Sede Amministrativa: Università degli Studi di Padova

Dipartimento Territorio e Sistemi Agro-Forestali

SCUOLA DI DOTTORATO DI RICERCA IN: INGEGNERIA GESTIONALE ED ESTIMO
INDIRIZZO: ESTIMO ED ECONOMIA TERRITORIALE
CICLO XXIV

**Governance of natural resources and development of local economies in rural areas:
the Social Networks Analysis and other instruments for good governance indicators**

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In un mondo dove tutti scrivono e nessuno legge più..

(Alain Finkielkraut)

..questa tesi è dedicata a tutti quelli che avranno il tempo di leggerla!

Abstract

At global level, the concept of 'governance' arouses a more and more growing interest, and there is an ongoing debate about the shift from 'old' forms of government to the 'new' forms of governance; Public Administrations nowadays need to manage a multidimensional process, which performs at various levels, involves a multitude of actors and lasts for several years, and they need to involve actors of civil society in decision-making processes, forming new networks of collaboration and information exchange. Some key-principles of good governance have been defined and adopted also by the EU in addressing its environmental, agricultural and rural policies reforms but, despite this, the monitoring and evaluation tools currently used by European Commission to assess the Administrations' performances in rural development programs and Leader approach don't consider all the facets of this complex concept. In the current debate and analysis on new forms of governance, the attention is rarely focused on the instruments to assess 'good governance', and a well-consolidated system of indicators for measuring governance of natural resources does not exist yet, above all at the local level.

This work tries to develop a methodology for evaluation of good local governance of natural resources in rural areas, and in particular it focuses mainly on three aspects: i) the definition of the concept of 'good governance' of natural resources at local level in rural areas; ii) the division of this huge term in key-dimensions and more concrete sub-dimensions; iii) and the creation of a simple and expeditious set of indicators to be applied at local level to assess good governance of natural resources. Among the instruments used during the study, special attention is given to social network analysis which has been used both to study the networks generated by the assessed organizations and to create new indicators to assess local good governance.

First of all, the concepts of 'governance' and 'good governance' are analyzed, and all the main initiatives of governance assessment carried on at the international/national level, and the main limits, are discussed. Then the study is shifted to the few initiatives of evaluation existing in local contexts, above all in rural areas where the finite quantities of resources have led people to organize in forms of collective actions; particular attention is given to the European Commission attempts of assessment of Administrations' performances in Rural Development Program, and on some initiatives of self-evaluation in Local Action Groups. Then the 'new' role of public institutions in managing and involving actors is discussed.

Using the definitions emerged by the first part of the study to identify governance's key-dimensions and sub-dimensions, a conceptual framework is created. The key-dimensions are seven: (1) Sustainable 'glocal' development, (2) Efficiency; (3) Effectiveness; (4) Participation; (5) Transparency; (6) Accountability; and (7) Capacity. This framework is tested on three emerging

economic mechanisms (REDD+, PES and certification initiatives) and is compared with other local assessment initiatives (the evaluation procedures of the LEADER approach within the ambits of rural development planning).

A preliminary set of 93 indicators, based both on objective indicators and on subjective indicators and social network analysis indices, is created by this conceptual framework and tested on two case-studies in two European National Parks. The qualitative and quantitative data analysis leads to selection of a final set of indicators to assess local good governance. Operational tools and an estimation of the costs of the methodology are given. Further analysis on the description of networks created in the two case-studies' contexts and on the attitudes of stakeholders to economically support good governance are reported in the thesis. Finally an attempt for constructing a composite indicator is done.

Considerations on the utility of the conceptual framework are given at the end of the work, which concludes with some recommendations for further work.

Riassunto

Dallo studio della letteratura emerge che il concetto di 'governance' suscita un interesse sempre più crescente, ed è presente un acceso dibattito sul passaggio dalle 'vecchie' forme di governo alle 'nuove' forme di governance; le Pubbliche Amministrazioni oggi si ritrovano a gestire un processo multidimensionale, che si svolge a vari livelli, coinvolge una moltitudine di attori e dura per parecchi anni, e si trovano così costrette a coinvolgere gli attori della società civile nei processi decisionali, formando nuove reti di collaborazione e di scambio delle informazioni. Alcuni principi chiave della buona governance sono stati definiti e adottati anche dall'Unione Europea per affrontare le sue politiche ambientali, agricole e rurali ma, nonostante questo, gli strumenti di monitoraggio e di valutazione attualmente utilizzati dalla Commissione Europea per valutare le prestazioni delle Amministrazioni nei programmi di sviluppo rurale e nell'approccio Leader non considerano tutte le sfaccettature di questo concetto complesso. Nel dibattito in corso e nell'analisi delle nuove forme di governance, l'attenzione viene raramente focalizzata sugli strumenti di valutazione della 'buona governance', e non esiste ancora un ben consolidato set di indicatori per misurare la governance delle risorse naturali, soprattutto a livello locale.

Questo lavoro si prefigge come obiettivo quello di sviluppare una metodologia per la valutazione della buona governance a livello locale delle risorse naturali nelle aree rurali, e in particolare si concentra principalmente su tre aspetti: i) la definizione del concetto di 'buona governance' delle risorse naturali a livello locale nelle zone rurali aree, ii) la divisione di questo termine in dimensioni-chiave e nelle più concrete sotto-dimensioni, iii) e la creazione di un set

semplice e rapido di indicatori da applicare a livello locale per valutare la buona governance delle risorse naturali. Tra gli strumenti utilizzati durante lo studio, particolare attenzione viene data alla social network analysis (SNA), che è stata utilizzata sia per studiare le reti generate dalle organizzazioni analizzate, sia per creare nuovi indicatori per valutare alcuni aspetti della buona governance locale.

Nella prima parte del lavoro vengono approfonditi i concetti di 'governance' e di 'buona governance', e vengono discusse tutte le principali iniziative (ed i loro limiti) di valutazione della buona governance a livello internazionale e nazionale. Successivamente lo studio si focalizza sulle poche iniziative di valutazione esistenti a livello locale, soprattutto nelle zone rurali dove la quantità finita di risorse hanno portato i residenti ad organizzarsi in forme di azioni collettive; particolare attenzione viene data ai tentativi della Commissione Europea di valutare i risultati delle Amministrazioni all'interno del Programma di Sviluppo rurale, e le iniziative di auto-valutazione nei GAL (Gruppi di Azione Locale). Successivamente viene discusso quello che dovrebbe essere il 'nuovo' ruolo delle Amministrazioni pubbliche nella gestione partecipata degli attori locali.

Utilizzando le definizioni emerse dalla prima parte dello studio per identificare le dimensioni-chiave e le sotto-dimensioni della buona governance, è stato creato un quadro concettuale che servirà da base per la creazione degli indicatori. La dimensioni-chiave individuate sono sette: (1) Sviluppo 'glocale' sostenibile, (2) Efficienza, (3) Efficacia, (4) Partecipazione; (5) Trasparenza, (6) Responsabilità e (7) Capacità. Questo schema viene prima testato su tre meccanismi di economie emergenti (REDD +, PES ed iniziative di certificazione), e successivamente viene confrontato con altre iniziative di valutazione locale (le procedure di valutazione dell'approccio LEADER all'interno degli ambiti di programmazione dello sviluppo rurale).

A partire dallo schema teorico è stato creato un set preliminare di 93 indicatori, basato sia su indicatori oggettivi che su indicatori soggettivi e su alcuni indici della SNA; questo set viene analizzato su due casi di studio in due Parchi Nazionali europei. L'analisi qualitativa e quantitativa dei dati porta alla selezione del set finale di indicatori per valutare la buona governance locale. Alla fine del lavoro viene fornito anche un elenco degli strumenti operativi ed una stima dei costi per riuscire ad utilizzare questa metodologia di valutazione. All'interno della tesi vengono riportate ulteriori analisi descrittive che mirano a studiare le reti create nei due contesti casi-studio ed a capire gli atteggiamenti degli stakeholders sul fatto di sostenere economicamente la buona governance locale. Infine è stato portato avanti un tentativo di un indicatore composito.

Le considerazioni finali sull'utilità del quadro concettuale e sulla validità degli indicatori vengono fornite alla fine del lavoro, che si conclude con dei suggerimenti di ricerca futura.

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1. Introduction

1.1 Problem definition

At global level, the concept of 'governance' arouses a more and more growing interest, and there is an ongoing debate about a shift from government to participatory governance in policy formulation and related decision-making procedures (Secco et al., 2011). The introduction of this new approach in making collective choices can be seen as 'a reaction to changes in political practices, together with changing realities' (Kjær, 2004, pg. 6), included increasing globalization, fragmentation of political systems (decentralization, devolution, privatization processes), inadequacy of representative democracy to achieve accountability, decreasing role of command and control instruments traditionally implemented with a top-down approach by strong central governments, flanked by an increasing role of business, environmental, social and other organized interests and their growing demand for responsible and ethical behaviors (Clapp, 1998; Coleman and Perl, 1999; Kjær, 2004; Shannon, 2006).

According to this new approach, it is clear that the role of Public Administration must change; they are no longer the only source of decision-making authority as the most common meaning of governance is referred to the capacity of Public Administration to lead and manage networks by involving all actors of civil society in decision-making processes (EC, 2001), and to redistribute the power among diverse actors. Key-ideas representing these new governance modes are inclusiveness, dialogue, consensus, sharing, networking, multisectoriality, co-operation, co-ordination, deliberation, accountability and public participation. Following this approach, PAs at all levels are more and more expected to transparently, efficiently, effectively perform by involving stakeholders i.e. to have proper capacity to coordinate the plurality and complexity of policies, hierarchies, networks and markets (Kjær, 2004) by adopting innovative governance mechanisms. Also, PAs have to be prepared to be accountable and valuated with respect to their new capacities and tasks. In other words, they have to demonstrate to properly adopt new 'good governance' practices.

Therefore, on the one hand, there is a recognized growing importance of 'good (new) governance' to guarantee successful policy, programs and projects in various international arenas

and disciplines. According to the definition of the World Bank, that established the concept of 'good governance' in 1989, "governance is said to be 'good' when it allocates and manages resources efficiently, effectively, and equitably" (WB – ARD, 2009, p.10).

But, on the other hand, the concept of governance, despite the growing use in several fields, remains ambiguous, multifaceted, with various interpretations and perceptions (Jessop, 2006). Governance can be described as a multidimensional process, which performs at various levels, involves a multitude of actors and lasts for several years. In this complex general picture, it is also necessary to consider the possibility that the effects of good governance appear even after the conclusion of a policy formulation or a project implementation.

Some key-principles of good governance have been defined and adopted also by the EU in addressing its environmental, agricultural and rural policies reforms (EC, 2001). This new approach led for example to the mainstreaming of the Leader approach into the 2007-2013 Rural Development Program, and we can say that they are the most advanced examples in European policy-making of networked, multi-level and participatory modes of governance. Despite this, the monitoring and evaluation tools currently used by European Commission to assess the Administrations' performances in rural development programs and Leader approach don't consider all the facets of this complex concept.

This ambiguity is one of the causes that makes the governance evaluation's attempts to be complex; in fact extreme care is needed in the definition of governance and in specifying the dimensions that compose it, to avoid redundancy or measurement errors which may invalidate any generalization of achieved assessments. In literature we can find few initiatives, especially at local level, for evaluating the good governance in policies and in all the four typical projects' phases (conceptualization, planning, execution and termination). At the international level, research and initiatives have often been focused so far on *analyzing* and *describing* governance modes with an output-oriented and/or outcomes-oriented approaches, rather than *assessing* it. In addition, the quality of governance is seldom assessed in its whole policy-making process, but often evaluations have been restricted to one or a few key dimensions of governance, mainly participation. Besides the opportunity of measuring the social and economic impacts created by good governance and the ability to create those networks that enable the achievement of the objectives of both individual and the community is not often taken into consideration. In particular, a well-consolidated framework of indicators for easily, comprehensively and systematically measuring innovative governance at local level does not exist in Europe yet, even if attempts have recently been launched at global or regional scales by the World Bank, the World Resource Institute and others.

1.2 Research Questions and Objectives

On the basis of the problems previously described, three main research questions have been formulated:

i) What 'good governance' in rural areas is? Which instruments and indicators have been used so far to assess 'good governance', both at the international/national and local level, in relation to natural resources? Are they useful/efficient/effective (easy to be used, not expensive, not too much complex, etc.) in assessing the good governance of natural resources also at local level?

ii) What dimensions do better define 'good governance' of natural resources at local level in rural areas? How can the term "governance" be broken down into more concrete key-dimensions in order to better evaluate it and its performances at local level?

iii) What indicators can be used to measure and assess local 'good governance' of natural resources? What methodologies are most appropriate? How and to what extent the indices of Social Network Analysis, mainly adopted to study and describe relational networks and social capital, can be used to build indicators? Is it possible to build a composite index? Which is the perception of stakeholders about the importance of 'good governance' to manage the natural resources in their local context? Is it possible to estimate this perception?

One general research objective and, respectively from each group of research questions, three specific research objectives have been created.

The overall research's aim is to develop a methodology for evaluation of good local governance of natural resources and rural areas.

The three specific research objectives are:

1) To define the concept of 'good governance' of natural resources at local level in rural areas. This means to find out if there is a common definition of the term and to study the indicators and the assessing framework used nowadays both in the international/national context and in the local one.

2) To divide the term 'governance' in key-dimensions and more concrete sub-dimensions, using the definitions emerged by the first specific research objective. This means to identify key-dimensions and sub-dimension, and to compare this conceptual framework with other local assessment initiatives.

3) To create a simple and expeditious set of indicators to be applied at local level to assess good governance of natural resources. In particular: to define operational tools based both on objective indicators and on subjective indicators and social network analysis indices; then to test the preliminary set in some case-studies and to try to understand the perception of stakeholders about

the importance of 'good governance'; to provide an idea of the overall cost of the methodology; and finally to give some suggestions for building a composite indicators.

The methodology used in our work varies with respect to each objective (see table 3.1): we have made the literature review to identify key concepts; we prepared the conceptual framework of the 7 key-dimensions and their sub-dimensions; we made a first screening of the framework using three case-studies; we found the indicators to assess each sub-dimension; we tested the set of indicators in two case-studies with one questionnaire towards the assessed organization's staff and with interviews to the main stakeholders; we analyzed qualitative and quantitative data to formulate the final set of indicators; we prepared the operational tools for future users.

At the end of the thesis, we expect to have a final set of indicators to assess local governance of natural resources and some operational tools for future users. Besides, the potential limitations emerged by the analysis and the recommendations for future work will be discussed.

1.3 Thesis structure

Hereafter the structure of the thesis is described.

In Chapter 2 we focus on the theoretical background. The concept of 'governance' and 'good governance' are analyzed in paragraph 2.1 and 2.2 respectively. In paragraph 2.3 we try to report all the main initiatives of governance assessment carried on at the international/national level, and the main limits of these attempts are discussed. Then we shift our attention to the few initiatives of evaluation existing in local contexts (paragraph 2.4), above all in rural areas where the finite quantities of resources have led people to organize in forms of collective actions; we concentrate more on the European Commission attempts of assessment of Administrations' performances in Rural Development Program, and on some initiatives of self-evaluation in Local Action Groups. Finally, in paragraph 2.5 we study the role of public institutions in the 'new' approach of 'good governance' in managing and involving actors and in forming networks among them to create social capital useful in the local rural areas development.

In Chapter 3 we describe the methodology used in our work. After an overall table (table 3.1) where the specific research objectives are linked to the methods used to reach them, we present the main tools used during the research. A deep description is given to indicators and case-studies (paragraph 3.2), Social Network Analysis (paragraph 3.3), and questionnaires (paragraph 3.4).

In Chapter 4 we present the conceptual framework of governance that we created. First we show how we defined the key-dimensions (paragraph 4.1) and the pre-test in three case-studies (paragraph 4.2). Then we describe the sub-dimensions for each governance's key-dimension

(paragraph 4.3) and we compare the whole conceptual framework with the evaluation procedures of the LEADER approach within the ambits of rural development planning.

In Chapter 5 we show the analysis that have led us from the first preliminary set (paragraph 5.1) to the final selection of indicators to assess local governance (paragraph 5.5), through two case-studies (paragraph 5.2), the analysis of stakeholders' involvement in the area management (paragraph 5.3) and the study of the networks (paragraph 5.4). Final suggestions on the construction of a composite indicator are given in the paragraph 5.6.

The final outputs of our work are presented in Chapter 6. We give the instructions to future possible users/researcher on how to use the various operational tools (paragraph 6.2) and an estimation of the costs of the evaluation (paragraph 6.3). The operational tools and the final set of indicators are reported in the Appendices (from Appendix 1 to Appendix 8).

Finally our conclusions are reported in Chapter 7, where we also give some recommendations for further work.

In table 1.1 a scheme of the thesis by Specific Research Objective is reported.

Table 1.1. Methodology and Results' chapters, by Specific Research Objective

Specific Research Objectives	Methodology	Results
1. To define the concept of 'good governance' at local level in rural areas.	Par. 3.1	Chapter 2
2. To divide the term 'governance' in key-dimensions and more concrete sub-dimensions.	Par. 3.1	Chapter 4
3. To create a simple and expeditious set of indicators to be applied at local level to assess good governance of natural resources.	Par. 3.2 Par. 3.3 Par. 3.4	Chapter 5, Chapter 6, Appendices

1.4 Papers

The work has led to the publications of four papers and to the writing of four contributions accepted in International conferences. Some sections of this thesis (above all in chapter 2, 3 and 4) are fully based on these papers, so it is important to give hereafter a list of these contributions and publications, and of their authors.

List of publications in International journal

1. Laura Secco, Riccardo Da Re, Paola Gatto and Dominic Taku Tassa, 2011. *How to Measure Governance in Forestry: Key Dimensions and Indicators from Emerging Economic Mechanisms*. German Journal of Forest Science (AFJZ), issue 5&6, p. 69-81.

List of publications in National journal

2. Laura Secco, Riccardo Da Re, Davide Pettenella e Luca Cesaro, 2010. *La valutazione della qualità della governance partecipativa in ambito rurale*. Agriregionieuropa (ARE), n° 23, p. 61-65.
3. Laura Secco, Riccardo Da Re, Linda Birolo e Luca Cesaro, 2011. *La qualità della governance: prime riflessioni sull'auto-valutazione dei GAL nel LEADER*. Agriregionieuropa (ARE), n° 26, p. 33-37.

List of publications in National Congress proceedings

4. Laura Secco, Riccardo Da Re, Davide Pettenella e Luca Cesaro, 2010. *La qualità della governance in ambito rurale: quali indicatori e quali strumenti per misurarla?*. Atti XLVII Convegno di Studi SIDEA "L'agricoltura oltre la crisi", Campobasso, 22-25 Settembre 2010.

List of contribution accepted ate the respective conferences

5. Dominic T. Tassa, Riccardo Da Re and Laura Secco, *Benefit sharing mechanisms and governance issues in Participatory Forest. Management-REDD related projects: A Community Forest case-study in Tanzania*. Berlin Conference on the Human Dimensions of Global Environmental Change, Berlin 8-9 October 2010.
6. Laura Secco, Riccardo Da Re, Paola Gatto and Dominic Taku Tassa, *How to Measure Governance in Forestry: Key Dimensions and Indicators from Emerging Economic Mechanisms*. International Conference-forum FAO "Emerging economic mechanisms: implications for forest-related policies and sector governance", Rome 6-8 October 2010.
7. Laura Secco, Riccardo Da Re, Davide Pettenella e Luca Cesaro, *How to Measure Innovative Modes of Governance in the EU Rural Policy: Key Dimensions, Indicators and Case Studies*. 122° EAAE Seminar on "Evidence-based agricultural and rural policy making: methodological and empirical challenges of policy evaluation", Ancona 17-18 February 2011.
8. Laura Secco, Riccardo Da Re, Davide Pettenella, Paola Gatto and Enrico Vidale, *Measuring Governance Quality in Forestry: from Policy to Project, or vice versa?*. Scaling and Governance Conference 2010 "Towards a New Knowledge for Scale Sensitive Governance of Complex Systems", Wageningen 10-12 November 2010.

Acknowledges

2. Theoretical background: Governance and "Good governance" of natural resources

2.1 Definitions of Governance

Despite the increasing (ab)use[1] of the term in several different fields (politics, economics, social sciences, environmental sciences, etc.), the concept of governance remains ambiguous, multifaceted, with multiple meanings, various interpretations and perceptions (Rhodes, 1996; Jessop, 2002; Kjær, 2004). Neither a common definition nor a common theoretical framework seem to have emerged yet, even if attempts have been made to identify core elements of governance theory, at least in social sciences.

Etymologically, governance derives from the Greek word *κυβερνάω* [kubernán], which means to pilot a ship or a chariot, and was metaphorically used for the first time by Plato to describe the act of governing men. The Latin term *gubernare* covered the same meaning than the Greek one, moving more to the idea of creating "rules" (EC, 2001).

On time, the word governance has been used as a synonym for government, as the act of governing. Only in the 80s the two words have taken on different meanings, and political scientists use the term governance indicating the ability to involve all actors of civil society in decision policies. The most common meaning, also throughout the European rural policy and economy, is referred to the capacity of Public Administration to lead and manage networks by involving all

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[1] Quasi *inflationary* use *(* Watson, 2005 – cit. in Wesselink and Paavola, 2008).

actors of civil society in decision-making processes (EC, 2001), thus improving communication and interactions and diminishing distinctions between private and public spheres (Lanzalaco and Lizzi, 2008). The hierarchical nature of policy making has changed (Buttoud et al., 2004): relationships among stakeholders are redesigned and authority redistributed.

The ambiguity of the term, instead of being a source of richness, often generates confusion and misunderstandings (Governa, 2004). In her detailed study, Anne Mette Kjær (2004 – p. 189) adopts an institutional analysis approach, and suggests referring to governance as 'the setting of rules, the application of rules, and the enforcement of rules': focusing on this definition, governance includes decentralization, privatization, and all the formal and informal modes of interactions and power relations between institutions and other actors (horizontal interplay), as well as between different levels of the same administration (vertical interplay) (Rayner et al. 2010), and their respective roles in delivering effective and accountable collective choices. The concept relies on the distribution of authority among actors, implying neither an equal distribution of such authority nor a high-level of stakeholders involvement. The rules settings, implementation and enforcement processes and structures can be dominated by public administrations (namely states or governments) (see for example Pierre and Peters, 2000; Pülzl and Rametsteiner, 2002), or by private actors and non-governmental organizations (NGOs) (see for example Cashore, 2002), or instead be quite equally balanced among all of them (Di Iacovo and Scarpellini, 2006).

In the first governance model (the 'old' governance according to Peters, 2000), the traditional government-based approach to decision-making can be identified as being hierarchical, typically top-down, one decision point-based, with well-defined and delimited tasks, and based on the capacity of government to exert control over society and economy in a goal-oriented way by making and implementing policy. In the second governance model (the 'new' governance according to Peters, 2000), the approach is consensus-oriented, multi-decision levels-based, with dynamic interaction among a plurality of actors, including civil-society actors such as private partners or environmental organized interests, intersectoral links and less clear-cut tasks (Kjær, 2004; Di Iacovo and Scarpellini, 2006; Rayner et al. 2010). In this latter case, the focus is clearly on rules for joint multilevel and multisectoral decision-making, cooperation, coordination and networking.

The shift from government to governance is based in the state's ability to guide decisions in a non-hierarchical, involving public and private actors and creating interaction and communication between them, and this change is possible through a process of participatory learning in contexts that redefine power relations among the various stakeholders. In reality, however, the distinction between these two models of action appears extremely labile; it cannot be considered according to a dichotomic logic, where there is a sharp distinction between the two models of action (Governa,

2004). There is a kind of continuum between traditional government structures and mechanisms and innovative governance processes (Lanzalaco and Lizzi, 2009).

A guiding idea for both 'old' and 'new' modes of governance is legitimacy, which 'may derive from democracy as well as from efficiency'(Kjær, 2004, p. 12). The first type is also reported as input-oriented legitimacy (based on how the decision-making process is organized and implemented including all stakeholders) and the second as output-oriented legitimacy (based on effective performance) (see also Scharpf, 2000 – quoted in Cashore, 2009b).

Different names for these new forms of governance are mentioned in literature. Some of them refer to Rhodes (1996) who classifies at least 6 uses of the term:

- Governance as the 'Minimal State', that is the situation where among the stakeholders that supply public services does not appear any public or formal international organization;
- Governance as 'Corporate Governance', referring to the dynamics, policies and internal rules by which a company is managed;
- Governance as the 'new Public Management', that is the transformation of the public sector from the "less rowing" to the "more steering" (Osborne and Gaebler, *Reinventing Government*, p. 34, quoted in Rhodes 1996);
- Governance as 'Good Governance', referring to the objectives of World Bank towards developing Countries;
- Governance as a 'Socio-cybernetic System', the informal organization of actors, related to a central government;
- Governance as 'Self-organizing Networks', the network of stakeholders that are not referred to any central governing body.

There are other expressions that are linked to the concept of governance, one of which is Multi-level Governance, which refers to the involvement of actors in networks of three layers, for instance the regional, the national and the European level with regard to the European Union (Marks, 1993 quoted by Lanzalaco and Lizzi, 2008). Jessop (2006) has instead focused his studies on the concept of Meta-governance, that is the creation of conditions in which the goal of participatory governance can be optimized in several areas of policy and on different levels: these levels are the solution of problems of a territory and the attempts to change the institutional conditions of the government which must manage and resolve problems; "meta-governance involves managing the complexity, plurality, and tangled hierarchies found in prevailing modes of co-ordination" (Jessop 2003, p. 108). Linked with the idea of complex networks and tangled hierarchies, there are the definition of Heterarchic Governance (Jessop, 1998; Pülzl and Rametsteiner, 2002; Kjær, 2004) and Networked Governance (Jordan and Schout, 2006), where the

focus is on the co-operation, the decentralization of decision-making, the inter-organizational dialogue and the inter-sectoral co-ordination. Broader meanings are given to Democratic Governance (Kjær, 2004) and Participatory Governance (Shannon, 2006; Fritsch and Newig, 2009; Secco et al., 2011), based on the idea of involving local actors' knowledge for improving the quality of decisions. Alternative ways to "challenge existing state-centered authority and public policymaking processes" are the new Private Governance systems (Cashore 2002), whose idea is to develop and implement environmentally and socially responsible management practices, like sustainable forestry certification or other non-state market-driven governance systems.

From this brief analysis we can see that it is not easy to summarize all the definitions exiting in literature and only some of them overlap. The result is a multi-faceted concept, and everyone focuses on the aspect that are useful in that moment to describe a particular observed phenomenon.

2.2 Good governance

The crucial point here is to define what 'good governance' is (or should be) at different levels and in different historical, institutional and cultural contexts[2].

The concept of good governance (Rhodes, 1996) was established by World Bank, which is also the major supporter and the first organization that tried to measure it. World Bank began an extensive debate on this issue when, in a report of 1989, the "bad" governance was identified as the origin of the economic crisis in many third-world countries, referring to corruption, nepotism and mismanagement of resources, which did not allow development (Kjaer, 2004). A debate on defining characteristics of a 'good' governance started and, after identifying the key-objectives, how it was possible to promote it; this discussion's aim was directed to loans, with the clear intention to lavish them only on those countries capable of guarantee transparency, efficiency and responsibilities.

"Governance is said to be 'good' when it allocates and manages resources efficiently, effectively, and equitably" (WB – ARD, 2009, p.10). The World Bank, nowadays, is referring to six dimensions of good governance: Voice and Accountability, Political Stability and Lack of Violence, Government Effectiveness, Regulatory Quality, Rule of Law, e Control of Corruption (Kaufmann et al., 2009).

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[2] The problem is quite similar to the one faced in developing the concept of SFM. In past years, the key-questions on SFM were: 'What is SFM - in tropical forests, in Italy or elsewhere? Who has the right to define it?'. Now, the key questions on 'Good Governance' (GG) are: 'What is GG in different areas? Who has the right to define it? Etc. In this sense, the SFM policy learning process is supporting a positive progressive incremental change (Rayner *et al.,* 2010).

The European Commission's Joint Research Centre (Saisana et al., 2009) divides the governance concept in five-pillar conceptual structure: (a) Safety and Security, (b) Rule of Law, Transparency, and Corruption, (c) Participation and Human Rights, (d) Sustainable Economic Opportunity, and (e) Human Development. The Organisation for Economic Co-operation and Development (OECD) instead considers the level of corruption, the legislation enforcement and the entrepreneurial environment as key-aspects for guaranteeing the good economic governance of a country.

In Europe, five principles have been identified for good governance (EC, 2001): openness, participation, responsibility, effectiveness and coherence. These principles should be the basis of any government's actions, and should be applied at all levels: global, European, national, regional and local. In the description of the five principles, it is often emphasized that one of the objectives to which governance must aim is to increase citizens' confidence in complex institutions, which for example the European Union itself.

Other sets of principles or key dimensions of good governance identified by the various initiatives exist, and they contain some common words: effectiveness, efficiency, coherence and appropriateness, transparency, accountability, legitimacy, law enforcement, stability, public participation, inclusiveness, empowerment, coordination, social justice, equity, sustainability, environmental and social consequences (EC, 2001; ODI, 2007; Kaufmann *et al.*, 2009; Cashore, 2009a and 2009b; GFI, 2009; WB – ARD, 2009; Rametsteiner, 2009). 'Participation' and 'accountability' are amongst the most relevant basic concepts, but dilemmas (e.g. democracy/accountability vs. efficiency) (Jessop, 1998; Kjær, 2004) and open criticisms about the real capacity of participatory approaches to guarantee good collective decisions (Cooke and Kothari, 2001; Shannon, 2006; Fristch and Newig, 2009) and the risks of governance failures (Jessop, 1998 and 2002) are not lacking.

It is clear that, in order to successfully deal with the modern plurality and complexity of hierarchies, markets and networks, the traditional government mechanisms and structures usually described by means of 'old' elements of a good governance (efficiency, effectiveness) should be integrated with innovative governance, which is described by 'new' dimensions (participation, transparency, etc.).

In figure 2.1 the main dimensions of Good Governance, used by some international Organizations, are summarized.

Figure 2.1: The Good Governance's dimensions, identified by World Bank (WB), European Union (EU), Organisation for Economic Co-operation and Development (OECD), European Commission's Joint Research Centre (JRC).
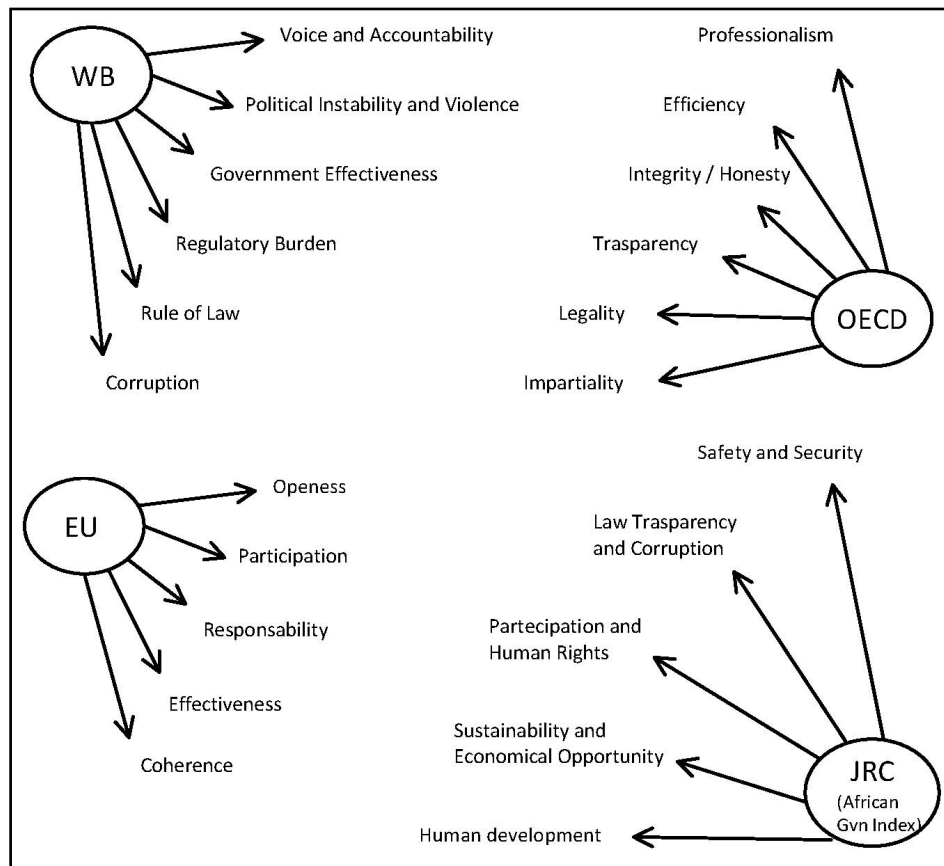
Source: our elaboration

At the European level, the five dimensions (above all participation) have been introduced in various measures, both in laws (Directive 2001/42/EC on Strategic Environmental Assessment; Directive 2003/4/EC on Public Access to Environmental Information; Directive 2003/35/EC providing for public participation in drawing up of certain environmental plans and programs) and programs (e.g. VI Environment Action Program, LIFE, Nature 2000). Amongst the various programs where the new modes of participatory, multi-level, flexible and networked governance have already been implemented, the LEADER and the Rural Development Programs are considered the most advanced ones (Cavazzani, 2006; Gaudio and Zumpano, 2006; Annunzi, 2006; Franceschetti, 2009). Since the beginning, the Local Action Groups (LAGs) had to be accountable both to their public/private partners and local population (Annunzi, 2006); also, they had to create networks and development strategies on the basis of collaboration, co-partnerships and stakeholders consultation. In a sense, the basic principles of the good governance for LAGs are functional at reaching the LEADER goals (Annunzi, 2006).

2.3 Assessing Governance

The concepts of "governance" and "good governance" are used everywhere, in different contexts and levels, as mentioned in previous paragraphs. Despite the widespread use of these concepts and the increasingly emphasis on the adoption of "good governance" practices in the policies and in their implementation in different sectors and international arenas, research and initiatives have so far focused on *analyzing* and *describing* governance modes with an output-oriented and/or outcomes-oriented approaches (i.e. what decisions are taken and which are their effects/performance). On the contrary, the attention has seldom been focused on approaches and instruments for *assessing* the quality of governance in terms of the whole policy-making process (i.e. how decisions are taken and implemented). Or, they have been restricted to one or a few key dimensions of "new" governance (mainly participation). For example the main objective of GoverNet[3], a project funded by the 2000-2006 EC Interreg Program, was to develop models and procedures for decision-making based on participatory approaches to be used in rural areas of the European Union. Another project carried out in the European context, GoverNat[4], concentrates mainly on participatory processes as means to improve environmental multi-level governance within Europe.

When the initiatives are designed for more comprehensively assessing the quality of governance and its performances by means of sets of indicators, they are mainly for applications in relation to economic development and comparative politics analysis (ODI, 2007). This is the case for the World Bank Institute's Worldwide Governance Indicators (WGI), the UN University's World Governance Assessment (WGA) Index, the OECD's Metagora project, and many others. The majority of these initiatives were developed by international organizations with the aim of assessing the quality of governance as an informative tool to direct donors in policies and bilateral or multilateral agreements for the economic development and the cooperation in Developing Countries.

The number of governance indicators has increased rapidly: a recent count identified 400 separate governance indicators (Arndt and Oman, 2008). Complex indices are born in the last years,

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[3] The GoverNet project titled 'Governance models for sustainable integrated rural development and multifunctional agriculture; networking and dissemination on the web' is an EU project promoted by the Community Initiative INTERREG IIIB CADSES and carried out in 2000-2006. The partners included public administrations and research centers in Italy, Greece, Slovenia and Moldova Republic.

[4] The GoverNat project, titled 'Multi-level Governance of Natural Resources: Tools and Processes for Biodiversity and Water Governance in Europe' was led by the Centre for Environmental Research – UFZ. It was a Marie Curie Research Training Network in the EC 6th FP. Its focus was research and training in all aspects of multi-level environmental governance. The 4-year project started on October 1, 2006. 10 partner institutes throughout Europe and several affiliated praxis partners have taken part.

offshoots of independent initiatives with the aim of comparing Countries describing their degree of good governance or of specific dimensions of it. UNDP (2004) prepared a detailed list, selecting indicator sources by their data availability and comparability. In general, data is mostly freely available on the web, and a number of sites, compile the data or provide links to the main sources. "Such web tools offer new possibilities for users to get a rapid sense of governance conditions and trends. While this does not substitute for in-depth country analysis, it does offer a useful starting point, providing an overview of governance conditions at a glance and helping to identify critical issues for further enquiry." (Williams, 2011).

Within the forest sector, Saunders and Reeve (2010) identify 11 in progress initiatives related to evaluation of the quality of governance, or at least to some of its dimensions; these initiatives deal with specific issues, such as illegal logging and corruption (for instance, Action Plan of European Commission FLEGT[5]) or climate change and mitigation measures (for instance REDD[6] projects).

Two very interesting exceptions are the Governance of Forests Initiative (GFI)[7] and the Forest Governance Diagnostics Tool by the Agriculture and Rural Development Department (ARD)[8] of the World Bank. By focusing on Developing Countries, the first one seeks to develop a widely accepted set of principles of good governance of forests and a comprehensive set of indicators for measuring and assessing its quality. The draft conceptual Framework and practical Toolkit developed by GFI in 2009 are quite complex, including 94 indicators defined on the basis of multiple cross-links among 5 "principles" of good governance (Transparency, Participation, Accountability, Coordination and Capacity), 3 governance 'components' (Actors, Rules and Practice) and 4 'critical issues' in the forest sector (Forest tenure, Land use planning, Forest management, and Forest revenues and economic incentives). As stated in the GFI Toolkit (p.1), the initiative aims to provide "a practical tool for civil society organizations to independently, systematically and comprehensively diagnose the integrity of institutions and processes that govern forests in their countries, as a basis to advocate for reform". Interdisciplinary national teams made up of civil society groups were conducting a pilot assessment process between August 2009 and July 2010 in Brazil, Indonesia and Cameroon.

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[5] FLEGT: Forest Law Enforcement and Governance Trade.
[6] REDD: Reduction of Emissions from Deforestation and Degradation of forests.
[7] The initiative is based on the collaboration between the World Resources Institute and two Brazilian organizations, Imazon and the Instituto Centro de Vida (ICV). More than 50 experts, mainly from international research centers and NGOs, have participated to the development of the first draft of 'The Governance of Forests Toolkit' (GFI, 2009).
[8] Apart from the World Bank team, approximately 20 experts have reviewed or commented on the main report available so far, titled 'Roots of good forest outcomes: an analytical framework for governance reforms' (WB– ARD, 2009).

Also the second initiative, named 'the Forest Governance Diagnostics Tool' by the World Bank - ARD, is at its first stages of development, being launched in 2009. The goal is to provide tools to decision-makers for identifying forest governance weaknesses in their own Developing Country (through a baseline situation analysis) and pinpointing appropriate reforms (WB - ARD, 2009 – p. ix). The analytical framework for analyzing forest governance and improving countries' capacity to understand and react to critical governance issues is based on five so-called 'building blocks': 1) 'Transparency, accountability and public participation'; 2) 'Stability of Forest Institutions and Conflict Management'; 3) 'Quality of Forest Administration'; 4) 'Coherence of Forest Legislation and Rule of Law' and 5) 'Economic efficiency, equity and incentives'. Each building block includes various principal components (e.g. one component for block (1) is 'Decentralization, devolution and public participation in forest management'); and each component includes various sub-components. Specific actionable indicators are currently under development, with the final aim of identifying 'a core set of practical actionable indicators tailored for a specific country context' (WB – ARD, 2009 – p. 39), which will be used first to measure the forest governance baseline in the country and then progresses in improvements. A pilot test is currently ongoing in Uganda.

The evaluation frameworks described till now have some limits, due to their scale of assessment. Governance can be measured "at different levels along multiple scales" (Gibson et al., 2000, p.217); it's crucial to understand that public institutions operate at different geographical levels (local, regional, national and international), and that variables and indicators used for assessment must be themselves located at the same level of what that there are measuring. For instance, the criticalities of international/national/regional evaluation are usually based on the fact that analysis are conducted using secondary data, collected by official statistics and other sources. The Governance of Forests Initiative and the Forest Governance Diagnostics Tool have avoided these limits interviewing a panel of experts (respectively 50 and 20); in this case other problems have emerged, such as costs, differences in data units (qualitative, quantitative and dichotomic values), not homogeneous number of "elements of quality" inside each indicator, difficulties in using questions created for specific contexts, errors in question wording, etc. (these problems will be analyzed in detail in chapter 3).

Besides we have seen that often the approach is output-oriented.; instead evaluation should provide credible and useful information for better orienting decision-making and improving the governance (Cashore, 2009b). "Governance outcomes such as changes in natural systems are often immeasurable due to involved time lags, unclear casual links, and ill-identified goals" (Conley and

Moote 2003 quoted in Rauschmayer et al. 2007). That's why the procedural-oriented[9] assessment approach is preferred, by focusing on how the process is organized and implemented, assuming that a 'good' (i.e. inclusive, transparent, etc.) decision-making process may be instrumental to an effective/successful later phase of policy implementation, and thus may contribute to guarantee the good governance (Wesselink and Paavola, 2008; Dwyer and Blandford, 2011).

On the other side, local level projects assessment implicates the need to collect lots of primary data, but allows to deepen the real situation without using proxy variables. The problem is that a well consolidated process-oriented framework of indicators for measuring local governance comprehensively and systematically does not exist yet, even if attempts are at a very early stages of development, but there's global agreement about the idea that an evaluation of local governance quality can provide credible and useful information for better orienting decision-making and improving the governance itself (Secco et al., 2011). In the next paragraph local governance evaluation will be analyzed.

In short, we can say that governance's assessment, above all local governance's assessment, is complex as:

- Governance is a multidimensional process, carried out at various levels, through a plurality of actors, in different years, with often long-term impacts;
- It is difficult to obtain relevant secondary data;
- Surveys can be very expensive and can bear not comparable results, but on the other side the use of experts can cause data distortion;
- In literature we find few governance evaluations, above all at local level, and these initiatives are often focused only on some specific dimensions of a good governance, not allowing a comprehensive evaluation of all its multi-faceted peculiarities;
- The majority of evaluation initiatives are built for Developing Countries, that means difficulty applicable to other contexts;
- Evaluations are often focused only on results, while process-oriented assessments are missing.

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[9] With respect to the widely accepted outcome-oriented assessment approach, where the decision-making process or governance mode 'can be analyzed with regards to its direct outputs (short-term) or assumed consequences of such outputs in terms of changes in the system-to-be-governed'

2.4 Local governance evaluation

Evaluation is 'an assessment, as systematic and objective as possible, of an ongoing or completed policy, program or project, included its conception, formulation, implementation and results' (EC, 2004). With respect to the theoretical framework presented in the previous paragraph, we have shown that both the policy-making level (policy) and the policy-implementing level (project) should be considered when discussing governance issues (ODI, 2007; Rametsteiner, 2009; Rayner *et al.* 2010). As stated by UNDP (2006), "governance […] operates at every level of human enterprise, be it the household, village, municipality, nation, region or globe". While the first level - connected with the global and/or national scales - is already being explored by the mentioned initiatives for assessing governance, the policy-implementing level – usually connected with the local scale – has not so far been extensively explored.

In literature there are few examples of local governance assessment, as it is very complex (see previous paragraph) and expensive. We focalize on natural resources governance as in rural territory it is easier to see how actors from different sectors can interact in developing and protecting the area where they live. In the 'new rurality' (Pisani et al., 2010) the economic sectors are no more separated and a common vision is necessary. Common-pool resources generate finite quantities of resources (Ostrom, 2005) and for this reason people have always tried to engage themselves in forms of collective action to manage natural resources (Pretty and Smith, 2004). Institutions based on self-governed resources have survived in centuries, but many others have failed. Ostrom (2005) outlines some principles that have characterized the long-enduring common-pool resource institutions, and the majority of them concern with the principles of good governance that we have analyzed in this chapter, such as participation, conflicts management, clear and transparent rules, monitoring. The need of transparency, equity, empowerment, participation is emerging more and more by several international experiences, and rare examples of assessment attempts are found in the forest context. Some Italian Common Properties in the Alps (Gatto et al., 2011), for instance, are good demonstrations that these institutions, considered a paradigm in environmental conservation nowadays, need to find new adaptation strategies leaving the traditional governance tools that don't guarantee anymore the social-ecological resilience. The creation of a 'net system' among stakeholders is a way to succeed in creating occupation opportunities in rural and marginal areas: Vidale (Vidale et al., 2010) shows, through the comparison of two Italian case-studies, that a local governance model based on a "more complex, well-structured and network-based" can produce a higher added value and a higher potential level of profitability.

The little number of experiences of local governance assessment, that is possible to find in literature, made us focus on EU's LEADER[10] Programme, that can "be considered as one of the first attempts to develop rural areas with an endogenous approach" (Pisani and Franceschetti, 2011, p.4), and where an whole part (4th axe of Rural Development Program) is dedicated to evaluation. At European level we find a first formalization of a local monitoring and evaluation system already in 1988 (Dwyer et al., 2008), thanks to the EU initiative LEADER and its evolution to the Rural Development Program (RDP) 2007-2013. Since the initial programming '91-'94, LAGs (Local Action Groups) were asked to structure a system to account for the results of their activities to government bodies of different levels, to all of its constituent partners but also to all those residing inside the area of their local action plan. They were also asked to build their networks and development strategies on the basis of collaboration, partnership and consultation with the public and private stakeholders at local level. But it is only since 2002 that the EC indicates a procedure for reviewing the impact of the integrated actions of European economic, social and environmental policies (EC, 2002; Terluin e Roza, 2010).

The standardization of the approach to the evaluation of rural development policies is an attempt that the European Commission (EC) has already made in the 2000-2006 program in both rural development planning and in the LEADER approach (Secco et al., 2011). In rural development planning the evaluations structure (ex ante, intermediate and ex post) had to be adapted to a detailed evaluation questionnaire (technical document 12004/00 of the EC Directorate-General Agriculture) that has involved not few problems in the phase of data gathering and their interpretation. Unfortunately, the understandable need for standardization of the evaluations of the European NSP has not produced the expected results: the evaluation documents (in all the evaluation phases) have been very heterogeneous and difficult to compare; a synthesis at European level is not yet available.

As regards the LEADER, the 2000-2006 program was, as is known, implemented separately from rural development planning. In this case the evaluation, in all three phases (ex ante, intermediate and ex post), was implemented by the Member States and by the Regions (when Managing Authorities) on the basis of a less-detailed and less-binding set of guidelines than those of the rural development policies. Consequently the marked diversity of the evaluation reports has, also in this case, impeded the organization of comparative tables at national/European level. A third

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[10] On 15 March 1991, the Commission has decided under Article. 11 of Reg. EC n. 4263/88 to launch the Community Initiative LEADER "Liaison entre actions de developpement de l'economie rural" for the period 1990-1993. The Commission has decided to continue the Leader for the periods 1994-1999 and 2000-2006. Following the 2005 reform in respect of the principle "one found, one program" the Commission has decided to continue the implementation of LEADER inserting it into the RDP for the period 2007-2013.

very important aspect regards the level of detail of the evaluation of the LEADER: normally the evaluation reports regard the regional or provincial LEADER Program as a whole. Evaluation reports have rarely been produced that regard the individual Local Development Programs (LDP) produced and implemented by the LAG. In addition, the self-evaluation process of the LAG, which is not obligatory, has only been implemented in a few cases.

With the new program (2007-2013) the LEADER approach is included in rural development planning. If on the one hand this 'clears' LEADER from its consideration as an 'experimental' planning tool, on the other it poses additional problems in the evaluation phase.

As shown in the recent report of the National Rural Network (RRN, 2010a), the regulatory framework, both for the definition of the measures that can be implemented with the LEADER approach, and for their evaluation, is quite generalized, and the LEADER approach has been implemented by the Managing Authorities in Italy in a rather heterogeneous manner. This means that, for example, that the set of measures for implementing the LEADER approach differs from Region to Region. Moreover, the administrative procedures, level of delegation to the LAG and selection mechanisms of the beneficiaries may also widely differ between the Regions.

The recent RRN report points out that, in the definition phase of the LEADER approach, the Regions and Autonomous Provinces can adopt (and have adopted) very different approaches, passing from a situation defined 'leader light', where the decisional and programming autonomy of the LAG is very limited, intermediate situations ('implementing agencies' and 'centers of strategic competence'), up to situations of greater autonomy, defined 'leader LEADER'. A standardized evaluation of the LEADER approach will therefore be very difficult to implement as the evaluation process must inevitably take into account the various regulatory and programming situations in which the LAG is to be found, and adapt to them.

Many guidelines were so produced for the assessment (Dwyer et al, 2008). In particular, the whole 2007-2013 planning of rural development policies is related to the manual of the *Common Monitoring and Evaluation Framework* (CMEF) (EC, 2006). The logic of this assessment model is based on three pillars:

   i. the identification of social economic and environmental needs that the program must satisfy
   ii. the identification of a hierarchy of objectives for each program action (general, specific, operative)
   iii. the identification of appropriate indicators for each objective, for assessing the objectives achievement's degree. Members are involved in adding indicators in order to fully capture all the effects and to consider the specific needs and realities of the territory (local approach) (EC, 2006; Terluin and Roza , 2010).

This approach has some limitations, and there is now a broad literature about criticism towards existing tools for monitoring and evaluation of local development policies in the rural areas. Table 2.1 summarizes these limitations.

Table 2.1. Main critical issues and limitations found in literature about CMEF

Criticality in Common Questionnaire use	• It can reduce the degree of independence of the evaluation (Dwyer et al., 2008). • It can lead to general answers that do not emphasize the overall variability of EU rural areas and therefore, doubt evaluation interest (Terluin e Roza, 2010). • They are poorly connected to the additional indicators proposed by Member States (Dwyer et al., 2008).
Criticality in Common Indicators use	• Additional qualitative information are omitted with the consequence of neglecting the diagnosis of cause and effect that is quantitative indicators photograph what happened but do not give information about how and why it happened. (Hodge e Midmore, 2008). • indicators concerning the territorial dimension are insufficient . The analysis at the European level could lead to focus only on assessing the achievement of overall objectives of the RDP (strategic guidelines) neglecting interactions with other policies in the area. The understanding of the impacts of the rural local economy is needed mainly in order to implement the policy and training/adaptation within the institutions. (learning/best practices) (Dwyer e al, 2008; EENRD, 2009).
Criticality in data collection	• The data required by the indicators are not provided by the institutions or are not easily removed from the complex database of the institutions themselves, this may lead to arbitrary assumptions or to be collected by the evaluators themselves (Dwyer et al., 2008). Hence no clear breakdown of responsibility in data collection between the Managing Authority (MA) and the evaluators. (EENRD, 2009). • When referring to a micro-territorial scale or sector is not readily available statistical data or database (Terluin e Roza, 2010).
Criticality for the involved actors	• The re-proposed assessment with bottom-up approach, already introduced in the LEADER +, requires high skills by evaluators. (EENRD, 2009). • the lack of communication by the Commission/Member State may lead to inappropriate application of the methodology and induce different approaches with the result of having no comparable results and therefore do not affect the final evaluation (EENRD, 2009).The CMEF is seen, especially for MA representatives, complex and as an imposition by authorities in Brussels. Many Member States ask for an assessment system more simple and sustainable (EENRD, 2009; Dwyer, 2008).

Source: Secco et al. (2011) from Dwyer e al. (2008), Hodge e Midmore (2008), EENRD (2009), and Terluin e Roza (2010).

The CMEF method, designed primarily for the evaluation of rural development programs at national or regional level, doesn't seem to be appropriate for local governance evaluation. A complementary and not-formal evaluation that takes place at a more local level may lead, in all probability, to positive developments of "policy down beds" (Dwyer et al., 2008). For the purposes

of our research, models of "self-evaluation" and internal evaluation (Pettenella and Pisani, 2006), by the subjects participating in a program, are particularly interesting[11].

This system can support and integrate external and independent institutional assessment, taking into account the specific needs of the actuators of the program, which do not necessarily agree with those provided by the European institutions. LEADER initiatives are identified as the best suitable socio-economic context to experiment these kind of methodologies.

Especially, the LAGs are called to build (voluntarily) a system for monitoring the Rural Development Program (Rural Network, 2007). The practice of self-evaluation, through self-diagnosis, allows to understand how many / what results have been obtained.

Self-evaluations methodologies have been tested by LAGs, and in Italy there are already some experiences for evaluating LAGs, based on participative self-evaluation involving stakeholders and local communities (Secco e al. 2011).

Box 2.1 shows the main strengths of a process of self-evaluation.

