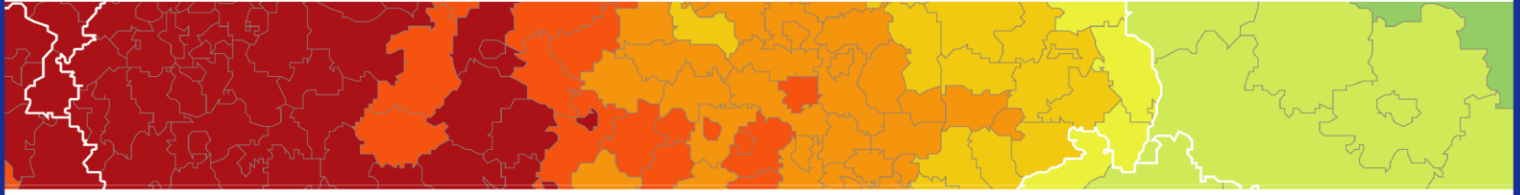


Inspire policy making by territorial evidence



LinkPAs – Linking networks of protected areas to territorial development

Targeted Analysis

Inception Report

Version 16/10/2017

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Abbreviations

ALPARC	Alpine Network of Protected Areas
ALPES	Interreg Alpine Space
CAP	Common Agricultural Policy
CDDA	Common Database on Designated Areas
CLLD LEADER	– Community Led Local Development
CNPA	Carpathians Network of Protected Areas
CS	Cultural Services
EC	European Commission
EEA	European Environment Agency
ELC	European Landscape Convention
ENC	Endogenous Natural Capital
ESS	Ecosystem Services
ESPON	European Territorial Observatory Network
EU	European Union
EUSALP	European Strategy for The Alpine Region
HNV	High nature value
IMELS	Italian Ministry for The Environment, Land and Sea
IR	Inception Report
IUCN	International Union for Conservation of Nature and Natural Resources
LFA	Less Favoured Areas
NIA	Non Institutional Authority
NDA	Nationally Designated Areas,
NGOS	Non-Government Organisations
NDAs	Nationally designated areas
NPA	Network Protected Areas
NUTS	Nomenclature of Territorial Units for Statistics
ORS	Outermost Regions
OECD	Organisation for Economic Co-operation and Development
PA/PAs	Protected Area/Areas
PEEN	Pan-European Ecological Network
PPs	Project Partners
SACs	Special Areas of Conservation
SAPA	System of Italian Alpine Protected Areas
SCIs	Spatial Conservation Interest
SOIA	System for the Observation and information on the Alps
SPAs	Special Protection Areas
SIC	Siti di Interesse Comunitario
SME	Small and Medium Enterprises

SOIA	Alpine Convention System
ToR	Terms of Reference
ZPS	Zone Speciali di Conservazione
UNEP	United Nation Environmental Programme
WDPA AC	World Database of Protected Areas

1 Executive Summary

The overall objective of the Linking networks of protected areas to territorial development - LinkPAs project - is to explore the role of existing networks of protected areas (NPAs) to define and implement sustainable territorial development strategies and policies. This study was launched by ESPON upon the stakeholders' request and it seeks to identify emerging trends in governance practices within complex socio-ecological systems (i.e. mountain regions) that are likely to shape a novel approach to natural resource management.

Drawing on the activities carried out by existing NPAs, this project seeks to provide significant evidence of the impact that NPAs have on growth at different territorial levels of development. Consequently, the project shall offer recommendations to ensure the successful capitalisation of the natural resources management; it is furthermore suggested that these recommendations should be integrated to the framework of general and sectoral strategies.

LinkPAs investigates four Protected Areas (PAs) that have joined different NPAs according to their specific territorial characteristics (e.g. PAs typologies, biodiversity, cultural heritage, etc.), institutional structure (e.g. legal status), geographical specificity and diversity (e.g. mountain with low accessibility, the population, poor services of general interest) and geographical location (within the scope of application of an international treaty).

In order to raise awareness regarding PAs and NPAs among prospective stakeholders, the University of Rome Tor Vergata (project leader) has created a consortium comprising five more partners and started a close cooperation with the Stakeholders Steering Committee (Abruzzo Region, the EGTC European Park Alpi Marittime-Mercantour, the ALPARC territory, the Municipality of Razlog)¹. As prescribed in the Terms of Reference (ToR), this Inception Report (IR) provides a description of the conceptual and methodological framework used to carry out this project, an overview of qualitative data to be collected and the relevant literature to be used throughout. It also outlines a preliminary overview of existing models of NPA and their governance and regulations within territorial development. This report concludes by discussing a preliminary set of policy recommendations.

The present version has been updated by taking into consideration the EGTC's comments and remarks.

¹ The project partners already met the Steering Committee twice: at the Kick-off meeting in Luxembourg on 28th June 2017 and during a meeting that was held through conference call on 2nd October 2017.

2 Brief overview of the LinkPAs project

In Europe, mountain areas have social, economic and environmental capital of significance for the entire continent (EEA Report 6/2010: Europe's ecological backbone: recognizing the true value of mountains). Since the late 19th century, this importance has been recognised through national legislations; since the 1970s, it has been confirmed through dedicated regional structures for cooperation and since the 1990s regional legal instruments for the Alps (1991) and Carpathians (2003) have further remarked such a value. The European Union (EU) first recognised the specific characteristics of mountain areas in 1975 by designating the so called Less Favoured Areas (LFAs). During the last decade, both the EU Cohesion Policy and the Treaty of Lisbon have focused specifically on mountains. Some European countries as Italy have dedicated special national strategies to these inner areas (see ESPON 2020 Prophecy project).

To date, the European Union has been promoting policies based on the conservation and protection of mountain landscape (European Landscape Convention of the Council of Europe – ELC), attracting the public authorities' attention regarding sustainable development, green economy, climate change mitigation, ecoservices, green infrastructures, etc. The high levels of biodiversity found in Europe's mountains have led the EU and national governments to designate a large part of their areas as 'Natura 2000 sites', respectively under the Habitats and Birds Directives and national/regional legislations (Map 1). These sites cover 14% of the mountain areas of the EU (European Environment Agency, 2010) including different typologies at transnational, national, regional and local level.

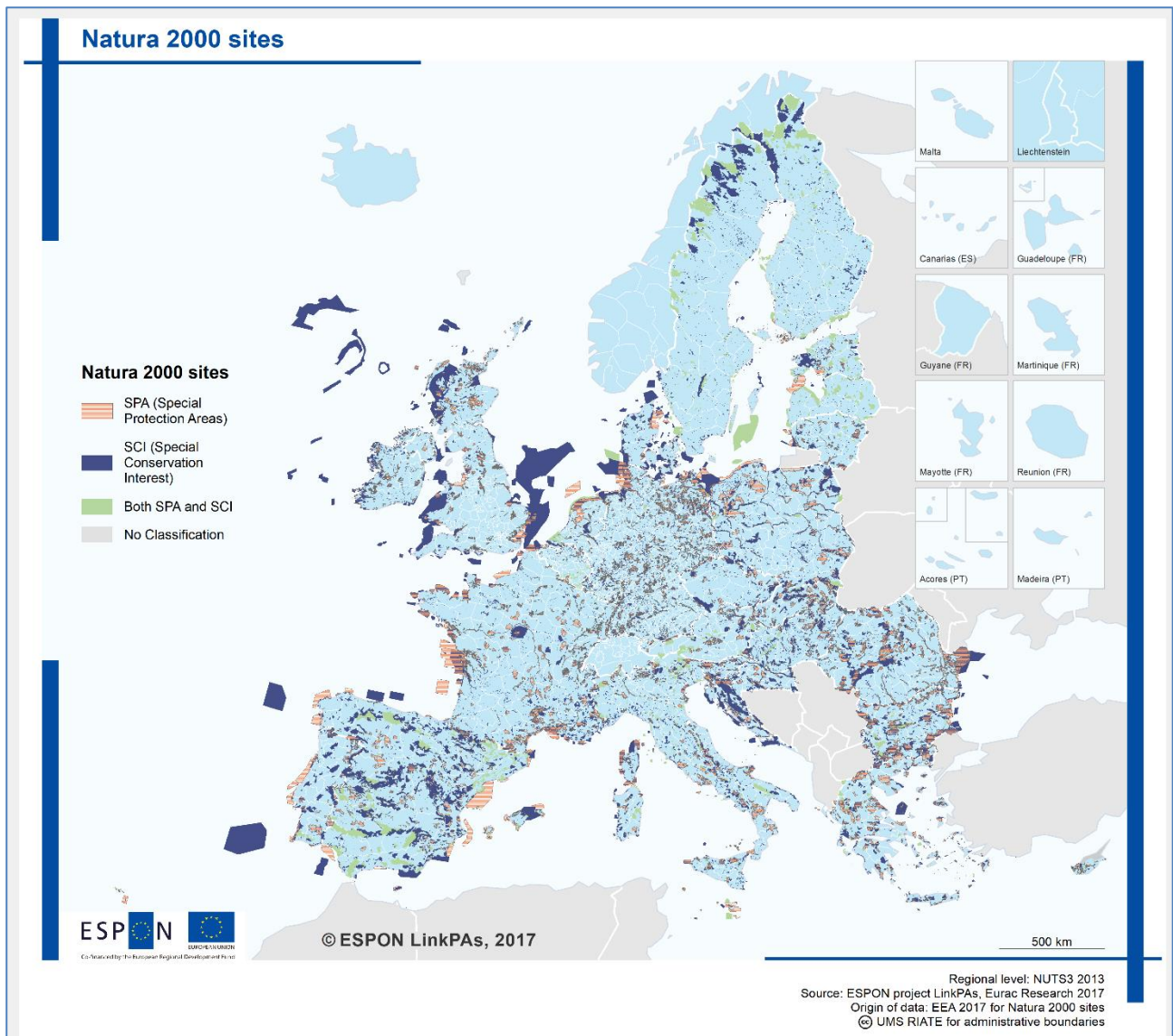
Mountain regions are essential to sustainable development and, over the last few years, various instruments have been developed to integrate protected areas via spatial planning methods and approaches. In accordance to international legally binding agreements and under international law (Alpine Convention 1991, Carpathian Convention 2003) and cooperative programmes (Central Europe, Urbact II, MED and LIFE), it has been possible to implement actions governing protected areas (mainly mountain ones), which have also been supported by European network activities as in ALPARC, EUROPARC, European Net of the Sustainable Tourism Chart, etc. The Council of Europe favours these networks, often in close collaboration with established EU observatories (e.g. on landscape, tourism, biotops, etc.). Taking part in EU projects – which have been designed according to shared objectives and reflections to promote common actions/guidelines – has increasingly facilitated the creation and consolidation of networks focusing on protected areas and their related issues.

The widespread consensus on shared natural areas policies has resulted in national/regional laws and regulations, which have been inspired by good practices of local communities.

Although very useful, legal and institutional frameworks cannot be used as unique reference to conduct an in-depth analysis of existing NPAs within Europe. Therefore, examining the real processes of territorial governance (be they formal and informal) in relation with territorial issues can successfully contribute to understand the way NPAs work. This helps to detect planning activities and the results achieved within each single context. In particular, the results offered by the analysis of the case studies at hand enable us to:

- Clarify how different governance approaches affect territorial development in and around protected areas;

Map 1: Natura 2000 sites



- Clarify which sectors are and should be influenced by protected areas and vice versa;
- Describe the concrete contribution of NPAs to the development and implementation of territorial strategies in the stakeholder territories;
- Demonstrate good and innovate mechanisms of territorial governance applied within and the surrounding protected areas;
- Identify cooperative options to ensure that protected areas are included into sectoral and regional policies;
- Identify shared features among all stakeholder territories, thus leading to the development of general and successful practices to be transferred onto similar regional cases of NPAs across Europe;
- Identify fields of action and/or policies that are needed in the stakeholder territories to ensure a sustainable and integrated management of natural resources in their mountain regions;
- Identify possible measures (e.g. financial and/or legal, cross-sectoral governance measures, integrated governance measures, etc.) that can be used to involve local actors (particularly SMEs) in

the implementation of NPAs, and mobilize private sector investments in natural resources and sustainable territorial development within NPAs.

What follows is a brief description and discussion of the main features of the project.

2.1 Concepts

The project has set off by discussing the very meaning of “Protected area” and “Network of Protected Areas” so as to identify the different types of NPAs currently existing across European mountain regions in general and in the stakeholder territories in particular (e.g. Abruzzo Region, ALPARC, Alpi Marittime –Mercantour, Rila National Park). All involved parties have been able to share concepts and definitions (BOX 1), thus reinforcing the NPAs’ shared identity, which also informs their work methodology and related actions (Cfn 2.2).

Box 1: Concepts and definitions agreed by all LinkPAs partners

Protected area (PA): IUNC defined a PA as a clearly bounded geographical space, recognised, dedicated and managed through legal or other effective means, to achieve the long-term conservation of nature with associated ecosystem services and cultural values. In this sense, protected areas, if well-managed, are effectively able to contribute to improving the quality of life of residents, also representing an example of reverence for surrounding contexts. Anyway, protected areas are mostly made up of heterogeneous interacting elements and their persistence in the future strictly relates to the maintenance/consolidation of the relationships among these various components, which are, in fact, the real natural and landscape richness of protected area. IUNC (2013) (<https://www.iucn.org/theme/protected-areas/about/protected-areas-categories>) classified these in different typologies (Map 2):

- I. a – *Strict Nature Reserve*: Strictly protected areas set aside to conserve biodiversity and possibility, geological/geomorphological features, where human visitation, use and impact are strictly controlled and limited to ensure protection of the conservation values. They serve as indispensable reference areas for scientific research and monitoring.
- I. b – *Wilderness Area*. Large unmodified or slightly modified areas, retaining their natural character and influence, without permanent or significant human habitation, which area protected and managed so as to preserve their natural condition.
- II. *National Park* (ecosystem protection; protection of cultural values). Large natural or near natural areas set aside to protect large scale ecological processes, along with the complement of species and ecosystems characteristic of the area, which also provide a foundation for environmentally and culturally compatible spiritual, scientific, educational, recreational and visitor opportunities.
- III. *Natural Monument*. Areas are set aside to protect a specific natural monument, such as a landform, sea mount, a cave or even a living feature such as an ancient grove. They are generally quite small areas and often have visitor, historical or cultural value.
- IV. *Habitat/Species Management*. Areas dedicated to the conservation of particular species or habitats. Many Category IV protected areas need regular, active management interventions to meet their objective.
- V. *Protected Landscape/Seascape*. An area where the interaction of people and nature over time has produced a distinct character and significant ecological, biological, cultural and scenic values, and where safeguarding the integrity of this interaction is vital to conserving nature and sustaining other values.
- VI. *Protected area with sustainable use of natural Resources*. Protected areas that conserve ecosystems and habitats, together with associated cultural values and traditional natural resource management systems. They are generally large, with most of the area in a natural condition and part under sustainable natural resource management. Low-level non-industrial use of nature resource compatible with nature conservation is seen as one of the main aims of this type of protected areas.

