United Nations Economic Commission for Europe) in Aarhus, Denmark, in 1998 and entered into force in October 30, 2001. Italy has ratified the Convention on the Law 108/2001.

deliberations or decisions with the constructive approach of many subjects and interests (shared planning).

A new way of understanding managing and regional planning so as to ensure the protection and sustainable use of the territory, was introduced in 2000 by the European Landscape Convention.

As well as providing a new definition of landscape[9], the Convention emphasizes the need for novel regional planning, based on integrated and sustainable local development.

Furthermore, it emphasizes the importance of procedures for participation of the public, of local and regional authorities, and of the other parties involved in the definition and implementation of territorial policies. It also recognizes the important role of citizens' perceptions and expectations in determining the value to resources, from which it follows that participation is closely linked to local context.

The Convention highlights the multilevel approach between local and global strategies. "The landscape, as essential element of individual and social wellbeing, is an important element of people's quality of life, [....] contributes to human development and consolidation of European identity "(Dejeant - Pons, 2001).

Is necessary to understand, the new role that citizens should take in the development of shared planning policies and in the defining and implementing of the objectives local governments have for the territory.

Giving the correct role to participation requires a systematic approach which cannot be merely traditional consultative procedures of observations regarding zoning, nor environmental assessment procedures. In decision-making the involvement of qualified witnesses (Del Zotto, 1988) or key witnesses, or of a "sociological sample" (Mongardini, 1984) to be referred for information relevant to the decision, is considered essential.

[9] The Convention defines landscape as "part of the area, as perceived by people, whose character derives from the factors and / or humans and their mutual inter-relationships".

Chapter 2: The regional governance in Italy

Premise

The conceptual framework ,which emerges over the concept of sustainable development, applied on the regional goverment, is of great complexity and articulation and finds reference in the problems which intrude the atmosphere and society in their development models, cultural backgrounds and technical disciplines, knowledge tools, evaluation and prospects, in the game players and the role of the information.

The term governance includes multiple questions, which this chapter attempts to analyse:
The first concerns all relations inside a multi-level regional governance[10], in which two co-present and polycentric parallel dimensions can be recognized, which create a management tool within the governance to transform the territory; one being a vertical which concerns the institutional relations within the government's various administrations and the other one being horizontal which includes all the procedures for the participation at the local government level.
The second is the attention to the environmental topic in a governance, gradually influencing the regional government's technical contents, of which has caused an evolution to the last generation's regional government's laws in an environmental sense.

The chapter is structured in a first paragraph which analyses the general definitions for the term "governance" as found in literature and in particular as expressed by the European Community; the second paragraph examines in further detail the transition from the concept of "regional government" to "regional governance"; the third paragraph analyses the evolution of the Italian regional governance model, whereas the fourth and firth paragraph takes an in depth look at the relations within different planning levels; the fifth paragraph summarizes some fundamental references for a good regional governance.

2.1 The concept of governance

Without an equivalent noun in Italian language the english term "governance" has become very popular in political and academic debates during the last 20 years. The definition of the concept has undergone various changes and integrations, although in general one can maintain that economists,

[10] The multi-level governance term is defined in the White Book of the region's commmitee, European Union, 80th session of June 17th and 18th 2009. It is meant as a government manner which implies a shared responsability on different power-levels, based on every democratic legitimacy and representation sources of the elements involved.

political scientists and international relationship experts have used it mainly to emphasize a distinction and an antithesis to the term "government" meant in this context as institution, apparatus or organisation; Instead governance is meant as "political government" which includes public structures and bodies interacting with the state (both companies and communities).

Governance therefore merges politics and policies[11], where by the first one describes the contents and effects of public political intervention and events regarding achievement and execution of power and the latter one describes the choices, conduct and directions the government opts to do or to omit. Some affirm that the concept of governance was born with human civilization in the sense of simply being a process to conceive decisions and how these are implemented or not (UNESCAP, 2007).

As of today a shared definition is missing on how the term governance is to be used since more often than not it is used with different meanings and shades; the concept is often substituted with other terms, but without creating a clear-cut understanding of the interaction mechanisms and applied regularizations and therefore without accounting for analytical and conceptual evidence of the very concept (Vedelago, 2002). In this sense the concept of governance as used in economy cannot be identical with the one used in political science and is further different when referred at public administration; unless it concerns extremely connected notions the meaning is profoundly influenced within the context they appear. Nonetheless it is possible to trace a common definition nucleus valid for all contexts.

Among the most common definitions, the governance is meant as a "coordination process of individuals, of social communities, of institutions aimed at achieving collectively discussed and preset objectives, within fragmented and precarious settings" (Bagnasco and Le Galès, 1997) as well as as "the execution of a political, economic and administrative authority during the management of a country's affairs at every level".[12]

In political science this is defined as a collective act of synergy of all components which determine the overall stability of a political system at a given moment.

The analysis of the governance processes requires the reconstruction of behaviour of the multiple participants which act in these processes. Returning to the interpreptation which defines governance

[11] The first surveys on policies were carryied out in the United States, led by the failure of reforming policies sentenced during the 60's by democratic administrations.
[12] Definition given by the United Nations Development Program (UNDP).

being opposed to the government, governance is a normative framework which functions only where intentions are shared and accepted by a majority, where as a government may also function albeit widespread political opposition (Minucci, 2005).

The lack of democracy in a system, requiring more civil transparency and the absence of a formal participation of the civil society's entities, which have been held outside the public system, has driven the European Community towards the definition of an own governance system. A model based on profound reforms of decisional processes in terms of democratic control, of superior coordination and a wider interpretation of the entire decision making process to better respond to citizens' aspirations, by permitting real participation to the European public life.

Ensuring from these conditions, the European Community has dedicated this argumentation in its "White Book"[13] (Commissione delle Comunità Europee, 2001) where it proposes a more open and transparent decisional process, with the objective to warrant a greater participation of its citizens and their representatives. The book contains five principles on which a good governance must be based: openness, participation, accountability, efficiency and consistency. In this regard, every institution must operate in a transparent way attempting to explain its objectives and strategies in an accessible and comprehensible language by its citizens seen as a fundamental principle to increase citizens' confidence in the institutions.

The latter ones must warrant superior simplicity and accessibility to decisional procedures through better information on its own activities and moreover implement new working methods. Every institution in its own aspiration must assume their selves responsibilities in defining and implementing their policies, which shall produce the required results in an efficient and well-timed fashion based on clear predefined objectives, and validating its future impact and wherever possible also experiences acquired in the past. In this respect, policies which warrant an higher degree of efficiency will need to be implemented according to decisions adopted at the right level.
The efficiency of such government system does not depend on the political activities at administration level only, but also and foremost on the horizontal and vertical coordination, between a greater number of institutional and social participants and of their ability to share objectives, negotiate agreements and cooperate to achieve them. This assumes that hierarchic

[13] Bruxelles, August 5th 2001

organized governments, to which a well-established and defined hierarchy of interests correlates, are now obsolete.

2.2 Definitions for regional "government" and governance.

The European Spatial Planning Charter, signed in Terremolinos in 1983[14], defines the concept of regional government in two ways; it is intended as a reference to spatial variation of economic, social, environmental and cultural policies of society and as a real and distinct science discipline based on an interdisciplinary approach. According to this definition the regional government aims for an adequate regional social-economic development, a better quality of life, a conscious management of natural resources, protection of the environment and an appropriate utilization of the territory. This definition implies the intervention in multiple disciplinary fields: Legislation, which shall mandate to identify the objectives to be accomplished and establish the fundamental schemes; Planning, to devising and acceptance of the plans; Execution, which deals with the actual implementation of the territorial transformations.

Literature refers to three principal theories which qualify the regional with the urban concept. One is the "Evolutionary", according to which and intended as a regularisation for the entire territory, the regional government coincides with modern regional and urban planning processes. Another one is the "Separatistic", within which urbanism is to be understood as managing in a strict sense the city assets, i.e. the populated centres whereas the surrounding spaces are administrated by the government. Within this vision urbanism is faintly orients itself towards the solution of problems and moreover pays little attention to the social involvement in choices which proposes.

At last the "Constituent", which attributes the regional government with something ulterior and partially different opposed to regional and urban planning by not reducing its power to adapt private property to serve social aims, but to include all territorial types, programs and titles. In other words, this vision of urbanism is the management of the development of city assets, i.e. the populated centers, whilst the regional government retains a number of powers partially limiting city planning and differentiating policies, such as interests in master infrastructure, economic development and environmental aspects since these concern territory in the sense of community space in which public life takes place.

[14] Signed by European Ministers.

In Italy the subject concerning the regional government has considerably evolved in the last years, in particular due to innovations implemented by federal and regional legislation, which has lead the regional government to interact with the regional governance processes. It seems that the term government is no longer appropriate to define the method in which populations and territories are organized and administered, whereas the term governance seems to better define the process with which problems are resolved, and social needs are addressed. That is the reason the relationships and interactions within the processes assume a great importance.

Some of the most debated topics were the contents and its effects on the schedules at different levels, the relation between the authorities' power over the schedule and the consensual agreement on modalities of regulations by which the requirements in the area of infrastructure and public services on location are satisfied.

2.3 Environmental development in the regional governance

Environmental policies are a crucial point for the beginning of good governance procedures (Governa, 2004). As of the 80's the regional planning has started concerning environmental questions with the "Direttiva comunitaria sulla Valutazione di impatto ambientale" (European Directive of Environmental Impact Assessment [15]) in 1985, which was applied on multiple public and private plans which could have a serious impact on the environment.

In Italy, with huge delays and doubts, the necessity for the overtake of the traditional normative framework, which considered nature resources deprived of a legal protection, was felt. The concept of environment has now the meaning of a common good which needs to be safeguarded by the law, not because it is owned by somebody, but because it can be used publicly.

"If the proposal that assigns to the regional planning, the task of directing territorial transformations towards specified quality standards by giving a real meaning to the "sustainable development" is accepted, the preservation of territorial goods will be its irreplaceable fulcrum. The roots of our future are in our heritage" (De Varine, 2002). This idea is found to be agreed in multiple declarations, arrangements and international conventions and is more included in regional and urban planning policies. Nowadays the environmental preservation and the regional government are implemented through multiple normative, planning and knowledge tools, which were developed for different administrational levels (community, national, regional and local).

[15] Council Direction of June 27th 1985, no.337, article 1, comma1.

The objectives and the criteria for their accomplishment and the implementation of environmental policies, are set concerning general and specific norms, which also give directions for the creation of plans and programs, which are the operative tools through the actions for the accomplishment of the objectives set by the norms will be planned.

At the same time, the knowledge-activities related to the completion of regional government and environmental preservation processes on different administrational fields are performed.

The allocation of environmental and territorial jurisdictions are sentenced by article 117 of the Italian Constitution (later edited into Constitutional Law 18.10.2001, no.3) which states that the State has the sole legislation right over “the preservation of the environment, eco-system and cultural heritage”, the Regions has, respecting governmental laws, the authority of “preserving the health and government of the territory, developing cultural and natural heritage and promoting cultural activities”. The statutory authority is held by the State on every exclusive field, except if delegated to any region, whereas the Region has the statutory authority on all non-exclusive fields; Municipalities, Provinces and Metropolis have their respective statutory authority only on the functions they were assigned to.

The acknowledgment of the right for a healthy and ecologically stable environment (which is recognized in multiple countries and used as a base for the latest directions of the European Union) is not nevertheless present in the Carta Costituzionale (Constitutional Charter). As a matter of fact, the Italian Constitution does not specifically cover the environment, the only constitutional norms concerning it are article 9, which preserves the landscape and the historic and artistic heritage, and article 32 which states that the right of health is fundamental for individuals and communities.

During the 90's several rules followed which enhanced but at the same time complicated the regional government's lawmaking. We said enhanced, as they set new plans and tried to reorganise and homogenise the multiple jurisdictions in the landscape planning; whereas we said complicated because by identifying those competences among Ministries, Regions and several other politic bodies, they produced difficulty in the formulation of trend programmes, implementation criterias and resources which were assigned to environmental policies.

The out coming of environmental problems and the necessity for directing regional developing policies towards sustainability standards requested important innovations for the regional and urban plans and for the nature itself.

In this meaning, the second “regional government law generation” have highlighted environmental origins for the regional and urban planning and the government of the territory. In the regional and urban planning, looking upon environmental landscape values has been converted into laws which unification all the plans into one, which, apart from regulating the ground usage, also regulates environmental and landscape resources.

While the first-generation urban laws were essentially headed towards the control of the urban growth and the restraint of the development, the latest aim for the creation of development possibilities reconcilable with the territory's resources, in a, by now inevitable, sustainable development view. The new acting directions are based on the fact that this concept must adapt the regional government as indispensable for every plan.

In this view, the territorial knowledge-activities have sensibly changed, as the new analysis prefigured by normative frameworks are not analytic and static anymore, instead they are systemic and historicized, in order to enhance the effects of the planning tools and to modifying their representation procedures.

The laws enacted by the various Regions turn out to be different by concerning their framework and the problems of the territory they are related to. The first generation ones usually provided a first draft for the plans concerned, which was generally based on analysis of documentary evidences (demographic trends, employment trends, population age-classes, services’ situation, some data regarding housing trends and something else, on a ten year scale). It basically summarised in a few pages the current overall-status, with the purpose of supporting the predictions of the planning part of the plan, which aimed for the research of resolutions for the upcoming spatial-growth request of urban agglomerates.

2.4 Some fundamental references for a good regional governance.

A governance can be considered well-done if it has a circular framework, in which all its aspects work reciprocally and have an important role.

From the analysis of the current chapter, and in opposite to what advised by the European Community, it can affirm that governance processes can only work if they cover sufficiently all aspects needed, or rather if every interest and point of view of the involved elements have an actual importance within the process.

Territorial transformations have the necessity of an interpretational, planning and directional process, which has to be implemented on every single part involved, and which must consider its specifically tradition and local values that can reach the top of their value through an intra-institutional cooperation and via the business interaction of the different interested (public and private) subjects.

In matters of the regional governance's vertical aspect, a further important point is the coordination between different government levels, with their corresponding planning processes, and an open hierarchy of the objectives. To understand adequately environmental, landscape, urban and natural processes, it is necessary to have as a point of reference a wide area. In fact, by limiting this view within municipal administration borders it is not possible neither to recognise the actual aspects and connections that concern environmental and landscape resources, nor to understand their working and the links which connect them with social-economic, housing and mobility trends. As a matter of fact, these questions can be well-understood only on a wider area, than a municipal one; therefore it is desirable from the government the interaction and integration between municipalities and wider areas.

In matters of the territorial governance's horizontal aspect, the outlined regional government is based on the plan and promotion for the highest participation of the administrations to the regional planning processes. This is triggered through a communication way which is based on collective discussions that include the preparation of the debate's place, the development of the discussion towards the problems in question, the conclusion modes and the summary of all results. During the collective process, it is important to care about the proposals and needs of every single participant, as they' re importance within the process depends on the value of the input they can give regarding preferences for the plan's drafting and implementation (Forester, 1998). Therefore they represent a test field for community visioning experiences, based on the process for the identification and setting of local predictions and objectives. Considering the territory, not only a spatial but also an environmental, social, cultural and economic resource which is the base for the local developing management, could match up ecological integrity, social fairness and economic efficiency.

Another key element is the integration of sectorial planning, which interfere with the territory's structure, although not in a different way. In that meaning, a control on a regional level of territorial transformation could be essential to unite all the different proposals, as it could pick out innovative elements from a complex regional framework and also act as a support for specific plans' changes.

Therefore, this “control” could pick out and expound the transformations, in order to be the element that grants the plan's implementation.[16] Last, but not least important as a fundamental element of a good regional governance, is the correct of sustainable development within the plan's processing choices. In practice, it is clear the need for integrated approaches which consider multi-dimensional techniques and tools which can promote the dialogue and interaction between different technical and political learning (Thérivel, 2008).

[16] See the case of the Osservatorio Regionale del Piemonte sulle Trasformazioni Territoriali (Territorial transformation observatory of the Region of Piemonte) which has started, basing on the Regional Law 57/77, a specific survey on separate plannings.

Chapter 3: Repercussions of the 2001/42/EC Directive on regional development policies.

Premise

In the previous chapters, the fundamental role that assessment has in governance and regional planning processes was discussed. In this respect, the chapter intends to analyse the doctrine regarding SEA, as well as European, national and regional normative references.

The 2001/42/EC Directive (henceforth referred to as Directive) represents an important step towards the guarantee of a sustainable development in countries of the European Community (EC). It introduces the obligation of a preliminary assessment of the impact of certain plans and programmes, in the attempt to make sure that activities of regional transformation, which are in the process of being implemented, achieve an acceptable level of sustainability (Brunetta, 2002). This can be attained by identifying and defining problems and environmental targets at an early stage of the decision process, carrying out a broad and interactive evaluation.

The great differences of the cultural, social and economic contexts in which the Directive is applied have led to multiple interpretations and therefore a wide range of approaches, instruments and methods of application of the SEA.

The first paragraph examines the origins of environmental assessment and the theoretical evolution which ultimately brought about the Directive; the second paragraph analyses the normative framework at EC, national and regional levels; the third one defines opportunities and strong points of the SEA and its repercussion in regional planning.

3.1 Towards the 2001/42/EC Directive

The origins of Environmental Assessment

The importance of the environmental aspect within the process of evaluation of the effects of the implementation of a certain development project, whether it may be a single work or a more complex planning instrument or even a policy, began to emerge when the public opinion and politicians recognised the worsening conditions of the environment and the necessity to address the threat of depletion of natural resources became compelling.

Environmental law began to develop as a separate branch in the Sixties, although a number of industrialised countries introduced types of environmental control as early as the XIX century.

In North America and Europe the first environmental laws tended to follow the traditional command and control approach, a form of top-down regulation model, whereby environmental protection is centrally controlled by the State. According to this vision, governments decide levels and standards and prosecutes those who do not abide by the regulations. Although the command and control approach appears to be necessary, it does however present intrinsic limitations and it cannot guarantee the resolution of environmental problems, since it does not allow the successful handling of complex systems. This is why laws and policies which encourage self-regulation have gradually gained an upper hand in environmental control (Heinelt *et al.*, 2001).

There are essentially three reasons that explain the birth of environmental assessment: firstly, increased scientific knowledge and growing awareness among the general public as regards the damage caused to the environment by development and technological activities; the second reason is related to the increasing pressure on public opinion and governments by the media, especially in the USA and the UK; the third motivation is the drastic growth of consumption of natural resources and the bleak scenarios ahead in terms of their regeneration capacity (O'Riordan e Turner, 1983).

The birth of environmental assessment[17] is traditionally associated with the enactment of the National Environmental Policy Act (NEPA) in December 1969 (US Congress, 1969). That document made it mandatory for federal administrations to take into consideration all available knowledge during the planning phases in order to highlight possible repercussions on the environment, aiming at the introduction of environmental values, as well as technical and economic aspects, in the decision-making phases[18]: in this way the principle of obligation for preventive assessment of the effects on the environment of a project was introduced. The directives which were issued, based on the procedures that the federal agencies must follow, have made it possible to develop an environmental assessment methodology which has been strongly influential among other European countries which began this type of practice in later stages.

The major Federal actions category of the NEPA can be considered the starting point of the SEA, because it contains references to projects, plans, programmes, policies and regulatory proposals, as

[17] In Great Britain, as early as 1548, a Commission was created whose mandate was to examine the impact that the new furnaces in Sussex and Kent would have on the local economy. In this case the assessment parametres were not the values and environmental protection interests (which became important only in the last decades of the XX century as regards the definition of political objectives), but merely the social and economic costs and benefits (e.g. cost of the material, cost of iron, an increase of employment levels). Nevertheless, in that circumstance the way the Commission carried out its task was very similar to the modern-day ones. This is the case because its nature was essentially technical, the interaction with associated forms of public and the fact that it had foreseen certain measures to contrast the negative effect that the implementation of the furnaces could have caused. These are examples of principles which were considered fundamental even then (Fortlage, 1990).

[18] The regulatory scheme provided by NEPA became operative in 1970, with the institution of the Council for Environmental Quality (CEQ) and the Environmental Protection Agency (EPA, with an administrative control role). The CEQ is a consultancy and coordination body, whose mandate is to issue directives to federal agencies.

well as methods which can be related to it. Various authors have drafted chronicles and studied the evolution of SEA. Sadler (2001) distinguishes three main phases: the formation stage (1970-1989), during which the political and legal conditions were pinpointed, although the application of the SEA was limited; the formalisation stage (1989-2001), during which different forms of SEA were instituted by countries and international agencies; the expansion stage (since 2001) during which normative and political development result in a wider adoption of SEA, especially in Europe (Sadler, 2001).

The course of the SEA at EC level prior to the Directive

The course leading to the SEA within the European Community (EC) commenced in 1980, when the need to assess the impact on the environment of projects in the fields of energy, transport and management of hydric resources etc. became apparent. The proposal of the directive in 1980 produced the Directive of Environmental Impact Assessment (EIA) 337/85/EC, modified by the 97/11/EC, which introduced in the Community system the principle of public participation, in organised forms, to the decision-making process regarding public and private projects which could have a strong impact on human and physical environment. That Directive essentially introduces a verification procedure, following the planning one, on the technical choices among those that minimise environmental impact. The application of this Directive to plans and programmes, however, was inadequate because it seems obvious that monitoring decisions which have already been made, while remaining out of the procedures themselves, does not affect those same decisions in any way.

On the basis of such considerations and following the guidelines of the Brundtland Report, which defines the principal elements of sustainable development, the EC decided to prioritise the integration of assessment processes, promoting their openness so as to create a vast consensus over environmental objectives. This is to be pursued through policies, plans and programmes (Pallone, 2004). In the early nineties, this led to the creation of an initial draft of a Directive on environmental assessment of plans and programmes, whose main concept were at the core of the Fifth European Community environment programme.[19]

The process for the formulation and approval of the Directive lasted more than a decade, but in the meanwhile a testing ground for the SEA was its application in those programmes financed by structural funds, which require a pre-emptive assessment of the possible environmental impact

[19] The programme defines the EC environmental strategy for the years 1992-2000; it highlights the need for an integrated approach for the protection and management of the environment.

caused by their implementation.

During the same period, an intense scientific debate over the concept of SEA took place. As far back as 1992, Thérivel comprehensively defines the SEA as a "formal, systematic and comprehensive process of evaluation of the environmental impact of a policy, plan or programme and its alternatives, which include the preparation of a written report, whose results must be made public and integrated in the decision-making process" (Thérivel *et al.*, 1992).

When defining the SEA, Sadler and Verheem do not talk about impact, but the environmental consequences of policies, plans or programmes, also adding that these must be taken into consideration in the initial phases of the decision-making process, along with further economic and social considerations (Sadler e Verheem, 1996).

The most recent doctrine stresses the fact that the SEA must necessarily do more than just a mere analysis of the effects on the environment of a decision (Brown e Thérivel, 2000; Kørnøv e Thissen, 2000). On the contrary, it should concentrate more on the decision-making process and its strategic importance. Therefore, the object of the assessment is not the decision, which is only the expected result, but the process that leads to it (Kørnøv e Thissen, 2000).

The text in which a compromise is finally reached, and that will become a Directive on 27 June 2001, has an essentially procedural nature, similar in many respects to the EIA Directive, but which includes many of the peculiarities of the SEA, as it emerged from the scientific debate.

3.2 EC, national and regional levels: the normative framework

3.2.1 EC level. Crucial elements of the Directive and its application among Member States.

The inspiring principles of the SEA are those which are defined in the European Community Treaty[20], which represents its legal foundation. In particular, article 6 of the Treaty foresees that: "environmental protection requirements must be integrated into the definition and implementation of the Community policies". Article 174 of the Treaty, which is also part of the preamble of the Directive, determines that Community environmental policy should contribute to the pursuit of environmental protection and improvement, safeguard of public welfare, as well as a careful and rational use of natural resources, based on the precautionary principle (Cecchetti, 2009).

The objective of the Directive (art. 1) is to provide a high level of environmental protection, making sure that an environmental assessment is carried out for plans and programmes, and that the results of such assessments are taken into account during the preparation and adoption of such plans and

[20] Treaty on the European Union (TEU), signed in Maastricht on 7 February 1992.

programmes. In this sense, it is very different from the EIA, which concentrates more on specific problems and evaluations relative to a given project.

Plans and programmes are to be intended as being those elaborated and/or adopted by a national, regional or local authority; also those which are prearranged by an authority which then need to be approved by parliament or government, and which are foreseen by laws or regulations (art. 2, letter a).

Environmental assessment is to be intended as the elaboration of a report on environmental impact, consultation sessions, evaluation of the environmental report and of the results of the consultations in the decision-making process, as well as the publication of the relative information (art. 2 letter b).

The fields in which the SEA (art. 6) is to be applied essentially pertain to plans and programmes set up for agriculture, forestry, fishery, energy, industry, transport, waste and hydric management, telecommunications, tourism, regional planning or use of local land planning. These define the framework of reference for the authorisation of the projects listed in attachments I and II of the Directive 85/337/EEC, or for those projects that, due to the possible impact on the sites, require an assessment according to articles 6 and 7 of the Directive 92/43/EEC[21].

The Directive determines limited requirements as regards the areas of application, therefore the different States of the European Union (Member States) use different methods when defining such areas and when consulting the appropriate authorities. Most of these are claimed to be based on a mixed approach, i.e. making use of lists of plans and programmes requiring an evaluation, but also assessing the need for an evaluation case by case[22].

The procedure for the definition of areas are usually established case by case, because specific methodology requirements do not apply. In some instances, the procedure requires a public consultation, which is not however mandatory as far as the Directive is concerned.

An environmental report is intended as the part of documents of a plan or a programme in which there is a listing, a description and an assessment of the significant effects that the implementation of the plan or programme could have on the environment, as well as the reasonable alternative based on the objectives of the territorial context of the plan or project (art. 5 paragraph 1 of the Directive).

All the national enactment regulations formally require the description of the initial situation.

[21] The Directive related to the conservation of natural and semi-natural habitats and wild fauna and flora (Official Journal of the European Communities, L 206 22 July 1992).

[22] See the Report from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions (Comitato delle Regioni, 2009) on the on the application and effectiveness of the Directive on the 2009 Strategic Environmental Assessment (COM/2009/469).

According to what was communicated to the Member States, the main difficulty consists in defining in what proportion and how detailed an assessment is[23].

Problems are generated also by the lack of reliable information, the time required for data collection, the lack of homogeneous criteria for the definition of the area and content of the initial analysis, as well as the lack of model criteria for the assessment of plans and programmes in the field of environment and sustainability.