Box 2.1 – Main strengths of self-evaluation
- Can be complementary and supplementary to the institutional assessment and provide information useful in decision-making processes and on-going evaluation of the external evaluator;
- The bottom-up approach can bring out the decisive factors of progress and optimize resource utilization and neglected by institutional evaluation. The indicators are identified by the actuators of the same program, so they are well known and understood in their function and purpose.
- Self-evaluation results are a resource for internal use of the actuators of the program. The self-assessment it is often more "severe" and "sincere" because it is designed to detect the internal components counterproductive to good management of the program.
- It can capture and improve organizational performances by ensuring the involvement of all stakeholders in the implementation of the program. they are encouraged to have a vision of the whole and not limited to administering individual activities.
- It can be done regularly using means of communication fast

Can be to share best practices and develop a dialogue system for groups of actors and territories with different experiences

Source: Secco et al. (2011) from Rete Rurale (2007) and Verrascina (2010)

The need for new tools, which allow to make an accurate assessment at the local level to integrate the wide and mediated analysis at the regional and national ones, is emerging more and more. In these analysis, the object of evaluation should become the same organization which implements policies for rural development. This would allow any types of organizations dealing with the management of a local territory and its human and natural resources (LAGs, Parks, NGOs,

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[11] In some cases there may be the assistance of an external verifier to carry out the evaluation . In this case we speak of "assisted self-evaluation".

etc.) to have more effective and useful feedback to the decisions to be taken, appropriate to the local context and oriented to improvements in internal management and networking: that is the governance implemented in the local context. In this way, to assess the quality of governance means to assess the overall action of the key actor who works in the territory (the way in which it works, it creates projects, it plans and implements them, interacting with all other stakeholders). This assessment can be conducted internally by the subject himself (Pettenella and Pisani, 2006), for example in order to identify possible areas for improvement of their performance.

2.5 Social capital, networks and key-actors

"Social capital gives the individual access to resources of others that can be used for the realization of his goals" (Stokman, 2004, p.2).

To explain the significance of social capital is a demanding task, both for the impressive lot of literature and because the concept – similarly to the governance concept – cannot be flattened into rigid definitions and it changes from time to time, depending on the actors, contexts and aims (Piselli, 1999). We'll not get too much to the bottom of the huge discussion on this topic, started about 50 years ago and still heated nowadays. The scheme (Pisani and Franceschetti, 2011), presented in figure 2.2, sums up the complexity of the subject, while we'll restrict myself to mention some authors.

As well summarized by Cimiotti (2006), Putnam (1993) considers social capital as a social endogenous resource that originates from cultural and historical heritage of the area and promotes the development of the territory; instead Coleman (1990) sees it as the product of social relations in which the actor or the group of actors are involved. In both contributions the multidimensional nature of the phenomenon is clearly outlined. There is a growing evidence (Pretty and Smith, 2004) that the creation of networks, through participatory processes promoted by a "good" governance, facilitates the meeting of stakeholders belonging to different social and economic sectors, and makes possible the achievement both of individuals' goals and of the common objectives to all actors involved in a territory. When people are well connected and a process of social learning starts, they are able to protect the territory and the natural resources. Besides, in some context as the protected areas are (Pretty and Smith, 2004), social capital is particularly important as stakeholders, when involved in the resources management, are more stimulated in defending the area and in investing in the collective good.

Figure 2.2. Social capital and social sciences
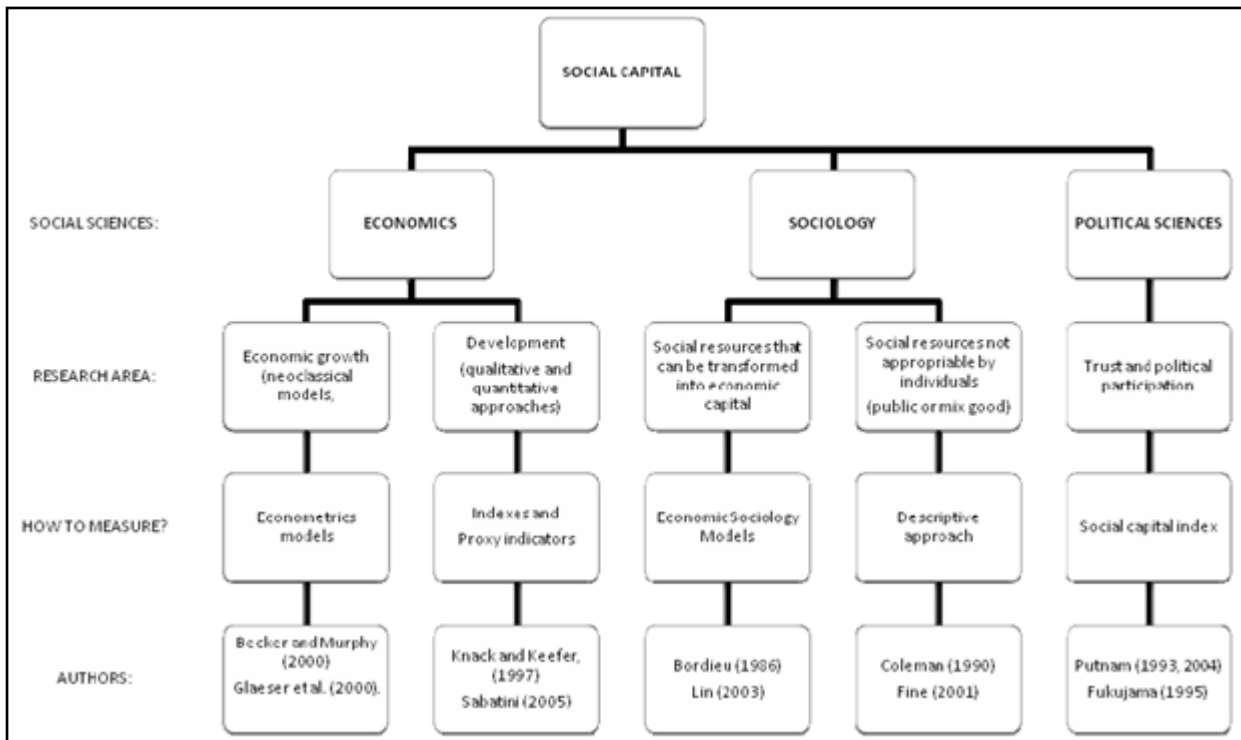
Source: Pisani and Franceschetti (2011) – modified.

Another sociologist, Bourdieu (1986, p. 248), underlines this concept of network, asserting that social capital is "the aggregate of the actual or potential resources which are linked to possession of a durable network of more or less institutionalized relationships of mutual acquaintance or recognition". From these definitions, we realize that the social network analysis plays a key role as a methodology to analyze those ties, strong and weak, which are created by the formation of networks among public and private actors, and which allow the creation of key channels for knowledge, innovation and ideas exchange (Granovetter, 1983). "Social capital is about the value of social networks, bonding similar people and bridging between diverse people, with norms of reciprocity" (Dekker and Uslaner 2001 in http://www.socialcapitalresearch.com/). Actually the applied research to study the relationships among social capital and socio-economic development in rural areas is very limited, but few shy attempts of analysis follow the way to use the network analysis (Pisani and Franceschetti, 2011) to show the impacts of a local good governance with quantitative analysis.

Cooperation among stakeholders and network creation are proper of the LEADER approach, and in particular LAGs (Local Action Groups), which are examples of a new kind socio-economic relationships between public and private actors in local communities (Pisani and Franceschetti, 2011) should generate social capital. For this reason some studies have used Social Network Analysis (SNA) to provide various quantitative indices to describe the local networks. For instance,

Cimiotti (2006) used density and symmetry indices to analyze four LAGs (Local Action Group), two located in Friuli-Venezia Giulia and two in Piedmont, and Franceschetti (2009) used the centrality index and the diversification index in the evaluation of the Venezia Orientale LAG and the Alto Bellunese LAG, both in Veneto region in Italy, to estimate the value of bonding (strong ties), bridging (weak ties) and linking (participation and public involvement) social capital (Grootaert et al., 2004). Franceschetti measures links through binary matrices, where presence-absence of relationships among the involved stakeholders are obtained, while Cimiotti with a questionnaire of 11 closed-answer questions assembles a database that can measure the level of trust, affinity and information exchange among the members of LAGs, both with dichotomous data and with ordinal data.

Participatory approaches and networks are often decided and promoted by central authorities, both to formulate and implement policies but also to justify decisions; but actors normally create links among them regardless of the government intervention, to achieve their own interests (Primmer, 2009). One of the objectives of the public operator should instead be to create an informative, economic and functional network among the stakeholders; in this way networks will allow local economic development and conflict resolution for the resources management. Social capital should be seen both as a pre-requisite for the realization of an effective governance, and as an result-indicator of a "good" governance in terms of participation and transparency (Franceschetti et al., 2009).

This requires the gradual but substantial redefinition of the role of public institutions. Although the power is distributed among diverse actors, with new arrangements based on combined roles of state agents, market-based approaches and communities (Lemos and Agrawal, 2007), and a good governance is based on the interactions among a plurality of actors, inside this network the public operator however continues to play a different role; public operator may be seen as a network manager: he stimulates interactions, enhances skills, builds non-hierarchical relationships between stakeholders (Governa, 2004). When users cannot communicate and participate in the decision-making processes to manage the territory where they are embedded (Ostrom, 2005), it is difficult to avoid internal conflicts: worldwide evidences have shown that community-based institutions succeed in managing and conserving natural resources while the traditional governance tools not always guarantee the ecological and social resilience (Gatto et al., 2011) necessary to adapt to external changes. But various actors can play a key-role in defining paths of rural development in the territory and in creating and managing local networks. A participative governance can be promoted both by public institutions and private organizations. LAGs, NGOs, producers associations, national parks, etc. are examples of local actors that can become key-actors in the

territory and start the creation of networks based on relationships of trust, collaboration, information exchange, common rules and reciprocity (Pretty and Smith, 2004).

2.6 References

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3. Material and methods

The methodology used in our work varies with the research objectives. Before deepening the most significant methods that have helped us in answering the research questions (presented in chapter 1), a brief summary of material and methods is presented in table 3.1, subdivided by specific objective.

Table 3.1. Methodology, and paragraph's link, used to reach the Specific Research Objectives

Specific Research Objectives	Methodology	Thesis Paragraph for details
1. To define the concept of 'good governance' at local level in rural areas.	A review of existing literature on the topic allowed us to have an overall picture of exiting governance definitions and their main contents/dimensions and/or possible indicators used for assessing it. We explored the various initiative actually used to assess good governance, with particular attention to those relating to natural resources management.	Par. 3.1
2. To divide the term 'governance' in key-dimensions and more concrete sub-dimensions	Brainstorming and Mind Maps helped us in conceptualizing the term of governance; the conceptual framework proposed by Bezzi (2007) enabled us to break down the concept of governance in dimensions and sub-dimensions; we tested these key-dimensions in case-studies to understand the pertinence and the redundancy of the terminology chosen. The results of this research objectives have been published and presented in international conferences and seminars (in particular: International Conference-forum FAO "Emerging economic mechanisms: implications for forest-related policies and sector governance", Rome 6-8 October 2010., and 122° EAAE Seminar on "Evidence-based agricultural and rural policy making: methodological and empirical challenges of policy evaluation", Ancona 17-18 February 2011): observations, comments and feedback have been used to refine the theoretical framework.	Par. 3.1

| 3. To create a simple and expeditious set of indicators to be applied at local level to assess good governance of natural resources. | The creation of the set of indicators has started by selecting and adapting indicators already existing in literature, supplemented by indicators that are built on primary data gathering; each indicator is based on variables and respective questions; a pilot survey based on case-studies has helped us in re-defining indicators and variables before the data collection; two questionnaires have been prepared: the public operators' one is based on dichotomic answers, the stakeholders' one on qualitative and quantitative questions; face-to-face semi-structured interviews have been conducted in two case-studies; stakeholders, directly and indirectly involved in the organizations' projects, have been selected with a snowball sampling, to create an ego-network centered on the organization itself; social network analysis (SNA) helped us to describe and to understand the networks among stakeholders created by the organization's initiatives; data collected with SNA has been used for the creation of descriptive indices and, afterwards, of appropriate indicators; correlation and regression analysis have been used for analyzing quantitative data; a complex index has been created after a process of normalization and aggregation of selected indicators.

Finally, we have inserted inside the stakeholders questionnaire a specific section about economic relationships between the interviewed and the organization; two questions are dedicated to collect information about what stakeholders already do for free to help the organization's existence; the final part of the questionnaire tries to estimate the willingness to pay of inhabitants in order to reach an utopian level of good governance. | Par. 3.2, 3.3, 3.4 |

3.1 First research methodologies and case studies for screening governance dimensions

A qualitative research approach has been adopted, mainly based on documents analysis (Silverman, 2004) and case-study analysis (Yin, 2009), to achieve the first and the second research objectives.

First of all, the conceptual framework on key-dimensions and sub-dimensions of good governance has been developed. In choosing the terminology we decided to follow the scheme proposed by Bezzi (2007), that allows to divide a general idea into concrete definitions that can be

easily evaluated with indicators. We started with the 'concept' (governance), moving to 'key-dimensions' (accountability, capacity, etc.) and 'sub-dimensions' (key-aspects of each dimension). By reading through definitions, descriptions and general texts on governance (more specific definitions will be approached more in detail in chapter 4.1), some common key-concepts have been identified, regardless of the scope and field of application (economics, social sciences, natural resources, etc.) and gathered into seven broad common issues called governance 'key-dimensions': (1) Sustainable 'glocal' development[1]; (2) Efficiency; (3) Effectiveness; (4) Participation; (5) Transparency; (6) Accountability; and (7) Capacity.

Definitions or simply descriptions for these seven governance-related features have been collected, summarized and interpreted. Efforts have then been made to identify, for each key-dimension (e.g. Transparency), a few core sub-dimensions (e.g. in the case of Transparency, Documentation, Information flows to external stakeholders and Feedback), which are highly significant to the core dimension and may be assessed by indicators that are as clear and easy-to-detect as possible.

Dimensions and sub-dimensions have been blown up: in this way it was possible to analyze in detail the key-concepts and to find the suitable indicators for governance assessing. New indicators based on primary data have been created, added to indicators already used at international level, appropriately transformed to local contexts.

Each sub-dimension is then analyzed in relation to a grid that considers the four temporal phases of a project (conceptualization, planning, execution and termination), as described by Jugdev and Muller (2005) quoting Pinto and Prescott (1990); thanks to this temporal division it is possible to monitor a project still under development, selecting indicators related to the current phase.

Secondly, to check the validity of dimensions and sub-dimensions we tried to suit them to different local realities.

We made a screening of the 7 key-dimensions, and three case studies have been analyzed by taking into account their performances, concerns and potentials with respect to the seven key-dimensions and sub-dimensions of good governance proposed in the general conceptual framework. They have been identified and selected according to two criteria: i) they all refer to the same level at which decisions are taken and implemented, the local one; and ii) they represent three main different types of emerging economic mechanisms. We chose three marked-based mechanisms as examples of local economic development initiatives in rural areas based on the valorization of

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[1] The term 'glocal' (i.e. a combination of 'global' and 'local') refers to the attempt to find optimal and sustainable solutions to local problems in the era of globalization (Robertson, 1995).

natural resources and on involvement of stakeholders in networks (rather than based on single actors). As shown in detail in paragraph 4.2, they are: 1) the PES mechanism in water regulation by forests in two Italian regions (Piedmont and Emilia Romagna); 2) the REDD-plus forestry-based pilot project in the Angai Villages Land Forest Reserve in Tanzania; and 3) the double FSC-PEFC forest certification of the *Magnifica Comunità di Fiemme* (MCF), in Trentino region, in Italy. In particular, the first case study has been chosen amongst other possible PES based on different types of environmental services because water and related policies are very hot issues at the moment in Italy and (correctly) perceived as very potentially conflicting by the population at large. The second one has been chosen as a hot issue: a REDD+ mechanism in a context, a Participatory Forest Management (PFM) project, already quite well acknowledged in terms of participation, one of the core principles of governance. The third one has been chosen because forest certification is considered one of the most advanced initiatives for introducing innovation and new modes of governance in forestry, in Italy as elsewhere. Even if there are differences between the governance mechanisms required by the two main schemes, FSC and PEFC, they have both played a paramount role since the beginning of the 2000s in stimulating dialogue, conflicts solving and networking within enlarged groups of actors with respect to the traditional 'closed' forestry world in Italy.

Quantitative and qualitative data used for the case study analysis were collected in different periods, for different purposes, and using different methods. The information on case studies 1 and 3 was obtained mainly by documents review (e.g. National Act 36/1994, supported by operational information from the two local experiences in Piedmont and Emilia Romagna) and direct observations, with a few informal key informant interviews (maximum n=2 per case study). The periods of observation and data collection were: for case study 1, about one year during 2009-2010; for case study 3, approx. three years between 1998-2000 and 2009-2010. The information on case study 2 was collected by key informant semi-structured field interviews (n=16) conducted from May to July 2010 and by internal documents review.

This screening has led to our first paper, according to the numeration in the first chapter (Secco et al., 2011).

In the second phase we compared the key-dimensions e their respective sub-dimensions with other three case-studies, to verify the consistency of our framework compared to other tools. The set of principles was compared with the evaluation procedures of the LEADER approach within the ambits of rural development planning. In particular, the coherence was analyzed of the set of principles and indicators with the selection procedures of the LDP. The analysis was conducted comparing the proposed evaluation system with the calls for bids by the Regions. In this regard it

should be mentioned that the selection procedure of the LAG/LDP is not a true evaluation process (RRN, 2009), as it is limited to verifying the quality of the planning documents (Local Development Programmes – LDP) and their coherence with the planning tools at the next level (NSP, National Strategic Plan for Rural Development). In reality, however, the selection of the LDP/LAG has in many cases also considered evaluation criteria connected with the approach adopted by the members of the Local Action Groups in the creation of the partnership, in the involvement of the stakeholders and local population. The method adopted for the selection may therefore be considered as a proxy for the ex ante evaluation process of the local planning.

For the evaluation of the coherence between our evaluation system and the evaluation and selection procedures of the LDP/LAG, three Regions were chosen from those that have completed the selection process of the LAG: Veneto, Umbria and Sardinia. The choice of the case studies was made taking the following into account:

- considering the Regions that have completed the selection process of the LDP/LAG,
- guaranteeing coverage of the national territory (north, centre, south/islands),
- opting for Regions that have set up a detailed selection process and attributed scores to the characteristics of the LDP/LAG.

Lastly, an attempt was made to compare the proposed evaluation framework with the EC guidelines for the monitoring and evaluation of rural development policies 2007-2013 (EU-DG Agriculture and Rural Development, 2006), with particular reference to the LEADER approach (axis 4).

This screening has led to our second paper, according to the numeration in the first chapter (Secco et al., 2010).

3.2 Indicators, composite indicators, and pilot case-studies

An indicator is "a trend or fact that indicates the state or level of something" (Oxford English Dictionary). According to OECD/DAC (2002), an indicator is "a quantitative or qualitative factor or variable that provides a simple and reliable means to measure achievement, to reflect changes connected to an intervention, or to help assess the performance of a development actor".

There are by now a very large number and variety of cross-country and within-country measures of governance (Kaufmann and Kraay 2007). "All governance indicators have limitations, which make them imperfect proxies for the concepts they are intended to measure" (Kaufmann and

Kraay 2008, p.18); the concept itself of 'proxy' is seen as a limit of indicators, which are often used to substitute information which would be more difficult to get (UNDP, 2009). Besides researchers often forget that some indicators are born in specific context and can be difficultly exported.

Governance indicators have been criticized in recent years, as atheoretical and biased, but on the other hand "critics of the critics counter that no better alternatives exist" (Andrews at al., 2010, p.391); "these definitional challenges should not lead to paralysis in measurement, since many manifestations clearly related to governance can be measured" and sometimes it is enough to find out which indicator is more appropriate than others for particular objectives (Kaufmann and Kraay 2007, p.2).

Complex social concepts, such as the quality of life, welfare, development or governance itself, can be expressed through a plurality of variables, all empirically observable, but only together they can indicate the complex analyzed concept. Therefore, the indicator is not reflected in the empirical observation, but it is the result of logical and/or mathematical calculation. That is why to speak about 'indicators' is meaningless: it is always necessary to speak about 'indicators of something'. An indicator may indicate more concepts and each concept is shown by several indicators. The indiscriminate collection of socio-economic indicators in the absence of a accurate dimensional analysis of the concepts can only lead to confusion, and of course to limited descriptive and predictive capacities of the investigated phenomena (Bezzi, 2011).

There are several 'best practices when we work with indicators. Some of them are:
- to identify and clarify the 'object' of study, by a semantic and pragmatic concept's exploration (Bezzi, 2007) and by using critical questions about what exactly the indicators are measuring;
- to "take a modest view of the ability of broad governance indicators to demonstrate causality" (Williams, 2011, p.7);
- to "take careful account of the purpose for which individual indicators were designed and the statistical limitations on the data" (Williams, 2011, p.5).

Focusing in this last point, the selection and use of indicators to be used in the evaluation phase is conditioned by a huge problem due to the quality of available data (Franceschetti, 1982). According to OECD (2005), a data set should be:
- Relevant, that means to satisfy the demand and the needs of users.
- Accurate, "when it adequately measures the concepts or characteristics that it is designed for" (UNDP, 2007).
- Credible, thanks to the integrity of collecting processes, independent from any pressure, particularly political.

- Timely, that is when data's availability and frequency are compatible with a valuable assessment of the facts or events it is supposed to estimate.
- Interpretable, thanks to precise definitions, variables, means of verification and limitations.
- Coherent, when it is "logically connected and mutually consistent within a dataset, across datasets, over time and across countries" (OECD 2005).
- Accessible, when its source is well located and easily accessible.

Organization's projects and programs are expected to become more and more "SMART" (Specific, Measurable, Achievable, Relevant, Time-bound), to account for their achievements in terms of concrete results (Doran, 1981).

"Indicator does not have to come in numeric form" (UNDP, 2009, p.1). According to Palumbo (2003), indicators can be the result of processes of conceptualization (sociological approach), or can be created from existing data (statistical approach): the latter can be object of mathematical calculations.

Various classification of indicators exist. Franceschetti (1982) uses 4 categories for evaluation indicators: final indicators (subdivided in result and objective indicators), intervention indicators (subdivided in instrumental and activity indicators), commitment indicators (subdivided in restriction and tendency indicators), and contributory indicators. Bezzi (2009) gives another distinction among context, process, output, outcome and impact indicators. Finally, Williams (2011) argues that indicators can be distinguished according to their source and objectivity (fact-based indicators, expert judgments, survey on public perception), level of impact (input, process, output or outcome-oriented indicators), comparability (cross-country comparability, comparability over time, country-specific indicators) and degree of aggregation (disaggregated indicators, measurement of a single aspect of governance, composite indicators).

Focusing on objectivity, "data can be divided into two types: objective and subjective. On the one hand, objective data can be collected through standards, codes, treaties, and various administrative documents. Objective data is desirable because it is reproducible, and more difficult to dismiss than 'mere opinion'. A major drawback of objective data is that it is often of poor quality or not always available, especially in the case of some developing countries. On the other hand, subjective data rely on perceptions of people. Such data are consequently gathered through more complex processes than objective ones, like polls or surveys of residents, national or international experts. Concept, country coverage, time coverage, sampled population, nature and order of questions are key issues concerning the reliability of the data sets" UNDP (2007, p.12). One of the

biggest limits of perceptions is that they "are founded upon events which people remember, about which they have information. Hence perception and reality can be different" (UNDP, 2009, p.8).

This is absolutely "one of the most heated debates among users and producers of governance indicators", but it is important to understand that "all firms and individuals take actions based on their perceptions", so "it is difficult to come up with alternatives to perceptions data" (Kaufmann and Kraay 2007, p.3). That is the reason we decided to include both typologies of indicators in our research: besides fact-based indicators, we tried "to capture less tangible aspects of governance" (Williams, 2011, p.6) through indicators based on perceptions surveys. Moreover we used subjective indicators to have a cross-check of results from more objective indicators' scores.

Another reason is linked to the fact that it is very difficult to find already existing indicators and ready/usable secondary data in local level rather than global/national level assessment. We built two questionnaires: the first is based on the use of secondary sources and the second on direct survey based on stakeholders' interviews. The latter include those indicators aimed at measuring perceptions, the density of the networks and social interrelations inspired by the rural development program or projects, the degree of involvement of the actors, the flows of exchange of information, reciprocity and trust, the representativeness of the stakeholders in the decision-making processes, and many other important aspects of governance. In this regard, an interesting applicative tool is the Social Network Analysis (SNA), already used in attempts at evaluation of the amount of social capital in a given territory (Franceschetti, 2009). SNA, in particular, proved to be a useful instrument to understand the impacts of policy decisions and projects by examining the creation of networks among the involved actors. By means of relational data collection, it is possible to assess the information flows, the centrality of public operators, stakeholders representativeness, access to documentation, creation of networks, efficiency in informing actors, etc. The degree of applicability/reliability of SNA tools in assessing good governance at local level has been tested with the indicators. SNA is deeply described in the next paragraph 3.3.

In our study, we collected data from the two case studies, and tried to test the set of indicators, both counting only fact-based indicators and also including perception-based indicators. Indicators' quality has been tested with qualitative and quantitative data. Control questions have been added in questionnaires (see chapter 3.4).

In the indicators' selection, we tried to follow the hierarchical framework for the formulation of Sustainable Forest Management (SFM) standards (Lammerts van Bueren and Blom, 1997), used traditionally in some application sectors. From the key-dimensions and the sub-dimensions (identified thanks to the Bezzi's scheme, described in paragraph 3.1), that we can

compare to the 'goals' and 'principles' of the SFM's framework, it is possible to find indicators and appropriate verifiers; each indicator belongs to only one sub-dimension, and the verifier gives useful information about the sources or the reference values for the indicator. This hierarchical structure is useful as it allows to keep an horizontally consistency, when there is not overlapping or duplications of indicators at one level, and a vertically consistency, when indicators are correct proxies to evaluate the sub-dimension where they are collocated.

Finally, we tried to build a composite indicator for each good governance's dimension. "A composite indicator is formed when individual measures are compiled into a single index and should ideally measure multi-dimensional concepts which cannot be captured by a single indicator alone" (OECD/JRC, 2008, p.8).

Composite indicators have a number of important advantages: it can summarizes complex concepts, it is easier to be interpreted, it facilitates the task of ranking and comparison, and it facilitates communication among public and private organizations (Saisana and Tarantola, 2002). The downside instead are: it may lead to simplistic policy conclusions, it is difficult to check the quality of origin data, the lack of transparency in constructing composite indicators may bring misunderstanding, it is hard to go back to details and it means composite indicators "does not readily suggest action to be taken to work towards improvements" (UNDP, 2009, p.10).

Although a composite indicator "sacrifices the richness and scope of original individual indicators" (United Nations Department of Economic and Social Affairs, 2007, p.16), in literature there are numerous attempts to summarize complex concepts with a concise quantitative index[2]. All these attempts, very different from each other, have a common feature: they require very strong methodological assumptions (FEEM, 2011). The OECD/JRC's Handbook on Constructing Composite Indicators (2008) suggests 10 recommended steps:

1) To develop a theoretical framework to provide the basis for the following steps.
2) To select indicators, on the basis of their 'quality'.
3) To input missing data and to examine extreme values.
4) To use multivariate analysis for investigating the overall structure of indicators.
5) To normalize data for rending indicators comparable.
6) To weight and aggregate data according to the underlying theoretical framework.
7) To do robustness and sensitivity analysis.
8) To go back to the details, thanks to transparency.

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[2] Some examples of governance composite indicators, listed and well described by UNDP (2009), are: Afrobarometer, Annual survey of Freedom, Corruption Perception Index, Gender Empowerment Measure, Global Accountability Report, Global Integrity Index, Media Sustainability Index, World Governance Assessment, etc.

9) To do association with other variables, used to correlate the composite indicator with other indicators.

10) To think accurately to presentation and dissemination, which can influence indicator's interpretation.

In our research we had only two case-studies: for this reason it was impossible to follow the whole path proposed by OECD/JRC. But we nevertheless tried to make an attempt to construct a composite indicator for each good governance's dimension and we suggest the need to test the set of indicators in other case-studies as possible future research path to corroborate our results (see chapter 6 on recommendation for future work). Indicators based on public operator's questionnaire are composed on dichotomous variables (presence/absence of attribute), while indicators based on stakeholders' questionnaire are constructed on continuous variables. We tried to normalize these last two ways: re-scaling (each indicator is calculated as the ratio of the difference between the raw indicator value and the minimum value divided by the range) and indicators above or below the median (indicator adopts value 1 if the raw value is above the upper quartile, 0 if below the lower quartile, 0.5 if inside the interquartile range). Finally we made two assumption for data aggregation: first we gave equal weight to dimension's indicators, then we gave equal weight to sub-dimensions.

The two case-studies where we tested the whole preliminary set of indicators are: Dolomiti Bellunesi National Park (Italy) and Durmitor National Park (Montenegro). These two organizations have been chosen as both are UNESCO sites and are linked by common projects and similar contexts where good governance should be applied; but, on the other hand, the two Parks differ in history, and in each key-dimensions the *a priori* situation is opposite. The two case studies are better shown in chapter 5.2. The field work was based on document analysis, consultation and questions to public operators and private stakeholders interviews. The interviews were divided into two types: interviews addressed directly to those working inside public administration involved in the park management and interviews to all those stakeholders affected by the presence in the territory of the National Park. The first was calibrated on organizational and decision-making questions, while the second attempted to measure the density of social networks and relations among actors, the information exchange flows, the degree of actors' involvement, reciprocity and trust, the decision-making stakeholders representativeness, and many other aspects of governance.

The field survey therefore needed the collaboration of the National Parks' operators, in particular in: (i) identifying the local actors/stakeholders to be interviewed (ego-network); (ii) interviewing the staff and decision-makers involved in the Park management; and (iii) in providing access to internal documents that were necessary for documental analysis.

Finally, the analysis of data collected during the field work have been useful to understand the influence of certain contextual variables on the success of local projects and the creation of a strong network among the actors involved in decision-making processes. The study sets out to contribute to the current debate on the role of public actors in the administration of territories where the presence of many stakeholders interested in the use of natural resources is a potential source of conflict. How these key indicators and instruments can be used to build a composite index to measure the good governance at policy-level or project-level is discussed in chapter 5.

3.3 Social Network Analysis

"Over the past decade, there has been an explosion of interest in network research across the physical and social sciences." (Borgatti et al., 2009, p.1). Borgatti summarizes the history of Social Network Analysis (SNA), starting from Jacob Moreno's work (Moreno, 1934) about an epidemic of runaways at the Hudson School for Girls, and concluding with a general descriptions of the applied fields in which it is used (such as sociology, physics, biology, anthropology, management consulting, public health and crime/war fighting).

SNA grew in the 1930s, thanks to the sociometric analysts, who focused on the analysis of group dynamics through the theory of graphs, and to Harvard's researchers, who studied the patterns of interpersonal relationships and the formation of cliques, that are groups of individuals who share interests, visions, goals, behaviors (Jones and Gerard, 1967). In the 1950s SNA was also used in anthropology, by Manchester School, for the study of ego-networks connected exclusively to single individuals. In the 1970s Harvard researchers focused on structural analysis with a mathematical approach to the construction of models of social structures. In a study Granovetter (1983), for example, showed that, looking for a job, people got the best information from individuals to whom they were bound by "weaker" relationships than those to whom they were bound by "strong" ones.

Since the 1980's, social network analysis had become an established field within the social sciences, with a professional organization (INSNA, International Network for Social Network Analysis), an annual conference, specialized software and its own journal (Social Networks).

According to Frans N. Stokman (2001, p.10509) social network analysis is "the behavior of the individual at the micro level, the pattern of relationships (network structure) at the macro level,

and the interactions between the two". By the study of the network structure (Wasserman and Faust, 1994) and the types of weak and strong ties (similarities, social relations, interactions and flows), it is possible to analyze the exchange approaches (cooperation and competition) between relationships as well as between networks.

Through the application of graph theory (Harary et al., 1965), a branch of discrete mathematics, social network measures are represented in graphs, where points usually indicate individuals or social groups of actors, and lines represent dyadic relationships, as communication, friendship, advice, trust, influence, exchange. John Scott (2000) defines four levels to measure relational data, basing on directionality and unit; in fact SNA uses matrix of both "undirected" than "directed" data, in a binary form (1 = presence of tie, 0 = absence of tie) or expressed with numeric values that identify the "strength" of the relationship.

We adopted Social Network Analysis tools mainly to understand the relationships among the actors involved in the local scale governance, but also to hypothesize indicators for good governance assessment. The resulting data have been analyzed in UCINET, a software package for analyzing social network data developed by Steve Borgatti, Martin Everett and Lin Freeman (2002).

In our study we used binary directed data; the reason of this choice is well described by this Hanneman's quote (2005, p. 12): "the additional power and simplicity of analysis of binary data is "worth" the cost in information lost". We imputed data in an adjacency matrix *g x g* (*g* rows and *g* columns), without considering "loops".

Indices used to describe a network can be divided among those that analyze the position of the actor in relation to that of others in the network and those that describe the network structure (Chiesi, 1999, p.262). The indices that we have chosen to describe and analyze the ego-networks of the two case-studies are (Hanneman, 2005, Wasserman and Faust, 1994, Scott, 2000):

- Degree Centrality, the number of nodes adjacent to a given node, compared to the total potential number of ties.
- Closeness Centrality, the distance of an actor to all others.
- Betweenness Centrality, the extent to which a node (bridge node) lies between other 2 nodes in the network that are themselves disconnected.
- Density, the proportion of all possible ties that are actually present, which measures the extent to which all actors are tied to one another in the network
- Compactness, the number of edges in the shortest path between each pair of nodes.
- Core/Periphery Analysis, where the core is the sub-group with the maximum density, while each periphery member is not directly connected to any of the other periphery stakeholders.

- Clique Analysis, where a clique is a complete sub-graph of the network where each couple of actors connected by a line.

A list of main local stakeholders has been created by the organization itself whose governance we wanted to evaluate; this 'name generator' process has been made easier by a previous identifications of eight (8) relevant stakeholders categories based on perceived role of individuals and organizations in the area (Prell et al., 2009). The main category is formed by all the formal Park's members, and we expected a 100% response rate by them. The other seven categories, emerged by pilot survey and expert consultation, are: Municipalities, Other Public Institutions, Mountain Experts, Touristic Information Points, Recreation-related Enterprises (sport activities, etc.), Restaurant and Reception Structures, Local Producers.

Snowball sampling allows to obtain information by actors that revolve around the organization's initiative (ego-network) and that are really aware about the subject. In a second round we interviewed stakeholders identified as important by first-round interviews but that missed in the initial list.

In the stakeholders questionnaire (see appendix 4), a whole section has been dedicated to relational data collection. After some questions about actor's involvement and participation in the Park's initiatives and projects, in this dedicated section we tried to obtain information about four aspects useful for the study:

  i.   the reputational power of the stakeholders in the list, with respect to their role in the management of the territory;

 ii.   the information exchange flows (by phone, mail, letter, personally), regarding local initiatives in the area;

iii.   the collaboration flow, that can take place through formal employment contracts or informal working partnerships;

 iv.   divergences among stakeholders, which means with whom actors have mainly had conflicting relations, regardless of whether they have worked together.

From this data, it was possible to describe and analyze the networks of the two case studies. Finally, 13 indicators have been created by the SNA main indices. A detailed description of these considerations is reported in paragraph 5.3.

The Ph.D. student has made a training period abroad to improve his knowledge on SNA. In particular, he has been in Zurich from 17 June to 9 July, hosted by ETH Zurich, Department of Environmental Science, with Dr. Karin Ingold as tutor. The objectives of the period were: to integrate the bibliography analyzed until that moment; to learn a SNA software's use; to analyze

data collected by Zurich colleagues in respect to their case studies on natural resources management and conflicts; to understand the strengths and the weaknesses of the methodology in respect to the research aims (variables, cause-effect relation, data redundancy, etc.); to set the basement for the following months study and to start the preparation of the questionnaire's section inherent in the stakeholders relations.

3.4 Questionnaires evidences

The set of indicators is based on variables resulting from two questionnaires: a questionnaire has been addressed directly to those working inside public administration involved in the park management, while was planned on interviews to all those stakeholders affected by the presence in the territory of the national park. The first was calibrated on organizational and decision-making questions and produced dichotomous variables. The second attempted to measure the perception of stakeholders, their degree of involvement in Park's initiatives, the density of social networks and relations among actors, the information exchange flows, reciprocity and trust, the decision-making stakeholders representativeness, and many other aspects of governance. In general we tried to be the most objective as possible for not leading the respondent into giving a desired answer: so we built the questionnaires following the main rules of question wording (only one dimension expressed by each question, all the possible answers in multiple choice items, mutually exclusive options, avoiding questions on too old events, etc.), and we conducted a pilot survey on a small scale (one pilot-questionnaire per stakeholders' categories, for a total of eight interviews) to test questionnaires and to gain information to improve the efficiency of the main survey. Interview's respondents have been prepared in advance by letter or by mail.

Questionnaires have been modified and improved during the pilot interviews and little changes have been made after the first case-study to questions which didn't bring enough variability. In the following the main characteristics and evidences of the two tools are described.

The interviews to the Park's staff is based on a 13 pages questionnaire. In the first part we ask general information on the organization and a detailed list of the main projects carried out by the Park in the last 5 years. The remaining part is divided in 7 sections (one for each governance key-dimension), and each sections contains dichotomous questions divided in its sub-dimensions. The temporal span is 5 years: it has been chosen to help respondent's memory, but it caused some problems in collecting all the documents and information required to assess Park's projects.

Another difficulty concerns the definition of projects: for instance in the second case study (Durmitor National Park) the interviewed operators confuse projects with operative actions.

The stakeholders questionnaire is shorter than the other one (6 pages, 20-25' average time) to facilitate both face-to-face interviews and possible self-completed questionnaires. We divided the questionnaire in 4 sections:

i) Knowledge and involvement in the Park's projects

ii) Perception of the quality of governance

iii) The stakeholders' network

iv) Economic aspects

The main evidences and notes pointed out during our study are:

• We cared a lot questionnaire's layout: we put clear titles and gave information about the survey, adequate space for respondents' comments has been left, we varies the type of items used, we changed several times the order of sections inside the questionnaire to understand which one was the most efficient, and a simple and direct language was used.

• About questions' order, we decided to start with questions about concrete examples on what the organization has done to guarantee (or not guarantee) good governance: these question have been used as control variables during the analysis.

• Initial open questions are useful to understand the mood and some attributes of the respondent, and thanks to this information the interviewer may change the order of the following sections.

• The items in the section about stakeholders perception are evaluated in a wide (1-10) range, to make stakeholders free to express their opinions in numeric values.

• We analyzed three network flows (information exchange, formal and informal collaboration), while we simplified the questions about power reputation and divergences among stakeholders.

• Inside the economic section, we inserted some questions to estimate the economic value of a good governance: we asked information about concrete contributions (without any compensation) to Park's existence in the territory, and about the willingness-to-pay to achieve an utopian optimum of governance.

• We left space to comments in strategic parts of the questionnaire.

Each questions is linked to one or more indicators. These connections are well described in chapter 5. The two questionnaires have been translated in 3 languages: English (as a basis for the methodology to be to be used in other case-studies in other part of the world in the future), Italian

(which has been used in the Italian case-study, Dolomiti National Park) and Montenegrin (for the Durmitor National Park case-study in Montenegro). The English version is in the Appendices, while a detailed description of data collection tools is reported in paragraph 6.2.

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4. Results and Discussion: Governance's Dimensions

4.1 Key Dimensions

In chapter 2 we have seen how many definitions and uses of the concept of good governance exist. Besides we showed that in literature the term 'governance' has been broken down in several dimensions, but these pillars often change and differ from author to author (an example is shown in figure 2.1). Bezzi (2007) underlines the importance of moving into dimensions and sub-dimensions to better assess a wide concept as governance is, and the second research question of the study is completely focused on this aspect.

This part of our work has been the most tricky, because we were aware that a component of subjectivity in selecting our key-dimensions was inevitable. That is the reason for which we analyzed accurately all the definitions given by different authors in literature, and tried to find out similarities, overlapping and disagreement among governance's dimensions. Figure 4.1 is an example of this process of analysis, where governance's dimensions used by international institutions are compared and linked each others. This process has been reiterated 3 times, until overlapping, unclear formulation or redundancies were minimized.

From the analysis of these scheme, three guiding ideas and some common key-concepts have been identified. The three guiding idea are still very abstract concepts, and we used them just to select and define the key-dimensions. These guiding ideas are:
- **Legitimacy**, which 'may derive from democracy as well as from efficiency'(Kjær, 2004, p. 12), and which can be divided in two type: the input-oriented legitimacy, based on how the decision-making process is organized and implemented including all stakeholders, and the output-oriented legitimacy, based on effective performance (see also Scharpf, 2000 – quoted in Cashore, 2009b);
- **Consensus**, used both as the goal of a policy and as the measure of a successful process of public participation (Burkeley, 2003), can be considered both the cause and the consequence of a good governance, depending on the prevailing type of legitimacy;

- **Sustainability[1]**, whose three components (environmental, social and economic) cannot be ignored by policy makers when policies and projects with concrete impacts on the territory are planned.

Figure 4.1. comparison among some good governance dimensions.
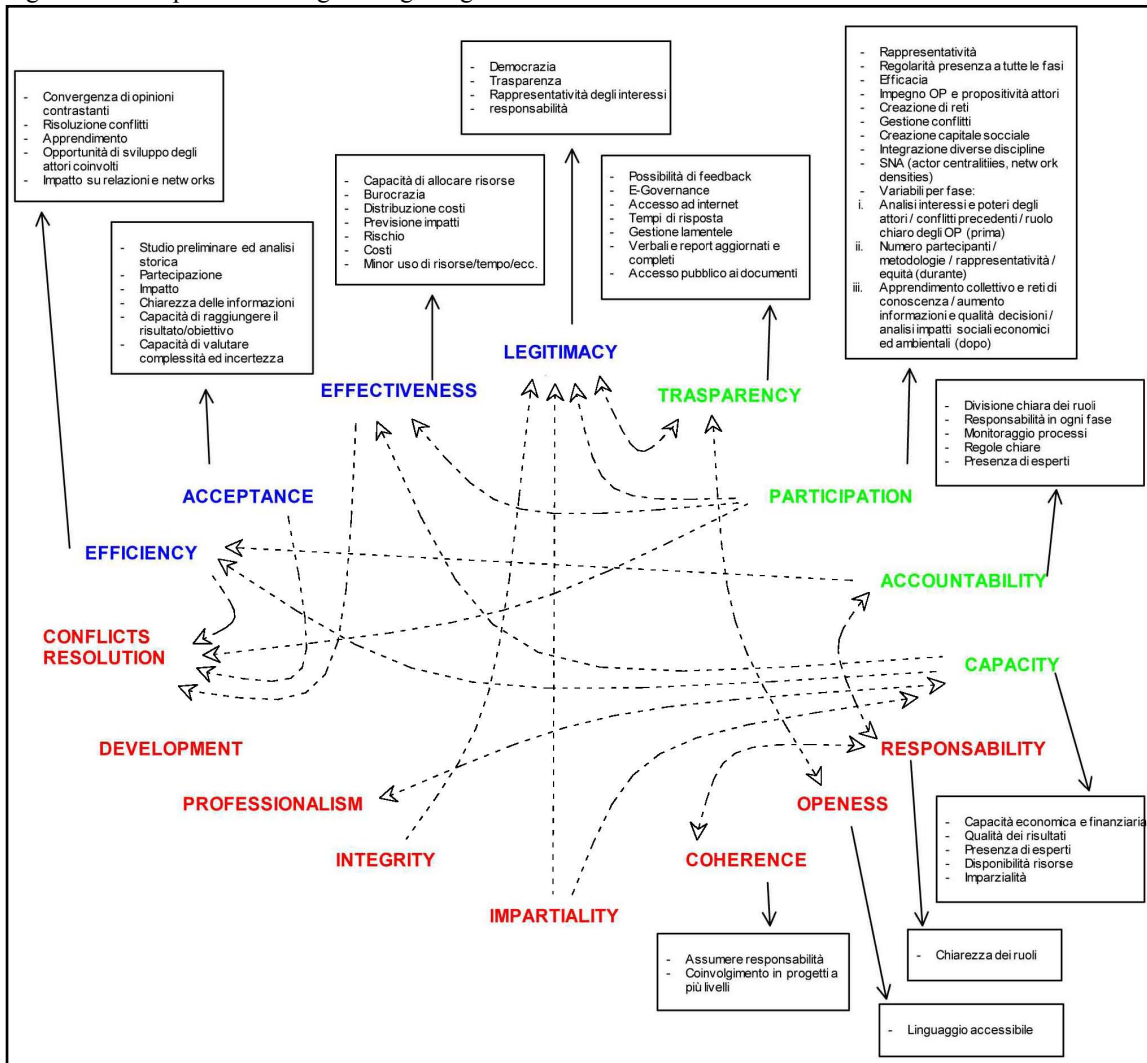
Source: our elaboration.

The key-concepts, regardless of the scope and field of application (economics, social sciences, natural resources, etc.), have been gathered into seven broad common issues that we called governance 'key-dimensions': (1) Sustainable 'glocal' development[2]; (2) Efficiency; (3) Effectiveness; (4) Participation; (5) Transparency; (6) Accountability; and (7) Capacity. To the two traditional dimensions of the evaluation of the actions of the institutions responsible for process

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[1] The definition of sustainability is linked to the most widely quoted definition of sustainable development, which is "is development that meets the needs of the present without compromising the ability of future generations to meet their own needs". (United Nations General Assembly, 1987, chapter 2, paragraph 1)

[2] The term 'glocal' (i.e. a combination of Global and Local) refers to the attempt to find optimal and sustainable solutions to local problems in the era of globalization (Robertson, 1995).

(Efficiency and Efficacy), five 'new' dimensions have been added: Sustainable glocal development, Participation, Transparency, Responsibility and Capacity. The first one presents the greatest interpretive and practical difficulties in proper indicators formulation, but in an attempt to include the relevant aspects of governance in terms of long-term impacts on the environment, society and economy, at global and local level (i.e. 'glocal'), it appears extremely appropriate.

Definitions or simply descriptions for these seven governance-related features have been collected, summarized and interpreted. We report a schematic description (table 4.1) of each key-dimension seen in a local perspective, that will be useful to understand the sub-dimensions' choice, presented in paragraph 4.3.

Table 4.1. Definitions and main sources of the seven governance key-dimensions.

Governance key-dimensions	Definitions Basic concepts and ideas	Main sources
SUSTAINABLE 'GLOCAL' DEVELOPMENT	Policy/project long-term wide effects i.e. impacts on environment and natural resources (single components - air, water, soil, forest, landscape, etc – and complex systems). Policy/project long-term social effects i.e. impacts on tenure rights. Social acceptability. Gender equality. Equal distribution of costs and benefits. Likelihood of benefits produced by the policy/project (e.g. payments/funds) to continue to flow to beneficiaries after external funding has ended. Financial viability/recurrent cost financing. Appropriate technology, equipment/asset maintenance. Institutions and institutional changes: adaptation capacity on a long-term perspective (flexibility, resilience, reflexivity - reforms). Balanced importance assigned to all the 3+1 dimensions: environmental, social, economic + institutional sustainability. Reciprocal advantage and common interests between localities and global flows ('glocal').	United Nations General Assembly, 1987; Robertson, 1995; European Commission, 2004; FEEM, 2011.
EFFICIENCY	Capacity to achieve planned results (= intended outputs) by means of activities based on a careful use of available resources. Degree to which objectives are achieved and the extent to which targeted problems are resolved with respect to costs (= policy/project results achieved at reasonable cost). Good use of money, but also time (respect of deadlines) and "energy". Use of limited resources for greatest outputs. Quantity, quality and timeliness of achieved results. Expected outcomes of altered options effectively taken into account. Quality of monitoring (its existence, accuracy and flexibility, and the use made of it; adequacy of baseline information). Management of risk: capacity to adapt to changes in circumstances. Policy/project design (in term of costs) appropriate with regards to dimension and risk of the decision to be made. Distribution of costs and benefits of policy/project across different levels and sectors. Relations, coordination and	European Commission, 2004; Kjær, 2004; Di Iacovo e Scarpellini, 2006; ODI, 2007; Wesselink and Paavola, 2008; businessdictionary.com.

	cooperation among all actors (effects on transaction costs).	
EFFECTIVENESS	Ability of the policy/project to achieve desired outcomes in practice. Degree to which stated objectives are met (using whatever means and inputs that might be required). How far the policy/project's outputs are used and the policy/project's purpose realized. Planned benefits have been properly delivered and received, as perceived by stakeholders. Not only political-based decisions; scientific truth claims included. Institutional arrangements and behavioral patterns changed, with consequent improvements. Quality of policy/project design, formulation and implementation: clear objectives formulation; decisions taken at the most appropriate level. Coordination between different policies, structures and levels; number of administrations and actors with similar competences. Secure financial resources for planning, implementing and monitoring activities related to governance key-components (i.e. participation process). Coordination networks or joint actions have to be developed by the vertical level (multi-level governance).	EC, 2001 and 2004; Di Iacovo e Scarpellini, 2006; Wesselink and Paavola, 2007; Kaufmann et al. 2009; Fritsch e Newig, 2009; Saunders and Reeve, 2010; EENRD, 2010; ALPARC, 2011.
PARTICIPATION	Prerequisite for sustainable politics (or "new tyranny"?). Participation vs. efficiency dilemma. Actively involvement of all the actors (stakeholders) throughout the policy-chain (from conception to implementation, to results and impact evaluation). Perceived fairness of the process. All relevant interests and values included or at least represented. Mutual understanding. Negotiation and equally balanced co-decisions. Deliberation mechanisms. Inclusive approach (all stakeholders: individuals and groups, private and public, minorities). Gender balance. Networks creation and management for information exchange and collective learning. Empowerment (more equitable sharing of power, increasing political awareness and supporting actions of disadvantaged groups, presence/absence of powerful actors). Real or latent conflicts management (prevention/resolution). Creation and maintenance of trust in the institutions, confidence in the final results and reciprocity for the following years. Engagement of public in determining the general will (not in the technology of execution). Formal space for participation in relevant forums. Appropriate or sufficient mechanisms to invite participation, the inclusiveness and openness. Emerging international consensus that the public need to be more involved in the processes of decision making. The extent of involvement in information and co-operation structures can be considered as a result of stronger relationships.	Sources: Macnaghten and Jacobs, 1997; Cooke and Kothari, 2001; EC, 2001; Bulkeley, 2003; Kjær, 2004; ODI, 2007; GFI, 2009; Fritsch e Newig, 2009; Saunders and Reeve, 2010; EENRD, 2010.
TRANSPARENCY	Three sub-categories: i) ownership structure and investor's relations; ii) board and management structure and process; iii) financial transparency and information disclosure. Management carried out according to clear and accessible rules. Rules and assumptions transparent to insiders and outsiders (to reduce risks of corruption, illegalities). Available, clear and update information about decisions taken, activities, results and resources (budget, personnel	Sandeep A. Patel 2002; ODI, 2007; GFI, 2009; Saunders and Reeve, 2010.

	management and administration rules) = periodically reporting. Feedback to information requests, complaints and appeals. Use of understandable and accessible language for the general public. Provision of evidences of stability; predictability; reduction of risks of corruption. Attributes of transparency include the comprehensiveness, timeliness, availability, comprehensibility of information, and whether efforts are made to make sure information reaches affected and vulnerable groups as appropriate.	
ACCOUNTABILITY	Clear roles and rules in the legislative and executive processes. Who is held accountable for the decision and its outcomes. Responsibility accepting and sharing among actors. Results disclosure (information disclosure and updating); performance-based accountability. Financial disclosure requirements for public officials and in general for public resources use. Supervision of operations and systematic monitoring of sector operations and processes. Three sub-categories: i) programme accountability, ii) process accountability, iii) fiscal accountability. Accountability of governments to their citizens: capacity of citizens to participate in selecting their government/representatives (formal elections); extent to which citizens can hold public authorities to account. Access to justice and redress to enable individuals and public interest groups to protect their rights to information and participation. Two key elements: answerability (to explain power-holders' actions to those affected by their actions) and enforceability (to punish poor or criminal performance). Who is allowed to appropriate natural resources, and who have to manage them?	EC, 2001; Kjær, 2004; Jepson, 2005; Di Iacovo e Scarpellini, 2006; Annunzi, 2006; businessdictionary.com; Kaufmann et al. 2009; GFI, 2009; Saunders and Reeve, 2010, van Bodegom A.J., 2011; Ostrom, 2005.
CAPACITY	Actors' competences and experiences. Impartiality and professionalism by public sector. Collaborative learning and mutual growth. Capacity and willingness to transfer experience, competences and knowledge to interested actors. Experts systems included in decision making. Government's social, educational, technological, legal, institutional ability to provide public access to decision-making (autonomy, independence, resources availability); ability of the civil society to make use of such access (analyze the issues and participate effectively). Governance institutions have to include knowledge, research, training, and learning at local level.	Kaufmann et al. 2009; GFI, 2009; Dillenbourg, 1999; Cashore 2010.

4.2 Dimensions screening

We made a screening of the 7 key-dimensions through three case studies, identified by taking into account their performances, concerns and potentials. The case studies, selected according to the two criteria described in chapter 3.1, are:

1) the PES mechanism in water regulation by forests in two Italian regions (Piedmont and Emilia Romagna);

2) the REDD-plus forestry-based pilot project in the Angai Villages Land Forest Reserve in Tanzania;

3) the double FSC-PEFC forest certification of the Magnifica Comunità di Fiemme (MCF), in Trentino region, in Italy.

A detailed description of the three case studies are presented in box 4.1, 4.2 and 4.3.

Observations from the three case studies in regard to governance key-dimensions are summarized in Table 4.2 and briefly commented in the following sub-sections.

Table 4.2. Observations from the case-studies in regard to the seven key-dimensions of governance.