Mountainous protected areas: they have social, economic and environmental capital of significance for the entire continent (EEA Report 6/2010: Europe’s ecological backbone: recognizing the true value of mountains). Mountain regions are essential to sustainable development and, over the last few years, various instruments have been developed to integrate protected areas via spatial planning methods and approaches.

The Treaty of Lisbon (signed 2007) committed the European Union to “pursuing actions” leading to “economic, social and territorial cohesion”. The reference to territorial cohesion was elaborated as follows: “particular attention shall be paid to rural areas, areas

affected by industrial transition, and regions which suffer from severe and permanent natural or demographic handicaps such as the northernmost regions with very low population density and island, cross-border and mountain regions.”

The following year the European Commission issued the Green Paper on Territorial Cohesion (CEC 2008). This document set out a principle that EU Cohesion Policy should support all places within the EU to develop to their full potential, “turning diversity into strength”, and allowing “people to live wherever they want”. After describing the overall principles of Concentration, Connection and Cooperation, the paper focuses on three types of “regions with specific geographic features”, mountain areas, islands, and sparsely populated regions.

Europe’s mountains are highly multifunctional, they provide a wide range of services aiming at enhancing and protecting the ecosystem: 1) provisioning services, agricultural and forestry systems, natural ecosystems, and rivers provide water and hydroelectricity; 2) regulating services relate particularly to climate change, air quality, water flow and water quality, and reduction of natural hazards; 3) cultural services related to tourism, recreation, valorisation of protected areas, local production and cultural heritage as well as to water regulation and protection against natural hazards.

The RRG GIS Database already includes European-wide GIS point layers on hospitals and universities, which in the past have already been utilized in different projects (for instance, recently ESPON TRACC, mountain study of DG Regio EURAC).

Biosphere reserves. They are established by UNESCO under its Man & the Biosphere Programme. Proposals are put forward by UNESCO member states to the International Co-ordinating Council of the MAB Programme which makes the decision in the light of the Criteria set out in Article 4 of The Statutory Framework for the World Network of Biosphere Reserve.

Biosphere Reserves comprise 3 areas as follows:

- i. Core area: must be devoted to long-term protection, according to the conservation objectives of the biosphere reserves
- ii. Buffer area: to minimise negative and external effects of human and induced activities on the core area and where only activities compatible with the conservation objectives can take place
- iii. Transition area: to promote and develop sustainable resource management in the context of achieving sustainable development.

NPAs Linking networks of protected areas. They are by now not only a measurable reality, but they also are mental/cultural and political categories of the European Cohesion Policy. A Parks should not exist as unique islands, but need to be planned and managed as an integral part of the broader context. From these points of view, the territory can be considered a “network of networks” able to provide vital connections (IUCN 2005, Gambino 2012):

- in space, between facts variously located in the territory;
- in time, between facts that have occurred at various times in the history of the territory; and
- in society, between different subjects and social groups.

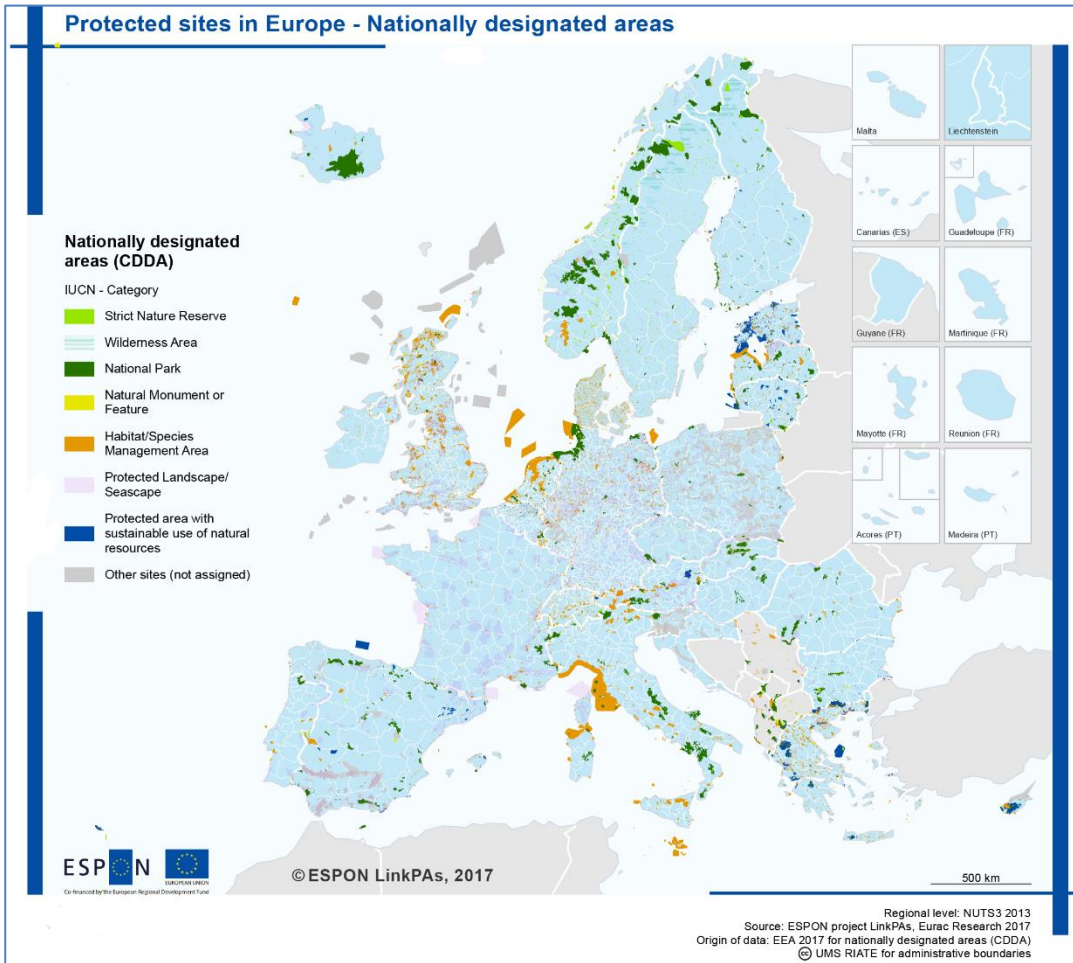
The “reticular paradigm” must necessarily have a strongly multidimensional character and all its relationships in some way influence the connectivity of the systems. The ways in which the different protected areas relate not only refer to the different levels of governance (European, transnational, national, subnational, local...), but also deal with aspects that characterize the different interactions between protected areas and between protected areas and contexts. To date, the European Union has been promoting policies based on the conservation and protection of mountain landscape, attracting the public authorities’ attention regarding sustainable development, green economy, climate change reduction, etc.

In general, within these typologies, management authorities of PAs apply different rules of *governance*. These rules reflect the adopted sustainable spatial planning, which is organised according to the zones that can be identified on the basis of different levels of protection and use; these zones can be defined as:

- *Strict nature zones*, whose natural environment is strictly conserved and unmodified.
- *General reserve zones*, where buildings and civil engineering works are not allowed, unless for hygienic purposes (e.g. refurbishing existing buildings); only strictly necessary infrastructures can be implemented and the managing institutions are the sole actors that can carry out these activities; however, substantial modifications of the territory are generally forbidden.
- *Protection zones*, where only traditional and organic agro-pastoral activities are allowed, which can include harvesting local products; the general purpose is to encourage quality local manufacturing and active agritourism.

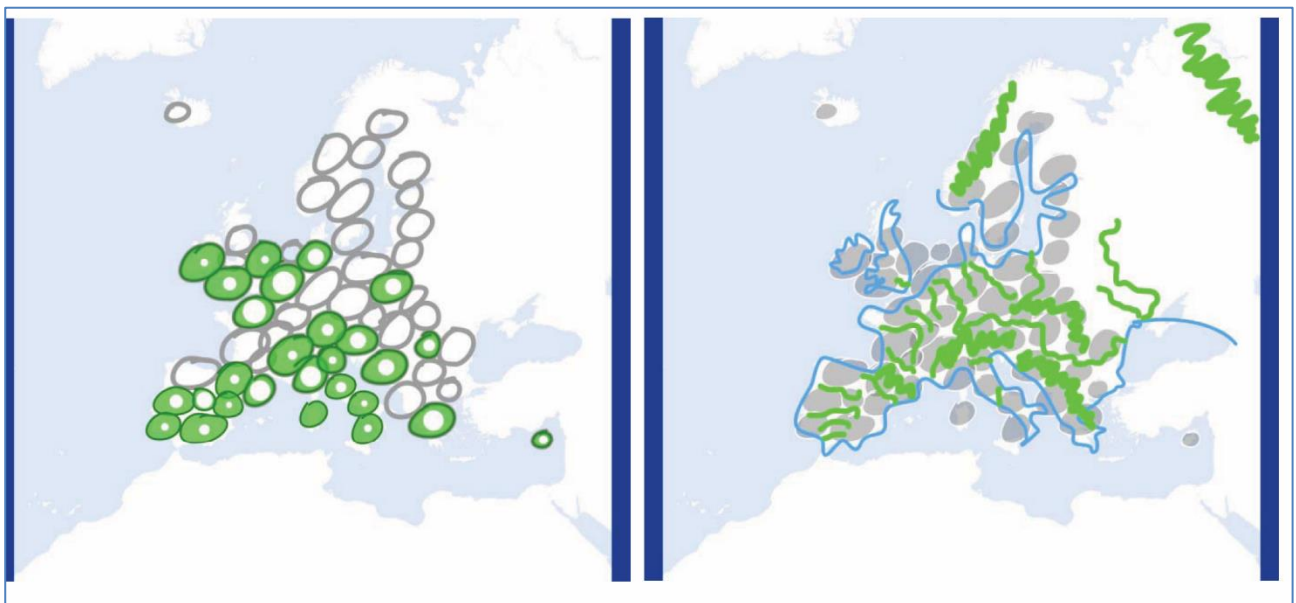
Economic and social promotion zones, which are characterised by significant human action (anthropisation); in these zones, all economic and social activities should harmoniously develop to ensure the protection of the whole area.

Map 2. Protected sites in Europe – Nationally designated areas



That said, PAs should be interpreted as nodes of a much larger territorial system (Fig.1) within which natural and agricultural (or semi-natural) areas can harmoniously integrate. This can enhance the interplay between different environmental settings (cf. the case of the Piedmont Region within the ReSSI project).

Fig. 1 – Sustainable management of natural and cultural assets



Source: ESPON ET 2050 project, 2015 p. 18

Where the network has been established (Fig. 2), its valorisation has continued thanks to the interaction of different planning projects (at international, transboundary and local level). This was made possible by acknowledging the positive role that PAs have in terms of production, cultural output and wellbeing. The way human communities, animal species and plants have harmoniously cohabited demonstrates how these areas can be seen a cohesive and well-structured whole. Besides, these areas have started a mental, cultural and political turn, which also met the addresses of the European Cohesion Policy.

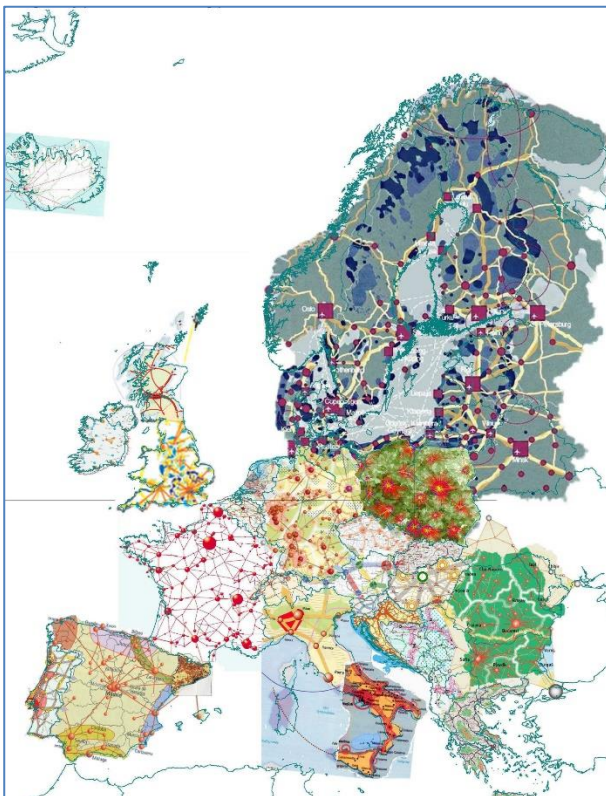
Fig. 2: EUSALP at a glance



Source: Eustrategy for the Alpine Region, 2016

Each EU Member State seems to follow one or more prevailing approaches to define 'protected areas' and 'green mountainity'. In some countries (e.g. Italy, the Netherlands, Austria), the term 'protected area' is used extensively within several typologies of spatial planning (Fig. 3).

Fig. 3: Collection of territorial visions and plans



Source: ESPON, 2014, p.105

Some devise master plans at local level whereas others create landscape and cultural heritage plans at regional level. The PAs' spatial planning and the related governance must consider the many constraints set out by respectively by local, national and/or European directives . Authorities and stakeholders can refer to 'green areas' as 'low and sparsely populated areas' (e.g. Sweden), rural areas, mountain areas (e.g. Switzerland), 'prevalent natural system' (Italy) according to national or regional geographic specificities and experiences (see NATURA 2000 sites).