One of the difficulties encountered by states when drafting an environmental report was to find and assess "reasonable" alternatives to a given plan. In order to address this problem, some states produced comprehensive guidelines, in the attempt to aid the single procedures, but most of them did not establish any operational modes for this stage of the process[24.]

Most national regulations do not define in any specific way the concept of "reasonable" alternative (art. 5 paragraph 1), nor do they establish which alternatives are to be assessed; the choice takes place after the assessment of every single case and subsequent decision.

All the Member States have communicated that among the alternatives to be included in the environmental report there must be an inactive one, i.e. the so called "zero alternative".

The authorities with specific environmental jurisdiction must be consulted when deciding the extent of the information which is to be included in the environmental report (art. 5 paragraph 4 and art. 6 paragraph 3). The proposal of the plan or programme and the environmental report must be made available to the above mentioned authorities and the public; they must also be given the opportunity to express, in suitable terms, their opinion regarding the given plan or programme and the annexed environmental report, before the plan or programme is effectively adopted or before the legal procedure gets underway.

The results of the consultations need to be assessed during the decision-making process (art. 2 paragraph b). It is therefore necessary to define in the early stages which are the players that need to be consulted, i.e. the "public", made of (art. 2 paragraph d) all the persons, both natural and legal, which could be potentially interested in the plan or programme for which the SEA in being developed. It is a very broad definition and it is in line with the Aarhus Convention. The definition of "public" remains purposely vague, needing a more rigorous definition "according to national regulations and procedures" (art. 2 paragraph d), which are also left to determine how the consultations are to take place.

[23] *ibidem*
[24] *ibidem*

A fundamental precondition for the consultations is that the proposal of a plan or programme for which the SEA and the environmental report are being developed is made public. Also regarding this aspect, the Directive leaves the Member States to decide which modalities and procedures are the most suitable. It is however crucial to effectively reach the goal of allowing the public, subsequent to its precise definition, to appropriately express their opinion in future consultations (art. 6, paragraph 2).

Since the Directive does not provide specific details as to which procedure is to be followed for public consultations, Member States have implemented different methods: public announcements, publications in official journals or the press, public meetings, internet surveys and questionnaires. Only few Member States have given precise deadlines for the duration of the consultation: the majority allow around one month for the consultation, while others do not follow a regular pattern and decide case by case[25].

In general, this experience demonstrates how public consultations, in particular when carried out in the early stages of the planning process and are conceived as part of it, make it easier for plans and programmes to be accepted. Consequently, it contributes to a timely definition and solution of possible conflicts.[26]

Which authority holds the responsibility to decide the results of the procedure does not appear to be clear in the Directive. According to the regulations of the Member States, it is often the authority in charge of planning, prior to consultations with the authority in charge of environmental matters; while it is the other way round in other countries.

As regards monitoring, Member States should keep under control the significant environmental effects of the enactment of plans or programmes so as to promptly address any unforeseen negative impacts with suitable measures (art. 10). However, very few have actually communicated to have defined the supervising authorities or to have issued national guidelines for the definition of the relative indicators.[27]

The Directive is strongly intertwined with the 92/43/EEC Directive, issued by the Council on May 21, 1992, regarding conservation of natural habitats and of wild fauna and flora; with the Directive on the EIA and with other directives (on water, nitrates, waste, noise and air quality), which mark the standards for the creation and assessment of plans and programmes in fields which concern the SEA.

[25] *ibidem*
[26] *ibidem*
[27] *ibidem*

Member States can foresee coordinated or even joint procedures, if the assessment of environmental impact is mandatory according to both the SEA Directive and EC regulations (art. 11). Few have issued guidelines for the coordination of common procedures which meet the given standards in the field of assessment of other directives.[28]

Every Member State was duty-bound to acknowledge the Directive in its own regulations by July 2, 2004 but this did not happen until 2009, after a number of proceedings for misdemeanours or incorrect acknowledgement. This demonstrates how tortuous it has been for the different Member States to adapt national regulations to EU Directives, whose procedures started well before 2001. Nevertheless, most countries have received benefits from the application of the SEA, thanks to more environmentally friendly plans and programmes and to the cooperation between the different authorities.

Approaches and models for the application of the SEA in different States.

The SEA presents many differences in those places where the planning of space, whether it regards land or other type of zones, failed to systematically incorporate environmental issues and sustainability in the planning process, or in those cases where politics and planning could not identify and compare feasible alternatives, using a wide range of integrated and reliable criteria (Partidário, 2001).

In international literature, two different general approaches to the application of the SEA have been identified, depending on the different political, institutional and planning-process contexts, and also depending on whether they present elements and methodologies in their procedures deriving from the EIA (bottom-up approach) or from the assessment of plans and policies (top down approach) (Partidário, 1996; Partidário, 2000; Dalal-Clayton e Sadler, 2005).

The bottom-up approach, it is the most frequently used and it appears to be an extended EIA for plans and programmes, since it applies the same procedural and normative steps, and often the same methodologies too; in the top-down approach the environmental assessment principles are incorporated in the policy-planning process, with the identification of needs and options for sustainable development.

The first approach is typical of those systems where the EIA has been used for a long time and it is consolidated both in terms of regulations and methods, e.g. Holland and the United States; the second should normally be prevalent in those contexts where regional planning has a long tradition,

[28] *ibidem*

where the principles of sustainability descend from the highest levels of the planning and policy-making authorities to the lower ones, like for example in the United Kingdom. However, many reckon that initially the SEA took shape within the EIA practise and that as a consequence the normative and procedural aspects were influenced by it. The two general approaches described above lead to different implementation and procedural models in the specific national contexts, which depend on the planning and institutional systems.

In literature, the following are defined SEA procedural models (Sadler e Verheem, 1996): "standard model" (or EIA model), the "equivalent model" (environmental appraisal) and the "integrated model" (environmental management). Over the years, such categorisation has been enlarged and it now includes "institutional models" of SEA, which according to Sadler should include the EIA, the regional assessment (i.e. the state of the environment at regional level), the environmental assessment, the dual approach, the integrated management of resources and models of sustainability analysis (Sadler, 2001).

3.2.2 National level

The success of the SEA at a national level was achieved as a result of a difficult process, just like at an international level. In Italy, the Directive was acknowledged with the second part of the Legislative Decree no. 156 of April 3, 2006 "Regulations on environmental issues", which was then modified and integrated by the Legislative Decree no. 2 of January 16, 2008 "Further norms in correction and integration of Legislative Decree no. 156 of April 3, 2006, regarding regulations on environmental issues", which came into force on March 13, 2008, so later than what had been prescribed by the European Union, which led to the proceeding for misdemeanour, which subsequently led to a sentence by the European Court of Justice for not having transposed the Directive to the national legislation by the given deadline". The consequence of this is that, to date, although the SEA has been introduced in EU legislation for over ten years, its application in national regulations as a decision support instrument has been heavily hampered.

According to the regulations foreseen by Legislative Decree 152/2006 and amendments and supplements, the entire assessment pivots around three authorities:

together with the proceeding authority, the competent authority which adopts the advice that comes from the screening[29] phase of the plans and programmes, also chooses which environmental experts

[29] Verification of the screening phase is an assessment procedure which is intended to establish whether a plan or programme can have a significant impact on the environment and therefore if it needs to be subject to the SEA or not. As foreseen by the Directive 2001/42/ECC, the Legislative Decree 152/2006 (art. 12) and amendments and supplements rules that there are cases in which it is

are to be consulted; it also explains its opinion regarding the proposed plan or programme, the environmental report, monitoring plan and available financial backing, taking into account the findings of the consultations;

the proceeding authority, which is the public administration which issues the plan or programme, or if it is another type of public or private body which is issuing the plan or programme, it is the authority which is acknowledging, adopting or approving the plan or programme subject to SEA;

the proposing authority, i.e. the private or public actor which issues the plan or programme.

One of the critical aspects of the first draft of the Legislative Decree 152/2006 is to be found in the areas of application of the SEA, which is made of "national and regional plans and programmes", whereby plans and programmes are intended as "acts which have been approved or adopted by national, regional or local authorities", however without explaining what is meant by "local". The Decree implicitly excludes municipal plans from applying the assessment, thus infringing the EU norm which on the contrary includes them among those which are subject to SEA (INU, 2006).

In respect to what is mentioned in the norm, not even the time frame for the activation of the SEA procedure is clear. Sometimes, it is included during the elaboration, while on other occasions during the adoption phase. As regards the participation aspect of the regulation, the text foresees the possibility to consult the environmental report and the non-technical synthesis in administration offices, excluding the participation of local communities to the preliminary phases of the programming of plans, thus impeding single citizens and associations representative of different interests a true and active participation to the organisation of instruments, via the formulation of suggestions and proposals.

With the elaboration of the Legislative Decree 4/2008, some discrepancies of the Legislative Decree 152/2006 were annulled and subsequently modified in the Legislative Decree of 29 June 2010, no. 128. One of the modifications (the introduction of art. 5, letter m-ter) specifies the nature of "reasoned opinions", thus assigning to them a clear legal and decision-making role; it is therefore an obligatory measure which ends the assessment phase of the SEA with prospective observations and conditions. It is expressed by the competent authority, based on the preliminary investigation and the outcome of consultations (Brambilla, 2011).

The modifications of art. 6, paragraph 3 et seq. relative to the application of the SEA in plans and programmes which regulate the use of small areas at local level, lead to critical interpretation problems. The SEA appears to be necessary in case the competent authority estimates the

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mandatory for the application of the SEA to a plan or programme to be subject to a preliminary examination. This is to be carried out case by case, and intended to assess whether the enactment of a plan can determine a significant impact on the environment.

production of a significant impact on the environment (according to the measures in art. 12); apart from the relevance of the impact and the sensitivity of an area, nevertheless the SEA should be functional in deciding whether the action of a plan is sustainable, therefore to talk about application restrictions goes beyond the possibility of influencing decisions which concern territorial development. However, the spirit of art. 6 originates from a type of logic that takes into account problems and the risk of further costs which public administrations might have to face when activating the SEA.

In art. 13 the importance of the environmental report is highlighted, by saying that this needs to be a work-in-progress document, subject to observations and integrations in which participation stages and procedures are listed in detail.

It is plausible to assert that neither the EU Directive, nor national regulations underline the importance of participation and negotiations in the SEA process. Indeed, the norms do not clarify the role that such a practice could have in building consensus and actions of the plan. Also in relation to the integration of the planning and the assessment processes, especially in national regulations, the spirit of the SEA appears to be lost and its importance reduced to being the object of the decision, rather than the process that leads to it.

3.2.3 Regional level

The principles of sustainable development, as was analysed in the second chapter, have been integrated in the last generation of regional urban laws, resulting environmentally influential in regional planning. In regards to SEA, different levels of sensitivity towards environmental issues led to a fairly heterogeneous regional regulations.

Before the Legislative Decree 152/2006 came into effect, some Regions approved and issued SEA regulations, while others merged those aspects concerning strategic environmental Assessment of plans and programmes into existing EIA legislation, or within the context of regional and urban planning; to date, almost every Italian Region has produced SEA regulations: some have a regional law on SEA adapted to the Legislative Decree 4/2008 (Valle d'Aosta); some others regulate the SEA procedure so as to adapt them to the Legislative Decree 152/2006 as modified by the Legislative Decree. 4/2008 (Piedmont, Lombardy, Friuli Venezia Giulia, Autonomous Province of Bolzano, Marche, Abruzzo, Molise, Apulia, Calabria, Sardinia); some others instead have not yet acknowledged the national law with their own normative acts and therefore the normative guideline remains that of Legislative Decree 152/2006 as modified by the Legislative Decree 4/2008 (Liguria, Autonomous Province of Trento, Umbria, Lazio, Basilicata and Sicily); there are also regions which

have acknowledged Legislative Decree 152/2006 with a regulation of their own and are currently preparing the acknowledgement of Legislative Decree 4/2008 (Tuscany and Emilia Romagna) (Flori, 2010).

Long before other regions and the Directive, Emilia Romagna issued the Regional Law of March 23, 2000 no. 20 "General regulations for territorial protection and use"[30] introduced environmental sustainability as one of the main priorities of regional planning (Regione Emilia Romagna, 2000).

Article 5 of the Law introduces the instrument *Valutazione della Sostenibilità Ambientale e Territoriale* (Environmental and Territorial Sustainability Assessment, henceforth VALSAT), which intends to demonstrate the environmental and territorial sustainability predicted in the plan, in terms of coherence with the characteristics of the territory and the compatibility of environmental and infrastructural impacts.

VALSAT is an anticipation of the EC Directive on the SEA, according to the procedure of the environmental assessment of the plan as a process which is part of the approval procedure; the assessment, together with the elaboration and the approval, is carried out together with all the bodies which have a role in environmental issues. Until the issuance of the Regional Law with which the national regulations regarding SEA will come into effect, the environmental assessment for regional and urban planning, foreseen by the Regional Law no. 20 of 2000, will be subject to the VALSAT, though completed by the procedures and phases which are part of the Decree, but not present in the Regional Law.

Integration and multidimensionality are the main guidelines for the VALSAT: assessment is the tool with which planning can guarantee "a balanced ratio between development and protection of the environment", which is expressed by the notion of regional and environmental sustainability of plans, present in the Law.

Although Emilia Romagna has been the region with the most precocious awareness as regards environmental assessment of plans, it does not however have a comprehensive SEA regulation, but rather a system of rules which derive from its urban-planning laws.

Tuscany, with the Regional Law of 3 January 2005 no. 1, "Regulations for the governing of the territory", introduced integrated assessment of plans and programmes within its planning procedures, thus acting after the issuance of the EC Directive, but before its acknowledgement by national legislation (Regione Toscana, 2005). Assessment can be defined as "integrated" because it

[30] The Law and its amendments (in particular Regional Law 6/2009) strongly modernised objectives, rules and instruments within the institutional framework and in relationship with citizens, based on subsidiarity, participative institutional planning, administrative simplification.

includes the assessment of the impact that strategic choices can have on the environment, territory, society, economy and public health. On the other hand, the assessment takes into account different plans and programmes, verifying the way in which they complement or clash with each other, according to predefined indicators.

The new Regional Law of 12 February 2010 no. 10, “Regulations on Strategic Environmental Assessment, Environmental Impact Assessment and Incidence Assessment”, stresses the importance for a strong integration between different types of assessments, which can be also partially overlapping and parallel. The aim of integrated assessment is to guarantee that regional planning instruments are compatible, in a framework which is orientated towards subsidiarity and autonomy, as encouraged by the regional legislation. To date, the integrated assessments principally act as instruments for the verification of the coherence between the actions and objectives of a plan internally, and between objectives of the plan and other types of regional plans, externally. It is also worth mentioning that as early as 2005 the Regional Law foresees the presence of a communication guarantor, appointed by the authority which approves the plan that is the object of the assessment, working alongside the person in charge of the procedure, so as to guarantee its participation and transparency.

Article 6 of the Provincial Law of 4 March 2008 no. 1, “Urban planning and government of territory of the Autonomous Province of Trento” (Provincia Autonoma di Trento e Bolzano, 2008) talks about “self-assessment” concerning instruments of planning of strategic territory and “urban reporting” as regards general planning. The words “urban reporting” lead to a reductive interpretation of the SEA, in respect to its potential contribution for the creation of a territorial strategy for local planning.

The adaptation to the national legislation carried out by the Sicilian region is unique. It ruled that the SEA would become mandatory for plans and programmes which have a significant impact on the environment and would come into effect on 13 February 2009 (a year after the publication of the Legislative Decree 4/2008) rather than 31 July 2007. Furthermore, it gave a rigid interpretation of the dispositions of Legislative Decree 152/2006, not including town master-plans in the procedure. In this way, for a long time general master-plans were drafted having not undergone an environmental assessment. Even when this interpretation was removed by Legislative Decree 4/2008, it was still possible to submit the proposed procedures for the adoption of plans and variations which lacked the prescribed assessment even beyond the deadline (Trombino, 2009).

Guidelines and procedural models

To date, some regions have issued specific regulations on SEA (Campania and Calabria), while others have formulated guidelines and procedural models (Sardinia, Piedmont, Lombardy, Lazio, Marche, Veneto and Sicily).

In particular reference to methodological and procedural guidelines in the field of research, a comparative analysis has been carried out in order to understand the way in which two fundamental aspects of the SEA have been approached by the different regions: the integration between the planning process, the assessment process and the participation phases. Further elements of the comparison are the types of plans that the methodological guidelines are referred to and whether they include operational instructions for the drafting of the environmental report other than those already provided by national legislation.

It emerges from the comparative analysis that except Sardinia and Marche, the other regions only propose procedural sequences.

With the intention of providing support to the municipalities in the process of adapting their master-plans with the Regional Landscape Plan (henceforth RLP), the Sardinian Regional Government issued guidelines[31] whose goal was to integrate the planning process relative to the Regional Law of December 22, 1989, no. 45, "Norms for the use and protection of territory", with the SEA procedure, according to the second part of Legislative Decree 152/2006 and amendments and supplements. The integration with the Sardinian guidelines, as explained more in depth in chapter 5, is formal; however, it presents an introductory chart, as shown in Figure 3.2.3_a, where it is apparent that the planning process contains the SEA procedure (Regione Autonoma della Sardegna, 2010, pages 11-12).

[31] The Assessorato della Difesa dell'Ambiente(Regional department for environmental protection), together with the Assessorato Enti Locali, Finanze e Urbanistica (Regional departments for local authorities, finance and urban planning). The first 2007 version has been modified many times and integrated until the final draft, approved on December 14, 2007 with deliberation 44/51. The above mentioned guidelines were discussed and approved by a technical committee which was activated by the Provinces, to whom it appertains to regulate the administration of SEA for plans and programmes in municipal and provincial masterplans.

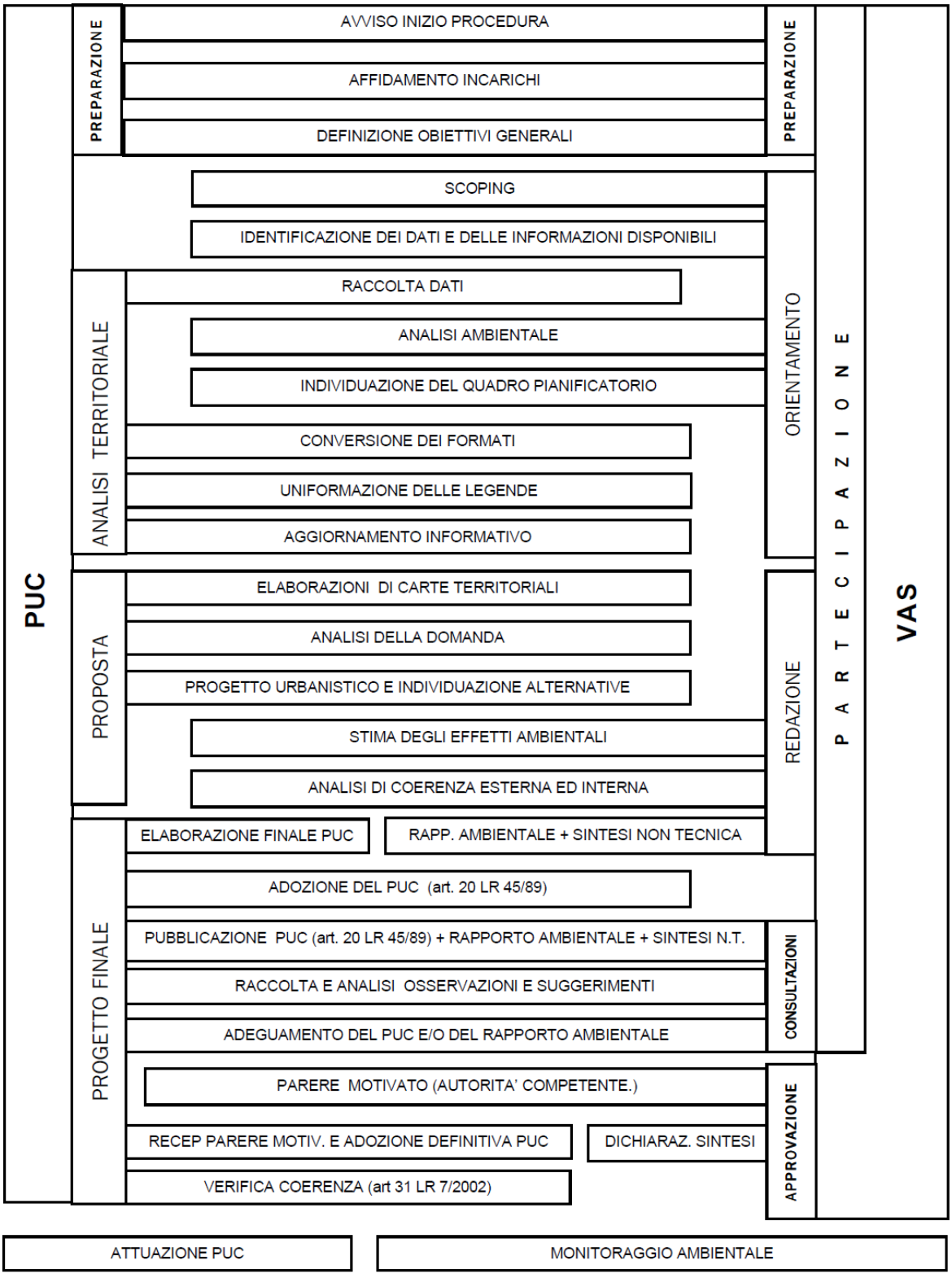

Figure 3.2.3_a. Integration between the process of formation of the plan and the SEA. Source: Linee guida per la Valutazione Ambientale strategica dei Piani Urbanistici Comunali della Regione Sardegna, p. 11.

The same integration, at least formally, cannot be found in other guidelines, where only the SEA is described, or the SEA separately from the planning procedure, e.g. in the methodological - procedural models[32], defined by the Lombardy Region (Regione Lombardia, 2010).
Also in regards to the participation aspects, the Sardinian guidelines are defined more in depth, when compared to those of other regions. As explained in further detail in chapter 5, the guidelines explain how to carry out the participation process which accompanies the entire procedure of the SEA (Regione Autonoma della Sardegna 2010, attachment C). In particular, for every phase of the process, they define the players of the process, the participation modalities, and according to the size of the municipality, they also suggest the number of meetings.

The regions of Sardinia and Marche[33] provide further guidelines regarding the drafting and contents of the environmental report, while the other regions generally list the points included in Legislative Decree. 4/2008, attachment 6.
Sardinian guidelines provide a list of additional contents which need to be included in the environmental report or, as in the case of the subject ability assessment, in the preliminary report, if the municipal territory, or part of it, is within the boundary delimitation of an area classified as a Site of Community Importance (SCI) and/or Special Protection Area (SPA), and which is therefore subject to the an Incidence Assessment (IA), according to the Decree of the President of the Republic (DPR) 357/1997, art. 5. In this case, the SEA process is integrated with the incidence assessment process. Lombardy and Marche, however, mention a merely procedural integration of the SEA with the IA.

Definition of a competent authority and the SEA process within the planning procedure

The Directive left the Member States the freedom to choose whether or not to appoint the same authorities competent for the approval of the plan also for the assessment, or on the contrary to create an *ad hoc* procedural phase, along with the traditional planning procedure, therefore with a different competent authority and procedure.
The Legislative Decree n. 152/2006 opted for a system in which there is a distinction between proceeding authority and competent authority, in which the planning must relate to the environmental report and be assessed by a reasoned opinion on the plan and programme, on the

[32] The deliberation of the Lombardy Regional Government nb. 7 of 10 November 2010 approved new methodological - procedural and organization models and the environmental assessment of plans and programmes - SEA (attachments from 1 to 1s), confirming attachments 2 and 4 approved with the deliberation of the Lombardy Regional Government nb. 8 of 27 December 2007 and the attachments 3 and 5 approved with the deliberation of the Lombardy Regional Government nb. 8/10971 of 30 December 2009.
[33] See the deliberation of the Regional Government 1813/2010 "Updating of the guidelines for the SEA, as for deliberation of the Regional Government 1400/2008, and adaptation to D. Lgs 152/2006, as modified by D. Lgs 128/2010" (Regione Marche, 2010).

environmental report, on the appropriateness of the monitoring plan and financial resources (Brambilla, 2011).

According to the May 17, 2010, n. 1526 sentence by the Lombardy Tribunale Amministrativo Regionale (Regional Administration Court), the competent authorities must provide adequate technical guarantees, as well as specialization in the field of environmental protection, but also impartiality and independence from the proceeding authority, in order to fully carry out its environmental assessment in the most objective possible way, without excessive conditioning, even indirectly, by the proceeding authority.

When choosing the competent authority, the regions reflect different approaches, which can be divided in two main groups: 1) an approach which tends to act within the procedure, giving particular importance to integration (e.g. Lombardy), in which the assessment is carried out by the competent authority in charge of approving the planning instrument; 2) "sub-procedural" or "separation" approach (e.g. Sardinia, Lazio, Valle D'Aosta, Marche, Veneto), in which a different authority is in charge of the assessment and for which a separate "sub-procedure" is created within the planning procedure.

In respect to the second approach, some regions find the competent authority within the regional department responsible for the environment (e.g. Lazio, Valle d'Aosta, Veneto). Other regions appoint the province as competent authority for the assessment of municipal and sub-provincial plans and programmes, while the region withholds the non-national administrative functions for regional or provincial plans and programmes (e.g. Sardinia and Emilia Romagna). Others appoint a third body to guarantee the necessary technical competence and support, as well as to foster an integrated approach (Tuscany). For example, in Tuscany the technical coordinating role in integrated assessment processes was appointed to the Nucleo unificato di valutazione e verifica degli investimenti pubblici (unified Unit for assessment and evaluation of public investments), instituted by the Tuscan Region according to Law 144/1999. In the new integrated assessment model, this body withholds the role to support those responsible for plans and programmes during the planning stages, especially in regards to the adopted assessment techniques, and the role of final endorser of the entire integrated assessment process.

In the light of a recent sentence by the State Council[34] it is interesting to establish whether full integration with the planning is or not guaranteed by the integration approach, in regards to the body in charge of the assessment. According to such sentence, for the assessment of a city

[34] Sentence no. 133/2011, i.e. the legal process which initially took place before the Regional Administration Tribunal and then before the State Council, in the appeal.

Masterplan it is absolutely legitimate to appoint a competent authority within the same proceeding authority, thus confirming the position of those who reckon that the correct application of the SEA is not a procedure or sub-procedure separate from the planning process, but that it is in fact part of it and that it is carried out issuing an opinion.

The sentence of the State Council appears to agree with those who opine that while guaranteeing autonomous and independent judgement by the competent authority, as established in the Directive, there is the risk that the competent authority itself be too detached from drafting and approval of the plan, leading to a reduced capacity to appropriately affect the decision-making process[35].