Key-Governance dimensions	Case study 1. PES mechanism in water regulation in Italy	Case-study 2. REDD-plus project in Tanzania	Case study 3. Double FSC-PEFC forest certification in Italy	Comments / Notes
1. Sustainable 'glocal' development	Complex long-term impacts. No specific procedures to assess and monitor it, need to transfer and adapt knowledge from other sectors.	One key aspect is the equity and fairness in costs and benefits distribution among the actors (especially the village). Unclear perception of long-term impacts of the project.	Existence of procedures and methods to keep the long-term impacts under control (e.g. formal commitments to respect SFM standards requirements).	Quite difficult to assess not referring to the specific context. Possibility to focus on inputs or process-oriented indicators. Sub-dimensions probably with different time-frames.
2. Efficiency	Need to bridge existing gaps between scientific knowledge on water-forest relationships and assessment of economic dimensions & impacts.	Not measurable at this stage of the project, as it is still in its design phase.	Annual monitoring (activity reports and budgets approved by the Community forest Assembly).	Quite easy to assess. Included in the ordinary management activity of the Community forest.
3. Effectiveness	Redundancy of actors in some cases. Difficult to identify real 'additionality' of forest management changes with regards to water.	Not measurable at this stage of the project	Lack of multilevel coordination with local authorities. Difficulties of assessing changes not directly linked with the certification requirements.	Possibility to assess some of the sub-dimensions (e.g. multilevel coordination) for example by means of the SNA.
4. Participation	Key-dimension in theory (required by rules for PES design), but not implemented in practice. Hierarchical, top down approach dominant. Not enough data available.	Well-consolidated procedures (formal or informal) for deliberative decision-making process are able to guarantee it.	Required by certification standards and procedures. Clear and consolidated procedures and indicators to design and implement it within the Community forest practice. Internal deliberation vs. closure with outsiders.	The overall attitude (cultural institutional context) towards participation important in determining the quality. Quite easy to assess by means of key-indicators and existing instruments (e.g. SNA)

5. Transparency	General communication biased by the distorted political climate. No public data available.	Reports and records of revenue collection (a requirement for REDD-plus) available.	Certification reports (from first certification and annual surveillance audits) are publicly available.	Quite easy to assess. Usually recognized key-aspects of good governance.
6. Accountability	Water sector with well-defined accounting procedures, but not finalised on the specific issue at stake, need to adapt and develop.	Clear reporting system. Village general assembly serves as supreme decision-making body	Required by forest certification procedures. Clear and well-defined for the Community forests; sometimes opaque for other actors in the area.	Need to structure accountability into several sub-accountabilities: use of resources, distribution of competences, etc.
7. Capacity	Not considered so far	No special provision but the village has the capacity to formulate and implement decisions	No special provisions on this item.	Quite unclear in its key-aspect. Capacity of acting in a broad sense. Need to be better addressed.

Source: own elaboration in Secco et al. (2011)

Case study 1. PES mechanisms in water regulation by forests in two Italian regions

As regards the first key-dimension of governance, ***Sustainable glocal development***, given the growth in water demand connected with economic development, it is indubitable such a mechanism can create a continuous flow of payments, able to guarantee sustainable economic impacts and therefore positively adding to this sub-dimension of good governance. Other effects, for example linked to environmental impacts or to water quality are difficult to assess properly, because of site-specific and complex cause-effect relationships between forest management and water. An additional methodological problem here is the longer time-frame required for assessing long-term economic effects, thus confirming the complexity of this dimension. As regards ***Efficiency***, two possible proxies to assess its level are the number of actors involved and the degree of vertical and/or horizontal coordination, therefore the time needed to inform all the involved stakeholders. Transaction costs related to design, put in place, manage and monitor the project are core aspects, as in any PES scheme. However, given the ownership structure of Italian forests (many small inefficient private forest estates), the nature of the drinking water market (final consumers = households), and the 'legal' setup in both Piedmont and Emilia Romagna Regions, large numbers of providers and beneficiaries are involved, with many intermediate steps, implying lack of flexibility and higher transaction costs, with a very probable negative impact on efficiency. An indicator for assessing transaction costs should, therefore, be developed.

Box 4.1. Case-study 1: main features

By law, all surface or ground waters are public goods in Italy. Planning, controlling and monitoring of water use are assigned to decentralized local Authorities (AATOs), technical-political emanation of the Region's powers. Management functions, (purification, adduction, distribution, sewage) are instead contracted out to public or mixed

public-private companies which charge final water users based on tariffs under the control of the AATOs. One key-element in terms of governance is therefore the high number of multi-level and multi-sector actors that are expected to collaborate and be coordinated. The 'legal' acknowledgment of the positive role of forests on water cycle regulation and soil protection (today scientifically recognized) was introduced for the first time by Act 36/1994. Administrative Regions can compel managing authorities to devolve part of the water tariff to forest owners in mountain areas for the regulating service they perform, following a PES approach in which the communities of the lowland areas are the 'beneficiaries' of the service. Funds go to local mountain authorities, delegated to reinvest them in forestland on behalf of forest landowners. So far, Article 24 has only been implemented in two northern Regions of Italy: Piedmont and Emilia Romagna. This limited experience in PES mechanisms is perceived as an obstacle to good governance in terms of capacity. In Piedmont, up to 8% of the water tariff is reinvested in 'maintenance and conservation' of mountainous areas: in 2007 the funds collected met 54% of the total budget spent for 'hydro-geological and watershed management' – this however may not necessarily mean forest maintenance, hydraulic works on the river banks or beds also being included. In Emilia Romagna the mechanism is similar, but with two differences: i) the share of the water tariff devolved to forest management is 6‰ and ii) at least half the amount collected through the water tariff has to be used strictly for forest maintenance.

As regards ***Effectiveness***, one concern is the lack of funds to achieve the objective of appropriate forest management, due to evident design errors (see Piedmont where no minimum criteria or thresholds for earmarking funds have been set). Furthermore, the vastly different share of the water tariff in the two Regions indicates that this has been established mainly on political grounds rather than on technical ones. Formulation of the policy objectives is also unclear, appearing more as an attempt at generic fund redistribution between lowland and mountain areas than as a clear statement of attribution of property rights and of related 'ownership' of services provided, implying more profound and courageous changes in institutional arrangements. The sub-dimension 'Equity' is not implemented either: funds collected and redistributed are calculated in proportion to the final market and not to the size of the forest catchment providing the service. ***Participation*** is required by the rules for PES design, but is not implemented in practice; none of its key sub-dimensions are traceable so far: there are no provisions for either representativeness criteria nor for stakeholder inclusion or information exchange and conflicts management, and not enough data are available on 'Participation' processes. The hierarchical top-down approach is dominant. This is due mostly to the infancy of the mechanism but also to the generalized 'immaturity' of Italian institutions towards the PES idea. Also, the chain is incomplete: funds remain in public hands and are not returned to the service's original providers. This can be justified on the grounds of economies of scale and scope, but has strong implications in terms of participation. As regards ***Transparency***, our information on funds allocation comes from internal documents, which are not available to the public. Anyhow, the issue has a very complex technical nature: therefore communication and understandability to the general public are rather difficult, emphasizing the

need for communication tools availability and quality. The very 'hot' climate of the current policy debate about water in Italy does not help either, often making the discussion on water and its use prejudicial and unbalanced. Similar considerations are valid for *Accountability*. The level of devolution of Italian policy with regards to water (left to the regional powers) complicates the task of adopting common monitoring tools, clear and plain reporting language and disclosure-communication techniques. Finally, with respect to *Capacity*, the development of a PES idea certainly requires high technical competences at all its stages: these are not lacking in the institutions involved, however a shared-responsibility model based on constructive dialogue and a common language between the 'water management authorities' at the downstream end and the 'forest management authorities' at the opposite upstream one has to be further developed.

Case study 2. The REDD-plus forestry-based project in Angai Villages Land Forest Reserve in Tanzania.

Box 4.2. Case study 2: main features

Angai villages land forest reserve is located in Liwale District, Lindi Region of south-eastern Tanzania. It is owned and managed by 13 surrounding villages (Nahoro, Nangano, Kibutuka, Kiangara, Kitogoro, Mtawatawa, Mikunya, Liwale B, Likombora, Mihumo, Ngongowele, Ngunja, Lilombe). The total land area of the 13 villages is 464,474 ha. Each of the 13 neighbouring village governments set aside a forest area, together creating the 139,420 ha reserve, making it one of the largest PFM areas in Tanzania. AVLFR is a large contiguous and generally intact forest with little known deforestation or degradation. It is essentially comprised of the *miombo* woodland with high value tree species such as *Pterocarpus angolensis* (locally known as *mninga*), *Julbernardia globiflora* (locally known as *mtondo*) and *Dalbergia melanoxylon* generally known as African Black Wood (locally known as *mpingo*). Angai is one of the three selected sites in the Tanzanian Group on Earth Observation – Forest Carbon Tracking National Demonstration Project. Satellite and aerial Lidar measurements taken in Liwale as part of this project will complement ground measurements taken by the local residents through an ongoing participatory carbon monitoring initiative. This aspect means local actors have already participated in decision-making processes related to their natural resources; this experience might be a key-factor in determining good governance conditions for the carbon project implementation. The following actors are involved in the PFM/REDD processes: the communities, the Government of Tanzania, the local district natural resource office, donors such as the Finnish Ministry for Foreign Affairs, international NGOs such as Clinton Foundation and Mpingo Conservation Project and private research initiatives. Because of the high number of actors involved at various levels, representing from global to local interests, coordination and effectiveness are key-elements of 'glocal' governance. Agriculture is the major economic activity in the area and accounts for about 93% of income for households. AVLFR has suffered from changes in rainy seasons which, according to local farmers, are shorter and arrive late. The villages deal with pressures from shifting cultivation, forest fires, illegal logging and food shortages (Sources: Mustalahti, 2009; Taku Tassa, 2010). All these aspects might lead to potential (or real) conflicts, risks that should be reduced or properly addressed by means of good governance practices.

As regards the ***Sustainable glocal development*** dimension, the key aspect is likely to be the equity and fairness in costs and benefit distribution among the actors (especially the villages), but at this very early stage of the REDD+ project design there is an unclear perception of its long-term impacts. Based on these observations, at least one indicator for assessing equity in cost/benefit distribution has to be developed and included among key-indicators for this key-dimension. With respect to ***Participation***, the villagers actively participate in voting for the village government and members of the various village committees including the village natural resources committee. Major decisions in the village are deliberated and approved by the village assembly. Well-consolidated deliberative processes based on pre-defined and known procedures (both formal and informal) are therefore relevant aspects of good governance. Indicators to measure also informal As regards the sub-dimension of gender balance, there is no written prescription, but it is always taken in consideration when electing members of the village government and village committees. Thus, also informal norms and customs (informal communications) are important in guaranteeing good governance elements. Participation by the villagers in the PFM and REDD process is fairly important. However, the overall level of participation can be considered medium to high in the participation continuum. With respect to ***Accountability***, each specialized committee has a timetable for conducting meetings in which the minutes are presented to the village assembly for scrutiny. Village general assembly meetings are held quarterly, village government meetings are held monthly, while an extra-ordinary general assembly or village government meetings can be held when need arises. There is also a system of reporting in place. Reports of every meeting of the village government and committees are presented to the village assembly with copies sent to the Ward Executive Officer (WEO) and District Executive Director (DED). As regards ***Transparency***, evidence of records of payment receipts can be found in the WEO office, and the amount paid for example for research permits in the area are announced during village assembly meetings. The sub-dimension 'Information flow' is a major governance challenge at village level and to the entire Angai process. Members of the VNRC that have received training have failed to share the acquired knowledge with other villagers, the main reason being that villagers expected payment in the form of per diems to be trained. Both the ***Efficiency*** and ***Effectiveness*** dimensions are not measurable/observable at this early stage of the project, thus confirming the identification of different indicators to be used in assessing the various stages of a project development is crucial.

Case study 3: the FSC-PEFC forest certification of Magnifica Comunità di Fiemme in Italy

Magnifica Comunità di Fiemme (MCF) is a community forest in the Italian Alps. It is a mixed private-public institution, where roles and competences are clearly identified both among internal stakeholders (residents, members of the community) and external ones (local public authorities, NGOs, other sectors representatives such as tourism agencies, etc.). The total land owned by MCF, approximately 20,000 ha, is 64% forest with 29% alpine meadows and pasture and 7% unproductive land. Of the forest area, about 3/4 is productive area and the rest protective forest. The forest is dominated by Norway spruce (*Picea abies* Karst.), partly due to climate and topography, and partly due to its being favored by forest managers for its high-quality timber. In fact, MCF owns a modernized sawmill, which is important to its economic viability as it can process value-added products for specialty markets. By processing around 46,000 cubic meters per year the community's sawmill is one of the largest in Italy. The local economy of agriculture and forestry is also supplemented by tourism. The community is perceived as successful in terms of socio-economics and low-impact logging, which fully involves the local community members in decision-making and focuses on timber production as primary management objective (with less interest given to natural biodiversity and ecosystem functions conservation). From this point of view, the key-elements of good governance in terms of glocal economic, environmental and social sustainability are fulfilled. In 1997, MCF was not only the first FSC certified forest in Italy but also the first in the Alps, thus being considered highly innovative and a pioneer in this field. The FSC certification was renewed in 2002 and 2007. In 2009, the PEFC certification was obtained. Both FSC and PEFC certifications are for forest management and chain-of-custody, so that MCF's sawn wood and other co-products are labeled with both logos on the market (Sources: Duinker and Pulkki, 1998). MCF built its (successful) governance mechanism on its capacity to integrate ancient local traditions and customary rights with innovative certification procedures and rules.

The MCF being certified, a lot of key-elements of good governance principles are already included in internal management procedures and processes. As regards the **Sustainable glocal development** dimension, the MCF was required to sign a formal written long-term commitment to comply with the FSC standards (10 Principles and 56 Criteria for SFM), which include specifications for evaluating, managing and monitoring social, economic and environmental impacts. By complying with these standards, both in management planning and implementing, the MCF keeps in some way under control the aspects related to this key-dimension of good governance. Similar considerations are valid also for other dimensions: certification procedures and standards require accountability (periodic monitoring and standardized reporting), transparency (publicly available certification reports), participation (stakeholders consultation during various steps of the process, including forest management system adaptation and field audits). In terms of **Effectiveness**, lack of coordination and networking (if not latent conflicts) were observed between the MCF and the local public authorities in defining common communication strategies for the forest certification initiative (no territorial marketing plans have been proposed on FSC certification) and – especially at the beginning, when the MCF was certified only according to FSC – in supporting it by means of other policies (for example green public procurement or industrial

policies). As regards *Participation*, on the one hand effective deliberative processes are in place, due to the ancient rights assigned by Statute to MCF members to participate in collective choices. On the other hand, interestingly, outsiders (i.e. those stakeholders who are not members of the MCF) have no real power in influencing decisions (closure), even if the actions required by the certification standards for stakeholders consultations are correctly carried out at local, regional and national level.

General conclusions on the three case-studies

According to our observations of the 3 selected case-studies, on the one hand, the developed framework seems to be a valuable tool to describe and assess governance key-dimensions. It has allowed us to provide a rather good first value judgment on the level of governance of each case-study on the basis of common elements of evaluation. According to this first pre-test, as discussed further on, the judgment was only qualitative. The quality of governance can be considered rather low but potentially increasing in the medium/long term in the case of the Italian PES mechanisms in water regulation, which is now at its early stages of design and development; it can be considered medium in the REDD-plus forest-based project, taking advantage of Participatory Forest Management experience; and, as expected, from medium to high in the forest certification initiative, where procedural requirements established by the certification standards already asked for broad stakeholder consultation processes, periodic reporting, public availability of audits results, etc. (thus confirming forest certification as an instrument influencing the new governance).

Some elements to assess several key-dimensions of governance (core ones, such as participation) were completely lacking at the moment of our analysis in some of the case-studies and it was difficult to foresee improvements in future. This situation is magnified by an intrinsic technical difficulty in the design and implementation of emerging economic mechanisms due to their complexity and scant knowledge (requiring long time spans to be achieved) on cause-effects relationships, and their case-specificity. Additional empirical evidences are required for understanding whether this is a problem due to the framework contents formulation (too highly-demanding information on complex procedural aspects?) or to the poor quality of the adopted governance modes.

On the other hand, observations from the case-studies help us to make first assumptions in identifying core indicators. The first key-dimension 'Sustainable glocal development' is probably the most complex to be interpreted (it is on a higher hierarchical level of aggregation than the other six). But impacts on environment and society as well as on economy cannot be ignored, being one of the challenges of forest governance (Rayner *et al.,* 2010). From case-study 1 observation

emerges that an indicator for assessing transaction costs should be formulated; from case-study 2, at least one indicator for assessing equity in cost/benefit distribution should be included among key-indicators for this key-dimension. Thus, further research is needed to better integrate it into the assessment framework, taking advantage of previous experiences, like those based on procedures and practices for complying with SFM standards requirements. As regards the second key-dimension, 'Efficiency', one key-aspect is the amount of intermediate steps in network creation and management; this is also important with respect to 'Participation'. Possible useful proxies or indicators can be the number of involved actors and the degree of their vertical and/or horizontal coordination (with the SNA instrument of cliques analysis) and the average time necessary to inform all the involved stakeholders (again, with the SNA instrument called public operator's closeness centrality index). Surprisingly, according to our pre-test results, there is a lack of indicators on 'transparency' of decision-making and programming processes, but further considerations on this dimension and on the whole theoretical framework will be discussed in chapter 5 and the final conclusions (chapter 7).

4.3 Sub key-dimensions

After having identified the key-dimensions, a similar methodology (mind maps, etc.) has been applied to identify, for each key-dimension, a few core sub-dimensions (e.g. in the case of Transparency: Documentation, Information flows and Feedback), which have been considered highly significant to the core dimension and may be assessed by indicators that are as clear and easy-to-detect as possible. Sub-dimensions have been chosen starting from each dimensions' definition presented in paragraph 4.1. The definitive proposed general framework for assessing good governance in natural resources, with its guiding ideas, is represented in Figure 4.2. As can be observed, the framework has the same hierarchical structure as the sets of Principles, Criteria and Indicators for SFM (Lammerts van Bueren and Blom, 1997), described in paragraph 3.2. Since the first version, this framework has changed in according to the observations from the first screening, and the reduction of the number of sub-dimensions, in order to simplify the assessment, has been a consequence of the attempts to find out appropriate indicators (see paragraph 5.1). The picture, which is the definitive result of this analysis, is completed by the identification of the three guiding ideas of good governance, i.e. sustainability, consensus and legitimacy, described in paragraph 4.1.

Figure 4.2. Governance key-dimensions and sub-dimensions: a simplified conceptual framework.
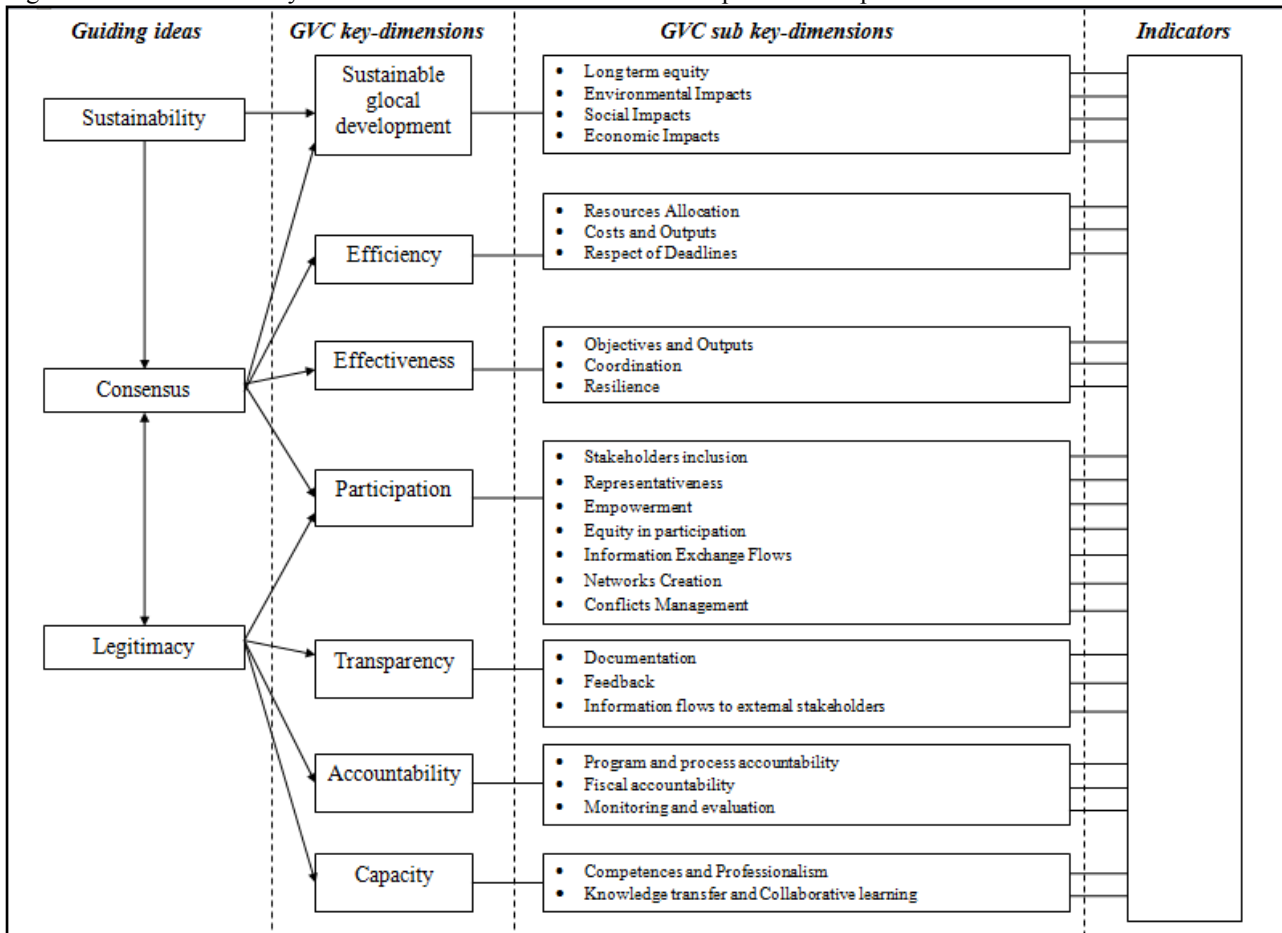
Source: our elaboration.

It can be seen that the framework contains the same hierarchical structure of the sets of principles, criteria and indicators traditionally used in some application sectors (e.g. for the examining of good forestry management; see Lammerts van Bueren and Blom, 1997). Within this perspective, the key dimensions could be considered 'principles' and the sub-dimensions 'criteria'. However, this is not standard terminology: on the contrary, the various initiatives of evaluation of governance analyzed use 'components', 'elements of quality', 'critical aspects', etc. There is an obvious need to harmonize the terms (as well as the contents). With respect to other sets of indicators (for example those of the GFI), the one proposed is certainly a very simplified framework, but some degree of simplification is necessary to render the evaluation practicable and reasonable; otherwise, there is a risk of constructing decision-support tools that will not be utilized (especially at local level) simply because they are too complex and costly.

Referring to the definitions used in 4.1, here we present the sub key-dimensions for each key dimension:

Sustainable 'glocal' development

We have divided this complex key-dimension in the three main sub-dimensions of sustainability (environmental, social and economic sustainability), with the idea of including all the specific projects promoted and planned by the organization, and in addition a fourth transversal sub-dimension that embraces all those aspects concerning to organization's responsibility: equity in cost and benefit distribution, commitment do sustainability, certification, sustainability promotion and reporting.

Sub Key-Dimensions: Long-term Equity; Environmental Impacts; Social Impacts; Economic Impacts.

Efficiency

We followed three branches to analyze efficiency. An organization is efficient if it is able to define, and to respect, operative and clear deadlines, to achieve its goals without waste of money, and to allocate efficiently its human, technologic and budget resources. Good governance means capacity of using well resources, even if they are falling and are few. In 'Costs and Outputs' we consider also the organization's awareness of its transaction costs as it is necessary to better guarantee efficiency.

Sub Key-Dimensions: Resources Allocation; Costs and Outputs; Respect of Deadlines.

Effectiveness

The first sub-dimension is the most evident: an organization is able to carry out projects and policies effectively if it achieves desired outcomes in practice and is able to interest stakeholders.

Stakeholders' involvement is essential to be effective: for this reason an inter-organizational, inter-sectoral and multi-level coordination is necessary.

Finally, we included a third sub-dimension called 'resilience'. Resilience is "the capacity to adapt to changing relationships between society and ecosystems" (Resilience Alliance, 2010). It includes every kind of change that could shake the equilibrium the state of art of things, such as changes in institutional arrangements and actions, changes in available financial resources, ecological changes, changes in population needs. Organizations need to be able to manage risk: adaptation, flexibility and creation of professional and economic relationships (EENRD, 2010), are key-words to be taken into consideration.

Sub Key-Dimensions: Objectives and Outputs; Coordination; Resilience.

Participation

Participative approaches' use is very controversial and complex: on the one hand participation is a decisive factor for effectiveness as it allows to stimulate the involved actors' interest, on the other hand it slows down the achievement of goals and can be an obstacle to efficiency. That is way we decided to divide this key-dimension in several sub-dimension, for better analyzing specific aspects of this tricky concept.

'Stakeholders inclusion' evaluates the adoption of participative approaches throughout the four project phases. 'Representativeness' analyzes if population interests are well represented by participating stakeholders. 'Empowerment' allows people to feel free to exercise their own voice; we consider two aspect: 1) the effort of organization to collect, categorize and file comments from stakeholders for trying to take them into consideration in its projects, 2) and the presence of formalized pre-defined rule/procedure for taking into consideration comments and feedbacks from stakeholders, which might be considered positively in term of empowerment because at least stakeholders know from the beginning which are the "rules of the game", even if it is not possible to evaluate the quality of such procedures. Then we consider the equal participation of all actors and of minorities such as women and young to decision-making process. Information exchange flows allow the organization to reach all population and to collect feedback by everybody. Networks can be created by formal collaboration but also by social initiatives and events of aggregation. Finally the focus is on negotiation mechanisms and real analysis of latent conflicts: conflicts management avoids divergences in decision-making process.

Sub Key-Dimensions: Stakeholders inclusion; Representativeness; Empowerment; Equity in participation; Information exchange flows; Networks creation; Conflicts management.

Transparency

The most evident means to tell that an organization operates in a transparent way is the evaluation of its documentation's accessibility, understandability, updating and exhaustiveness. But also the quality and quantity of procedures to get feedbacks and to inform external stakeholders are important sub-dimensions of transparency.

Sub Key-Dimensions: Documentation; Feedback; Information flows to external stakeholders.

Accountability

We divided accountability in three sub-dimensions: 1) Program and process accountability, which evaluates the clarity of roles (who is held accountable?) and the division of responsibility; 2)

Fiscal accountability, which includes salaries and payments; 3) Monitoring and evaluation, both internal and external.

Sub Key-Dimensions: Program and Process Accountability; Fiscal Accountability; Monitoring and Evaluation.

Capacity

The term 'capacity' can be read on two levels: the internal competences and the professionalism during the whole project cycle on the one hand, and the knowledge transfer to all stakeholders involved in projects. Good governance should allow stakeholders to attempt to learn something together (Dillenbourg, 1999): collaborative learning is based on mutual growth through information and knowledge sharing.

Sub Key-Dimensions: Competences and Professionalism; Knowledge Transfer and Collaborative learning.

4.4 Sub-dimensions screening

In this paragraph we made a screening of our key-dimensions and their respective sub-dimensions in other three case-studies. This screening has led to our second paper, according to the numeration in the first chapter (Secco et al., 2010).

Our conceptual framework was compared with the evaluation procedures of the LEADER approach within the ambits of rural development planning (see description in paragraph 2.4). Methodology and criteria in case studies' selection has already been described in paragraph 3.1. This screening has led to our second paper, according to the numeration in the first chapter (Secco et al., 2010).

Here attention is paid to two main aspects: i) the selection process of the LAG, implemented in the initial planning phase, and ii) the Common Evaluation Questionnaire. The part relating to the evaluation indicators proposed at NSP (National Strategic Plan for rural development) level or LDP (Local Development Programs) level will instead only be briefly mentioned. The selection process of the LAG is the administrative procedure set up by the Managing Authorities (Regions and Autonomous Provinces) which, on the basis of the planning documents presented by the LAG, assign (or do not assign, depending on the result) the funding to the LAG. The selection procedures have been implemented in a different way by each Region: in some cases it is competitive,

evaluation parameters have been included and a score has been attributed for each characteristic of the LDP and proposing LAG. As shown in Table 4.3, the situation of the selection process differs: the preliminary examination still has to be concluded in the Abruzzo, Marche, Molise and Sicily Regions. All the other Regions have already finished the selection procedure, even if with some delay with respect to the initial timetables, and assigned the funds.

Table 4.3. Selection of the LAG and LDP: situation at 15 July 2010

	N. of LAGs (**)	Pre-selection of LAGs				Selection of LAGs			
		Pubblication	Deadline	conclusion preselection	results (n. LAGS)	Pubblication	Deadline	conclusion selection	results (n. LAGS)
Abruzzo	6					10/02/10	23/04/10		0
Basilicata	8					16/10/08	30/06/09	13/07/10	8
P.A. Bolzano	4	22/11/07	07/01/08	17/03/08	4	23/03/08	23/06/08	13/10/08	4
Calabria	14					01/09/08	30/01/09	18/01/10	16
Campania (*)	14	05/08/09	18/09/09	05/12/09	13	25/01/10	09/03/10	01/04/10	13
Emilia Romagna	5					30/05/08	08/09/08	18/12/08	5
Friuli	5					28/05/08	01/09/08	10/07/09	5
Lazio	8					21/05/09	15/12/09	24/06/10	8
Liguria	9	23/05/07	18/06/07	17/07/08	9	17/07/08	15/09/08	20/03/09	9
Lombardia	10	20/02/07	01/04/07	11/05/07	19	13/06/08	13/07/08	14/07/09	16
Marche	5	20/12/07	09/01/08	10/03/08	6	05/06/08	30/09/08		3
Molise	3	16/01/09	14/02/09	27/03/09	3	31/10/09	15/01/10		0
Piemonte (*)	12					24/08/08	16/11/08	04/03/09	13
Puglia	25	23/10/08	23/12/08	29/01/10	25	15/10/09	29/01/10	27/05/10	25
Sardegna	15	30/04/08	30/07/08	31/03/09	13	23/12/08	31/03/09	25/02/10	13
Sicilia	15	29/05/09	22/07/09	15/12/09	17	04/09/09	15/12/09		0
Toscana (*)	7	21/01/08	21/02/08	13/07/08	7	14/05/08	13/07/08	03/08/09	7
P.A. Trento	1					11/04/08	02/03/09	18/08/09	1
Umbria	5					11/06/08	25/08/08	14/06/09	5
Valle d'Aosta	4					07/11/08	19/05/09	19/03/10	3
Veneto	14					12/02/08	12/05/08	10/03/09	14
Italia	189					16/11/08	12/03/09	10/11/09	168

Source: National Rural Network, 2010, mentioned in Secco et al. (2010)

Without entering into the merits of the implementation of rural development policies, it is worth mentioning the long delay in the start-up of the LEADER approach in many Italian Regions. If on the one hand this will undoubtedly cause difficulty for the LAG in implementing the rural development measures, on the other, it already has serious effects in terms of expenditure efficiency, contributing to the risk of generating situations that involve automatic withdrawal of the EU funding.

In all three considered case studies (Veneto, Umbria and Sardinia Region) the evaluation was done with an administrative procedure that involved a public call for bids, the presentation of projects (LDP or draft programmes) by the LAG, a preliminary examination and evaluation of the projects and the publication of a ranking. The evaluation methods used are rather different. In particular, only Sardinia among the studied Regions included award mechanisms, allocating 30% of the budget to distribution among the LAG based on their position in the ranking. For the other two Regions the ranking determined exclusively eligibility to the funding. Also in the definition of the

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minimum scores of eligibility the three Regions acted differently: Veneto and Umbria set a minimum score of 60 points to gain access to funding from the NSP, Sardinia had a much lower limit, of 40 points, but then penalized the "worst" LDP with a modulation of the funding.

With regard to the criteria adopted for the evaluation of the LDP, as it is not possible to present a detailed description, it is worth mentioning the very high level of detail adopted (perhaps too high) in the case of the Veneto Region, more succinct in the case of Umbria and Sardinia.

As shown in Table 4.4, the approach adopted by the Regions in the selection of the LAG/LDP differs greatly. Some of these differences are due to the different ways of implementation of the LEADER approach in the three Regions. The evaluation criterion that refers to the characteristics of the territory, in fact, is not applied by Umbria and Sardinia because the LEADER territories have already been identified and defined as such in the NSP. The LDP therefore do not contain information, analyses and diagnoses on the territories and criterion 1 in Table 4.4 cannot be adopted as an evaluation tool of the LAG/LDP. As regards the partnership characteristics the differences are less relevant: the organization, nature, type and size of the partnership are characteristics considered by all the Regions, while the experience of the partners in local development policies is considered only by Veneto and Umbria and the representativeness of the partnership is not included as an evaluation criterion by Umbria Region. The section relating to the evaluation of the local development strategy adopted is more detailed and complex. In this regard it should be stressed that only Umbria Region has considered among the evaluated characteristics the capacity to generate positive impacts, the quantifiability of the effects and the presence of an evaluation system. However, it must be said that at such an early stage, the evaluation of the possible impacts of local development planning is inevitably rather risky.

Table 4.4. Indicators used by the Regions in the selection of the LAG/LDP

			N. indicators		
Criteria		Sub-criteria	Veneto	Umbria	Sardinia
1 Characteristics of the territory			**4**	**0**	**0**
	1.1	Rurality	2	-	-
	1.2	Homogeneity	1	-	-
	1.3	Dimensions	1	-	
2 Characteristics of the partnership			**9**	**8**	**10**
	2.1	number subjects		1	1
	2.2	nature and type subjects	1	1	3
	2.3	experience	3	1	-
	2.4	Representativeness	2	-	5
	2.5	effectiveness/organization	3	5	1
3 Characteristics of the strategy			**8**	**10**	**4**
	3.0	*coherence with RDP*			*1*
	3.1	quality analysis/diagnosis	1	1	

3.2	strategy coherence with respect to a central topic	1	1	
3.3	overall coherence	1	2	
3.4	innovative approaches	1	1	1
3.5	complementarity with other policies	1	1	1
3.6	Cooperation	1		1
3.7	participative approach	1	1	
3.8	capacity to generate positive impacts		1	
3.9	quantifiability effects/evaluation system		1	
3.10	integration		1	1
3.11	equal opportunities	1		

Source: our elaboration on regional LAG/LDP selection procedures, reported in Secco et al. (2010)

In the second part of the analysis the selection system used by the three Regions was compared with the evaluation system proposed in this paper. A summary of the comparison is reported in Table 4.5. It should be noted that in order to compare the two systems appropriate simplifications had to be adopted; very often the indicators used in the selection process are formulated in a different way to the dimensions and sub-dimensions we proposed. It may also happen that a sub-dimension is represented by more than one indicator in the evaluation system or, on the contrary, that more than one sub-dimension corresponds to a single indicator of the evaluation process.

Table 4.5. Comparison between the proposed evaluation system and the indicators used by the Regions in the selection of the LAG/LDP

Key-dimensions of *governance*	Key sub-dimensions	LDP selection processes		
		Veneto	Umbria	Sardinia
1. Sustainable Glocal Development	Environmental impacts	no	no	no
	Social impacts	no	no	no
	Economic impacts	no	no	no
	Institutional changes	no	no	no
	Equity in cost/benefit distribution	no	no	no
2. Efficiency	Allocation of resources	No	no	Yes
	Quantity/quality of results vs. costs	No	no	no
	Respect of deadlines	Yes	yes	yes
	Risk management	No	no	no
	Quality monitoring	Yes	yes	yes
3. Efficacy	Quantity/quality of results vs. objectives/aims	No	yes	no
	Inter-organizational, inter-sectorial, multilevel coordination	Yes	yes	yes
	Changes in institutional agreements	No	no	no
	Financial resources for participatory approaches	Yes	yes	yes
4. Participation	Representativeness	Yes	yes	yes
	Involvement of interested parties	Yes	yes	yes
	Equality (male/female, minorities …)	Yes	no	yes
	Assumption of responsibility	Yes	yes	yes
	Exchange of information	Yes	yes	yes
	Network creation/management	Yes	yes	yes
	Conflict management and resolution	No	no	no
5. Transparency	Documentation: accessibility, updating, comprehensibility	Yes	yes	no
	Exchange of information with external actors	Yes	yes	no

	Feedback: quantity and quality, procedures, contents	No	no	no
6. Responsibility	Clarity of roles	Yes	yes	no
	Division of responsibilities	No	yes	no
	Monitoring	Yes	yes	no
	Dissemination of updates (*reporting*)	Yes	yes	no
7. Capacity	Competences	Yes	yes	no
	Professionalism	Yes	yes	no
	Collaborative learning: processes, testimonies.	Yes	no	no

Legend: yes = dimension/sub-dimension present; no = dimension/sub-dimension absent
Source: our elaboration on LAG/LDP selection procedures, reported in Secco et al. (2010)

Overall, if the first key dimension (Sustainable glocal development) is excluded, which contains mainly sub-dimensions that represent the impacts of the local development policies, which can only be evaluated at an advanced stage of the implementation of the programmes, the other dimensions are considered quite well in the three systems of selection of the LDP/LAG analyzed. On the other hand, the evaluation system proposed at EU level (Table 4.6), that is usually called the "Common Evaluation Questionnaire" (EU - DG Agriculture and Rural Development, 2006), includes a considerable amount of information for the first key dimension, gathered both in the specific questions and in the section of questions of indirect evaluation. The only sub-dimension that does not appear to be considered in the CEQ is the one relating to distribution equity, in terms of both the costs and benefits of the programme.

Table 4.6. Comparison between the proposed evaluation system and the questions in the Common Evaluation Questionnaire 2007/2013

Key-dimensions of *governance*	Key sub-dimensions	Common Evaluation Questionnaire
1. Sustainable Glocal Development	Environmental impacts	M+QT
	Social impacts	M+QT
	Economic impacts	M+QT
	Institutional changes	L+QT
	Equity in cost/benefit distribution	no
2. Efficiency	Allocation of resources	L+M
	Quantity/quality of results vs. costs	no
	Respect of deadlines	no
	Risk management	no
	Quality monitoring	L+M
3. Efficacy	Quantity/quality of results vs. objectives/aims	M
	Inter-organizational, inter-sectorial, multilevel coordination	L
	Changes in institutional agreements	no
	Financial resources for participatory approaches	L
4. Participation	Representativeness	L
	Involvement of interested parties	L
	Equality (male/female, minorities …)	QT
	Assumption of responsibility	no
	Exchange of information	no

	Network creation/management	L
	Conflict management and resolution	no
5. Transparency	Documentation: accessibility, updating, comprehensibility	no
	Exchange of information with external actors	no
	Feedback: quantity and quality, procedures, contents	no
6. Responsibility	Clarity of roles	no
	Division of responsibilities	no
	Monitoring	yes
	Dissemination of updates (*reporting*)	yes
7. Capacity	Competences	yes
	Professionalism	yes
	Collaborative learning: processes, testimonies.	yes

Legend: yes = dimension/sub-dimension present
     no = dimension/ sub-dimension absent
     L = dimension/ sub-dimension present in the Leader evaluation questionnaire
     M = dimension/ sub-dimension present in the evaluation questionnaire of the single measures of RD
     QT = dimension/ sub-dimension present in the questions of indirect evaluation
Source: our elaboration, reported in Secco et al. (2010)

As regards the second dimension (Efficiency), this is only in part considered in the selection processes of the LDP/LAG: the first sub-dimension, relating to the allocation of resources, is not generally included in the calls for bids as it is an element that is determined and set at the higher planning level (NSP); only in the case of Sardinia does an award mechanism exist for the best LDP. The ratio between results and costs is instead never considered in the calls for bids. However, an estimate of the results is difficult at an initial stage of the planning. Indeed, a cost/benefit analysis was rarely implemented in the evaluation experiences of the NSP 2000-2006 (there are only some examples in the evaluation of forestry investments in the Veneto Region, in particular for the building of forest roads). Another sub-dimension that is never considered is risk management.

The comparison with the CEQ (Table 4.6) shows a similar situation. The cost/benefit ratio is not considered among the questions in the questionnaire, the same goes for risk management.

Passing to the third dimension (Efficacy), the sub-dimension that is missing in both the calls and in the CEQ is the one relating to the change in institutional relations, which are generally considered not modifiable elements by local development and rural policies. The sub-dimensions relating to participation are instead well-represented, especially in the selection procedures of the LAG; the only sub-dimension absent in all the studied Regions is the management and resolving of conflicts.

The fifth dimension (Transparency) is considered in the selection procedures of the LAG, while it seems to be strangely absent from the CEQ. This is in some ways surprising and unexpected in that the transparency of the decision-making and planning processes, and especially the feedback from the population involved and from the stakeholders, has always been an important element in LEADER planning and, recently, also in rural development planning. Many LAG, but

also some Regions, have, in the design phase of the Programmes (NSP or PAL?), activated procedures of public consultation, also via internet, which have directly involved the local population and stakeholders with a collection of proposals, initiatives and highly innovative ideas.

On the last two dimensions (Responsibility and Capacity) both the calls and the CEQ show evaluation criteria and evaluation questions much in line with the key dimensions we propose, the only element that appears lacking in the CEQ is the clarity of the roles and the division of responsibilities, which is moreover, in our opinion, a dimension more pertinent to the ex ante evaluation than to the *in itinere* or *ex post* evaluation.

Moreover, it should be stressed at the end of this brief review of the evaluation criteria adopted in the planning, that the Common Evaluation Questionnaire refers to the whole of rural development planning, not just to the LEADER approach. It follows that the detail that can be given to the LEADER approach, which only plays a minor part in rural development, is inevitably limited. It will be interesting to evaluate, as the planning proceeds, how the LAG react to the processes of self-evaluation. But this can only be analyzed in the last part of the planning of rural development.

The analysis has demonstrated that the system of dimensions and sub-dimensions fundamental for the analysis of governance that we propose is on the whole in line with the monitoring and evaluation systems proposed and implemented within the ambits of rural development and, in particular, with the LEADER approach. The greatest differences regard the dimension relating to the transparency of the decision-making and programming processes and that of the evaluation of the cost/benefit ratios of the policies implemented. On the first point (Transparency) the LEADER is already a fully-developed and effective system. Over time the capacity of the local partnerships to deal with the population and with the stakeholders has progressively increased. Nowadays also regional planning adopts, in some territorial contexts, participatory processes that just a few years ago would seemed impossible to implement. More problematic is the question of distribution equity and the ratio between costs and benefits of the policies of local/rural development. It is clear that an evaluation approach that integrates the comparison of costs and benefits and the evaluation of the distribution effects is highly complex. Yet there is the impression that the direction taken by the European Union in recent years is that of evaluating the policies exclusively on the basis of their cost, without dwelling too much on the (monetary) evaluation of the effects. If on the one hand this makes sense, also from the economic point of view, in that the aim is to avoid phenomena of surplus or over-compensation (the lost income or higher costs for beneficiaries that participate in the measure must never be higher than the payment), on the other hand ignoring every attempt at monetary evaluation of the benefits risks

leading to distortions, by favouring, public expenditure being equal, measures that are easier to implement (and sometimes of dubious benefit) over others that are more complex (but perhaps of greater benefit).

Increasingly often the public decision-makers at international, European, national and local level have to deal with complex scenarios and with a well-informed and demanding civil society with regard to a transparent and participatory decision-making processes. Understanding if and how the current evaluation procedures of programmes like those for rural development are able to measure the quality of the governance, not only in terms of public administration expenditure, but also of participation or of environmental and social responsibility, may contribute towards identifying any weak points and to develop more efficacious models to tackle the effects of the crisis. Nevertheless, there are still many aspects to investigate and clarify to obtain a consolidated series of evaluative criteria of governance.

Final considerations

In this chapter we have compared our conceptual framework (figure 4.2), except for the last column on indicators, with 6 case-studies. Even if the analysis in these case-studies have been conducted according to different objectives and methodology, from this pre-test a substantial validation of our theoretical framework has emerged. In second phase of our research, described in chapter 5, it will be refined and validated, and the last column of the scheme will be filled with specific indicators for each key-dimensions and sub-dimensions.

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5. Results and Discussion: Data Analysis and Indicators

5.1 Preliminary set of indicators

One of the main difficulties in making evaluations on a local scale is usually that of tracing already existing indicators or finding adequate secondary sources of raw data. In developing the conceptual framework (see figure 4.2), described in the previous chapter, we made efforts to adapt existing techniques and assessing indicators to our aims, thus contributing to fill the last column of the framework with as many already existing indicators as possible. For example, we adjusted the hierarchical structure of Principle, Criteria and Indicators for SFM (see paragraph 4.3) to the new field of application (good governance); we were inspired by forest certification auditing techniques and Social Network Analysis tools for identifying several of the possible key-indicators/variables; we adapted experiences developed by global/national scales initiatives (such as the ARD-WB and GFI) to local scale; we drew inspiration from the Common Evaluation Questionnaire (see paragraph 4.4) and its application to rural development policies.

Three steps were followed in finding out the preliminary set of indicators: 1) Adaptation of existing indicators; 2) Transformation of expert-based indicators; 3) Creation of new indicators. They are briefly described hereafter.

1) Adaptation of existing indicators

In the first step we tried to adapt to local context indicators already used in the literature on a national/international level. In table 5.1 we illustrate some examples of indicators used by assessment initiatives focused on national/international governance, such as the World Governance Indicators set formulated by the World Bank, that can be adapted to local context (downscaling), and thus then we have tried to include some of them in our set of indicators to be used at local level. This process was not always possible as we had to evaluate carefully what indicators were measuring at a level different than the local one (Gibson et al., 2000). In table 5.2 there are some examples of international/national level indicators, based on secondary data, that we could not take

in consideration in our study. The main problems for downscaling them from international to local level analysis are reported in the last column.

Table 5.1. Examples of indicators used at national/international level that can be adapted to local context

Dimension	Source	Question / Indicator	Examples of Transformation
Effectiveness, Efficiency	Worldwide Governance Indicators (WGI). Global Insight Business Conditions and Risk Indicators, by expert survey from Commercial Business Information Provider.	Bureaucracy : An assessment of the quality of the country's bureaucracy. The better the bureaucracy the quicker decisions are made and the more easily foreign investors can go about their business	Answering average time (feedback). PO's closeness centrality degree (SNA). Incidence of dedicated staff in the project and in the communication with actors.
Trasparency	Worldwide Governance Indicators (WGI). Institutional Profiles Database (IPD), by experts in Public Sector Data Provider.	Transparency of public action in the economic field.	Existence of periodical reporting in standardized
Capacity, Participation	Worldwide Governance Indicators (WGI). World Economic Forum Global Competitiveness Report, by survey.	When deciding upon policies and contracts, Government officials favor well-connected firms	"After – Before" collaboration Density (SNA), Collaborative learning among stakeholders.

Source: our elaboration.

Table 5.2. Examples of indicators used at national/international level that cannot be adapted to local context

Dimension	Source	Question / Indicator	Problems
Effectiveness	Worldwide Governance Indicators (WGI). Indicator from Global Insight Global Risk Service (DRI), by expert survey from Commercial Business Information Provider	Government Ineffectiveness: A decline in government personnel quality at any level that reduces the GDP growth rate by 1% during any 12- month period	Not measurable at local level
Accountability	Worldwide Governance Indicators (WGI). Political Risk Services International Country Risk Guide (PRS), by expert survey from Commercial Business Information Provider	Democratic Accountability. Quantifies how responsive government is to its people, on the basis that the less response there is the more likely is that the government will fall, peacefully or violently. It includes not only if free and fair elections are in place, but also how likely is the government to remain in power.	Difficult to be applied at the project level.
Participation	"A robust model to measure governance in African countries", Michaela Saisana, Paola Annoni and Michela Nardo, European Commission Joint Research Centre (JRC)	Opposition Participation in Executive Elections. (Y / N)	Participation is often assessed at national level by collecting data on elections.

Source: our elaboration.

2) Transformation of expert-based indicators

In paragraph 2.3 we described two interesting initiatives of governance assessment based on experts interviews: the Governance of Forests Initiative (GFI, 2009) and the Forest Governance Diagnostics Tool by the Agriculture and Rural Development Department (WB – ARD, 2009). We underlined strengths and limits of these methodologies. Indicators used by GFI and World Bank were built on a set of items, each of which could be transformed in a single indicator. In the following table (table 5.3) we report some examples of these indicators, their limits, and some suggestions of transformation in indicators that could be useful in our study.

Table 5.3. Examples of expert-based indicators and hypothesis of transformation.

Indicator	Source	Question / Indicator	Problems	Examples of Transformation
Trasparency	"Roots for Good Forest Outcomes: an analytical framework for governance reforms", 2009, World Bank, annex2, p.1	Are commercial timber forest products allocations from public forests open and transparent? - The authorities give clear, timely notice of all proposed policies, programs, laws, and projects - The authorities give clear, timely notice of most proposed policies, programs, laws, and projects - The authorities give clear, timely notice of less than half of its proposed policies, programs, laws, and projects - The authorities seldom or never give clear, timely notice of proposed policies, programs, laws, and projects.	Four possibilities of answer, where the perception and knowledge of the expert is fundamental, and where the two "aspects" of the question (openness and transparency) are kept together.	Are there official documents in which commercial timber forest products allocations are introduced? Are these documents available to the population? With which means (internet, paper, etc)?
Participation, Accountability	"The governance of forests toolkit (version 1): a draft framework of indicators for assessing governance of the forest sector", The Governance of Forests Initiative, September 2009, p.37	To what extent is there effective public participation in policy-making? - Opportunity for debates among various interest groups - Participation of local leaders and representatives - Participation of stakeholders affected by decisions on land use - Quantity of participation - Breadth of participation by different stakeholders	Indicator is not exclusive of one dimension. Different units of measurement: difficulty of answering and aggregation for analysis. No time-bound indicator. No specific indicator (meaning of "different"?).	Are there opportunity for debates among various interest groups in each phase (ideation, planning, implementation, etc.) of the project? Attraction capacity with respect of gender, age, profession… (percentage with respect ate the population proportion).

Source: our elaboration.

3) Creation of new indicators

When indicators were not available in literature, we created indicators *ex novo* following the definitions of each key sub-dimensions.

On the basis of the observations from the pre-test case studies (see chapter 4) and literature review, a preliminary set of 93 indicators has been developed during the research. This list, which at the beginning was neither exhaustive nor definitive, has been tested by means of two pilot applications (case studies in protected areas of Europe – see paragraph 3.2 and 5.2).

In chapter 3 we explained the main characteristics of indicators. In our research we made some strong assumptions in order to move towards building a 'universal' valid assessment instrument. Our general choices are listed hereafter:

   i. The focus of the assessment should be on the organization (public or private) which play an important role in managing a territory and its natural resources through policies, programs, projects and actions;

   ii. The time frame considered for assessment is 5 years: longer ranges risk to come up against memory problems and difficulties in data gathering; shorter ranges are not able to assess the whole governance process, especially when dealing with its impacts;

   iii. The aim is the evaluation of the organization's overall governance (the whole of its decisions, projects, policies, etc.), but at the same time it is possible to assess single projects as indicators can be divided by the 4 typical project phases (Jugdev and Muller, 2005, quoting Pinto and Prescott, 1990): a) conceptualization (intent to create a policy/program and first ideas about it), b) planning (from writing draft proposals to final policy decision), c) execution (from designing to monitoring to finally implement operational actions) and d) termination (ex-post analysis of policy consequences);

   iv. Operative notes, verifiers[1] and references to data collection tools are accurately given to support assessors/users of the set of indicators in correctly interpreting them;

   v. Both fact-based indicators and perception-based indicators are considered; satisfactions items are evaluated in a 1-10 range as we chose to give a wide range to respondents to express theriselves; each sub-dimension contains at least one indicator of both typologies, to have a control of the two.

   vi. Descriptive (and not prescriptive) indicators are used in our study. Two main reasons have led us to this choice: a) the final tool of this work aims to be the baseline of

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[1] Verifiers can be documents, management system elements or "places" where it is possible to find evidences of compliance during the audit. They are useful tools used for auditing (they give ideas and suggestions to the auditor) and for managing (they give ideas and suggestion to the manager).

organizations (Parks, LAGs, etc.) from which the organization itself can start to evaluate its performances' improvement; b) it would not be correct to define *a priori* a minimum level of good governance through a set of prescriptive indicators. Prescriptive indicators would need a consultation of experts, but opinions about this huge concept can be very different (environmentalists, entrepreneurs, etc.) and it would be difficult to reach a common agreement.

vii. When programs/projects are mentioned in indicators, we not necessarily refer to the total number of programs/projects, but it might be enough the indicator is satisfied for one or few of them: in this way, we do a more global evaluation and we avoid the problem of assessing too small projects in those Organisations carrying out large scale projects and high numbers of projects.

viii. Indicators based on public operators questionnaire are composed by binary data: in this way surely we lose some precious piece of information, but this choice allow us to have an easy-to-use and practical tool, flexible in adapting to different contexts.

In order to fill the last column of our theoretical framework (see figure 4.2) with concrete good governance indicators, we had to solve several methodological problems. Hereafter our reasoning, the main problematical issues and our final choices on regards to each single key-dimension of good governance are briefly explained.