2.2 Methodology

Several ESPON projects (ESPON2013: GEOSPECS, GREECO and TANGO) have demonstrated to be important starting points in defining the specific territorial features of mountainous regions (GEOSPECS, 2013; PROFECY, 2107) and their sectoral territorial potential (GREECO, 2014). Others have helped to analyse the relation between governance and territorial development (e.g. TANGO, 2013). Conversely, more recent projects have concentrated on how the stakeholders' needs could better be met and their experiences understood.

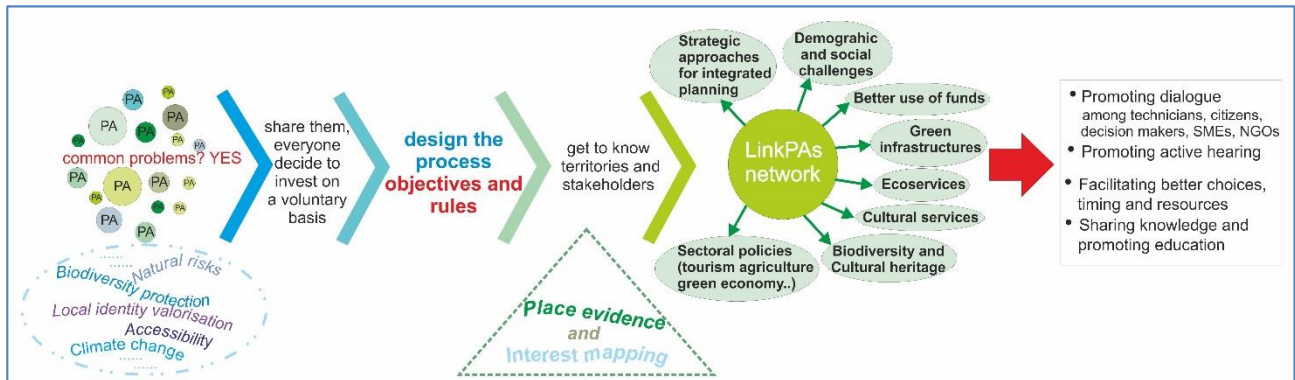
Under these premises and keeping in mind all different approaches developed, a methodology has been built to achieve the general and sectoral aims of the LinkPAs project. In particular, this methodology seeks to:

- Identify the state of the art regarding PAs, NPAs and their supporting strategies; this will be done by reviewing all the relevant literature, examining data from different sources and policy documents; the analysis also included place evidence mapping of PAs and NPAs;
- Evaluate the endogenous natural capital to support sustainable regional economic cycles and their inputs towards a green economy that NPAs should be able to promote by climate change mitigation;
- Identify how, and to what extent NPAs contribute to enhancing and implementing territorial development strategies related to sector policies by data from different sources and stakeholders interviews;
- Provide evidence of the NPAs impact by assessing the effects that networks of protected areas have on territorial development;
- Identify what territorial governance model(s) can fruitfully support the decision-making process and agreements between actors; this will be done via interviews and documents analysis. The list of actors will include several categories: institutional stakeholders, private economic bodies, mainly SMEs, NGOs, citizens and citizenships, interconnected networks of municipalities that operate at local level and therefore need to be involve in this process so as to encourage and support green jobs and business opportunities within PAs and through NPAs. This will also be done by considering in particular community-led local development (CLLD - LEADER approach);
- Put forward policy recommendations for the successful integration of natural resources management and sectoral strategies;
- Develop practical guidelines that can be applicable not only to the territories under scrutiny but also onto any other European NPAs that adopt emerging trends in governance practices that are likely to result in a novel approach to natural resource management and complex socio-ecological systems. This will be possible thanks to the formulation and implementation of public policies, programs and

projects.

Summarizing theoretical and practical experiences within the PAs context can lead to the creation of an appropriate methodological framework that is able to tackle issues such as “linking network” (when conceived in general terms and relating specifically to protected areas), “mountainity”, “endowments” for socio-economic sustainable development (i.e. agriculture, tourism, green production and services, landscape organisation, reaction to climate change, re-population, digital connection, etc.). The LinkPAs methodology (Figure 6) draws mainly on Economic Geography and Spatial Planning, which provide a sound framework for the understanding of the more recent evolution processes and trends:

Figure 4: LinkPAs project



The main steps of the project are:

1. analysing those (formal and informal) NPAs that have been actively involved in shaping the EU mountain political arena (at high NPAs level) and any related stakeholders (at meso- and micro-NPAs levels);
2. examining the types of EU mountain protected areas at national/regional/sub-regional level and within the stakeholders territories; detecting and classifying PAs that take part in any existing type of NPAs, on the basis of their specific territorial characteristics (e.g. type of environmental or cultural resources), institutional structure (e.g. legal status) or geographical location (e.g. within the scope of application of an international treaty);
3. analysing the main political issues and strategies reported by each country, regions and NPAs under scrutiny, with particular regards to demography, employment, education, services of general interest, environment, economy, digital transition, climate change, accessibility, etc.;
4. investigating governance models within the EU mountain protected areas and the stakeholders territories, examining nature protection activities under different levels of governance, and highlighting their effects on PAs management (particularly, if considering that most legislations aiming to protect nature are issued at national or regional level whereas most activities take place at the local level);
5. drawing up of list of relevant policies applicable to these mountain protected areas (tackling climate change, employment, digital transition, migration, agriculture, tourism, marginalisation, management of natural resources, seismic risk, land use, etc.)
6. carrying out a sound comparison of all involves stakeholder territories (as per points 3 and 4 above);
7. mapping analytic phenomena and results relating to the stakeholder territories;
8. drawing up general and specific policy recommendations to help local and regional administrations to

attract SMEs, private investors, etc.; particular attention will be paid to EU instruments such as CAP, the LIFE programme, etc. in accordance with the EU Biodiversity Strategy and climate change mitigation; defining different types and levels of protection policies applied to specific PAs, depending on their characteristics, location, legal status, or willingness or availability to join an open NPA;

It should be noted that NPAs may strive to adopt different governance regulations and be subject to a diverse set of sectorial policies, depending on their geographical location and their social, demographic and economic characteristics.

In this light, the NPAs under scrutiny will be analysed considering aspects such as the ecological and cultural component, their socio-economic situation and the way all these factors interact through territorial development policies and planning. To this end, the analysis will also be carried out by identifying those relationships between natural and cultural components that are fundamental for the maintenance of a PA's identity values; it will also be worth pointing out all those activities that have been carried out to date in order to preserve, enhance or restore PA resources.

In turn, this methodology will lead to the active involvement of local SMEs and actors that can ultimately mobilise private sector investments in order to guarantee that the communities will continue to work and live in these PAs.

3 Preliminary overview of existing models on NPA and their governance

3.1 Preliminary overview of existing models of NPAs and their governance

According with the general objectives set by LinkPAs, the project team has started to concentrate on the following actions 1) providing place evidence regarding existing NPAs at EU level (Fig. 2) analysing the existing NPAs models related to mountain regions in more detail and paying particular attention to the stakeholders contexts, and 3) describing those aspects that strictly pertain to governance. Following this procedure will help us to determine whether and to what extent NPAs can be drivers for territorial development and the successful integration of natural resources management and sectoral strategies.

An NPA can be seen as an instrument that Countries can look to in order to foster the coordinated management of those areas having specific ecological and environmental features, which require joined actions for their conservation and valorisation. Using this instrument allows some transboundary, national and inter-regional mountain macro-regions (e.g. Alpine Region, Carpathian Region, Danube region, etc.) to establish a sharing and debating platform (be it formal or informal and semi-structured) that all the bodies that are dealing with the management of PAs can contribute to. Such a platform is important as it helps to share experiences, transfer the participant's know-how, harmonise monitoring systems for the conservation of biodiversity and identify wider objectives to be achieved. It considers all the different governing frameworks (be the legal and institutional), any formal or informal processes of territorial governance in relation with potential territorial issues, planning activities and the results that each NPA may have achieved.

In order to compare the different contexts the LinkPas investigates, the project partners have devised a reporting table (cf. Table 1 below) that includes the following aspects of each NPAs: Territorial area; Legal framework; Objectives.

A more comprehensive table (cf. Table 2) has been subsequently created to plot other aspects, specifically related to governance. It is to be completed in the Interim Report. This second table accounts for the following data: Actors involved; PAs involved; Management aspects of NPAs; Activities promoted by and implemented under the NPAs. The compared analysis of the two table will allow to identify challenges and opportunities for the territorial areas involved and elaborate some considerations regarding the existing models of governance.

The proposed selection of NPAs at EU level should not be considered not exhaustive but representative of the variety of the situations detected this far across Europe. Special attention has also been paid to NPAs dealing with mountain areas in general and stakeholder territories in particular.

A cursory look at the data reveals that the situation at EU level appears to be extremely heterogeneous. Some NPAs reflect European overall typologies of PAs (see BOX 2), while others are more focused on the geographical specificities of the several countries and regions (e.g. mountain areas, rivers, maritime areas, etc.). In other cases, the NPAs focus in homogeneous territories under the same administrative boundary, involving different PAs and different stakeholders at national, regional and local level, with which they try to establish a vertical and horizontal coordination. It is possible to notice that creating an NPA also contributes to shaping the management and governance of the PAs included in the network. Consequently, some types of networks appear to be particularly challenging at lower territorial and administrative levels. However, the possibility to involve local actors – be they public administrations or private companies – that collaborate with

the national administrations is likely to guarantee effective vertical and horizontal coordination.

Table 1: NPAs at EU level

NPAs at EU level	Territorial area	Legal framework	Objectives
Emerald Network	45 Member States of the Council of Europe and 5 not-member States (Ratifying States and Observers of the Berne Convention)	International legally binding instrument in the field of Nature Conservation. Established in 1989 under the Bern Convention	Conservation of species and habitats under the Bern Convention
Natura 2000	28 European Countries	International legally binding instrument in the field of Nature Conservation. Established in 1992 according to the Habitat and Birds Directives (1992)	Conservation of species and habitats under the Habitat and Birds Directives
EUROPARC Federation	38 European Countries	Voluntary network established in 1973. Federation of European PAs under German law	Improving the management of Protected Areas in Europe through international cooperation; nature conservation and sustainable development of Europe's biodiversity; fostering management through holistic landscape approaches
ALPARC - Alpine Network of PAs	8 Countries under the Alpine Convention (Austria, France, Germany, Italy, Liechtenstein, Monaco, Slovenia and Switzerland)	Voluntary network established in 2013. Registered association under French law	Contributing to implementing the Alpine Convention and its Protocols for protected areas. Establishing a pan-alpine ecological network implementing Article 12 of the "Nature protection and landscape conservation" protocol of the Alpine Convention
CNPA - Carpathian Network of PAs	7 Countries under the Carpathian Convention (Czech Republic, Hungary, Poland, Romania, Serbia, Slovak Republic, Ukraine)	Founded in 2006 by the Kiev Conference of the Contracting Parties of the Carpathian Convention	Contributing to implementing the Carpathian Convention on Conservation. Fostering cooperation between protected areas in the Carpathians and other mountain ranges for a sustainable development in the Carpathians.
DANUBEPARKS Network	Protected areas along the Danube river covering 9 Countries (Romania, Serbia, Hungary, Croatia, Slovakia, Austria, Bulgaria, Germany, Moldova)	Voluntary network. Association founded in 2007 by signing of the Declaration of Tulcea	Enhancing nature conservation of the Danube River Protected Areas and their management; promoting sustainable development
MedPAN - Network of Mediterranean Marine PAs	Mediterranean PAs, International, national and regional administrations, associations and NGOs from 19 Mediterranean Countries	Voluntary network established in 2008. Association under French law	Fostering cooperation among MPAs and giving them support in management activities. Promoting and implementing cooperation programmes and strategies, improving NPAs effectiveness
EGTC Alpi Marittime – Mercantour	Transboundary area of the Alpi Marittime Park (IT) and Mercantour Park (FR)	European Grouping of Territorial Cooperation established in 2013	Fostering and promoting cooperation among transboundary PAs. Enhancing the coordination and management of the transboundary area

FEDERPARCHI – Italian Federation of Parks and Nature Reserves	Italy	Voluntary network established in 1989. Registered association under Italian law	Enforcement of the national parks system; improving nature conservation and sustainable development
SAPA – System of Italian Alpine PAs	Italian Alpine area under the Alpine Convention	Voluntary network established in 2013	Contributing to implementing Alpine Convention Protocols relating to PAs within the Italian Alpine area. Fostering international cooperation among mountain PAs.

Table 2: NPAs at International and EU level²

NPAs at International and EU level	Governance aspects (according to IUCN)			
	PAs involved	Other actors involved	Management aspects	Activities promoted by and implemented under the NPAs
Emerald Network				
Natura 2000				
EUROPARC Federation				
ALPARC - Alpine Network of PAs				
CNPA - Carpathian Network of PAs				
DANUBEPARKS Network				
AdriaPAN and MedPAN				
EGTC Alpi Marittime – Mercantour				
FEDERPARCHI – Italian Federation of Parks and Nature Reserves				
SAPA – System of Italian Alpine PAs				

² The table 2 will be developed by the Interim Report.

BOX 2. NPAs affecting mountain areas. The listed five cases are examples of different territorial levels: EU level (Natura2000), transnational level (ALPARC and CNPA), transboundary level (EGTC Alpi Maritime – Mercantour), national level (FEDERPARCHI), sub-national level (SAPA)³.

Natura 2000 – EU level

The high levels of biodiversity found in Europe's mountains have led the EU and many national governments to designate a large part of their area as "Natura 2000 sites", respectively under the Habitats and Birds Directives and national/regional legislations. The Natura2000 network is composed by PAs that are important at EU level due to the presence of particular habitats and species, including the Special Protection Areas (SPAs) and the Sites of Community Importance (SCIs). The aim of the network is to ensure the long-term survival of Europe's most valuable and threatened species and habitats. Since directives are legally binding, it is expected that Member States collaborate to implement them, especially considering that they propose the creation of SCIs that can match the specific features of the habitats included in their territory.