3.3 Opportunities and strengths in the application of the SEA

Although the SEA has by now become an ordinary planning practise, it has not yet fully embraced the concepts lined out in the Directive: the regions act in a jumbled fashion and in their regulations they lose the added value of the SEA in terms of participation and strategic potential in decision-making processes, and some do not even have a relative regulation at all (e.g. Liguria and Basilicata).

The most apparent flaw, as regards the acknowledgement of the Directive, is the lack of integration between the SEA process and the planning process, as well as the time frame of the two processes, which ultimately tend to be merely administrative procedures. In the national legislation, the strategic value of the SEA is completely lost, whereby the importance is given to the object of the decision, rather than the process that leads to it.

The SEA must be part of a planning process which follows a homogeneous course of elaboration, adoption and approval, both in terms of its time frame and of the different institutional bodies which intervene in the various phases of the planning process. However, this is not enough to guarantee that the SEA be a real support to decision-making.

Apart from the merely normative point of view, much as important it may be, a fundamental aspect is the awareness building of the added value that use of the SEA can give to the decision-making process. As conceived by the Directive, the assessment cannot configure itself as merely administrative action, but on the contrary it should develop into a positive critical pondering,

[35] In such respect, a muddled administrative procedure is that of the Sardinian Region, where municipal planning presents fragmented responsibilities: the province is the competent authority which issues reasoned opinions regarding the SEA; the region, Servizio Natura dell'Assessorato Regionale difesa dell'Ambiente (Nature unit, Regional department for the protection of the environment) issues reasoned opinions regarding IA (providing there are SCIs and/or SPAs in the municipal territory); the City Councils approve the plan prior to the verification of consistency by the Region, Assessorato Regionale Enti Locali Finanze e Urbanistica (Regional department for local authorities, finance and regional and urban planning).

stimulating and supporting an inclusive debate, based on the sharing of opinions and documents between the different conflicting positions, thus becoming rather a governance process than an administrative procedure.

The risk of emphasising the role of control bodies which are external to the process is that bureaucratic aspects end up prevailing over the principles of the SEA, which should in fact constitute a valid support during the decision-making phases, as an interactive instrument, which ought to be used parallel to the drafting of the plan in order to pre-emptively find its limits, opportunities, alternatives and define the criteria and possible options for spatial transformation (Brunetta, 2002).

It has been demonstrated that the regulations (especially national and regional) on SEA do not stress the role that participation can have in consensus building and in planning actions. Participation is an essential element to enhance effectiveness of the application of the Directive and it is necessary to define more rigorously how it should be structured and developed; secondly, it is vital that public opinion sees its role in the process and prove its efficacy. “Clarity and transparency represent two relevant prerequisites to develop trust and long lasting relationships” (Davoudi, 2003). The SEA “must foresee moments in which communities can express themselves, systematic phases of interpretation of petitions, requests, and their explicit integration in the political decisions of the plan” (Zoppi, 2009). This is the only way in which the SEA can be considered inclusive.

The definition and structuring of an inclusive process, which is not merely a list of observations regarding a plan in its adoption phase, is a particularly relevant aspect of this dissertation.

As a guarantee for the objectiveness and transparency of the integrated process of planning and assessment, it is desirable that there be a strong public participation, providing this is not only a consultation procedure, but also a real debate regarding choices and, in a later stage, regarding the outcome of the assessment and the definition of priorities and specific objectives.

In order to obtain more favourable decisions for the parties involved in the process, it is necessary that special-interest groups and conflicts of interest be openly discussed, rather than expressed behind the scenes.

In this perspective, the role of the SEA becomes a central part of the planning process.

Second Part: Identification of the in-depth analysed regional area of interest. The procedural protocol for the SEA in the regional governance.

Chapter 4: Regional governance in Sardinia: study of regional and provincial levels.

Premise

After having analysed in the second chapter the state of regional governance in Italy, this chapter focuses on the territory of the Region of Sardinia. In particular, I have chosen to analyse the workings of the governance which brought about the formation of the first version of the RLP and those concerning its actuation[36] and revision[37], because they are paradigmatic for planning in the new season and for the management of the Sardinian territory.

As a matter of fact, the RLP is the first plan in Italy which proposes a new method of interpretation of the regional territory through an innovative process of knowledge, redesign and management of available resources. In addition, it is innovative in terms of operational approach to regional and urban transformation.

Passed in 2006 as a tool for directing the sustainable development of the Region, it faced multiple political and cultural issues which, following political changes, resulted in beginning a revision process in 2009. In the meantime, local and provincial governments are adapting their plans in relation to the RLP's directives.

Multilevel governance is virtually ignored in the general and implemental design of the first draft of the RLP as its legislation lacks a close examination of questions regarding the planning of a wide area. Within the RLP's normative framework, the provincial authority lacks the power to act as coordinator and guide for supra-municipal processes.

The first paragraph of the chapter analyses recent landscape planning events in Sardinia before the RLP; the second paragraph examines the concept of sustainable development in the RLP; the third paragraph analyses, at regional and provincial government levels, the institutional framework and the processes of regional governance of the first draft, as well as those during the actuation and revision stage of the RLP, through experiences in the field acquired during the Ph.D. programme. An analysis has been carried out in relation to every government level (regional, provincial) with

[36] Since 2006 Regions and Municipalities are adapting their tools to the RLP.
[37] As if June 2010 the revision process of the RLP has begun

the aim of detecting critical points and points to be improved, by setting target values and providing a series of possible solutions. The fourth paragraph considers some ideas for a balanced integration of regional governance and regional planning.

4.1 Coastal and landscape planning in Sardinia.

The regional Law n. 45/89 "Norme per l'uso e la tutela del territorio regionale," gives the Regional Landscape Plans the function of coordinating and directing the organisational choices of the entire regional territory.

As of the 90's coastal planning is part of regional planning. As a matter of fact, the Region of Sardinia, based on the Galasso Law[38], works out the Regional Landscape Plans which, unlike their early function of general point of reference for the territory's direction and coordination, in time standardise only the territory within 2 Km of the coast. For that area, laws were restricted to following predetermined norms for the "integral conservation of the single naturalistic, historical, morphological characteristics and their corresponding combinations " (art. 10 bis, c. 1, regional Law 45/89). This condition gave rise to much confusion, with serious effects which were difficult to monitor, and was further accentuated by the reversal, through the ruling of the Regional Administration Court[39], of the Regional Landscape Plans themselves (except the one for Sinis); further problems and unresolved questions had a big influence on future regional development policies.

The first issue was the huge delay with which municipalities and provinces (only a minor part did it) adapted their city Masterplans to the Regional Landscape Plans. In particular, the provinces worked out their provincial plans more than 10 years after the enacting of the regional Law 45/89 and those, according to the law itself, are subservient to regional planning acts and are frozen in their absence. Given that defining regional planning was no longer required with the Regional Landscape Plans, defining provincial planning could have been (but never was) a great opportunity for bringing to life a new and innovative season for regional planning (Ercolini *et al*., 2010), also

[38] Law 431/85 which sentences a building prohibition on coastal territories within 300m from the foreshore.
[39] The Sardinian regional planning was implemented via 14 Regional Landscape Plans which 13 of them (except the Sinis' one) were revoked due to a decree of the President of the Republic of July 29 and October 20 1998 and to the following sentence of the Sardinian Regional Administration Tribunal. From no.1203 through no.1208.

considering the wide range of prerogatives assigned to the provinces themselves by the “Testo unico delle leggi sull’ordinamento degli enti locali” (Legislative Decree 267/2000)[40].

Secondly, it was pointed out that there is no strategic guideline for the city Masterplans whose only point of reference, still today, is the “old” Decree no. 2266/U/1983, “Disciplina dei limiti e dei rapporti relativi alla formazione di nuovi strumenti urbanistici ed alla revisione di quelli esistenti nei Comuni della Sardegna” (Known as Decreto “Floris”)

Even the subsequent efforts of carrying on, by trying to propose new definitions for the Regional Landscape Plans built on territorial squares based on Unità Paesaggistico-Ambientali (UPA, Environmental Landscape Units), were depowered, debased and misrepresented. The result, once again, was the declassing of the plan itself to a constraining tool limited to a narrow coastal territorial belt. The reasons for this failure come from the fact that the process of the proposal's definition, and building of the environmental squares, had stopped even before local authorities were subdued to it.

The succeeding regional governments, which felt the local administrations’ rejection of the Regional Landscape Plans tried to make the territorial impact of urban planning less invasive, all but undoing its considerable potential effectiveness. (Caledda *et al.,* 2006).

Planning based on the Regional Landscape Plans ended with their nearly total annihilation. This was followed by a *vacatio legis* five-year period, until the regional committee's decision no. 33/1 of August 10, 2004 became, a few months later, the regional Law 8/2004, "Norme urgenti di provvisoria salvaguardia per la pianificazione paesaggistica e la tutela del territorio regionale", immediately renamed in “Legge Salvacoste” (Coastal Protection Law).

This law set extremely restrictive preservation measures for the coastal landscapes (those within 2 km of the surf) which would remain in force until the RLP was passed. The definition, adoption and passage of the RLP is strictly set by the Coast Protection Law.

Art. 1 of the regional Law n. 8/2004, acknowledging what was set by the Legislative Decree of January 22, 2004 “Codice dei beni culturali e del paesaggio”, introduces the RLP as the main tool for regional planning, stating that it has to acquire the contents of art. 143 of the Legislative Decree

[40] Article 20, c.2. Sentences that the provincial administration adopts the Territorial Coordination Plan, which cannot be considered subordinated to the urban one, as stated by the Regional Law 45/89. Both are, as a matter of fact, at the same level. Anyway, this question did not emerge as the Regional Landscape Plans covered only a small provincial coastal ground.

42/2004 and setting its approval procedure. The RLP's expectations are binding for the plans and are immediately predominant over other regulations that might be contained in the urban tools themselves. Regarding landscape preservation, the regulations contained in it are predominant over the orderings of other planning deeds according to the sector's norms, including those, if more restrictive[41], concerning nature reserves boards. Municipalities, provinces and nature reserves boards, must adapt their respective plans to the RLP's expectations, by specifying and integrating the contents[42].

The regulations framework of the RLP was built to adapt to the overriding legislation, with particular attention to the legislative evolution which derived from Law 431/1985[43] to the Legislative Decree 42/2004, and to the constitutional law which emerged from rulings 55 and 56 of 1968, as well as from the European Landscape Convention and the MAP protocol (Mediterranean Action Plan) for coastal areas. It is essentially based on the distinction of two normative classes[44]:

- The first one refers to the single territorial elements which need to be conserved according to articles 142 and 143 of the Legislative Decree 42/2004 ("goods regarding preset categories whose elements can be picked out within jure criteria's"), as well as to the components which, although they are not goods, need to be kept under control in order to avoid damage to the territory and favor its requalification.
- The second class refers to territorial areas whose natural and ecological characteristics are defining, and will be the starting place for establishing directions, directives and prescriptions also for urban areas. They will become operative through subsequent planning, in particular for defining landscape quality objectives, conservation directives and relational directions which aim at preserving or recreating specific relational systems between the different components.

The most relevant element, among those of the first category, is the coast in all of its parts. Even though it is made up of different types of goods (sand dunes, cliffs, ponds, headlands) it is a territorial resource of huge relevance: not only for the value of each single part, but for the superior, uncommon quality determined by their composition[45]. In particular, the 2 km wide preservation belt, transiently granted by the regional Law 8/2004, becomes a strip of variable width called "bene

[41] Sardinian Regional Landscape Plan, Technical and implementation norms, art. 4, c.1 and 2.
[42] Sardinian RLP, Technical and implementation norms, art. 105, 106, 107.
[43] Legislative Decree of June 27, 1985, no. 312, converted into Law of August 8, 1985, no. 431 "Urgent directions for the preservation of environmental concerning areas
[44] Sardinian RLP, General technical report, p.3.
[45] Sardinian RLP, General technical report, p.27

paesaggistico d' insieme" (collective natural heritage) on the strength of the territory's structural and morphological qualities.

The norm sets twenty-seven different territorial areas,[46] which constitute the first homogeneous area of expertise: the coastal landscape. The purpose was to protect a part of the island considered economically strategic and environmentally sustainable at the same time.

Through this division, based on unclear and coherent standards, the RLP proposes to safeguard the coastal landscape by elaborating specific directions in order to direct the submitted plans (especially the municipal and intra-municipal ones) to reach preset goals and to promote preset tasks: for each area it sets specific directions with the purpose of promoting preset tasks that are fully part of the regulations and are written in data sheets.

The areas of expertise were created as an important link between territorial planning and local urban planning.[47]

The plan imposes on all municipalities the obligation of having a city Masterplan as a tool for rules and rights, in step with the general legislative directions. Thanks to the approval of the city Masterplan, municipalities will have prerogatives which were not within the jurisdiction of local authorities, such as those concerning the management of territorial waters, through the approval of the Coastal Plan of use, and those regarding arrangements with the provinces, via the planning of urban and industrial development.

4.2 Sustainable development in the first draft of the RLP.

The RLP is based on multiple trends coming from European directives and from the Legislative Decree 42/2004, which aim at better preserving the landscape. It refers to nondescript system policies and to a coastal landscape project headed towards sustainable tourism and the territory's preservation rather than housing growth.[48]

The RLP guides directives and prescriptions towards safeguarding the territory by binding multiple transformations against the "rush for the privatisation and exploitation of the territory and its resources". This approach clashed with the Sardinian pattern of development based on the "Brick

[46] The territorial area is defined in the RLP as the "Landscape planning tool, aimed to direct preservation, rebuilding and transformation processes, based on specific projects." Every area has "name and surname" referred to the toponimy of its places. They are all characterised by the presence of specific territorial goods.
[47] Sardinian RLP, General technical report, p.5
[48] Sardinian RLP, Report of the Science Committee in the General technical report of the RLP, p.157

culture", which counts on construction for development. In particular, the RLP promotes the "protection of undamaged areas": the identification of those areas which are still untouched by unbridled coastal housing.

According to many, a flaw in the RLP was focusing its regulation framework on the so-called "preventive control" of human activities in relation to the preservation of the territory's value. This tied-way of acting did not really prove to be successful as it phased out the plan's practicality; there is no reference to the types of transformative interventions or simply its correct usage[49]. In other words, more relevance is given to the environment's sustainability, and in particular its preservation, than to rules and instructions for guiding the project itself.

The RLP defines, but only theoretically, interventions on the landscape as a planning tool, in a "shared transformation" sense as well as in its actual safeguard, in order to offer the opportunity for a new sustainable development.[50] However, the directions for application are not well-explained in the Plan itself. As far as economic sustainability is concerned, the Plan does not address the economic issues of the territory, in particular those related to each single area. Nevertheless, the RLP theoretically aims at reconciling landscape planning with the territory's governmental tools and with the national and regional economic development projects (art. 145 del Legislative Decree 42/2004).

The lack of coordination between the RLP and all the other regional plans (tourist, infrastructure, waste, transports), and the subsequent lack of evaluation regarding the impact of economic activities on coastal areas, activities which are the biggest environmental detractors, is one of the most serious imperfections of the plan. This shows scarce development of the concept of "sustainability", limited to the definition of ties in various environmental areas that make up the Sardinian landscape.

[49] The risks and limits the weakling of the concept of "bound" are described in the following quote "A bound does not states providently and concretely the extent of its limitation and is not accompanied by preset modes for an in-depth examination of the project aimed to conciliate preservation with development. This bound […] at the moment when it is set, is general and is not graduated concerning the absolute and contextual relevance of the element in place; it is blind and deaf, because it does not refers to the best implementation of the preservation, or if it does, it is set based burocratically for a nearly complete preservation, disregarding the questions referred to the development of the resource and ,lastly, on the survival of the territory. Briefly, the necessity for an organic individuation of territorial elements which refer to the same natural or urban group and their visible and invisible relations, as well as the need for goods and "signs" during the processes of the communities, without considering the immutability of the resource, are the boost of a narrower relation between bounding an planning policies" (Nigro, 2000).

[50] Sardinian Regional Landscape Plan, General technical report of the RLP, p.9.

The Sardinian case highlights how plans can be made on innovative tenets and strategic objectives, as for example, improving the quality of a territory by basing on its identity,[51] though without having suitable tools or sufficient resources. To put it more simply, there is huge difficulty in the transition from "theory to practice" in order to adapt the regional planning objectives to the local ones, and therefore difficulty to carry out the plan itself, by going astray from its nature and nullifying its ambition as tool for regional governance.

4.3 Analysis of the establishments and processes of regional governance in the first draft of the RLP.

As stated above, territorial planning in the Region of Sardinia has been going through a phase of extraordinary relevance, characterised by a process of adaptation of all its planning tools at different levels and in different fields; this has been a very complex project because it concerns different fields of activity on the territory as well as numerous social, economic and cultural fields. With the passing of the plans, the first basic stage of a reform process began in Sardinia (at least for the coastal municipalities) which led to a link, via the adaptation of plans the prescriptions of the RLP, between territorial norms and the complex, actual and de jure, situations of local Sardinian realities. (Bitti , 2008).

The region of Sardinia was not provided with a coordination plan, therefore local plans needed to switchover to the new norms without the support of an adequate regional and provincial planning framework. In the forthcoming sections, the regional and provincial scales of responsibility, the current work in progress situations with all their inevitable involvements which characterise the current regional governance in the Region of Sardinia will be analysed.

4.3.1 Regional scale

In the analysis of the governance workings which led to the formation of the first version of the RLP and those concerning its current realisation and revision, there have been two fundamental elements: the presence of different corporate moments concurrent with both the plan's stages, and an educational experience[52] in the regional offices where the main plan's application problems by privates, municipal and provincial authorities were encountered.

[51] Sardinian Regional Landscape Plan, General technical report of the RLP, p.1.

[52] An experience on the field during the Ph.D. was a qualifying period at the Regional Government and Landscape preservation Body for the provinces of Cagliari and Carboni-Iglesias, at the Local, Financial and Urban Administration of the Region of Sardinia. The activities performed during the traineeship concerned the procedures in matter of territorial preservation and those in matter of

There are multiple criticisms for the first draft of the RLP, starting with the rejection of the development policy imposed by the Plan itself, which was based, according to the majority, too heavily on not applying the SEA to the tool which was meant to conciliate regional planning with territorial government tools and with national and regional economic development programs.[53]

The collective process which led to the definition of the normative framework and to the first draft of the RLP was characterised by choices not agreed on by local authorities and by inadequate institutional cooperation: the Region of Sardinia called conferences (the Planning Conferences of 2006) with municipalities and provinces, to present a plan which had already been written down and adopted.

The multi-level governance seemed to be almost ignored in the early design of the first draft of the RLP, as its norms lacked an in-depth examination of questions regarding the planning of a large area. In the implementation of the plan, the territorial areas did not actually represent a link between regional and urban planning. It should be noted that among one hundred and two coastal municipalities, which should have adapted their urban tools, only four have concluded their adjustments and eight have obtained an unbounded act for the SEA from their province[54]. Evidently there is a great difficulty for local authorities in applying the prescriptions and directions of the RLP, and to conciliate them with their low financial and cognitive resources.

At the moment there is an ongoing collective revision process of the RLP called "Sardegna Nuove Idee",[55] which aims to build up shared scenarios with their relative action strategies by proposing a collective, agreed on regional planning. The object of the regional authorities carrying out this process, is to guarantee loyal cooperation between the various government bodies within institutional relations, which were totally absent during the Planning Conferences of 2006 as, at the time, the plan presented was already developed and not agreed upon.

building authorizations on covered areas. In particular, trainings for files, public meetings and participations to conventions related particular regional planning projects were carried out.

[53] See art. 145 of the Legislative Decree of January 22nd 2004 about the coordination of the regional planning with other plans.

[54] The SEA is compulsory for the adapting of municipal and provincial plans to the RLP. In Sardinia, the Province is the authority which covers SEA processes on municipal fields. The implemented SEA processes for municipal plans can be consulted at the weblink http://www.sardegnaambiente.it/documenti/18_269_20110203130155.pdf [Last access: May 20, 2011]

[55] The resources can be consulted at the weblink: http://www.sardegnaterritorio.it/paesaggio/sardegnanuoveidee.html. [Last access: April 28, 2011].

The revision process started in June 2009; the regional administration organised (unlike what had been done for the first draft of the plan) a series of provincial conventions and went straight to the territories in order to listen to the criticisms regarding the first draft.[56]

Apart from greater participation (at least formally) the plan's revision was submitted to the SEA; this procedure started on start July 27, 2010, almost a month after the revision officially began. The authority for local bodies and planning, which allows the SEA to submit the RLP, did not follow the directives regarding the beginning of the evaluation process.

The collective process "Sardegna Nuove Idee" was divided into territorial workshops, each one separated into three different workshops with different activities and procedures depending on the topic. The Region of Sardinia applied the norms of the European Landscape Convention, which stated that landscapes must be preserved, managed and valued considering specific values given to them by interested individuals and populations.[57]

Workshop no. 1, called "Struttura dei paesaggi," (Landscape Structure) took place from June to July 2010 throughout Sardinia and involved only coastal areas, which were divided into fourteen Laboratories with the same function. Representatives of the city, province and regional administrations (municipalities, provinces and other local governmental bodies) participated. The purpose of this first workshops was "highlighting current values and criticisms in order to draft a preliminary knowledge map of the territory."

So, the target was helping ideas and proposals to become actions, trying to find causal relations between the identified concepts using the knowledge maps[58]. From all of work the maps of the section, expectations of the participants frequently emerged which can be summarized as: the necessity to act within a certain and durable regulatory framework",[59] stricter regulations for relations between municipal and regional planning;[60] greater provincial involvement in territorial

[56] The resources regarding the convention can be consulted at the weblink http://www.sardegnaterritorio.it /j/v/ 1123?s=6&v=9&c=7428&na=1&n=10 [Last access: April 28, 2011].
[57] European Landscape convention, art.6
[58] Knowledge maps are a graphic tool for the representation of information and knowledge, conjectured by Joseph Novak during the 70's. They 're used to rapresent a knowledge graphic regarding a specific topic, by following constructive directions and for which everyone has its own.
[59] Theme emerged in all Workshops.
[60] Theme emerged from theWorkshops: 1, 2, 4, 5, 7, 9,10, 11, 12, 13, 14.

administration;[61] consideration of other themes during planning phases (for instance infrastructure or productivity),[62] a more relevant institutional plan;[63] integration of territorial and field planning.[64]

The outcome of Workshop 1 is, without a doubt, the need for a new regional urban law to regulate the problems related to regional planning by adapting its contents and procedures in a resources-safeguard framework, in order to create plans for the areas for each government level.

Furthermore, a law concerning regional and urban planning could, realistically, put into action the acts promoted by the planning normative, allowing it to set the rules interpreted by regional planning in order to preserve natural heritage. This normative vacuum has highlighted the actual frailty of the conceptual framework of the RLP, whose strategic guidelines where strongly undermined by the Piano Casa[65] Law (Housing Plan), which contributed to weaken its structure by favoring the emergence of another obstacle between urban planning and the territory.

Although it would be essential to provide the territorial administration with explicit planning regulations, the issue cannot be resolved with pre-made solutions because if on the one hand regional planning needs a regulatory contribution able to furnish itself with adequate implementation tools, on the other hand there is a difficulty in indicating tools which do not clash with those essential values that give regional planning a unitary foundation.

In this way, a city planning reform would affect the RLP's objectives for the territory in order to modernise the ancient dualist way of acting between regional and urban planning. As a matter of fact, this dualism characterises the current modernisation stage.

Another aspect that emerged clearly from the territorial Workshops was the poor knowledge of the SEA by local authorities, especially in two of the fourteen workshops.[66] Regarding the SEA, it is possible to state that it is not considered as a fundamental tool for the plan's creation; With regard to this, there is the symbolic experience of the Palau Municipality, whose City Masterplan was blocked by the Province (nota no. 9474 of April 12, 2011) because it had been adopted (City

[61] Theme emerged from theWorkshops:: 2, 5, 7, 9, 12, 13.
[62] Theme emerged from he Workshops : 1, 2, 4, 5, 6, 7, 8, 9,10, 11, 12, 13, 14.
[63] Theme emerged from the Workshops: 1, 2, 3, 5, 7, 8, 9,10, 11, 12, 13, 14.
[64] Theme emerged from theWorkshops: 1, 2, 4, 5, 6, 7, 8, 10, 11, 12, 13, 14.
[65] The regional Law n.4 of October 23rd 2009, "Extraordinary directions for the economic sustainment via the re-launch of the construction sector and for the advertisement of strategic development programmes.
[66] Theme emerged from theWorkshops: 1, 11.

Council resolution no. 37 of December 22, 2010) without going through the compulsory SEA process[67].

Workshop no.2, called "Nuove idee del paesaggio" (New Ideas for landscape planning) took place in Cagliari on December 13, 2010 and also concerned non-coastal municipalities. It had been organised with the purpose of specifying local characteristics by a "unanimous reading of the territory and sharing of the criteria for the quality of the territory". Some of the remarks and information which came out from Workshop no. 1 and the project designs which emerged from Workshop no. 2 permitted proposals for the realisation of new territorial fields.

On February 18, 2011 Workshop no. 3, called "Progetto dei Paesaggi" (Landscape Planning), took place in Cagliari. In this workshops there was a further sharing of criteria for the quality of the territory via four workshops, divided into "Natural landscape", "Urban landscape", "Socio-cultural perceptual landscape", "Productive landscape". Contrary to the facts which emerged from the other workshops, there was an unclear process for the definition of criteria and also some missing points, such as infrastructures.

A permanent online work section was activated together with the other sections. It is accessible through the institutional website of the Region of Sardinia based on the "SardegnaGeoBLog" platform, built on online maps used to discuss geographical themes along with data, images and videos.

On April 27, 2011, during a scoping convention[68] held in Cagliari, scoping document of the SEA related to the revision of the RLP was introduced, and not without criticism. In particular, the document does not take into account the results obtained from the workshops, and therefore it is unclear what their role is, in terms of objectives for the revision of the plan. The document states that "the acceptance of the proposals received during the "Sardegna Nuove Idee" collective process and their respective ways of acceptance will be evaluated on the environmental, urban and legislative aspects" (Regione Autonoma della Sardegna, 2011, p. 23). By the way, it should be considered that neither of the above quotes are written down in the scoping document, nor are they even summarised.

[67] See the appeal done by the Gruppo di Intervento Giuridico ed Amici della terra at the weblink: http:// gruppodinterventogiuridico.blog.tiscali.it/ 2011/01/19/ ricorso-avverso-il-p-u-c-di-palau-senza-preventiva-v-a-s/ [Last Access: May 3, 2011].

[68] The scoping convention highlights , as shown more accurately in the fifht capitle, the end of the SEA orientation process, The scoping document discussed during the meeting summarises this sentence.