1. Sustainable 'glocal' development

In the first sub-dimensions we studied all those aspects concerning to the organization's responsibility and capacity to act in a 'glocal' manner: from policy related to global environmental and social concerns (e.g. a general commitment towards sustainability based on the existence of an third-party environmental or social certification inside the organization) to the local actions for promoting sustainability, we tried to have a look to actors at different levels. Aware of the fact that in gathering only binary data we risk to lose the quality of reporting and commitment to sustainability (i.e. the existence of reporting does not mean *per se* the reporting is exhaustive, clear, etc.), we tried to compensate this limit by analyzing to what extent actors are conscious of the cost and benefit sharing mechanism.

The task of finding out appropriate indicators was easier in the other three sub-dimensions. We started from the presence/absence of specific projects for improving the environmental, social and economic impacts, and then we tried to analyze the concrete impacts in terms of perceptions and relationships.

2. *Efficiency*

Efficiency has been one of the most debated key-dimensions: from the one hand consolidated procedures and tools from other sectors (for instance in economic development cooperation) are available and might be adapted, on the other hand these procedures need long time and financial knowledge that would slow down the assessment process.

The second main problem we had concerned the distinction between public institutions and private organizations as consortiums, corporations, NGO's, cooperatives, etc.: the concept of budget optimization changes in the two contexts and the financial sources are different: for example, how is it possible to evaluate the efficiency of a public institutions if national funds transferred by the State or other national funding agencies decrease for external driving factors (such as the current international economic crisis)?

The third issue concerns with the allocation of resources that are not financial, as time, technology and human. We had some problems in finding objective indicators to assess this latter aspect: for the evaluation of human resources allocation we considered only the perception of stakeholders (while we assessed the employers professionalism and training in the key-dimension 'Capacity').

Effectiveness

For the evaluation of projects we couldn't base on the number of beneficiaries achieved by the projects, because, for instance, in projects on biodiversity it is difficult to define exactly who are the beneficiaries. For this reason we focus on the capacity of the organization to achieve its goals, to evaluate its performances and to create interest in the population.

It was easy to choose indicators to analyze the inter-organizational and inter-sectoral coordination capacity of the organization. We had more problems to assess the multi-level coordination: we couldn't study the relationships of the organization with higher levels as the same questions should have be done to all the actors of the network; and we couldn't focalize on the number of contacts among stakeholders which resist at the end of projects as we want to evaluate the whole governance and not single projects. So at the end we decided to use SNA for multi-level cliques analysis, and we looked at the presence of joint actions with international, national or sub-national organizations.

The last sub-dimension is the resilience of the organization, that means the adaptation capacity to changes. The main aspects that we wanted to evaluate were: 1) the integration in the territory and the acceptance by population, 2) the diversification of financial resources, 3) the

management of risk, 4) the presence of flexible rules and 5) the political stability. We found proxy indicators to assess the first three aspects, but we didn't succeed in finding out objective variables to study the leadership change's impacts, the number of reforms and the capacity to adapt internal and external rules.

Participation

The integration of objective indicators with indicators based on surveys among stakeholders is particularly important in assessing this key-dimension. In particular we expected that SNA would have provided useful instruments to understand the impacts of policy decisions by examining the actors' involvement and the creation of networks among involved stakeholders.

In the first sub-dimensions we assessed the adoption of participatory approaches throughout the project cycle (no need to investigate it for each single project/program: the aim is to assess the overall capacity of the organization to adopt participation in the various phases of the project cycle) and the stakeholders effective participation. In the second sub-dimension we looked at the 'Representativeness' in terms of capacity of participating stakeholders to represent differentiated interests and of facilitation in covering all the territory with meetings and participatory events.

In empowerment assessment we needed to have at least 2 levels of analysis (to be integrated by the stakeholders perception/satisfaction):

1) The effort of the organization to collect, categorize and file comments from stakeholders; it is considered anyhow positive in term of governance even if there are no evidences about the real use of these comments in changing decision-making. At least, the organization made an effort in trying to take comments into consideration: unsuccessful use of these comments might be due to low level of capacity/experience to manage participatory approaches rather than unwillingness.

2) The fact that the organization has formalized a pre-defined rule/procedure for taking into consideration comments and feedbacks from stakeholders might be considered positively in term of empowerment because at least stakeholders know from the beginning which are the "rules of the game", even if it is not possible to evaluate the quality of such procedures. In addition, in order to cross-checking the results of the first 2 indicators, a third indicator has been introduced on stakeholders perception about their real capacity to influence decisions.

'Equity in participation' can evaluated using perceptions and integrating the data collected by the organization itself on its stakeholders with the demographic data on population to see if there is an equal participation of minorities such as women and young to decision-making process. The perception of fairness in participation is not a proxy: it is important the process is perceived to be fair by stakeholder rather than the process to be really fair.

In 'Information exchange flows' and 'Network creation' we observed the instruments used by the organization (procedures for collecting comments, stakeholders updated databases and creation of aggregation events) and the compactness of the networks that such tools should create.

We chose to assess the 'Conflicts management' focusing on negotiation mechanisms and real analysis of latent conflicts rather than on identification/categorization of stakeholders and putting stakeholders around a table for discussing in order to avoid potential redundancies with indicators on sub-dimension "stakeholders involvement". Convergences and divergences analysis has been considered a proxy variable to get an overall idea of the real or latent conflicts in the area of interest (not specific for single projects but more in general on stakeholders differences in points of view/interests): higher divergences mean potential higher level of conflicts. Finally we used the stakeholders' perception to analyze the organization's capacity to play a role of mediator, as it was difficult to use more objective indicators.

Transparency

We found out easily the indicators of sub-dimensions 'Documentation' and 'Information flows to external stakeholders: in the latter we looked at the organization's notification instruments and visibility; in assessing the documentation produced by the organization we tried to evaluate the exhaustiveness, the accessibility, the understandability and the updating of projects documents. The only subjective indicator is the one to assess understandability.

More reasoning has been necessary for the sub-dimension 'Feedback'. The two indicators on 'perception of' and ' satisfaction on' are typical control indicators, and after testing the set of indicators we expected that one of them would be selected. It is not feasible to assess quality of feedback on the basis of incidence of dedicated staff in the communication with stakeholders (e.g. n° dedicated hours/n° tot working hours) because this would work only for large organizations – for example those where a special department for complaints management is established (evidences of this difficulty came out also from the pre-test of set of indicators carried out at the Dolomiti Bellunesi National Park in April 2011). But small scale (i.e. local authorities) will not probably have the staff and/or the timesheet regularly registered for this activity when it is not an ordinary activity. Also, the indicator concerning the variety of the ways for contacting the organisation (e.g. by emails, and/or website, and/or phone numbers, etc.) has been considered to be not easily standardizable. We did not use the "average time for feedback" (i.e. n° days elapsed between question and answer/n° tot questions) because from the preliminary test with PNDB officials we found these type of information where not easily available and these kinds of assessment would require consultation with experts.

Accountability

In 'Program and process accountability' we focused on organization's clarity: presence of rationale for decision, charts, rules and well-defined roles. In particular, in asking the stakeholders if the role of the organization within the area overlaps with those of other organizations, there might be the risk of assessing the perception of high overlapping which is not due to the Organization's behaviors but to the legal framework (i.e. assigning similar competencies to various authorities) and/or to the actions of other Organizations (which are performing overlapping with the assessed Organization). In any case, the situation of the general accountability in terms of clarity of roles among actors would be limited and it would limit the capacity of the Organization to be accountable to the citizens.

'Fiscal accountability' have been evaluated by the presence of public available evidences of salaries and payments, while in 'Monitoring and evaluation' we considered both internal and external evaluations.

Capacity

An organization can guarantee its 'Competences and professionalism' if its employees are specialized in different fields, if it organizes training courses and if it is able to co-finance projects.

To explore the collaborative learning, which is based on knowledge mobilisation/transfer, we decided to transform an indicator typically used by SNA tools (density degree) using a symmetric matrix, assuming that when there is a bidirectional flow of collaboration between two stakeholders, both the stakeholders are improving their knowledge and thus collaboratively learning each other. The normal density degree evaluates the creation of whole network, while by investigating the number of bidirectional flows of collaboration (direct interview to stakeholders) with respect to the total number of flows of collaboration the focus is on reciprocity of collaboration which is assumed to support also collaborative learning. If the flow is mono-directional, there would be the typical top-down approach in spreading information.

The complete list of preliminary set of indicators is presented in the appendices (see appendix 2). In table 5.4 there are the main sources from which indicators used at national and/or international level have been taken to be adapted to local context analysis (our framework). Indicators based on Social Network Analysis will be deeply treated in paragraph 5.3.

Table 5.4. Main sources of international and national indicators.

Source	Indicator	Code
Derk Jan Stobbelaar, abstract 92, p.34, conference of Wageningen	Commitment to sustainability	1a.1
WB - ARD, 2009, annex 2, p.11	Cost and benefit sharing mechanisms	1a.4
Haniotis Tassos, 2011, presentation at the 122nd EAAE Seminar, Ancona, Italy	Climate change projects	1b.1
EENRD, 2010, pg.38	Social relationships	1c.3
WB - ARD, 2009, annex 2, p.3	Use of budget	2a.1
WB - ARD, 2009, annex 2, p.7	Use of technology	2a.4
EENRD, 2010	Phasing out	3a.4
Hirschi, 2008, p.21	Inter-sectoral coordination	3b.2
Milic, Bogdanov, Heijman, 2011, p.9	Multi-level actions	3b.3
Hirschi, 2008, p.19	Multi-level network	3b.4
Prell, Hubacek , Reed, 2009, p.4	Bidirectional flows	3c.5
GFI, 2009, p.37	Participation throughout the project cycle	4a.1
WB - ARD, 2009, annex 2, p.4	Formal mechanisms	4g.1
Franceschetti, 2009, p.55	Between stakeholder	4g.2
WB - ARD, 2009, annex 2, p.1	Accessibility	5a.2
WB - ARD, 2009, annex 2, p.1	Understandability	5a.4
GFI, 2009, p.38	Updating	5a.5
WB - ARD, 2009, annex 2, p.2	Perception of feedback	5b.2
WB - ARD, 2009, annex 2, p.2	Procedure for feedback	5b.3
Cashore, 2009, (Part 1)	Notification instruments	5c.1
Cashore, 2009, (Part 1)	Rationale for decisions	6a.1
GFI, 2009, p.44	Perception of clarity of actors' roles	6a.3
Cashore, 2009, (Part 1)	Clarity of policymaking rules	6a.4
GFI, 2009, p.33	Visible salaries	6b.1
GFI, 2009, p.40	Criteria for monitoring	6c.2
WB - ARD, 2009, annex 2, p.6	Evaluation	6c.3
GFI, 2009, p.50	Degree of diversification among staff	7a.1
Ingold, Balsiger, Hirschi, 2008, p.8	Mobilization of knowledge	7b.1
WB - ARD, 2009, annex 2, p.9	Knowledge courses	7b.2

Source: our elaboration.

Finally, we tested the whole preliminary set of indicators in two case-studies, Dolomiti Bellunesi National Park in Italy and Durmitor National Park in Montenegro (see paragraph 5.2).

5.2 Case studies

Both the two National Parks are recognized UNESCO[2] sites, and have been included as they meet the same two selection criteria: they contain "*superlative natural phenomena or areas of exceptional natural beauty and aesthetic importance*" (criterion vii), and they are "*outstanding examples representing major stages of earth's history, including the record of life, significant on-going geological processes in the development of landforms, or significant geomorphic or physiographic features*" (criterion viii)[3]. The two twinned National Parks have in common an analogous vision and similar contexts where policies and projects for a good governance can be applied; on the other hand, the two Parks differ in history, and some *a priori* evidences (such as the absence of a web-site, the absence of use of participative approaches, etc, and the opinions of two experts in the Montenegrin context) made us suppose that the situation was opposite for some key-dimensions. The two socio-economic contexts are very different, and also the geographic position differs: the Durmitor area is more isolated and less complex than the Dolomiti Bellunesi one. Diversity allows us to evaluate the applicability of the set of indicators in very different contexts.

The field work was based on document analysis, consultation and questions to public operators and private stakeholders interviews (see paragraph 3.1). In following lines we introduce the two case studies with a brief description, and we illustrate their main characteristics and the operative choices made during the work.

Dolomiti Bellunesi National Park

Dolomiti Bellunesi National Park was established with a Ministerial Decree on 20th April 1990. The Park Authority, managing the protected area, was born on 12th July 1993, with a decree of the President of the Republic. It covers an area of about 32,000 hectares, located in Veneto Region, central-southern section of Belluno Province, between the valleys of Cismon in the west and Piave in the east, with spurs in the north towards the basin of Maè (Val Prampèr) and the lower Agordino area. The involved mountain groups are Alpi Feltrine (Vette di Feltre, Cimonega, Pizzocco-Brendol-Agnelezze), Feruch-Monti del Sole, Schiara-Talvéna, Prampèr-Spiz di Mezzodì.

The Park includes the territories belonging to 15 Municipalities: Sovramonte, Pedavena, Feltre, Cesiomaggiore, San Gregorio nelle Alpi, Santa Giustina, Sospirolo, Sedico, Belluno, Ponte nelle Alpi, Longarone, Forno di Zoldo, La Valle Agordina, Rivamonte, and Gosaldo. Residents

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[2] United Nations Educational, Scientific and Cultural Organization
[3] http://whc.unesco.org/en/criteria

inside the Park's boundaries are about 80 people, but if we consider the whole population of the 15 Municipalities, inhabitants are about 100.000.

Map 5.1. Dolomiti Bellunesi National Park map.
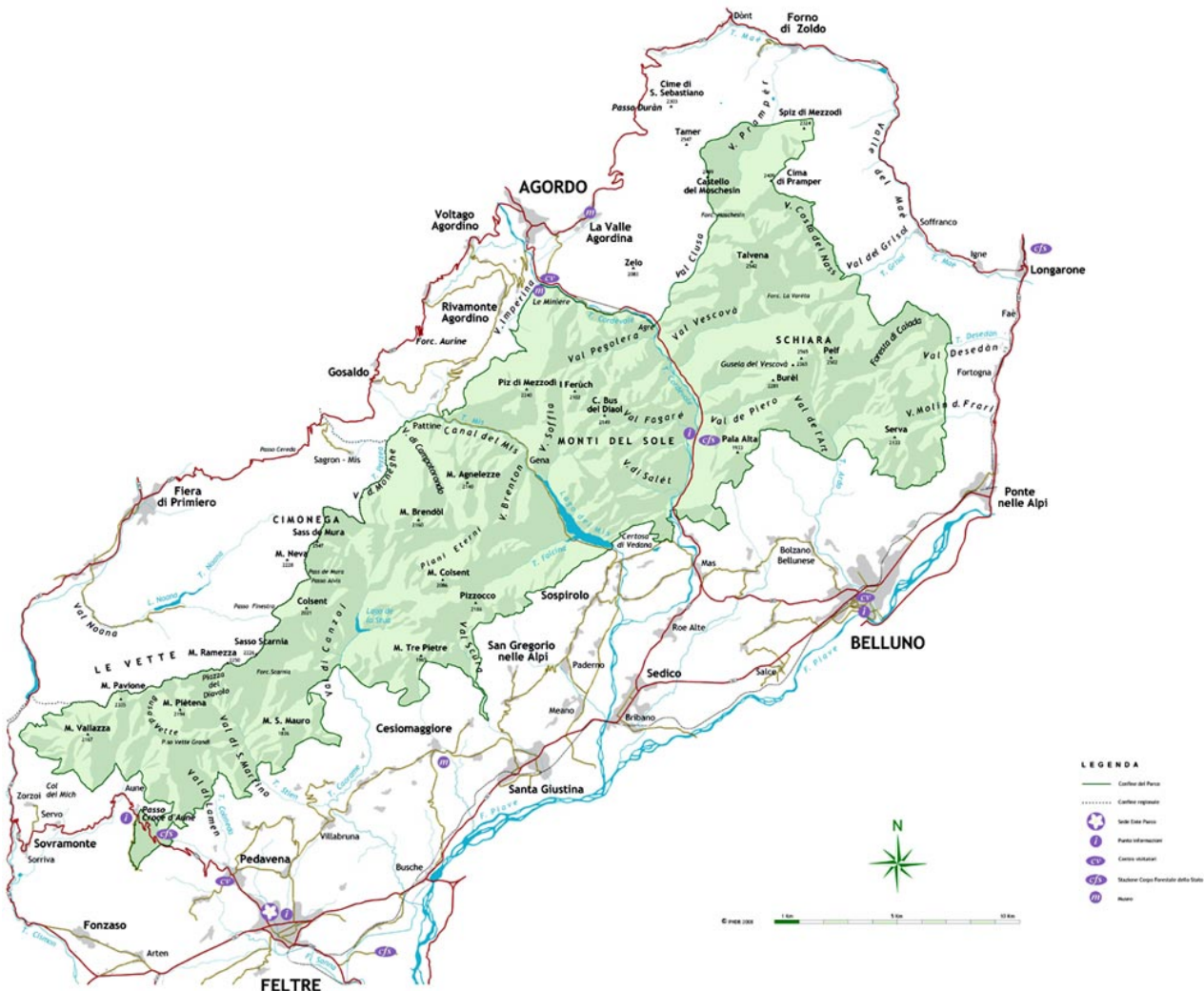
Source: www.parks.it

Dolomiti Bellunesi National Park is inscribed on UNESCO list since 2009: the nomination was sent on 29 January 2008, and it includes nine components parts of varying sizes, one of those is Dolomiti Bellunesi National Park (we decided of including only one of these components as it is independent in decision-making, and for not analyzing a multi-site case-study).

In the organization 14 employees work, helped by 35 agents of the local environment coordination of the Corpo Forestale dello Stato (policy forest guard). The Community of the Park is composed by all the mayors and the representatives of the main public institutions of the area.

The main activities of the Park, divided in 4 branches (innovation, transparency and communication, efficiency in answering citizens, capacity), are: territory and huts control and use, structures for visitors, mountain paths, scientific research, training courses, territorial marketing.

Dolomiti Bellunesi National Park has been the first National Park in Italy to approve the Park Plan, and other useful documents (such as reports, performance plan, etc.) are regularly produced.

The Park's staff has been contacted three times: first we got the preliminary information about the territory and we created the sampling list, and then we had two meetings of about 2-3 hours each, to collect information not available by on-line documentation to fill the oraganization's questionnaire.

Meanwhile stakeholders interviews have been conducted from the 4th to the 22th of July 2011. The initial sample calculated 55 stakeholders to be interviewed, but we had the possibility to contact only 43 of them. In addition to the Park itself, the interviewed stakeholders, divided by category (see paragraph 3.3), are: 13 Municipalities, 7 Public Institutions, 5 Touristic Information Points, 4 Mountain Experts, 2 Recreation-related Enterprises, 3 Reception Structures and 8 Local Producers.

Durmitor National Park

The Durmitor National Park represents one of the oldest protected areas in Europe, since from 1907, in the time of King Nikola. In 1952 the National Assembly of the People's Republic of Montenegro decided to turn this territory into a national park, and in 1978 the area was expanded to encompass a larger aerea including more mountains and the Tara canyon. Actually the Durmitor National Park covers an area of about 39.000 hectares in the northern part of the Country.

The protected territory incorporates parts of the municipalities of Pluzine, Mojkovac, Pljevlja and Zabljak, but only the last one is directly involved in the Park's organization. More or less 3000 persons live inside the Park's boundaries.

In 1980 Durmitor National Park together with the Tara river canyon were inscribed on the UNESCO list of World Heritage Sites.

In the organization 25 employers work full-time, and the main activities concern with flora and fauna protection, touristic information and infrastructure, paths and sings, professional advices and scientific research.

We spoke with the Park's director the first day we arrived in Montenegro to get more specific information about the territory and to create the stakeholders list; afterwards we had two interviews with the Park's staff: in the more substantial one (about 3 hours) we filled out the

majority of questionnaire and we got the main documents from which to collect the remaining information; in the last one (about 1 hour) we checked the previous answers in the light of the stakeholders interviews' results.

Map 5.2. Durmitor National Park map.

Meanwhile stakeholders interviews have been conducted from the 21th of September to the 15th of October 2011. We succeeded in interviewing all the 13 stakeholders of the initial sample. In addition to the Park itself, the interviewed stakeholders, divided by category are: 1 Municipalities, 1 Public Institutions, 1 Touristic Information Points, 2 Mountain Experts, 3 Recreation-related Enterprises, 4 Reception Structures and 0 Local Producers. Interviews have been conducted thanks to the precious support of a local translator.

5.3 Attitudes of stakeholders to economically support good governance

Which the importance assigned by stakeholders to the presence of the Park in the territory? Before the analysis of variables and indicators used to assess the organization's good governance,

we wondered to what extent the involved stakeholders think that the Park's presence is important for the territory development, and which is the value that they assign to the 'idea' of a good governance in their local context. It will be the baseline to final considerations at the end of the analysis.

Our first idea was about the opportunity to estimate the economic value of the quality of local good governance of natural resources in rural area, but then we realized there were too many difficulties in finding out an appropriate methodology and that there would have been limits in matching this economic value to the final value of a composite indicator to assesses good governance. Besides, these attempts would have distracted by the main objectives of our research. So we decided to insert some pointed questions inside the stakeholders questionnaire, without creating a new survey *ad hoc*, with the aim to study the attitudes of stakeholders to economically support good governance and to create the basis for future researches.

We have divided the analysis in two parts: i) we tried to collect information on revealed preferences of stakeholders, asking what they have done (and will do) concretely for contributing to Park's existence in the territory, in terms of time, donation, spaces and other quantifiable actions; ii) we used contingent valuation to see if it is possible to get an estimate of stated preferences about an utopian situation of optimal good governance. Contingent valuation is subject to severe criticism, mainly around the validity and the reliability of the results, and the effects of various biases and errors (Venkatachalam, 2003). But it is a method for placing a monetary value on a public and abstract concept ad good governance, and it is the only valuation technique capable of measuring its non−use value.

Results can be considered surprising. In the little context of Durmitor, where inhabitants are aware that the territory can benefit economically from the Park' initiatives and where local governance can still improve, high values have been obtained by the survey. In the marginal and fragmentized area of Dolomiti people are discouraged to contribute more than what already do for the maintenance of one of the numerous public institutions existing in the territory.

In table 5.5 the main contributions to Park's existence are summarized. We divided private and public actors in two separate columns because the latter had some difficulties in answering to the first and the second items, respectively on time dedicated to Park's initiatives without receiving any compensation, and on money donations, grants, etc. With respect to the other items, we reported only the percentage of actors who have made available spaces for free as it was difficult to get quantitative measures of the sizes, and a full list of other quantifiable things, such as equipment, promotion, etc..

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Table 5.5. Concrete contributions to Park's existence in the last 5 years from private and public stakeholders without receiving compensation in the two case-studies.

Concrete contribution to Park's existence	Durmitor National Park		Dolomiti Bellunesi National Park	
	Private actors	Public actors	Private actors	Public actors
N° of interviewed actors	9	3	17	25
Average time (days/year)	42	0	3	2
Donations (euro/year)	0	0	0	0
Available surface (% of actors)	11	0	24	48
Other (quantifiable)	Promotion – seminars participation - creation of NGOs to clean natural environments	Promotion	Equipment - hives for demonstrations - distribution of brochures	Miscellaneous - gazebos - help for expansion
Generally, actors who contribute without receiving compensation (%)	56	67	41	68

It is possible to see that public institutions are concretely involved in Park's initiatives more in Dolomiti Bellunesi than in Durmitor; as we will see also in the following analysis (paragraph 5.4), Municipalities, Provincia and Mountain Communities participate actively in Dolomiti Bellunesi National Park's process making, and their contributions consist in spaces and human resources. Instead in Montenegro the Municipality and the other public institutions are less linked each other, and their action to allow the Park's existence is limited in promotion.

On the other hand, Montenegrin private actors believe in Park's potentiality more than Italian ones, and the 56% of the interviewed stakeholders (against a 41% in Dolomiti Bellunesi area) tries to contribute without receiving instant compensation.

In the second part we asked if stakeholders, in the utopian assumption that the Park guarantees to be 100% sustainable, efficient, effective, transparent, participative, professionally capable and accountable towards the territory, would be willing to give a financial contribution to achieve the optimum state of governance. In the first case study (Dolomiti Bellunesi) we found out that only 1 respondent on 42 was willing to pay[4]. If we include all the stakeholders in the final sum, the average willingness to pay (WTP) is of 12 euro; 29 euro if we don't consider public institutions which cannot make donations like individuals.

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[4] (an amount of about 500 euro)

This invaluable result was about to make us desist from continuing on this path. But surprisingly in the other case study, Durmitor National Park, things changed. 83% of respondents wished to contribute and the average WTP was 464 euro, value that grows to 567 euro if we don't consider public actors.

These quantitative estimates are obviously hazards. We are more interested in the stakeholders' willingness to contribute actively to the good governance of the territory. We made a last experiment. As it is difficult to understand an abstract concept as governance is, we helped the respondents showing them the characteristics of the 7 key-dimensions: in the final section of the questionnaire, between the questions about what they do concretely for the Park's existence and their willingness to pay, we asked to distribute a symbolic amount of 100 euro among the 7 key-dimensions, to enable the Park to improve its good governance of the territory. In table 5.6 we can see that Durmitor's respondents think that the National Park should invest more in sustainability, while in the Dolomiti context stakeholders need more to have the possibility to participate in the decision-making processes.

Table 5.6. Perception of stakeholders about the distribution among the seven key-dimensions of 100 euro to improve the overall Park's governance (%).

Key-dimension	Durmitor	Dolomiti Bellunesi
Sustainable 'glocal development	42	15
Efficiency	8	14
Effectiveness	18	16
Participation	14	25
Transparency	5	8
Accountability	3	9
Capacity	10	13
Total	*100*	*100*

Source: our elaboration

Results in table 5.6, combined with the reasoning made in the other paragraphs of chapter 5, will help us in the final discussion about the concept of good governance and its key-dimensions.

5.4 SNA descriptive indices and indicators: discussion

Social Network Analysis allows the researchers to study the network structure and the behavior of individuals inside this network (Stockman, 2001). In paragraph 3.3 we have seen the main indices used in literature, and the basic typologies of descriptive analysis. As already explained, in our study we made some basic assumptions and choices. First of all, stakeholders have been identified through a name generator process started by the same organization that we wanted to assess (the two National Parks), and the list has been completed in only two rounds: in this way a so-called ego-network (where "ego" is the "focal" node[5], that is the assessed organization), has been created thanks to a snowball sampling. A whole section of stakeholders questionnaire has been dedicated to relational data collection (i.e. information flows, formal and informal collaboration interactions), and also data about reputational power and divergences among stakeholders have been collected. We gathered in our adjacency matrices 'directed' data in a binary form (1 = presence of tie, 0 = absence of tie), without considering "loops". Data analysis, graphs and final outputs have been created thanks to UCINET[6].

We have identified 8 relevant stakeholders categories based on perceived role of individuals and organizations in the area (Prell et al., 2009): in this way the 'name generator' process has been made easier, and we can use convenient abbreviations in graphs and in final tables, respecting individuals' privacy. The categories, emerged by pilot survey and expert consultation, are (abbreviations are put in brackets): Park ('PNDB' or 'PND'), Municipalities ('comune'), Other Public Institutions ('CM' or 'pubblico' or 'provincia'), Mountain Experts ('esperto'), Touristic Information Points ('turismo' or 'proloco'), Recreation-related Enterprises (sport activities, etc.) ('attivit' or 'pesca'), Restaurant and Reception Structures ('ricez'), Local Producers ('produtt').

Now we are going to show the main results of social network analysis. We'll present first the indexes' scores of the Durmitor National Park as the number of stakeholders is lower than the Dolomiti Bellunesi one, and it is easier to understand the methodology and our reasoning.

The first question of the section dedicated to relational data asked which stakeholders (public or private) have a particularly important role in the management of the territory; in this way it is possible to evaluate the reputational power of each stakeholder, that will be compared with the indices on the position of actors in the network. In the two following tables we describe the

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[5] Hanneman, 2005
[6] UCINET is a software package for analyzing social network data developed by Steve Borgatti, Martin Everett and Lin Freeman (2002).

importance's degree received by each actor by other respondents. The 'reputational approach' is a subjective measure used in literature (Ingold, 2008) to study the power of an actor in the network. We highlighted the stakeholders who received a bigger number of votes (in the upper quartile, rounded up to all who have the same value) as they will be considered as 'main actors' in the construction of an indicator.

Table 5.7. Reputational power of Durmitor National Park's interviewed actors.

Stakeholder	Rep. Pow.	Stakeholder	Rep. Pow.	Stakeholder	Rep. Pow.
Comune	9	ricez1	3	PND	2
Turismo	3	attivit1	3	attivit3	2
ricez3	3	attivit2	3	esperto1	1
ricez2	3	esperto2	3	ricez4	1
				Pubblico	0

Table 5.8. Reputational power of Dolomiti Bellunesi National Park's interviewed actors.

Stakeholder	Rep. Pow.	Stakeholder	Rep. Pow.	Stakeholder	Rep. Pow.
PNDB	12	CM3	8	esperto3	3
comune3	11	esperto5	7	Turismo	3
comune14	11	provincia	7	proloco3	3
comune10	11	esperto1	6	proloco6	3
comune4	11	regione	5	pesca1	3
comune5	11	CTA	5	pesca3	3
comune2	10	esperto4	5	esperto4	3
comune9	10	ricez3	5	attivit1	3
comune1	10	forestale	5	produtt10	3
comune11	10	ricez6	5	esperto2	2
comune6	10	pesca2	4	produtt4	2
comune13	10	ricez4	4	esperto6	2
comune7	10	ricez5	4	produtt2	1
comune15	10	proloco2	4	ricez2	1
comune12	10	ricez7	4	produtt3	1
comune8	10	ricez8	4	produtt5	1
CM2	9	proloco4	3	ricez1	1
CM5	9	proloco1	3	produtt6	1
CM1	9	proloco5	3	produtt7	1
CM4	8	produtt9	3	produtt1	1

It is evident that in the table 5.7 the Municipality is considered the main actor which has the power to manage the territory, and the National Park doesn't enter even the first quartile. On the contrary, the Italian National Park is seen as a key actor, followed by all the Municipalities which constitute the Park Community.

Now we start our network analysis, representing in the following 8 graphs the main measures that are analyzed later. Points indicate the stakeholders: their size represent the reputational power value, while their color represent the category in which the respondent has been classified (see box 5.1). Lines represent the dyadic relationships: information and collaboration flow have been analyzed, and the latter has been broken down in 'informal' and 'formal' collaboration flow. In informal and formal collaboration networks, the size of nodes don't represent the reputational power.

Box 5.1. Legend of points' layout.

🟥	Park
🟦	Municipality
🟩	Public
🟩	M. Expert
⬛	Tourism
🟪	Recreation
🟨	Producer
⬜	Reception

Some graphs could result chaotic for the big number of points and lines, but "a good drawing of a graph can immediately suggest some of the most important features of overall network structure" (Hanneman, 2005). It is possible to get first impressions about the Park's connections to its neighborhood, the density of the network, the presence of isolated actors, the presence of a 'core' or of evident sub-groups.

Durmitor National Park's graphs are easier to be read. In the graph 5.1 we can see that all nodes are well connected and from each node at least four lines start or arrive; in fact the small and informal context of the Montenegrin park allows a better communication and each one know the other actors.

In graph 5.2 we can still see a well connected network, but some nodes are more isolated than in the previous one, and there is a dense core inside the network structure. This aspects are clearer in the informal collaboration network, where we find even an isolated actor (graph 5.3).

On the contrary, the last Durmitor National Park's graph (graph 5.4) is poor of ties. In this area collaboration can be very strong among actors, but difficultly it is formalized. Contracts pivot around the two public stakeholders, the Park and the Municipality: restaurants and reception

structures refer to the Municipality, while mountain experts and recreational enterprises refers to the National Park.

This first analysis already contrast with the low reputational power assigned to the Park.

Graph 5.1. Information flow in Durmitor National Park and reputational power of stakeholders divided by category.
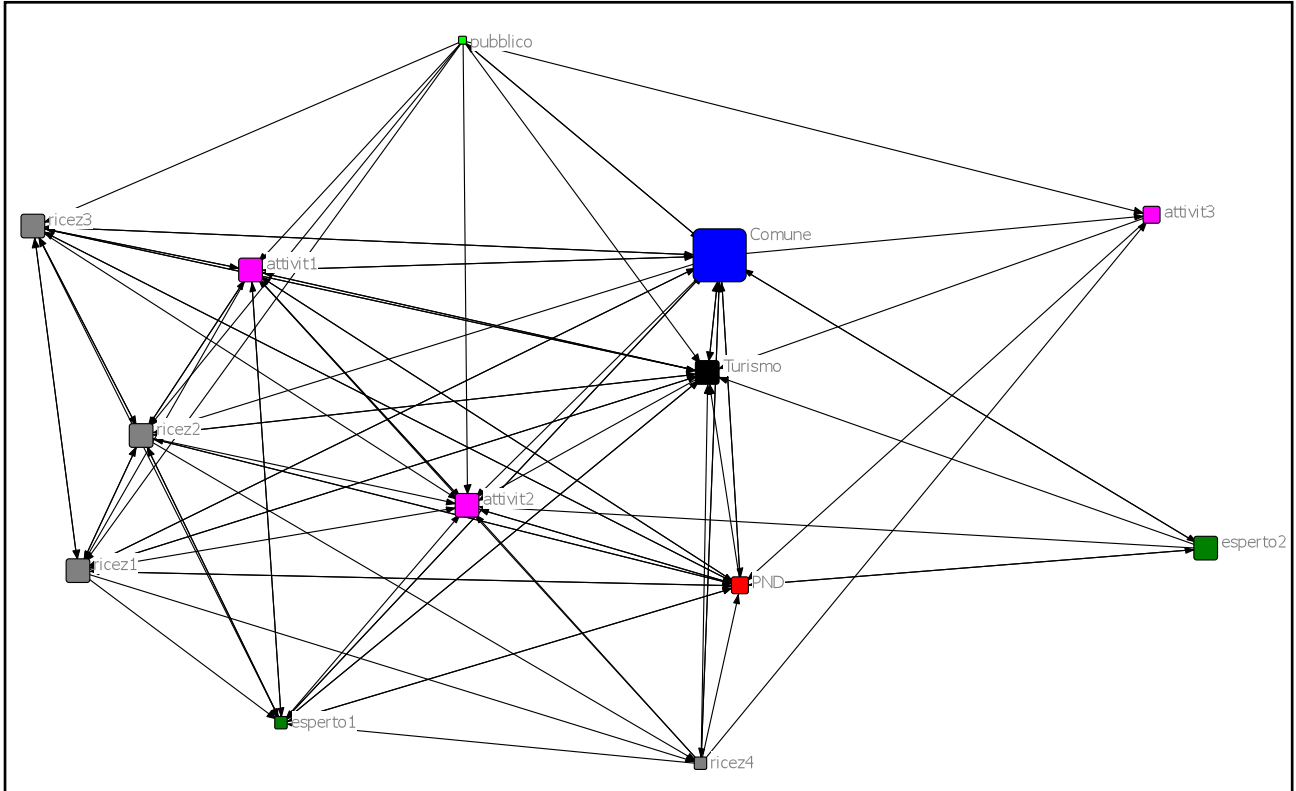
Graph 5.2. Total collaboration flow in Durmitor National Park and reputational power of stakeholders divided by category.
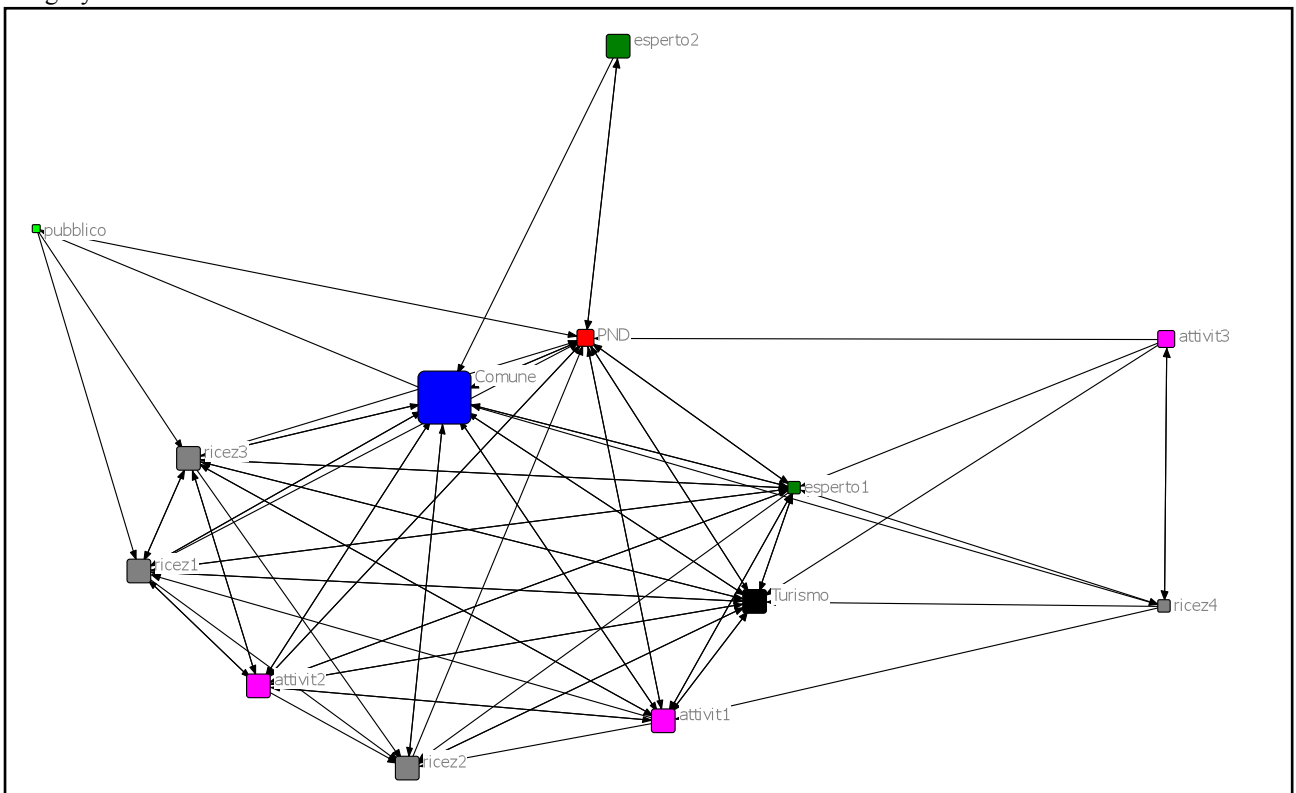
Graph 5.3. Informal collaboration flow in Durmitor National Park. Stakeholders are divided by category.
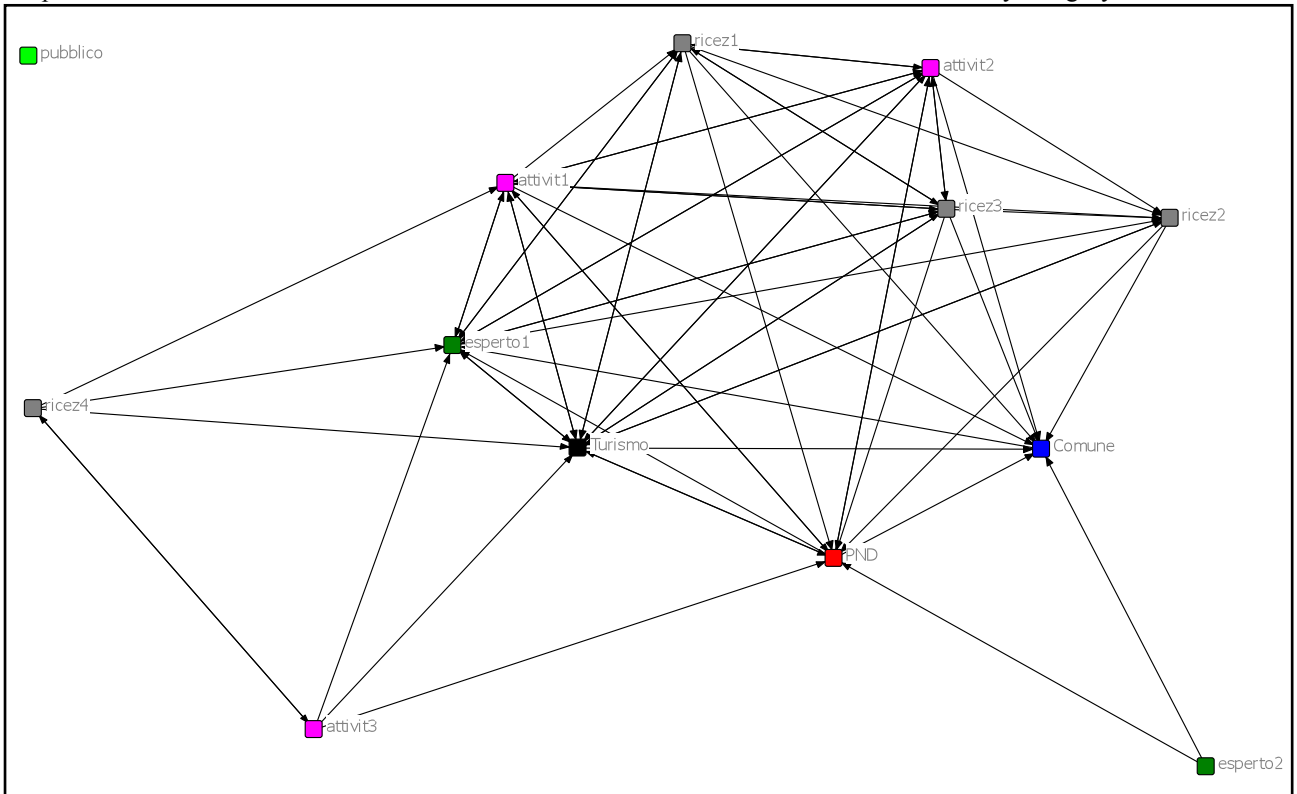
Graph 5.4. Formal collaboration flow in Durmitor National Park. Stakeholders are divided by category.
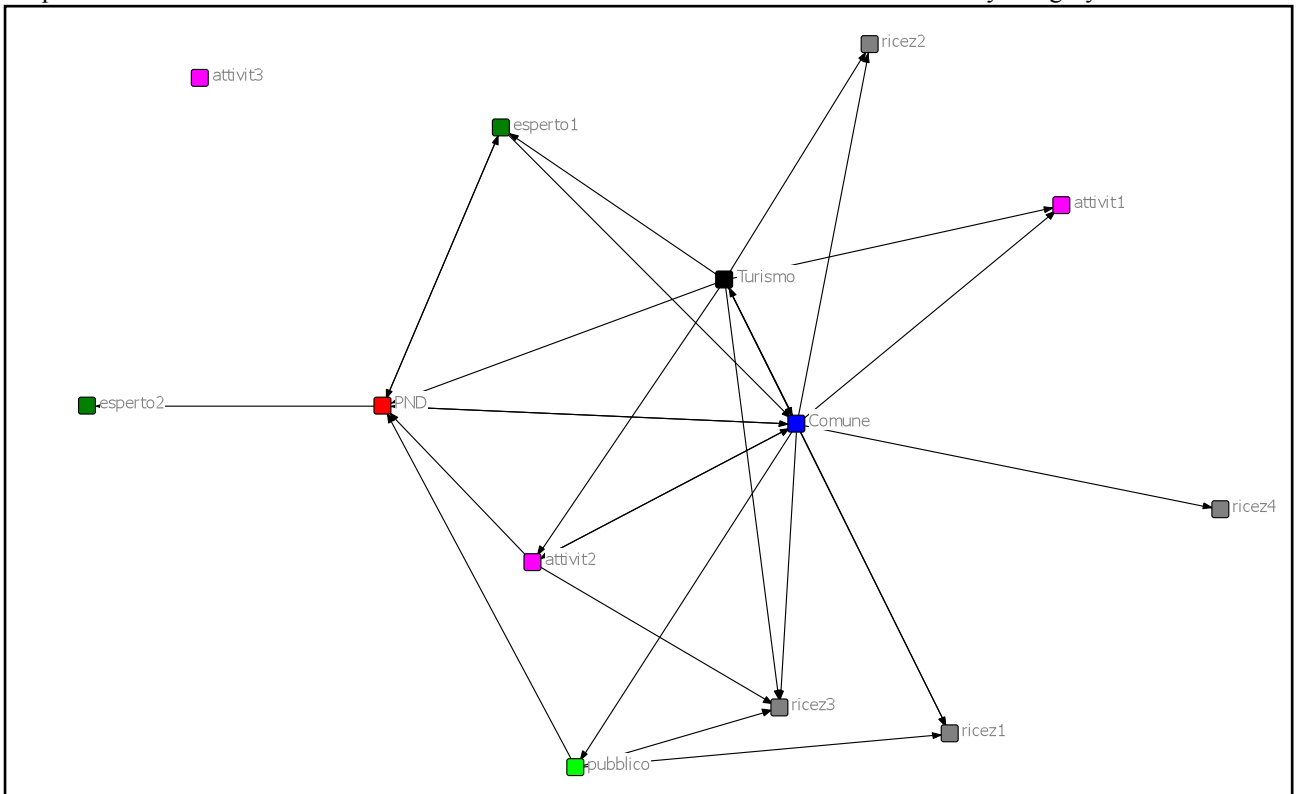
Dolomiti Bellunesi National Park's graphs are much more complex and thus obviously less readable. The high number of nodes doesn't let us understand if the density is really so strong as it appears. For these considerations we need the support of SNA indices. But we can do other general considerations, common to all the 4 networks. First of all, networks are centered on all the Public Institutions: the Park, the Municipalities, the Comunità Montana's, the Province and the National Corps of forest rangers. Private actors in the periphery are always connected with the public administrations that manage the territory where they live or operate. Then, some categories have an internal communication channel, like fishing activities or touristic information points ('proloco'), while others are more isolated.

These considerations are more emphasized in the last two graphs (graph 5.7 and 5.8) where density is lower and ties are clearer. Core and periphery are more evident in formal collaboration network, while the relationships among stakeholders are clearer in the informal collaboration network. Besides, the informal collaboration network is the only one where Municipalities are not in the centre: a more important role is played by less formal Public Institutions as Comunità Montana's are.

In general, actors with highest reputational power seem to occupy the central position of the networks, both in information exchange structure and in collaboration flows.