These sites cover 14% of the EU mountain areas (cf. European Environment Agency 2010). Slovenia has the highest percentage of mountain areas within its sites, followed by Slovakia, Spain and Bulgaria. In general, the percentage of mountain areas in a country results in an even greater number of Natura 2000 sites. In the EU, the Natura 2000 sites cover a smaller portion of mountain land than HNV farmland; however, relative proportions vary considerably across massifs and countries. Comparatively speaking, 15% of Europe's total mountain area is included within sites designated for conservation by their governing states (a.k.a. nationally designated areas, NDAs). The highest percentages can be found among the small massifs of central Europe. Among larger massifs, percentages are particularly high in the Alps and the Nordic mountains. In most EU Member States, the percentage of mountain land within NDAs is higher than within Natura 2000 sites.

ALPARC e CNPA – transnational level

The Alpine Network of Protected Areas (ALPARC) and the Carpathians network of protected areas (CNPA) are networks of protected areas acting at transnational level. ALPARC contributes to implementing the "Nature conservation and landscape management" Protocol of the Alpine Convention and the CNPA strives to implement the Carpathian Convention.

Since 1995, ALPARC has been promoting fruitful relations among alpine protected areas of different categories (e.g. parks, nature reserves, biosphere reserves, tranquillity zones and many other kinds of protection areas), organisations and institutions committed to nature protection, local actors, citizens, universities and the private sector. From a legislative point of view, ALPARC is an association governed by French laws; its mission is supported by and regulated according to the decisions taken by the Constituent Assembly on 18 January 2013, the Permanent Secretariat and ALPARC; all three parties signed a memorandum of cooperation in 2013. ALPARC supports the managers, local authorities and actors working within its protected area to carry out the park's mission. ALPARC's main objectives are nature and landscape protection and sustainable development, promoting and facilitating the exchange of expertise, techniques and methods among the managers of the Alpine protected areas through participatory processes. Consequently, ALPARC is actively involved in the implementation of projects and actions that seek to preserve biodiversity by developing a sort of ecological continuum, promoting regional development and quality of life, enhancing environmental and mountain education, as well as raising awareness about and within the Alpine regions.

The Carpathian Network of Protected Areas (CNPA) was created in December 2006 in order to implement the Carpathian Convention, and therefore increasing the potential for cooperation within the massif area and its neighbouring mountain areas. The protected areas in the network are made up of national parks, nature parks, biosphere reserves and other protected areas; the level of protection within each category varies considerably, ranging from very strict protected areas to areas that focus mainly on rural development. The cooperation on conservation and collaboration among protected areas has by now become essential. This network continues working to respond to the need for cooperation and coordination of these areas, for example by facilitating thematic exchanges to identify key issues and creating shared instruments.

CNPA extends from Austria to Serbia, covering most of Slovakia and Romania and parts of the Czech Republic, Hungary, Poland and Ukraine. This area naturally connects western and eastern Europe as it facilitates species migration and genetic exchange while, at the same time, containing some of the most intact ecosystems that house a wealth of indigenous species. CNPA aims to foster the conservation of biodiversity and sustainable management of natural resources; the Carpathian landscape has largely

³ It could be useful to consider in the Interim Report also the DANUBEPARKS Network region. High interests mountain countries involved in mountain NPAs here described

been shaped by a long tradition of mountain agriculture and sheep farming, although these traditional occupations are currently in decline because of the economic development and increasing pressures on the natural environment. However, two out of seven Carpathian countries have now joined the European Union, and this is likely to increase their potential for sustainable development through new environmental policies.

The Italian Federation of Parks and Nature Reserves (FEERPARCHI - IT) - national level

Italian territory is largely mountainous. Alpine and Apennine areas cover 35,2% of its land. FEERPARCHI is the Italian Federation of Parks and Nature Reserves founded in 1989; in 2008, it became the Italian Section of the EUROPARC Federation. FEERPARCHI coordinates over 160 entities that manage national and regional parks, marine protected areas, regional and state-owned nature reserves, from the largest national park to the smallest local reserve according to the various levels of territorial government. The main objectives of its activity are the implementation of the National Strategy of Biodiversity and the integration and coordination of PAs policies with territorial policies (e.g. sustainable tourism fostering the implementation of the European Chart of Sustainable Tourism - ECST). FEERPARCHI is also actively involved in the national policy debate regarding how PAs can effectively address conservation and sustainable development; at EU level, FEERPARCHI contributes to developing international environmental policies.

The EGTC of the Maritime Alps - Mercantour – transboundary level

Alpi Marittime Park (IT) and Mercantour Park (FR) have been cooperating for over 30 years in order to protect and enhance the transboundary territory they share, which can be seen as a whole from a geological and landscape point of view. One of the most interesting features of this area is that its mountains are very close to the sea and it often snows in areas that are only 50m away from the coast. This area boasts a unique blend of flora and fauna that pertains to both the arctic-alpine domain and the Afro-Mediterranean domain. The EGTC was established in 2013 in order to facilitate the management of the transboundary areas within Italy and France. Instances of typical Alpine and Mediterranean architectures and landscapes can be found consistently across the EGTC.

The two parks have been involved in several EU, Alpine and transboundary projects. For instance, they took part in INTERREG Alcotra, which also included other PAs, administrative bodies and stakeholders at local level. Currently, some of the main EGTC activities refer to the touristic promotion of the area under the “Alps of the Mediterranean sea” brand and the UNESCO World Heritage candidature

The System of Italian Alpine Protected Areas (SAPA - IT) – subnational level

In 2012, the System of Alpine Protected Areas (SAPA) was set up in response to the proposal of the Italian Delegation that took part in the Alpine Convention. SAPA is the first national network to gather territorial actors involved in nature protection and the promotion of sustainable development. It includes regional governments, protected areas, managers of protected areas and other competent bodies, which are assisted by experts from different domains currently working in higher education and research institutions. Each PA can subscribe by adopting the best fitting administrative regulation. The SAPA Network promotes studies, actions, data collection and data sharing within the Italian Alps. Its activities are driven by sound evidence of the potential of protected areas to enhance economic sectors and the sensible exploitation of natural resource. The activities carried out by SAPA are consistent with the framework proposed by the Alpine Convention in compliance with the Protocol on Nature protection and with ALPARC's international activities.

SAPA members include the Italian Alpine regional governments, protected areas including Natura 2000 sites, research institution, which are coordinated by the Italian Ministry for the Environment, Land and Sea (IMELS). SAPA covers 23.7% of the Italian Alpine territory; many Alpine large protected areas have already joined the network and others are expected to join shortly.

SAPA is an open, self-governed partnership, which can be generally categorised as a public-private partnership. It encourages the participation of all institutional and interested stakeholders dealing with ecological connectivity, biodiversity, wildlife, PA management etc.; it also seeks the involvement of public and private research institutions.

3.2 Governance: opportunities and challenges for different models of NPAs

By looking at existing models and typologies of NPAs across Europe (see Table 1, Table 2, BOX 1), it is possible to detect some opportunities and challenges.

Opportunities and challenges can be identified by taking into account the following aspects: the territorial level to which NPAs apply territorial characteristics of the interested area, the objectives NPAs aim at, the type of governance used to reach such objectives and so on. These aspects can serve as a starting point to identify some NPA models, which could help us devising guidelines to foster the creation of new networks

or rearranging existing ones that do not seem to fully achieve their objectives.

The Natura 2000 network is a telling example in this sense. In that case, the existence of an EU Directive that formally established the network has ensured the application of a shared approach and a common governance policy across all the Natura2000 protected areas within all EU countries; the very existence of this Directive also implies that national authorities firmly commit to its implementation. However, there are also voluntary agreements, as in the case of ALPARC and CNPA, which are two specific supranational regional NPAs that cover an exclusively mountain area. Moreover, the transboundary and international nature of both ALPARC and CNPA is part of their many distinctive characteristics. This implies that they are located across a well-defined region, which also corresponds to the scope of application of an international Treaty, pursuant to the existing regulations. NPAs voluntary agreements encourage cooperation among the PAs of their territories by using coordination models. These considerations are also valid at national level, as it happens in the case of FEDERPARCHI, which is a voluntary network as well. However, being a national level organisation FEDERPARCHI can be more easily recognised give and positively linked to the national policy processes.

The transboundary case of EGTC shows a different situation. The PAs whose territories have been included in the EGTC, Alpi Marittime Park (IT) and Mercantour Park (FR), have been actively involved in projects of transboundary cooperation. For example, some have taken part in the management ecological network (this transboundary area is already a pilot area for the Ecological Network Platform of the Alpine Convention) and sustainable tourism (cf. the implementation of the European Charter for sustainable Tourism – ECST). This cooperation has led to more structured governance that in the 2013 resulted in the creation of the EGTC European Park Alpi Marittime – Mercantour. Currently, the EGTC is waiting for the result of their the UNESCO candidature for transboundary areas; interestingly, establishing NPAs within its organisation, has given EGTC more chances of achieving this ambitious and international objective.

More generally, by looking at the relation between NPAs and those territorial policies addressing environmental, economic and social issues, it is possible to notice that:

- 1) EU Directives or national or regional laws governing the implementation of a NPA cannot be considered the sufficient tools to identify its functioning; matter-of-factly, the term “network” to describe a number of PAs does not automatically mean that PAs in the network are consistently managed and coordinated;
- 2) the conservation of a PA’s biodiversity is only one of the three pillar of the sustainability, as stated in previous EU strategy plans. However, while still considering the role PAs have had over the last decades, it is also important to take into account economic and social sustainability.

4 General overview of main sources and data

4.1 Preliminary considerations on data and indicators

The term “data” here refers to information regarding the areas under scrutiny (a.k.a. case studies); this information will be collected from many sources, which mainly have a descriptive function. The term “indicators” refers to metrics aimed at assessing the territorial impacts of the implementation of public policies in the areas specifically analysed within this project. These indicators will be selected among those typically linked to the concept of “green economy” and will focus on the dimensions underlying the analyses performed during the project. Indicators are proposed so as to measure the performance of the “stakeholder regions” and well as to test their future application.

The data collected from the four “stakeholder regions” aim at providing a general territorial guidelines to help the regions hosting a case-study for a better governance. In particular, data collection will seek to:

1. describe the different protected areas networks under enquiry;
2. focus on territorial variables (demography, economy, society, environment)
3. specifically address the three fields of enquiry (i.e. dimensions) that in turn define three data categories (sub-dimensions): (a) *Natural Capital*; (b) *Ecoservices*; (c) *Cultural and recreational services*.

All datasets listed below will form the NUTS3 database for the ESPON LinkPAs project. The whole database will be designed so as to integrate different themes, diverse data sources and different file formats, thus addressing the problems related to different spatial delimitations, resolutions and scales. This will be done in accordance with EU standards, which are based on the guidelines set up in previous ESPON project. The European and international standards for spatial referencing and data storage will be also considered.

4.2 Sources

The first step will entail providing a comprehensive list of existing data based on the stakeholders’ needs, call objectives, literature review, contractor expertise and experience as regards to the LinkPAs themes. One important aspect of data inventory is to ensure that the data can be understood and interpreted correctly by any user. It requires compiling clear data descriptions, annotations, contextual information and documentation. This action is essential as it enables us to create data collection templates.

The typologies of data used to describe the networks selected as case studies (see the dedicated Section of the project) will be collected from two main source categories:

- a. *datasets: EU, national and local statistical data;*
- b. *documentary resources: planning documents; legal and administrative agreements and decrees regarding the networks under enquiry (stakeholders will be actively involved; more details to follow).*

(a) Databases

Data will be collected at NUTS3 level by taking into account territorial needs and level of inquiry. Therefore, the support of the LinkPAs lead and partner stakeholders will be essential during this phase and data collection will concentrate on selected case studies. Data sources include both public and proprietary databases. Data collection at the level of Europe NUTS3 from official datasets will be integrated with data supplied by stakeholder regions, regional/local stakeholders within NPAs, and the other Project Partners (PPs). Prior ESPON-related projects (e.g. ReSSI) have demonstrated that local and regional stakeholders can effectively

contribute to data gathering. Information on relevant data providers (e.g. associations, research agencies, government departments and platforms, public authorities, non-governmental organisations) will be contextually collected aiming at assessing how data providers' existing information matches the objectives LinkPAs has set as well as to ease mutual contact during every stage of this project.

A preliminary survey of data sources for this project has been conducted on a series of significant datasets showing remarkable consistency with the declared aims of this project, and in particular with:

1. the assessment of *endogenous natural capital* to support regional economic cycles and their capacity to provide inputs for a green economy (ENC),
2. the identification of *ecosystem services* related to climate, air quality, water and natural hazards (ESS),
3. the identification of *cultural services* and their impact on tourism, recreation, cultural heritage (CS).

This survey has been based mainly on existing datasets and databases from ESPON, Eurostat (including regional statistics), the European Environment Agency (EEA), INSPIRE geoportal, UN databases (cf. in particular to Good practices, Millennium Indicators, Vital and Social Statistics), World Bank (regarding World Development Indicators, Actionable Governance Indicators, Climate Change and Enterprise Surveys), European Life+ projects (e.g. Life+ "Making Good Natura - Making Public Goods Provision The Core Business Of Natura 2000" with focus on Ecosystem Services), as well as other European transnational cooperation projects (e.g. the ongoing INTERREG Alpine Space "AlpES"), the Alpine Convention, and other national and local sources (e.g. Italian Strategy "Aree Interne").