Other criticism found in the scoping document was that concerning the multi-level regional governance and in particular the relations between the Sardinian region and the other government bodies. In relation to this, it was said that “the implementation of the RLP is up to the municipalities via the adapting of their city Masterplan” (Regione Autonoma della Sardegna, 2011, p.12), the exact opposite of what was stated by the norms for the plan's realisation: “the predictions of the RLP are implemented via the provincial and municipal planning and the plans of nature reserves. (art. 11, c.1). The provinces seem, according to what was indicated in the scoping document, not to be helpful in the implementation of the RLP, even though they had encountered difficulty adapting themselves to the plan. As a matter of fact, only one in eight has finished the adapting process for the RLP, and therefore it should be stated, as reported in the scoping document, that there is a need for an “accurate control for the problems relative to the realization of the RLP, also on a local planning level”. (Regione Autonoma della Sardegna, 2011, p. 5).

4.3.2 Provincial scale

According to the Law 142/90 and the Legislative Decree 267/2000, the tenets for the subsidiarity and the adaptation of the administration, the Province is the closest institution to the municipality and has to seize the effects of the territory. In the planning system, it is put as an intermediate body, with the purpose of linking regional (which carry out according to the law the territory's administration) and local authorities (which have the assignment of the planning).

The planning of a wide area is, in most European countries, its plan for strategic choices and the framework itself, established in Great Britain, which launched urban reforms in multiple Italian Regions; it is a wide-area plan, concerning territories made up of counties or districts. In addition, the policies of the EU focus on the urgency of making territories (and not single municipalities) to compete at world-scale.

In some Italian Regions, the legislation in force assigns the task of arranging a knowledge map of their territory to the provinces, which will be a useful and necessary point of reference for the processing of local area building plans (where needed), which perhaps will be integrated and studied in depth only in case of necessity for defining specific expectations.

In Italy, nevertheless, multiple enterprises of legislative sort have emerged, which question the necessity of keeping the provincial administration, as it would be very expensive and would not have an actual role (this refers particularly to the multiple legislative proposals aimed at quickly

expelling provinces from the Italian institutional system with a quick edit of the Fifth Article of the Italian Constitution and the laws of the special administrative regions).

Basically, instead of promoting venture for new reforms, it was paradoxically supposed to eliminate the institutional framework of the system against the recent and significant approval of the recent art. 114 of the Italian Constitution, without adequately considering not only the history and groundings of territorial communities, but also the roles of these bodies in a future implementation of a road to Italian federalism: this entails an important institutional simplification based on highlighting the essentially administrative role of Municipalities and Provinces (or Metropolitan areas) as opposed to the legislative and planning role of the regions, in the idea of a Republic aimed at improving the territorial authorities and their subsidiarities as much as possible (De Martin, 2008).

In the various experiences of regional planning, the provinces generally never had the support of the regions, which basically confirmed their centralised role in the most recent administrative orders as well.

“The provincial plans need to be constantly checked and reinterpreted, as they are in a position which appears to be more instable than consolidated. The provincial plan must be frequently compared to the decisions of both directives, in a swing of demands between subsidiarity and oligarchic structure (Pompilio, 2009)”.

It was discussed whether provincial plans might have a useful coordinating role and, if “yes”, whether it might be unaffected or need to be renewed. As the relations between planning grades have changed with the editing of the Fifth Article, in terms of features of those elements which are coordinated, the rules for interaction and, consequently, the role of the coordinator need to be refreshed.

During the writing of this thesis the role of the Province itself and the point of view of municipal authorities regarding it were studied in depth, on a provincial level, within the field of the Protocol signed by the Departments of Land Engineering of the University of Cagliari[69] and the Province of Ogliastra. The survey project, based on the Agreement Protocol, aims at “Forming a new intra-institutional governance model and testing it with the planning of the provincial territory in relation

[69] In which a research group has been created, in the section of regional planning.

to the international directions and protocols contained in the Integrated Coastal Zone Management (ICZM)".[70]

The goal was to build up a new model based on the participation and integration of all territorial acts, by forming a technical team for regional planning, guided by the Province,[71] which could help the authorities in adapting their urban tools, but also in making new projects coming from the implementation of the ICZM protocol.

Questionnaires submitted to the municipalities: The inquiry and framework plan.

The first stage focused on knowledge analysis; they were called multiple conventions with provincial[72] and municipal authorities from the province as well. A series of themes regarding the territory and its possible economic and social development were discussed; questionnaires concerning institutional relations between government bodies (Region, Province, Municipalities) and the adjustment of the city Masterplan to the RLP were submitted to all municipal authorities.[73]

The questionnaire was chosen as a tool for a descriptive survey (Calvani, 2000) because it quickly involves a lot of people with a written schematic question list: in this way it is possible to collect information, opinions, behaviors, intentions and accomplished deeds. (Coggi e Ricchiardi, 2005; Mantovani e Gattico, 1998).
The main outline in creating the questionnaire was:
- Clarification of purpose
- Definition of areas and structures to be investigated
- Wording and writing down of the questions
- Identification of the questionnaire's addressees
- Setting of the submitting procedure

In this case the purpose was to discover the execution progress of the adjustment of city and provincial plans to the RLP and the authorities' opinion in matters of governance relations between Region and Province. To do this, the questionnaire was divided into two Sections, concerning two topics of interest.

[70] The ICZM approach is recognised by environmental european norms and defines an action strategy concerning the planning of coastal areas with the purpose of economic, social and environmental sustainability.
[71] The Province of Ogliastra was chosen for the experiment as it had an internal regional planning workshop which had started in 2005. It was the only Sardinian province which carryied on this process.
[72] Multiple conventions were called with administrative officials of the Environment Section, the municipal and procincial Council.
[73] Twenty-three municipalities are included in the Province of Ogliastra. Lanusei and Tortolì are the most inhabited cities(with respectively 5655 and 10830 inhabitants) whereas Elini (555 inhabitants) is the less inhabited.

The topic of Workshop no. 1, called “Pianificazione e governo del territorio” (Planning and the Territorial Government), was to find out the current status of plans in force, their process of adjustment to the RLP and the point of view of municipal authorities on the ideas of “local governance”, “multi-level governance” and “co-planning process”. Section 2, called “Identità territoriale e ruolo della Provincia” (Territorial Identity and the Role of Provincial Administrations), had the specific aim of analysing the relations between government levels of the territory in question. A concerted effort was made to formulate clear, logical questions regarding the studied theme, with selected vocabulary and syntax, as they are aspects that influence the answers of the interviewees. (Mantovani e Gattico, 1998).

The questionnaire had open, closed, and mixed questions in order to take advantage of the positive aspects and reduce the imperfections of each. The open questions gave the interviewees the chance of expressing themselves in their favorite way, by using their own words and not being influenced by suggestions (example question: ”Which were the main issues encountered in the implementation of the processes of the adaption to the SEA? What do you think could be the solution to these problems?”).

The advantages of this question type are a minimal risk of influencing the answer; If the concerned problem is not known by the interviewee, it's the only possible kind of question; it's useful for sensitive questions as it lets the interviewee back up their answers with opinions, which they would otherwise have difficulty in doing. But, among the disadvantages there are the interviewee's culture which could influence the answer, and a greater effort in producing an answer.

Whereas, the closed questions are derivations of structured questions, as they set only two or three answers chosen by the researcher and ask the interviewee to choose the one closest to their opinion. Generally they are used to accomplish the presence/absence of a phenomenon, and to pick out different subgroups which will be asked different, more specific questions (example: The interviewee could only answer in two ways, “Yes” and “No” to the following question “Has plan been updated in the recent years?”).

Mixed questions offer preset answers by the researcher and also an open one (example: Do you think the guidelines for the SEA of the city Masterplans are suitable? Which are the positive and/or negative aspects of the guidelines? The answer could be given with “Yes” or “No”, plus the motivation behind it). Mixed questions take advantage of the structural value of closed answers, but

cluster uninterested answers in the open part. The questions were the same for everyone, in order to compare them with each other. Moreover, the questionnaire turned out to have a highly structured framework and in order to perform its role, it needed to be standardised (Fortini, 2000).

Mayors and experts were the addresses of the questionnaire and they were granted absolute anonymity; in addition, it was clarified that the aim of the survey was to develop the project of the protocol. The addressees were contacted by telephone and, if willing, the questionnaire was submitted via telephone or via e-mail.

Of the twenty-three municipalities interviewed, only thirteen returned filled out questionnaires, therefore statistic methods were not used for their analysis (Mantovani e Gattico, 1998). Anyway, it is possible to affirm, based on what emerged from the discussion during the preliminary convention for the presentation of the protocol (which was attended by mayors and experts of nearly all municipalities of Ogliastra) that, although it is only a small sample of municipalities, it is nevertheless representative for the researched themes.

Critical analysis of the results questionnaires

A series of critical aspects emerged from the analysis of the questionnaires. The first is the delay of the adjustment of the municipal city Masterplans to the RLP, even though the realisation norms stated that coastal municipalities were obliged to adapt them within twelve months from the plan's approval (article 107). It is important to say that, as of December 2009, the time of the questionnaire's return, none of the interviewed municipalities had completed their adjustment to the RLP, although some had begun the process (four among thirteen); only one municipality justified its delay with its administration inadequate financial resources.

Each of the thirteen municipalities was interested in activating strategic planning and local governance processes and projects, but there was a general mistrust in the provincial administration, which, as they said, did not represent them well. An interviewee even answered the question “how would you evaluate the role of the provincial administration in the government of the territory?” with “a obstacle”.

Other criticisms which emerged were the lack of integration of the plans between neighboring municipalities, the request for greater municipal power without adequate finances, a marked institutional and geographical fragmentation among territorial authorities. From the questionnaires a greater confidence in municipality unions (In Ogliastra there are two of them) emerged, as they

promote better coordination among institutions in multi-level regional governance processes and permit a more open dialogue, as opposed to the one by Municipalities and Provinces.

Among the norms of the framework of the RLP, provinces have only a support role, lacking the actual capability of acting as a coordinator and guide for supra municipal decisions. Although they are the authorities which the Region of Sardinia have given a guiding role concerning the SEA and therefore are fundamental because they can express motivated opinions regarding the Sea processes of the city Master plans, nevertheless they do not seem to be relevant from a planning point of view and are not actually carrying out their assignments concerning regional and municipal planning.
These criticisms also emerged because the protocol has not produced positive results for continuing the testing, and its failure is partly caused by organisational, technical and political problems (the protocol was in fact written during provincial political alternation). In particular, the idea of proposing a Regional Planning Workshop led by the Province was not successful due to the lack of confidence of municipalities in the provincial administration.

The experiment highlighted multiple issues, from which, nonetheless, it is possible to identify several useful indications focused on the dialogue and cooperation between the authorities in charge of local development. The presence of an individual who has to tackle and guide the planning of the processes is required. Moreover, the territorial issues are set on such a large scale that they cannot be resolved within municipal borders, but need to be handled taking a wider area into consideration.

It seems, at least theoretically, that the province is, basing on the latest norms, the most appropriate body for the preservation and development of the landscape, as it has a better close range view of territorial topics than the Region and consequently can develop regional planning tools by having a bigger impact on the landscape and on territorial and environmental systems. Provincial plans, as a matter of fact, could not only be the in depth development of regional plans but also plans, which might be more appropriate for the adoption of territorial and environmental requests.

The Provinces, despite the outcomes of the questionnaire say the contrary, could be the mediator between local and supra local levels; its role, as results from the experiences of other Italian provinces, is therefore important for an actual, coherent application of a multi-level governance, which is pointed towards subsidiarity. Nowadays, as its fueled by institutions, it has to be

considered as an authority related to a wide area, and will represent an essential link between the Region and municipalities (De Martin, 2008).

In this sense, it could act as the promoter for the activation of integrated processes within provincial bounds, and at the same time, strengthen its, at present, poor capability of governing the territory. As the province covers the SEA in Sardinia on a municipal and provincial level[74], it could act via the SEA as coordinator for the provincial planning and as a connection with municipal planning.

4.4 Proposals for a correct integration between regional governance and landscape planning.

Beyond a disciplinary comparison which involves multiple schools in order to apply bounded technical urban procedures to the process for territorial preservation, there is still a collective belief that the normative framework needs a territorial way of acting and subsidiarity needs to be adapted as long as adequate and effective measures, which are not naturally in effect within municipal bounds, are granted (Urbani, 2004).

It clearly appears that there is difficulty in reconciling subsidiarity with the landscape culture; municipalities apply preservation processes reluctantly, as they are seen as an obstacle to public consensus.
By reiterating Urbani's reflection concerning the best authority scale for landscape protection, it is easy to agree with his ideas which state that the processing of a single regional plan is a choice based on actual data and the outcome of a reading error of the European Landscape Convention, stating that "everything is landscape".

In addition, the regional planning in Sardinia, with the aim of processing a RLP in accordance with the Legislative Decree 42/2004, interpreted national norms by organising the territory in multiple areas: for example coastal areas being the main ones for regional planning.

Through their planning, regarding the idea of specific projects to be detailed in each setting, preservation, rebuilding and transformation processes have been made. In fact, the lack of an actual relation between safeguard, development and transformation tools has strongly depowered and partly negated the innovations brought about by the RLP.[75]

[74] This capability was sentenced by the regional Law n.9 of June 12, 2005 "Investment of Local bodies with capabilities and directions."
[75] As well-summarized by a Sardinian researcher during a recent public meeting between local administrations, "From the RLP's philosophy, it has remained only its philosophy.

Among these criticisms, some interpretations about landscape planning are found which suggest territorial cooperation. Nevertheless, these directions require a territory which has to be planned on a supra municipal scale. The weakness of the governance system and the lack of coordination between normative tools and regional development policies are the most criticised aspects for the enacting of new regional landscape policies. Only by solving these problems, can the regional planning become a key tool for the governance, as a strategic process for a new normative, administrational and organisational framework for the regional territory.

In order to achieve this, it is necessary to opt out of the hierarchical processes which were in place during the writing of the first draft of the RLP, and to make a new project in a collective, voluntary way, shared by all local bodies.

From the Sardegna Nuove Idee workshops it is clear that territories need a regional territorial plan which does not act directly on the territory but on territorial relations, namely the relations between competent local authorities and the territory itself. Through the realisation of this idea, it is possible to build up a framework for territorial transformation, which stands on the norms stated by higher institutional levels.

In this way, the Plan could be an innovative institutional governance tool that identifies different resources and goods in the territory for the development of economic and cultural activities. Moreover, the attention for social, economic and cultural trends which influence and model territories is reflected in the Landscape Ecology board, which states that no eco-system can be studied without considering human presence (McHarg, 1981).

Although political and technical conditions seem to converge on the necessity for the territorial transformation processes to get socially involved with the local public, nevertheless attitudes aimed at granting cooperation and inclusiveness for the SEA do not seem to be reflected in the current decisions. A well-balanced blend of the different interests, rights and expectations on the territory is increasingly harder because of pluralism in the decisions and, consequently, leads to a weakening of the institutions resulting also in the fragmentation of the responsibilities.
There is real difficulty in converging objectives and contents of the regional planning with municipal and sectoral planning, resulting in problems in applying the RLP which, being nullified, turns out to be useless as a regional governance tool. What is seen in nearly all Workshops is the

present lack of approach regarding the systematic relations between interacting eco-systems and the territorial system (Raffestin, 1986).

In this sense, the need for planning adequate tools and procedures emerges, and it needs to be pointed out that nearly all local bodies work this out without adequate financial resources.

Another relevant aspect is found in the competence overlapping among institutional bodies, especially in urban development fields, when interventions are clearly made by the Province, because of their importance and scale, over the municipal authority. This experience shows that the fact is not to raise the power of the directions of one authority over another, but the unequivocal definition of conditions which focus on the problems handled by supra municipal authorities.

This setting is concerned with the correct use of subsidiarity, which would otherwise be damaged without the conditions of adaptation and efficiency regarding the fulfillment of respective obligations, which cannot be assigned naturally within municipal borders.

Nonetheless there appears to be a fundamental problem with the aspects listed above, which is related to the theoretical and practical bases of regional planning with the meaning of the concept of wide area and to its definition within natural, historical, cultural and economic restrictions which are involved in the study of the territory.

Evidently there is difficulty in the identification of wide areas, which should be carried out by the Province. As of today, there are not enough experienced individuals on the Sardinian territory who can promote and coordinate choices over the municipal level. The Municipal Unions themselves are often the examples of a fragmented institution which multiplies interventions and neutralizes any possible attempt for the integration of plans and projects.

The critical elements highlighted in the Sardinian case study are the cause of a long planning period, that comes from a variety of different approaches which caused a hard and complex institutional process that eventually defined shared decisions. In the future, a scale of responsibility is desirable between the different economic, social and institutional bodies, new interests in decisional processes and new regional development policies. This might be the cause of new intra-institutional conflicts and, therefore, must be adequately governed.
The Workshops, which contribute to mitigate the conflicts in place, showed that municipal authorities have developed a growing interest in a general coordination of wide area. The

cooperation concerned is generally a middle-grade one between municipal and provincial ones and usually aims at managing services over the municipal level.

The Province may provide an answer to this question of collective-government by interpreting the role of a territorial promoter, and by uniting other bodies and individuals which act on the territory, and overall, by proposing a new design of a wide flexible area, which could replace local ideas, derived from municipal borders and the indeterminacy of provincial administrative borders.

The need for an intra-municipal cooperation which emerged from the Workshops, has partly found a solution in some national experiences (for example the one of the Piedmont Region) where the regional territory has been divided into middle-sized between provincial and municipal “areas for the territorial integration”, which actuate collective projects incisive for the development processes and for the improvement of the inhabitant' s life.

This is what territories expect from the revision of the RLP, as only through the correct redesigning of territorial areas in regards to the environment and infrastructure, from agriculture to tourism, industries and services, it is possible to integrate these issues in order to improve positive aspects and reduce negative impacts. It is at this level indeed that a regional tool can permit an overall view over the fragmented processes enacted by plans, programmes and policies, which in fact act in a relevant way and need to be governed by an adequate institutional plan which covers all of them.

If the regional government is characterised by the presence of different plans processing on different institutional levels which should nevertheless be executed unitarily, the regional planning activities should aim for the coexistence of three programming and planning frameworks: a “Regional government plan” concerning the identification of the territory and its norms for its structural and normative planning for the different levels; a “Regional landscape plan” pursuant to the Legislative Decree 42/2004, and in accordance with the European Landscape Convention and the Department for Culture and Environment; a “Regional strategic document”, as a point of reference for the regional governance and strategic for economic and social development which coordinates the multiple national, regional and municipal planning sources.

The proposed framework has the purpose of defining into three major themes the organisation of directions which cannot be divided or substituted for others. The “regional government” formulation is a basic example, because it is evidently cross-scale on territorial policies and should

therefore be the connecting framework of the different sector plans, which, not by chance, are identified as separate.

In the meantime it provides the explanations of confirmative policies by incorporating a “mission” for regulating the unavoidable conditions, aimed at evaluating the territory, which come from the knowledge of the territory and from the different shared choices, in norms that put a strain, directly or indirectly, on the territorial transformation processes.

Chapter 5: Regional governance in Sardinia at the local level. Strategic environmental assessment (SEA) of adjustment of the city Masterplans to the Regional Landscape Plan (RLP). Methodological aspects and experiences.

Premise

Adjustment of city Masterplans to the RLP is disciplined by Article 107, paragraph 3, letters a) and b), of its Technical Regulations for Implementation, in which municipalities, in adjusting their plans must, among other things, provide for the "identification of their landscape peculiarities through an analysis of the interactions between historical and cultural features of the natural and anthropic environments and promote their maintenance and enhancement, while at the same time defining the structural conditions necessary for creation of a system of sustainable development at the local level". The same article obliges all municipalities that fall within the twenty-seven defined coastal landscape areas to bring their city Masterplans into line with it. In particular, the adjustment of the city Masterplans are among the plans that must be subjected to Strategic Environmental Assessment (SEA) (Article 6 of Legislative Decree 152/2006 and amendments); at this level, attention is focused on the planning and assessment aspects of the adjustment for the purpose of discovering their weak points.

The chapter contains a critical analysis of the "Guidelines for strategic environmental assessment of city Masterplans" (henceforth GL) and their application to certain cases to be studied, which is to say assessment of the city Masterplans of the municipalities of Alghero[76], Arborea, Badesi, Carbonia, Oristano, Posada, Sestu, Simaxis, Stintino, Tortolì and Elini[77]. Starting from a description of the phases and activities proposed in the GL, the study focuses on the specific critical methodological aspects of the same and of the cases under examination, from the standpoint of participation, overall feasibility and clarity of the SEA and the plan.

The analysis makes it possible to advance considerations and reveal the criticalities that emerge for which the procedural protocol described in Chapter 6 aims at defining possible solutions.

[76] One of the experiences in the field that characterised the period of the Ph.D programme was the participation in the working group for the elaboration of the SEA for Alghero's city Masterplan in adjusting it to the RLP.

[77] The environmental reports and the scoping documents of the municipalities of Arborea, Badesi, Carbonia, Oristano, Posada, Sestu and Simaxis were chosen since at the procedural level they had received the grounded opinion of the provincial administration.

The first paragraph analyses the integration of the SEA in the process of elaboration the plan; the second and third paragraphs deal with the scoping phase and that of the elaboration of the environmental report respectively.

5.1 Integration between the SEA and elaboration of the plan

A first criticality that emerges from an analysis of the GL and the cases examined is the lack of integration of the SEA within the planning process; the procedures must be integrated into the process of elaboration plans and programmes from the very beginning: only in this way can the SEA be functional in improving the plan and making it more effective, bringing into it strategies and objectives aimed at fostering sustainable development and environmental protection (Zoppi, 2010).

In the case of the SEA of Alghero's city Masterplan, for example, it can be stated that the assessment process began after a serious delay after the elaboration of the plan, the result of a long planning process that began in 1995. In this case, the lack of integration of the SEA time frame and that of the plan is clear; as a consequence, all the added value that the plan could have offered in defining objectives and alternatives has been lost.

An application of the SEA that does not respect its fundamental principles is unfortunately a widespread and consolidated practice at the regional level and is part of a *modus operandi* characterised by the fact that assessments are downgraded to mere accessories of the planning process (Karrer, 2004). The distorted practice that has come into being is also caused by the fact that Sardinia has an obsolete regional planning law, one that does not provide for an assessment that accompanies and qualifies from within the elaboration of plans.

If the SEA lacks the integration within the planning process, it disregards the spirit of the Community Directive (henceforth referred to as Directive) and above all strongly invalidates its potential for improving the quality of the planning process. If, as in the case of Alghero, the SEA begins fifteen years after the elaboration of the city Masterplan, it is evident that it is senseless to search for credible alternatives to now-consolidated decisions, and that it is quite difficult, if not impossible, to increase the range of planning objectives to the universe of sustainability in its different aspects. This extension almost always leads to a grotesque caricature of a process truly inclusive of these issues.

5.2 The scoping phase

The scoping phase (defined in the GL also as the preliminary or orientation phase) represents a fundamental step in the assessment process; its objective is to define the conceptual and operative references by means of which environmental assessment will be made, both in terms of indicating the procedural features and the analytical indications.

The Directive concerning the SEA does not speak explicitly of scoping or orientation, but does state that member states shall designate the authorities who have specific environmental competence (Article 6, paragraph 3)[78] to be consulted at the time of deciding on the amount of information to be included in the environmental report and the level of its detail (Article 4, paragraph 3). The first version of Legislative Decree 152/2006, Article 9c. 4, establishes that these preliminary phases shall be activated by the proposer in presence of the competent authority. The first version of Legislative Decree 4/2008, Article 13 c. 1, specifies that consultations between the proposing authority, the authority charged with assessment and those environmental experts[79] shall take place starting from the preparatory phases in the elaboration of plans and programmes on the basis of a preliminary report on possible significant environmental impacts deriving from implementation of the plan or programme.

In the GL the proposing authority (the municipality) that calls the scoping meeting, with participation by the provincial administration as the authority competent for the city Masterplan, the regional Ministries for Environmental Protection, Local Administrations, Finance and City Planning and all subjects competent in the environmental field.

The GL define as activities to be performed in the scoping phase, indicated in Table 5.2_a, the definition of the area involved in the city Masterplan and its time frame, the amount and level of detail of the information to be included in the environmental report, the environmental analysis, identification of the environmental objectives to be included in the plan, identification of the plan's frame of reference and the objectives/criteria of environmental sustainability, identification of the data and information available in the area. The scoping phase concludes with the elaboration of a preliminary report (the scoping document).

[78] The Directive defines the authorities that may be interested in the environmental effects of implementation of plans and programmes.

[79] According to national legislation, the authorities competent as concerns the environment are the public administrations and bodies which, owing to their specific expertise or responsibilities in the environmental field, may be affected by impacts caused by implementation of plans or programmes (Article 5 c. 1, letter s of Legislative Decree 4/2008).

Phase 1 Orientation (Scoping)	Definition of the ambit of influence of the city Masterplan, the amount and level of detail of the information to be included in the environmental report with subjects competent in the environmental field Environmental analysis Identification of the planning frame of reference and the objectives/criteria for environmental sustainability Identification of environmental objectives to be included in the plan Organization of the data structure (format conversion) Definition of the levels of detail of the territorial information and standardisation of the legends Informatic Updating

Table 5.2_a. Activities in the elaboration of the environmental report. Source: GL, page 12

As concerns the description of the scoping phase, the criticalities of the GL, also found in the cases examined, are in the lack of detail on participation of local communities in the planning process, sustainable development and the definition of the objectives of the plan.

5.2.1 Participation in the scoping phase

According to the GL, within the SEA process the scoping phase must provide for a process of participation involving environmental experts interested in the elaboration the city Masterplan, to share the level of detail and the amount of information to produce and process, as well as the methods employed in performing the environmental analysis and assessment of environmental effects (Regione Autonoma della Sardegna, 2010, page 22). During scoping meetings the following are to be illustrated (Regione Autonoma della Sardegna, 2010, page 23): the ways in which the SEA process is to be conducted; the methodology for environmental analysis l (environmental components involved in the implementation of the city Masterplan, indicators to be used, the possibility of populating them, methods of analysis and so on); the modalities for conducting the participation process and approval of the list of those involved in the process (environmental experts, the interested public[80] and general public[81]); the contents of the environmental report.

[80] These are defined as one or more physical or legal persons as well as the associations, organizations or groups of such persons as defined by the laws in force. (Regione Autonoma della Sardegna, 2010, page 6).

[81] These are defined as the public subjected to, or that may be subjected to, the effects of the decision-making procedures as concerns the environment, or who are stakeholders in such procedures. (The non-governmental organizations that promote environmental protection and satisfy the requirements established by the laws in force are considered stakeholders). (Regione Autonoma della Sardegna, 2010, page 6).