Graph 5.5. Information flow in Dolomiti Bellunesi National Park and reputational power of stakeholders divided by category.
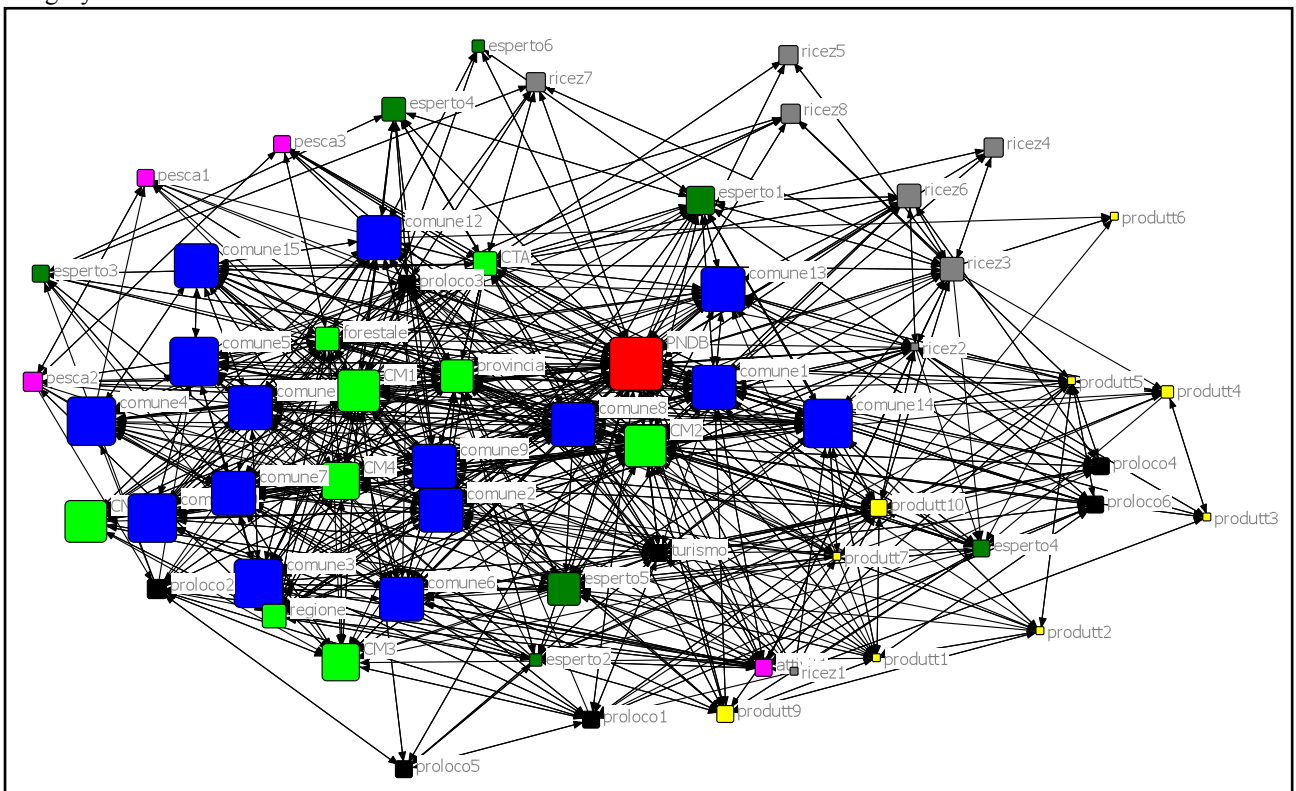
Graph 5.6. Total collaboration flow in Dolomiti Bellunesi National Park and reputational power of stakeholders divided by category.
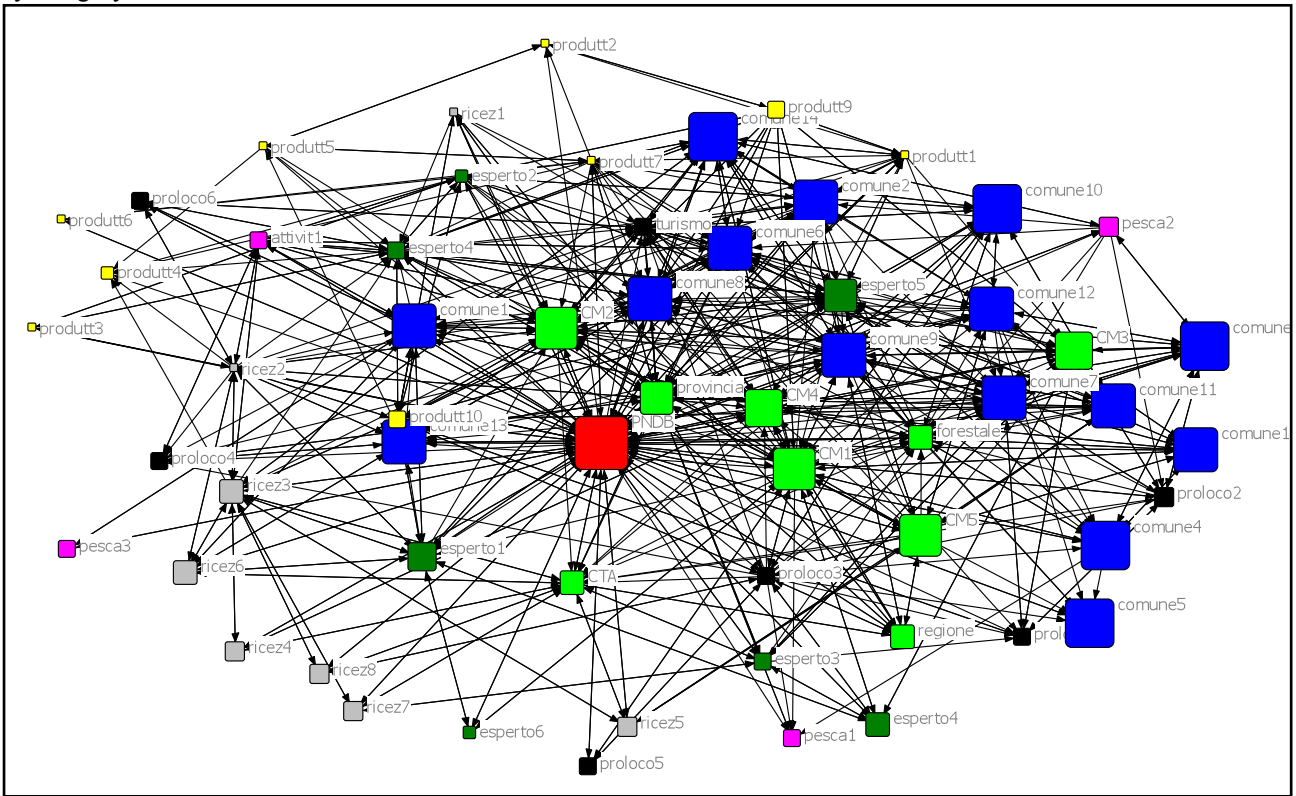
Graph 5.7. Informal collaboration flow in Dolomiti Bellunesi National Park. Stakeholders are divided by category.
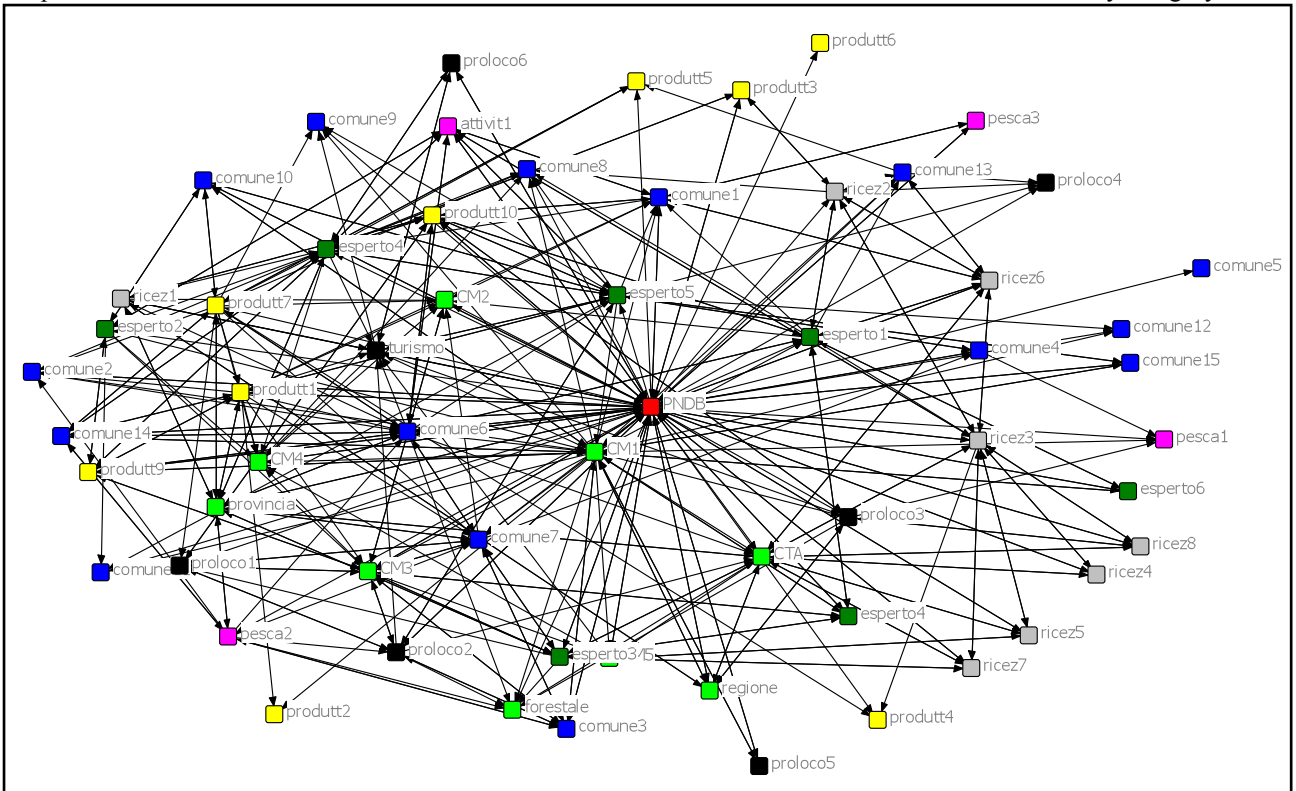
Graph 5.8. Formal collaboration flow in Dolomiti Bellunesi National Park. Stakeholders are divided by category.
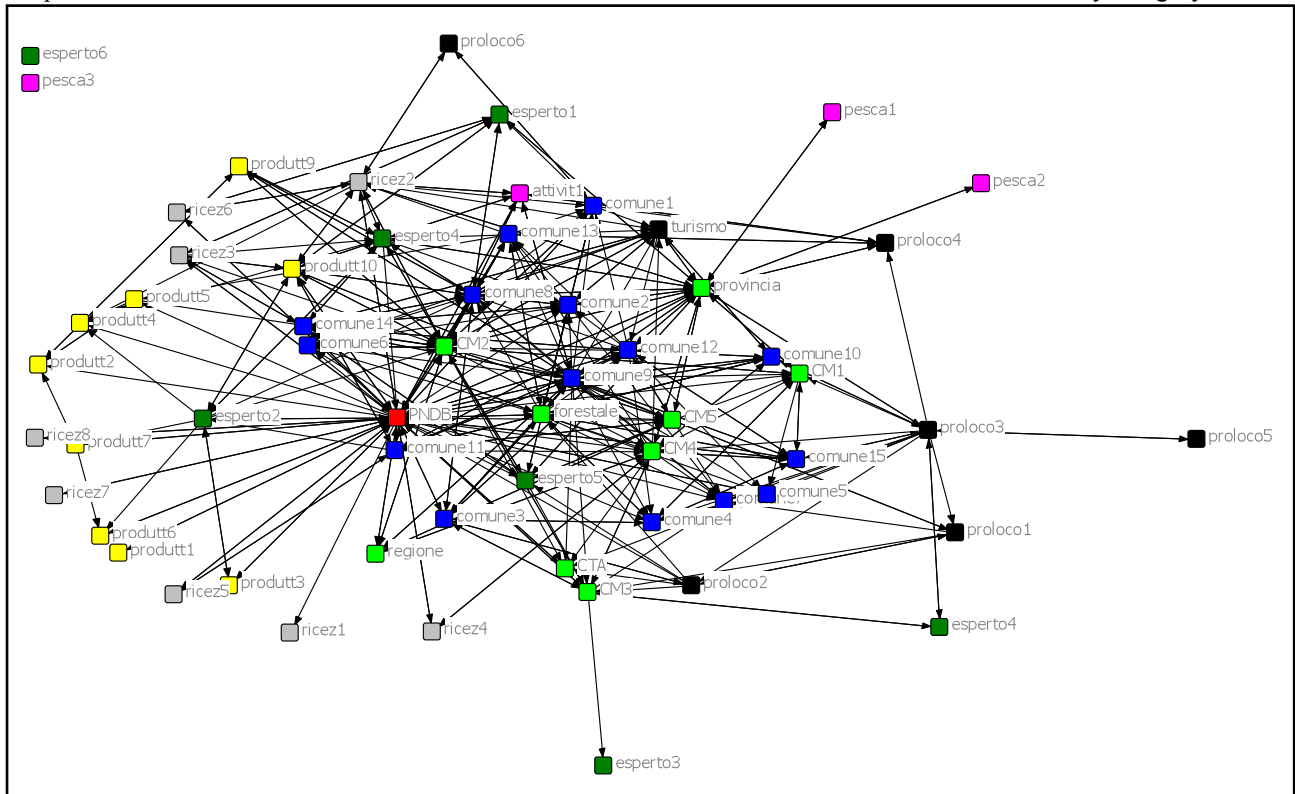
The analysis of the networks of the two case-studies can focus on two main aspects: the position of the actor in relation to the other nodes, and the whole network structure. We start from the latter: density, compactness and core/periphery analysis have been calculated.

In table 5.9 we compare the Parks' density scores for each flow. Beyond density, we put the number of ties and the actors' average degree, which is calculated multiplying the density by the total number of nodes minus one.

As we can see in the table, the density scores of Durmitor are always higher than the Dolomiti's ones. More than 50% of all the possible ties are present in Durmitor network, both in information exchange than in collaboration relationships. On the other hand Dolomiti Bellunesi is a broader and more fragmented context, and the density score are always lower than 30%.

Another evidence shows that in Durmitor all the informal interactions are very common: so there is no big difference between information exchange and collaboration relationships, while the average number of formal contracts is less than the half of informal working partnerships. Instead differences are more definite in Dolomiti Bellunesi: information exchanges are less compromising than collaboration partnerships, but when two actors work together, a formalization is more common and is seen as necessary.

Finally we tried to symmetries the adjacency matrices, inserting value 1 when both the actors declare existing relation. This means that we look only at bidirectional flows, that is where

both the actor in a relationships declare that the relationship exists. Differences are very strong: in Durmitor the density scores halve, while in Dolomiti reduction is not so pronounced; that means that the ties are less frequent in the whole Dolomiti context, but maybe they are more recognized and stronger when they exist. This can be read as a result of geographical fragmentation.

Table 5.9. Density scores by typology of flow for the two case studies.

Flow	Measures	Durmitor National Park	Dolomiti Bellunesi National Park
Information	Density	0.5705	0.2706
	N° of ties	89	958
	Average Degree	6.8	16.0
Total Collaboration	Density	0.5064	0.1952
	N° of ties	79	691
	Average Degree	6.1	11.5
Informal Collaboration	Density	0.4103	0.1119
	N° of ties	64	396
	Average Degree	4.9	6.6
Formal Collaboration	Density	0.1795	0.1150
	N° of ties	28	407
	Average Degree	2.1	6.8

The other cohesion index that we used is compactness. Distance between two nodes is the shortest path, that is the number of its edges. The distance matrix show the number of steps necessary to reach one node from another one. For instance, in the table that we report (table 5.10) for the Durmitor National Park's information flow (Dolomiti's distance matrices are too big and are difficultly readable), the Park is not directly in contact with the last three actors, but it can reach them in only two passages.

Table 5.10. Geodesic distances in Durmitor National Park's information flow.

```
                            1 1 1 1
            1 2 3 4 5 6 7 8 9 0 1 2 3
            P C T r r r a e a e a r p
            - - - - - - - - - - - - -
 1     PND  0 1 1 1 1 1 1 1 1 1 2 2 2
 2  Comune  1 0 1 1 1 1 1 1 1 1 1 1 1
 3 Turismo  2 1 0 1 1 1 1 1 2 2 2 2 2
 4   ricez3  1 1 1 0 1 1 1 1 2 2 2 2 2
 5   ricez2  1 2 1 1 0 1 1 1 2 2 1 3
 6   ricez1  1 1 1 1 1 0 2 1 1 2 2 1 2
 7 attivit1  1 1 1 1 1 1 0 1 1 2 2 2 2
 8 esperto1  1 1 1 2 1 2 1 0 1 2 2 2 2
 9 attivit2  1 2 2 2 2 1 2 0 2 3 3 3
10 esperto2  1 1 1 2 2 2 2 2 1 0 2 2 2
11 attivit3  1 2 1 2 2 2 2 2 2 0 3 3
12   ricez4  1 1 1 2 2 2 1 1 1 2 1 0 2
13 pubblico  2 1 1 1 1 1 1 2 1 2 1 2 0
```

100

In table 5.11 we summarize the frequencies of the geodesic distances in the two National Parks. The first row gives us the same information of density, that is the number of actors directly connected each other. More advices are given by the following rows, where we understand that the majority of actors are reachable in maximum 2 steps in the Dolomiti Bellunesi context (98% for information, 93,3% for total collaboration), while higher number of nodes are more isolated in Durmitor context.

Table 5.11. Frequency (%) of geodesic distances by National Park and typology of flow.

Frequencies of Geodesic Distances	Durmitor National Park		Dolomiti Bellunesi National Park	
	Information Flow	Total Collaboration	Information Flow	Total Collaboration
1	57,1%	50,6%	27,0%	19,9%
2	39,1%	40,4%	71,0%	73,4%
3	03,8%	08,4%	02,0%	06,7%
4	00,0%	00,6%	00,0%	00,0%

In table 5.12 we give additional information on the average distance of nodes in the network, and we report the Distance-based cohesion "Compactness", whose range varies between 0 and 1, and whose larger values indicate greater cohesiveness.

Table 5.12. Compactness scores by typology of flow for the two case studies.

Flow	Measures	Durmitor National Park	Dolomiti Bellunesi National Park
Information	Geodesic Average distance	1,468	1,749
	Distance-based cohesion "Compactness"	0,779	0,632
Total Collaboration	Geodesic Average distance	1,590	1,869
	Distance-based cohesion "Compactness"	0,738	0,578

The final way chosen to analyze the network structure is the 'core/periphery analysis'. The algorithm changes the order of actors in the matrix, forming a core, that is the sub-group with the maximum density, and a periphery, where each member is not directly connected to any of the other periphery stakeholders. The core is an high-density block.

The following UCINET's outputs show these new adjacency matrices, the list of actors belonging to the core and to the periphery, and the internal densities of the new sub-networks. Outputs are shown only for Durmitor's flows, because the number of Dolomiti's stakeholders is too high and difficultly readable: in Dolomiti we report only the list of actors belonging to the core of networks. Actors in the core are expected to have a bigger influence in decision making, and the high density among them allow a faster communication. From this analysis an indicator has been created.

Core/periphery analysis for information flow in Durmitor National Park:

```
Core/Periphery Class Memberships:

    1:  PND Comune Turismo ricez3 ricez2 ricez1 attivit1 esperto1
    2:  attivit2 esperto2 attivit3 ricez4 pubblico

Blocked Adjacency Matrix

                                     1 1 1 1
                      1 2 3 4 5 6 7 8  9 0 1 2 3
                      P C T r r r a e  a e a r p
                      ----------------------------
 1       PND  |  1 1 1 1 1 1 1 1 | 1 1           |
 2    Comune  |  1 1 1 1 1 1 1 1 | 1 1 1 1 1     |
 3   Turismo  |    1   1 1 1 1 1 | 1             |
 4    ricez3  |  1 1 1 1 1 1 1 1 | 1             |
 5    ricez2  |  1   1 1 1 1 1 1 | 1       1     |
 6    ricez1  |  1 1 1 1 1 1   1 | 1       1     |
 7  attivit1  |  1 1 1 1 1 1   1 | 1             |
 8  esperto1  |  1 1 1   1   1   | 1             |
              ----------------------------
 9  attivit2  |  1             1 |               |
10  esperto2  |  1 1 1           | 1             |
11  attivit3  |  1   1           |               |
12    ricez4  |  1 1 1       1 1 | 1   1         |
13  pubblico  |    1 1 1 1 1 1   | 1   1         |
              ----------------------------


Density matrix

         1     2
       ----- -----
  1   0.911 0.375
  2   0.450 0.250
```

Core/periphery analysis for total collaboration flow in Durmitor National Park:

```
Core/Periphery Class Memberships:

    1:  PND Comune Turismo ricez3 ricez2 ricez1 attivit1 esperto1 attivit2
    2:  esperto2 attivit3 ricez4 pubblico

Blocked Adjacency Matrix

                                   1 1 1 1
                    1 2 3 4 5 6 7 8 9  0 1 2 3
                    P C T r r r a e a  e a r p
                    ----------------------------
 1       PND  |   1 1         1 1 1 | 1         |
 2    Comune  |   1 1 1 1 1 1 1 1 1 |     1 1   |
 3   Turismo  |   1 1 1 1 1 1 1 1 1 |           |
 4    ricez3  |   1 1 1 1 1 1 1 1 1 |           |
 5    ricez2  |   1 1 1             |           |
 6    ricez1  |   1 1 1 1 1 1   1 1 |           |
 7  attivit1  |   1 1 1 1 1 1 1 1 1 |           |
 8  esperto1  |   1 1 1 1 1 1 1 1 1 |           |
 9  attivit2  |   1 1 1 1 1 1 1 1 1 |           |
              ----------------------------
10  esperto2  |   1 1             |             |
11  attivit3  |   1   1       1   |     1       |
12    ricez4  |       1     1 1   |   1         |
13  pubblico  |   1   1   1       |             |
              ----------------------------


Density matrix

        1     2
      ----- -----
  1  0.875 0.083
  2  0.306 0.167
```

Core/periphery analysis for informal collaboration flow in Durmitor National Park:

```
Core/Periphery Class Memberships:

    1:  PND Comune Turismo ricez3 ricez2 ricez1 attivit1 esperto1 attivit2
    2:  esperto2 attivit3 ricez4 pubblico

Blocked Adjacency Matrix

                                   1 1 1 1
                     1 2 3 4 5 6 7 8 9  0 1 2 3
                     P C T r r r a e a   e a r p
                     ---------------------------
  1      PND  |  1 1        1 1 1 |          |
  2   Comune  |               1   |          |
  3  Turismo  |  1 1 1 1 1 1 1 1 1 |          |
  4   ricez3  |  1 1 1 1 1 1 1 1 1 |          |
  5   ricez2  |  1 1 1             |          |
  6   ricez1  |  1 1 1 1 1 1   1 1 |          |
  7 attivit1  |  1 1 1 1 1 1 1 1 1 |          |
  8 esperto1  |      1 1 1 1 1 1 1 |          |
  9 attivit2  |  1 1 1 1 1 1 1 1 1 |          |
                     ---------------------------
 10 esperto2  |  1 1              |          |
 11 attivit3  |  1   1         1  |     1    |
 12   ricez4  |      1       1 1  |   1      |
 13 pubblico  |                   |          |
                     ---------------------------


Density matrix

          1     2
        ----- -----
    1   0.750 0.000
    2   0.222 0.167
```

Core/periphery analysis for formal collaboration flow in Durmitor National Park:

```
Core/Periphery Class Memberships:

    1:  PND Comune Turismo
    2:  ricez3 ricez2 ricez1 attivit1 esperto1 attivit2 esperto2 attivit3 ricez4 pubblico

Blocked Adjacency Matrix

                                 1 1 1 1
                   1 2 3   4 5 6 7 8 9 0 1 2 3
                   P C T   r r r a e a e a r p
                   -----------------------------
  1      PND  |   1     |       1   1   |      |
  2   Comune  | 1 1 1   | 1 1 1 1   1     1 1  |
  3  Turismo  | 1 1 1   | 1 1 1 1 1 1          |
                   -----------------------------
  4   ricez3  |         |               |      |
  5   ricez2  |         |               |      |
  6   ricez1  |         |               |      |
  7 attivit1  |         |               |      |
  8 esperto1  | 1 1     |               |      |
  9 attivit2  | 1 1     | 1             |      |
 10 esperto2  |         |               |      |
 11 attivit3  |         |               |      |
 12   ricez4  |         |               |      |
 13 pubblico  | 1       | 1   1         |      |
                   -----------------------------


Density matrix

          1     2
        ----- -----
    1   0.833 0.500
    2   0.167 0.033
```

From these outputs that in Durmitor's networks three actors are always present in the core: the National Park, the Municipality and the Touristic information Point. But, except for the formal collaboration network, other private actors play a key-role in collaboration and information exchange. Instead in Dolomiti Bellunesi the majority of actors inside the networks' core are public institution, as it possible to see in table 5.13 where the core/periphery results for Dolomiti Bellunesi are summarized.

Table 5.13. Core class memberships in Dolomiti Bellunesi by kind of flow.

Flow	Core Class Memberships
Information	PNDB, comune3, comune2, comune9, comune1, comune11, comune14, CM2, CM4, CTA, esperto5, comune8, CM1, provincia, forestale, turismo.
Total collaboration	PNDB, comune3, comune2, comune9, comune1, comune14, comune6, CM2, CM4, CM5, regione, CTA, esperto5, produtt9, ricez2, ricez3, comune10, comune7, comune12, comune8, CM1, CM3, provincia, forestale, turismo, proloco3, esperto4, produtt10.
Informal collaboration	PNDB, comune3, comune2, comune1, comune6, CM2, CM4, CM5, CTA, esperto5, esperto1, esperto4, pesca2, produtt9, esperto2, ricez3, ricez5, comune10, comune7, CM1, CM3, provincia, esperto3, turismo, esperto4, produtt7, produtt1, produtt10.
Formal collaboration	PNDB, comune3, comune9, comune1, comune11, comune14, CM2, CM4, CM5, regione, esperto5, ricez2, comune10, comune13, comune15, comune12, comune8, CM3, provincia, forestale, turismo, esperto4, produtt10.

"Power is a fundamental property of social structures" (Hanneman, 2005), and it can adopt different forms. Reputational power is one index of actors' power. We will compare it with other three SNA indices used to describe the position of the actor in relation to that of others in the network: the degree centrality, the closeness centrality and the betweenness centrality.

The first one counts the number of nodes adjacent to a given node, compared to the total potential number of ties. With directed data we distinguish the 'prominent' actors, that are those who receive many ties, and 'influential' actors, who are able to exchange with many others. In our analysis we will consider only the in-degree centrality, as we are interested in the 'prestige' of an actor and as the out-degree of the Park would be very close to the maximum score for the reason that we are studying an ego-network.

Closeness centrality measures the distance of an actor to all others. An actor with an high degree centrality, but located in the centre of a local neighborhood, may have a low closeness centrality score. For the same reasons of the degree centrality, we will consider only the in-degree measures. Closeness centrality cannot be calculated if there are isolated points in the network.

Betweenness Centrality is the extent to which a node (bridge node) lies between other 2 nodes in the network that are themselves disconnected. It measures the key role played by an actor in letting other two actors communicate each other.

In the following two tables (table 5.14 and 5.15) we show the main results of the analysis. In the second table we report the scores only for the first 12 stakeholders. Closeness in-degree centrality couldn't be calculated in the networks where there were isolated nodes. The values have been standardized, that means that their range is between 0 and 100.

Table 5.14. Centrality indices and reputational power for actors in Durmitor's network.

	power	information			total collaboration			formal collaboration		informal collaboration	
		degree	closeness	betweenness	degree	closeness	betweenness	degree	betweenness	degree	betweenness
		INdegreeSt	INdegreeSt	degreeSt	INdegreeSt	INdegreeSt	degreeSt	INdegreeSt	degreeSt	INdegreeSt	degreeSt
PND	2	83	86	13	92	92	14	42	10	67	6
Comune	9	75	80	23	75	80	29	33	22	67	1
Turismo	3	92	92	6	83	86	6	8	0	75	8
ricez3	3	58	70	1	58	70	2	33	0	42	1
ricez2	3	67	75	3	58	70	0	17	0	50	0
ricez1	3	58	70	2	58	70	2	25	0	42	0
attivit1	3	75	80	5	58	70	2	17	0	50	3
esperto1	1	67	75	1	75	80	5	17	0	75	10
attivit2	3	92	92	1	58	70	1	17	0	50	2
esperto2	3	17	54	0	8	50	0	8	0	0	0
attivit3	2	25	54	0	8	35	0	0	0	8	0
ricez4	1	25	52	1	17	54	9	8	0	8	0
pubblico	0	8	46	0	8	48	0	8	0	0	0

Table 5.15. Centrality indices and reputational power for the first 12 actors (according to the in-degree centrality) in Dolomiti's network.

	power	information			total collaboration		formal collaboration		informal collaboration	
		degree	closeness	betweenness	degree	betweenness	degree	betweenness	degree	betweenness
		INdegreeSt	INdegreeSt	degreeSt	INdegreeSt	degreeSt	INdegreeSt	degreeSt	INdegreeSt	degreeSt
PNDB	12	86	88	25	78	40	54	38	56	46
CM2	9	68	76	7	49	3	37	8	17	0
CTA	5	53	68	5	31	2	10	0	24	2
comune8	10	51	67	2	36	1	27	3	14	0
comune1	10	49	66	2	31	1	17	2	15	1
provincia	7	49	66	4	44	7	32	13	17	2
forestale	5	44	64	2	31	1	20	2	14	0
comune2	10	42	63	1	27	0	19	0	12	0
comune9	10	42	63	1	29	2	22	4	8	0
CM1	9	42	63	3	32	4	15	0	20	5
comune7	10	41	63	1	31	1	17	0	19	1
turismo	3	41	63	2	36	1	19	0	19	0

Despite its high reputational power, the Municipality in Durmitor doesn't have the highest degree and closeness centrality: other actors are more connected and more close to the network's boundaries, such as the touristic information point, a rafting enterprise and the National Park. However Municipality plays a key role in letting actors communicate and collaborate, except for the informal collaboration. Formal collaboration turns around to two stakeholders, the Park and the Municipality, and the betweenness centrality scores show it clearly.

On the Dolomiti Bellunesi case study the Park seems to be the dominant actor in the network. This could be explained by the fact that stakeholders don't see the Dolomiti Bellunesi area as an unique context, but as an union of fragmentized little areas; for this reasons the National Park plays a key role of connection. The huge difference among the Park's betweenness scores and the others ones is a clear evidence of this fact.

Finally we study the presence in the networks of cliques, that are complete sub-graph of the network where each couple of actors connected by a line. The minimum chosen size is 3 actors. Symmetrized matrices have been used for the clique analysis. Actors have been grouped by the frequency the couples appear in the same cliques, and dendograms have been created by this analysis.

In Durmitor case study there are 14 maximal complete sub-graphs present in information data, and the National Park appears in 8 of the 14 cliques formed studying the information flow (see box 5.2); instead in total collaboration data the Park appears in 1 of the 4 cliques (see box 5.3). As we can see by the UCINET's outputs, only three cliques of information flow don't include the Park or the Municipality.

We are interested in the extent to which these sub-structures overlap, and which actors are most "central" and most "isolated" from the cliques. We can examine these questions by looking at 'co-membership'. Dendograms show that the Park creates strongest sub-networks in the information exchange, while the Municipality is better in concluding collaboration agreements. Besides be can see that the Parks and the Municipality form strongest relations with different private actors, and they themselves meet each others in the dendogram only at the third or fourth level.

Box 5.2. List of cliques found in information matrix in Durmitor National Park.

```
 1:  PND Comune ricez3 ricez1
 2:  PND Comune ricez3 attivit1
 3:  PND Comune attivit1 esperto1
 4:  PND Comune esperto2
 5:  Comune Turismo ricez3 ricez1
 6:  Comune Turismo ricez3 attivit1
 7:  Comune Turismo attivit1 esperto1
 8:  Turismo ricez3 ricez2 ricez1
 9:  Turismo ricez3 ricez2 attivit1
10:  Turismo ricez2 attivit1 esperto1
11:  PND ricez3 ricez2 ricez1
12:  PND ricez3 ricez2 attivit1
13:  PND ricez2 attivit1 esperto1
14:  PND attivit1 attivit2
```

Graph 5.9. Dendogram of information clique analysis in Durmitor National Park.
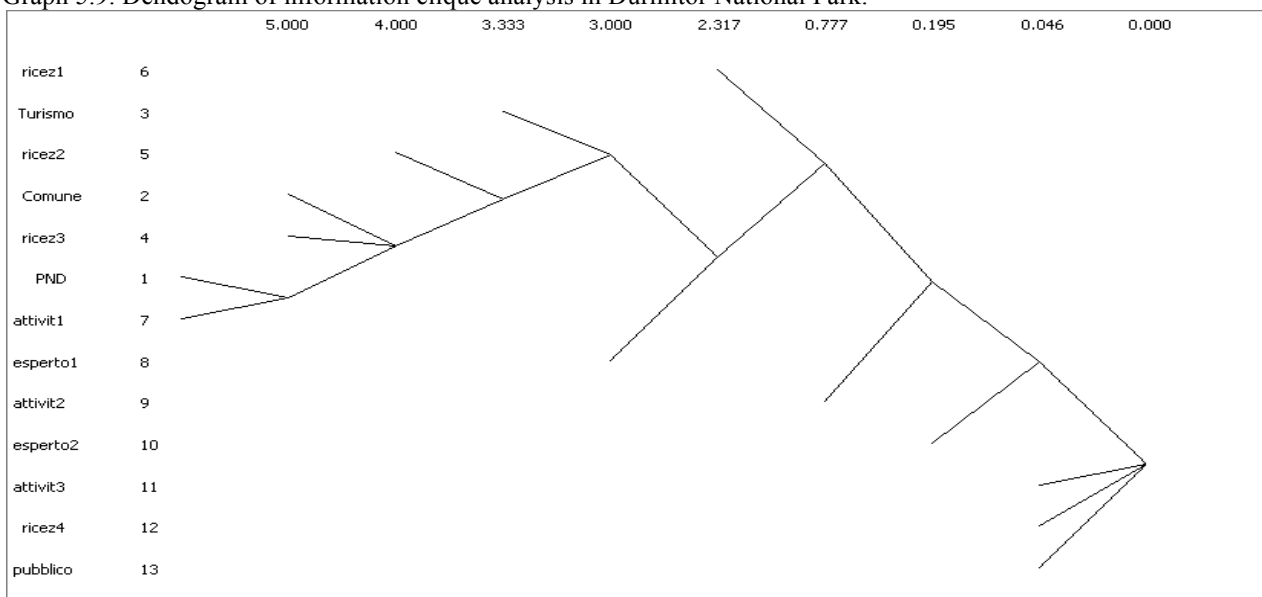
Box 5.3. List of cliques found in collaboration matrix in Durmitor National Park.

```
1:  PND Comune Turismo attivit1 esperto1 attivit2
2:  Comune Turismo ricez3 attivit1 esperto1 attivit2
3:  Comune Turismo ricez3 ricez1 esperto1 attivit2
4:  Comune Turismo ricez2
```

Graph 5.10. Dendogram of collaboration clique analysis in Durmitor National Park.
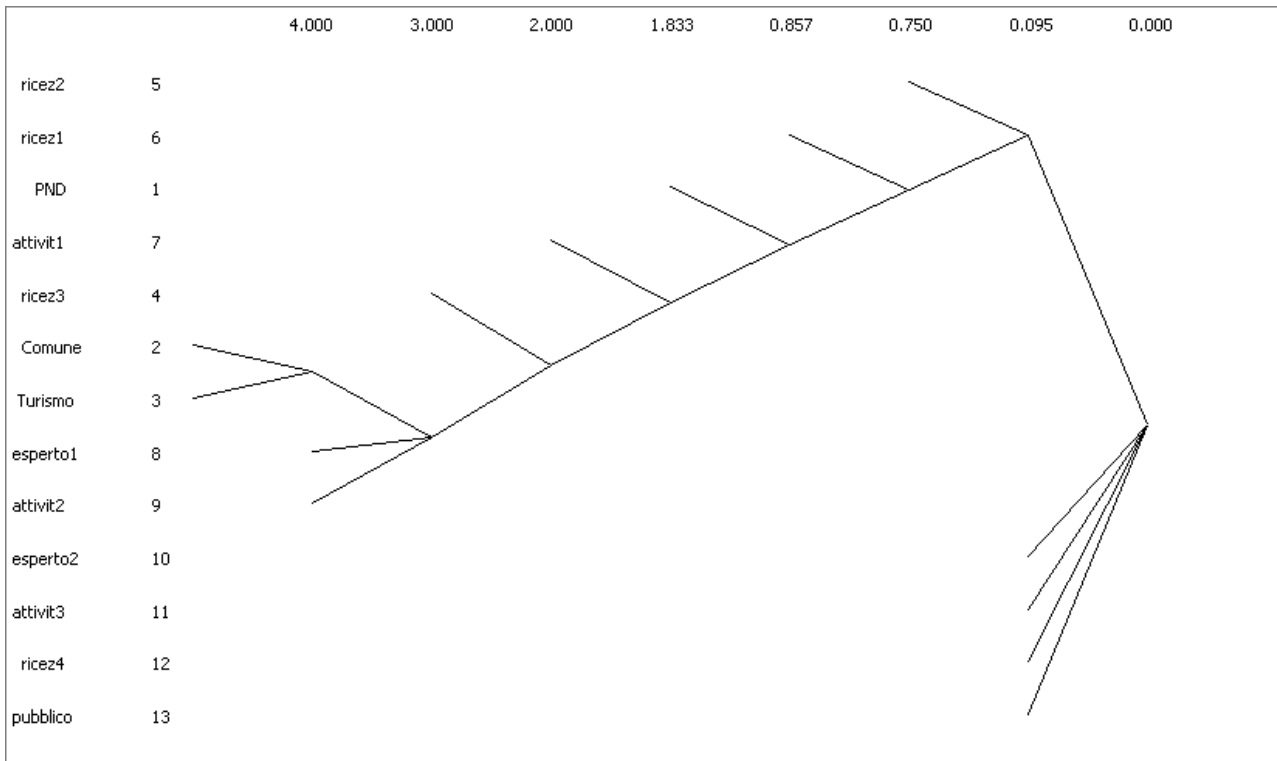
We chose of not showing the whole list of cliques constituted in the Dolomiti Bellunesi National Park. We just present the dendograms of information and collaboration dataset, and we can report that 182 out of 232 information cliques include the Park, while 93 on 139 collaboration cliques include the Park. Besides it is possible to see that the majority of the actors involved in the first levels of both dendograms are public institutions. In particular, some of them are very linked with the National Park (i.e. CM29).

Graph 5.11. Dendogram of information clique analysis in Dolomiti Bellunesi National Park.
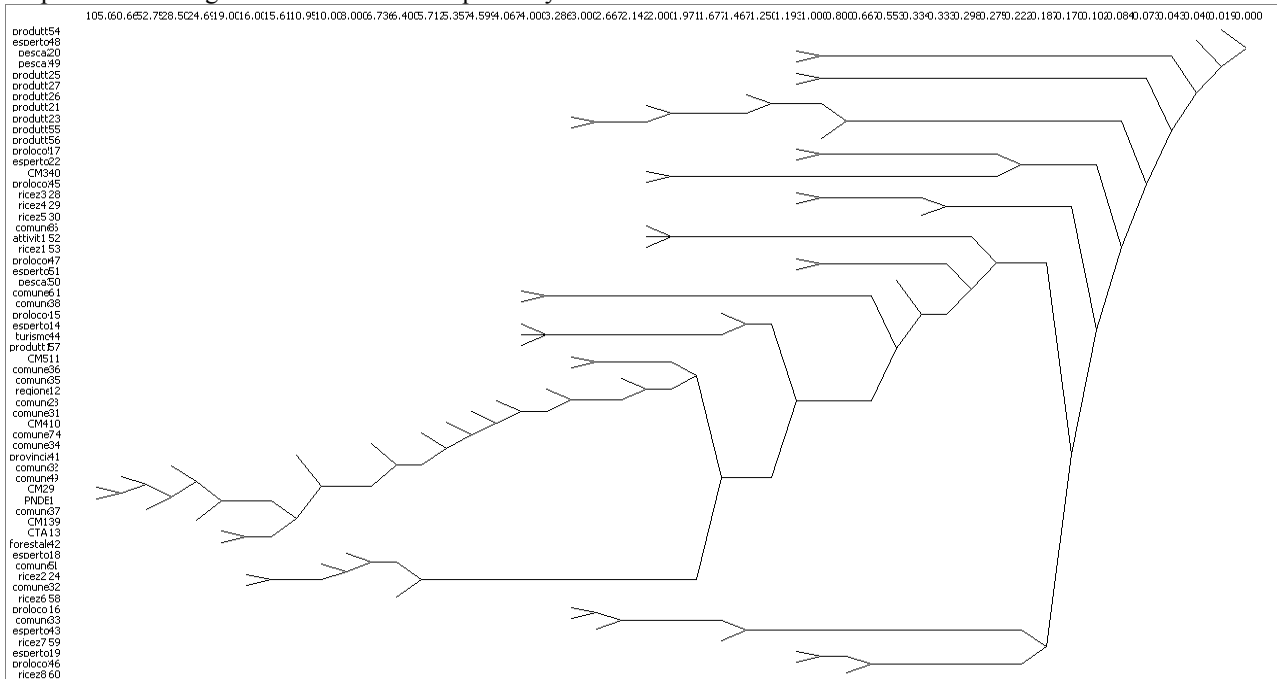
Graph 5.12. Dendogram of collaboration clique analysis in Dolomiti Bellunesi National Park.
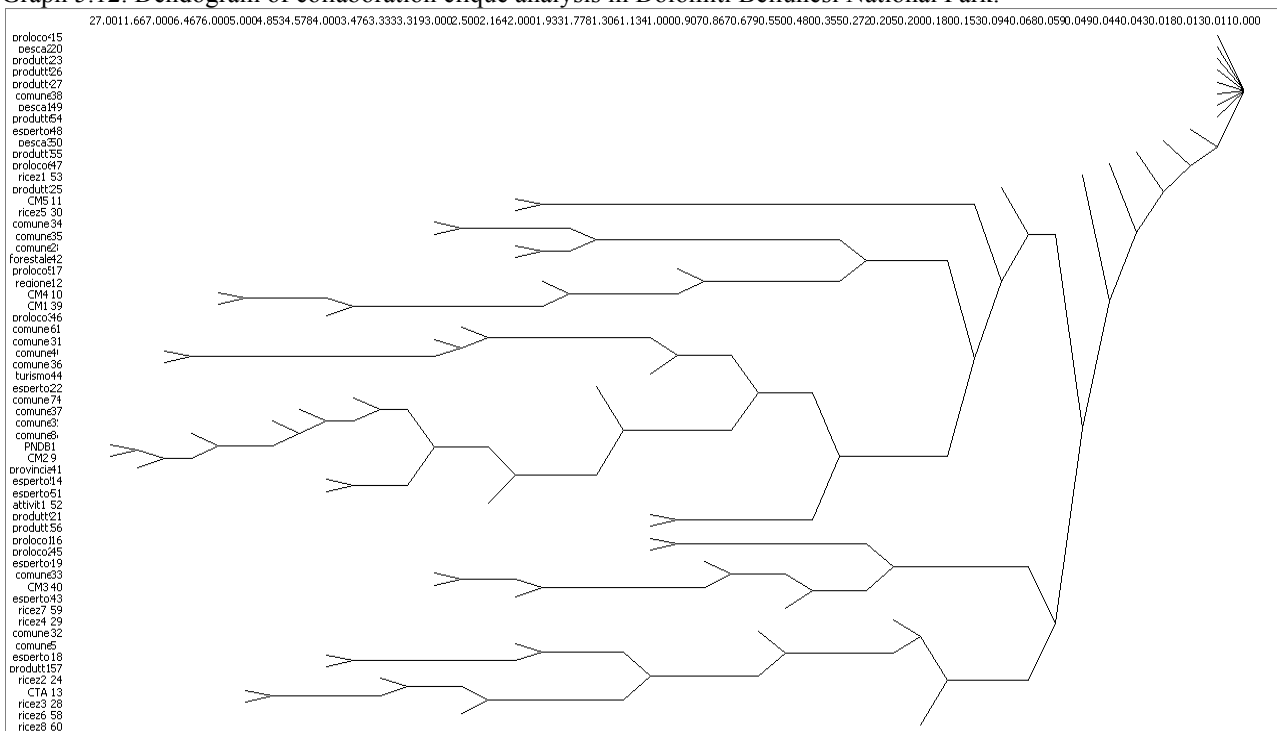
We adopted some SNA indices mainly to describe and understand the networks and the relationships among actors involved in the local scale governance of the two case studies. The second step of the study presented in this paragraph tries to find out useful indicators for our final set of indicators to assess local good governance.

As told in paragraph 3.3, we tried to use some SNA descriptive results also to build innovative indicators to assess the local good governance. We created 13 indicators by the SNA main indices. The list is shown in table 5.16. Some indicators hypothesis are born by indicators' examples already tested in literature. Other indicators have been arbitrarily chosen with respect of our theoretical framework. Not all the indicators will be kept in the final set of indicators.

In the following, a brief description of the 13 indicators is provided.

We first talk about an aspect that we have not considered in the previous network analysis concern the study of convergences and divergences among actors, which was the fourth questions in the questionnaire section dedicated to SNA data collection. In both the case-studies we saw that "actors were very hesitant to reveal conflicts within the network" (Hirschi, 2008, p.18), above all in the first case study. The majority of respondents seemed "to assess the quality of their relationship within the network rather benevolently": for this reason we chose to reduce the space in the questionnaire dedicated to this aspects, hypothesizing that opinions and actions were cooperative when not differently specified, and we focused only on conflictive relationships among the Park and the other stakeholders. So we didn't build a general indicator on conflicts management: on the contrary, we used information on divergences against the organization on which the ego-network in based to evaluate to which extent the Park is accepted by the local population and can be resilient to external factors.

Hirschi (2008, p.19) uses cliques analysis to analyze vertical and horizontal coordination: if there is a close collaboration structure among actors from different levels and sectors, a higher degree of "coordination will be assumed than in the case of more homogenously composed subgroups". Besides, the frequency of flows between different levels can help the degree of local adaptive capacity (Ingold et al., 2010) of the organization and of the whole local community.

Core/periphery analysis can be used in projects evaluation (Hirschi, 2008): the ratio of actors inside the collaboration network measures the degree of actors involvement. In our case we decided to evaluate the presence in the core of 'main actors", that are those stakeholder with high reputational power (within the first quartile), and the presence of at least one representing actor by category.

Some studies have tried to use SNA centrality indices to assess the bonding, bridging and linking social capital (Franceschetti, 2009); in our analysis we looked at the Park's betweenness centrality to demonstrate that key actors in the network are essential for avoiding conflicts and to create social capital.

The other centrality indices have been tested in other key-dimensions' evaluation. The degree centrality has been used to study the Park's resilience: a stakeholder with an high score can

be seen as an significant actor in the network, but a lot of energy is used to maintain a large number of ties, which often are weak ties (Prell et al., 2009). To guarantee that the Park has a positive influence on its ties, we chose to assess symmetric matrix, that is we studied only bidirectional information flows. The closeness centrality index has been used to study the efficiency of the evaluated organization to reach all the stakeholders of its ego-network (in-degree).

The mobilization of knowledge and the collaborative learning can be assessed by the ratio of information bidirectional flows in the network, as two-way communication can be defined as a mutual collaboration (Ingold et al., 2010, p.8): "if the frequency of collaborative relations is high, local communities are integrated in decision-making processes".

Density measures of information exchange and of formal collaboration degree have been used respectively to observe if the Park's initiatives have brought positive social and economic impacts in the area.

We tested compactness measures to study the network cohesion in information exchange flows, and the capacity of the Park to create a collaborative network around its initiatives.

Finally we studied the reputational power distribution among actors, to assess if there is an overall development and reciprocal learning in the territory.

Table 5.16. List of SNA indices used as indicators in the final set of indicators to assess local good governance

. SNA Index	Flow	Indicator	Dimension
Density	Information (symmetric)	Social relationships	Sustainable 'glocal' development
Density	Formal collaboration	Economic relationships	Sustainable 'glocal' development
Park's in-closeness centrality	Information	Use of time	Efficiency
Core/periphery analysis	Total collaboration	Inter-sectoral coordination	Effectiveness
Cliques analysis	Total collaboration	Multi-level network	Effectiveness
Divergences against the Park	Divergences	Acceptance by population	Effectiveness
Park's in-degree centrality	Information	Bidirectional flows	Effectiveness
Core/periphery analysis	Information	Main actors' presence in the core	Participation
Compactness	Information	Network cohesion	Participation
Compactness	Total collaboration	Collaboration cohesion	Participation
Park's betweenness centrality	Total collaboration	Between stakeholders	Participation

Density	Information (symmetric)	Mobilization of knowledge	Capacity
Reputational power	Reputational power	Overall reputational power	Capacity

Source: our elaboration.

5.5 Data analysis and results

Data has been collected from the interviews to the two National Parks and all the main stakeholders involved in their initiatives. Without considering the Park's questionnaire (based on dichotomous questions), we have analyzed 98 variables, among which 23 are qualitative. In this paragraph we are going to divide the results analysis in four steps:

i) first personal impressions after public operators and experts interviews;

ii) qualitative analysis to emphasize strengths and weaknesses of the organizations;

iii) analysis of quantitative variables based on stakeholders interviews;

iv) indicators selection.

5.5.1 First impressions

Personal reflections, impressions and doubts, born during the interviews in both the case studies, are summarized in the following list:

General considerations

- In both the case studies we observed what we have defined a "governance synecdoche" (a figure of the speech in which a part is used for the whole or the whole for a part), that is we have perceived how much more important is the influence of a single man in a prominent position inside the organization than the organization itself! The communication capacity (or incapacity) of the director f the Park can affect positively or negatively the mood of stakeholders more than effective projects or durable impacts.

- The concepts that mostly confuse stakeholders are: climate change, distribution costs and benefits, the role of mediation.

- How can we evaluate good governance when the managing board completely change?

- Ego-network guarantee more interest and critical capacity.

- Indicators constructed on field surveys are obviously more expensive than indicators based on secondary data, but allow to delve more into the context and qualitative information benefits from this.
- Complains focus more on economic personal incomes than on general territorial development.
- When we let people free to express their opinions, their comments and complains are focused mainly on projects' efficiency and effectiveness; instead, thanks to our framework, stakeholders are able to express opinions also about other aspects and they analyze strengths and weaknesses focusing on each key-dimension.

Sustainable 'glocal' development considerations

- Perceptions on positive environmental impacts are influenced by the presence of constraints and by the fact that there was already an environmental sensibility "before the arrival of the Park".
- Social impacts are not seen as a Park's duty nor a consequence of its initiatives.
- Territorial marketing can bring positive economic impacts, but sometimes it creates more expectations than concrete results, and this breeds disagreement and bad mood in the population.
- The majority of population doesn't know the meaning of certification.
- It is possible to see real impacts only when residents are included in Park's boundaries.

Effectiveness considerations

- People are interested in 'concrete' projects, not in research.
- The more mentioned projects are not the projects for which the Park cares more.
- In this "institutional chaos" stakeholders need someone who coordinates actors!

Efficiency considerations

- Objective difficulty by stakeholders to evaluate Park's efficiency in use of resources (human, technological, economic, temporal).
- Stakeholders don't compromise themselves easily on this topic.

Participation considerations

- It is the most warmly debated topic.
- Participation creates expectations.
- Park's efforts are useless if people inhabitants don't collaborate: territorial fragmentation and parochialism limit participation.
- Participative approaches with all the stakeholders or only with some representative experts?
- Who must be the mediator? Different opinion have been collected.
- Inhabitants claim more than what they are ready to collaborate.
- People are worried that participation is used by public institution just to obtain political consensus.

Transparency considerations

• It is the basis for governance, but it doesn't create a good governance: the concept is taken in very high consideration when there is a low level of governance in the territory, while it is underestimated when we good governance processes already exist.

Accountability considerations

• It is a vague concept for the majority of interviewed stakeholders.

• Monitoring processes are taken for granted

Capacity considerations

• Stakeholders' opinion change a lot with respect to the internal person with whom they are in contact.

• When Municipalities or private stakeholders co-finance Park's projects, their care and awareness grow significantly.

Cause-effect relations considerations

From stakeholders' opinions some cause-effect relations among dimensions are emerged:

• Accountability determines sustainability.

• Participation and transparency leads to effectiveness (a good project but not "accepted" by population does not bring positive impacts).

• Excessive use of participative approaches causes less effective actions.

• If organization is not capable and accountable it will not be effective and efficient.

• Capacity in the baseline for other dimensions.

• Sustainability is the consequence of other dimensions.

These general results help us in understanding better what good governance means in our two case-studies through the public operators and experts opinions. The importance assigned to each key-dimension and the relations among them will be compared with stakeholders' interviews and the quantitative analysis.

5.5.2 Qualitative analysis

In stakeholders questionnaire we left adequate space for respondents' comments: open questions are useful to understand the mood and some attributes of respondents. Moreover interviewed stakeholders have been selected as people directly involved (ego-network) in the Park's initiatives, that means that we can consider them as experts and their opinions are important to check the quality and validity of quantitative data. Qualitative analysis is also used here to

emphasize strengths and weaknesses of the two evaluated organizations. Normally people are used to concentrate themselves only in negative aspects, but we succeeded in collecting also precious comments on positive aspects of the Parks' governance.

First we present the main comments, divided by key-dimensions, and then we join them in a table containing a general SWOT analysis of the two Parks.

Sustainable 'glocal' development

In a mare magnum of institutions overlapping their roles trying to govern a complex and decentralized territory, the real impact of the **Dolomiti Bellunesi National Park** is still debated and ambiguous to population. The high fragmentation don't facilitate coordination, and the Park is often seen as a limit more than a resource of economic development. Now things are slowly changing, and the UNESCO nomination pays in terms of image. The Park has tried to make the best use of this and created a logo of quality to increase the value of local products, accommodation infrastructures and local restaurant industry. Tourism has increased and smaller local producers have benefited from the Park's territorial marketing. Despite these efforts, the Park's initiative to promote economically the territory are still too much marginal, and medium-size enterprises are not positively affected by the logo influence.

With the passing of the time, social impacts have been concentrated to reduce conflicts with population who saw the Park as a restriction imposed by the State. More open-minded categories of stakeholders have benefited from the Park's initiatives, the others persevere in obstructing projects. But the real problem is that boundaries are collocated in the peaks of the mountains where few people live: how is possible to have positive economic and social impacts if inhabitants are not integrated in the Park itself?

Finally, the Park has promoted several initiatives to preserve the habitat of local flora and fauna, but someone (especially hunters) criticizes that the population was already able to defend the territory before the Park's formation and that useless infrastructures have been created. Now public funding are less than in the past and it is difficult to carry on old and new projects.

Durmitor National Park protects a wonderful naturalistic area, attraction of tourism from whole Europe; but economic impacts were higher before that National Parks of Montenegro have been centralized and their incomes used by the central government.

All stakeholders benefit from the presence of the Park, but then nobody care about its conservation. Few volunteers and local Ngo's exist, and the Park doesn't promote social initiatives

to sensitize population on environmental topics. Young people emigrate and who live in Durmitor doesn't have the mentality to change things.

Montenegro was the first country internationally acknowledged as an ecological country (in 1992), and Zabljak should be its informal capital; but inhabitants and the Institutions themselves are not aware about this, and neither tourists nor locals are educated to respect the territory.

Effectiveness

Many projects are carried on by the **Dolomiti Bellunesi National Park**, but the more mentioned ones are not the projects for which the Park cares more, as research studies or children education initiatives. Till few years ago, the Park was very concrete and effective, but now financial resources are limited and the difference in results is clear.

The Park is very effective in coordinating itself with other national or international similar bodies and with local political representatives; but the director has forgotten to involve local associations and to collaborate more with local experts, and this fact has brought conflicts and a weak acceptance by population.

Durmitor National Park lacks in creativity and carries on few initiatives and is not involved in many national or international projects; but on the other hand the director is very good in managing conflicts and the clever diversification of financial resources allows to manage unexpected risks.

There is not coordination among stakeholders who work in touristic field, and investments in natural resources protection are very limited.

Efficiency

Stakeholders of **Dolomiti Bellunesi National Park** underline several times that in some big projects there has been a waste of financial resources and that outputs don't reflect expectations. So financial resources are not seen as well optimized, and in addition critics are moved towards the bad use of time, which is slowed down by bureaucracy.

Durmitor National Park is not independent in allocating its resources, and incomes are not re-invested in the territory. The Park doesn't invest in mountain paths' security and the whole work of maintenance is done by volunteers.

Participation

The **Dolomiti Bellunesi National Park** is able to join mayors and other political exponents that normally don't collaborate due to the strong fragmentation of the territory. Attempts of participatory processes involving residents have been done: annual meetings with producers and projects presentations in each Municipality have been organized. In some cases, the Park has played an important role of mediator to avoid conflicts among local actors, but on this topic most of the interviewed persons think that this role is task of Mayors and not of Park's director.

Critics on participatory approaches come above all from local producers who think that in the annual meetings there is not dialogue and that only politicians are really involved in decision making.

In the **Durmitor National Park** a strong informal collaboration network exist, but participative approaches are not applied and stakeholders are not directly involved in projects decision making.

Transparency

Dolomiti Bellunesi National Park has been the first National Park in Italy to approve the Park Plan, and other clear and useful documents (such as reports, performance plan, etc.) are regularly produced. Transparency is perceived to be the basis of a good governance.

Local informal relationships in **Durmitor National Park** are perceived to be very transparent, but on the other hand information flows to external stakeholders are not clear and notification instruments don't exist.

Accountability

Dolomiti Bellunesi National Park starts several projects and produces innovative ideas to develop the territory, but then it doesn't monitor the implementation and the prosecution of these initiatives.

Political and geographic fragmentation is a limit in the territory as roles often overlap and local experts are not consulted.

Controversial opinions exist in **Durmitor National Park** about who is held accountable of managing the territory: the majority of interviewed stakeholders think that the Park's duty is that of attracting tourists but then the role of managing the territory is a Municipality's duty. Instead, internal roles are very clear and inhabitants know who call according to their contingent needs.

A city plan doesn't exist and this fact limits the Park's authority to control illegal constructions. Projects monitoring and evaluation is done at national level. Park's boundaries are not always clear.

Capacity

Technical staff of **Dolomiti Bellunesi National Park** is qualified and well diversified, but the number of employers is low and their knowledge of the territory is often insufficient. The Park's director is not well accepted by population, and the organization is seen by not involved actors as an environmental constraints generator.

The Park promotes training courses and there is a good knowledge transfer among public institutions' technical staff.

The circumscribed context of **Durmitor National Park** facilitates relationship between actors and the Park's director. The Park helps touristic infrastructures and invests in sport equipment for Tara River rafting and other touristic activities.

On the other hand the Park is not able to control and to register all the touristic operators, the Park's rules are not respected and there are not human capable resources in the territory.

Finally we have collected all the qualitative information in a SWOT analysis (table 5.17), where strengths, weaknesses, opportunities and threats to respect the good governance implementation of the two Parks are summarized.

Table 5.17. SWOT analysis in the two case-studies.