Particular attention has been paid to the analysis of previous ESPON experiences (from ESPON 2006 and ESPON 2013 to the current working period). Databases and related projects that have been recently completed with the aim of identifying original data can be profitably used to perform all the analyses set by the LinkPAs partners:

- ReSSI (Regional Strategies for sustainable and inclusive territorial development – Regional interplay and EU dialogue) and its preliminary results;
- PROFECY (Inner Peripheries: national territories facing challenges of access to basic services of general interest) and its preliminary results;
- GEOSPECS (Geographic Specificities and Development Potentials in Europe) that covers EU27+4 countries (Norway, Iceland, Liechtenstein and Switzerland) with respect to socio-economic indicators to define geographic specificities;
- TeDi (Territorial Diversity in Europe) that deals with how PAs territories may contribute to the achievement of overarching European objectives, as listed in the Lisbon and Gothenburg Strategies;
- SeGI (Services of General Interest) whose data can facilitate the assessment of services of general interest and their respective development perspectives within a PA;
- GRRECO (Regional Potential for a Greener Economy) whose results may help the LinkPAs project to highlight relevant aspects of a green economy in PAs and NPAs;
- TANGO (Territorial Approaches to New Governance) that focuses on the creation and implementation of effective models and mechanisms to ensure coordination between different public sectoral policies, as well as cooperation among different levels of public government;
- EDORA (European Development Opportunities in Rural Areas), which is relevant to LinkPAs as it investigates job creation and economic growth in rural areas;
- PURR (Potential of Rural Regions), which is devoted to the analysis of issues in rural areas;
- DEMIFER (Demographic and Migratory Flows Affecting European Regions and Cities), whose data will facilitate the assessment of the demographic situations of the areas examined by LinkPAs;

- ECR2 (Economic Crisis: Resilience of Regions), whose results can help to enhance resilience within individual PAs economies;
- SMART-IST (Smart Institutions for Territorial Development), which is based on indicators that allow to measure, compare and improve implementing processed connected to the territorial dimension, as suggested in the Structural Funds programmes;
- CLIMATE (Climate Change and Territorial Effects on Regions and Local Economies in Europe), which investigates to what extent PAs are exposed to climate change;
- LOCATE (Territories and low-carbon economy), whose results suggest that adaptation measures should help to decrease the harmful effects of climate change; it also puts forward opportunities all PAs can benefit from;

Existing datasets at NUTS3 level, deriving from ESPON projects, provided by EUROSTAT and OECD include:

- data on geographic specificities and cross-border cooperation;
- data on PAs, including nationally designated areas (CDDA), Natura 2000 and Biosphere reserve;
- data on accessibility and transport;
- data on population and economy;
- data on health and education;
- data on land cover;
- data on culture and local productions;

The Statistical Classification of Economic Activities in the European Community (NACE) will be applied to related economic sectors. GIS overlay techniques will be used to combine datasets and elaborate specific maps focused on project objectives.

(b) Documentary Sources

In order to analyse the NPAs at hand, legal, political and administrative documents will be collected – they will be mainly concerned with legal regulations, promoted actions and policies. It is important to bear in mind that all policies that are implemented to conserve protected areas generally have an impact on the territory as a whole (including internal and external areas). These sources play a pivotal role in the analysis of NPAs types and case-studies. A list of sources of interest that can help to investigate the functioning and territorial effects of the NPAs and case-studies analysed in this project is provided below.

<p>Main types of documentary sources used for case-studies analysis</p> <p><i>European laws</i></p> <p><i>National laws</i></p> <p><i>Regional laws</i></p> <p><i>Local administrative acts</i></p> <p><i>Decisions by management authorities</i></p> <p><i>Decisions by managers and executives holding competences on protected areas and NPAs management</i></p> <p><i>Other documents affecting the governance of NPAs</i></p>

Most of the information concerning the above-mentioned documents are currently by the stakeholders involved in this research. Therefore, the stakeholders will serve as “contact points” and data provides during the collection phase. It is consequently essential to establish long-lasting relationships and cooperation with all involved stakeholders as this will ensure an effective and efficient data-collection process within all relevant territories.

4.2.1 Data usage

Collected data from the sources described above provide a primarily description of the NPAs identified as case-studies. Aggregated data allows us to describe the specific characteristics of the analysed networks at different levels. A NUTS3 level analysis permits in-depth investigations within the NPAs' territories. In other words, collected data can provide us with a multi-criteria description of the territories under enquiry, especially when considering the dimensions set out above.

It is however essential to clarify that the term "data" as described above differs from "indicators" as used in relation to the concept of "*green economy*" that will be introduced shortly. Here, data is considered as a means that provides descriptive information; conversely, indicators allow to monitor the performance of the territories in a NPA where specific policies are applied with specific regard to the three identified dimensions (i.e. natural capital, ecoservices and cultural services); a set of "metrics" for each dimension (and sub-dimension, where appropriate) are also establish to gauge performance.

4.2.2 "Green economy" indicators

According to the most widely accepted definition, a green economy is low-carbon, resource-efficient and socially inclusive (UNEP 2009). It is commonly acknowledged that green economy has to be conceived as an intermediate target as well as a refined tool that can be used as a means for implementing sustainable development.

Consequently, the present study adopts the recently formulated concept of "transformational green economy" wherein economic and environmental measurement is essential for tracking transformation itself (Georgeson et al. 2017). However, definitions of concepts regarding green economy and sets of indicators are often lack adequate correlation and need to be reconciled on a case-by-case basis.

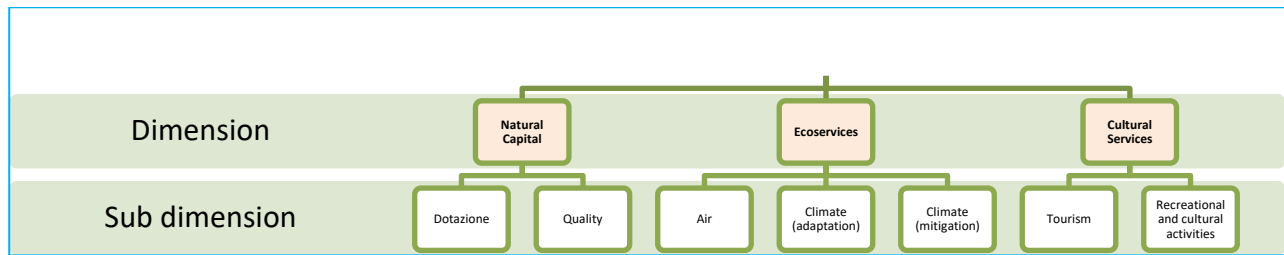
A comprehensive list of indicators should be based on well-defined sources and consider the specific features of each project, as described in Chapter 4.1 e 4.2 The rationale behind selecting specific the indicators for *LinkPAs* has been based on the project's main objectives, which are (see in-text, below):

1. Addressing the three *core-topics* identified as drivers of the project as a whole, under *para. 2* of the inception report (p. 4) and namely: *endogenous natural capital*; *eco-services* including environmental quality and climate change adaptation & mitigation; and *cultural services* aiming to support;
2. Providing a response to the needs of the stakeholder regions as identified in chapter 5 and further clarified through the stakeholders' interaction (e.g. Project Steering Committee) (...)

The indicators identified here can refer to physical, social and economic dimensions. Since the project is openly based on "green economy" as one of the core-topic for the territories under inquiry, the indicators to be used are selected among well-established sets that have already been tested and recognized by the international, scientific and policy-maker communities as distinctive to a green economy framework.

Thus, the project will ideally identify a number of "performance indicators" measuring the territorial effects of protected areas management, through the governance of NPAs – as defined in the methodology. Indicators refer mainly to the three dimensions (and eventually, sub-dimensions), as proposed below (Fig. 5)

Fig. 5: Performance Indicators



The selected indicators should be able to support the envisaged policy analysis as well as future policy and decision making. In particular, indicators are expected to describe aspects of interest for the policy-fields to be investigated. This will also allow willing stakeholder regions to monitor the progress achieved in the selected policy-fields over-time, through the implementation of territorial development strategies (included in planning and management documents such as strategies, programs, plans and others, as in the list above) in their territories in general and the case study regions in particular.

5 Case Studies

The analysis of each stakeholder territories as case studies is a crucial part of this project's process. It will form the basis for developing a certain typology of NPA governance structures. Furthermore, it will contribute to proposing concrete policy recommendations and actions at local level by providing an empirical, spatially-related basis. Case studies are a viable approach to investigate the real-life context of planning and managing natural resources within a specific territorial unit (Yin, 2009; approach of the ESPON ReSSI project 2017). This is particularly important when systems are embedded in complexly interacting regional networks and boundaries.

The case studies will provide an in-depth insight into the NPA types, legal frameworks, objectives and governance models of existing protected area (networks) within the stakeholder territories. Special emphasis is placed on collecting information on formal and informal governance processes and territorial strategy development of the protected areas and other sectors within the stakeholder territories. This will allow to identify all actors with a spatially explicit responsibility or interest and the identification of cooperation models between protected area (networks) such as cooperation between:

- Protected areas and regional institutions (NGOs, companies)
- Protected areas and protected areas
- Protected areas and local/regional policy makers and authorities

The ESPON LinkPAs project investigates four case studies (Tab. 3 and Map 3) having different spatial scopes (i.e. Abruzzo, European Park Alpi Marittime Mercantour, ALPARC territory, Razlog Municipality, Maritime Alps) to give an overview of different practices and solutions in mountainous regions of Europe.

Table 3: LinkPAs case studies

Name	Country	Level	Main responsible
Razlog Municipality	Bulgaria	local level	Bulgarian Academy of Science
Abruzzo Region	Italy	regional level	The University of Camerino
Alpi Marittime- Mercantour NP	Italy-France	transboundary level	CNRS
Alps (ALPARC area)	Alpine countries	international level	EURAC

The LinkPAs project maps specific NPAs as its case studies (International, International transboundary, national and subnational NPAs) within GEOSPECS typologies (Map 3) in order to “sew up” different points of view in a unified vision of NPAs. Also if, in some of the LinkPAs case studies, typologies tend to overlap (e.g. the Alps area can fall both into the cross border and mountain area typologies). Therefore, the analysis of these cases under scrutiny might require the use of more than one type of governance model, depending on their geographical typology.

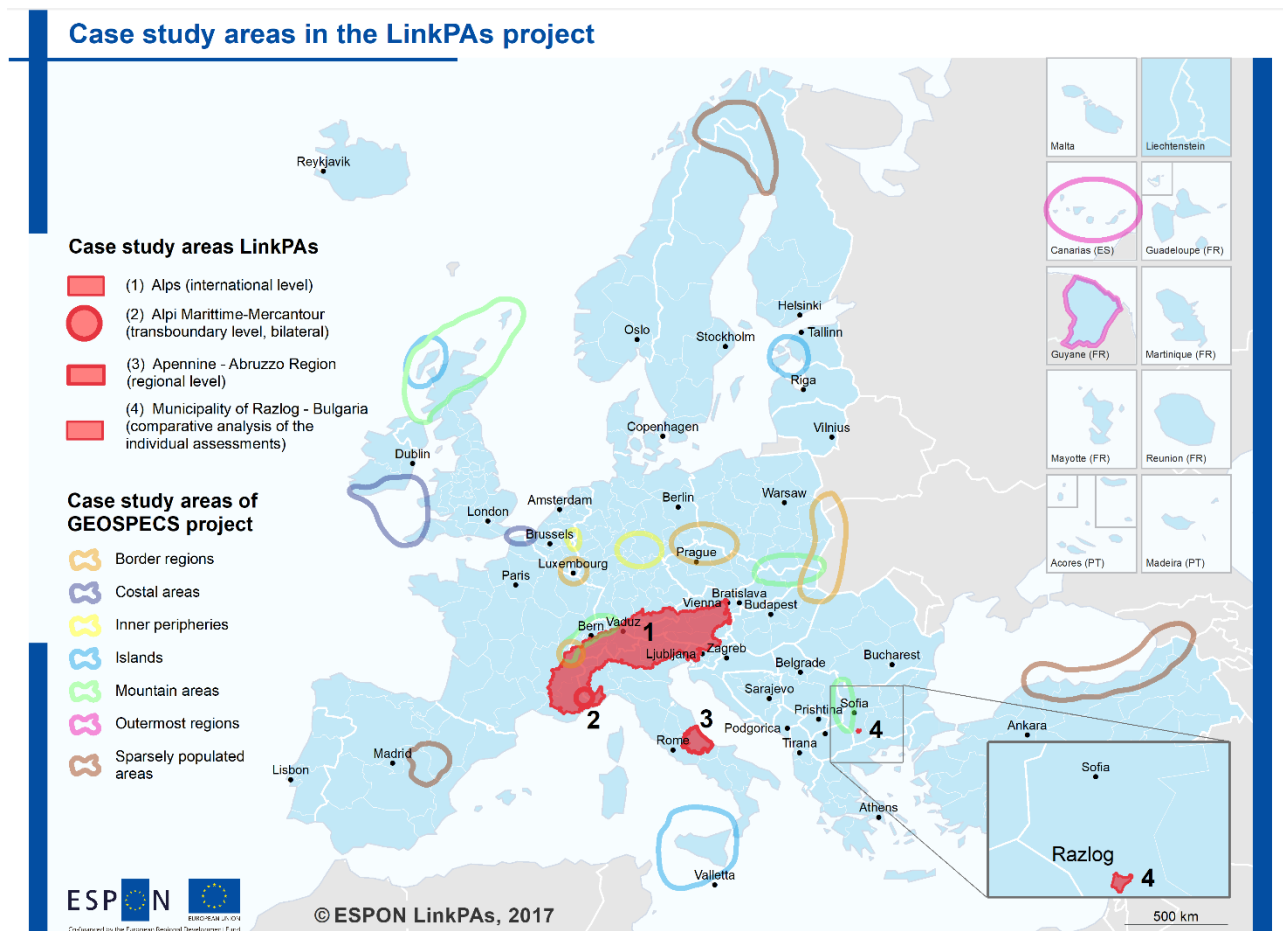
5.1 Case study methodology

The case studies comprise in-depth desktop research as well as some empirical data collection to support the identification of informal relationships.

Desktop research

A crucial part of this project is based on desktop research that focuses on existing strategies and planning documents within a well-defined territorial context. The data investigated to this end comprises documents from different governing levels (i.e. local – regional – national – European); their examination seeks to highlight key objectives, stakeholder participation, responsibilities and implementation in the stakeholder territories. Besides, the analysis concentrates on the NPAs' strategies and plans (including responsibility, spatial scope, participation and main objectives). This helps to understand whether NPAs are currently well integrated into territorial development processes of what is their potential in this sense.