The first critical point in the GL for this phase is the non-involvement, but merely the identification, of the interested public and the general public. However, the glstate that for the purpose of elaboration a plan agreed upon by as many as possible, the participation process should begin in the first phases in the elaboration of the city Masterplan (Regione Autonoma della Sardegna, 2010, page 45); it is also suggested, despite the fact that Legislative Decree 152/2006 and amendments, limits public participation to a later phase in adoption of the city Masterplan, should provide for further phases of participation for the purpose of involving environmental experts as well as general public even in the phases preceding the approval of the city Masterplan, which is to say during the elaboration of the plan *(*Regione Autonoma della Sardegna, 2010, page 45). From this statement and the non-involvement of the interested public and general public in this phase, it would appear that scoping is not a part of the process of elaboration the plan.

As concerns the methodology to apply in involving environmentally competent subjects during the meetings, the traditional method based on the presentation of the scoping document is suggested, followed by a discussion and the putting on record of the observations presented (Regione Autonoma della Sardegna, 2010, page 46). The GL also propose a questionnaire to be filled in by the same subjects by means of which they can express their opinions on specific issues concerning the ways in which the SEA process is to be conducted and the information to be included in the environmental report.

As concerns personal experience with Alghero’s SEA, following are some criticalities found during this phase and which can also be found in the other cases examined. During the three scoping meetings, summoned and organized by the city authorities, the absence of most of the environmental experts invited was noted. This inadequate participation is probably due to a lack of understanding of the importance of the contribution they could make to the SEA process as well as due to the city authorities for the haste and methodological weakness that characterised the way in which the meeting were organized. The latter focused more on discussions of Alghero's environment and its criticalities than on an examination of the content of the plan; this was probably the result of the lack of meetings with many key stakeholders and representatives of the local community, whose lack of participation characterised the entire SEA process.

In this critical framework we must also consider a further issue: the difficulty of the competent authority, the Province of Sassari, in performing a proactive and subsidiary role in the scoping

phase and in general throughout the entire SEA process. The lack of technical expertise as concerns the SEA reduced the role of the province to that of the mere formal overseer of the procedure.

As concerns the lack of involvement of the interested public and general public, the criticalities of the GL emerged also in the other cases examined; generally speaking, the good intentions of promoting participation are not accompanied by an explanation of how this is to come about in the scoping document.

In the SEA and city Masterplan documents of Simaxis, for example, it is stated that following the identification of (a generic) public there will be set up (unspecified) means of consultation to make it possible to express an opinion on the plan's proposals, the environmental report and the non-technical synthesis prior to its approval (Comune di Simaxis, 2008, page 16). The case of Simaxis is singular since in the same document it is stated, contradicting what is affirmed shortly before, that consultations will be activated once the plan is approved (Comune di Simaxis, 2008, page 45).

In Arborea's SEA of the city Masterplan, scoping document it is stated that the SEA process requires a structured involvement of subjects different from the administration that elaboration of the city Masterplan. Such subjects include local and higher-level public bodies and the public in its different expressions (Comune di Arborea, 2008, page 24): but nowhere in the document is it explained how this "structured involvement" is to take place.

In the scoping documents examined, environmental experts are identified overall as those to be found in the GL, with the exclusion of some. To be noted is the non-involvement in this sense of city administrations belonging to the lands of reference of the city Masterplan (which are present in the list proposed in the GL) despite the fact that in some cases this is considered an important element (Comune di Arborea, 2008, page 24) for the purpose of identifying common operative areas for projects involving different communities.

Among those examined, none contains the questionnaire elaborated by environmental experts and in few cases their observations are included.

During the scoping phase there is thus a lack of representative democracy in the territorial context of reference due to the indications given in the GL in this sense.

Also to be mentioned is a certain lack of interest in participating by environmentally competent subjects who are involved; this should lead to reflection on the times and modalities of their

involvement, which probably calls for greater incentives and not making it appear as a merely formal option imposed by the regulations.

5.2.2 The retracing of the process formation of the city Masterplan in the scoping phase

In the GL, the phases of the SEA appear to be a part of a process separate from those for the formation of the plan. Apart from a formal integration (Regione Autonoma della Sardegna, 2010, page 11), they are correlated with the activities leading to the definition of objectives and actions.

The lack of an explanation of the concept of overall objective and specific objective of planning and a method for their definition is pointed out. According to the GL, the overall objectives must be defined in the preparatory phase even before that of orientation. It thus appears to be outside the SEA procedure (Regione Autonoma della Sardegna, 2010, page 12). “The SEA process, to be performed together with the elaboration of the city Masterplan, is started up by the city administration as the proceeding authority by means of the publication of a notice to that effect on the city bulletin board and in the web site. It contains the preliminary definition of the objectives of the plan” (Regione Autonoma della Sardegna, 2010, page 15).

The processes leading to definition of the planning objectives are poorly defined and impossible to follow in the cases examined herein. There is often a certain confusion and lack of correlation between overall objectives, specific objectives and actions (Comune di Arborea, 2008, page 16; Comune di Simaxis, 2008, page 34); in some cases the objectives are defined as "overall", but also contain elements of specificity (Comune di Posada, 2008, page 16).

In the case of Alghero's city Masterplan, the SEA was applied to a plan that had already been defined in its objectives and actions. In the first version of the scoping document prepared by the city administration overall and specific objectives were poorly defined together with the actions of the plan. The work of the group that prepared the SEA, together with the city administration and the planners, was one of synthesis and reordering so as to obtain a tree structure, shown in Table 5.2.2_a, which could be useful in the subsequent assessment phases and in which the correlation between overall and specific objectives and actions would appear clearly. (Comune di Alghero, 2010, page 13). This arrangement facilitated the subsequent phase of assessment of the effects of the plan's actions on the environment and the definition of the monitoring programme.

General objectives	Specific objectives	Actions
GO 1 Understanding and enhancing the environmental system	SO 1.1 Understanding and enhancing the system of natural habitats	A 1.1.1 -Identification of a system of territorial park areas in connection with urban parks -Urban park of the Pineta delle Bombarde -Arenosu- Pond Calich -Maria Pia system -Monte Calvia-Monte Agnese park area -Valverde park area -Surigheddu-Mamuntanas park area
		A 1.1.2 -Protection and fruition of protected natural areas: -Enhancement of Porto Conte Park; -Recovery of the area occupied by free camping sites and Villa Mugoni; -Regeneration of the Tramariglio hamlet; -Recovery of historical objects; -Regeneration of existing accommodation facilities; -Protection of the Calich ecosystem and regeneration of its banks;
	SO 1.2 Understanding of landscape systems	A 1.2.1 Identification, protection and regeneration of agrarian, natural, urban and infrastructural landscapes; Cataloguing and regulation for protection and enhancement of the landscape heritage and areas of high quality

Table 5.2.2_a. Separation of general objectives, specific objectives and actions of the plan. Source: scoping document of the SEA of Alghero's City Masterplan.

Referring to the definition of the single activities, certain criticalities of the GL are pointed out.

The definition of the area of influence, indicated as the first scoping activity, is not clear as concerns its contents; not even in the scoping documents do we find a clear and univocal definition: sometimes the definition includes the environmental analysis and the identification of plans and programmes above the local level and on the same level with respect to the City Masterplan (Comune di Arborea, 2008, page 22), in other cases the definition and identification of external subjects important for the plan is not clear (Comune di Alghero, 2010, page 9), while in some cases the definition is not even mentioned (Posada's scoping document).

Other inconsistencies are found in the definition of activities for the environmental analysis: it is first defined, as can be seen in Table 5.2_a, as a scoping activity, then as an activity for the elaboration of the environmental report (Regione Autonoma della Sardegna, 2010, page 34) and an

activity superimposed on the reorganization of knowledge provided for within the process of elaboration the city Masterplan (Regione Autonoma della Sardegna, 2010, page 55). In the latter definition in the GL we once again find the separation between the process of elaboration the plan and that of assessment.

The objective of the environmental analysis is to diagnose the environmental situation before application of the plan by means of the study of a series of issues: quality of the air, water, wastes, soil, flora, fauna and biodiversity, the landscape and historical and cultural structure, the urban and demographic structure, the economic and productive system, mobility and transport, energy and noise (Regione Autonoma della Sardegna, 2010, page 36).
For each of the environmental issues listed above, a table of synthesis was prepared; it indicates the information to be collected for analysis of the single components and distinguishes the indicators to be processed and any maps that are to be produced. For each type of information, side by side with the aspects to be analysed the indicators to be measured are specified and how they are to be populated; the sources from which to collect data are also indicated (Regione Autonoma della Sardegna, 2010, pages 56-81). These tables are always present and compiled (even partially) in the scoping documents where, however, there is never an explicit analysis of environmental criticalities and how these can be addressed in the plan in terms of objectives and actions. Moreover, in the scoping documents examined the set of indicators chosen is never placed in the context of the city to be analysed and thus can be applied indifferently to any territorial context.

Among the activities defined in the GL for scoping, as can be seen in Table 5.2_a, we find the identification of the planning framework of reference and the objectives and criteria for environmental sustainability as well as the environmental objectives to be included in the plan. It is stated that in the scoping phase there should be the production of a technical report illustrating among other things the aspects concerning the planning instruments with which the City Masterplan is to relate, both at the same level as well as at a higher level, but without explaining the aim (Regione Autonoma della Sardegna, 2010, page 23). The scoping documents contain only the list of plans, the analysis of which is almost always put off to the phase of the elaboration of the environmental report.

As concerns identification of the objectives and criteria for sustainability, in the GL are indicated, besides the principles mentioned in paragraph 2 of Article 3 of the Technical Regulations for

Implementation of the Regional Landscape Plan[82] , the possibility of referring to the ten criteria proposed in the "Manual for environmental assessment of regional development plans and programmes of the structural funds of the European Union" (European Commission, DGXI Environment, Nuclear Security and Civil Protection - August 1998).[83] While preparing the city Masterplan it is recommended to keep in mind the opportuneness of taking into consideration the ten objectives mentioned above by evaluating through what strategic decisions and what specific actions these objectives can be concretely reached (Regione Autonoma della Sardegna, 2010, page 16).

It is not mentioned in the GL that assessment of the plan's sustainability should be crucial in the orientation phase and that the objectives of environmental protection must be considered when decisions are made: this consideration must take place on an equal footing with the other variables (economic and social) that are the subjects of the decision (Caratti and Tarquini, 2002). Furthermore, there is no mention of the fact that the specific objectives of the plan must be in line with the aforementioned criteria, with the aim of defining for the territory examined a series of local sustainable objectives (Mondini and Norberti, 2008). Only the contextualisation of the criteria assures a function effective in improving the quality of programming and planning (Zoppi, 2010).

In the different scoping documents, the environmental sustainability of the plan is usually mentioned in an isolated paragraph of the document with a standard sentence in which it is stated that beginning from the ten sustainability criteria, the objectives of environmental sustainability will be considered within the context of the respective cities (Comune di Arborea, 2008, page 16; Comune di Simaxis, 2008, page 38), or that the objectives of the plan will be reviewed for their adherence to the ten criteria considered within the city's territorial reality (Comune di Alghero, 2010, page 37); the actual definition of the objectives of environmental sustainability is put off to

[82] The principles listed in the technical regulations are: control of urban expansion; management of the urban ecosystem according to the principle of precaution; conservation and development of the natural and cultural heritage; attenuation of excessive urban pressure, especially of coastal areas; sectorial policies respecting the conservation of biological diversity; integrated territorial strategies for ecologically sensitive areas; protection of the soil with the reduction of erosion, the conservation and recovery of the large wetlands; management and recovery of marine ecosystems; conservation and management of cultural, historical, aesthetic and ecological landscape; a more adequate compatibility of measures for development which impact on the landscape; recovery of landscapes deteriorated by human activities.

[83] European Commission, DGXI Environment, Nuclear Security and Civil Protection - August 1998. The criteria are: 1. reduce to a minimum the use of non-renewable energy sources; 2. use of renewable resources within the limits of their regenerative capacity; 3. use and proper management from the ecological standpoint of hazardous and polluting substances; 4. conserve and improve the state of wild flora and fauna, their habitats and the landscape; 5. conserve and improve the quality of soil and water resources; 6. conserve and improve the quality of historical and cultural resources; 7. conserve and improve the quality of the local environment; 8. protection of the atmosphere; 9. promote awareness of environmental issues, develop education and training in the environmental field; 10. promote public participation in decision-making leading to sustainable development. Document available in the internet at the site: http:// www.provincia.lucca.it/ ambiente/astrale/files/approfondimento_manuale.pdf [last access: May 20, 2010]

the elaboration of the environmental report. The same is true for the scoping document of the SEA of Posada's city Masterplan, where much time is devoted to the definition of the objectives of environmental protection necessary for producing the environmental assessment of the plan through comparison between such objectives and those of the city Masterplan (Comune di Posada, 2008, page 34). The environmental protection objectives in this case will be defined starting from the analysis of the environmental context and examination of the plans, programmes and national and Community strategies (Comune di Posada, 2008, page 34). To each of the environmental protection objectives thus identified will be associated, when available, the targets of reference defined at the National and Community levels and a set of indicators in line with those proposed at the international (EEA, Eurostat, OECD, UNO) and national (ISTAT, APAT) levels necessary for monitoring the environmental effects of the city Masterplan. In the same document it is also stated that the objectives will be identified both as concerns the environment and the factors of environmental integration (which are defined nowhere in the document).

In the cases examined, the problem is not so much whether to consider the question of sustainability, but rather to clarify and state explicitly the mechanism by means of which to define the objectives of sustainability, which must be the objectives of the plan and not used exclusively for the environmental assessment of the latter. It would also be opportune to consider, together with the environment, the other issues of sustainability and thus integrate economic and social objectives with those of the environment.

It is strange to note that the main activities indicated in the GL for the scoping phase (environmental analysis, identification of the planning frame of reference and the objectives and criteria for environmental sustainability, the identification of the environmental objective to include in the plan) are in practice deferred to the time of elaboration the environmental report. However, as we have seen, in the scoping documents examined the planning objectives and actions are already included, but with no explanation of how they were defined, without performing such important activities. It can thus be concluded that little importance is attributed to the orientation phase and that integration of the SEA in the plan's formulation is no more than theoretical.

5.3 Preparation of the environmental report

The environmental report must account for the entire process of preparing and approving the city Masterplan, demonstrating that the environmental factors have been included in the decision-making process having regard to the regulations and programmes for sustainable development

defined at the international, community, national and regional levels. The report must indicate the objectives, the line of actions to follow and the estimate of the effects that implementation may determine in the environment. The plan, with respect to the indications of the environmental report, shall be improved and adjusted on the basis of the results of the assessments (Regione Autonoma della Sardegna, 2010, page 16).

The Table 5.3_a shows the process of formation of the plan in the cases examined, using the activities defined in the GL .

Phase 2 Drafting	Reinterpretation of the territory First hypotheses for enhancement of the characteristics and opportunities of the territory and proposals for mitigating criticalities identification of local ambits (for towns included in the regional landscape plan) First drafts of alternatives to the City Masterplan project Definition of the specific objectives, policies for implementation and construction of alternatives Analysis of external coherence with reference to higher-level plans Analysis of coherence with the objectives and criteria of environmental sustainability Estimate of environmental effects Analysis of internal coherence Planning of the monitoring system

Table 5.3_a. Activities in the elaboration of the environmental report. Source: GL, page 13

5.3.1 Retracing of the process formation of the plan in the environmental report

From what was said at the end of the scoping phase it is can deduce that despite the theoretical assumptions, it is difficult for the environmental report to retrace the process for the formation of the plan since this is in most cases a process separate from that of the SEA. The objectives and actions are defined outside the SEA: since they are plans to be brought in line with the RLP, many of them assume its principles and policies (Comune di Stintino, 2010, page 26), others define objectives and actions on the basis of analyses of housing requirements (Comune di Sestu, 2008, page 33), others following the construction of an (undetermined) fact-finding frame (Comune di Oristano, 2009, page 26).

In the cases considered, there is never a clear correlation between the definition of planning objectives and actions and the activities indicated for elaboration the environmental report (see Table 5.3_a), some of which are: coherent interpretations of the territory and initial hypotheses for enhancing the characteristics and opportunities offered by the area, but are never even explained.

Identification of the areas of the local landscape

Definition of the areas of the local landscape, defined in the GL as one of the first phases in preparing an environmental report (Regione Autonoma della Sardegna, 2010, page 13), a particular aspect of adjustment of the city Masterplan to the RLP[84], results only in some of the environmental reports among those analysed (Comune di Arborea, 2008, page 15; Comune di Stintino, 2010, page 29, Comune di Simaxis, page 42). In these, the landscape areas are identified "by considering the peculiar and specific interaction between historical, cultural, environmental and urban characteristics, identifying the system of territorial relationships recognized by the local communities which thus represent both the places of interaction of the resources of the environmental, natural, historical, cultural and urban heritage, and the places in the territorial project" (Comune di Arborea, 2008, page 15). The identification of local landscape areas makes it possible in such cases to spatially separate the strategic options and directions guiding territorial policies and to use them as a reference in all phases of the SEA; in particular for the definition of specific objectives, the environmental analysis and the definition of the monitoring programme.

First alternative drafts of the City Masterplan project

In the GL for activities for identification of the alternative drafts of the City Masterplan project, see Table 5.3_a (Regione Autonoma della Sardegna, 2010, page 13). No indications are given concerning the modalities for their determination, assessment and comparison.

In the cases examined the project alternatives are totally absent, except for mention acknowledging their importance.

In the environmental report of Carbonia's city Masterplan (Comune di Carbonia, 2009, page 88) it is stated that since the opportunity of alternative zero is not practical in the light of the obligation to adjust the instrument, a series of alternatives was defined, but of these there is no further mention.

In the environmental report of Arborea's City Masterplan (Comune di Arborea, 2008, page 7) the situation is the same. When the SEA procedure is described it is stated that alternative drafts are fundamental and provide support in decision-making in the formation of planning policies and options (page 8), but there is no trace of them in the document.

[84] Refer to Article 107 of the Technical Regulations for Implementation of the RLP cited in the premise to this chapter.

On reading the environmental report of Sestu's City Masterplan (Comune di Sestu, 2008, page 42) where it is stated that the plan represents an alternative to the plan approved previously and questions the conceptualization of the term "alternative" and its meaning.

In the cases examined, what is recommended in Directive 2001/42/EC is not applied: according to this document the contribution that the SEA can make to the plan in terms of sustainability is an assessment that must focus on implementable scenarios and alternatives.

The environmental analysis

As concerns the time frame in which the environmental analysis is to be performed, as stated previously, there is a certain confusion in the GL,: firstly, it is included as a scoping activity; it is then stated that the collection of useful information for the same can be included within the process of bringing the city Masterplan into line with the RLP in the phase of territorial analysis and reorganization of knowledge (Regione Autonoma della Sardegna, 2010, page 35); finally, it is placed in the phase of elaboration the environmental report. As concerns the latter, it is felt that there is not much sense in its being included in the environmental report, which is at an advanced phase in assessment since, besides being functional to assessment of the effects of the plan on the environment, it should be used to determine specific planning objectives and actions for environmental protection.

The GL define the environmental analysis as the diagnosis of the environmental situation of the city's lands and the examination of the qualitative state of a series of landscape components. The result of the analysis is to represent the knowledge base on the state of the environment in the area involved in implementation of the plan and must allow for the performance of subsequent assessments of the impacts that implementation may have on the environment. Therefore, the environmental analysis consists of identifying and combining a series of data on the state of the natural resources and the relative pressures brought to bear on them by anthropic and/or productive factors for the purpose of revealing possible environmental criticalities that may be impacted by implementation of the city Masterplan and of identifying territorial opportunities that may be enhanced by this (Regione Autonoma della Sardegna, 2010, page 35).

To represent concisely the results of the environmental analysis, the GL suggest using the SWOT analysis,[85] which makes it possible to identify the opportunities for territorial development deriving

[85] SWOT is the acronym for the following terms: *Strengths, Weaknesses, Opportunities and Threats*.

from its strengths and containment of its weaknesses, in the light of the frame of opportunities and risks that would normally result from the actions foreseen in the plan. The SWOT analysis represents a valid instrument for supporting decision-making, one that is capable of identifying strategies for territorial development in relation to an overall objective of sustainable development and illustrating how the development strategy outlined in the plan can contribute to the sustainable development of the territorial context or, on the contrary, what negative effects it may cause (Regione Autonoma della Sardegna, 2010, page 36).

Although the steps on how to perform the environmental analysis are well described in the GL, nowhere is there an indication of how the analysis is connected to the plan's objectives.

Even in the cases examined the environmental analysis in general is not the pivotal element on which to base the choice of the plan's objectives.

In the environmental report of Alghero's city Masterplan the environmental analysis is performed after definition of the plan's actions, preparatory to identification and assessment of their effects on the land (Comune di Alghero, 2010, page 79). In this case, the analysis of each environmental component (the same indicated in the GL) was divided into an analysis of the present condition, a SWOT analysis, a qualitative and quantitative analysis of the indicators and the definition of a concise evaluation of the quality of the available data. In selecting the indicators, the contribution of the few environmentally competent subjects who participated at the scoping meetings was precious;[86] in this sense, the subjects who were invited but did not participate could also have provided fundamental help at this phase, especially in populating the indicators, for many of which, with reference to certain components, the populating and collecting of data was difficult and led to poor results.[87]

The SWOT analysis is used in many of the environmental reports examined (Arborea, Stintino, Alghero, Carbonia). In some cases it refers to well-defined areas, such as the local landscapes (Comune di Arborea, 2008, pages 59-70), or to the homogeneous areas of the City Masterplan now in force (Comune di Stintino, 2008, pages 111-145). This kind of analysis has the advantage of having the assessment model grounded in an effective and real structure of the territory which will

[86] In particular, the Regional Agency for Environmental Protection of Sardinia (ARPAS), the Local Public Health Agency (ASL) and the Regional Service for the Environment and Impact Assessment (SAVI).

[87] From the viewpoint of the availability of data, one of the criticalities was the noise component; the company that manages the town's airport was not among those who participated in the SEA, while it could have made an important contribution both in terms of providing data and in defining planning objectives.

potentially be modified in going from the instrument in force to the one proposed for the future. In other cases the SWOT analysis is organized in thematic terms[88] (Comune di Carbonia, 2009, page 67) referring to the territory under examination (but not referable to the analysis of the components), or by structure (environmental, historical and cultural, urban) on the components (Comune di Tortoli, 2010, pages 70-80). In most cases, SWOT is not functional to formulating objectives connected to the criticalities and opportunities found in the territory; in this way, the environmental analysis appears to analyse exclusively the state of the environment prior to implementing the City Masterplan. Only in the case of the environmental report of Arborea's City Masterplan, in the environmental analysis and in particular in the SWOT, are defined the policies useful in reformulating the specific objectives of planning, previously described in the scoping document (Comune di Arborea, 2008, page 89).

Definition of the specific objectives, actions and the setting up of alternatives

In the GL, the definition of the specific objectives is provided in the phase of elaboration the environmental report (Regione Autonoma della Sardegna, 2010, page 13), but the path to be followed in the definition and correlation with the activities defined in it is not clearly indicated. The same problem is found in the cases examined; in most of them the specific objectives are determined even before preparation of the environmental report in the scoping document, without specifying the criterion applied in identifying them (Alghero, Posada, Simaxis, Arborea) and sometimes even overlooking the overall objectives (Comune di Sestu, 2008, page 33).

Also found in the cases examined is a lack of correlation between planning actions and specific objectives (Comune di Arborea, 2008, pages 97-106, Comune di Carbonia, 2009, pages 17-19).

Analysis of external coherence with reference to the higher-level plans

The analysis of the programming frame is defined in the GL partly in the orientation phase (as mere identification of plans of reference) and partly in the elaboration of the environmental report (analysis of external coherence); this methodological setup definitely frustrates the role of the SEA as the fundamental instrument in coordinating planning processes capable of promoting sustainability even in the context of strategic programming decisions (Tarquini, 2001).

[88] Urban environment, rural environment, hamlets, environmental situation, social structure, transport, economic structure, tourist activities, culture, employment.

In practice, the GL reduce the purpose of this activity to seeing whether or not the lines of development indicated in the plan are coherent with the policies foreseen in other existing plans and/or programmes and with which the City Masterplan may interact. To this end, they provide an incomplete list of plans which, besides the RLP, with respect to which the coherence of city Masterplans is implicit in the adjustment process, must be examined if pertinent (Regione Autonoma della Sardegna, 2010, page 37).

The typical modality adopted in conducting the analysis of the existing programming frame is that of including a synthesis of the plans and programmes of reference in the environmental report without explaining the correlation in terms of the definition of the city Masterplan's objectives (Comune di Sestu, 2008, pages 11-33).
The analysis of the programming frame is followed by an analysis of external coherence which is nothing but a comparison of the objectives of the plans examined and those of the city Masterplan, without specifying how this comparison may be useful in delineating the planning strategy that is the subject of the assessment (Comune di Elini, 2010, pages 47-48). Only in some cases is it useful in formulating policies for the redefinition of the city Masterplan's specific objectives (Comune di Arborea, 2008, pages 21-38; Comune di Stintino, 2010, pages 32-91). Typically, the analysis of coherence is carried out by considering each specific objective of the City Masterplan with each of the objectives deriving from the analysis of the higher-level plans, considering a scale of interaction that indicates the coherence or lack of same with respect to the objective examined (Comune di Oristano, 2009, pages 168-174).

Analysis of coherence with the objectives and criteria of environmental sustainability

As we have seen, the GL state that the main objective of the SEA is conformity of implementation with the objectives of sustainable development by verifying the overall environmental impact, which is to say the direct effect on environmental quality.

In the cases analysed, it is evident that the concept of sustainability in the SEA is left to a series of interpretations which say little about its intrinsic significance. To say that the plan or the objectives are of a sustainable nature does not mean that it suffices to refer to the criteria of sustainability or compare them to a series of objectives formulated in an uncertain way. To return to the question in the title of Chapter 1, firstly it is necessary to find in the SEA, and more in general in the management of decision-making processes, an operative process that makes possible the effective realization of the sustainability of the choices.