	Dolomiti Bellunesi National Park	**Durmitor National Park**
STRENGTHS	• Social initiatives and training courses • Creativity in developing new projects • Wish to dialogue with citizens • Political representativeness in decisions • Clear and concrete program • Territorial Marketing vision • Approach to all actors and to the more marginal areas • Transparency	• Economic impacts on population • Professionalism • No conflicts with the population • Diversification in financial resources

WEAKNESSES	• Insufficient number of employers • Environmental constraints • Overlapping roles • Economic impacts • Financial resources not well optimized • Conflicts with some stakeholders categories	• Boundaries are not well defined • No social initiatives • No use of participative approaches • Negative environmental impacts • Notification instruments don't exist • No coordination among economic actors • Few projects proposed
OPPORTUNITIES	• Seen as an opportunity by marginal zones • Categories try to have a dialogue as there is a common interest	• Few occasional initiatives try to clean up the Tara river • Awareness about the positive economic impacts of the Park and respect for its role in the territory
THREATS	• Territory complex and fragmentized • Too many public institutions and overlapping roles • Economically marginal area • People give more importance to Municipalities' role	• No city plan • Park is not financially independent • There is not a popular knowledge of the meaning of sustainability • No human resources due to young emigration

Source: our elaboration

5.5.3 Quantitative variables

The third part of this paragraph is dedicated to the analysis of quantitative variables based on stakeholders interviews. As anticipated in chapter 3, two case studies give the possibility to generate a minimum variance and comparison among variables, but multivariate analysis and other quantitative analysis are not possible. So we tried to study dependency and association among variables through appropriate indices.

First of all, correlation analysis has been used to describe linear association between variables that will be used to construct indicators. We expect that variables used to construct the same indicator are positively correlated, while variables used to evaluate different sub-dimensions don't depend significantly from each other. For dichotomous variables we used odds ratio. This measure describes the strength of association or non-independency between two binary data values and treats the two variables being compared symmetrically.

We used all the data available collected from the field work. When results were ambiguous or difficult to be interpreted, we divided the dataset in the two case studies.

Control questions have been inserted in the questionnaire to check the coherence of stakeholders in answering. In the first part of the interview we asked to provide a few examples

(both positive and negative) about what the Park has actually done to guarantee/not guarantee the 7 key-dimensions of a good governance. This innovative solution enables us to collect data about general perception on abstract concepts such as good governance and its key-dimensions by using concrete facts that prove the validity of perceptions themselves. The range of these control questions varies from 0 to 3. We expect a positive correlation between each of them and the respective variables of the same key-dimension; above all, with the items based on perception specific to some sub-dimensions. Control variables have been transformed in dummy variables to allow the comparison with dichotomous variables. The mean of these control variables is around the value 1, so we created two kinds of dummy variables: more 'restrictive' control variables (new value 1 is given only to who was able to provide 2 or 3 concrete examples), and more 'permissive' variables (new value 1 is given to who gave 1 or 2 or 3 concrete examples).

Before the analysis of each dimension's variables, we report a table with the correlation values among variables on the network centrality indices, that is on the position of the actors in the network. We can observe that all the values are positive, except for the relation among the betweenness centrality measure for informal and formal collaboration, that could mean that not all the actors who play a key role in the informal collaboration network, have the same importance in the other one.

Table 5.18. Correlations among SNA measures.

		info_degr	info_cl	info_betw	coll_degr	coll_cl	coll_betw	form_degr	form_betw	inform_degr	inform_betw
info_degr	Correlazione di Pearson	1	,984**	,554**	,936**	,869**	,423**	,678**	,312*	,842**	,489**
	Sig. (2-code)		,000	,000	,000	,000	,001	,000	,022	,000	,000
	N	54	54	54	54	12	54	54	54	54	54
info_cl	Correlazione di Pearson	,984**	1	,553**	,922**	,849**	,408**	,604**	,302*	,858**	,515**
	Sig. (2-code)	,000		,000	,000	,000	,002	,000	,027	,000	,000
	N	54	54	54	54	12	54	54	54	54	54
info_betw	Correlazione di Pearson	,554**	,553**	1	,591**	,488	,904**	,494**	,858**	,566**	,170
	Sig. (2-code)	,000	,000		,000	,108	,000	,000	,000	,000	,219
	N	54	54	54	54	12	54	54	54	54	54
coll_degr	Correlazione di Pearson	,936**	,922**	,591**	1	,968**	,517**	,683**	,359**	,941**	,602**
	Sig. (2-code)	,000	,000	,000		,000	,000	,000	,008	,000	,000
	N	54	54	54	54	12	54	54	54	54	54
coll_cl	Correlazione di Pearson	,869**	,849**	,488	,968**	1	,408	,619*	,305	,939**	,627*
	Sig. (2-code)	,000	,000	,108	,000		,188	,032	,335	,000	,029
	N	12	12	12	12	12	12	12	12	12	12
coll_betw	Correlazione di Pearson	,423**	,408**	,904**	,517**	,408	1	,401**	,828**	,534**	,236
	Sig. (2-code)	,001	,002	,000	,000	,188		,003	,000	,000	,086
	N	54	54	54	54	12	54	54	54	54	54
form_degr	Correlazione di Pearson	,678**	,604**	,494**	,683**	,619*	,401**	1	,515**	,431**	,053
	Sig. (2-code)	,000	,000	,000	,000	,032	,003		,000	,001	,704
	N	54	54	54	54	12	54	54	54	54	54
form_betw	Correlazione di Pearson	,312*	,302*	,858**	,359**	,305	,828**	,515**	1	,291*	-,077
	Sig. (2-code)	,022	,027	,000	,008	,335	,000	,000		,033	,582
	N	54	54	54	54	12	54	54	54	54	54
inform_degr	Correlazione di Pearson	,842**	,858**	,566**	,941**	,939**	,534**	,431**	,291*	1	,706**
	Sig. (2-code)	,000	,000	,000	,000	,000	,000	,001	,033		,000
	N	54	54	54	54	12	54	54	54	54	54
inform_betw	Correlazione di Pearson	,489**	,515**	,170	,602**	,627*	,236	,053	-,077	,706**	1
	Sig. (2-code)	,000	,000	,219	,000	,029	,086	,704	,582	,000	
	N	54	54	54	54	12	54	54	54	54	54

** the correlation is significant up to level 0.01 (2-sides).
* the correlation is significant up to level 0.05 (2-sides).

Now we present correlation analysis and general considerations on variables for each key-dimensions and sub-dimension.

Sustainable 'glocal' development

The only indicator of the first sub-dimension ('Long term equity') built on stakeholders questionnaire contains too many missing values, as the majority of respondents didn't know the meaning of equity in cost and benefit distribution.

The same happened for the item which asked the perception of climate change impacts in the sub-dimension 'Environmental Impacts'. For this reason the control question on sustainable 'glocal' development (v5g) has been correlated only with the variable measuring the perception of environmental impacts (v11a). in table 5.19 we can see that the two variables are statistically significant up to level 0.05.

Table 5.19. Correlations among variables of sub-dimension 'Environmental Impacts'.

		v11a	v5g
v11a	Correlazione di Pearson	1	,339(*)
	Sig. (2-code)		,023
	N	46	45
v5g	Correlazione di Pearson	,339(*)	1
	Sig. (2-code)	,023	
	N	45	53

* The correlation is significant up to level 0.05 (2-sides).

In general the stakeholders perception on sustainability, played by the control variable v5g, seems to depend more by environmental aspects than by social variables (v11b in table 5.20) or economic impacts (v11c in table 5.21). it could mean that the concept of sustainability is perceived by population as linked to the environmental aspect, while the socio-economic pillars have not the same importance. On this, a good governance can change the impacts on the territory.

Table 5.20. Correlations among variables of sub-dimension 'Social Impacts'.

		v5g	v11b
v5g	Correlazione di Pearson	1	,197
	Sig. (2-code)		,204
	N	53	43
v11b	Correlazione di Pearson	,197	1
	Sig. (2-code)	,204	
	N	43	44

Table 5.21. Correlations among variables of sub-dimension 'Economic Impacts'.

		v5g	v11c
v5g	Correlazione di Pearson	1	,138
	Sig. (2-code)		,368
	N	53	45
v11c	Correlazione di Pearson	,138	1
	Sig. (2-code)	,368	
	N	45	46

* The correlation is significant up to level 0.05 (2-sides)
** The correlation is significant up to level 0.01 (2-sides)

Finally, the last two variables of 'Economic impacts' measure if the respondent (v19) and the territory (v19b) have benefitted economically from the Park' initiatives. The variables are strictly connected, as revealed by the odds ratio measure in table 5.22, and it is interesting to notice that all the stakeholders who declare to have received benefits then associate this positive mood also to the general context: for this reason they have been aggregated in the construction of indicators.

The odds ratio between the control variable (only in the 'permissive' transformation) and variable v19b is statistically significant up to level 0.1. from this result we can say that the control variable explain well the environmental and the economic component of sustainability.

Table 5.22. Odds ratio value between variable v19 and v19b.

| | Value | Confidence Interval 95% | |
		Lower	Upper
Cohort v19b = 1	,375	,153	,917
N. of valid cases	19		

Table 5.23. Economic benefits from the Park's initiatives to the territory (v19b) and to respondents (v19).

| | | v19b | | Total |
		No	Yes	
v19	No	5	3	8
	Yes	0	11	11
	Total	5	14	19

Effectiveness

Initially we were a little afraid that in the first sub-dimension ('Objectives and Outputs') the two indicators on interest creation (n° of projects mentioned by the respondent, v4pbis) and the perception on Park's capacity to achieve its goals (v11o) would have measured the same information. On the contrary, the interviews have demonstrated that the two questions analyze different aspects of this issue, and the correlation measure show that they are independent (table 5.24).

Table 5.24. Correlations among variables of sub-dimension 'Objectives and Outputs'.

		v5a	v11o	v4pbis
v5a	Correlazione di Pearson	1	,403(*)	,019
	Sig. (2-code)		,011	,893
	N	51	39	51
v11o	Correlazione di Pearson	,403(*)	1	-,117
	Sig. (2-code)	,011		,479
	N	39	39	39
v4pbis	Correlazione di Pearson	,019	-,117	1
	Sig. (2-code)	,893	,479	
	N	51	39	54

* The correlation is significant up to level 0.05 (2-sides).

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The control question keeps on being strictly connected with the perception items, except to the perception on the ability of the Park to integrate itself in the territory (table 5.26).

Table 5.25. Correlations among variables of sub-dimension 'Coordination'.

		v5a	v11p
v5a	Correlazione di Pearson	1	,332(*)
	Sig. (2-code)		,041
	N	51	38
v11p	Correlazione di Pearson	,332(*)	1
	Sig. (2-code)	,041	
	N	38	40

* The correlation is significant up to level 0.05 (2-sides)

Table 5.26. Correlations among variables of sub-dimension 'Resilience'.

		v5a	v11q
v5a	Correlazione Pearson	1	,115
	Sig. (2-code)		,452
	N	51	45
v11q	Correlazione Pearson	,115	1
	Sig. (2-code)	,452	
	N	45	47

Efficiency

Few indicators in this key-dimension are based on stakeholders questionnaire. The correlation among them is reported in table 5.27. We can see that the control variable (v5b) is correlated to both with significance up to level 0,1.

Table 5.27. Correlations among variables of 'Efficiency'

		v5b	v11d	v11e
v5b	Correlazione di Pearson	1	,293	,308
	Sig. (2-code)		,083	,092
	N	48	36	31
v11d	Correlazione di Pearson	,293	1	,627(**)
	Sig. (2-code)	,083		,000
	N	36	38	27
v11e	Correlazione di Pearson	,308	,627(**)	1
	Sig. (2-code)	,092	,000	
	N	31	27	34

** The correlation is significant up to level 0.01 (2-sides).

Participation

In the set of indicators to assess the key-dimension of Participation we inserted several variables based on stakeholders questionnaire, as here we may assume it might be easier to see concrete consequences of a good governance, in terms of both perception and actions.

In the section dedicated to the 'Stakeholders inclusion', we asked if the respondents had ever took part in participatory events on each of the 4 project phases (variables v6a, v6b, v6c and v6d). Odds ratio values between the pairs of these dichotomous variables is very high, and varies within a range of [12; 28], with critical p-value lower than 1%. It means that who is involved in the Park's

initiatives, often tries to participate to all the phases of projects (there are lower values only in the valuation phase).

The control variable (v5c) is not significantly associated with any of these 4 variables. Rather, it is more linked to the variable (v6e7) which join the direct degree of involvement to the interest representation in decision making processes (table 5.28).

Table 5.28. Odds ratio values between control variable v5cl and variables of key-dimensions 'Stakeholders inclusion' and 'Representativeness'.

Odds Ratio for v5cl (,00 / 1,00)	Value	Confidence interval 95%	
		Lower	Upper
V6e7	3,654	1,122	11,899
V6a	2,000	0,636	6,286
V6b	2,082	0,646	6,708
V6c	1,429	0,461	4,423
V6d	3,667	0,974	13,806

Sub-dimensions 'Empowerment' gives us ambiguous results. We collected data on the perception of stakeholders about the fact that the Park uses stakeholders' comments/suggestions to make decisions relating to the territory (v11f), on their confidence on the organization (variable v9fid based on binary data), and on the number of comments, ideas and practical suggestions provided by stakeholders to the Park regarding the initiatives/projects run by the Park itself (v9). The control variable doesn't explain the component 'Empowerment' as no variables are significantly correlated or associated with it.

Control variable instead refers well to the perception of equity in participative processes (v11g), while it has even a negative relation with the variable 'events of aggregation' (v4e); this last question was not completely understood by respondents, and maybe this is the reason of the negative correlation measure.

Table 5.29. Correlations among variables of 'Equity in participation' and 'Network creation'.

		v5c	v4e	v11g
v5c	Correlazione di Pearson	1	-,220	,490(**)
	Sig. (2-code)		,113	,002
	N	53	53	38
v4e	Correlazione di Pearson	-,220	1	-,066
	Sig. (2-code)	,113		,694
	N	53	54	38
v11g	Correlazione di Pearson	,490(**)	-,066	1
	Sig. (2-code)	,002	,694	
	N	38	38	38

** The correlation is significant up to level 0.01 (2-sides).

In the last sub-dimension 'Conflicts management', the variable on informed consensus has been deleted as missing values cover a 26%, and among the 30 stakeholders who answered only 2 told that predefined rules were not clear since the beginning of projects: this lack of variability doesn't allow any analysis.

The topic of the role played by the Park in managing conflicts has been one of the most debated during interviews, as many respondents wonder if it was a Park's duty or someone else had to cover this role. In any case, the perception variable (v11h) has a correlation statistically significant with the control variable, and also question 10 of the questionnaire (which always ask a perception on this topic, but giving 3 modalities of answer – see Annex 4) is associated positively, both adding the intermediate modality to the 'no' and to the 'yes'.

Table 5.30. Correlations among variables of 'Conflicts management'.

		v5c	v11h
v5c	Correlazione di Pearson	1	,385(*)
	Sig. (2-code)		,025
	N	53	34
v11h	Correlazione di Pearson	,385(*)	1
	Sig. (2-code)	,025	
	N	34	35

* The correlation is significant up to level 0.05 (2-sides).

Transparency

The only aspects of transparency that needs the use of subjective indicators is the understandability of documentation produced by the Park (v11i), but the correlation with the control variable is very close to zero. Maybe we can find explanation on the fact that understandability is a very specific issue and not directly imputable to transparency concept.

Table 5.31. Correlations among variables of 'Transparency'.

		v5d	v11i	v11s
v5d	Correlazione di Pearson	1	,008	,000
	Sig. (2-code)		,960	1,000
	N	48	40	9
v11i	Correlazione di Pearson	,008	1	,761(*)
	Sig. (2-code)	,960		,028
	N	40	41	8
v11s	Correlazione di Pearson	,000	,761(*)	1
	Sig. (2-code)	1,000	,028	
	N	9	8	9

* The correlation is significant up to level 0.05 (2-sides).

Other two variables, concerning the sub-dimension 'Feedback', have been introduced only in the second case study, but the number of respondents is too low to allow any kind of analysis; the two variables try to measure the same aspect, that is the satisfaction in Park's responses, but only the perception variable (v11s) give interesting results, while the other one (v3b) was not understood by respondents. We can put the blame for this on the question ambiguous formulation.

Accountability

Our first impressions during the field work (paragraph 5.4.1) have alerted us that the term accountability is a vague concept for the majority of interviewed stakeholders. These preliminary analysis have been confirmed by quantitative analysis: respondents were hardly able to provide concrete examples of Park's accountability, and the correlation among the control variable (v5e) and the perception variables on clarity of actors' roles and overlapping roles (respectively v11i and v11m) is not significant. There is absolutely no association also with the variable (v16e17) that analyzes the formal involvement of stakeholders in projects/programs with co-responsibility clearly identified.

This seems to confirm our first impressions on the fact that population have not a clear idea of what accountability is, and maybe perception-based indicators are not adapt to assess this key-dimension.

Capacity

Correlation among the control variable (v5f) and the perception on the adequacy of Park's staff competences (v11n) is significant up to level 0,01. Excluding questions used in SNA, no other variables based on stakeholders interviews have been considered.

Table 5.32. Correlations among variables of 'Capacity.

		v5f	v11n
v5f	Correlazione di Pearson	1	,417(**)
	Sig. (2-code)		,007
	N	47	41
v11n	Correlazione di Pearson	,417(**)	1
	Sig. (2-code)	,007	
	N	41	46

** The correlation is significant up to level 0.01 (2-sides).

5.5.4 Indicators selection

In the last step of the analysis we tried to reduce the initial high number of indicators (93) in the preliminary set. The presence of only two dataset don't allow us to use multivariate analysis, or other quantitative methods. So indicators selection is based on three aspects:

- data accessibility during the field work;
- correlation and association analysis made for stakeholders variables in the previous section;
- comparison between qualitative analysis and the two case-studies indicators.

Difficulty in data accessibility depends both on information not obtained by staff's interviews or documents review, and on all those variables based on stakeholders questionnaire that present an high number of missing values. Here the main observations:

- there were too many missing values in three items on perception; a possible cause of this can be attributed to in the difficult terminology or in the vague concepts expressed by the question;
- the process to get financial information have been very slow in both the case studies, and it was impossible to have useful data for indicators concerning specific aspects of the use of budget (indicators 'use of budget' and 'financial efficiency');
- the indicator 'use of technology' is vague, and there is the risk that each organization can demonstrate that money has been invested in software's and technology;
- among effectiveness's indicators, there have been difficulties in summarizing data for 'objectives attainment' if there were too many projects; besides, the two Parks had different parameters to distinguish the terms outputs, projects and actions;
- organizations don't collect demographic data on stakeholders participating the meetings, when and if they are organized;
- the two questions on the mediator role of the organization have been debated a lot; according to us, it is necessary to delete one of them, and we left the item on perception, removing the dichotomous one;
- according to the initial considerations in paragraph 5.1, only one indicator between 'perception of feedback' and 'satisfaction on feedback' will be selected after the analysis: the test on satisfaction failed completely, so we removed it;
- the question on the policy-making rules was not immediate to be understood and vague;
- information on training courses attended by organization's personnel have not been collected as the time-lapse was too wide.

The second aspect considered the analysis on quantitative data gathered with the stakeholders questionnaire. Final notes can be summarized as follow:

- the density of the network is too much correlated to the size of the network itself; between the two indicators on density we left the one about economic relationship as the results reflect well the context as they are based on formal collaboration relationships; vice versa social impacts cannot be easily interpreted;

- we faced a problem of data distortion in divergences question: people were suspicious in revealing their contrasts with the organization;

- understandability is a very specific issue and not directly imputable to transparency concept: the low correlation with the control variable can be explained by the fact that respondents had the tendency to assign high scores to this item *a priori*, even if they had not read any document;

- the variable on informed consensus produced a total lack of variability that doesn't allow any analysis;

- the question on the events of aggregation promoted by the Park was not completely understood by respondents, and maybe this is the reason of the negative correlation measure with the other variables.

In the third aspect (comparison between qualitative analysis and the two case-studies indicators) we joined together both the indicators based on public operator's questionnaire and the indicators based on stakeholders' questionnaire. The scores in the two case studies have been compared for each indicator. Then, the logical order ('<', '=', '>') in each pair was associated to the respective qualitative data collected by our first impressions and by experts interviews. If a big dissimilarity was noticed, maybe the indicator was not relevant with the context. Only one of the four logical incongruity has been removed by the set of indicators:

- condescension can have distorted some results based on perception; the good relationship with the Park director (see the "governance synecdoche" described in the first section of this paragraph) maybe has changed the perception of some problems in Durmitor National Park, and the items on the clarity of actors' role, on effectiveness and on the use of human resource produce contrasting results; we decided to remove the latter as it also produced many missing values;

- the indicator on the presence of 'main actors' in the core of the network is an interesting indicator, but the initial number of 'main actors' can be misleading.

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In table 5.33 we show a list of removed indicators and of indicators that have been accepted but that would need a further test ('accepted conditionally').

Table 5.33. List of deleted indicators and of indicators conditionally accepted.

Code	Indicator	Deleted or Accepted conditionally	Cause of removal (accessibility – analysis – comparison)	Notes
1a.5	Perception of equity in cost and benefit distribution	Deleted	accessibility	Missing values
1b.2	Climate change impacts perception	Deleted	accessibility	Missing values
1c.3	Social relationships	Deleted	analysis	the size of the context/network influences the result
2a.1	Use of budget	Deleted	accessibility	data gathering difficulties
2a.3	Use of human resources	Deleted	comparison	Missing data in DBNP and results in contrast to experts' assertions
2b.1	Financial efficiency	Deleted	accessibility	data gathering difficulties
3c.2	Acceptance by population	Deleted	analysis	Data distortion
4d.1	Minorities coverage	Deleted	accessibility	Data not collected by organization. Useless results
4f.3	Events of aggregation	Deleted	analysis	Negative correlation score
4g.3	Informed consensus	Deleted	analysis	Lack of variability
4g.5	Mediator role	Deleted	accessibility	This indicator overlaps itself with 4g.4, which is more appreciated by respondents
5a.4	Understandability	Deleted	analysis – comparison	Stakeholders are not aware..
5b.1	Satisfaction on feedback	Deleted	accessibility	Misunderstanding in answering
6a.4	Clarity of policymaking rules	Deleted	accessibility	Not immediate to be understood and vague
7a.4	Training courses	Deleted	accessibility	Data not available in a 5 years' time-laps
1a.4	Cost and benefit sharing mechanisms	Accepted conditionally	accessibility	Ambiguous interpretation

1a.6	Promotion of sustainability	Accepted conditionally	accessibility	Several levels not noted down with binary answer
1d.2	Economic relationships	Accepted conditionally	analysis	the size of the context/network influences the result
2a.4	Use of technology	Accepted conditionally	accessibility	Vague and affirmative answers are easy
2b.2	Transaction costs	Accepted conditionally	accessibility	Vague and affirmative answers are easy
2c.3	Deadlines perception	Accepted conditionally	accessibility	Several missing values, but who really participate answered well
3a.2	Objectives' attainment	Accepted conditionally	accessibility	Common definition of terms doesn't exist
3a.5	Perception of effectiveness	Accepted conditionally	comparison	Conflicting results.. Influenced by mood and relation with the Park
4b.1	Main actors' presence in the core	Accepted conditionally	comparison	Interesting indicator, but the initial number of 'main actors' can be misleading
3c.4	Risk management resources	Accepted conditionally	accessibility	Vague and affirmative answers are easy
4c.1	Influencing decision-making	Accepted conditionally	accessibility	Not so concrete. More tests are necessary
4d.2	Perception of participation	Accepted conditionally	accessibility	Missing values when there are no participative approaches
5b.2	Perception of feedback	Accepted conditionally	accessibility	This indicator has been tested only in Durmitor
6a.1	Rationale for decisions	Accepted conditionally	accessibility	Not immediate to be understood
6a.3	Perception of clarity of actors' roles	Accepted conditionally	comparison	Condescension maybe has distorted expected results
6b.2	Payment of prescribed charges	Accepted conditionally	accessibility	Are results predictable for a park?

Source: our elaboration.

The deleted indicators will however appear in the full list of indicators in appendix (Appendix 2), but they have been strikethroughed: in this way users can see our final set of indicators to assess local good governance of natural resources, but meanwhile they can be inspired by the other indicators for future modifications. From the starting preliminary set of 93 indicators,

15 of them have been removed in constructing the composite indicator (see paragraph 5.6); but the final number of indicators can be reduced to 62 if we wouldn't consider the 'conditionally accepted' indicators. This number could be reduced further with new tests in other case-studies, or if we consider only indicators based on Park's staff questionnaire. Considerations on recommendations for future research are presented in chapter 7.

5.6 Composite indicators: suggestions

In this phase of the analysis, we joined together both the indicators based on public operator's questionnaire and the indicators based on stakeholders' questionnaire. The first kind of indicators are composed by binary data: this choice allow us to have an easy-to-use and practical tool, flexible in adapting to different contexts. For this reason we decided to normalize the continuous indicators and to transform them within a 0-1 range. In chapter 3 we described the two attempted normalization ways. We chose the normalization 'above or below' the median, where the indicator adopts score 1 if the raw value is above the upper quartile, 0 if below the lower quartile, 0.5 if inside the interquartile range. The disadvantages of this method are the arbitrariness of the threshold level and the loss of absolute level information. But the advantage of the method is its simplicity and its robustness to the presence of outliers (OECD, 2008). Moreover the resulting score is not a relative continuous number: in this way comparison and aggregation with dichotomous indicators is easier. Instead the re-scaling method (described in paragraph 3.2) gives out an output more detailed but at the same time more complicated to be understood and to be aggregated, above all in a perspective of self-evaluation (see paragraph 2.4 on LAGs self-evaluation possible methodology within the LEADER programme).

An example of normalized variables is given in table 5.34. We normalized the 7 control questions for each key-dimension, in their 'normal' form and in the 'restrictive' and 'permissive' forms (see the previous paragraph).

Table 5.34. Key-dimensions' control questions in the 'normal', 'permissive' and 'restrictive' form, normalized with the 're-scaling' method and the 'above/below' method.

		variables			Re-scaling			Above/Below		
		Check question	Check %[1-3]	Check %[2-3]	Check question	Check %[1-3]	Check %[2-3]	Check question	Check %[1-3]	Check %[2-3]
	range	*0-3*	*0-100*	*0-100*	*0-1*	*0-1*	*0-1*	*0-0,5-1*	*0-0,5-1*	*0-0,5-1*
SUSTAINABILITY	PND	0,3	25	8	0,18	0,23	0,15	0	0	0,5
	PNDB	1,1	73	29	0,71	0,88	0,55	0,5	0,5	0,5
EFFICIENCY	PND	0,5	42	8	0,30	0,46	0,15	0	0	0,5
	PNDB	0,7	47	22	0,44	0,53	0,42	0,5	0	0,5
EFFECTIVENESS	PND	1,1	75	33	0,72	0,91	0,62	0,5	1	1
	PNDB	1,2	82	28	0,77	1,00	0,53	1	1	0,5
PARTICIPATION	PND	0,1	8	0	0,00	0,00	0,00	0	0	0
	PNDB	1,0	66	24	0,65	0,78	0,45	0,5	0,5	0,5
TRANSPARENCY	PND	0,8	67	8	0,48	0,80	0,15	0,5	0,5	0,5
	PNDB	1,5	75	53	1,00	0,91	1,00	1	1	1
ACCOUNTABILITY	PND	0,7	50	17	0,42	0,57	0,32	0,5	0,5	0,5
	PNDB	1,1	63	41	0,73	0,74	0,77	1	0,5	1
CAPACITY	PND	0,5	50	0	0,30	0,57	0,00	0	0,5	0
	PNDB	1,3	80	46	0,87	0,97	0,87	1	1	1

Source: our elaboration.

Finally we made two assumption for data aggregation: first we gave equal weight to dimension's indicators, then we gave equal weight to sub-dimensions.

In the first case each key-dimension's indicator has the same weight within the dimension itself, and the aggregate indicator of the dimension I_D is the result of the arithmetic mean of all the indicators:

$$I_D = \frac{\sum_{i=1}^{n_D} x_{iD}}{n_D},$$

where n_D is the number of indicators used to assess the key-dimension, and x_{iD} the indicator i. In the second case each sub-dimension has the same weight within the key-dimension, and the aggregate indicator is the result of the arithmetic mean of the sub-dimensions' internal mean $\overline{x}_{sD}$:

$$I_D = \frac{\sum_{s=1}^{N_{sD}} \overline{x}_{sD}}{N_{sD}},$$

where N_{sD} is the number of sub-dimensions of each key-dimension.

We tried to calculate a composite indicator both by using all the selected indicators and by considering only variables based on the Park's staff questionnaire. The 4 final options are:

i. equal weight to each key-dimension's indicators based on Park's staff questionnaire, that we will call "equal-park";

ii. equal weight to sub-dimensions, using only indicators based on Park's staff questionnaire, that we will call "weight-park";

iii. equal weight to all the indicators of each key-dimension, that we will call "equal-all";

iv. equal weight to sub-dimensions, using all the indicators, that we will call "weight-all".

In the following table (table 5.35) the results are reported. Scores have been calculated for each key-dimensions in the two case-studies, using the 4 described options.

Table 5.35. Composite indicators scores for each key-dimensions, by aggregation method, indicators-baseline and case-study.

Key-dimensions	Park's staff indicators				All indicators			
	equal		weight		equal		weight	
	PND	PNDB	PND	PNDB	PND	PNDB	PND	PNDB
sustainability	0,50	0,86	0,50	0,95	0,55	0,91	0,51	0,92
efficiency	0,50	0,75	0,50	0,67	0,71	0,64	0,56	0,50
effectiveness	0,47	0,82	0,52	0,74	0,54	0,70	0,58	0,66
participation	0,06	0,56	0,14	0,67	0,25	0,43	0,30	0,44
transparency	0,33	0,88	0,13	0,95	0,38	0,88	0,31	0,95
accountability	0,56	1,00	0,64	1,00	0,50	0,83	0,65	0,90
capacity	0,38	0,88	0,25	0,92	0,43	0,79	0,42	0,77

The final scores are more easily comparable in the following 4 radar charts, one for each methodological option, where the case-studies are compared in each key-dimension.

Graph 5.13. Composite indicators in option "equal-park"
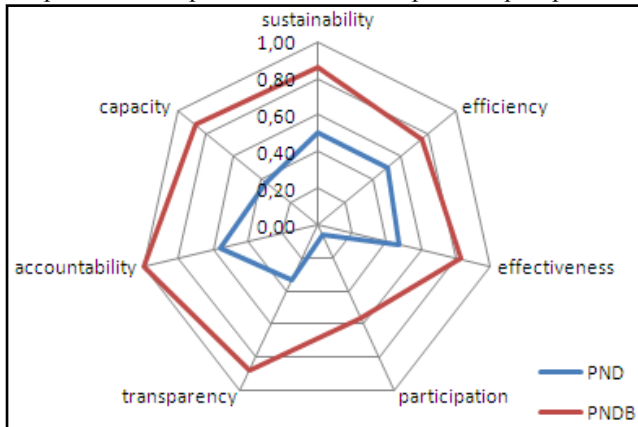
Graph 5.14. Composite indicators in option "weight-park"
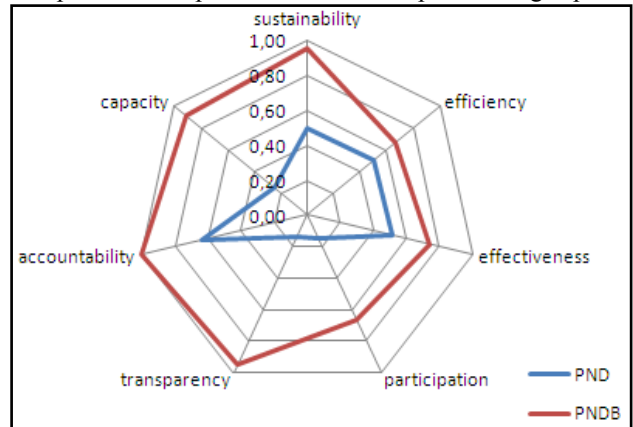
Graph 5.15. Composite indicators in option "equal-all"
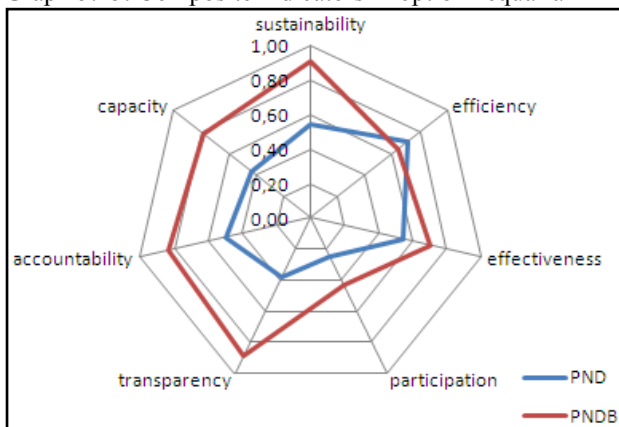
Graph 5.16. Composite indicators in option "weight-all"
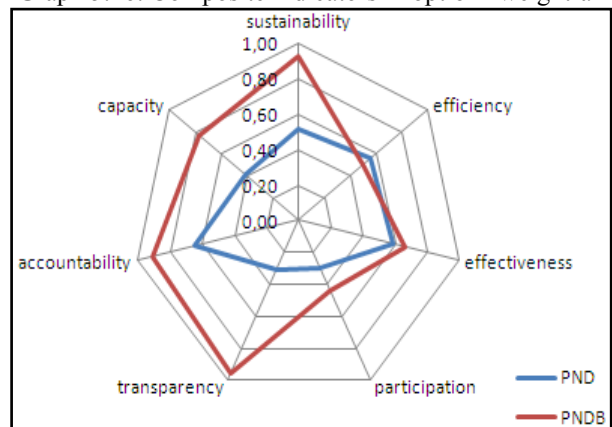
As told in chapter 3, we couldn't fully follow the 10 steps proposed by OECD/JRC in the Handook on constructing composite indicators (2008), as we had only two case-studies. The aim of this paragraph is to give some suggestions to future research (see chapter 7). The 4 options are highly correlated (significance up to level 0,01), but they have underlined some interesting differences in the four options. The four charts will help us in the analysis of our attempts.

First of all, a composite indicator based only on organization's staff questionnaire loses completely the perception component: if we would exactly sure that the selected indicators are exhaustive and relevant of the evaluated concept, we could use this cheaper option; but on the contrary the risk is to overestimate the real value. For instance, the 'perfect' score of the key-dimension accountability in graph 5.y and 5.z is an explicative alarm bell.

On the other hand, perception-based indicators can reduce significantly the score in the key-dimensions to which complaints can be addressed more easily. Effectiveness and efficiency are two examples of this: in Dolomiti Bellunesi context the number of projects and programs is definitely greater than in Durmitor one, but the fragmentized situation let people criticizing and the object of attacks are often the more concrete dimensions.

Maybe there are no right or wrong solutions, but only arbitrary choices. Our personal choice is to use the fourth option, where equal weight is given to sub-dimensions, and where both objective and subjective indicators are considered for the final assessment of the organization by means of complex index.

We conclude showing the chart of normalized values of control variables for each key-dimensions. We can see that the pattern is similar, but higher values are given to transparency and effectiveness. This means that they are the key-dimensions that have the biggest impact on the population's perception for their concreteness; this is in contradiction with the fact that transparency is seldom evaluated in a right way, as for instance in the LEADER evaluation (see paragraph 4.4).

Graph 5.y. Normalized control variables by key-dimension.
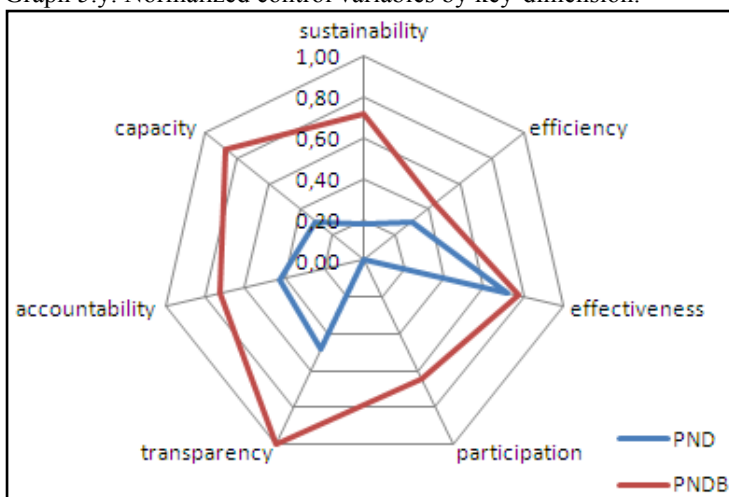
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6. Final Output: an innovative set of indicators to assess local governance

6.1 Detailed list of final indicators to assess local governance

A detailed report of the final set of indicators to assess local governance of natural resources is given in Appendix 1. Indicators are divided by key-dimensions and sub-dimensions. We provided a detailed description of each indicator: in this way any external user can understand the background of our reasoning and the practical suggestions for the utilization. The description includes:

- The code, which allows the user to link this tool to all the other practical instruments;
- A brief description, which explains the meaning of the indicator and its construction;
- The phase of the project cycle, in case the researcher would analyze only some aspects of single projects and not the whole governance process of an organization. The four codes ('a', 'b', 'c', 'd') refer respectively to the four phases (conceptualization, planning, execution, termination);
- The data collection tool, that means the questionnaire by which information for the indicators are collected;
- The operative question present in the questionnaire;
- The output's unit of measurement;
- The final range of the indicator;
- The means of verification and possible notes, which indicate how evidence can be found and measured. These inputs are usually specified and can be measured or assessed; verifying that activities are proceeding as planned requires tracking actual inputs against proposed inputs in a given timeframe. When selecting indicators at the outputs level, it is helpful to think of the expected output and purpose of the activity in terms of targets, answering the questions of "What?" "How many?" "With which characteristics?" and "When?" Documents, research reports, research proposals, survey results and scientific publications can be used.

In box 6.1 we report an example of schedule reported in Appendix 1.

Box 6.1. Example of schedule for final indicators

> ### *Code. Name of the indicator*
>
> Description:
> Phases:
> Data collection tool:
> Question:
> Unit:
> Final Range:

6.2 Operational tools

The aim of our work was not limited to provide a list of innovative indicators to assess local governance of natural resources, but we tried to develop a whole assessing methodology, easy to use e to apply in different contexts. For this reason, 9 operational tools have been prepared: these tools are very flexible, so each future user can adapt them to different specific contexts or take inspiration for other researches or field works.

Tool 1: Detailed set of indicators to assess local governance

The list of the final indicators selected after the two case-studies has already been showed in the previous paragraph (paragraph 6.1). Descriptions include the code of the indicator, a brief explanation, the phases of the project cycle in which it can be used if the researcher wish to analyze single projects, the tool from which data can be collected, the questions from which variables depend, the unit of measurement, the range, and the means of verifications which indicate how evidence can be found and measured. This tool is reported in Appendix 1.

Tool 2: Summarizing schedule of indicators

This tool is more practical than the previous one. In the table we put the basic information of each indicator and the useful links to where data con be gathered. Indicators are subdivided by key-dimension and sub-dimension. We inserted in the schedule also the removed indicators (see table 5.33), but they have been strikethroughed: in this way users can see our choice on the final set of

indicators to assess local good governance of natural resources, but meanwhile they can be inspired by the other indicators for future modifications.

In the tool for each indicator we specified: the referring sub-dimensions, the code, the full name, a short description, the unit of measurement, the final range, verifiers and potential notes, the typology of questionnaire used to gather data, and the code of the questions to which it refers.

This tool is reported in Appendix 2.

Tool 3: Organization's staff questionnaire

The questionnaire can be administered to any operator of the Organization that is to be assessed, as long as he/she has a good knowledge of the organization itself (it is possible to collect data by more operators). In the 13 pages of questionnaire there are 52 questions, the majority of which have only 2 modalities of answer (yes/no). We provided practical notes about where data can be obtained from: in fact the interviewer can answer many questions by him/herself just analyzing organization's documents (some of which might be available on-line, other internal documents have likely to be provided by the Organization). In the last column there is the indicator's code to which the question refers. Questions refer to the projects in the previous 5 years (see paragraph 5.1).

In the first section of the questionnaire we give some general information to the respondent and we ask some identification data and the last projects information. In the following pages the questions are divided by key-dimension to help the user in answering, but the interviewer can choose the order of question administration, according to the respondent's willingness and the number of answers already given by the previous documents consultation.

The English version of this tool is reported in Appendix 3.

Tool 4: Stakeholders questionnaire

The stakeholders questionnaire is shorter than the other one (6 pages) to facilitate both face-to-face interviews and possible self-completed questionnaires. We divide the questionnaire in 4 sections: Knowledge and involvement in the Park's projects, Perception of the quality of governance, The stakeholders' network, Economic aspects. There are 28 questions, but the last 5 are about the concrete involvement of actors (see paragraph 5.3) that don't concern to the indicators construction (so they can be deleted if the user is not interested in this aspect). The main characteristics and evidences of the questionnaire have already been described in paragraph 3.4.

Questions and modalities have been coded to facilitate the data imputation. The questionnaire has been translated in three languages: English (as a basis for the methodology to be to be used in other case-studies in other part of the world in the future), Italian (which has been used

in the Italian case-study, Dolomiti National Park) and Montenegrin (for the Durmitor National Park case-study in Montenegro). In Appendix 4 only the English version is reported.

Tool 5: Grid for 'name generator' process

When using the snowball sampling, the researcher starts from the organization to be assessed in order to create - in few rounds - the list of the main stakeholders that will form the ego-network (i.e. the list of stakeholders to be interviewed). The 'name generator' process has been made easier by the previous identification of 7+1 relevant stakeholders categories (Prell et al., 2009), as described in paragraph 3.3. The grid wants to be a useful tool for the field work: from the one hand it helps the organization's internal operator in finding out the main stakeholders divided by category, but on the other hand it helps the researcher in getting the right stakeholders' contacts. We ask information about the respondent, the organization he represents, its address, e-mail and phone number, potential notes, and the interview data and other practical notes.

This tool is reported in Appendix 5.

Tool 6: Collaboration request letter

We wrote down a letter addressed to the Parks' directors. The aims of the letter are: to introduce the researchers and the objectives of the study, to explain the reasons of the case-study selection, and to ask the collaboration of the organization's staff. The researchers during the field work need the organization's collaboration for three reasons:

i. to support in selecting and correctly interpreting any internal and external documentation or written procedures related to decision making processes in the territory;

ii. to help in identifying key stakeholders involved in the organization's initiatives, and to facilitate the interviews providing their contacts;

iii. to answer some questions about the organization's governance, better if more than one meeting (two or three short meetings).

In appendix 6 we show an example of this tool. The letter addressed to the Dolomiti Bellunesi National Park, in Italian language, is showed.

Tool 7: Presentation letter to stakeholders

Before interviews, a letter has been sent to each stakeholder of the sample. The letter introduces the researchers and the objectives of the study, asks the helpfulness in dedicating time

for a face-to-face interview, underlines that data will be analyzed with respect to the their privacy and will be shown only in aggregate form, and specifies that the interview will last maximum 25'.

In Appendix 7 we show an example of this tool. The letter addressed to the Dolomiti Bellunesi National Park's stakeholders, in Italian language, is showed.

Tool 8: Indicators list divided by project's phases

In the detailed list of indicators (tool 1) we inserted the phase of the project cycle where each indicator can be used, in the case that the researcher would analyze only some aspects of single projects and not the whole governance process of an organization. In Appendix 8 we show a synthetic list of indicators divided by project's phase; the four temporal phases are: conceptualization, planning, execution and termination (see paragraph 3.1). The division of indicators into the four phases is a suggestion: this topic has not been developed too much, and this instrument will be the basis for further research (see chapter 7).

Tool 9: Imputation data file

An excel file has been created to help the user in the data imputation. In the file there are 6 sheets: four of them are dedicated to the gathering of SNA data, the fifth to the imputation of the stakeholders questionnaire's answers, and the last one to the final indicators computation.

We decided of not inserting it in the appendices.

6.3 Methodology costs

In the previous chapters we underlined that our framework is aimed at identifying secondary data sources as cheap and reliable as possible, as well as suitable (simple and cheap) instruments for collecting and analyzing primary data. In this regard, one of the overall goals of our study is to simplify and limit costs of natural resources governance assessment with respect to other more complex systems we have explored, such as the Governance of Forests Initiative (GFI, 2009) and the Forest Governance Diagnostics Tool by the Agriculture and Rural Development Department (WB – RDA, 2009) of the World Bank. Even if we do not have specific data about the pilot applications, on the basis of their structure, they are both expected to be quite costly, being mainly outcome-oriented and characterized by large numbers of indicators and consultations of experts based on direct interviews.

On the contrary, we try to provide a process-oriented, instead outcome-oriented instrument, of natural resources governance assessment based on 78 indicators (but we saw in paragraph 5.4 that this number can be reduced to 62), with practical and easy-to-use operational tools. The estimated costs of the assessment process based on our set of indicators and operation tools that we are going to present in this paragraph can be even lower if the user would decide to focalize his/her attention only in the organization's staff interviews, but according to us the stakeholders perception are extremely important to understand better the territory and its necessities, and to capture the less tangible features of local governance (Williams, 2011).

The costs that a user will incur have been divided in three categories: overhead costs, field costs and data mining costs. Expenditures are counted in hours, as the specific cost per hour depend on who will take charge of the assessment process, that means if the work is carried on by an internal operator or by an external expert. In the count we consider that only one person will be dedicated to the work, that is plausible by our experience.

The **overheads costs** include all the preparation costs. Our overhead costs have been very high in term of hours/days dedicated to the projects, as we created all the operational tools showed in the previous paragraph. But a final user can utilize these already prepared tools, and the cost will depend only to what extent they will be changed or adapted to different goals.

The analysis don't need expensive software's: the majority of the work can be made just using Microsoft Office Excel© , and for social network analysis there are many free of charge software's. The user will maybe need to spend time to learn to use a SNA program, but the majority of these software's are user-friendly and all the analysis presented in paragraph 5.3 are not necessary: few commands are enough to get the indicators' scores.

The **field costs** include the interviews, the previous contacts and the transportation cost. The latter varies on several factors: the size of the area where stakeholders live, the means of transport and the potential expenditures to reach the place if the evaluator doesn't live *in loco*.

The costs for interviewing organization's staff are more or less fix. The researcher need to divide the interview in three phases:

i) in the first meeting (before the interviews to the stakeholders) he will introduce himself, get the information about the organization and where it is possible to obtain the main documents, and create the list of the stakeholders involved in projects and programs thanks to the snowball sampling (expected time necessary according to our empirical observations is about 1-2 hours);

ii) in the second meeting (during the interviews to the stakeholders) he will fill in the questionnaire with all the questions that he was not able to answer through the document analysis (expected time necessary according to our empirical observations is about -3 hours);

iii) in the last meeting (at the end of the interviews to the stakeholders) he will solve potential doubts emerged during the whole assessment process (expected time necessary according to our empirical observations is about 1-2 hours).

The costs for interviewing the stakeholders are more flexible and depend on the number of interviews and on the social context where the organization is located. The average time per interview in Dolomiti Bellunesi was 29', but the median time, which doesn't consider outliers, was 25'; in fact the range was 10'-45', with one outlier around the 2 hours interview. In Durmitor, where respondents had more time to talk and the translation slowed the process, the average time per interview was 50' (48' the median), and the range varied between 15' and 70', with few outliers around the 2 hours. In general we saw that 20-25' minutes are necessary and sufficient for interviews: the user can consider 25' per interview and multiply this number by the size of the sample.

Also contacts require time. When the stakeholder list is ready, the user will send by e-mail or by post the presentation letter and then he must consider one week of phone call to contact the stakeholders in the list.

The **data mining costs** include the time required by analysis and by the final reporting. The researcher will need:

- 7'-10' per questionnaire to input in the excel file all the stakeholders' data, except to the SNA section;
- 10' per questionnaire to input the SNA data;
- 1-2 hours to input the data by the organization's staff questionnaire;
- 2 hours to calculate the indicators based on stakeholders' interviews;
- 2-4 hours to calculate the indicators based on SNA (this time is calculated on a researcher who knew the software's);
- 3 hours to join the information and to calculate the simple and composite indicators.

The reporting varies on the base of the user or the organization's need.

Concluding we can say that the whole assessing process requires totally more or less one month work (considering one person dedicated to the work). One week to contact stakeholders,

maximum two weeks of interviews (the time refers to a sample of about 50-60 interviews), one week of data imputation and final analysis. If the organization starts an internal self-evaluation the transaction costs are reduced and the final expenditures can be low, also including the interviews to many stakeholders.

This estimates are approximate, and need to be checked case by case. They depend on the complexity of the context and on the number of stakeholders in the sample to be interviewed.

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7. Conclusions and Recommendations for further research

"Quando la strada non c'è, inventala!"
(Robert Baden-Powell)

We can divide our final considerations on the conceptual frameworks that we created in two main sections, following the specific research objectives presented in the introduction (paragraph 1.2): conclusions on each key-dimension (paragraph 7.1) and conclusions about the final set of indicators and the other operational tools for assessing good governance of natural resources in rural areas (paragraph 7.2). At the end of the chapter we give some recommendations for further work (paragraph 7.3).

7.1 The conceptual framework: key-dimensions and sub-dimensions

From the first pre-tests, a substantial validation of our theoretical framework had emerged, but some key-dimensions (such as transparency) and sub-dimensions needed further tests. After the analysis of the quantitative and qualitative data collected in the two case-studies, we matched the information and some final considerations can be done on the 7 key-dimensions of our conceptual framework.

• The key-dimension of governance **Sustainable 'glocal' development** is probably the most complex to be interpreted (it is on a higher hierarchical level of aggregation with respect to the other six). But impacts on environment and society as well as on economy cannot be ignored assessing the quality of governance on the basis of its outcomes. The concept of sustainability is perceived by population as linked only to the environmental aspect (positively for the environment protection, negatively for the activities restrictions), while the socio-economic pillars have not the same importance. But when the organization creates expectations with its initiatives, which concern always with the socio-economic pillars of the sustainable development, that means that a good governance can really change the impacts on the territory.

• The financial efficiency is the most tricky of the **Efficiency**'s sub-dimensions, as data is difficult to be gathered and analyzed: if in future analysis other indicators are removed, the sub-dimensions' division will need to be reviewed. Moreover, stakeholders don't know the evaluated

organization so well to be able to assess its resources allocation and they don't easily compromise themselves on this topic.

• **Effectiveness** is a dimension that can be evaluated well by the stakeholders' perception; in fact respondents are able to evaluate if a project is really effective and concrete, and recognize the importance of coordination. So only one indicator has been removed, and it belonged to the third sub-dimension 'resilience', maybe the most vague of the three.

• **Participation** is the most warmly debated topic, as it creates expectations, it doesn't work if inhabitants don't collaborate, it can slow effectiveness, and it is not always clear who have to participate and in which project's phases. For these reasons, we had divided this key-dimension in several sub-dimensions and we used many variables based on stakeholders questionnaire. In one of our case-studies participative approaches are not applied and stakeholders are not directly involved in projects decision making: this don't allow us to have a comparison for all the sub-dimensions. Stakeholders are able to answer easily to question concerning to 'Stakeholders inclusion', 'Representativeness' and 'Empowerment', even if in the latter the indicators analysis gives us ambiguous results. Instead 'Equity in participation', 'Information Exchange Flows', 'Networks Creation' will need to be reviewed as many indicators have been removed. Finally, the topic of the role played by the Park in managing conflicts has been one of the most debated during interviews, as many respondents wonder if it was a Park's duty or someone else had to cover this role.

• **Transparency** is the basis for governance, but it doesn't create a good governance: in fact this concept is taken in very high consideration when there a low level of governance is perceived by stakeholders in the territory, while it is underestimated when the perception is about the existence of a good governance. The only aspects of transparency that needs the use of subjective indicators is the understandability of documentation produced by the organization, but it is a very specific issue and the analysis seems to exclude it from this key-dimension. The considerations on the sub-dimension 'Feedback' will need to be developed with further data analysis, as two indicators have been introduced only in the second case study, and the number of respondents is too low to allow any kind of analysis.

• **Accountability** is the most vague dimension. People are able to answer to questions about specific sub-dimensions (i.e. the overlapping of roles), but the majority is not able to make concrete examples of how the organization is accountable. Our first impressions during the field work had alerted us that the term accountability is a vague concept for the majority of interviewed stakeholders. These preliminary analysis have been confirmed by quantitative analysis: respondents were hardly able to provide concrete examples of Park's accountability and have not a clear idea of

what accountability is. Maybe perception-based indicators are not adapt to assess this key-dimension.

- The main limit that we found in key-dimension **Capacity** is that stakeholders' opinion change a lot with respect to the internal person with whom they are in contact (what we called the "governance synecdoche"), but the indicators based on SNA seem to be good substitutes of the perception indicators.

Despite some potential weaknesses, we think that the framework contributes towards improving not only governance practice but also governance theory, and we think the present contribution can be a component of policy learning.

7.2 The conceptual framework: an overall assessing instrument

The set of indicators has been improved and consolidated in our ongoing research. A list of 93 indicators has been tested by means of pilot applications in two protected areas in Europe, and the final total number of indicators in the operational set is 78. The number is still high, but it could be reduced further with new tests in other case-studies, or if we consider only indicators based on Park's staff questionnaire. In addition, the majority of indicators are based on dichotomous questions, and we have seen that this fact has accelerated the phase of data collection both in stakeholders interviews and in the meetings with the organization's staff. This is in line with our third specific research objective, which aimed at identifying a simple and expeditious set of indicators to be applied at local level to assess good governance of natural resources. Our framework is based on secondary data sources as cheap and reliable as possible, as well as suitable (simple and cheap) instruments for collecting and analyzing primary data. The only exception is the use of SNA indicators, that require more efforts in data analysis, but results have demonstrated that few of them are very useful to the local governance's assessment, so we decided to keep them in the final set. Finally we can say that we succeeded in simplifying and limiting costs of natural resources governance assessment with respect to other more complex systems such as the WB – RDA and GFI ones. In paragraph 6.3 we showed that the total time that an user needs for the evaluation using our framework is of one man-month work. This estimate considers that the user knows the basis of Social Network Analysis and is able to use some statistical software's. In the Italian system researcher senior is paid approximately 1,800 euro/month (plus social security charges): if we include costs for data collection (travel, accommodation, etc..), we can estimate a cost for the application of the procedure approximately around 3000-5000 Euro, an amount that can be afforded

by small organizations like LAGs. Although these estimates are based only on two case-studies, we can however say that the application of the set of indicators in a local context is not costly, above all if future users are the organizations themselves, according to the idea that self-evaluation is possible.