Map 3: LinkPAs case studies and GEOSPECS typologies, Inception Report



Regional level: NUTS 2
 Source: ESPON project LinkPAs, Eurac Research 2017
 Origin of data: Perimeter Alpine Convention: Eurac Research 2008
 Abruzzo Region: EuroGeographics 2009
 Razlog boundary: ESPON Database 2010
 Case study areas of GEOSPECS project: geospecs.eu/CaseStudies
 © UMS RIATE for administrative boundaries

Empirical data collection

To support the interpretation of desktop research results and gain information about informal processes, an empirical data collection part in the stakeholder territories has been planned. This comprises semi-structured interviews with key stakeholders as listed in Chapter 5.2. The breakdown of the partners' responsibilities for empirical and desktop research is outlined in Table 1. In addition to the agreed interviewees (a preliminary list

is proposed in chapter 5.2) additional key stakeholders will be identified after the regional governance actor analysis (see Tab. 5)

Analysis of the governance of protected area networks

The specific methods used here refer to the ESPON TANGO project but will be also integrated by the IUCN methodology for the assessment of the governance of protected areas (IUCN Governance Guideline⁴). As with ESPON TANGO, this project will propose a typology of NPA-governance that will take into account different spatial and geographic contexts; by doing so, this typology will include the different governance traditions as developed within different areas of Europe, thus enabling the project partners to compare different governance strategies. As mentioned earlier, LinkPas will make use of the IUCN comprehensive methodology, which has been tested worldwide and at different levels (local and system level). The working matrices will be preliminary completed by means of data retrieved through desktop research; these matrices will be subsequently verified and assessed during the empirical data collection (interviews).

Table 4: Listing actors and institutions involved (or willing to be involved) in governing a system of protected areas⁵

Actors and Institutions with direct responsibilities in protected area management* (Name and sectors)**	The actor or institution is hierarchically subordinated to: (name)	Their responsibilities include: (please tick the box where applicable)								Comments/additional explanations (concerning specific role & responsibility)	
		Financing protected area management	Defining strategy, initiates, designation	Approving designation	Elaborating management plans	Approving 5-10 years management plans	Managing protected areas (day-by-day decisions)	Evaluating outcomes & performance	Surveillance and control		Other responsibilities (please list/explain)
Transboundary level											
International level											
Regional level											
Local level											
add lines as needed											
* Non-governmental actors (NGOs, private companies, individuals) should also be considered; if multi-stakeholder bodies/administrative structures exist (e.g. Consultative Councils, advisory bodies, working groups), they should be listed											
** Refers to the field of activity in which the respective institution is engaged (e.g. environment, forestry, water, agriculture, tourism).											

Source: modified from Borrini-Feyerabend et al. 2013: p. 80

⁴ <https://portals.iucn.org/library/sites/library/files/documents/PAG-020.pdf>)

⁵ The table will be developed by the Interim Report

Table 5: The IUCN Protected Area Matrix – a classification system for protected areas comprising both management category and governance type⁶

Governance Type \ Management Category	A. Governance by government			B. Shared governance		C. Private governance		D. Governance by indigenous peoples and local communities			
	Federal or national ministry or agency in charge	Sub-national ministry or agency in charge	Government-delegated management (e.g. to an NGO)	Transboundary governance	Collaborative governance (various forms of pluralist influence)	Joint governance (pluralist governing body)	Conserved areas established and run by individual landowners	...by non-profit organisations (e.g. NGOs, universities)	...by for-profit organisations (e.g., corporate landowners)	Indigenous peoples' conserved areas and territories – established and run by indigenous peoples	Community conserved areas and territories – established and run by local communities
I a. Strict Nature Reserve											
Ib. Wilderness Area											
II. National Park											
III. Natural Monument											
IV. Habitat/ Species Management											
V. Protected Landscape/ Seascape											
VI. Protected Area with Sustainable Use of Natural Resources											

Source: Borrini-Feyerabend et al. 2013: p. 44

Analysis of the impact of NPA on regional development

In order to explore economic relations of protected areas and protected area networks, the LinkPAs project refers to methodologies applied in previous projects (Fig. 6; and Fig. 7). These approaches use existing key strategies, policies, programmes or projects of protected area(s) or networks as a proxy to describe the type and intensity of impact on the surrounding region.

⁶ The table will be developed by the Interim Report

Figure 6: Effects of protected areas and protected area networks on regional development and territorial planning⁷

Effects on regional development				
	Case Study 1	Case Study 2	Case Study 3	Case Study 4
+= indicated directly (+) indicated indirectly - = not indicated				
Economic effects				
Economic value added (turnover)				
Creation of infrastructure				
Visitor expenses				
Local income				
New working places (job creation)				
Tax revenue				
Keeping people in the region				
Cross sector co-operation				
Other economic impacts				
Impacts in other regions, countries				
Gender and generation interests				
Involvement of Pas in territorial planning				
Participation in land-use planning processes of regional stakeholders within own territory				
Participation in land-use planning processes of regional stakeholders within PA-region				
Mechanisms to be involved in regional strategy development and regional planning				
Influence on territorial policies within PA				
Influence on territorial policies within PA region				

Source: Jungmeier et al., 2006

The resulting effects are directly related to the chosen policy, which also produces a relevant impact on the region it governs. Therefore, (Fig. 7) offers a clear example of the way a matrix of the policy/effects relation is derived. The list of policies below refers in general to the NPAs context. They will be better analysed, selected and developed during the next steps of the project. However, this method of Impact Assessment is able to predict whether or not the policy under scrutiny can have an (strong, medium, low or zero) effect on the NPAs.

⁷ The table will be developed by the Interim Report

Fig. 7: Relation matrix of policy impacts/effects in relation to the analysed stakeholders' regions⁸

Effects	Policies for NPAs																																						
	Innovation					R&D		Human Capital		Age					Economic development				Employment			Transport/network		Natural Resources		Climate		Public Health											
	Bridging digital divide	Technological/innovative dissemination for the enterprises and institutions	Support to trans-regional cooperative projects	Use/development of environmental friendly technologies	Quality certification and assessment tools	R&D infrastructures	Support to BAT	Development of recycling technologies of waste	Supply of education	Human capital internationalisation	Reinforcement of aging people	Support leisure	Social integration	Child protection	Poverty reduction	Positive dissemination, for transparency and efficiency of bureaucracy	Cultural integration	Support Local productive identity	Promotion of a global enterprise culture	New business/services instruments	Inflation control	Internationalisation of good and services	Homogenisation of enterprise costs	Support enterprise creation	Support employer mobility	Support equal opportunities	Development of telecommunication networks	Development of energy networks	Increase of physical accessibility	Use of renewable resources	Active Protection of Natural resources	Reduction of Natural Resources consumption	Natural hazard prevention	Energy policies	Flexible Mechanisms	Climate Active Protection	Social Programme Financing	Safety	Support Welfare
CI	BI	BI	BI	BI	BI	BI	BI	BI	BI	BI	BI	BI	BI	BI	BI	BI	BI	BI	BI	BI	BI	BI	BI	BI	BI	BI	BI	BI	BI	BI	BI	BI	BI	BI	BI	BI	BI	BI	
Increase level of productivity	#DIV/0!	0	0																																				
Demand increase of goods	#DIV/0!	0	0																																				
Employment level increasing	#DIV/0!	0	0																																				
Pricing control	#DIV/0!	0	0																																				
Public Health improvement	#DIV/0!	0	0																																				
Improvement leisure opportunities	#DIV/0!	0	0																																				
Physical Relationships increasing	#DIV/0!	0	0																																				
Virtual Relationships increasing	#DIV/0!	0	0																																				
Waste Reduction	#DIV/0!	0	0																																				
Cleaner production	#DIV/0!	0	0																																				
Increasing Recycling Waste	#DIV/0!	0	0																																				
Natural hazard prevention	#DIV/0!	0	0																																				
Pollution reduction	#DIV/0!	0	0																																				
efficient water use	#DIV/0!	0	0																																				
CO2 level decreasing	#DIV/0!	0	0																																				
Improvement level of transparency and efficiency of bureaucracy	#DIV/0!	0	0																																				
Bottom up approach implementation	#DIV/0!	0	0																																				
Education level and child protection improvement	#DIV/0!	0	0																																				
improvement level of balancing out (perequazione)	#DIV/0!	0	0																																				
Weak social classes protection	#DIV/0!	0	0																																				
Poverty level decreasing	#DIV/0!	0	0																																				
Increase female employment	#DIV/0!	0	0																																				
Wellbeing improvement	#DIV/0!	0	0																																				

Source: Prezioso 2006 and 2011

⁸ The table will be worked starting from the Interim report and concluded by the Draft Final Reports.

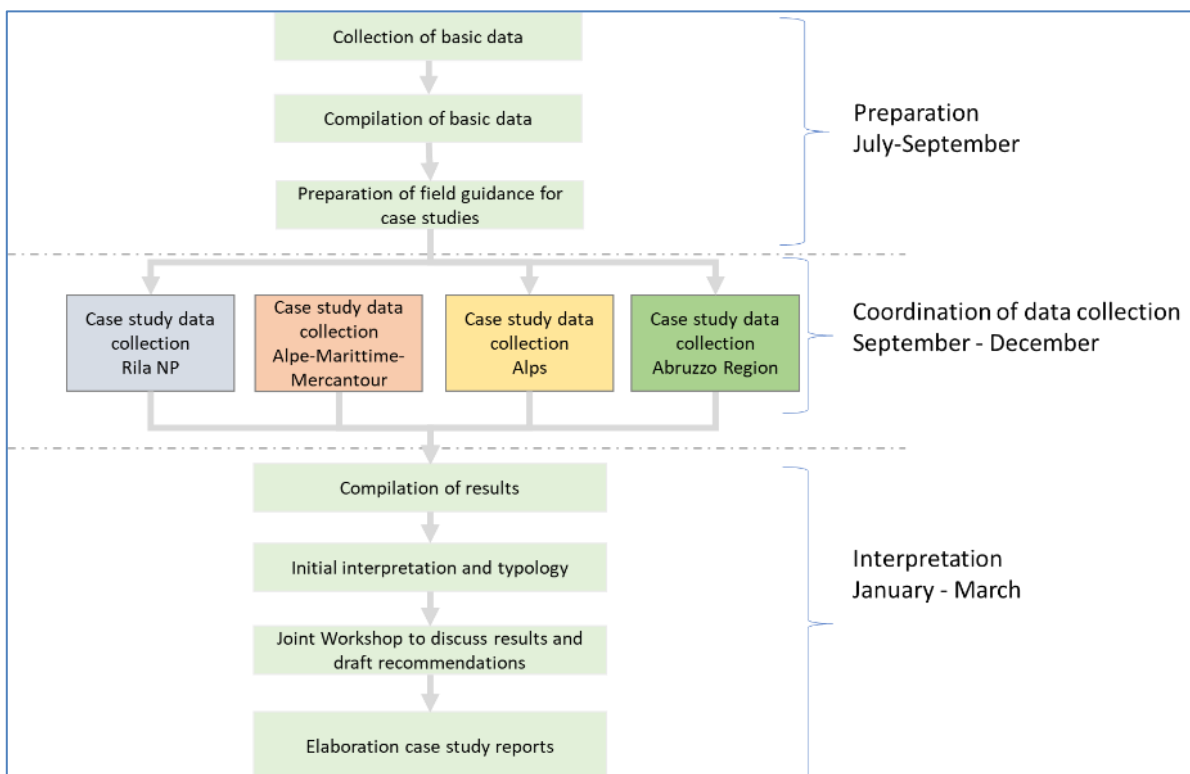
5.1.1 Case studies

The case studies will follow a well-defined structure that will allow all partners to compare their data in a systematic way, as well as to define specific typologies and discuss future outcomes. The proposed structure for all case studies is as follows:

- **Geographical description of case study** (Map, brief description of main characteristics)
- **System boundaries and parks network** (type and size of protected areas in the case of networks, objectives of different protected areas)
- **Current governance model** (organization, governance, actors, decision-making, framework (regulations, territorial strategies, legal documents, PA-strategies), policies and strategies that protected areas can influence, policies and strategies (regional) that affect protected areas)
- **Description of the regional economic sector** (Main characteristics, economic role of PAs, key sectors, activities of PA)
- **Relevant policy questions** (protected area integration into regional development and regional development affecting protected areas) and **expected effects**
- **Policy and action recommendations** (protected area integration into regional development and in terms of regional development affecting protected areas)

Each case study is investigated according to a predefined number of steps (Figure 8):

Figure 8: Workflow LinkPAs case studies



5.2 Activation plan for local and regional stakeholders

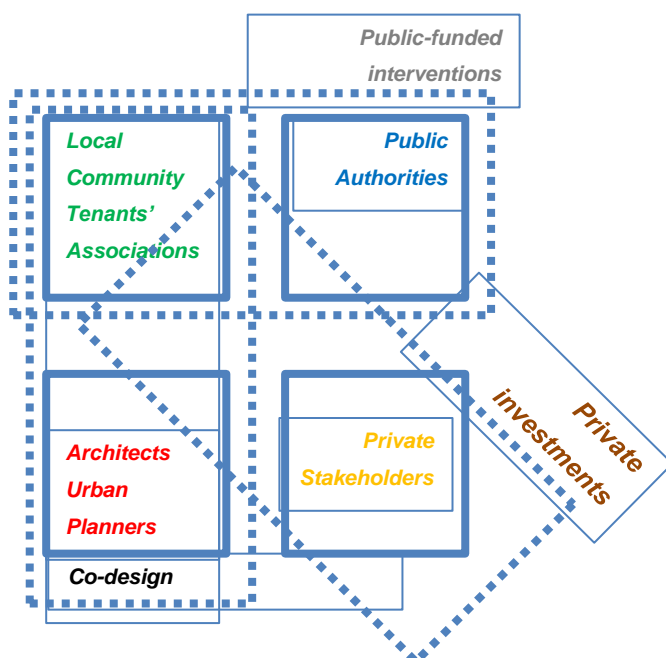
The four case study areas have different characteristics and spatial extension. To properly involve and activate stakeholders a specific approach is presented for each case study area. Key stakeholders will be also involved

in validating the matrices elaborated during the previous steps. This will possibly lead to detecting new stakeholders, which can be subject to additional interviews. The local partners in all four case study areas are very familiar with the institutional setting and regional stakeholder networks. The stakeholders involved in the project are differentiated into 3 groups⁹:

- **Actors with strong and direct interest (Primary stakeholders):** Public administrations and decision-makers of different sectors (conservation, forestry, agriculture, spatial development, infrastructure development, regional development), land owners, tourism enterprises, protected area managements, local/regional key NGOs dealing with land-related topics
- **Actors with strong and diffuse interest (Secondary stakeholders):** business association, SME, associations of organized citizens (citizenships, distinct committees, hunters, environmentalists, etc.) and academics;
- **Actors with latent and /or diffuse interest (other stakeholders):** non-organized citizens, school systems and or users and occasional or regular visitors of the areas

The analysis of stakeholders (Fig. 9) is an important phase of this project in order to identify role, influence and knowledge of stakeholders regarding NPAs. This activity will be carried out throughout by the Interim Report of the project and in close contact with the Steering Committee. This step entails *semi-structured interviews* with the stakeholders (see Annex: list of potential stakeholders for each case study).