In the cases examined, the concept of sustainability is addressed first of all by exalting its fundamental importance in processes leading to formulation of the plans (Comune di Oristano, 2009, page 17) but it is then reduced to a list of the usual criteria proposed in the EU manual, with the statement that the same will be contextualized for the territory to which they refer (Comune di Oristano, 2009, page 25). Even in this case everything is reduced to subsequent verification of coherence with the criteria (Comune di Oristano, 2009, page 10); sometimes contextualization is not even mentioned and all we find is the list of criteria (Comune di Carbonia, 2009, pages 73-74).
In the environmental report of Arborea's City Masterplan the concept of sustainability with reference to formulation of the objectives is the following (Comune di Arborea, 2008, page 90): "for integration of the environmental aspects in the process of adjustment of Arborea's city Masterplan to the RLP, reference is made to the ten sustainability criteria proposed in the EU manual. Such criteria, explained and detailed in objectives of sustainable development, are for the purpose of decreasing pressure on the environment and directly affecting the quality of the environment"; the objectives thus obtained represent the basis for the assessment of coherence with the specific objectives of the plan (Comune di Arborea, 2008, pages 97-106).

In the environmental report of the SEA of Badesi's city Masterplan the objectives of environmental sustainability are defined starting from the environmental context and the examination of the plans and programmes of reference; on the basis of the environmental objectives found, a set of key indicators chosen from among those considered most representative of each of the environmental components considered is selected. With these objectives, later "opportunely" calibrated for Badesi's territorial context (Comune di Badesi, 2009, page 42), the objectives of sustainable development selected with reference to certain documents of international importance are associated.[89]

The same references and the same approach used in Badesi's environmental report are proposed in Posada's environmental report (Comune di Posada, 2008, page 58), where, however, the connection between the objectives of environmental protection and the overall objectives proposed for the plan is not underscored.

The approach used in the SEA in the Masterplans of Sestu and Alghero is totally different. In the former case some environmental objectives (different from those of the plan) are defined, without

[89] The Strategy of the European Union concerning sustainable development of 2006; The Community 20-20-20 Strategy of 2007; the Aalborg Commitments of 2004.

specifying exactly how these were obtained, and then compared to the planning objectives (Comune di Sestu, 2008, page 42).

In the latter case objectives referring to the concept of sustainability, which become planning objectives,[90] are identified, as can be seen in Table 5.3.1_a.

General objective 1 (GO 1)	Recognition and enhancement of the environmental system
General objective 2 (GO 2)	Recognition and enhancement of historical places, the cultural heritage and traditional sites
General objective 3 (GO 3)	Structural and functional reorganization of the town and its lands
General objective 4 (GO 4)	Strengthening of the economic and productive system
General objective 5 (GO 5)	Strengthening and regeneration of the tourism sector
General objective 6 (GO 6)	Strengthening of the City Masterplan's elemen saats of sustainability

Table 5.3.1_a. Definition of the General planning objectives. Source: Environmental report of the SEA of Alghero's City Masterplan.

Estimate of environmental effects. Comparison and selection of alternatives

As concerns the analysis of the city Masterplan's environmental effects, the GL (Regione Autonoma della Sardegna, 2010, page 16) indicate that to proceed with the improvement of the city Masterplan it is necessary to estimate the effects that implementation of the actions and interventions may determine in the environment, so as to adjustment the plan on the basis of the results of this estimate.

In the frame of the SEA process, the estimate of the effects that implementation of the plan may cause represents one of the most important phases. As concerns this, it is necessary to point out that the evaluation of the effects in the SEA process cannot reach a level of detail comparable to that obtainable in the Environmental Impact Assessment (EIA) (Regione Autonoma della Sardegna, 2010, page 38).

[90] The strengthening of these elements, defined as overall objectives, for which the following specific objectives were defined: reduction of the use of non-renewable resources; use of renewable resources within the limits of their capacity for regeneration; conservation and improvement of water and soil quality. To each of these objectives correspond actions in the plan.

The SEA must lead to identification of solutions allowing the reaching of the plan's objectives and at the same time ensuring greater protection of the environment, also through the definition of opportune measures of mitigation. The potential effects that implementation of the plan may determine in the environment must be identified and estimated in relation to alternatives with which the plan can be implemented (Regione Autonoma della Sardegna, 2010, page 38).

Nowhere in the GL are defined what environmental effects are, but they do provide some basic general criteria for their assessment (Regione Autonoma della Sardegna, 2010, page 13):
- effects in the environment should be assessed on all the components examined in the initial environmental analysis, with the exception of "productive systems" and "mobility and transport" which, although included in the environmental analysis, are not to be considered in assessing the effects since they do not represent potential targets of actions but, if at all, of pressures. The analysis of such components is in any case necessary as concerns construction of the state of the environment since this makes it possible to obtain information on the pressures brought to bear in the plan's area of influence;
- in assessing environmental effects it should be verified if the actions of the plan have taken into consideration the results of the environmental analysis, both in terms of criticalities to deal with and opportunities to be seized;
- the system of assessing environmental effects should be formalised so as to ensure review of the process. In this sense it is not advisable to use excessively discretionary systems and those based on comparisons of a purely qualitative nature;
- assessment of the environmental effects should take into account both direct and indirect effects (not defined in the GL);
- in assessing environmental effects, also to be considered are the cumulative impacts deriving from the contribution of effects caused by more than one action, that is, the sum of effects caused by an action when this is added to others in the past, present and reasonably foreseeable in the future.
Assessment of environmental effects should be carried out for the different alternatives to the proposed plan so as to identify the solution allowing the reaching of the objectives of territorial development with the fewest environmental impacts.
For assessment of the effects thus identified, the methods normally used are based on qualitative and quantitative assessments indicated with an adjective (good, average, sufficient, modest and so on) or with a colour (according to an determined colour scale) or with symbols (according to an

preset legend), or based on numerical quantitative assessments in which reference is made to given scales of value (Regione Autonoma della Sardegna, 2010, page 39).
Furthermore, in the case of numerical evaluations, scales of absolute or relative values can be used, that is, they can be constructed following a system of weights making it possible to take into account, for example, the sensitivity of a given environmental component with respect to others (Regione Autonoma della Sardegna, 2010, page 39).

With reference to the aforementioned criteria, from the examination of the cases studied we can state that generally speaking, in the assessment of environmental effects only in few cases (Oristano and Sestu) it is to be seen that the actions of the proposed city Masterplan have taken into consideration the results of the environmental analysis, both in terms of criticalities to address and opportunities to seize.
Concerning the effects, in the cases examined it is almost never stated whether or not the analysis takes into account the direct or indirect effects.
In all cases considered the assessment of environmental effects was not performed for the planning alternatives, since these are totally absent in the environmental reports.
As concerns more specifically the methods used, they are based on the compilation of checklists and matrices that make it possible to correlate planning actions with environmental components. The cross-referencing of actions with the different components allows identification of the potential effects that each action may have on them. With reference to the latter, although the GL recommend not to assess effects on "productive systems" and "mobility and transport" components, some of the environmental reports examined assess the effects on these components as well (Badesi, Alghero, Posada and Stintino).
In some cases, assessment of the environmental effects is performed by using matrices with a concise indication of the magnitude of the potential impacts on each environmental component. In others, it is performed only in a conversational style or only on the components that may be affected by implementation of the planning actions (Comune di Badesi, 2009 , pages 68-69) or without an explicit reference to the components indicated in the GL (Comune di Arborea, 2008, pages 97-106).

In Posada's city Masterplan we find the use of a matrix that verifies impacts which correlates the environmental components with the actions called for in the City Masterplan by means of a "weighted" assessment of the effects created, and which allows a representation of the intensity

with which a given environmental component will be stressed by the implementation of a certain action (Comune di Posada, 2008, page 80).

Interpretation of the matrix is facilitated by the presence of two synthetic indices: that of environmental compatibility and that of environmental impact. In defining the two indices also the cumulative and synergic impacts are taken into account through an impact cumulativeness factor.

In the SEA of Carbonia's city Masterplan, there is a qualitative assessment of the possible effects of planning decisions with respect to the main environmental matrices (Comune di Carbonia, 2009, page 79), then for each action the ways in which the objectives of the plan are to be reached is defined. Concerning the SEA of Oristano's city Masterplan, the planned actions are compared with the compatibility criteria within the context of Oristano's territory by means of an interaction matrix separated into the three systems that structure the plan, that is, urban, environmental and historical and cultural; the matrices thus constructed show the positive, potentially positive, negative, potentially negative and uncertain interactions. The incompatibilities found, or potential ones, are then analysed and for each the measures for limiting the impacts of the planned actions are identified by means of the compilation of in-depth reports; such reports are important in elaboration the plan: they contribute in such a way as to make possible the choice of the proper solutions with full consideration of, and respect for, the environmental factors (Comune di Oristano, 2009, pages 192-223).

A different approach is used in the SEA of Sestu's city Masterplan, in which in conformity with what resulted from the fact-finding analysis and in accordance with the DPSIR model,[91] the pressures brought to bear by city Masterplan actions are determined quantitatively and qualitatively; the intensity of pressure on the indicators of the environmental components is then assessed for each of the subsets, assuming as the worst level the one attributed to the indicators in the subsystem. In particular, the effects are subdivided into direct, indirect, cumulative, synergic and antagonistic (Comune di Sestu, 2009, pages 65-72) and analysed from the qualitative standpoint.

Analysis of internal coherence

According to the GL, the internal coherence analysis makes it possible to verify the presence of inconsistencies in plans. By means of this analysis one can examine the correspondence between

[91] The DPSIR (Driving forces, Pressures, States, Impacts, Responses) model, was proposed by the European Environment Agency (EEA) in 1995 and has its origin in the previous PSR (Pressure-State-Response) model created by the OECD.

the knowledge base, overall and specific objectives, planning actions and indicators and verifying in particular the following conditions (Regione Autonoma della Sardegna, 2010, page 36):

- that all the environmental criticalities that emerge from analysis of the context be represented by at least one indicator;
- that all the objectives of the plan be represented by at least one indicator, that is, there must not be objectives that cannot be reached or the results of which cannot be measured;
- that all significant effects caused by the actions shall be measured by an indicator;
- that all the indicators shall refer to at least one objective and one action, thus correlating the systems of the objectives and actions.

This should make it possible to find, for example, undeclared objectives or those that are declared but not reached, or incompatible objectives and indicators.

It is possible to distinguish an analysis of horizontal coherence and one of vertical coherence. The vertical internal coherence analysis verifies the congruence between the plan's strategies and lines of action and the analysis of the socioeconomic and environmental contexts. It is thus a way to evaluate the coherence between the context analysis and the objectives proposed in the plan and between the objectives identified and the instruments designed to reach them.

The analysis of internal horizontal coherence verifies the existence of contrasts between the plan's specific objectives and the several actions proposed with respect to the overall objective. This allows verification of the presence of possible redundancies and inconsistencies in the several actions.

The instruments of the coherence analyses are many, such as the use of coaxial matrices, the SWOT analysis or a relational database for analysis of correlations between different kinds of plans (Regione Autonoma della Sardegna, 2010, page 36).

In the cases studied, the analysis of internal coherence is formulated in different ways, but in none the conditions indicated in the GL as concerns the indicators are followed.

In Alghero's SEA, it aims at verifying the reciprocal congruence between the plan's specific objectives (Comune di Alghero, 2010, pages 53-70); the crossing may indicate:

- congruence if two specific objectives aim at reaching the same objectives of sustainability;
- neutrality if two specific objectives aim at reaching the same objectives of sustainability and are not in conflict with each other;
- possible criticalities if two specific objectives may clash as concerns the ways in which the specific actions are to be implemented. In the latter situation, reference is made to the prefiguration

of planning actions which, in the phase of implementation for reaching the specific objectives, give special attention to protecting the environment and the landscapes, limiting as much as possible the effects on the natural and anthropic elements that characterize Alghero's lands.

Inthe SEA of Carbonia's city Masterplan the intrinsic analysis is for the purpose of verifying coherence between the city Masterplan's objectives and the actions that the plan indicates for reaching them; the coherence between objectives and actions is expressed by means of a matrix of comparison, in which the way the comparison is to come about is not very clear (Comune di Carbonia, 2009, page 70).
The correlation matrices are used also in the case of the SEA of Oristano's city Masterplan: it is structured for actions of the plan and criteria of compatibility, from the analysis of which emerge the critical or potentially critical elements (Comune di Oristano, 2009, pages 191-204). In this case, contrary to the previous one, the methodology adopted is made clear through the use of symbols representing judgements attributable to the single actions with respect to the sustainability criteria (Comune di Oristano, 2009, page 30).

In the case of the SEA of Stintino's city Masterplan, the “verification and representation of internal coherence" consists of a summing up report in which are indicated the specific objectives and corresponding actions of the plan for reaching these objectives (Comune di Stintino, 2010, pages 158-161).

In the other environmental reports examined, internal coherence is not addressed (Arborea, Badesi, Posada, Sestu, Simaxis, Tortoli and Elini).

Planning of the monitoring system

In the GL a brief description is devoted to monitoring (Regione Autonoma della Sardegna, 2010, pages 42-43) in which it is pointed out that the SEA does not end with the final approval of the city Masterplan, but continues with monitoring activities for the purpose of following the evolution of significant environmental effects caused by implementation of the plan, so as to be in a position to intervene with timely corrective measures. According to the GL, the monitoring system should define: the elements to monitor (environmental components, implementation of the plan's provisions and so on); the indicators to be used; the sources from which to collect data, the modalities and recurrence of updating; the critical thresholds on the basis of which to activate

measures for reorienting the plan; the modalities for the implementation of the monitoring system (subjects responsible for monitoring, financial sources for implementing the system and so on).

In most of the cases studied, they stop at the description of how the monitoring system will be structured, even going on to the times at which the single indicators are to be updated, but in reality the relationships between strategies and the effects that the actions cause or may cause in time in the territorial context are not explained.

It is possible to state that in the light of the obvious importance of this phase what emerges from the reading of the environmental reports is vagueness concerning the elements that structure the monitoring system.

In the environmental report of the Simaxis' city Masterplan, it is stated that for the purposes of the SEA, monitoring of the city Masterplan's significant environmental effects aims at:

- observing the evolution of the environmental context of reference, also to identify unforeseen effects not directly related to implementation of the actions;
- identifying the significant environmental effects deriving from implementation of the plan;
- verifying the mitigation measures foreseen in implementing the single actions;
- verifying the quality of the information contained in the environmental report;
- verifying conformity of the city Masterplan to the objectives of environmental protection described in the environmental report;
- making it possible to define and adopt the necessary corrective measures that become necessary in the case of significant environmental effects.

Following these statements, a list of indicators is defined; they are subdivided by local areas of reference but without clearly stating how to set up the monitoring system, that is, how to control compliance of the city Masterplan with the objectives of environmental protection defined in the environmental report or what actions and possible effects to monitor (Comune di Simaxis, pages 128-133).

Apart from the case of the environmental report of the SEA for Alghero's city Masterplan (Comune di Alghero, 2010, pages 251- 256), where an indicator is assigned to each specific objective so as to monitor implementation of the plan, the other environmental reports list a series of indicators not correlated in any way with the city Masterplan's objectives; in some cases the same indicators used in the environmental analysis are again proposed (Comune di Posada, 2008, pages 94-96).

5.3.2 Participation in elaboration of the environmental report

The GL call for participation in elaboration the environmental report with a generic series of meetings in relation to the size of the town and its environmental components. Such meetings should involve subjects who are competent in the environmental field, the general public and general public (Regione Autonoma della Sardegna, 2010, page 48). In particular, the GL state that participation by general public should be foreseen in different phases (it is not specified which) within the frame of the entire SEA procedure, each of which to conduct with specific finalities (not indicated in the GL): to ensure the availability of the necessary organizational and economic resources, the city administration should proceed to deciding on a preliminary scheduling to define the subjects to invite, when to hold meetings, what information to provide to the general public and how the meetings are to be chaired (Regione Autonoma della Sardegna, 2010, page 44).
The categories and representatives of specific sectors (general public) that are to participate should be decided in advance (Regione Autonoma della Sardegna, 2010, page 44); as concerns this aspect, it was found in the analysis of the scoping documents that this preliminary choice is hardly ever made.

Referring to the phases shown in the table on page 16 of the GL and in relation to the process of constructing the city Masterplan, it is up to the city administration to decide at what time to call for participation and which subjects to invite (Regione Autonoma della Sardegna, 2010, page 44).
The GL recommend some modalities for participation, such as the creation of online forums and the organization of meetings with the involvement of experts in the techniques of participation (facilitators). In this case, it is suggested to adopt a participative methodology (for example Metaplan) which calls for the preliminary sending of the document in progress or a draft of the city Masterplan, including the environmental report, to those identified as "general public".
Following approval by the city Council, as foreseen by Regional Law 45/89 and by Part Two of Legislative Decree 152/2006 and amendments, the plan is made available to the public, together with the environmental report and a non-technical synthesis so that all have the possibility of expressing their opinions. To solicit participation by the public at this phase, the city administration can organize one of more meetings to present these documents to the townspeople between the fifteenth and forty-fifth day from publication of the notice that the city Masterplan and the environmental report have been deposited. The GL state that in the same time frame "it would be opportune to plan one or more meetings with general public.”

Scanty participation of local communities in the process of formulating the plan is a constant in the cases examined. The lack of involvement of single members of the community and of the associations representing important interests during the planning phase hinders their active participation with the formulation of suggestions and proposals.

In the case of the SEA of Alghero's City Masterplan, public participation in the planning phase was marginal. Only in the final phases of the elaboration of the plan and before its approval was a series of meetings scheduled[92] and a series of information instruments was organized so as to allow all subjects involved to express their opinions concerning the decisions. The meetings were for the purpose of favouring interaction between the authors of the plan and all subjects involved in the process. In correspondence to the key issues, associations of categories and sectors, as well as single persons holding personal interests, were invited to participate; they were informed by means of illustrative material that could also be consulted by means of a dedicated website in which the documentation concerning the plan and the SEA, together with a form for participation in which it was possible to express their opinions and observations were made available.[93]

In some of the environmental reports examined the references to participation are generically those indicated in the GL (Comune di Arborea, 2008, page 14; Comune di Carbonia, 2009, page 10), in other cases the series of meetings was held without reporting what emerged from them (Comune di Badesi, 2009, pages 22-24), or reference is made to future initiatives, but without specifying when they are to take place (Comune di Oristano, 2009, page 146; Comune di Posada, 2008, page 110).[94]

In the case of the environmental report in the SEA of Posada's city Masterplan, a chart of the subjects who will be involved in the planning process is proposed together with the modalities for involvement to be adopted (Comune di Posada, 2008, pages 35-36).

Observations made following approval of the plan cannot make up for reduced participation prior to its approval. These come at a time when the plan has already reached a high degree of concreteness and has assumed a formal nature.

[92] In July of 2010, meetings were organized on specific issues such as: “Tourism”, “Mobility and Transport”, “Productive Activities”, “Environment and Territory”, “Masterplan and Institutions”, “Neighbourhood and Hamlet Committees”.
[93] The documents can be downloaded from the website: http://88.58.112.248/puc/_m/modulistica.pdf [last access: February 12, 2011]
[94] The municipal administration of Oristano, besides providing for public presentations and consultations for the purpose of involving the townsfolk, associations, public bodies and specialists, announced the setting up of an Urban Center in the near future to keep participation alive even in the period following approval of the masterplan, with the idea of involving as much as possible all the resources present in the area, both public and private, in implementing the contents of the plan.

The observations and proposals presented by single persons or associations should be considered by the administration as a necessary and fundamental contribution to providing the town with a planning instrument that is the result of full participation and shared by as many as possible.

Moreover, the communities must not be identified only by the stakeholders representing strong interests that are already well represented and protected. It is also important to find them in formal and informal organizations through which citizens can and wish to express their ideas and proposals concerning the present and future organization of the town and the land around it (Zoppi and Lai, 2008).

This series of issues represents the basis for the search for a solution and for practices that represent one of the possible routes leading to the solution of problems.

Chapter 6: A procedural protocol for SEA in regional governance

Premise

The past and future practices of SEA, are an important field of study for the application of the principles of good governance in regional planning. (Zoppi, 2007).

The analysis in chapter five highlights, in as far as problems and weaknesses are concerned, an insufficient awareness of the opportunities offered by SEA in the planning process and in correcting methodological shortcomings : non-integration, an uncooperative approach at an institutional level together with an inadequate involvement of local communities in decision-making stages are all part of the *modus operandi.*

As a consequence of these shortcomings it was decided to formulate a procedural protocol where the SEA was fully inserted in the construction of a plan and indistinct from it. Negotiation and participation mechanisms were enhanced in order identify choices that had a broad consensus.

The guidelines for the development of an inclusive and incremental decision-making process, were defined, so as to include, in a more effective manner, considerations of environmental aspects and improve participation in the planning process.

The essential elements in implementing a SEA, regardless of the scale of application or level of government involved and the issues that need to be considered, and where appropriate, to characterise the specificity of them, have been highlighted.

The participatory modes, the determination of the amount and type of data required, the identification and evaluation of the effects, in particular, need to be considered taking into account the territorial scale of reference.

The involvement of environmental experts, the general public and the members of the public who have a special interest in the plan, was structured in a systematic way. The results to be achieved in the cognitive analysis, the choice of priorities, and identification of strategies and alternative actions and was pre-determined.

The exportability and the possible uses by government, planners and evaluators, shows the potential of the procedural protocol.

This chapter is divided into five paragraph. The first deals with the dimension of the integration of SEA in the process of building the plan, which is essential for achieving the objective of inclusiveness. In the second paragraph the prerequisites for the construction of the procedural protocol are discussed. In the third section some techniques are proposed, that can be used in a complementary manner, to help integrate the participation stages throughout the SEA process. In the fourth and fifth paragraphs, attention is focused on the core activities to be carried out in the scoping and elaboration of environmental reports .

6.1 The dimensions of integration between SEA and plan

In this thesis, the importance of the integrated approach to environmental issues and the importance of assessment tools as key elements to guide decision making in sustainable choices, has often been highlighted. If integration is seen as "add what's missing" the SEA itself can be an instrument of integration, as it completes the key sustainable decision-making process.

The first step in integration is implementing and maintaining a positive and creative interaction between the planning and evaluation processes. Ideally these processes should merge into one. In this way the procedure will lead to continuous improvements and adjustments, which should be reflected in the final product, making it more consistent and mature. Integration is an essential requirement in order to move from a vision of environmental objectives as an expression of industrial expertise to the construction of plans and programs from these objectives which form the basic prerequisites.

A second form of integration is the joint consideration of environmental, social and economic factors. The strong tendency to the compartmentalization of knowledge makes it difficult to carry out any integrated analysis. Integrated analysis often results in the emergence of as useful and as interesting knowledge as results from expert analysis.[95]

These forms of integration are essential, as are good communication and coordination between the different agencies and bodies involved in the plan, the utility of which is of particular importance in the basic decisions about the content of the plan.

Considering the case studies seen in the previous chapter, the integration model, in practice, is an approach of “minimal" integration”, i.e. based on the scanning process indicated by the SEA

[95] ENPLAN Guidelines paragraph 4. These Guidelines are the result of a transnational project between Italian and Spanish regions, aimed at developing a common methodology and shared for the introduction of the SEA of plans and programs at the regional level, are placed in a time step before the formal implementation by Member States of the European Community Directive 2001/42/EC.

Directive (the development and evaluation of the environmental report, the conduct and results of consultations in decision-making and the availability of information on the decisions), the SEA in this approach is intended only as an authorization procedure.

The correct approach should be “full" integration as defined by the Guidelines of the European Union[96], in which the SEA accompanies all stages of preparation, approval, and implementation of the plan, in a continuous process that goes from the *ex-ante* evaluation, through to the *ex-post* evaluation [97].

Nel mezzo dei due approcci, gli aspetti trasversali che influenzano l’integrazione della VAS nella pianificazione, e più in generale, nella governance territoriale, sono il livello di cultura valutativa e i rapporti tra tutti gli attori (proponente, autorità preposta alla valutazione, portatori di interesse), che sostanzialmente richiede una completa comprensione del processo decisionale nelle sue fasi e dello specifico contributo che dall’applicazione della VAS ne può derivare.

In the middle of the two approaches, cross cutting issues that affect the integration of SEA in the planning, and more generally, in regional governance, are the level of evaluation culture and the relationships between all those involved (the proposer, the assessment authority, interested parties), which basically requires a full understanding of the decision-making process in all its stages and the specific contribution that the application of the SEA can make.

6.2 Requirements for the construction of the procedural protocol

The first condition for writing the procedural protocol is to consider the SEA as a concrete support for the formation of a plan, to achieve set targets and actions in accordance with a broader set of perspectives, from those initially identified by the proposer and capable of supporting, both the latter and the final decision maker, entering the linear process of planning allowing for the use of feedback along the way, so as to maximize its effectiveness. As noted by the Guidelines ENPLAN[98], the initial guidance of the plan must not, in fact, be dictated solely by the

[96] Guidelines for SEA of Structural Funds 2000-2006. In these environmental issues has become the primary and absolute cross-disciplinary character of the different sectors of investment subject of development plans, implementation of Community policies, with particular reference to the programming of Structural Funds and with the specific intent to develop strategies capable sectoral and territorial to promote a truly sustainable development.

[97] The *ex ante* SEA proceeds in parallel with the definition of plans and programs, which is an integral part, the ongoing SEA monitors the changes triggered by the first plans and programs and verifies the degree of consistency with the objectives set out in the *ex ante* stage, introducing if necessary, corrective and additions; ex post SEA has the task of explaining the effectiveness and efficiency of interventions, in terms of overall impact on the local system.

[98] Guidelines ENPLAN paragraph 8.1. These Guidelines are the result of a transnational project between Italian and Spanish regions, aimed at developing a common and shared methodology for the introduction of the SEA of plans and programs at regional level, are placed in a time step before the formal implementation by Member States of the European Community Directive 2001/42/EC.

administration responsible for policy direction and implementation of the same, but are built as a rule, taking into account many other factors such as sectorial or territorial interests and social pressure on specific issues.

L’integrazione della dimensione ambientale in genere non è motivazione significativa all’avvio dell’impostazione dei piani urbanistici, per cui il secondo presupposto è esprimere la volontà di protezione dell’ambiente fin dagli orientamenti iniziali di un piano, alla pari delle esigenze di natura sociale ed economica.

The integration of the environment is generally not a significant enough motivation to start the elaboration of regional and urban plans; So the second condition is to express the desire to protect the environment from the start, making the needs of nature equal to social and economic needs.

The third assumption is to ensure the integration of the SEA within the planning process, in particular in the process of the formation of the plan, without losing the independence and impartiality of an independent final evaluation. In this sense it is important to emphasize that the proposer is the same administration, responsible for assessing the environmental sustainability of the plan. The role of the authority, in this view, should be collaborative, rather than controlling, so that the contents of the plan actually achieve environmental sustainability profiles, providing data for the reconstruction of the state of the environment, to identify environmental emergencies, for the definition of objectives and an indication of the methods and best practices to address them.