This latter sentence is inherent with another consideration: our aim was to provide a conceptual framework to be used also for self-evaluations, especially at local scale and with the aim of improving projects and local governance. In general, it should be helpful particularly for innovative and complex fields of application, in forestry (such as REDD projects and in general PES mechanisms) as well as in other sectors (such as the implementation of European rural development policies), which are challenged by complex interactions among multi-level hierarchies, networks and markets. If on the one hand the set of indicators being developed runs the risk of introducing oversimplification in the evaluation (potential weakness of the framework), on the other, because of its simplicity, it can potentially contribute to consolidating the necessary evaluation culture within the policy process.

Our preliminary findings consolidated the idea that the local 'governance culture', as well as the institutional context (i.e. values, cultural norms and political history), are key factors in influencing the quality of governance. According to this idea, the assessment results should not be used for comparison between different contexts but only for comparing projects performances in a certain context with respect to an ideal 'good governance' model and/or to assess their own progress. Nevertheless, in order to move towards building a 'universal' valid assessment instrument, we made an effort to focus on descriptive and procedural-oriented assessment criteria and indicators. For this reason, we think our conceptual framework transcends various levels of government and has no fixed territorial locus, thus being adaptable to different contexts and to both the whole organization's governance and to single projects' phases.

7.3 Recommendations for further research

We are aware that additional theoretical and empirical research is needed and several methodological problems still remain. For example, the need to consider the intrinsic dynamic nature of governance, the need to reduce risks of redundancies between indicators connected with more than one key-dimension of governance (e.g. the analysis of flows of information may refer to both 'Participation' and 'Accountability'), the need to correctly assign weights and quantitative values to the indicators, etc.

The majority of these problems are linked with the fact the data has been collected by only two case-studies. This aspect has been underlined several times during the analysis description. Further work could be addressed in testing the final set of indicators on other organizations in different contexts and fields of application. In this way it would be possible to test those indicators that have been 'accepted conditionally' and to check the final considerations on the other indicators and on the quality of the key-dimensions' assessment. It would be possible to remove more and more the component of arbitrariness that we used in some choices. Besides, the presence of data from an higher number of case studies would enable us to verify that there is not an overlapping in the indicators' division within the sub-dimensions, with the use of multivariate statistical analysis, and would lead us in a better estimate of the composite indicator's scores.

Further work should delve into the topic of self-evaluation, through the selection of suitable indicators for better exploring the cause-effect links between a policy-making and policy-implementing process and their impacts (with special reference to the dimension of Sustainable glocal development) from our final set of indicators to assess governance at local level.

Moreover, in the final operational tools to collect the data for assessment we added the possibility to divide the project into its four phases (conceptualization, planning, execution and termination), in the case that the researcher would like to analyze only some aspects or phases of single projects and not the whole governance process of an organization. But we have only touched on this issue, and this instrument needs to be better refined in future.

Finally, the analysis on the stakeholders' willingness to contribute actively to the good governance of the territory and the willingness to pay for guaranteeing an utopian level of good governance could be a challenging starting line to try to give an estimate of the economic value of good governance. We make the hypothesis that the results, if compared with the final scores of the composite indicator that assesses the quality of the local governance, could demonstrate that high degree of governance's quality could be esteemed by the population and a positive correlation between the two scores would be possible.

Some studies have been already started in these directions. Two ongoing master thesis (inside the project 'FOPER II[1]') are testing our conceptual framework and the set of indicators in two protected areas in the Balkans. A Ph.D. student, inside the three-year world-class Joint Doctoral Programme FONASO (Forest and Nature for Society) is using our work as baseline for the thesis, which title is "Testing the effectiveness of forest governance mechanisms in conservation policy and practices". Another Ph.D. student of TARS (Territorio Ambiente Risorse e Salute) Doctoral

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[1] Forest Policy and Economics Education and Research. http://www.efi.int/portal/projects/foper/

Programme is studying the self-evaluation of LAGs, applying some of the indicators that we tested in our work. Finally two research project at Department LEAF (Land, environment, Agriculture and Forestry) has started in 2011: one project with the Veneto Region on the payment for environmental services schemes in protected areas of the Veneto Region, always based on good governance indicators, and secondly a project on social capital, where SNA indicators will be used.

In conclusion, we can say that the overall research objective, that was the development of a methodology for evaluation of good local governance of natural resources and rural areas, has been reached. Both strengths and weaknesses of the instrument have been analyzed, and we saw that further research will be necessary. But we can affirm that an innovative alternative in local good governance assessment has been provided and the fields of application are several. We hope that this methodology could give a tangible contribution both to the theoretical debate on good governance and, above all, to the concrete requirement of its evaluation in local contexts.

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Appendix 1: Detailed set of indicators to assess local governance

1.	SUSTAINABLE GLOCAL DEVELOPMENT

a. Long Term Equity

1a.1 Commitment to sustainability

Description: Presence/absence of formal commitment to sustainability and at least one objective per each sustainability dimension (Environmental / Economic / Social) is stated in written

Phases: a

Data collection tool: Organization staff Questionnaire

Question:
- D1: Does a formal commitment to sustainability exist? (Y/N)
- D1a: Is at least one concrete goal stated in written by the Park for the environmental impact dimension? (Y/N)
- D1b: Is at least one concrete goal stated in written by the Park for the social impact dimension? (Y/N)
- D1c: Is at least one concrete goal stated in written by the Park for the economic impact dimension? (Y/N)

Unit: dichotomous

Final Range: 0-4

Verifiers and notes: Formal written policy

1a.2 Sustainability reporting

Description: Presence/absence of sustainability reporting (or environmental, economic or social reporting), frequency and standardized grid

Phases: d

Data collection tool: Organization staff Questionnaire

Question:
- D2a: Is there environmental, social or economic reporting? (Y/N)
- D2b: If yes, is it at least annual? (Y/N)
- D2c: Do these reports follow a standardized grid? (Y/N)

Unit: dichotomous

Final Range: 0-3

Verifiers and notes: Social or environmental or sustainability reporting documents i.e. regularly available quantitative metrics on performances. Reporting is based on GRI guidelines

1a.3 Certification

Description: Presence/absence of independent third-party environmental or social certification

Phases: d

Data collection tool: Organization staff Questionnaire

Question:
   D3:   Has the Park an independent third-party environmental or social certification? (Y/N)

Unit: dichotomous

Final Range: 0-1

Verifiers and notes: Environmental certification: ISO14000, EMAS; Forest certification: FSC, PEFC, …; Social certification: SA8000

1a.4 Cost and benefit sharing mechanisms

Description: Presence/absence of formal cost/benefit sharing mechanisms

Phases: a

Data collection tool: Organization staff Questionnaire

Question:
   D4:   Are there rules/laws that impose a costs sharing and a profits redistribution to local communities by the Park initiatives? (Y/N)

Unit: dichotomous

Final Range: 0-1

Verifiers and notes: Formal (procedures, rules, laws) or informal (customary rules). Written evidences (e.g. in internal reports) of successful cost/benefit sharing mechanism

1a.6 Promotion of sustainability

Description: Best practices for tourists and other final users are promoted

Phases: c

Data collection tool: Organization staff Questionnaire

Question:
   D5:   Best practices for tourists and other final users are promoted by the Park to a respectful use of the area? (Y/N)

Unit: dichotomous

Final Range: 0-1

Verifiers and notes: Public available set of rules (i.e. best practices published in web, …) for natural resources sustainable use

b. Environmental Impacts

1b.1 Climate change projects

Description: Presence/absence in the past 5 years of specific projects for climate change impact reduction

Phases: -

Data collection tool: Organization staff Questionnaire

Question:
   D6:   Has the Park carried out in the past 5 years specific projects for climate change impact reduction? (Y/N)

Unit: dichotomous

Final Range: 0-1

Verifiers and notes: for instance, REDD projects, projects to support renewable energies, …

1b.3 Environmental Projects

Description: Presence/absence in the past 5 years of specific projects for improving environmental impact

Phases: -

Data collection tool: Organization staff Questionnaire

Question:
> D7:   Has the Park carried out in the past 5 years specific projects for improving environmental impact? (Y/N)

Unit: dichotomous

Final Range: 0-1

Verifiers and notes: "glocal" referring to local environmental aspects which concern to a global existence value (for instance: biodiversity, …)

1b.4 Perception of environmental impacts

Description: Environmental impacts are seen as positive by stakeholders

Phases: d

Data collection tool: Stakeholders Questionnaire

Question:
> Q11a: The Park's initiatives lead to a positive and long-term environmental impact

Unit: scale

Final Range: 1-10

Verifiers and notes: Stakeholders perception of positive and long-term impacts on environment

c. Social Impacts

1c.1 Social projects

Description: Presence/absence in the past 5 years of specific projects for improving social impacts

Phases: -

Data collection tool: Organization staff Questionnaire

Question:
> D8:   Has the Park carried out in the past 5 years specific projects for improving social impact? (Y/N)

Unit: dichotomous

Final Range: 0-1

Verifiers and notes: for instance, cultural initiatives, …

1c.2 Social impacts perception

Description: Social impacts are seen as positive by stakeholders

Phases: d

Data collection tool: Stakeholders Questionnaire

Question:
    Q11a: The Park's initiatives lead to a positive and long-term social impact

Unit: scale

Final Range: 1-10

Verifiers and notes: Stakeholders perception of positive and long-term social impacts

d. Economic impacts

1d.1 Added value

Description: N° of stakeholders getting economic benefits due to the Organization activities (projects/programs) on the total of stakeholders.

Phases: d

Data collection tool: Stakeholders Questionnaire

Question:
    Q 19: Have you ever benefitted economically from the Park' initiatives? (Y/N)
    Q19b: Has the territory benefitted economically from the Park' initiatives? (Y/N)

Unit: %

Final Range: 0-100

Verifiers and notes: Economic benefits: possibility to create entrepreneurial initiatives, financial support to entrepreneurs, businesses, job opportunity, additional income, …

1d.2 Economic relationships

Description: N° of "economic" (flow of formal collaboration) relationships among stakeholders on total n° of stakeholders (density)

Phases: d

Data collection tool: Stakeholders Questionnaire (SNA)

Question:
    Q 14: We ask you to indicate with which stakeholders, among those listed below, you have had formal
        or informal work collaborations in the last 5 years.

Unit: %

Final Range: 0-100

Verifiers and notes: Formal collaboration: formal contract signs (*we assume that contracts are based on flow of financial resources*)

1d.3 Economic impacts perception

Description: Economic impacts on the area are seen as positive by stakeholders.

Phases: d

Data collection tool: Stakeholders Questionnaire

Question:
    Q11c: The Park's initiatives lead to a positive and long-term <u>economic impact</u>

Unit: scale

Final Range: 1-10

Verifiers and notes: Stakeholders perception of positive and long-term economic impacts

1d.4 Economic development projects

Description: Presence/absence in the past 5 years of specific projects for economic development

Phases: d

Data collection tool: Organization staff Questionnaire

Question:
    D9: Has the Park carried out in the past 5 years specific projects for improving economic impact? (Y/N)

Unit: dichot

Final Range: 0-1

Verifiers and notes: -

2. EFFICIENCY

a. Resources Allocation

2a.2 Use of time

Description: Quickness in informing stakeholders

Phases: c

Data collection tool: Stakeholders Questionnaire (SNA)

Question:
    Q13: Please mark the stakeholders with whom <u>in the past 5 years</u>, you had an exchange of information (by phone, mail, letter, personally) regarding local initiatives in the area.

Unit: %

Final Range: 0-100

Verifiers and notes: -

2a.4 Use of technology

Description: Organization invests money in updating softwares or in buying innovative technology tools, in the last year

Phases: a - c

Data collection tool: Organization staff Questionnaire

Question:

     D11: Has the Park invested money in updating softwares or in buying innovative technology tools? (Y/N)

Unit: dichot

Final Range: 0-1

Verifiers and notes: -

b. Costs and Outputs

2b.2 Transaction costs

Description: Presence/absence of a written estimated amount of transaction costs, at least as % on total costs

Phases: a – d

Data collection tool: Organization staff Questionnaire

Question:

     D13: Is there a written estimated amount of transaction costs? (Y/N)

Unit: dichot

Final Range: 0-1

Verifiers and notes: Any internal document

c. Respect of Deadlines

2c.1 Defined deadlines

Description: N° of projects with pre-defined timetable on total n° of projects

Phases: b

Data collection tool: Organization staff Questionnaire

Question:

     D14: In how many projects, in the past 5 years is there a pre-defined deadlines' timetable? (Y/N)

Unit: %

Final Range: 0-100

Verifiers and notes: Examples of pre-defined timetable for carrying out activities: Gantt Diagram

2c.2 Respect of deadlines

Description: N° of extensions required on the n° of started projects in the last 5 years

Phases: d

Data collection tool: Organization staff Questionnaire

Question:

D15: How many projects have required an extention? (Y/N)

Unit: %

Final Range: 0-100

Verifiers and notes: Minutes of internal management meetings. Decisions of extension granting

2c.3 Deadlines perception

Description: Stakeholders perceived deadlines are respected

Phases: c – d

Data collection tool: Stakeholders Questionnaire

Question:

Q11e: Project/programme deadlines are respected by the Park

Unit: scale

Final Range: 1-10

Verifiers and notes: E.g. in referring to salaries payments, to expected responses, etc

3. EFFECTIVENESS

a. Objectives and Outputs

3a.1 Performances self-evaluation

Description: Presence/absence of at least one annual self-evaluation evidence of organization's performance for each governance dimension.

Phases: d

Data collection tool: Organization staff Questionnaire

Question:
D16: Are there annual self-evaluation evidence of organization's performance for each governance dimension? (Y/N)

Unit: ∑ 7 dichot

Final Range: 0-7

Verifiers and notes: Graphs, reports, figures, tables, …. Any written document reporting on organization's performances for each dimension

3a.2 Objectives' attainment

Description: N° of achieved outputs on the total of stated objectives (Sum of all projects' objectives)

Phases: d

Data collection tool: Organization staff Questionnaire

Question:
    D17: How many of the objectives of each project have been achieved?

Unit: %

Final Range: 0-100

Verifiers and notes: Projects documents

3a.3 Interest creation

Description: N° of projects able to stimulate stakeholders interest on the total n° of projects mentioned by the org. (maximum 6)

Phases: -

Data collection tool: Stakeholders Questionnaire

Question:
    Q4: Referring to the past 5 years, could you make a list including both the activities in which you were directly involved, and those that you think have had the biggest impact on the area?
    D0: Which projects has the Park carried out in the past 5 years?

Unit: %

Final Range: 0-100

Verifiers and notes: -

3a.4 Phasing out

Description: N° of projects with a phasing out or planned activities to continue collaboration beyond the funded period on the total N° of projects

Phases: d

Data collection tool: Organization staff Questionnaire

Question:
    D18: How many projects phase out beyond the funded period?

Unit: %

Final Range: 0-100

Verifiers and notes: -

3a.5 Perception of effectiveness

Description: Stakeholders perceive the planned benefits have been properly delivered and received.

Phases: d

Data collection tool: Stakeholders Questionnaires

Question:
    Q11o: The Park achieves its goals set in its projects and programmes for the territory

Unit: scale

Final Range: 1-10

Verifiers and notes: -

b. Coordination

3b.1 Inter-organizational coordination

Description: Presence/absence of coordination mechanisms among public institutions of the area; Presence/absence of coordination mechanisms among private organizations (economic bodies, volunteers, etc); Presence/absence of coordination mechanisms among different types of organizations / actors / institutions / residents

Phases: a – b – c – d

Data collection tool: Organization staff Questionnaire

Question:
D19: Are there coordination mechanisms among public institutions of the area? (Y/N)
Are there coordination mechanisms among private organizations (economic bodies, volunteers, etc)? (Y/N)
Are there coordination mechanisms among public and private organizations, institutions and residents? (Y/N)

Unit: ∑ 3 dichot

Final Range: 0-3

Verifiers and notes: Coordination mechanisms: written common procedures, rules, etc. for joint interactions (e.g. regular meetings, formal exchanges of ideas, …); Organizations: e.g. parks, LAGs, etc; Various types of actors: private, public, civil society organizations, residents

3b.2 Inter-sectoral coordination

Description: N° of represented sectors in the centre of the network created by the organization's initiatives on the total socio economic-spectrum of the area

Phases: a – b – c – d

Data collection tool: Stakeholders Questionnaire (SNA)

Question:
Q14: We ask you to indicate with which stakeholders, among those listed below, you have had formal or informal work collaborations in the last 5 years.

Unit: ∑ 8 dichot

Final Range: 0-8

Verifiers and notes: One sector is represented when it has at least one actor. (Socio-economic sectors are: Park – Municipalities – other Public Institutions – Tourism – Mountain Experts – Producers – Restaurants and Hotels – Sport Activities)

3b.3 Multi-level actions

Description: Presence/absence of joint actions with international/national/sub-national organizations

Phases: a – b – c – d

Data collection tool: Organization staff Questionnaire

Question:
> D20: Does the Park take part in joint actions with international, national, sub-national organizations? (Y/N)

Unit: ∑ 3 dichot

Final Range: 0-3

Verifiers and notes: Joint actions: projects and programs in collaboration, vertical interactions required by compulsory rules, …

3b.4 Multi-level network

Description: N° of network cliques constituted by both public and private stakeholders on the total number of cliques in the total collaboration network

Phases: a – b – c – d

Data collection tool: Stakeholders Questionnaire (SNA)

Question:
> Q14: We ask you to indicate with which stakeholders, among those listed below, you have had formal or informal work collaborations in the last 5 years.

Unit: %

Final Range: 0-100

Verifiers and notes: We consider at least 3-size ccliques

3b.5 Perception of coordination

Description: The Organization is perceived to be able to effectively coordinate actors.

Phases: a – b – c

Data collection tool: Stakeholders Questionnaire

Question:
> Q11p: The Park is effective in coordinating stakeholders and in coordinating with other organizations.

Unit: scale

Final Range: 1-10

Verifiers and notes: -

c. Resilience

3c.1 Perception of integration

Description: The Organization is perceived to be integrated in the territory

Phases: a – b – c – d

Data collection tool: Stakeholders Questionnaire

Question:
> Q11q: The Park is well integrated in the territory

Unit: scale

Final Range: 1-10

Verifiers and notes: -

3c.3 Diversification of financial resources

Description: None of the financial sources is providing more than 50% of total financial resources

Phases: b – c

Data collection tool: Organization staff Questionnaire

Question:
> D21: What are the Park's financial sources?
> Is there one financial source that provides more than 50% of the Park's income?

Unit: dichot

Final Range: 0-1

Verifiers and notes: List of sources of financial resources (e.g. donors, etc.). Amount of financial resources annually transferred by each source

3c.4 Risk management resources

Description: Presence/absence of reserve funds for potential unexpected events (damages, …)

Phases: a – b

Data collection tool: Organization staff Questionnaire

Question:
> D22: Are there reserve funds for potential unexpected events (damages, …)? (Y/N)

Unit: dichot

Final Range: 0-1

Verifiers and notes: Annual budget and annual balance

3c.5 Bidirectional flows

Description: N° of bidirectional flows of information between the organization and other stakeholders on the total n° of stakeholders

Phases: a – b – c

Data collection tool: Stakeholders Questionnaire (SNA)

Question:
> Q13: Please mark the stakeholders with whom in the past 5 years, you had an exchange of information (by phone, mail, letter, personally) regarding local initiatives in the area.

Unit: %

Final Range: 0-100

Verifiers and notes: -

a. Stakeholders Inclusion

4a.1 Adoption of participation

Description: N° of projects/program adopting participatory approaches on total N° of projects/programs in the past 5 years

Phases: d

Data collection tool: Organization staff Questionnaire

Question:
> D23: For how many projects (past 5 years) has the Park adopted participatory approaches for consulting population or experts before taking decisions?

Unit: %

Final Range: 0-100

Verifiers and notes: Projects/program documents.

4a.2 Participation throughout the project cycle

Description: Presence/absence of participatory approaches in decision-making in the 4 phases of project/program development

Phases: a – b – c – d

Data collection tool: Organization staff Questionnaire

Question:
> D24: In regards to all projects of the past 5 years, has the Park never consulted population in each of the four project phases (design, formulation, implementation, evaluation)?

Unit: $\sum$ 4 dichot

Final Range: 0-4

Verifiers and notes: For each phase of projects/programs (a,b,c,d) investigate whether the all stakeholders (population), only experts, both of them or none of them have been invited.

4a.3 Stakeholders participation

Description: N° of actors which have taken part in stakeholders participatory events on each of the 4 project phases in the last 5 years on total n° of main actors.

Phases: a – b – c – d

Data collection tool: Stakeholders Questionnaire

Question:
> Q6: Over the past 5 years, have you ever taken part in the..
> > design of a project promoted by the Park? (Y/N)
> > formulation of a project promoted by the Park? (Y/N)
> > implementation of a project promoted by the Park? (Y/N)
> > assessment of a project promoted by the Park? (Y/N)

Unit: Average of 4 phases

Final Range: 0-100

Verifiers and notes: -

4a.4 Participants recording

Description: N° of projects/programs for which participants to the meetings are recorded on the total n° of projects/programs in the past 5 years.

Phases: d

Data collection tool: Organization staff Questionnaire

Question:
>   D25: In how many projects does the Park record the stakeholders attending the meetings?

Unit: %

Final Range: 0-100

Verifiers and notes: Records of meetings, with participants list (documents analysis)

b. Representativeness

4b.1 Main actors' presence in the core

Description: Main actors are in the centre of the information network.

Phases: a – b – c – d

Data collection tool: Stakeholders Questionnaire (SNA)

Question:
>   Q13: Please mark the stakeholders with whom in the past 5 years, you had an exchange of information (by phone, mail, letter, personally) regarding local initiatives in the area.
>   Q12: In your opinion, which stakeholders (public or private) have a particularly important role in the management of the territory?

Unit: %

Final Range: 0-100

Verifiers and notes: Main actors are those actors identified as "main" by all the stakeholders (according to the reputational power, the upper quartile 25%).

4b.2 Represented interests

Description: N° of represented stakeholders which have taken part in stakeholders participatory events in the last 5 years on the total N° of stakeholders.

Phases: a – b – c – d

Data collection tool: Stakeholders Questionnaire

Question:
>   Q6: Over the past 5 years, have you ever taken part in the..
>   design of a project promoted by the Park? (Y/N)

formulation of a project promoted by the Park? (Y/N)

implementation of a project promoted by the Park? (Y/N)

assessment of a project promoted by the Park? (Y/N)

Q7: When you were not directly involved, did you consider any of the participating stakeholders as representing your interests? (Y/N)

Unit: %

Final Range: 0-100

Verifiers and notes: -

4b.3 Participants recording

Description: Stakeholders participatory events are distributed in various sites within the interested area.

Phases: a – b – c – d

Data collection tool: Organization staff Questionnaire

Question:

D26: Does the Park use various sites distributed in within the interested area for the meetings? In which sites?

Unit: dichot

Final Range: 0-1

Verifiers and notes: -

c. Empowerment

4c.1 Influencing decision-making

Description: Presence/absence of formal procedures/rules for allowing stakeholders to really influence decision-making.

Phases: b

Data collection tool: Organization staff Questionnaire

Question:

D27: Are there formal procedures/rules for allowing stakeholders to really influence decision-making? (Y/N)

Unit: dichot

Final Range: 0-1

Verifiers and notes: Written procedures establishing how and when stakeholders are involved (with voting power or not, etc.; only consultation: only "voice", etc)

4c.2 Fundamentals of empowerment

Description: Feedbacks/comments/complaints from stakeholders are collected, categorized and archived.

Phases: a – b – c – d

Data collection tool: Organization staff Questionnaire

Question:

      D28: Are feedbacks/comments/complaints from stakeholders collected, categorized and archived by the Park?

Unit: dichot

Final Range: 0-1

Verifiers and notes: Categorized: by contents, by uses, by level of utility, etc.

4c.3 Confidence in the organization

Description: N° of stakeholders who think that their comments/feedbacks/complaints have real capacity to influence decisions, on total n° of stakeholders

Phases: a – b – c – d

Data collection tool: Stakeholders Questionnaire

Question:

      Q9: In general, have you ever provided comments, ideas, practical suggestions to the Park regarding the initiatives/projects run by the Park? (Y/N)

Unit: %

Final Range: 0-100

Verifiers and notes: -

4c.4 Perception of empowerment

Description: Stakeholders perceive the org. uses their comments/feedbacks/complaints

Phases: a – b – c – d

Data collection tool: Stakeholders Questionnaire

Question:

      Q11f: The Park uses stakeholders' comments/suggestions to make decisions relating to the territory

Unit: scale

Final Range: 1-10

Verifiers and notes: -

4c.5 Stakeholders involvement

Description: N° of stakeholders often giving comments and suggestions to the org. on the total n° of stakeholders

Phases: a – b – c – d

Data collection tool: Stakeholders Questionnaire

Question:

      Q9: In general, have you ever provided comments, ideas, practical suggestions to the Park regarding the initiatives/projects run by the Park? (Y/N)

Unit: %

Final Range: 1-100

Verifiers and notes: *Often = answer "yes, frequently" **or** answer "yes, occasionally"*

d. Equity in participation

4d.2 Perception of participation

Description: Stakeholders perceive participation as fair.

Phases: a – b – c – d

Data collection tool: Stakeholders Questionnaire

Question:

>   Q11g: In participatory processes, all stakeholders of the territory are <u>represented fairly</u>

Unit: scale

Final Range: 1-10

Verifiers and notes: -

e. Information Exchange Flows

4e.1 Network cohesion

Description: Information compactness index

Phases: a – b – c – d

Data collection tool: Stakeholders Questionnaire

Question:

>   Q13: Please mark the stakeholders with whom <u>in the past 5 years</u>, you had an exchange of information (by phone, mail, letter, personally) regarding local initiatives in the area.

Unit: %

Final Range: 0-100

Verifiers and notes: -

4e.2 Procedures for collecting comments

Description: Presence/absence of formal procedure to allow stakeholders to give their comments/contributes even without taking part in meetings.

Phases: a – b – c – d

Data collection tool: Organization staff Questionnaire

Question:

>   D30: Which means has the Park provided to allow stakeholders to give their comments/contributes even without taking part in meetings?

Unit: dichot

Final Range: 0-1

Verifiers and notes: Examples: forum on-line, hard copies of forms available in the offices, e-mail address where to post comments, feedbacks, complaints, etc.

f. Network Creation

4f.1 Collaboration cohesion

Description: Collaboration compactness index

Phases: a – b – c – d

Data collection tool: Stakeholders Questionnaire (SNA)

Question:

> Q14: We ask you to indicate with which stakeholders, among those listed below, you have had formal or informal work collaborations in the last 5 years.

Unit: %

Final Range: 0-100

Verifiers and notes: -

4f.2 Stakeholders databases

Description: Presence/absence of an updated exhaustive database of stakeholders

Phases: a – b – c – d

Data collection tool: Organization staff Questionnaire

Question:

> D31: Is there an exhaustive and updates database of stakeholders involved in projects and meetings? (Y/N)

Unit: dichot

Final Range: 0-1

Verifiers and notes: Exhaustive database in terms of updated and full contacts to facilitate timely and effective communication (address, e-mail, phone, Skype, etc.)

g. Conflicts Management

4g.1 Formal mechanisms

Description: Presence/absence of formal mechanisms for conflicts/disputes management/resolution.

Phases: a – b – c – d

Data collection tool: Organization staff Questionnaire

Question:

D33: Are there formal mechanisms for the management and resolution of conflicts/disputes among stakeholders involved in the Park's projects? (Y/N)

Unit: dichot

Final Range: 0-1

Verifiers and notes: Formal mechanisms: e.g. written procedure for disputes resolution, creation of opportunities for negotiation among stakeholders, public available forms for anonymously submitting complaints, …

4g.2 Between stakeholders

Description: Betweenness role of the organization in collaboration

Phases: a – b – c – d

Data collection tool: Stakeholders Questionnaire (SNA)

Question:

Q14: We ask you to indicate with which stakeholders, among those listed below, you have had formal or informal work collaborations in the last 5 years.

Unit: %

Final Range: 0-100

Verifiers and notes: -

4g.4 Perception of conflicts

Description: Stakeholders perceive the real/potential conflicts are properly managed by the org.

Phases: a – b – c – d

Data collection tool: Stakeholders Questionnaire

Question:

Q11h: Conflicts among stakeholders working in the area are properly managed by the Park

Unit: scale

Final Range: 1-10

Verifiers and notes: Perception on a scale: from low level of conflict to high level

5. TRANSPARENCY

a. Documentation

5a.1 Projects exhaustiveness

Description: N° of projects with easy access to comprehensive information on: analysis of the context, objectives, outputs, logical framework, methodology, timetable, resources, financial plan

Phases: d

Data collection tool: Organization staff Questionnaire

Question:

D34: How many projects have easy access to comprehensive information on: analysis of the context, objectives, outputs, logical framework, methodology, timetable, resources, financial plan?

Unit: ∑ 8 dichot

Final Range: 0-8

Verifiers and notes: -

5a.2 Accessibility

Description: Information on structure, decisions process, resources and projects with respect to the organization are public available on the web.

Phases: a

Data collection tool: Organization staff Questionnaire

Question:

D35: On the web is possible to find information on ownership structure and investors' relations? (Y/N)
On the web is possible to find information on board and management structure and decision-making process? (Y/N)
On the web is possible to find financial information? (Y/N)
On the web is possible to find information on projects cycle (decisions taken; activities; results)? (Y/N)

Unit: ∑ 4 dichot

Final Range: 0-4

Verifiers and notes: Resources refer to points 2) and 3): budget, staff, salaries, organization chart, administration and decision-making rules.

5a.3 Translation

Description: Information on structure, decisions process, resources and projects with respect to the organization are available at least in another language?

Phases: d

Data collection tool: Organization staff Questionnaire

Question:

D36: Are information on structure, decisions process, resources and projects with respect to the Park available at least in another language? (Y/N)

Unit: ∑ 4 dichot

Final Range: 0-4

Verifiers and notes: Resources: budget, staff, administration rules. World languages list: English, Spanish, French, Arabian, Russian, Portuguese, standard Chinese, Hindustani, German.

5a.5 Updating

Description: Information on structure, decisions process, resources and projects with respect to the organization are regularly updated.

Phases: c

Data collection tool: Organization staff Questionnaire

Question:

> D37: Are information on structure, decisions process, resources and projects with respect to the Park regularly (at least one a year) updated? (Y/N)

Unit: ∑ 4 dichot

Final Range: 0-4

Verifiers and notes: Resources: budget, staff, administration rules. For each type of information:

Annual update = 1 score; Less than once a year = 0

b. Feedback

5b.2 Perception of feedback

Description: Feedbacks are perceived to be satisfactory by stakeholders

Phases: a – b – c – d

Data collection tool: Stakeholders Questionnaire

Question:
> Q 11s: When contacted, the Park provides satisfactory and timely responses

Unit: scale

Final Range: 1-10

Verifiers and notes: Satisfaction in terms of: 1) quality/contents; 2) timeliness; 3) quantity.

5b.3 Procedure for feedback

Description: Absence/presence of formal procedure(s) to provide feedback to stakeholders requests/complaints/etc.

Phases: a – b – c

Data collection tool: Organization staff Questionnaire

Question:
> D38: Are there formal procedures to provide feedback to stakeholders requests/complaints/etc.? (Y/N)

Unit: dichot

Final Range: 0-1

Verifiers and notes: e.g. Written procedures establishing a timetable for providing feedbacks (for example within 15 days from receiving the request)

c. Information Flows to External Stakeholders

5c.1 Notification instruments

Description: Presence/absence of notification instruments to near and distant stakeholders in the project cycle

Phases: a

Data collection tool: Organization staff Questionnaire

Question:
> D39: Does the Park use notification instruments to get the projects' development across to residents? (Y/N)
> Does the Park use notification instruments to get the projects' development across to people not living in the area? (Y/N)

Unit: ∑ 2 dichot

Final Range: 0-2

Verifiers and notes: Near= local, resident stakeholders, which are not inside the Organization – in principle "near" stakeholders can be local people, old people with no access to informatics (e.g. they need to have a local brochure)

Distant = external, far stakeholders, which are not part of the Organisation – in principle they can be tourists or national level stakeholders able to use Information Technology (e.g. the web)

Notification: 1) of intent to create a policy; 2) of draft proposals; 3) of final policy decision ("of a pending policymaking exercise")

5c.2 Visibility

Description: Presence/absence of a method to calculate the annual website accesses, subdivided by month or variables on users

Phases: a – b

Data collection tool: Organization staff Questionnaire

Question:
> D40: Has the Park the instruments to calculate the annual website accesses? (Y/N)
> If yes: which is the number of accesses in the past year?

Unit: dichot

Final Range: 0-1

Verifiers and notes: website statistics and counters

6. ACCOUNTABILITY

a. Program and process accountability

6a.1 Rationale for decisions

Description: The rationale for decisions to affected parties is explained in written record(s).

Phases: a

Data collection tool: Organization staff Questionnaire

Question:
D41: Is the rationale for decisions to affected parties explained in written records? (Y/N)

Unit: dichot

Final Range: 0-1

Verifiers and notes: -

6a.2 Organization chart

Description: Presence/absence of a written internal organization chart and jobs description.

Phases: a

Data collection tool: Organization staff Questionnaire

Question:
D42: Is there an internal organization chart? (Y/N)
     Is there a clear division of areas of expertise? (Y/N)

Unit: ∑ 2 dichot

Final Range: 0-2

Verifiers and notes: Organization chart. Jobs description.

6a.3 Perception of clarity of actors' roles

Description: The role of the Organization are perceived to be clear by stakeholders.

Phases: a – b – c – d

Data collection tool: Stakeholders Questionnaire

Question:
Q11: According to your perception, in the past 5 years how has the Park acted with respect to the following aspects?

Unit: scale

Final Range: 1-10

Verifiers and notes: Clear roles = clear division of areas of intervention, competencies.

6a.5 Co-responsibility

Description: N° of stakeholders formally involved in projects/programs with co-responsibilities clearly identified on the total n° of stakeholders.

Phases: a – b – c

Data collection tool: Stakeholders Questionnaire

Question:
Q16: Have you ever co-funded a project promoted by the Park? (Y/N)
Q17: Have you ever assumed formal responsibilities on projects promoted by the Park? (Y/N)

Unit: %

Final Range: 0-100

Verifiers and notes: Co-responsibilities: e.g. by co-financing the projects/programs; by formally signing implementation responsibility, … Co-financing

6a.6 Overlapping roles

Description: The roles of the Organization are perceived by stakeholders of not overlapping with other actors' ones

Phases: a – b – c – d

Data collection tool: Stakeholders Questionnaire

Question:
    Q11m: The role of the Park does not overlap with that of other stakeholders

Unit: scale

Final Range: 1-10

Verifiers and notes: -

b. Fiscal accountability

6b.1 Visible salaries

Description: There are public available evidences of salaries and commissions (fees).

Phases: a

Data collection tool: Organization staff Questionnaire

Question:
    D44: Is there a formal document where the rules in policymaking are clearly defined? (Y/N)

Unit: dichot

Final Range: 0-1

Verifiers and notes: Public available: directly accessible or on request.

6b.2 Payment of prescribed charges

Description: There are public available evidences that applicable and legally prescribed fees, taxes and other charges are paid.

Phases: a – b – c

Data collection tool: Organization staff Questionnaire

Question:
    D45: Are there public available evidences that applicable and legally prescribed fees, taxes and other charges are paid? (Y/N)

Unit: dichot

Final Range: 0-1

Verifiers and notes: Public available: directly accessible or on request.

Applicable and legally prescribed fees, royalties, taxes and other charge: i.e. tax burden, social security taxes.

c. Monitoring and evaluation

6c.1 Regular monitoring

Description: Presence/absence of at least annual monitoring.

Phases: c

Data collection tool: Organization staff Questionnaire

Question:
> D46: Is there at least an annual monitoring? (Y/N)

Unit: dichot

Final Range: 0-1

Verifiers and notes: Monitoring reports

6c.2 Criteria for monitoring

Description: Presence/absence of internally defined criteria and indicators to assess the Organization's performances.

Phases: a – b – c

Data collection tool: Organization staff Questionnaire

Question:
> D47: Are there internally defined criteria and indicators to assess the Park's performances? (Y/N)

Unit: dichot

Final Range: 0-1

Verifiers and notes: -

6c.3 Evaluation

Description: There are evidences of external valuations carried out for programs/projects developed by the Organization.

Phases: c – d

Data collection tool: Organization staff Questionnaire

Question:
> D48: Are there evidences of external valuations carried out for projects developed by the Park? (Y/N)

Unit: dichot

Final Range: 0-1

Verifiers and notes: External valuations carried out by donors/funders (they might be independent – third-party or second-party valuations).

7. CAPACITY

a. Competences and professionalism

7a.1 Degree of diversification among staff

Description: Presence/absence of staff's curricula. There are different fields of specialization among the staff employed by the Organization.

Phases: a

Data collection tool: Organization staff Questionnaire

Question:
    D42: Are there the staff's curricula? (Y/N)
    D49: How many different fields of specialization are there among the staff employed by the Park?

Unit: $\sum$ 2 dichot

Final Range: 0-2

Verifiers and notes: Fields of specialization can be identified on the basis of type of university degrees, expertise, CV, etc.

7a.2 Co-financed projects

Description: N° of co-financed projects on total n° of projects

Phases: a

Data collection tool: Organization staff Questionnaire

Question:
    D50: How many projects have been co-financed in the past 5 years?
        How much is the co-financing?

Unit: %

Final Range: 0-100

Verifiers and notes: -

7a.3 Perception of professionalism

Description: The Organization is perceived to be adequately staffed.

Phases: a – b – c

Data collection tool: Stakeholders Questionnaire

Question:
    Q 11n: The competences of the Park's staff are adequate

Unit: scale

Final Range: 1-10

Verifiers and notes: -

b. Knowledge Transfer and Collaborative Learning

7b.1 Mobilization of knowledge

Description: N° of bidirectional flows of collaboration among **stakeholders** on the total N° of flows of collaboration

Phases: a – b – c – d

Data collection tool: Stakeholders Questionnaire (SNA)

Question:

Q14: We ask you to indicate with which stakeholders, among those listed below, you have had formal or informal work collaborations in the last 5 years.

Unit: %

Final Range: 0-100

Verifiers and notes: *Note: "stakeholders" is underlined to differentiate this indicator by the 4e.1*

7b.2 Knowledge courses

Description: the org. organizes specializing courses open to residents and stakeholders

Phases: c – d

Data collection tool: Organization staff Questionnaire

Question:

D52: Does the Park organize specializing courses open to residents and stakeholders of the territory? (Y/N)

Unit: dichot

Final Range: 0-1

Verifiers and notes: -

7b.3 Overall reputational power

Description: The reputational power is distributed also among actors different from the Org

Phases: a – b – c – d

Data collection tool: Stakeholders Questionnaire (SNA)

Question:
Q 12: In your opinion, which stakeholders (public or private) have a particularly important role in the management of the territory?

Unit: $\sum$ 8 dichot

Final Range: 0-8

Verifiers and notes: All the categories (8) are considered important inside the upper quartile (25%)

APPENDIX 2: SUMMARIZING SCHEDULE OF INDICATORS

1. SUSTAINABLE GLOCAL DEVELOPMENT									
Sub-dimension	**code**	**Indicator name**	**Indicator description**	**Variables**	**Unit**	**Range**	**Verifiers and *Notes***	**Data collection tool**	**Referring to …**
a. Long term Equity	1a.1	Commitment to sustainability	Presence/absence of formal commitment to sustainability		dichot	0-1	Formal written policy	Organization staff Questionnaire	D 1
			At least one objective per each sustainability dimension (E/E/S) is stated in written		Σ 3 dichot .	0-3	One objective (value/quality) per ecologic, economic or social dimension.	Organization staff Questionnaire	D 1a D 1b D 1c
	1a.2	Sustainability reporting	Presence/absence of sustainability reporting (or environmental, economic or social reporting)		Σ 3 dichot	0-3	Social or environmental or sustainability reporting documents i.e. regularly available quantitative metrics on performances	Organization staff Questionnaire	D 2a
			At least annual reporting					Organization staff Questionnaire	D 2b
			Standardized reporting				Reporting is based on GRI guidelines	Organization staff Questionnaire	D 2c
	1a.3	Certification	Presence/absence of independent third-party environmental or social certification		dichot	0-1	Environmental certification: ISO14000, EMAS Forest certification: FSC, PEFC, …. Social certification: SA8000	Organization staff Questionnaire	D 3
	1a.4	Cost and benefit sharing mechanisms	Presence/absence of formal cost/benefit sharing mechanisms		dichot	0-1	Formal (procedures, rules, laws) or informal (customary rules) Written evidences (e.g. in internal reports) of successful cost/benefit sharing mechanism	Organization staff Questionnaire	D 4
	1a.5	*Perception of equity in cost and benefit distribution*	*Cost and benefit sharing is seen as fair by stakeholders*		*scale*	*1-10*		*Stakeholders Questionnaire*	*Q 11r*
	1a.6	Promotion of sustainability	Best practices for tourists and other final users are		dichot	0-1	Public available set of rules (i.e. best practices published in web, …) for natural resources sustainable use	Organization staff Questionnaire	D 5

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			promoted							
b. Environmental impacts	1b.1	Climate change projects	Presence/absence in the past 5 years of specific projects for climate change impact reduction		dichot	0-1	REDD projects, projects to support renewable energies, …. *OK dimensione "glocal"*	Organization staff Questionnaire	D 6
	1b.2	*Climate change impacts perception*	*Impacts on climate change are seen as positive by stakeholders*		scale	*1-10*	*Stakeholders perception of positive and long-term impacts on climate change*	*Stakeholders Questionnaires*	
	1b.3	Environmental projects	Presence/absence in the past 5 years of specific projects for improving environmental impact		dichot	0-1	*Dimensione "glocal" in riferimento ad aspetti ambientali che hanno un valore globale es. d'esistenza (es. biodiversità, …)*	Organization staff Questionnaire	D 7
	1b.4	Perception of environmental impacts	Environmental impacts are seen as positive by stakeholders		scale	1-10	Stakeholders perception of positive and long-term impacts on environment	Stakeholders Questionnaire	Q 11a
c. Social impacts	1c.1	Social projects	Presence/absence in the past 5 years of specific projects for improving social impacts		dichot	0-1	E.g. increased employment opportunities, …	Organization staff Questionnaire	D 8
	1c.2	Social impacts perception	Social impacts are seen as positive by stakeholders		scale	1-10	Stakeholders perception of positive and long-term social impacts	Stakeholders Questionnaire	Q 11b
	1c.3	*Social relationships*	*N° of "social" (flow of information)*			*0-100*		*Stakeholders Questionnaire (SNA)*	*Q 13*

			relationships (symmetrized by the minimum) among stakeholders on total n° of stakeholders (density)						
d. Economic impacts	1d.1	Added value	N° of stakeholders getting economic benefits due to the Organization activities (projects/programs) on the total of stakeholders.		%	0-100	Economic benefits: possibility to create entrepreneurial initiatives, financial support to entrepreneurs, businesses, job opportunity, additional income, …	Stakeholders Questionnaire	Q 19 Q 19b
	1d.2	Economic relationships	N° of "economic" (flow of formal collaboration) relationships among stakeholders on total n° of stakeholders (density)		%	0-100	Formal collaboration: formal contract signs (*we assume that contracts are based on flow of financial resources*)	Stakeholders Questionnaire (SNA)	Q 14
	1d.3	Economic impacts perception	Economic impacts on the area are seen as positive by stakeholders.		scale	1-10	Stakeholders perception of positive and long-term economic impacts	Stakeholders Questionnaire	Q 11c
	1d.4	Economic development projects	Presence/absence in the past 5 years of specific projects for economic development		dichot	0-1		Organization staff Questionnaire	D 9

2. EFFICIENCY									
Sub-dimension	code	Indicator name	Indicator description	Variables	Unit	Range	Verifiers and *Notes*	Data collection tool	Referring to …
a. Resources Allocation	*2a.1*	*Use of budget*	*Difference between the final spending and the budget, on the budget of the last 5 years*		*%*	*0-100*	*Documents: preliminary budget and balance sheet* *Attention: this indicator fit in only with public institutions*	*Organization staff Questionnaire*	*D 10*
			Amount of capital expenditures used for investments in the last 5 years		*%*	*0-100*	*We use the capacity of investments in private organizations: consortiums, corporations, Ngo's, Regole, Cooperatives, etc.* *It's a suggested indicator, never tested.*	*Organization staff Questionnaire*	
	2a.2	Use of time	Quickness in informing stakeholders	In-closeness centrality of org.	%	0-100		Stakeholders Questionnaire (SNA)	Q 13
	2a.3	*Use of human resources*	*The Organization is perceived to adequately employ its staff.*	*Stakeholder perception*	*scale*	*1-10*		*Stakeholders Questionnaire*	*Q 11d*
	2a.4	Use of technology	Organization invests money in updating softwares or in buying innovative technology tools, ==in the last year==		dichot	0-1		Organization staff Questionnaire	D 11
b. Costs and Outputs	*2b.1*	*Financial efficiency*	*Sum of costs for achieved results/total planned costs for projects*	*Costs of achieved results on Total costs*	*%*	*0-100*	*Annual budget* *Annual balance* *Projects' budget (if possible, divided by objectives)*	*Organization staff Questionnaire*	*D 12*
	2b.2	Transaction costs	Presence/absence of a written estimated amount of transaction costs, at least as % on total costs		dichot	0-1	Any internal document	Organization staff Questionnaire	D 13
c. Respect of Deadlines	2c.1	Defined deadlines	N° of projects with pre-defined timetable on total n° of projects		%	0-100	Examples of pre-defined timetable for carrying out activities: Gantt Diagram	Organization staff Questionnaire	D 14

	2c.2	Respect of deadlines	N° of extensions required on the n° of started projects in the last 5 years		%	0-100	Minutes of internal management meetings Decisions of extension granting	Organization staff Questionnaire	D 15
	2c.3	Deadlines perception	Stakeholders perceived deadlines are respected	Stakeholder perception	scale	1-10	E.g. in referring to salaries payments, to expected responses, etc	Stakeholders Questionnaire	Q 11e

3. EFFECTIVENESS									
Sub-dimension	code	Indicator name	Indicator description	Variables	Unit	Range	Verifiers and *Notes*	Data collection tool	Referring to …
a. Objectives and Outputs	3a.1	Performances self-evaluation	Presence/absence of at least one annual self-evaluation evidence of organization's performance for each governance dimension.	Annual evidences of SGD/E/E/P/T/A/C performances.	∑ 7 dichot	0-7	Graphs, reports, figures, tables, …. Any written document reporting on organization's performances for each dimension	Organization staff Questionnaire	D 16
	3a.2	Objectives' attainment	N° of achieved outputs on the total of stated objectives (Sum of all projects' objectives)	N° of objectives stated in each project. N° of achieved outputs per project.	%	0-100	Projects documents	Organization staff Questionnaire	D 17
	3a.3	Interest creation	N° of projects able to stimulate stakeholders interest on the total n° of projects mentioned by the org. (maximum 6)	projects mentioned by the org. (maximum 6) Average of initiatives stakeholders are able to remember.	%	0-100		Stakeholders Questionnaire	Q 4 D 0
	3a.4	Phasing out	N° of projects with a phasing out or planned activities to continue collaboration beyond the funded period on the total N° of projects		%	0-100		Organization staff Questionnaire	D 18
	3a.5	Perception of	Stakeholders perceive	Stakeholde	scale	1-10		Stakeholders	Q 11o

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		effectiveness	the planned benefits have been properly delivered and received.	rs perception.				Questionnaires	
b. Coordination	3b.1	Inter-organizational coordination	Presence/absence of coordination mechanisms among public institutions of the area		∑ 3 dichot	0-3	Coordination mechanisms: written common procedures, rules, etc. for joint interactions (e.g. regular meetings, formal exchanges of ideas, …)	Organization staff Questionnaire	D 19
			Presence/absence of coordination mechanisms among private organizations (economic bodies, volunteers, etc)				Organizations: e.g. parks, LAGs, etc		
			Presence/absence of coordination mechanisms among different types of organizations / actors / institutions / residents				Various types of actors: private, public, civil society organizations, residents		
	3b.2	Inter-sectoral coordination	N° of represented sectors in the centre of the network created by the organization's initiatives on the total socio economic-spectrum of the area	Core / periphery analysis on total collaboration	0-8	0-8	One sector is represented when it has at least one actor. Socio-economic sectors are: Park – Municipalities – other Public Institutions – Tourism – Mountain Experts – Producers – Restaurants and Hotels – Sport Activities	Stakeholders Questionnaire (SNA)	Q 14
	3b.3	Multi-level actions	Presence/absence of joint actions with international/national/ sub-national organizations		∑ 3 dichot	0-3	Joint actions: projects and programs in collaboration, vertical interactions required by compulsory rules, …	Organization staff Questionnaire	D 20

	3b.4	Multi-level network	N° of network cliques constituted by both public and private stakeholders on the total number of cliques in the total collaboration network		%	0-100	We consider at least 3-size ccliques	Stakeholders Questionnaire (SNA)	Q 14
	3b.5	Perception of coordination	The Organization is perceived to be able to effectively coordinate actors.		scale	1-10		Stakeholders Questionnaire	Q 11p
c. Resilience	3c.1	Perception of integration	The Organization is perceived to be integrated in the territory		scale	1-10		Stakeholders Questionnaire	Q 11q
	3c.2	*Acceptance by population*	*N° of relationships among the org. and stakeholders which are not seen as divergences on the total ego-links*		*%*	*0-100*	*Better to use divergences than convergences..*	*Stakeholders Questionnaire (SNA)*	*Q 15*
	3c.3	Diversification of financial resources	None of the financial sources is providing more than 50% of total financial resources	Amount of financial resources Sources of financial resources	dichot	0-1	List of sources of financial resources (e.g. donors, etc.) Amount of financial resources annually transferred by each source	Organization staff Questionnaire	D 21
	3c.4	Risk management resources	Presence/absence of reserve funds for potential unexpected events (damages, …)		dichot	0-1	Annual budget and annual balance	Organization staff Questionnaire	D 22
	3c.5	Bidirectional flows	N° of bidirectional flows of information between the **organization** and other stakeholders on the total n° of stakeholders	In-degree	%	0-100	*Note: "organization" is underlined to differentiate this indicator by the 7b.1*	Stakeholders Questionnaire (SNA)	Q 13

4. PARTICIPATION									
Sub-dimension	code	Indicator name	Indicator description	Variables	Unit	Range	Verifiers and *Notes*	Data collection tool	Referring to …
a. Stakeholders Inclusion	4a.1	Adoption of participation	N° of projects/program adopting participatory approaches on total N° of projects/programs in the past 5 years		**%**	0-100	Projects/program documents.	Organization staff Questionnaire	D 23
	4a.2	Participation throughout the project cycle	Presence/absence of participatory approaches in decision-making in the 4 phases of project/program development		$\sum 4$ dichot.	0-4	For each phase of projects/programs (a,b,c,d) investigate whether the all stakeholders (population), only experts, both of them or none of them have been invited.	Organization staff Questionnaire	D 24
	4a.3	Stakeholders participation	N° of actors which have taken part in stakeholders participatory events on each of the 4 project phases in the last 5 years on total n° of main actors.	N° of main actors participating	Average of 4 phases	0-100		Stakeholders Questionnaire	Q 6
	4a.4	Participants recording	N° of projects/programs for which participants to the meetings are recorded on the total n° of projects/programs in the past 5 years.		**%**	0-100	Records of meetings, with participants list (documents analysis)	Organization staff Questionnaire	D 25
b. Representative ness	4b.1	Main actors' presence in the core	Main actors are in the centre of the information network**.**	*(core / periphery analysis)*	%	0-100	Main actors are those actors identified as "main" by all the stakeholders (according to the reputational power, the upper quartile 25%).	Stakeholders Questionnaire (SNA)	Q 13 Q 12