Figure 9: Example of Territory actors' involvement



Source: Prezioso, Elisei, D’Orazio, URBACT Re-BLOCK Project (2014)

⁹ Annex 1 plots a preliminary list of the Stakeholder to be involved.

These are used to better understand the interviewees' perceptions, how they define given situations, how they construct reality, and which meanings they attribute to events (Punch, 1998). Data analysis will use a sound analytical framework (Gale et al., 2013; Ritchie and Spencer, 1994; Srivastava and Thomson, 2009) of the role of NPAs in the territorial development (strategies) of European Mountain regions.

5.3 From PAs to NPAs

Adopting a systemic approach (Prezioso, Coronato, D'Orazio, 2016) is typical of PAs planning. The application of the "reticular paradigm" (Sargolini 2006¹⁰) to PAs planning, which also entails the landscape approach introduced by the European Landscape Convention (ELP, 2000), has highlighted the multidimensional interactions between protected areas towards the NAPs creation and protected areas within given contexts. Drawing of previous experiences, it is possible to note that, where NPAs exist, they can effectively influence the sustainable behaviours of the proximity areas and the connectivity of the overall territorial system.

"Looking beyond protected areas' boundaries" makes NAPs dynamic, reduces risks of asphyxia, ecological and socio-economic death, and confirms their pivotal role in getting European innovative inputs towards climate change mitigation and green economy.

Two different approaches to the creation of networks of protected area (NPAs) can be identified.

One approach is mainly based on the interactions (within a specific PA and between PAs) of natural and cultural components; its main objectives are:

i) improving the bio-connectivity (within a specific PA) of biocoenosis and different living environments that survive and strengthen only to the extent that they can keep continuity and overcome anthropic disruptions. The interaction between protected areas is fundamental in terms of ecological connectivity. The concept of Ecological Network has been formulated as a response to fragmentation processes (Bonnin et al. 2007) which today represent a serious treatment of biological diversity and ecological processes (Lindenmayer and Fisher 2006). The Conference of the European Ministers of the Environment, held in Sofia on 25th October 1995, approved the initiative that aimed to establish a Pan-European Ecological Network within 20 years.

(ii) improving the accessibility of networks of protected areas and other open spaces (e.g. natural environments and urban natural areas) used for public use and recreational activities by users willing to develop open spaces that bear special importance from a landscape point of view. Turning open spaces within urban boundaries into green interconnected areas and disclosing rural areas around expanding urban centres can also help the transition towards urban sustainability. This may also improve the quality of life of urban residents, their physical and mental health, which in turn can decrease mortality rates and increase employment by attracting investments. Improved local environmental quality and increased real estate value can also be seen as positive outcomes (World Resources Institute, 2005).

The other approach concentrates on the socio-economic interaction between protected areas and territorial contexts; its main objectives are:

¹⁰ Sargolini M., Cinquini F., Perna P., eds. (2006), *Reti ecologiche e siti Natura2000*, v.1., Edizioni Kappa, Roma

i) developing fruitful interactions between protected areas and cities, highlighting the growing interest of citizens for natural or semi-natural areas in and around cities. This is especially important for the policies of parks and protected areas, in order to avoid or reduce insularisation and improve their economic and social impact (“Benefits beyond boundaries”, as recommended during the Durban meeting (IUCN, 2005¹¹) in reference to the “new paradigms” framework). Protected area and the surrounding territorial contexts on which protected area have an impact on will greatly benefit from this approach. This interrelation is also reflected by the increasing number of people moving from the city to protected areas and natural spaces outside urban boundaries.

(ii) maintenance, or orientation of new interactions between protected areas and local communities, by developing and innovating relationships between semi-natural environments (uses) and traditional or new communities (new migratory phenomena, neo-rural inhabitants, new ascetics, etc.). In this sense, IUCN highlights the need to extend protection actions and benefits over the boundaries of protected areas in order to involve local populations in valorisation strategies, regardless their administrative reference. The opportunity to initiate non-controversial planning and management and co-operative planning with local communities highlights the breakthrough in park management approaches and protected area networks in recent years. As a matter of fact, local communities play a central role and their presence in and around protected areas guarantees the quality of ecosystems, economic development and widespread care of the territory.

The first approach generated a NAP typology mainly related to conservation, environmental protection, landscape development and transition toward sustainability; the second approach produced NAPs able to maintain identity values of protected areas, often linked to resident communities. Recognizing the existence of tangible and non-tangible networks and interconnections makes it possible to accurately assess and enhance the possible effects and interactions of NPAs on territorial development. The project analyses existing NPAs (see following paragraphs), also focusing on the abovementioned aspects.

5.4 Preliminary overview on sectoral policies that NPAs impact on

The relationships between NPAs and the territorial system are the basis for building up the first overview of sectoral topics on which NPAs might have an effect and the sectoral policies that have linkages with the management of natural resources.

The recognition of those relationships allows identifying how ecosystem services can be integrating into decision-making. In this line, a specific activity of IUCN is foreseen by 2018: the most recently IUCN Action Plan in the framework of Natura2000 (IUCN, 2017¹²) lists under priority A “improving guidance and knowledge and ensuring better coherence with broader socio-economic objectives” Action 1 “integrating ecosystem services into decision-making”. IUCN realises that ecosystem services are often not fully considered during the decision-making process. Therefore, it has been working on guidelines and a set of practical tools to cover this gap and support the integration of ecosystem and their services into planning and decision-making processes at local, regional, national and EU level.

¹¹ IUCN 2015, *Benefits beyond boundaries*. Proceedings of the Vth IUCN World Parks Congress (Durban 2003)

¹² IUCN 2017, *An action plan for nature, people and economy*, European Union, 2017

The potential of natural and cultural assets in shaping a new and greener economy is a matter of fact, and European mountain ecosystems can play an effective role in this context by contributing in achieving SDGs. Many EU Members States have been debating about the possibility that green infrastructures can reach goals that extend beyond more biodiversity protection. These infrastructures can still pursue their objective but, at the same time, they can also be used to evaluate ecosystem services for social, economic and business purposes. Consequently, NPAs must rely on policy domains that fall outside their usual field of application. An integrated approach to manage natural resources has therefore been developed, by taking into account the EU framework of reference that widens the existing field of application of traditional conservation policies. As a result of this, it has been possible to show how local economy has developed, thus enhancing the endogenous growth, which has been based on regional environmental assets, natural capital and ecosystem services.

BOX 3: ESPON projects contribution to the economic sectors of the LinkPAs project

It has been recently pointed out that mountain areas have a great potential for developing circular (ESPON Brief, 2016) and green economies. Similarly, the local natural capital of PAs has also shown to have a major potential in this sense (Alpine Convention 2017, Destination Green Italy 2016). Many other sectors having similar potentiality in terms of green economy development have already been identified by UNEP (2011), which suggests investing in the natural capital of these areas and encouraging energy and resource efficiency. Under these premises, the ESPON GREECO project (2013) has examined five sectors that can create green economy, by identifying sector-specific drivers and studying their territorial relations. The five sectors considered are: Bio-economy (sub-divided in Agriculture, Forestry and Fishery); Manufacturing, Renewable energy, Tourism and Transport. In addition, four cross-cutting sectors including Water management, Waste management, Building and Construction, and Green research have also been investigated. Therefore, the results provided by GREECO can be used for the LinkPAs project.

Besides, LinkPAs has included climate change as one of the factors to be analysed. This has been done in order to verify whether NPAs can effectively enhance adaptation processes in relation to climate change and foster resilience within mountain areas. Biodiversity and mountainous economic sectors like agriculture, forestry and tourism demonstrate to be highly sensitive to climate change. Conversely, PAs and NPAs' climate change adaptation is a challenging issue in terms of innovation and development.

Some past cases in Europe have shown how protected areas can become attractive sites for agriculture, quality local production and tourism and, more generally, for any economic activity related to biodiversity. The biggest challenge for these protected areas seems to be the economic valorisation of biodiversity conservation processes. Also, implementing a green economy based on biodiversity within protected areas to enhance territorial development can be extremely difficult in sparsely populated areas. As a matter of fact, tourists are hardly ever attracted to protected areas because of they have been named as such; rather, they visit these sites due to many other interacting factors. In other words, although some studies have shown that being named as a "protected area" can increase the Gross Value-Added deriving from tourism by more than a third, biological agriculture and typical productions can generate integrated income in an area, thus contributing to territorial development. The GREECO Project particularly focused on additional integrated income as part of the potential development of green economies (ecotourism). Ad hoc certifications can help to balance the protection and the use of parks and protected areas (for example the European Charter for Sustainable Tourism in Protected Areas, the Pan Parks certification system). Nevertheless, it is worth pointing out that moving towards mass tourism represents a threat for the conservation of biodiversity (GEOSPECS, 2013).

It is now possible to draft an analytical scheme that can facilitate the comparison of selected mountain NPAs (as listed in Table 6). This scheme considers the sector policies that emerged after the application of the framework described above, along with the activities listed in Table 2. This scheme enables us to show a preliminary qualitative assessment on the relation between sectoral topics and NPAs activities (low influence is marked in yellow, medium influence in orange and high influence in red). Table 5 is a general scheme to be fully implemented during further steps of the analysis; it is supported by the stakeholders' data and interviews, but at this stage it merely offer a general overview. However, it can provide an initial understanding of the

quality of influence (it can demonstrate if there is a possibility to contribute to the policy process and/or implement its policies).

Table 6: The relation between activities/sectoral topics in NPAs

Sectoral topics	Activities within NPAs				
	Natura2000	ALPARC	GECT Alpi Marittime - Mercantour	FEDERPARCHI - IT	SAPA - IT
Agriculture					
Forestry					
Climate change					
Manufacturing					
Renewable energy					
Tourism					
Transport					
Water management					
Waste management					
Building and Construction					
Green research					
Cultural heritage					
Demographic social challenges					
Education					

**(colours are used for reference purposes only).*

6 Preliminary overview of policy recommendations towards a new NPAs governance

NPAs in mountainous regions offer a wide range of opportunities that can help to achieve EU targets concerning employment, cohesion and environment safeguarding. This can be done through the sustainable use and management of the natural resources of these areas (EU Parliament 2015)¹³.

The correct use of mountain assets and resources by NPAs can help to enhance the liveability of those urban centres boarding the many mountain ranges in Europe. This idea has been extensively debated at global and European level (macro-regional conventions) since it can help to address other global priorities such as “promoting the creation and maintenance of well-connected and well-distributed networks of open, multi-purpose, safe, inclusive, accessible, green, and quality public spaces”; “improving the resilience of cities and towns to disasters and climate change, including floods, drought risks and heat waves”; “improving food security and nutrition, physical and mental health, and household and ambient air quality” as well as “prioritizing the conservation of endemic species” (UN Habitat III). In all such cases, the European mountains can become providers of valuable assets and services.

Mountainous areas and the related NPAs can also have a positive impact on long-term urban-rural and territorial planning processes and spatial development practices that incorporate integrated water resources planning and management, considering the urban–rural continuum on the local and territorial scales, and including the participation of relevant stakeholders and communities. However, such an approach needs a special governance process based on:

- Strengthening the Networks of Local Support Groups (i.e. the CLLD experience, etc.);
- The institutionalization of Networks of Local Support Groups through partnerships;
- The full engagement of all parties interested in developing the stakeholders’ territories to implement activities that can attract future investments (e.g. involvement of private stakeholders and SMEs)

An integrated socio-economic approach to NPAs requires actions such as the diversification of local communities, promotion of community development, improvement of local employment opportunities, valorisation of natural resources. The economic regeneration NPAs areas can mainly be achieved through public-private partnerships. The local public authorities can also be involved by supporting the organization of service functions, local farmers’ and SMEs markets or providing incentives for local entrepreneurs.

One important aspect in delivering integrated socio-economic strategies devoted to PAs is identifying financial and non-financial resources, which need to come not only from public institutions, but also from private agencies, local citizens and services organisations (Figure 10).

An integrate strategic approach to the economic and social development of the territory and to its sustainability is what has been called by OECD (2000) "entrepreneurial body", that is a sort of area-enterprise. Broadening this concept to the territory in the 2000-2006 period asked for an evaluation of its proactive capabilities. In other words, the convergence of political, economic and social resources into a consistent large area whole

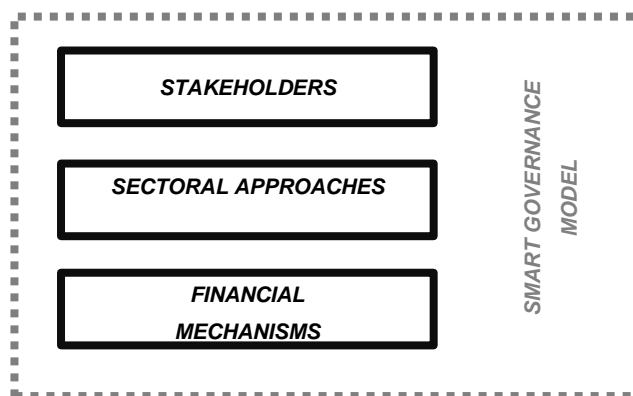
¹³ Thanks to their specific characteristics, regarding especially the abundance and variety of renewable resources and their reliance on resource and energy efficiency, mountainous regions can actively contribute to the development of new technologies and innovation in general (EU Parl 2015).

can help to develop its social and economic aspect according to well defined strategic goals, namely competitiveness, flexibility, welfare, subsidiarity, sustainability.

The issue concerning what territorial level is more apt to implement specific policies for the natural areas, as well as what functions should be involved in terms of governance, is complex and varies over countries, regional/local areas and cities. For instance, financing and delivering primary infrastructures and health, education, environmental services brings economic profit when dealt at intra-metropolitan level. In this case, governance must set rules for the adequate functioning of both private and public sectors.