Another assumption is to start from the awareness that there can not be a single model of evaluation, but that this must change, as mentioned in the introduction, according to the territorial scale of the plan. Starting from these assumptions, the methodological and procedural issues that could overcome the difficulties encountered in the fifth chapter and summarized in Table 6.2_a., were identified.

CRITICAL ASPECTS OF THE GL
The general objectives of the plan are not defined and are identified in the preparatory phase of the SEA (Regione Autonoma della Sardegna, 2010, p.12).There is no methodological structuring for their identification.
The specific objectives are not defined. There is no methodological structuring for their identification.
There is no a clear correlation between the activities in the SEA with the construction plan, which seems to be part of a separate process.
There is a lack of structured involvement of the public and interested public from the early stage.
CRITICAL ASPECTS OF THE CASE STUDIES
General and specific objectives and action plans are defined outside of the SEA procedure. The planning process is not retraceable.
The analysis of context is not related to the definition of objectives.
In the choice of objectives, scant regard is paid to the concepts of environmental, social and economic sustainability.
Lack of involvement of neighboring municipalities by the municipal administration proposing the city Masterplan during the consultation phase.
The monitoring program was not built taking into account the impact of actions on the territory of the plan. It almost always provides only a list of indicators on the environmental components and not on the achievement of objectives and actions.

Table 6.2_a. Sardinian Guidelines and criticality of the relationship of environmental adjustment in the SEA of the city Masterplan to RLP.

The differentiation between planner and evaluator is not considered very relevant in the procedural protocol, especially when there is a good level of participation in the definition of decisions (Magoni, 2008), but it is certainly important for close collaboration and cooperation between planners and environmental experts.

6.3 Methods for integrated a participatory process

Consultation opportunities in the procedural protocol are incorporated into all stages of the development / evaluation of the plan. As mentioned above, they must be structured within the SEA process and be designed to reach both the desired results and the territorial scale of the plan. Beyond these considerations there are several techniques and tools that, if used in an integrated manner, will help improve participation.

The forms of participation recommended by the Protocol, complementary to those online, are in the form of programmed on-site consultations, both in plenary sessions with the general public (meetings) and in thematic sessions with relevant environmental experts and the public interested[99] (this should include the representation of the public: private profit and non-profit organizations, associations and individual citizens with special interests. In essence, any organization or individual with an interest in the plan, that the authority concerned believes can make a useful contribution to the planning process).

To facilitate the meetings, particularly those on specific thematic issues, it is appropriate to the use of participatory methodologies such as focus groups and the European Awareness Scenario Workshop (EASW).[100]

Group interaction is based on feedback and this helps to study in depth the issues that are raised. Interaction has the great advantage of producing, in a more realistic manner, a process that governs the decision-making (Corrao, 2000).
In focus groups,[101] the interaction is personal and less structured. They are a form of qualitative research, in which groups of people are asked about their attitude towards a given subject (Corrao, 2000).

[99] The definitions given by the legislation for the subjects of an SEA process are reported in chapter five.
[100] Part of the process of strategic planning of the Municipality of Capoterra (2007), for example, during activities that involved the participation of several representatives of local society, were used both the methodology EASW both the focus groups.
[101] The use of focus groups has been extended over time as part of numerous projects and initiatives and local development of animation as a tool to detect the needs and perceptions of participants about the phenomena being observed. In a focus group, work is based on the guided discussions that are moderated by a facilitator. He must ensure that participants feel free to express their opinions and simultaneously to keep the conversation focused on the theme.

They have been defined as interviews with a homogeneous group of people to explore a theme or particular aspects of a topic (Stagi, 2000). They are built on the idea that, by collecting the various opinions and viewpoints of the people and observing how the participants interact within a group and change their opinions, more information can be collected then through simple individual interviews.

In a focus group, made up an average of seven to twelve people, the work is based on guided discussions, which are moderated by a facilitator. He must ensure that participants feel free to express their views while keeping the conversation focused on the theme. The groups are encouraged to explore in depth, in a positive way, the differences of opinion, thereby eliciting the real points of view, judgments, prejudices, opinions, perceptions and expectations of the public, in greater depth than possible using other techniques of investigation. The aim is not to get the group to take decisions or reach a consensus on a topic. The aim is to get every participant to contribute his/her expertise and opinions on a specific topic and through constructive dialogue, highlight the problems and opportunities, ideas and projects by the participants. A distinctive feature of focus groups is that the group homogeneous. That is that they are made up of people with similar characteristics and experiences.[102] This is to highlight the strengths and weaknesses of any proposals on the specific issues under consideration, as they relate to members of a specific category in a given territorial context. Excessive uniformity, however, is not recommended because in every group there should be just enough difference to allow the emergence of different positions and even opposition (Krueger, 1994).

The total number of participants is not large enough ,however, to be able to project the results to the entire population nor is it statistically significant (Bovina, 1998). It is not possible to get statistically significant results, so for this reason focus groups are usually used together with quantitative methods, which allow for the statistical analysis of data. Where the quantity supplied and quantity correlations, and especially the focus on quality, promotes understanding of why and considers relevant aspects of the study (Stagi, 2000).

The use of focus groups is recommended at the start of the planning process, for the analysis of new or unfamiliar contexts or in the final part, as a study or audit of the results obtained. Focus groups

[102] In the case of the Strategic Plan of the Municipality of Capoterra, for example, during the cognitive analysis, six meetings have been organized so divided: traders (theme: problems, opportunities, ideas), artists, and associations (theme: culture and cultures in Capoterra) , schools and associations (theme: what future?), artisans (theme: ideas and hands to Capoterra), fishermen (theme: ideas and projects for Capoterra), tourism entrepreneurs (theme: potential and opportunities for Capoterra).

are often accompanied by other methods, such as interviews, which can be more qualitative (Bezzi, 2001; Corrao, 2000).

Participatory planning methodologies, such as the EASW methodology, may be used when defining the objectives and priority actions of a plan. Created to promote initiatives on environmental issues, the EASW methodology, particularly within the programs of Agenda 21, has also been implemented on a wide variety of topics, including urban planning.
A minimum of twenty to a maximum of forty people are selected from among the stakeholders. These are real experts in the subject under discussion and the problems involved.

The selection of participants is essential for the success of an EASW. They must represent the community and not their own self-interest. EASW is structured in such a way as to lead the participants to develop visions of the next item of discussion. One day workshops are usually used to start discussions on objectives, and outline lines of action to achieve them. The results vary depending on the subject discussed and the characteristics of the participants, so it is very difficult to layout specific rules for the use of this method. One thing is, however, certain, we have to start from a correct definition of the objectives and the results to be achieved (De Luzenberger, 2004). A very important role in an EASW is the role played by scenarios. The use of scenarios helps the participants to consider possible future alternatives.

As stated above, in order to better manage the participatory process, it is recommended that the thematic sessions are targeted only at the stakeholders (environmental experts and the interested public)[103], identified at the beginning of the procedure. See Table 6.4_a

A more extensive public participation, however, can be favored, even during the plenary sessions, by the use of questionnaires or interviews (see the discussion in this regard on the questionnaires in fourth chapter, section 4.3.2).[104]

To facilitate communication and participation of all the interested parties, the techniques of Information and Communication Technology (ICT)[105] should be used from the orientation phase. ICT is a technological foundation for the planning process and is an important reference for

[103] The term "stakeholders" technically defines all those persons having an interest in the plan and that by their behavior can affect its activity.
[104] Questionnaires are often administered at public meetings, such as those convenedfor the Strategic Plan of the Municipality of Capoterra (Comune di Capoterra, 2007) and the city Masterplan of Cava de Tirreni (Cerreta and De Toro, 2011).
[105] The ICT is a field of application of new technologies on which in recent years has greatly increased the interest of both national governments and international bodies, the local community. It is defined as the set of methods and technologies that make the systems of transmission, reception and processing of information.

governance related to the implementation of planning policies in a way that integrates different methodological approaches for decision support, based on the proactive involvement of communities in the decision-making processes, planning for the flow of information, and the effectiveness of communication between local government and communities.

One of the possible methods is the setting up of a web-platform, with a website that can be continuously updated, such platforms, supported by a WebGIS[106] system, with dynamic functions where interested parties and the general public can interact: information processes and communication on the Internet allow all interested citizens to check (and possibly criticize) the development of the plan.

The use of ICT identifies four levels on the ladder of participation (Carver, 2003): i) access to information and administration services; ii) on-line discussion; iii) on-line opinion polls; iv) on-line decision support systems. In the first level, the communication flow is unidirectional (McCall, 2003), from the second level it becomes two-way: ordinary citizens can express their opinions and preferences in an informal manner (for example by taking part in an online forum), while in the third and fourth level it becomes structured participation.

The use of GIS can facilitate public participation and support the transition from one level to another (Craig et al., 2002), since it can make available a variety of information in the form of maps and communicate spatial relationships between different data referring to the same territorial contexts.

The use of the Internet and GIS, however, has some weakness. The first is the use of computers is not democratic (Obermeryer, 1998), due to the fact that GIS requires a high level of computer literacy (Carver, 2001). The other criticism is that the availability of information on the Internet is not a guarantee of greater public participation (Carver, 2003; Craglia and Onsrud, 2003, De Man, 2003; Merrick, 2003, Tulloch and Shapiro, 2003).

For these reasons, support for participation in planning processes and evaluation based on WebGIS are not currently able to replace more traditional forms of participation (Peng, 2001), but should rather be considered as a complement to them that can foster dialogue, transparency and public involvement in the decision process (Carver, 2003).

[106] WebGIS are called the geographic information systems (GIS) published on the web. A WebGIS is therefore the extension of the Web applications born and developed to manage the digital cartography. A WebGIS project is distinguished by a GIS project for the specific purposes of communication and information sharing with other users.

6.4 The initiation of proceedings and scoping

As stated in the foreword the procedural protocol requires, that the SEA process is not separate from the planning process. So it is essential in the preparatory stage ,that the authority concerned, makes public, the start of the planning process together with its evaluation, by publication in the Official Gazette of the Italian Republic or in the Official Bulletin of the autonomous region or province concerned.[107]

In this initial phase, the authority shall identify the environmental experts and the interested public, who will be involved in the process right from scoping, after any eventual verification of subjectability. (see Table 6.4_a).

A problematic issue since the first draft of the Legislative Decree. 152 is the definition of plans to be submitted to the SEA. According to the national legislation those plans and programs that can have significant impact on the environment and/or cultural heritage (Article 6, 1c of Legislative Decree 152 and amendments) have to follow SEA guidelines . The last amendment to the Decree (which introduces a change with article 5, letter m-bis) defines the verification of subjectability, as the verification activities used to assess, where applicable, if plans, programs or amendments, may have significant effects on the environment and therefore be subjected to the evaluation stage, given the differences in the level of environmental sensitivity of different areas. It is conceivable, considering the norms, that a part of regional and urban planning and plans that define in detail land use (for example, implementation plans) may not be subjected to the evaluation process after verification subjectability .

This procedural protocol does not enter in to the merits of this specific and complicated issue since it is assumed that, regardless of the sensitivity of the territorial plan, the SEA could be a useful tool in setting up any plan and in the definition of the choices to be considered.

[107] The notice must contain: the title of the draft plan, the applicant, the authority concerned, indicating the locations where that can be taken note of the plan and the environmental report and where you can see the non-technical summary (Art. 14 1 c. of Legislative Decree. 152 and amendments).

Starting the procedure for the formation process of the plan and the SEA	
Activities	**Participatory activities and stakeholders**
- Public notification of commencement of procedures for the preparation of the plan and the Strategic Environmental Assessment; - Assign responsibility for the drafting of the plan, and the preparation of the environmental report (including non-technical summary) and / or for the preparation of a preliminary study for the purposes of a verification of subjectability. - Mapping of the stakeholders: • Identification of environmental experts; • Identification of the interested public Attivazione di una piattaforma web - Activation of a web platform	- Public notification of commencement of procedures

Table 6.4_a. Activities and those involved in organizing meetings to initiate the procedure of the formation process of the plan and the SEA.

Assuming that the plan is subject to SEA, we analyse the scoping phase[108] to which the procedural protocol assigns a fundamental role, since it represents one of the crucial stages of the process of planning and evaluation[109], which will layout the initial definition of the objectives of the plan.[110] The objectives are the statement of what the plan aims to achieve, taking into account, environmental considerations and socio-economic development.

A procedure which follows the SEA protocols allows (as compared to one without the SEA), objectives to be extrapolate through the possibility of considering alternative scenarios to the plan,

[108] The terms orientation, scoping and defining the scope of influence in the proposed procedural protocol are used as synonyms. This does not happen in GL where the definition of the scope of influence is a (not detailed) activity of the orientation phase (Regione Autonoma della Sardegna, 2010, p.12).
[109] Enplan Guidelines section 9.2
[110] As seen in Chapter Five, in practice scoping is unrelated to the definition of the objectives of the plan, these being defined outside of the SEA.

through discussion and consideration of possible constraints on the study area. The SEA in this way becomes a practical tool to reach decisions.

The determination of the objectives is derived, using SEA, in a systemic manner by all the key elements of a defined knowledge base.[111] This is produced by: the analysis of the planning framework, by the context analysis and by the results of the processes of participation, consultation and negotiation processes.

Table 6.4_b, summarises the activities planned for scoping, the aims of which are the formulation of general and specific objectives.

The participants at this stage are, the environmental experts, the general public and the interested public. Their main responsibilities are: the analysis of the context, the definition of specific objectives and identifying the main action plan.

In addition to an interactive relationship with the public through a web platform, which should be activated at the beginning of the proceedings, (See Table 6.4_a) and if necessary the administration of questionnaires, we recommend the organization of a series of consultative meetings[112], to define and discuss the main problems and critical aspects of the territory concerned and then to define the objectives and the main lines of action. The aim is to ensure that the process of decision and evaluation become subordinate to obtaining a results that, as already said, is the outcome of negotiations as well as cognitive aspects and political/policy ones. The point of view of those who are not "experts" will allow, those who plan, to formulate a draft plan that comes from a series of technical considerations and proposals from the public, considering the latter, before of the decision-making process.

[111] The construction and implementation of knowledge is a key element of the process of training plan / SEA. As seen in the case studies examined in Chapter Five, sometimes building the knowledge base is more related to a procedural requirement rather than a functional definition of the strategies of the plan.

[112] It suggests the organization will encounter thematic sessions (for example using the techniques proposed in the third paragraph).

The scoping phase	
Activities	**Participatory stages and participants**
Formulation of the general objectives of the plan: -Analysis of the planning framework and planning reference	
Formulation of specific objectives and main lines of action: - Analysis of the context - Define the planning matrix identifying specific objectives and actions.	Public, interested public and environmental experts
- Scoping meeting	environmental experts

Table 6.4_b. Activities and those involved, at the participatory stage, in the scoping meetings.

6.4.1 Formulation of the general objectives of the plan

The general objectives[113], in the procedural protocol, are defined during scoping21, according to the analysis of the planning framework and planning reference.

Programming and planning analysis framework

The set of plans and programs that govern the territory, to which the plan, subject to evaluation refers, is the planning framework and programming of the same, the analysis of which is functional in the formulation of the general objectives of the plan and guidelines for the definition of specific ones.

In the preparation of a regional and urban plan, of any scale, it is necessary to take into account the plans and programs of the same and higher-levels as indicated in the definition of its strategic lines. To make this possible it is necessary, first, to carry out a general survey of the planning instruments and programming references.

The aim of the analysis of the planning framework and programming it to get to the point where consistent external verification in the decision making process becomes superfluous,[114] since the

[113] The classification of the objectives (general, specific), proposed by the procedural protocol, is oriented to give a systematic definition of the same.

formation of the objectives of the plan already take into account the strategic lines of reference. At this key stage, each plan can be aligned not only "up," with reference to regional plans and national and EU strategic lines but also "down", with reference to planning and programming documents already existing and operating within the territory involved.

From an environmental point of view: in order to build a comprehensive and effective framework, which is necessary for the determination of the general objectives and the guidelines for the specific ones, one should consider, for example, the existing environmental planning and programming by other entities with expertise in the same territory (Provinces, Mountain Communities, Basin Authorities, Parks, etc..), area socio-economic development plans, policies and financial guidelines, any action plans for biodiversity, action plans for species of wild fauna and flora and action plans for habitats, as well as other implementation plans that relate to environmental issues.[115]

From this analysis it is essential to obtain, in particular, lines to define specific targets for environmental protection. For the latter, the many documents in the international arena on environmental sustainability[116], which could help; for each environmental component examined in the definition of the aims and goals of a long-term sustainability policy, in the definition of specific objectives in the short and medium term, in the determination of the target and in the evaluation of the plan of actions. It is certainly useful to refer, to the ten criteria proposed by the "Handbook for Environmental Assessment of Regional Development Plans and the EU Structural Funded Programs", as indicated by GL (Regione Autonoma della Sardegna, 2010, p . 17), but this is too late in the process of forming a plan, to make a comparison between these criteria and the objectives that have already been identified (Regione Autonoma della Sardegna, 2010, p. 13). The criteria in fact, should serve to define the objectives of the plan to make it more oriented towards environmental protection and the context to the territorial reference should be to integrate the set of objectives of the plan and not to be used simply as a reference to assess their coherence. The

[114] The GL include the identification of the planning framework of reference in the scoping (Regione Autonoma della Sardegna, 2010, p. 12), but only to prepare the environmental report setting out the consistency check (analysis of external coherence) between the lines of development indicated in the plan with the broad context of the existing programmatic (Regione Autonoma della Sardegna, 2010, p. 37) and in this regard include a non-exhaustive list of plans on which to make such verification. In the case studies examined in Chapter Four, the typical method adopted in conducting the analysis of the existing policy framework is to report, environmental report, a summary of plans and programs without reference to explain the correlation in terms of defining the objectives of the plan that is considering. Verification of external coherence, in practice consists of a simple comparison between the objectives of the plan and those extrapolated from higher-level plans examined.

[115] Enplan Guidelines, section 9.1.1

[116] Some references are: Barcelona Convention for the Protection of the Mediterranean Sea against Pollution, 1976, Kyoto Protocol, Agenda 21, Fifth and Sixth European Programme of Action for the environment, New EU strategy on sustainable Development of 2006, Community Strategy 20-20-20 of 2007.

definition of environmental protection objectives may be refined based on analysis of the state of the environment in terms of criticality, strengths, opportunities and threats (SWOT analysis).

6.4.2 Formulation of specific objectives and main lines of action

After defining the general objectives it is necessary to formulate a set of specific objectives and action plans related to the analysis of the territorial context affected by the plan and to the specificities related to them. In particular, functionally will be important in the definition of appropriate indicators.

The analysis of context

Analysis of the context means the acquisition of the development trends of natural and human systems and their interactions, in order to get a cognitive picture of the overall situation in which the plan will operate, which can support and help in decision making. It consists of a detailed study of the territory on which the plan has a significant effect that allows one to define specific objectives, articulated in space and time.[117]

The setting of the analysis of detail and level of detail, in terms of quantity and type of data required varies with the type and scale of the plan area: the boundaries of the knowledge framework will vary according to the characteristic of the different environmental and territorial issues and potential impacts in question. For example, for large area land use plans, such as provincial, an ecological approach[118] to systems[119] or thematic areas[120] may be preferable to an analysis of the individual biotic components, but more suited to a plan that affects an area of limited extension, such as for municipal urban plans. In the latter case the schedules proposed by GL, involving the analysis of the state of the environment for a series of environmental components (Regione

[117] Enplan Guidelines, section 9.5.1

[118] One approach to ecologies is the one followed in the preparation of the Regional Coordination Plan of the Province of Sassari, which have been identified of primary-process forms and complex landscape and environment of the area (Provincia di Sassari, 2006).

[119] In the case of Regional Coordination Plan of the Province of Benevento (Provincia di Benevento, 2010), the context analysis has been structured in fifteen thematic systems (among other environmental and natural, historic and landscape, settlement, areas of production) (Provincia di Benevento, 2010); territorial Coordination Plan of the Province of Milan, is divided into three rather large systems just defined thematic "structuring" settlement, mobility and environment. The division into geographical areas, made up of clusters of territories of municipalities of the province, was used during participatory (Provincia di Milano 2002) and defined "structuring" settlement, mobility and environment. The division into geographical areas, made up of clusters of territories of municipalities of the province, was used during participatory (Provincia di Milano, 2002).

[120] Interesting analysis is carried out in the Environmental Report of the city Masterplan of Cava de' Tirreni that refers to the following "themes": population, agriculture, energy, transport, economy and production, atmosphere, hydrosphere, biosphere, geosphere, landscape waste; ionizing and non ionizing radiation, noise, risk of natural and anthropogenic, promotion and dissemination of environmental awareness. Each environmental issue has been analyzed using a thematic board which contains an explanatory text, any objectives set by legislation, sources of data, the indicator tables, and any useful maps to represent and locate information (Cerreta and De Toro, 2011).

Autonoma della Sardegna, 2010) are a good reference[121], however, the proposed indicators should be defined by reference to the territorial object of the analysis.

The analysis of the context, must take in to account the presence of resources and their pre-operational quality. The detailed survey of existing sources and environmental information is an essential preliminary step, since it derives from the definition of the cognitive frameworks, that the evolution of planning and evaluation will make constant reference to (Fabietti and Carbonara, 2007).

The quantity of environmental data to be extracted must be adequate in the sense that it must be able to provide both up to date and historical data from which to draw specific assessments.

In this activity it is important to collaborate with all the bodies of the regional government and the various agencies[122], to build a common knowledge through the collection of information and indicators already in their possession. The databases of regions and provinces, the use of geographic information systems, the official socio-economic statistics and the store of knowledge derived from studies and plans already in place for the context, are valuable and essential references .

The context analysis, aimed at acquiring data, information and indicators, should not lead to a framework for general indistinct information but should depend directly on the type of the object plan of the decision, in this sense it is important to find a balance between redundancy and the vagueness of the information.

There are contexts characterised by high uncertainty and lack of information that require innovative analytical models, based on the judgments of observers (skilled witnesses) rather than direct observation of phenomena. "If you analyse a phenomenon that many observers describe in a certain way it is very likely that the observation is reliable" (Bertin, 1994). Public involvement and consultation with stakeholders, as repeatedly stated, at this stage will help identify and understand the main issues that the SEA should deal with.[123]

[121] In the case of the GL, Environment is considered in its broadest definition, are in fact considered, as discussed in Chapter Five also components of settlement and demographic structure, economic system of production, mobility and transport and energy.
[122] Fundamental is the role of regional agencies for the environment established by Law n. 61 of 21 January 2001, which among other powers the data processing of environmental interest and their diffusion.
[123] In the case of the SEA of the city MAsterplan of Cava de' Tirreni, for example, during construction of knowledge were activated consultations with the authorities and parties involved in environmental matters but also with the associations, individual citizens and stakeholders with the purpose of enriching the knowledge framework with the issues considered most significant for future urban transformations, social, economic and cultural area, and to highlight instances of the community. As part of the meetings with the

One can start from the more general issues and then explore in depth the specific questions with the aim of developing a framework of knowledge, that is as broad and rich as possible. In this sense, it is essential to go beyond the information framework provided by objective data ("hard data") making use of "soft data", an expression of the views of different stakeholders in the process (De Marchi, 1999).

In this perspective the SEA becomes an instrument of dialogue which is capable of integrating the "common knowledge" (citizens, associations, representatives of civil society, etc.) with the "expert knowledge" (technicians and administrators) to improve identification and selection of choices. As has been mentioned in the introduction and in the third paragraph of this chapter, the participation must be structured and designed to both reach the result and to respect the territorial scale of the plan. For example, if one is dealing with a plan at a provincial or regional level, the participants involved must include representatives of all concerned entities through the activation of inter-institutional meetings, while in the case of municipal plans collaboration between neighboring municipalities is valuable.

The SWOT analysis at the conclusion of the context, will be important to allow the identification of critical issues and relevant opportunities, on the base of which it may be possible to contribute to the modulation of the plan's objectives, integrating them with environmental precautions.

Definition of indicators

Commonly, the term indicator identifies a tool that can provide information, in summary form, of a phenomenon that is more complex and broader in meaning, a tool that can make visible a trend or phenomenon that is not immediately obvious[124]. The definition of indicators in SEA, is of considerable importance for the analysis of context and for the next phase of monitoring, as well as for the development of information systems and for the construction of environmental models.

Having a set of appropriate indicators, that can best interpret the situation on which a plan or program will have an effect is fundamental. It allows for the construction of reliable scenarios of the plan based on interpretations of the starting position as consistent as possible with the reality that one is studying.

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community were addressed three main issues related to territorial development of the Munipality of Cava de 'Tirreni: 1. What vision of the future? 2. What strategies? 3. What actions? (Cerreta and De Toro, 2011)

[124] It is what was stated by Bollini Gabriel in a document available on the Internet at the address: http://www.comune.alghero.ss.it/progetti_programmi/agenda_locale/documenti/indicatori.pdf [last access April 4, 2011].

To ensure that their use is effective in the evaluation, it is necessary that they are not too numerous but at the same time are representative of the reality that is being considered. At the same time they must also be translatable into quantitative values and statistically monitored[125]. In their analysis, they can be compared with the thresholds of the law, in case there are legal regulations to this effect or specific quantitative criteria defined from time to time.
In addition to quantitative indicators, quality indicators and the map indicators are also a great utility for the study of territorial transformations.
The qualitative indicators are not comparable indicators with numeric data but may represent the changes which occurred in a given territory. The map indicators are those derived from the overlapping of multiple thematic maps.
All the indicators used in the SEA, must be related to the sources of pressure in the environmental planning instrument, this will prevent the inclusion in the SEA documents of indicators that have little to contribute to the decision-making process (Calenda, 2008).

The information systems and the indicators that represent them, may require processing and adjustments to make them relevant to the specific territorial scope of the plan. They still need to ensure consistency and comparability of selected indicators for the plan with those of environmental monitoring, in order to constitute the first important group of indicators, that are, essential for future systematic evaluation of the expected environmental effects.

In this way the monitoring phase will begin in reality at "the beginning", i.e. through an initial cognitive framework, which through the use of indicators, becomes an integral part of the monitoring system. The approach is methodologically more correct when the monitoring begins the cognitive framework with the characterizations of these components, and then compares them with their future evolution and, not therefore, as an appendix to put at the end of the SEA (Baldizzone, 2010).

As far as indicators of sustainability are concerned, there is no International or European agreement on a "unit of measurement". There are no agreed criteria nor methods for monitoring or measuring sustainability nor for creating the necessary budgets[126].

[125] The lack of available data on historical obviates the indicator for the verification of past trends.
[126] *Ibid*, footnote 133

The sustainability (or non-sustainability) of a plan is not easily measurable. In fact, it is not directly detectable as it would be if it were a natural phenomenon, which is describable, catalogued or a direct result of reading of environmental indicators.