	4b.2	Represented interests	N° of represented stakeholders which have taken part in stakeholders participatory events in the last 5 years on the total N° of stakeholders.	Sum of who answer "y" in all 4 questions in Q6, and of who answer "y" in Q7	%	0-100		Stakeholders Questionnaire	Q 6 Q 7
	4b.3	Facilitation to territorial coverage	Stakeholders participatory events are distributed in various sites within the interested area.	Geograph. locations of participatory events.	dichot	0-1		Organization staff Questionnaire	D 26
c. Empowerment	4c.1	Influencing decision-making	Presence/absence of formal procedures/rules for allowing stakeholders to really influence decision-making.		dichot	0-1	Written procedures establishing how and when stakeholders are involved (with voting power or not, etc.; only consultation: only "voice", etc)	Organization staff Questionnaire	D 27
	4c.2	Fundamentals of empowerment	Feedbacks/comments /complaints from stakeholders are collected, categorized and archived.		dichot	0-1	Categorized: by contents, by uses, by level of utility, etc.	Organization staff Questionnaire	D 28
	4c.3	Confidence in the organization	N° of stakeholders who think that their comments/feedbacks/ complaints have real capacity to influence decisions, on total n° of stakeholders	N° of "Yes" at Question 1 **and** "Yes" at Question 2 / on total	%	0-100		Stakeholders Questionnaire	Q 9
	4c.4	Perception of empowerment	Stakeholders perceive the org. uses their comments/feedbacks/ complaints		scale	1-10		Stakeholders Questionnaire	Q 11f
	4c.5	Stakeholders involvement	N° of stakeholders often giving		%	0-100	*Often = answer "yes, frequently" **or** answer "yes, occasionally"*	Stakeholders Questionnaire	Q 9

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Dimension	Code	Indicator	Description	Unit reference	Measure	Range	Notes	Source	Ref
			comments and suggestions to the org. on the total n° of stakeholders						
d. Equity in participation	~~4d.1~~	~~Minorities coverage~~	~~% of women participating/% of female population~~ ~~% of young (18-35) participating/% of young population~~	~~Population distribution in the interested area.~~	~~0-2~~ ~~0-2~~	~~0-4~~	~~Demographic data on population of the interested area. and Records of stakeholders meetings.~~ ~~Score2 = female/young index≥ 1~~ ~~Score 1 = 0.5<female/young index>1~~ ~~Score 0 = female/young index ≤ 0.5~~	~~Organization staff Questionnaire~~	~~D 29~~
	4d.2	Perception of participation	Stakeholders perceive participation as fair.	.		1-10		Stakeholders Questionnaire	Q 11g
e. Information Exchange Flows	4e.1	Network cohesion	Information compactness index			0-100			
	4e.2	Procedures for collecting comments	Presence/absence of formal procedure to allow stakeholders to give their comments/contributes even without taking part in meetings.	Presence/Absence of formal procedure.	dichot	0-1	Examples: forum on-line, hard copies of forms available in the offices, e-mail address where to post comments, feedbacks, complaints, etc.	Organization staff Questionnaire	D 30
f. Networks Creation	4f.1	Collaboration cohesion	Collaboration compactness index			0-100		Stakeholders Questionnaire (SNA)	Q 14
	4f.2	Stakeholders databases	Presence/absence of an updated exhaustive database of stakeholders		dichot	0-1	Exhaustive database in terms of updated and full contacts to facilitate timely and effective communication (address, e-mail, phone, Skype, etc.)	Organization staff Questionnaire	D 31
	~~4f.3~~	~~Events of aggregation~~	~~Presence/absence of events of aggregation created or sponsored by the org.~~		~~dichot~~	~~0-100~~	~~Events of aggregation: opportunities of networking other than projects meeting, such as fairs, social dinners, day excursions with guides, etc.~~	~~Organization staff Questionnaire~~	~~D 32~~
			~~N° of events of aggregation able to stimulate stakeholders interest on the total n° of events mentioned by~~	~~Events mentioned by the org. average of initiatives stakeholde~~	~~%~~				~~Q 4a~~

			the org.	*rs are able to remember.*					
g. Conflicts Management	4g.1	Formal mechanisms	Presence/absence of formal mechanisms for conflicts/disputes management/resolution.		dichot	0-1	Formal mechanisms: e.g. written procedure for disputes resolution, creation of opportunities for negotiation among stakeholders, public available forms for anonymously submitting complaints, …	Organization staff Questionnaire	D 33
	4g.2	Between stakeholders	Betweenness role of the organization in collaboration		%	0-100		Stakeholders Questionnaire (SNA)	Q 14
	4g.3	*Informed consensus*	*N° of stakeholders formally agreeing to be involved in projects/programs launched by the organization on the basis of clearly pre-defined rules on the total stakeholders.*		*%*	*0-100*	*Example: stakeholders voluntarily accept to be involved in certain projects/programs after getting enough information about the "rules of the game"*	*Stakeholders Questionnaire*	*Q 8*
	4g.4	Perception of conflicts	Stakeholders perceive the real/potential conflicts are properly managed by the org.		scale	1-10	Perception on a scale: from low level of conflict to high level	Stakeholders Questionnaire	Q 11h
	4g.5	*Mediator role*	*N° of stakeholders who attribute the role of mediator to the org. on the total n° of stakeholders.*		*%*	*0-100*	*Stakeholders are informed about the existence and functioning of the mechanisms to solve disputes.*	*Stakeholders Questionnaire*	*Q 10*

5. TRANSPARENCY									
Sub-dimension	code	Indicator name	Indicator description	Variables	Unit	Range	Verifiers and *Notes*	Data collection tool	Referring to …
a. Documentation	5a.1	Projects exhaustiveness	N° of projects with easy access to comprehensive information on: analysis of the context, objectives, outputs, logical framework, methodology, timetable, resources, financial plan		$\sum 8$ dichot	0-8		Organization staff Questionnaire	D 34
	5a.2	Accessibility	Information on structure, decisions process, resources and projects with respect to the organization are public available on the web.	Presence/absence on the web of: information/document on: : 1) ownership structure and investors' relations; 2) board and management structure and decision-making process; 3) financial information; 4) project cycle (decisions taken; activities; results).	$\sum 4$ dichot	0-4	Resources refer to points 2) and 3): budget, staff, salaries, organization chart, administration and decision-making rules.	Organization staff Questionnaire	D 35
	5a.3	Translation	Information on structure, decisions process, resources and projects with respect to the organization are available at least in another language?	Presence/absence of translated information/document on: 1) ownership structure and investors' relations; 2) board and management structure and decision-making process; 3) financial information; 4) project	$\sum 4$ dichot	0-4	Resources: budget, staff, administration rules. World languages list: English, Spanish, French, Arabian, Russian, Portuguese, standard Chinese, Hindustani, German.	Organization staff Questionnaire	D 36

				cycle (decisions taken; activities; results).					
	5a.4	*Understandability*	*Stakeholders perceive documents/information are understandable.*	*Stakeholders perception.*	*scale*	*1-10*		*Stakeholders Questionnaire*	*Q 11i*
	5a.5	Updating	Information on structure, decisions process, resources and projects with respect to the organization are regularly updated.	Information/document on: 1) ownership structure and investors' relations; 2) board and management structure and decision-making process; 3) financial information; 4) project cycle (decisions taken; activities; results).	$\sum 4$ dic	0-4	Resources: budget, staff, administration rules. For each type of information: Annual update = 1 score Less than once a year = 0	Organization staff Questionnaire	D 37
b. Feedback	*5b.1*	*Satisfaction on feedback*	*N° of times where it was enough one contact for getting the proper information on the total n° of feedback required*		*%*	*0-100*		*Stakeholders Questionnaire*	*Q 3b*
	5b.2	Perception of feedback	Feedbacks are perceived to be satisfactory by stakeholders		scale	1-10	Satisfaction in terms of: 1) quality/contents; 2) timeliness; 3) quantity.	Stakeholders Questionnaire	Q 11s
	5b.3	Procedure for feedback	Absence/presence of formal procedure(s) to provide feedback to stakeholders requests/complaints /etc.		dichot	0-1	e.g. Written procedures establishing a timetable for providing feedbacks (for example within 15 days from receiving the request)	Organization staff Questionnaire	D 38
c. Information Flows to External Stakeholders	5c.1	Notification instruments	Presence/absence of notification instruments to near and distant stakeholders in the project cycle	N° of notification instruments to local (near) and external (far) stakeholders.	$\sum 2$ dichot	0-2	Near= local, resident stakeholders, which are not inside the Organization – in principle "near" stakeholders can be local people, old people with no access to	Organization staff Questionnaire	D 39

							informatics (e.g. they need to have a local brochure) Distant = external, far stakeholders, which are not part of the Organisation – in principle they can be tourists or national level stakeholders able to use Information Technology (e.g. the web) *Notification: 1) of intent to create a policy; 2) of draft proposals; 3) of final policy decision ("of a pending policymaking exercise")*		
	5c.2	Visibility	Presence/absence of a method to calculate the annual website accesses, subdivided by month or variables on users		dichot	0-1	website statistics and counters	Organization staff Questionnaire	D 40

6. ACCOUNTABILITY									
Sub-dimension	code	Indicator name	Indicator description	Variables	Unit	Range	Verifiers and *Notes*	Data collection tool	Referring to …
a. Program and process accountability	6a.1	Rationale for decisions	The rationale for decisions to affected parties is explained in written record(s).		dichot	0-1		Organization staff Questionnaire	D 41
	6a.2	Organization chart	Presence/absence of a written internal organization chart and jobs description.		∑ 2 dichot	0-2	Organization chart. Jobs description.	Organization staff Questionnaire	D 42
	6a.3	Perception of clarity of actors' roles	The role of the Organization are perceived to be clear by stakeholders.		scale	1-10	▪ Clear roles = clear division of areas of intervention, competencies.	Stakeholders Questionnaire	Q 11l
	6a.4	*Clarity of policymaking rules*	*Presence/absence of a formal document where the rules in policymaking are clearly defined*		*dichot*	*0-1*	*E.g. formalized procedure(s) or communication to external stakeholders where the ultimate decision-making authority is identified.*	*Organization staff Questionnaire*	*D 43*
	6a.5	Co-responsibility	N° of stakeholders formally involved in projects/programs with co-responsibilities clearly identified on the total n° of stakeholders.	N° of answers "yes" at Q16 or answers "yes" at Q17 / on total	%	0-100	Co-responsibilities: e.g. by co-financing the projects/programs; by formally signing implementation responsibility, … Co-financing	Stakeholders Questionnaire	Q 16 Q 17
	6a.6	Overlapping roles	The roles of the Organization are perceived by stakeholders of not overlapping with other actors' ones		scale	1-10		Stakeholders Questionnaire	Q 11m
b. Fiscal accountability	6b.1	Visible salaries	There are public available evidences of salaries and commissions (fees).		dichot	0-1	Public available: directly accessible or on request.	Organization staff Questionnaire	D 44

	6b.2	Payment of prescribed charges	There are public available evidences that applicable and legally prescribed fees, taxes and other charges are paid.		dichot	0-1	Public available: directly accessible or on request. Applicable and legally prescribed fees, royalties, taxes and other charge: i.e. tax burden, social security taxes.	Organization staff Questionnaire	D 45
c. Monitoring and evaluation	6c.1	Regular monitoring	Presence/absence of at least annual monitoring.		dichot	0-1	Monitoring reports	Organization staff Questionnaire	D 46
	6c.2	Criteria for monitoring	Presence/absence of internally defined criteria and indicators to assess the Organization's performances.		dichot	0-1		Organization staff Questionnaire	D 47
	6c.3	Evaluation	There are evidences of external valuations carried out for programs/projects developed by the Organization.		dichot	0-1	External valuations carried out by donors/funders (they might be independent – third-party or second-party valuations).	Organization staff Questionnaire	D 48

7. CAPACITY									
Sub-dimension	code	Indicator name	Indicator description	Variables	Unit	Range	Verifiers and *Notes*	Data collection tool	Referring to …
a. Competences and professionalism	7a.1	Degree of diversification among staff	Presence/absence of staff's curricula		Dichot	0-2	Fields of specialization can be identified on the basis of type of university degrees, expertise, CV, etc.	Organization staff Questionnaire	D 42
			There are different fields of specialization among the staff employed by the Organization.		Dichot				D 49
	7a.2	Co-financed projects	N° of co-financed projects on total n° of projects		%	0-100		Organization staff Questionnaire	D 50
	7a.3	Perception of professionalism	The Organization is perceived to be adequately staffed.	Stakeholder perception	scale	1-10		Stakeholders Questionnaire	Q 11n
	7a.4	*Training courses*	*N° of org's personnel attending training courses*	*N° of staff attending courses on tot. n° staff*	*%*	*0-100*	*List/registers of participants to the training courses*	*Organization staff Questionnaire*	*D 51*
b. Knowledge Transfer and Collaborative Learning	7b.1	Mobilization of knowledge	N° of bidirectional flows of collaboration among **stakeholders** on the total N° of flows of collaboration	Information density in symmetric matrix on density	%	0-100	*Note: "stakeholders" is underlined to differentiate this indicator by the 4e.1*	Stakeholders Questionnaire (SNA)	Q 14
	7b.2	Knowledge courses	the org. organizes specializing courses open to residents and stakeholders		dichot	0-1		Organization staff Questionnaire	D 52
	7b.3	Overall reputational power	The reputational power is distributed also among actors different from the Org		0-8	0-8	All the categories (8) are considered important inside the upper quartile (25%)	Stakeholders Questionnaire (SNA)	Q 12

Appendix 3: Organization's staff questionnaire

Persona di riferimento:

Dr. Da Re Riccardo
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Università di Padova
Dipartimento Territorio e
Sistemi Agro-forestali

National Park's staff Questionnaire

Identification

Name of the person answering:

………

Contact (name, address, phone, e-mail)

………

………

………

How many people are employed within the organization and with which role?

………

………

………

………

………

Notes and privacy

A research project on "*the governance of natural resources and development of local economies* " is being conducted at the Department of Land Use and Agro-Forestry System (TeSAF) of the University of Padua (Faculty of Agriculture), with two case studies in Dolomiti Bellunesi National Park and Durmitor National Park.
The research is conducted by the PhD student **Riccardo Da Re**, under the supervision of **Dr. Laura Secco**, and aims to develop a technique to evaluate the performance of those entities, public and private, whose work contributes to the good management of natural resources in a mountainous area.

For any suggestion or modification, please write to riccardo.dare@unipd.it.

Projects in the past 5 years

Which projects has the Park carried out in the past 5 years? (describe in detail the 6 most important, by a financial point of view, and list the others at the bottom of the page)

Project 1:	Project 2:	Project 3:
Start data	Start data	Start data
End data (if completed)	End data (if completed)	End data (if completed)
Brief description	Brief description	Brief description
Dedicated personnel	Dedicated personnel	Dedicated personnel
Main stakeholders involved	Main stakeholders involved	Main stakeholders involved
Published material	Published material	Published material
Data availability	Data availability	Data availability
Project 4:	Project 5:	Project 6:
Start data	Start data	Start data
End data (if completed)	End data (if completed)	End data (if completed)
Brief description	Brief description	Brief description
Dedicated personnel	Dedicated personnel	Dedicated personnel
Main stakeholders involved	Main stakeholders involved	Main stakeholders involved
Published material	Published material	Published material
Data availability	Data availability	Data availability

Other Projects:

………..

………..

………..

1. Sustainable development

N°	QUESTION	Practical notes	ANSWER	Code
a. Long-term sustainability				
1	*Commitment to sustainability* Does a formal commitment to sustainability exist? Is at least one concrete goal per each sustainability dimension (environmental, social and economic impact) stated in written by the Park?	Written documents	Formal commitment: Yes ☐ No ☐ Environmental goal: Yes ☐ No ☐ Social goal: Yes ☐ No ☐ Economic goal: Yes ☐ No ☐	1a.1
2	*Sustainability reporting* Is there environmental, social or economic reporting? If yes, is it at least annual? Do these reports follow a standardized grid?	Guidelines based on GRI (Global Reporting Initiative)	Reporting: Yes ☐ No ☐ Annual periodicity: Yes ☐ No ☐ Standardized grid: Yes ☐ No ☐	1a.2
3	*Certification* Has the Park an independent third-party environmental or social certification?	Environmental certification: ISO14000, EMAS Forester certification: FSC, PEFC Social certification: SA8000	Certification: Yes ☐ No ☐	1a.3
4	*Cost and benefit sharing mechanisms* Are there rules/laws that impose a costs sharing and a profits redistribution to local communities by the Park initiatives?	Formal (procedures, rules, laws) or informal (customary rules) Written evidences (e.g. in internal reports) of successful cost/benefit sharing mechanism	Sharing: Yes ☐ No ☐	1a.4
5	*Promotion of sustainability* Best practices for tourists and other final users are promoted by the Park to a respectful use of the area?	Public available set of rules (i.e. best practices published in web, …) for natural resources sustainable use	Promotion: Yes ☐ No ☐	1a.6
b. Environmental impact				
6	*Climate change projects* Has the Park carried out in the past 5 years specific projects for climate change impact reduction?	Ex: REDD projects, projects to support renewable energies, …	Projects: Yes ☐ No ☐ Please specify ………………………	1b.1
7	*Environmental projects* Has the Park carried out in the past 5	"glocal" referring to local environmental aspects which concern		1b.3

		to a global existence value (for instance: biodiversity, …)	Projects: Yes ☐ No ☐ Please specify ……………………	
c. Social impact		206		
8	*Social Impacts projects* Has the Park carried out in the past 5 years specific projects for improving social impact?	Cultural initiatives, …	Projects: Yes ☐ No ☐ Please specify ……………………	1c.1
d. Economic impact				
9	*Economic development projects* Has the Park carried out in the past 5 years specific projects for improving economic impact?	increased employment opportunities, market creation …	Projects: Yes ☐ No ☐ Please specify ……………………	1d.4

2. Efficiency

N°	QUESTION	Practical notes	ANSWER	Code
Resources allocation				
10	*Use of budget* Does the Park use all its budget?		Available Budget: |_____| Used Budget: |_____|	2a.1
11	*Use of technology* Has the Park invested money in updating softwares or in buying innovative technology tools?		Softwares: Yes ☐ No ☐ Please specify ……………………… Equipment: Yes ☐ No ☐ Please specify ………………………	2a.4
Costs and outputs				
12	*Financial efficiency* In the budget plan of the past 5 years, what are the planned costs of projects? What are the effective costs that the Park has supported in the past 5 years to achieve the projects' goals?	Annual budget, Annual balance, Projects' budget (if possible, divided by objectives)	|_____| |_____| Notes ………………………………..	2b.1
13	*Transaction costs* Is there a written estimated amount of transaction costs?	Any internal document	Estimate: Yes ☐ No ☐ Please specify ………………………	2b.2
Respect of deadlines				
14	*Defined deadlines* In how many projects, in the past 5 years is there a pre-defined deadlines' timetable?	Examples of pre-defined timetable for carrying out activities: Gantt Diagram	N° of total projects: |__|__| N° of projects with timetable: |__|__|	2c.1
15	*Respect of deadlines* How many projects have required an extention?	Minutes of internal management meetings Decisions of extension granting	N° of extentions: |__|__|	2c.2

3. Effectiveness

N°	QUESTION	Practical notes	ANSWER	Code
	Objectives and putputs			
16	*Performances self-evaluation* Are there annual self-evaluation evidence of organization's performance for each governance dimension?	Graphs, reports, figures, tables, …. Any written document reporting on organization's performances for each dimension	Sustainability: Yes ☐ No ☐ Efficiency: Yes ☐ No ☐ Effectiveness: Yes ☐ No ☐ Participation: Yes ☐ No ☐ Transparency: Yes ☐ No ☐ Accountability: Yes ☐ No ☐ Capacity: Yes ☐ No ☐	3a.1
17	*Objectives' attainment* How many of the objectives of each project have been achieved?		N° total objectives: |__|__|__| N° achieved objectives: |__|__|__|	3a.2
18	*Phasing out* How many projects phase out beyond the funded period?		Projects: |__|__| Projects: ………………………….. ……………………………………… ………………………………………	3a.4
	Coordination			
19	*Inter-organizational coordination* Are there coordination mechanisms among public institutions of the area? Are there coordination mechanisms among private organizations (economic bodies, volunteers, etc)? Are there coordination mechanisms among public and private organizations, institutions and residents?	Coordination mechanisms: written common procedures, rules, etc. for joint interactions (e.g. regular meetings, formal exchanges of ideas, common rules, etc)	Institutions coordination: Yes ☐ No ☐ Organizations coordination: Yes ☐ No ☐ Public and private coordination: Yes ☐ No ☐	3b.1
20	*Multi-level actions* Does the Park take part in joint actions with international, national, sub-national organizations?	Joint actions: projects and programs in collaboration, vertical interactions required by compulsory rules, …	Joint actions with sub-national org.: Yes ☐ No ☐ / Who? …………… Joint actions with national org.: Yes ☐ No ☐ / Who? …………… Joint actions with international org.: Yes ☐ No ☐ / Who? ………………	3b.3

	Resilience			
21	*Diversification of financial sources* What are the Park's financial sources? Is there one financial source that provides more than 50% of the Park's income?	List of sources of financial resources (e.g. donors, etc.) Amount of financial resources annually transferred by each source	List of sources: ……………………………………… ……………………………………… Main source >50%: Yes ☐ No ☐	2d.1
22	*Risk management resources* Are there reserve funds for potential unexpected events (damages, …)?		Funds: Yes ☐ No ☐ Please specify ………………………	2d.2

4. Participation

N°	QUESTION	Practical notes	ANSWER	Code
Stakeholders inclusion				
23	*Adoption of participation* For how many projects (past 5 years) has the Park adopted participatory approaches for consulting population or experts before taking decisions?		N° of projects with participation: |__|__|	4a.1
24	*Participation throughout the project cycle* In regards to all projects of the past 5 years, has the Park never consulted population in each of the four project phases (design, formulation, implementation, evaluation)?	It is sufficient that the Park has used participatory approaches in a single project for answering positively to any question. If yes, please insert any example. For each phase of projects investigate whether the all population, only experts or, both of them have been invited	Design: Yes ☐ No ☐ How? ………………………….. Formulation: Yes ☐ No ☐ How? ………………………….. Implementation: Yes ☐ No ☐ How? ………………………….. Evaluation: Yes ☐ No ☐ How? …………………………..	4a.2
25	*Participants recording* In how many projects does the Park record the stakeholders attending the meetings?	Records of meetings, with participants list	N° of projects with a list: |__|__|	4a.4
Representativeness				
26	*Facilitation to territorial coverage* Does the Park use various sites distributed in within the interested area for the meetings? In which sites?		N° of sites: |__|__| Where: …………………………… ……………………………………… ………………………………………	4b.3
Empowerment				
27	*Influencing decision-making* Are there formal procedures/rules for allowing stakeholders to really influence decision-making?	Written procedures establishing how and when stakeholders are involved (with voting power or not, etc.; only consultation; etc)	Procedures: Yes ☐ No ☐	4c.1
28	*Fundamentals of empowerment* Are feedbacks/comments/complaints from stakeholders collected, categorized and archived by the Park?	Data could be categorized: by contents, by uses, by level of utility, etc	Collection: Yes ☐ No ☐ Categorization: Yes ☐ No ☐ Archived records: Yes ☐ No ☐	4c.2

Equity in participation				
29	*Minorities coverage* Is the participants' gender obtained at the meetings? If yes, which is the percentage of women participating? Is the participants' age obtained at the meetings? If yes, which is the percentage of young (under 35) people participating?		Gender data: Yes ☐ No ☐ % women: |__|__|__| Age data: Yes ☐ No ☐ % young (<35): |__|__|__|	4d.1
Information Exchange flow				
30	*Procedures for collecting comments* Which means has the Park provided to allow stakeholders to give their comments/contributes even without taking part in meetings?	Examples: forum on-line, copies of forms available in the offices, e-mail address where to post comments, feedbacks, complaints, etc	Means list: ………………………………… …………………………………	4e.2
Network creation				
31	*Stakeholders database* Is there an exhaustive and updates database of stakeholders involved in projects and meetings??	Exhaustive database in terms of updated and full contacts to facilitate timely and effective communication (address, e-mail, phone, Skype, etc.)	Database: Yes ☐ No ☐ Updates at: |_____| Collected information: ……………………………………	4f.2
32	*Events of aggregation* Are there events of aggregation created or sponsored by the Park?	Events of aggregation: opportunities of networking other than projects meeting, such as fairs, social dinners, day excursions with guides, etc.	Created events: Yes ☐ No ☐ List: …………………………… Sponsored events: Yes ☐ No ☐ List: ……………………………	4f.3
Conflicts management				
33	*Formal mechanisms* Are there formal mechanisms for the management and resolution of conflicts/disputes among stakeholders involved in the Park's projects?	Formal mechanisms: e.g. written procedure for disputes resolution, creation of opportunities for negotiation among stakeholders, public available forms for anonymously submitting complaints, …	Mechanisms: Yes ☐ No ☐ List: ………………………… …………………………………….. ……………………………………..	4g.1

5. Transparency

N°	QUESTION	Practical notes	ANSWER	Code
Documentation				
34	*Projects exhaustiveness* How many projects have easy access to comprehensive information on: analysis of the context, objectives, outputs, logical framework, methodology, timetable, resources, financial plan?		Context analysis: Yes ☐ No ☐ Objectives: Yes ☐ No ☐ Outputs: Yes ☐ No ☐ Logical framework: Yes ☐ No ☐ Methodology: Yes ☐ No ☐ Timetable: Yes ☐ No ☐ Resources: Yes ☐ No ☐ Financial plan: Yes ☐ No ☐	5a.1
35	*Accessibility* On the web is possible to find information on ownership structure and investors' relations? On the web is possible to find information on board and management structure and decision-making process? On the web is possible to find financial information? On the web is possible to find information on projects cycle (decisions taken; activities; results)?	Budget, staff, salaries, organization chart, administration and decision-making rules. …	Structure : Yes ☐ No ☐ Board chart: Yes ☐ No ☐ Financial plan: Yes ☐ No ☐ Projects: Yes ☐ No ☐	5a.2
36	*Translation* Are information on structure, decisions process, resources and projects with respect to the Park available at least in another language?	World languages list: English, Spanish, French, Arabian, Russian, Portuguese, standard Chinese, Hindustani, German	Structure : Yes ☐ No ☐ Board chart: Yes ☐ No ☐ Financial plan: Yes ☐ No ☐ Projects: Yes ☐ No ☐	5a.3
37	*Updating* Are information on structure, decisions process, resources and projects with respect to the Park regularly (at least one a year) updated?		Structure : Yes ☐ No ☐ Board chart: Yes ☐ No ☐ Financial plan: Yes ☐ No ☐ Projects: Yes ☐ No ☐	5a.5
Feedback				
38	*Procedure for feedback*	e.g. Written procedures establishing a timetable		5b.3

	Are there formal procedures to provide feedback to stakeholders requests/complaints/etc.?	for providing feedbacks	Procedures : Yes ☐ No ☐	
Information flow sto external stakeholders				
39	*Notification instruments* Does the Park use notification instruments to get the projects' development across to residents? Does the Park use notification instruments to get the projects' development across to people not living in the area?	Es: brochure, flyers, etc. Es: mailing list, online documents, etc.	Residents: Yes ☐ No ☐ What?: …………………………… Nonresidents: Yes ☐ No ☐ What?: ……………………………	5c.1
40	*Visibility* Has the Park the instruments to calculate the annual website accesses? If yes: which is the number of accesses in the past year?		Accesses desplay: Yes ☐ No ☐ Web accesses: |__|__|__|__|__|	5c.2

6. Accountability

N°	QUESTION	Practical notes	ANSWER	Code
Program and process accountability				
41	*Rationale for decisions* Is the rationale for decisions to affected parties explained in written records?		Rationale: Yes ☐ No ☐	6a.1
42	*Organization chart* Is there an internal organization chart? Is there a clear division of areas of expertise? Are there the staff's curricula?		Organization chart: Yes ☐ No ☐ Division: Yes ☐ No ☐ Curricula: Yes ☐ No ☐	6a.2
43	*Clarity of policymaking rules* Is there a formal document where the rules in policymaking are clearly defined?	Es.: it is made clear in the projects who has the final decision power, and how you can change things during the project	Document: Yes ☐ No ☐	6a.4
Fiscal accountability				
44	*Visible salaries* Are there public available evidences of salaries and commissions (fees)?	Public available: directly accessible or on request	Evidences: Yes ☐ No ☐	6b.1
45	*Payment of prescribed charges* Are there public available evidences that applicable and legally prescribed fees, taxes and other charges are paid?	Applicable and legally prescribed fees, royalties, taxes and other charge: i.e. tax burden, social security taxes	Evidences: Yes ☐ No ☐	6b.2
Monitoring and evaluation				
46	*Regular monitoring* Is there at least an annual monitoring?	Monitoring reports	Monitoring: Yes ☐ No ☐	6c.1
47	*Criteria for monitoring* Are there internally defined criteria and indicators to assess the Park's performances?		Internal criteria: Yes ☐ No ☐	6c.2
48	*Evaluation* Are there evidences of external valuations carried out for projects developed by the Park?	Valuations carried out by donors/funders (they might be independent – third-party or second-party valuations).	External valuation: Yes ☐ No ☐	6c.3

7. Capacity

N°	QUESTION	Practical notes	ANSWER	Code
Competences and professionalism		215		
49	*Degree of diversification among staff* How many different fields of specialization are there among the staff employed by the Park?	Fields of specialization can be identified on the basis of type of university degrees, expertise, CV, etc	List: …………………………… ………………………………… ………………………………..	7a.1
50	*Co-financed projects* How many projects have been co-financed in the past 5 years? How much is the co-financing??		N° of co-financed projects: |__|__| Total ammount: |_____|	7a.2
51	*Training courses* Number of Park's personnel wha has attained training courses in the past 5 years:	List/registers of participants to the training courses	N°: |__|__|__|	7a.4
Knowledge transfer and collaborative learning				
52	*Knowledge courses* Does the Park organize specializing courses open to residents and stakeholders of the territory?		Courses: Yes ☐ No ☐ List:: …………………………… ………………………………………..	7b.2

Appendix 4: Stakeholders Questionnaire

UNIVERSITÀ DEGLI STUDI DI PADOVA
DIPARTIMENTO TERRITORIO E SISTEMI AGRO-FORESTALI
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Area di ricerca: *Estimo, Diritto e Politiche dell'Ambiente e del Territorio*

Persone di riferimento:

	dott. Da Re Riccardo	dott.ssa Laura Secco		
tel. ufficio:	049 827 2746	049 8272692	Interview length	|_____|
tel. cellulare:	+39 348 0016485	+39 331 1720272		
e-mail:	riccardo.dare@unipd.it	laura.secco@unipd.it	Interview date	|___|___|_____|

The Department of Land Use and Agro-Forestry System (TeSAF) at the University of Padua (Faculty of Agriculture) is conducting in collaboration with the National Park a research project on "*the governance of natural resources and development of local economies* " as part of a doctoral thesis in Real Estate Appraisal and Land Economics. The research is conducted by the PhD candidate **Riccardo Da Re**, under the supervision of **Dr. Laura Secco**, and aims to develop a technique to evaluate the performance of public and private entities that contribute to the good management of natural resources in mountainous areas.
This Park was selected as one of the areas of interest for this case study. This work considers the municipalities included within the Park.

CONFIDENTIALITY
The questionnaire is anonymous and the retrieved data will be treated in full respect of the subject's privacy. The subject has the right to know, modify, delete and oppose the processing of his/her personal data.

Name of the stakeholder/organization/institution: ……………………………………………………………………………………

Contact Person: …………………………………..……………………………………………………………………………..

Phase 1: Knowledge and involvement in the Park's projects/programmes

1. In what year did the organization/institution/company that you represent make contact with the Park for the first time
\|_____\|

2. In what year did you personally make contact with the Park for the first time? \|_____\|

3. How many times have you contacted the Park in the last year in order to get information?

\|__\|__\|

3b. When you contacted the Park, how many times did you receive the information you were looking for at the first attempt?

\|__\|__\|

4. "The Park was established to safeguard a territory of extraordinary landscape and naturalistic value", through a number of **initiatives** (projects, programmes) of economic, social and environmental relevance, and through **social events** (fairs, hiking trips, social dinners, etc.). Referring to the past 5 years, **could you make a list** including both the activities in which you were directly involved, and those that you think have had the biggest impact on the area?

PROJECTS:

i) …………………………………………………….

ii) ……………………………………………………

iii) …………………………………………………...

iv) …………………………………………………...

v) ……………………………………………………

vi) …………………………………………………...

vii) ………………………………………………....

EVENTS:

i) …………………………………………………….

ii) …………………………………………………...

iii) …………………………………………………...

iv) …………………………………………………...

v) …………………………………………………….

vi) …………………………………………………...

vii) ………………………………………………….

5. Please provide a few examples (both positive and negative) about what the Park has actually done to guarantee/not guarantee:

Its EFFECTIVENESS
(goal achievement, coordination, reliable financial resources, flexibility in adapting to change, risk management)

1..

2..

3..

Its EFFICIENCY
(allocation of financial, technological and human resources, respecting deadlines, costs management)

1..

2..

3..

The PARTICIPATION of stakeholders
(inclusion of stakeholders, exchange of information, creation of networks, conflict management)

1..

2..

3..

Its TRANSPARENCY
(accessible, clear and up-to-date documents, open communication with residents)

1..

2..

3..

Its ACCOUNTABILITY
(monitoring and evaluation, clarity and division of roles, fiscal accountability)

1..

2..

3..

Its COMPETENCES and CAPACITY
(knowledge transfer, professionalism)

1..

2..

3..

The SUSTAINABILITY of its actions
(environmental, social and economic impact, fairness In sharing costs and benefits)

1..

2..

3..

_ _

6. Over the past 5 years, have you ever taken part in the..

design of a project promoted by the Park?	yes □ (1)	no □ (0)
formulation of a project promoted by the Park?	yes □ (1)	no □ (0)
implementation of a project promoted by the Park?	yes □ (1)	no □ (0)
assessment of a project promoted by the Park?	yes □ (1)	no □ (0)

Examples: …………………………………………………………………………………………………..

7. When you were not directly involved, did you consider any of the **participating stakeholders as representing your interests?**

yes □ (1)   no □ (0)

[If "yes"] Who? ……………………………………………………………………………………

8. In projects in which you were involved, **were the predefinedrules clear since the beginning**?

yes □ (1)   no □ (0)

Comments: …………………………………………………………………………………………………

9. In general, **have you ever provided comments, ideas, practical suggestions** to the Park regarding the initiatives/projects run by the Park?

      yes, frequently □ (3)   yes, occasionally □ (2)   yes, sporadically □ (1)   no □ (0)

      [If "yes"] In your opinion, does the Park take them into consideration when making decisions?

                                      partly □ (2)   yes □ (1)

                no □ (0)

      [If "no"] Why?

                    I thought that the Park would not take them into consideration………………. □ (1)
                    I didn't have time ………………………………………………………….... □ (2)
                    I didn't know that I could……………………………......………..... □ (3)
                    Other (*please specify*) …………………………………………….. □ (4)

10. In your opinion, does the Park hold a **role of mediator**, through both formal and informal mechanisms, **to resolve disputes/ conflicts** that arise among stakeholders in the territory?   Sometimes □ (2)   yes □ (1)   no □ (0)
Examples: ……………………………………………………………………………………………………..

Phase 2: Perception of the quality of governance

11. According to your perception, in the past 5 years how has the Park acted with respect to the following aspects?

(Assign to each item a <u>score from 1 to 10</u>. The minimum value indicates "<u>in an awful way</u>", while the maximum value indicated "<u>in an excellent way</u>")

Statements	Score [1-10]	Don't know
a) The Park's initiatives lead to a positive and long-term <u>environmental impact</u>	|___|	□
b) The Park's initiatives lead to a positive and long-term <u>social impact</u>	|___|	□
c) The Park's initiatives lead to a positive and long-term <u>economic impact</u>	|___|	□
d) The Park is able <u>to make the most of</u> its human resources	|___|	□
e) Project/programme <u>deadlines are respected</u> by the Park	|___|	□
f) The Park <u>uses stakeholders' comments/suggestions</u> to make decisions relating to the territory	|___|	□
g) In participatory processes, all stakeholders of the territory are <u>represented fairly</u>	|___|	□
h) <u>Conflicts</u> among stakeholders working in the area are <u>properly managed</u> by the Park	|___|	□
i) <u>Documents</u> produced by the Park are easy to <u>understand</u>	|___|	□
l) The <u>role</u> of the Park in the territory is <u>clear</u>	|___|	□
m) The <u>role</u> of the Park does <u>not overlap</u> with that of other stakeholders	|___|	□
n) The <u>competences</u> of the Park's staff are adequate	|___|	□
o) The Park <u>achieves its goals</u> set in its projects and programmes for the territory	|___|	□
p) The Park is effective in <u>coordinating</u> stakeholders and in coordinating with other organizations.	|___|	□
q) The Park is <u>well integrated</u> in the territory	|___|	□
r) The Park <u>shares costs and benefits fairly</u> among the stakeholders of the territory	|___|	□
s) When contacted, the Park provides <u>satisfactory and timely responses</u>	|___|	□

Any other comments: ....…………………..

....

....

Phase 3: The stakeholders' network

12. Stakeholders' role

Within the area considered in our study, the Park is not the only organization involved in land management.

In your opinion, **which stakeholders (public or private) have a particularly important role in the management of the territory?**

………...

………...

13. Information flow

Information flow is fundamental for the management and development of the area

The table below presents a "partial" list of stakeholders considered essential by the Park itself, either due to their institutional role, or economic sector in which they operate: please mark the stakeholders with whom <u>in the past 5 years</u>, you had an **exchange of information** (by phone, mail, letter, personally) **regarding local initiatives in the area**.

If you think that there are any names missing in the list provided, please add them to the bottom of the table in the empty lines.

.

STAKEHOLDERS	Information flow	STAKEHOLDERS	Information flow
	☐		☐
	☐		☐
	☐		☐
	☐		☐
	☐		☐
	☐		☐
	☐		☐
	☐		☐
	☐		☐
	☐		☐
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	☐		☐
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	☐		☐
	☐		☐
	☐		☐
	☐		☐
	☐		☐
	☐		☐
	☐		☐
	☐		☐

14. Collaboration

Collaboration among stakeholders in a territory is essential to optimally manage resources. This collaboration can take place through **formal employment contracts** or **informal working partnerships**.

We ask you to indicate with which stakeholders, among those listed below, you have had formal or informal work collaborations in the <u>last 5 years</u>.

If you think that there are any names missing in the list provided, please add them to the bottom of the table in the empty lines. (as in the previous question) and specificy the type of collaboration..

STAKEHOLDERS	Formal contract	Informal collaboration	STAKEHOLDERS	Formal contract	Informal collaboration
	☐	☐		☐	☐
	☐	☐		☐	☐
	☐	☐		☐	☐
	☐	☐		☐	☐
	☐	☐		☐	☐
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	☐	☐		☐	☐
	☐	☐		☐	☐
	☐	☐		☐	☐
	☐	☐		☐	☐
	☐	☐		☐	☐

15. Divergences

Finally, with respect to the stakeholders listed above, **with whom have you mainly had conflicting relations**, regardless of whether you have worked together?

……..

……..

Phase 4: Economic aspects

16. Have you ever **co-funded a project** promoted by the Park?   yes □ (1)   no □ (0)

     Please specify: …………………………………………………………………………

17. Have you ever **assumed formal responsibilities** on projects promoted by the Park?   yes □ (1)   no □ (0)

     Please specify: …………………………………………………………………………

18. In participating in the Park's projects, have you always **obtained the expected benefits**?

     yes, totally □ (3)   yes, in part □ (2)   no, barely □ (1)   not in the least □ (0)

19. Have you ever benefitted economically from the Park' initiatives?   yes □ (1)   no □ (0)

     [if "yes"] **In which way?** …….…………………………………………………………………………

     [if "no"] **Why?** ………………………………………………………………………………………………

19b. Has the territory benefitted economically from the Park' initiatives?   yes □ (1)   no □ (0)

     [if "yes"] **In which way?** ……………………………………………………………………………………

     [if "no"] **Why?** ……………………………………………………………….…………………

20. **Have you,** in the last 5 years, concretely contributed to Park's existence in the territory?

(a) □   I committed myself and my **time** (without receiving any compensation):   approximately…..……….. days/year

(b) □   I contributed with **donations**, grants, etc: approximately………………….Euro

(c) □   I have made available **spaces** (for free):   please specify ……....……………………………………...

(d) □   **Other** (quantifiable) (ex. equipment, …):   please specify ……....……………………………………...

(e) □   **No, nothing special**

21. With reference to the previous question, is there anything more (or less) you would do in the coming years?

     please specify…………………………………………………………………………………………………….

……….

22. Now assume you have the possibility to give the Park 100 Euro to enable it to improve its governance in the territory. **How would you like these 100 Euro distributed among the following aspects** (*described at g.2 of the questionnaire*)**?**

Effectiveness	Efficiency	Participation	Transparancy	Accountability	Capacity	Sustainability
………… €	………… €	………… €	………… €	………… €	………… €	………… €

23. In the utopian assumption that the Park guarantees to be 100% sustainable, efficient, effective, transparent, participative, professionally capable and accountable towards the territory, **would you be willing to give a financial contribution to achieve this optimum state of governance?**

                                                                   yes □ (1)   no □ (0)

     [if "yes"] How much would you give? (………………Euro/year)

24. Do you have any further comments?

……

……

……

……

Thank you for the collaboration

For any query or suggestion, please feel free to contact us at the addresses listed at the beginning of the questionnaire

Appendix 5: Grid for 'name generator' process

Stakeholder / Organization	Position with respect to he Organization	Referring person	Address	Contacts (phone, e-mail, etc.)	Notes	Data Interview	Deadlines
Park							
Municipalities							
Other Public Institutions							
Touristic Information Points							
Mountain Experts							
Recreation-related Enterprises							
Restaurant and Reception Structures							
Local Producers							

Appendix 6: Collaboration request letter

dr.ssa …
tel.uff.: …
e-mail: …

dott. …
tel. uff.: ….
e-mail: ….

Alla c.a. del dott. ….
e p.c. al dott. ….
Organization's address

Data

Oggetto: Richiesta di collaborazione per ricerca sulla governance delle risorse naturali e lo sviluppo delle economie locali nel Parco Nazionale Dolomiti Bellunesi

Presso il Dipartimento … dell'Università … si sta conducendo, nell'ambito di una tesi di dottorato, **una ricerca sulla governance delle risorse naturali e lo sviluppo delle economie locali.** La ricerca è condotta dal dottorando **dott. …** con la supervisione della scrivente ….

L'idea è quella di testare un set di indicatori per la valutazione della qualità della *governance* partecipativa su due casi-studio, ovvero su due aree protette appartenenti a siti UNESCO (una in Italia, nelle Dolomiti, ed una in Montenegro, nel Durmitor). Verrà utilizzata, tra altri strumenti, anche la *Social Network Analysis* per capire gli impatti e le relazioni che si vengono a formare fra gli attori coinvolti nella governance di queste aree. Dall'analisi dei dati si proverà a capire l'influenza di determinate variabili contestuali sulla buona riuscita dei progetti locali e la modalità di creazione di una solida rete fra gli attori coinvolti nei processi decisionali e consultivi relativi alla gestione dell'area protetta e dei suoi dintorni. Tutto ciò nell'ottica della trasparenza, efficienza, condivisione delle responsabilità ed altri principi di buona *governance* nella gestione delle risorse naturali e di sistemi socio-economici ad esse connessi. Lo studio si propone tra l'altro di contribuire all'attuale dibattito sul ruolo degli operatori pubblici nell'amministrazione di territori dove la presenza di molteplici attori interessati all'utilizzo di risorse naturali è potenzialmente causa di conflitti (su questa parte, in particolare, si sta collaborando con l'Università di Zurigo, che da tempo svolge studi su queste tematiche in area alpina).

Una delle aree selezionate come area pilota per testare la metodologia ed in particolare il set di indicatori per valutare la qualità della *governance* locale è il Parco Nazionale Dolomiti Bellunesi, con riferimento all'intero territorio dei 15 Comuni in cui il Parco insiste e ai relativi molteplici attori pubblici e privati che qui operano.

Per completare la fase applicativa pilota nei casi studio selezionati, come da accordi verbali intercorsi con il dott. … nel corso dell'incontro informativo tenutosi presso la sede del Parco in data 24 febbraio 2011, chiediamo quindi con la presente **il supporto e la collaborazione del Parco Nazionale Dolomiti Bellunesi**. Tale collaborazione si potrà concretizzare con tre modalità principali: (i) supporto nel selezionare ed interpretare correttamente ogni eventuale documentazione interna ed esterna dell'Ente Parco connessa ai processi decisionali sul territorio, dando anche la possibilità di visionare eventuali procedure o documenti scritti interni; (ii) supporto nell'individuare gli attori chiave presenti nel territorio (da sottoporre a interviste) e nel

contattarli/facilitare i contatti laddove necessario; (iii) supporto nel rispondere ad alcune delle interviste/questionari che saranno rivolti ai funzionari della Pubblica Amministrazione coinvolti nella *governance* dell'area (incluso l'Ente Parco stesso come attore principale).

Ogni assistenza e informazione che potrà essere fornita al dottorando dott. … ed al nostro gruppo di ricerca sarà estremamente apprezzata. I dati raccolti verranno utilizzati a solo scopo di ricerca ed in forma aggregata, senza riferimenti a singoli soggetti interpellati. I dati e le informazioni relative a procedure e documenti interni eventualmente visionati saranno considerati confidenziali e non divulgati. Se di interesse, potrà essere fornita, al termine dell'indagine, una sintesi dei risultati della ricerca e/o una copia della tesi di dottorato.

Gli scriventi restano a disposizione per ogni ulteriore chiarimento.

Ringraziando in anticipo per la cortese collaborazione, porgiamo i nostri migliori saluti.

Appendix 7: Presentation letter to stakeholders

Gentilissimo/a

presso il Dipartimento … dell'Università … si sta conducendo, nell'ambito di una tesi di dottorato in Estimo ed Economia Territoriale, una ricerca sulla "*governance delle risorse naturali e lo sviluppo delle economie locali*", in collaborazione con il Parco Nazionale Dolomiti Bellunesi. La ricerca è condotta dallo scrivente dottorando **…**, con la supervisione della **dr.ssa …**, e ha come obiettivo quello di mettere a punto una tecnica per valutare l'operato di quegli enti, pubblici e privati, che con il loro lavoro contribuiscono alla buona gestione delle risorse naturali in un territorio di montagna. Il Parco Nazionale Dolomiti Bellunesi è stato selezionato come una delle aree di interesse campione per lo studio.

Questa lettera ha lo scopo, oltre a quello di presentarLe il lavoro che si sta svolgendo, di chiederLe la collaborazione ad essere intervistato. Il Suo nominativo ci è stato fornito direttamente dal Parco Nazionale Dolomiti Bellunesi, che L'ha ritenuta un attore essenziale, rispetto al settore dove opera, per la gestione dell'area d'interesse. Il Suo contributo sarà quindi di grande importanza per la realizzazione del lavoro che stiamo portando avanti.

Le modalità dell'indagine che La riguardano sono le seguenti: il sottoscritto, …, sarà presente nell'area Parco **dall'11 al 22 luglio** per le interviste. Lei verrà contattato telefonicamente nei prossimi giorni per concordare una data in cui effettuare l'intervista, tramite questionario, della durata massima di 20-25'.

Le assicuriamo che le informazioni raccolte saranno trattate col massimo della riservatezza in forma anonima, secondo il D.lgs. 196/2003 (Codice in materia di protezione dei dati personali), e presentate solo in forma aggregata.

Una sintesi della ricerca Le sarà successivamente inviata, se di Suo interesse.

Confidando nella Sua adesione all'iniziativa, La ringraziamo sentitamente fin da ora per la collaborazione e la disponibilità. Per qualsiasi dubbio non esiti a contattarci agli indirizzi sotto indicati.

<div style="text-align:center">

dott. …   dott.ssa …

</div>

Università …, Dipartimento …
Indirizzo

e-mail:	…	…
tel. ufficio:	…	…
tel. cellulare:	…	…

Appendix 8. Indicators list divided by project's phases

Conceptualization (phase a)

1a.1 Commitment to sustainability

1a.4 Cost and benefit sharing mechanisms

2a.4 Use of technology

2b.2 Transaction costs

3b.1 Inter-organizational coordination

3b.2 Inter-sectoral coordination

3b.3 Multi-level actions

3b.4 Multi-level network

3b.5 Perception of coordination

3c.1 Perception of integration

3c.4 Risk management resources

3c.5 Bidirectional flows

4a.2 Participation throughout the project cycle

4a.3 Stakeholders participation

4b.1 Main actors' presence in the core

4b.2 Represented interests

4b.3 Participants recording

4c.2 Fundamentals of empowerment

4c.3 Confidence in the organization

4c.4 Perception of empowerment

4c.5 Stakeholders involvement

4d.2 Perception of participation

4e.1 Network cohesion

4e.2 Procedures for collecting comments

4f.1 Collaboration cohesion

4f.2 Stakeholders databases

4g.1 Formal mechanisms

4g.2 Between stakeholders

4g.4 Perception of conflicts

5a.2 Accessibility

5b.2 Perception of feedback

5b.3 Procedure for feedback

5c.1 Notification instruments

5c.2 Visibility

6a.1 Rationale for decisions

6a.2 Organization chart

6a.3 Perception of clarity of actors' roles

6a.5 Co-responsibility

6a.6 Overlapping roles

6b.1 Visible salaries

6b.2 Payment of prescribed charges

6c.2 Criteria for monitoring

7a.1 Degree of diversification among staff

7a.2 Co-financed projects

7a.3 Perception of professionalism

7b.1 Mobilization of knowledge

7b.3 Overall reputational power

Planning (phase b)

2c.1 Defined deadlines

3b.1 Inter-organizational coordination

3b.2 Inter-sectoral coordination

3b.3 Multi-level actions

3b.4 Multi-level network

3b.5 Perception of coordination

3c.1 Perception of integration

3c.3 Diversification of financial resources

3c.4 Risk management resources

3c.5 Bidirectional flows

4a.2 Participation throughout the project cycle

4a.3 Stakeholders participation

4b.1 Main actors' presence in the core

4b.2 Represented interests

4b.3 Participants recording

4c.1 Influencing decision-making

4c.2 Fundamentals of empowerment

4c.3 Confidence in the organization

4c.4 Perception of empowerment

4c.5 Stakeholders involvement

4d.2 Perception of participation

4e.1 Network cohesion

4e.2 Procedures for collecting comments

4f.1 Collaboration cohesion

4f.2 Stakeholders databases

4g.1 Formal mechanisms

4g.2 Between stakeholders

4g.4 Perception of conflicts

5b.2 Perception of feedback

5b.3 Procedure for feedback

5c.2 Visibility

6a.3 Perception of clarity of actors' roles

6a.5 Co-responsibility

6a.6 Overlapping roles

6b.2 Payment of prescribed charges

6c.2 Criteria for monitoring

7a.3 Perception of professionalism

7b.1 Mobilization of knowledge

7b.3 Overall reputational power

Execution (phase c)

1a.6 Promotion of sustainability

2a.2 Use of time

2a.4 Use of technology

2c.3 Deadlines perception

3b.1 Inter-organizational coordination

3b.2 Inter-sectoral coordination

3b.3 Multi-level actions

3b.4 Multi-level network

3b.5 Perception of coordination

3c.1 Perception of integration

3c.3 Diversification of financial resources

3c.5 Bidirectional flows

4a.2 Participation throughout the project cycle

4a.3 Stakeholders participation

4b.1 Main actors' presence in the core

4b.2 Represented interests

4b.3 Participants recording

4c.2 Fundamentals of empowerment

4c.3 Confidence in the organization

4c.4 Perception of empowerment

4c.5 Stakeholders involvement

4d.2 Perception of participation

4e.1 Network cohesion

4e.2 Procedures for collecting comments

4f.1 Collaboration cohesion

4f.2 Stakeholders databases

4g.1 Formal mechanisms

4g.2 Between stakeholders

4g.4 Perception of conflicts

5a.5 Updating

5b.2 Perception of feedback

5b.3 Procedure for feedback

6a.3 Perception of clarity of actors' roles

6a.5 Co-responsibility

6a.6 Overlapping roles

6b.2 Payment of prescribed charges

6c.1 Regular monitoring

6c.2 Criteria for monitoring

6c.3 Evaluation

7a.3 Perception of professionalism

7b.1 Mobilization of knowledge

7b.2 Knowledge courses

7b.3 Overall reputational power

Termination (phase d)

1a.2 Sustainability reporting

1a.3 Certification

1b.4 Perception of environmental impacts

1c.2 Social impacts perception

1d.1 Added value

1d.2 Economic relationships

1d.3 Economic impacts perception

1d.4 Economic development projects

2b.2 Transaction costs

2c.2 Respect of deadlines

2c.3 Deadlines perception

3a.1 Performances self-evaluation

3a.2 Objectives' attainment

3a.4 Phasing out

3a.5 Perception of effectiveness

3b.1 Inter-organizational coordination

3b.2 Inter-sectoral coordination

3b.3 Multi-level actions

3b.4 Multi-level network

3c.1 Perception of integration

4a.1 Adoption of participation

4a.2 Participation throughout the project cycle

4a.3 Stakeholders participation

4a.4 Participants recording

4b.1 Main actors' presence in the core

4b.2 Represented interests

4b.3 Participants recording

4c.2 Fundamentals of empowerment

4c.3 Confidence in the organization

4c.4 Perception of empowerment

4c.5 Stakeholders involvement

4d.2 Perception of participation

4e.1 Network cohesion

4e.2 Procedures for collecting comments

4f.1 Collaboration cohesion

4f.2 Stakeholders databases

4g.1 Formal mechanisms

4g.2 Between stakeholders

4g.4 Perception of conflicts

5a.1 Projects exhaustiveness

5a.3 Translation

5b.2 Perception of feedback

6a.3 Perception of clarity of actors' roles

6a.6 Overlapping roles

6c.3 Evaluation

7b.1 Mobilization of knowledge

7b.2 Knowledge courses

7b.3 Overall reputational power