We must reflect on the fact that not all environmental indicators can be taken as indicators or gauges of sustainability/non-sustainability. These numerous indicators and environmental parameters can often hint at, indirectly refer to, be interpreted as a warnings or as significant indicators of the progressing of sustainability / non-sustainability but do not measured it objectively and scientifically as such. The of risk of confusion between the use and interchangeability of the indicators for the description /measurement and use of environmental indicators for the description / measurement of sustainability is common.
The aggregate indices and synthetic indices in SEA are very useful, in particular for the comparison of scenarios[127].

Definitions of specific objectives and action lines

Through the above analysis it is possible to proceed to the formulation of the specific objectives of the plan, whose requirements must be concrete and measurable, each of them needs to correspond to a series of actions to be functionally activated to attain it. It can be useful to define a planning matrix. (see table 6.4.2_a), inspired by the Logical Framework Approach,37 where using a diagram tree is the relationship between general, specific and action plan is schematically presented.

[127] See the use of "dashboard" in “VAST Provincial Coordination Plan” of the Province of Milan, through which have been obtained using synthetic indexes simulation models, estimates, projections and comparative analysis time.

General Objective	Specific Objectives	Actions Plan
General Objective	Specific Objective 1	Action Plan 1
		……
	……	…… ……
		……..
	Specific Objective No	…….
		Action Plan No

Table 6.4.2_a. Design matrix that identifies, starting from a general objective, the specific objectives and actions

Even at this stage broad participation and transparency of the process is crucial, guaranteed by the continuous updating of any Web-platform, in line with the progress of the plan and focus groups or ESAW activated with the involvement of stakeholders. The goal is to reach a formulation of shared objectives and actions.

The result to be achieved is a structured, participatory and transparent plan, in which one can choose to reach only some of the goals that emerged through the selection of suitable areas for action or priority based on the requirements of the proposer of the plan and applications received.

All the activities organized in a retraceable way and the results achieved, must be reported in the form of a discourse in the scoping document whose contents will be shared and discussed with the environmental experts and the competent environmental authority. The authority shall convene one or more meetings, taking care to send the participants the scoping document sufficiently in advance of the scheduled date of the meeting. During the meetings, it is useful to attach questionnaires to the GL (Regione Autonoma della Sardegna, 2010). The list of comments received, the return of the questionnaires and the information on their implementation will be contained in the environmental report.

6.5 The preparation of the environmental report

According to the EU Directive the drafting of the environmental report should include, the significant effects(which have been identified, described and assessed) that the implementation of

the plan could have on the environment as well as the alternatives in the light of the objectives and the geographical scope covered by the plan. Thus, relative to the whole SEA process, the environmental report is therefore a functional tool to promote the efficient conduct of the evaluation procedure and, in particular, to make available relevant information, so that all stakeholders involved have a chance to make their contribution. When the design phase of the document of the plan is completed, the environmental report becomes the instrument to account for the entire process.

The activities involved in the drafting of the environmental report, (See table 6.5_a) are the construction and evaluation of plan alternatives, the estimation of the environmental effects of actions on the plan and the construction of the monitoring system[128].

The drafting of the environmental report	
Activity	Participatory stages and participants
- Construction of an alternatives to the plan - Evaluation and comparison of the alternative plan - Estimate the effects of actions on the environmental plan. - Public Monitoring Program	The general public, the interested public and environmental experts

Table 6.5_a. Activities and those involved in organizing meetings in preparation of the environmental report

[128] The procedural protocol differs substantially from the joint activities planned by GL (Regione Autonoma della Sardegna, 2010, p.13).

6.5.1 Construction of the alternative plan

At the conclusion of the scoping phase, the most significant interactions between the assessment and decision-making are determined. The matrix design, represented in table 6.4.c, favors the discovery of a "reasonable" alternative plans, as defined by the Directive[129]. Each specific objective, in fact, can be achieved with different combinations of actions, also on the basis of the area for intervention. According to the procedural protocol, in the formation of different combinations, an essential contribution is given by the participation, via the web platform, and by the meetings of the stakeholders, as well as political concerns. In some cases diverse options can be proposed that are so different that they require an assessment that combines different approaches. As part of SEA, the valuation issues are, or should be, typically oriented to compare different plan options including those that are very different, based on: the decision rules, defined preferences, expectations and the needs expressed by local communities (Lai et al., 2008).

The assessment outlined in the planning process, the contribution of the community and other stakeholders to the process is "used" to identify needs, problems and objectives and using the definition of lines of intervention, several alternative plans are identified. In this way, alternative scenarios of the plan can be defined that can be met by different lines of action. One of the main aims of the SEA is the exploration of alternative future scenarios that could arise following the implementation of a plan, program or project in order to provide useful information to planners and decision-makers (Greig and Duinker, 2007) .

Evaluation and comparison of alternatives

After identifying the various alternatives to the plan, the problem to be addressed is that relating to their assessment. The various hypotheses of the plan must be selected and classified, taking into account all the elements that the decision maker considers important. The technical evaluation does not automatically provide the decision but will provide systematic support to it. It will also help the authority to adopt more informed choices, increasing the effectiveness of cognitive decisions.

The traditional technique for evaluation, cost-benefit analysis, is based on a single evaluation criterion, social welfare. However it has been shelved due to the increasing influence of multi-criteria comparison methods.

[129] The identification and assessment of alternatives, as seen in chapter four, is absent in all the case studies examined. Even the GL do not give any hint on the methodology. Reflecting on the role of alternatives requires it, to start from the Directive 2001/42/EC and national standards, where despite claims that the definition of alternatives is a critical step in the SEA, do not give a comprehensive reference of how they should be made and what are the tools for this purpose. This lack of information is one of the reason that leads, in practice, their non-determination.

Cost-benefit analysis was created to support the choice among several projects undergoing feasibility studies and EIA. From a cost-benefit analysis point of view, and in particular, the outcome of the relationship between benefits and discounted costs, were considered feasible only those projects whose profitability was exclusively expressed in monetary terms. Its sole function of maximizing economic welfare is also its main limitation. If, as in the case of plans subject to SEA, the choices of the plan must satisfy criteria other than economic, the technical cost-benefit analysis alone is not enough.

The procedural protocol to do so, suggests the use of techniques based on multi-criteria analysis, which, unlike cost-benefit analysis, assess the alternatives to the plan according to different criteria, chosen
and weighed by the decision maker including on the basis of what has emerged during the participatory stage . They are based on the idea that, in a complex decisional problem, there may be many relevant aspects, not due to a single objective or criterion. The criteria, in this sense, are the means by which the various alternatives are compared to each other in respect to the objective of the decision maker and represent the measurable aspects of the proceedings to which the alternatives are submitted (Voogd, 1983).

The result of the evaluation process depends on different adopted criteria, often conflicting, which therefore must be chosen carefully and the methodologies, to the extent that it is possible, should be objective.

The advantages of a multi-criteria analysis as opposed to a cost-benefit analysis, which reduces all the indicators to monetary terms are: the consideration of different priorities and preferences,
the various components of the problem and their inter-relationships are highlighted, organised and summarised in an organic way. All the data processed are made explicit and transparent, the decisions have greater reproducibility and are less arbitrary. In this type of analysis in particular, the consideration of different priorities and preferences becomes essential (i.e. the allocation of weights that measure the importance of different criteria) and the contributions arising from the participatory stages must be considered. The process of decision and evaluation should, to that effect, be interactive and lead to an outcome that is the result of negotiations as well as cognitive and political/policy aspects.

Within the assessment procedure, multi criteria analysis, can be defined as an activity that develops during the latter stages. First, those alternatives must be sought that have an objective relevance, then they have to be evaluated, which involves giving them an order of preference. At all stages of the evaluation of alternatives it is necessary to ensure a continuous interaction with the web platform, the meetings (plenary sessions) and the tables (theme sessions) with the stakeholders.

The analysis is configured as a multi-criteria algorithm for comparing a number of alternatives according to a set of criteria and their weights. There are several ways to proceed, interpreted by different algorithms, in some cases highly formalized and presented in analytical form, in other cases presented without a mathematical formalization (Beria, 2005).

The "classical" multi-criteria analysis was developed in the United States, to generate an order of preference between a finite number of alternatives through the allocation to each of a score that measures performance in relation to all criteria considered. Based on the weights, the most satisfactory alternative, functional to the initial general objective, will be chosen. A method of this type has strong elements of subjectivity, both in the estimation of the utility of the weights, as the decision makers and stakeholders involved express different preferences, which make explicit, in an uncertain way, a scale of values (Laniado, 2010).

The uncertainty and subjectivity are studied through sensitivity analysis and analysis of the conflict. The sensitivity analysis allows us to understand the evolution of choice, i.e. the changing preferences of alternatives to the changing of the most critical parameters, in particular with the variation of weights.

For the analysis of conflict, there are two different methods: the first is based on participation and therefore the interaction between the different participants involved in the decision-making process, which, in order to obtain a scale of preferences among the alternatives, agree on a set of evaluation criteria and information that are designed to be supportive to the final decision and make transparent the whole process. The second however, provides that each participant involved expresses a preference on the alternatives. When using this method, conflict only arises at the final comparison of preferences.

The use of classical multi-criteria analysis can be an effective support for the choice of the decision maker. This technique makes it possible to synthetically identify the key elements of the process, in addition to making clear and retraceable the path of the choice of the alternatives, on the other hand,

since this method is based on mathematical assumptions, as stated previously, is not easily understood by those involved in the process and there remains the problem of the subjectivity in the determination of some parameters (indicators, weights, utility functions, etc.) that characterizes all evaluation processes.

Political willingness to ensure the transparency of the whole process is also required. Clearly, if the proponent of the plan, through its consultants, determines its own utility functions and inserts its own weights without a participatory process, releasing only the final results, without analysis and conflict sensitivity and without making clear the procedures followed, this becomes a method that serves to justify their own choices without any credibility (Laniado, 2010).

The second method, proposed by the procedural protocol and widely used in Anglo-Saxon countries, is the hierarchical analysis or an Analytic Hierarchy Process (AHP)[130], based on the same principles as classical multi-criteria analysis from which it differs in the way it manages the decisional problem. In particular, it attempts to simplify the interaction with the decision maker and the parties involve. The method consists of placing a series of questions concerning the comparison of the alternatives under evaluation that can give a qualitative answer.
The decisional problem is structured in a hierarchy where each level consists of specific elements. The main objective of the decision is at the top of the hierarchy, the criteria, sub-criteria and alternatives are located in the various sub-levels. The method consists of pairwise comparison between all the elements belonging to the same level, based on a subjective evaluation method by identifying a set of scores or weights. The results of pairwise comparisons between individual objectives are used to form a matrix of pairwise comparisons.

The hierarchical analysis allows the possibility to obtain a qualitative estimate, it is therefore suitable for the preliminary stages, in which the opinion of experts is more frequent then the use of quantitative models. It also provides, in a synthetic way, the opportunity to obtain information regarding the phases and the main aspects of the decisional problem.

The issues related to the use of these techniques are, however, the arbitrariness of the choice of a numerical scale to express preferences in a qualitative way, and the possibility that there is a change in the ordering of these alternatives, following the introduction of a new alternative.

[130] Has been developed by Thomas Saaty in 1980

The multi-criteria analysis is more effective for choices that relate to the territory, if it is conducted as part of GIS systems, for their ability to develop and manage a variety of complex territorial data.
The observation of the territory usually requires the use of territorial data of different nature, in this context the role of GIS is essential because it allows you to easily perform operations and transformations necessary for the integration of data in a single territorial database[131].
GIS is useful because it allows the decision maker, in an automatic way, to display the results of a choice and facilitates the search for alternatives in the area. It can also encourage the participation of the population, in an active manner, in fact from the participation procedures, guidance on the importance to attribute to the criteria in the evaluation process can arise. In particular, the use of multi-criteria analysis combined with the use of WebGIS promotes greater involvement of the population through the provision of documented knowledge of the area under study needed to understand the reasons for the choices or alternatives or in order to indicate non conflicting alternatives (Minucci and Camillo, 2008). This allows computerized plans, beyond mere information, to formulate scenarios for the territory resulting from choices, inserted as input, which have been shared on the basis of equally share knowledge.

Estimation of environmental effects

The effects of a plan can be defined as the consequences on the implementation itself. The effects usually refer to the plans, while the impacts relate in most cases to projects[132]; the view of the effects that a plan may have on the environment ,is in fact, much broader then the impact that a project can have and is also more difficult to identify and evaluate.

The effects should be evaluated in terms of their importance in order to provide information to decision makers, their identification and analysis for the process is therefore one of the key stages of SEA and possibly one which causes greater difficulties.

The first problem that arises is to describe the effects produced by the plan on various environmental components. The European Directive speaks of environmental effects with regard to

[131] The evaluation using the AHP method integrated into the GIS, is used for plans that include new locations for example, in analyzing the susceptibility of the territory. For example, for the location of new industrial areas have some criteria or subcriteria (Cerretta et al, 2008): Geology: slope stability, soil permeability, seismic zoning; Morphology: clivometria; exposure; natural resources: agricultural use of soil landscape : visual landscape, land use, network systems: road network, built-up areas: industry, residences. In this way it was possible to obtain not just a simple overlay of the various themes but to compare pairwise the criteria for each hierarchical level in order to assign a weight, expressed on a scale of 0-1, to each criterion, on the basis of a judgment expert.

[132] While there is no precise definition of the effect of a plan, there is a large literature on the definition of the impacts, which are classified according to the sign (positive or negative), size (minor, major, very important), the second term (reversible short-term, long term, irreversible), according to the probability (probable, sure), according to the spatial extent (local, wide area).

issues such as biodiversity, population, cultural heritage and landscape. The term "environmental assessment" cannot refer only to the environmental effects of plans and programs, but given that sustainable development refers to three basic dimensions (economic, social and environmental), a more general "sustainability assessment" must take into account the effects that plans and programs have also in an economic and social context. The full and complete internalization of the social effects associated with the plan, is present and shared in the scientific and technical literature on the subject of environmental assessment procedures. However, in practice, the importance given to the social indicators and effects is minimized. The effects on the environment must be assessed on all the components examined in the initial environmental analysis, taking into account the social impact, as relevant and definitely essential to the environmental assessment (Saturnino, 2009).

The critical analysis of the potential environmental, social and economic impact needs to be done with care (Verheem, 1992) to ensure that all potential problems are identified with the correct level of assessment (Von Seht, 1999).

The use of indicators in this activity is crucial, especially because they allow one to make quantitative estimates[133]. In this sense we must transform the physical indicators in to a common scale and then assess the significance of the effects with a clear explanation of the criteria used (Bresso et al, 1990). One method commonly used in the EIA, can transform the indicators into homogeneous values by means of a common numerical scale of processing, using transformation curves, that allow one to quickly switch from one scale to another (Bresso et al, 1990). Other methods are based on the construction of aggregate indices, for example when one wants to assess the evolution of an ecosystem, or if one has to take into account many interrelated variables.

For the analysis of environmental effects and the effects of the plan, the methods used are ad hoc checklists, matrices, overlay of thematic maps (Overlay-mapping)[134], networks, quantitative methods and models.

The identification of the environmental effects of the plan by the planner / evaluator, is made for each alternative plan, and involves analysing every single action, in terms of the direct, indirect and cumulative effects, through the use of indicators, (from those that have been selected for the

[133] In the case studies analysed in the previous chapter, assessments of the effects were mostly qualitative, often too general and inaccurate.

[134] In the evaluation of strategic plan for coordination of the Province of Milan, the Overlay-mapping was one of the techniques used for the construction of maps of potential, it is made possible through the verification of compatibility and potential interactions between land and choices project plan. Based on intrinsic, extrinsic, ubicazionali and landscaping of the area you have chosen to work on three potential issues: conservation, residential and productive.

analysis of context). The simulation of the environmental impact of territorial changes is not easy, but is in fact very complex, with a very high uncertainty factor.

As is the case in the choice of data, for the evaluation of the effects, it is very important to pay attention to the territorial scale of the study, depending on which, the environmental issues under discussion can have different characteristics.

Even the analysis of internal coherence, among the objectives, strategies and actions of a plan can be considered as a technique for prediction and for the representation of the effects (Pallone, 2004). The analysis of internal coherence will allow one to check for the existence of contradictions within the plan, identifying undeclared or not pursued or conflicting objectives, highlighting issues not explicitly raised in the previous phases of the evaluation.

For the analysis of internal coherence it is recommended to use matrices, as shown in the Table 6.5.1_a, representing the method followed in the environmental report of the SEA of Alghero (Comune di Alghero, 2010), specifically, the ' analysis of internal coherence was carried out by comparing, with reference to any overall objective, each objective (and related actions) with the specific objectives corresponding to the remaining general objectives and identifying if there was any relation to:

- Consistency: the two objectives are directed towards achieving the same sustainability goals;
- Neutrality: The two specific objectives are targeted towards different sustainability objectives but are not conflicting with each other;
- Possible problems: the two objectives may be in conflict in relation to modalities for implementation of specific interventions.

In the event of any criticality, it will be necessary, in pursuing the specific objectives, to project actions which pay particular attention to safeguarding the environment and landscape while limiting the possible effects on natural and human aspects which characterize the area of Alghero, from which it derives its main resource.

	SO 3.5 Identification of new territorial centrality	**SO 3.6** Reorganization of the accessibility and road system	**SO 3.7** Reorganization of the airport and port	**SO 3.8** Expansion of Public Transport
SO 1.1 Recognition and appreciation of the natural habitat	Neutral	Possibly critical	Neutral	Neutral
SO 1.2 Recognition of the system of the landscapes	Possibly critical	Possibly critical	Possibly critical	Neutral

Table 6.5.1_a. Analysis of internal coherence.
Source: the Environmental Report of the SEA of city Masterplan of Alghero

Construction of the monitoring program

The final stage of preparing the environmental report is the preparation of the monitoring plan, the importance of which, lies in the feedback it produces, which allows the retracing of the process. Its objective is to measure the effectiveness, during construction of the objectives, and propose corrective actions to adjust the plan in real time to the dynamics of the evolution of the territory in question. The monitoring is therefore not just a collection of data, but an "assessment of assessment" and verifies the findings of the SEA in the planning (Penna, 2008). In addition, the evaluation process does not end when approving the plan, but "accompanies" it throughout its life, verifying the effects of interventions carried out and proceeding to changing them in case of deviations from the predictions made in the ex-ante phase (Calenda, 2008). This is a phase that, in the wake of the principles of environmental protection is proposed as a solution to ensure and enhance the "sustainability performance" of a plan, taking a key role to ensure the success of the SEA (Penna, 2008).

The introduction of monitoring could allow greater flexibility of the contents of the plan and therefore a better adaptability to the changes taking place in the area and provide a possible solution

to overcome the lack of operability which is often attributed to operational planning practices, accused of excessive rigidity forecasts (Gambino, 2001).

Monitoring is, therefore, a substantial part of the strategic environmental assessment, it is a pro-active step by which to get directions to the gradual realignment of the contents of the plan to the environmental protection objectives established, with specific corrective actions.

The EU Directive (Article 10 paragraph 1) requires Member States to monitor the significant effects resulting from the implementation of plans in order to promptly identify unforeseen adverse effects and to be able to take the corrective measures that are deemed appropriate. According to this definition, the Directive would seem to emphasize the descriptive assessment of the significant effects. The database has an important role in defining the consequences. The regulations do not deal with the monitoring of the effectiveness of the plan, its effective sustainability nor the verifying of its implementation[135].

It is considered important to define some indictors, in the monitoring program for each specific objective of the plan, which can measure its implementation and effectiveness, as was attempted in the SEA environmental report of the city Masterplan of Alghero (Comune di Alghero, 2010).

See table 6.5.1_b, in this case together with pressure indicators and state indicators, indicators of responses have been identified[136].

Other indicators in the construction of the monitoring program are (Mc Callun, 1987): i) plan in advance, the how, the who, the what must be done to coordinate the activities of stakeholders and ii) manage information so that it is produced and made available, provide adequate resources, maintain the reliability of those who are involved in the process.

[135] This reading of the Directive has also emerged from the case studies examined, in monitoring programs where you never refers to methods of verifying the implementation and effectiveness of the plan.
[136] The response indicators summarize the capacity and efficiency of actions undertaken to achieve the objectives and assumptions.

Specific Objective	Indicators	Unit of Measurment	Type of Indicator
OS 2.1 Recognition of the identity of the habited territory	Landscape heritage identified as at risk of deterioration and impairment	No	P
	Recognized and identified landscape heritage	No	S
	Extension of the areas where recognized elements were identified	Mq	R
	Projects undertaken in the areas with recognized identified elements	No	R
SO 2.2 Valorization of pre-existing archaeological, architectural and mining areas	Historical and cultural heritage at risk of deterioration and impairment	No	P
	Recognized historical and cultural heritage	No	S
	Extension of the territorial areas with recognized historical and cultural values subject to protection	Mq	S
	Projects undertaken at historical and cultural heritage sites that are under protection	No	R

Table 6.5.1_b. Definition of indicators for monitoring the action plan. Source: Environmental Report of the SEA of city Masterplan of Alghero.

Compared to the monitoring of environmental effects, in general the set of environmental indicators of the monitoring program should be easier than those identified in the analysis of context, according to the aspects considered most important, but at the same time new indicators can be considered (Calenda, 2008).

In the preparation of a monitoring program, there is the risk that the program may not be feasible, for example, because of indicators that cannot be populated or inaccurate information on the necessary activities, with the result of being abandoned after the approval of the plan. Factors which affect the operation of a monitoring program are, the difficulty in collecting the data (Baldizzone,

2006) and the methodological approach followed in the definition of indicators. Discussions with the stakeholders and especially with the environmental experts is (also at this stage) valuable[137].

Conclusions

It can be said, based on the research findings, that a model of public decision-making based on the conceptual and methodological approach set out in SEA, can be inserted into a broader model of regional governance oriented towards a paradigm of sustainability. The latter, to become concrete, has to be transformed in to actions, upon the achievement of a dynamic balance, among the choices of governments, communities and groups (Hardy and Zdan, 1997). Equilibrium can, therefore, only be achieved through decision making moments, characterised by a greater coordination between the levels of government, the consistent involvement of the community and careful evaluation of all aspects of sustainability, in this sense, the ability to make concrete the "mirage" of sustainable development and of the sustainability depends crucially on the ability to implement incisive forms of territorial governance (Gambino, 2005).

The study of processes of regional governance, initiated in recent years in Sardinia, allows one to make two basic considerations that reinforce what has just been highlighted.

The first concerns the structure of local government: hierarchical and controlling forms of regional governments lead to institutional, administrative, physical and organizational models which are accepted and shared with difficulty by the lower-order levels of government and local communities, because they cannot see need nor expectations. On the other hand, it is considered important to emphasize that the planning function is attributed to the government, that has an obligation the to satisfy the general interests of the community that it represented (Urbani, 2007).
The experience of the RLP in Sardinia has shown the need to frame, in a shared objective manner, territorial issues and potential, rather than focus on the prescriptive force of the provisions of an entity to the detriment of other institutional participants.

The second point concerns the interpretation of the concept of sustainability: building the plans on valuable and innovative principles based on such abstraction is of little use if they are not supported by the appropriate tools and resources for their implementation. As seen in Chapter Four, the absence of an effective relationship between the means of protection, enhancement and

[137] In the case of the SEA of the city Masterplan of Alghero comparison with the partners responsible for the environment was crucial for the definition of indicators, both in the analysis of the state of the environment, both in the preparation of the monitoring program.

transformation has considerably weakened, and partially undermined, the innovative capacity of RLP.

One cannot make concrete the sustainability of the choices at the planning level through an exclusively limiting approach. An approach of this type does not have much chance of success from an operational standpoint, since it covers only the environmental dimensions and not the economic and social sustainability.

These problems are caused by three elements that have characterised the formation, implementation and review of the RLP: insufficient institutional coordination, the lack of involvement of local communities and the lack of integration between policies and the requirements of the RLP with the instruments of the regional and sectorial government , in accordance with art. 145 of Legislative Decree no. 42/2004.

Another element that has characterised the formation of the first draft of the RLP was not applying the SEA procedures. Compared to the findings in previous chapters, and in particular from the extensive literature on the subject (Sadler and Verheem, 1996; Partidário, 1996, 1999, Brown and Thérivel, 2000; Devuyst, 2001; Sadler, 2001; Sheate *et al.*, 2003), it is, if correctly applied, a political instrument of regional governance, which allows, in a participative and shared way, the analysis of complex values to arrive at a definition of strategic actions, through the use integrated approaches and tools. In this sense, it can be said that, during the formation of the RLP, its application could overcome some of the critical issues listed, with particular reference to the coordination of schedules, institutional consultation and participation of local communities.

In the procedural protocol proposed in the chapter six, a definition of the guidelines for the development of each individual step in the planning procedure, where the SEA is not just the method of verification of the environmental compatibility of choices, but a fundamental support for the construction of the same, is presented. In it, the words of Khakee (1998), governance, planning and evaluation are inseparable concepts, in which the participation of all stakeholders (environmental experts, the public and the interested public) become an "immaterial learning infrastructure" (Micelli, 2001), which should reduce or eliminate the distance between those who make choices those who implement the choices (Mazzucato, 2009).

Aspects of the procedural protocol that lend themselves to continuing in-depth research, are the definition of participatory methodologies and approaches that are rigorously scientific in their evaluation and

effective, but not overly expensive for the administration. There are some issues (for example: choice of locations to be surveyed, ecological network, accessibility issues, services) as part of the planning which, for relevance and opportunities, it makes sense to deal with above the municipal level. The reasons can be recognized in a greater incisiveness and awareness of the strategic vision of the territory, and a streamlining of the use of resources, including economic ones. The smaller municipalities, which outnumber the larger ones, have in fact, less financial resources to allocate to evaluation of the plans.

The verification of the conditions of environmental sustainability of an area , in terms of comparisons between needs and availability of environmental resources, becomes easier to understand and evaluate at the provincial or above municipal scale , where the SEA has a greater ability to affect individual actions (Magoni, 2008). These considerations are believed to have a significant value, despite the theme of inter-municipal planning, which figures strongly in the debates about this subject,(as seen in the second and fourth chapters), are still marginal in practice and in law. It also appears interesting for the continuation of research, to understand the potential role of the Province and the Union of Municipalities, in creating opportunities for more effective integration of SEA in the planning process and management of plans at above or at inter municipal level. As the Province, in Sardinia, is responsible for the SEA in the municipal ambit, it could, through the SEA, enhance its coordinating role in provincial territorial planning and in its interactions with municipal planning. In this sense, the Province should take the initiative for the activation of integrated projects and, at the same time, enhance its ability to participate actively in the governance of the territory, which, at present, is so limited that it runs the risk of being eliminated.

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