In view of the growing role played by the private sector regarding investments (see Figure 10) to be made in order to improve the infrastructures within the PAs, governments must search for the best economic returns from any incurred investments. As a matter of fact, whereas the private sector looks for the maximisation of the economic result. Consequently, different government levels are developing modern agreements procedure with the private sector that can precisely define the respect of the community needs (e.g. Social Investments) and ensure high quality offer. The project therefore will go to discover if and how NPAs contribute to build this smart governance model looking at the many economic, social and political/economic-financial aspects (Figure 10).

Figure 10: Smart governance model



Source: Prezioso, Elisei, D’Orazio, *URBACT Re-BLOCK Project*, 2014

6.1 Cohesive integration is the keyword

The European context of PAs is characterised by large geographical, economic and social diversity. It is therefore necessary to stress that their cohesion that was already proposed within the EU 2013 (ESPON GEOSPECS 2013) is sustaining the 2020 programming, also aiming to go beyond 2020. This could help to achieve a more balanced territorial development and have well-defined instruments gearing towards the effective implementation of shared economic and social objectives (i.e. job creation, especially for young people, transnational infrastructure projects regarding road and rail transport as well as environmental infrastructure and technologies to comply with EU legislations and ensure access to services of general interest, water management, sewage disposal and waste management infrastructure).

From a European point of view, the new possible actions that can make mountainous protected areas more productive must be designed by looking at the most efficient urban-rural cooperation. This can be achieved as long as the new applicable policies are compatible with the climate change mitigation, the development and active conservation of the land and the management of the natural and cultural heritage of such areas. By doing so, mountainous territories can grow and become more modern without losing their own identity. NPAs are the main actors of this challenge. The following three main goals should therefore be reached:

- Protect the territory and its inhabitants by seeking the latter's active involvement;
- Promoting natural and cultural diversity and polycentrism by opening to external cooperation;
- Support development and jobs creation using potential resources currently overlooked
- Encourage private investments and use of EU funds

By doing so, it will be possible to assess whether and how PAs economic and territorial system can adapt to a possible change (challenge) in their attitudes and behaviours while, at the same time, still relying on their own resources. It is also essential to redefine the existing roles and positions within the production process and territorial organisation of each area. This action refers in particular to the way the institutions have been conceived to meet the local demand for better infrastructures and environmental quality. These areas can consequently be supported by the local territorial system, thus becoming and acting as an integrated whole. In other words, each protected area should work as a system that interacts with the outside according to its own rules, which can ensure the replicability of production over time, respecting geographical specificities (capability and territorial capital).

7 Conclusion and future actions

This revised Inception Report has aimed to deepen the scope, framework and approach used to investigate the linking networks of protected areas for territorial development (LinkPAs project). In particular, it has pointed out the conceptual and methodological framework(s) needed to address and fully understand the issues at hand. It has also presented preliminary overviews on existing European governance models, along with a detailed account of the opportunities and challenges relating to the future development of PA and NPAs.

This Inception Report has been amended in response to the general and specific feedback offered by the EGCT.

Future actions will include conducting field work and data collection to be able to investigate each single territory involved in the project (cf. the case studies reported above). To this end, the LinkPAs research team will share a template that will facilitate data collection regarding each case study. This template will be based on the research issues, governance models, policy questions and theories identified by this Inception Report, as well as by considering the opinions and needs of the stakeholder regions

ANNEX 1: Brief overview of proposed case study areas

1. The Alpine Protected Area Network (ALPARC)

Stretching approximately over 1,200 kilometres across eight Alpine countries (Austria, France, Germany, Italy, Liechtenstein, Monaco, Slovenia, and Switzerland), the Alps represent the highest and most extensive mountain range system in Europe. The Alpine Network of Protected Areas brings together hundreds of protected areas of all kinds. In 2013, around 400 large protected areas over 100 ha were identified within the Alps. According to the Alpine Convention, this area has more than 1,000 parks that can be subsumed under many categories.

CURRENT GOVERNANCE MODEL

The governance framework applying to ALPARC includes the Alpine Convention and its thematic protocols, along with the European Strategy for the Alpine Region – EUSALP. To fully understand this model, it is important to consider the implementation of policies at the national level, the strategies for the management of protected areas and the sectoral policies that may affect the PAs in the network. From the legislative point of view, the Alpine region is subject to different levels of regulations and policy actions, ranging from international to the local laws. However, the most important policy and governance processes involving this network are those that have been established at international level (Alpine Convention) and within the EU.

ECONOMIC SECTOR

Below the snowline marking these areas, a treeless zone of alpine pastures has been used over many decades for the summer grazing of goats and cattle. Agriculture is confined to valleys and foothills, with fruit growing and viticulture limited to some sunny slopes. Hydroelectric power is used to support the factories on the mountains and nearby regions; hydroelectric power is generated from the many waterfalls and swift-flowing rivers. The Alps are the main tourist attraction as they can offer facilities for mountaineering and other winter sports, which in turn are a major source of income.

POLICY QUESTIONS

Regional stakeholders ranging from national to regional governments and other actors (including important organizations such as the protected area networks mentioned below and their members) are currently involved in the development of a comprehensive strategy aimed at providing an innovative governance scheme to the Alpine region and the surrounding territories known as European Strategy for the Alpine Region (EUSALP). According to the European Community (EC), an Alpine macroregional strategy can provide the opportunity to improve cooperation among the Alpine states; it can also help to identify shared goals and implement them more effectively through transnational collaborations. EUSALP has put forward a strategic agenda that aims to harmonise policy instruments so as to facilitate their application at EU, national and regional level.

Box 4: Preliminary list of stakeholders to be involved in The Alpine Protected Area Network (ALPARC)

EURAC is in charge of coordinating and facilitating data collection and carrying out interviews with key stakeholders in the Alpine Area. Due to its extension, the stakeholders network is extremely complex and priority will be given to stakeholders that are directly linked to ALPARC and its network within the the Alpine Convention framework. Thus, key stakeholders are: (primary list)

Key stakeholders (by administrative level) *

Alparc association (international)

Federparchi (National – Italy)

Regional Directorates for Nature Conservation / Environment / Parks across the Alpine countries and particularly within the SAPA Network (regional / sub-national)

Directors of National Parks in the Alps (national)

Directors of Regional Parks in the Alps (regional/sub-national)

Potential key actors¹⁴

WWF Alps Programme (international)

Platform Ecological Network of the Alpine Convention (international)

EUSALP Action Group 6 (international)

Presidents of Regional and National Parks in the Alps (sample of 4 from different Alpine countries)

2. The transboundary Alpi-Marittime-Mercantour NPAs

The Mercantour National Park (FR) and the Alpi Marittime Natural Park are respectively French and Italian bordering areas. They joined forces to establish a network of protected areas that currently covers 96,500 ha (68,500 ha in France and 28,000 ha in Italy). Since the Parco Alpi Marittime and the Parc national du Mercantour share a 35-km border, their cooperation allows them to protect an area that extends over 100,000 hectares, including mountains such as Gelàs, Argentera and Mercantour. This area comprises many protected areas that are linked together by networks that operate at different levels. However, the Alpi-Marittime Mercantour European park is the only one that manages to connect and coordinate all these areas into a single network.

CURRENT GOVERNANCE MODEL

The Mercantour National Park and the Alpi Marittime Natural Regional Park have been collaborating since 1987 and have become the first European park in 2013. The collaboration of these two parks has resulted in the creation of a transboundary area called the Marittime-Mercantour European Park. This park has been managed by means of a series of local models of governance, which often overlapped. Hence, a European group for territorial cooperation has been established to overcome the drawbacks caused by such an approach and improve the general running of the area; this group is currently also working on the UNESCO WHS candidature.

ECONOMIC SECTOR

¹⁴ Stakeholders refer to the international (Alparc network) and to the national level (SAPA network) since both the levels participate in shaping the Alpine case-study

The main priorities of these parks are the conservation of biodiversity and landscape, educating children and adults about sustainable development and increasing their awareness regarding future improvements. The two parks have been collaborating actively to enhance the management of many activities, including sustainable tourism, creating cross-border trails, shared signage and communication, education and training as well as scientific cooperation.

POLICY QUESTIONS

Alpi Marittime Nature Park (I) and Mercantour National Park (F) are two adjacent protected areas that are however divided by political borders. From a legislative point of view, the nature protection policies and sustainable development of the area seems to be strictly linked to the sustainable tourism sector.

Box 5: Preliminary list of stakeholders to be involved in Alpi-Marittime-Mercantour NPAs

The University of Nice is in charge of coordinating and facilitating local data collection and carrying out interviews with key stakeholders. A preliminary analysis starting from the protected area network identified the following key stakeholders:

Key stakeholders:

- Director of Parc National du Mercantour
- Director of Parco Alpi Marittime
- Representative of the town of Tende
- Representative of the town of Limone Piemonte
- Directeur de l'environnement et de la gestion des risques (conseil général)

Potential key/secondary stakeholders:

- District administration (Province/Departement) (It, FR)
- Regional Network of Protected areas (PACA, France)
- Regional agency for Environment (PACA, France)
- Regional NGOs and SMEs

3. The regional protected area network Abruzzo region

The Abruzzo Region area features the highest peaks within the Italian Apennine; a basin shaped plateau called Campo Imperatore is also part of Abruzzo. Abruzzo is a region in central Italy stretching from the centre of the Apennines to the Adriatic Sea, and it is characterised by extensive mountainous areas. The Apennine mountains stretch from the north to the south of Italy. Except for the Alpine regions in the north and the islands, all Italian regions are somehow linked to the Apennine system.

CURRENT GOVERNANCE MODEL

In Abruzzo, environmental protection refers to a wide and complex system that includes several PAs. One third of the whole territory is made of national and regional protected areas, and many other small PAs can be found within its mountain areas and coastal areas. The managing bodies for these areas operate at national, regional and sub-regional level. Overall, the region boasts 3 national parks, 1 regional park, 1 marine protected area, 14 national nature reserves,

25 regional nature reserves, 58 Natura2000 sites and 8 general protected areas. The Abruzzo Region Many and many of these PAs are members of the Italian Federation of Parks and Nature Reserves (FEDERPARCHI)

ECONOMIC SECTOR

The Apennine area has traditionally displayed high rates of living population; therefore, the area's ecosystem structure and human activities are strictly connected. Abruzzo has managed to successfully combine the protection of its natural heritage and much of its landscape with a thriving socio-economic development. With a third of its territory being part of parks, the region not only holds a cultural and civil record for protection of the environment, but also stands out as the biggest nature area in Europe.

Boasting a green territory label has led to a significant development of the Region in terms of tourism (particularly through activities related to the tourist enjoyment of protected areas like hiking, climbing, mountaineering, cycling, and several kinds of winter sport activities).

POLICY QUESTIONS

Abruzzo Region is very active in the field of mountain areas and protected areas. Many of its activities are respectively linked to the Landscape Regional Plan, territorial and development plans of its different parks, the Regional Plan of Adaptation to Climate Change (PACC) - mapping of mountain areas and identification of interventions needed for making territories more resilient. It is also involved in activities and interventions in the field of energy efficiency, energy saving, renewables and climate change foreseen within the "Covenant of Mayors for Climate & Energy" initiative and the development of a platform for a local market of Voluntary Carbon Credits derived from the agro-forest heritage of the Region, as well as the promotion and coordination of River contracts.

Territorial policies and strategies of the Apennine regions are all dealing with the mountain issues. The main challenges are the conservation and valorisation of cultural and natural resources (i.e. the ecological functionality as well as the cultural system made of spread-across historical towns), demographic trends, increasing the offer of general services including the implementation of the digital agenda, accessibility and risk prevention.

Over the last decades, these territories have suffered progressive decay, due to widespread socio-economic decline, severe lack of basic services, their general condition of remoteness, weak spatial planning system, widespread problems regarding innovation and generational renovation. To tackle such issues, in September 2012 Italy started developing a National Strategy to support Inner Areas. This strategy aims to improve the quality of life and economic wellbeing of people living in relatively isolated and sparsely populated areas and, at the same time, increase their attractiveness through the rationalization of essential services: healthcare, school, transport, and local development.

Box 6: Preliminary list of stakeholders to be involved in Apennine-Abruzzo region

The University of Camerino is in close contact with the main stakeholders in Abruzzo. They will be in charge of coordinating and facilitating local data collection and carrying out interviews with key stakeholders, including:

Key stakeholders:

- Italian Ministry for the Environment - IMELS
- Italian Ministry of Agricultural, Food and Forestry Policies – Mipaaf
- Italian Federation of Parks and Nature Reserves - FEDERPARCHI
- Italian National Agency for New Technologies, Energy and Sustainable Economic Development – ENEA
- All Provinces and municipalities of Abruzzo Region
- National Association of Italian Municipalities (ANCI) – Regional division
- All protected areas of Abruzzo Region (national, regional, local)
- Regional Forestry Agency
- Regional Civic Protection Department
- Regional and provincial energy agencies (ARAEN, AGENA Teramo, ALESA Chieti)
- Regional Managing Authorities for FESR, POR, FSE funds
- Regional watershed managing authority
- University of “G. D’Annunzio” Chieti-Pescara, University of L’Aquila, University of Teramo

Potential key/secondary stakeholders:

- WWF - World Wildlife Fund
- Legambiente - Italian environmentalist association
- NGO Ambiente e/è Vita
- Federation of Italian Hotels & Tourism Associations - Federalberghi
- Regional, provincial and local environmental education centers
- TUA ABRUZZO Spa (society for regional public local transport society)

Regional NGOs and SMEs on touristic sectors

4. Local protected area networks of Rila National Park

Razlog Municipality covers large parts of the National Park "Rila" (Rila NP) and smaller areas of the National Park "Pirin" (Pirin NP). Established in 1992, Rila National Park (Rila NP) is the largest park in Bulgaria covering an area of 78,000 ha and comprising four reserves (Skakavitsa, Parangalitsa, Central Rila Reserve, Ibar). The territory of Rila National Park is characterised by a wide variety of biotopes and natural habitats resulting from specific climatic conditions, historical factors and geomorphology. Due its territorial scope and importance for the local populations, the research team will mainly focus on Rila NP as its case study. However, the territories of Pirin NP belonging to the Municipality of Razlog will also be included in the overall analyses to support the different stakeholders’ needs.

CURRENT GOVERNANCE MODEL

Rila NP is managed according to IUCN Category II (National Park). The four reserves in Rila NP correspond to IUCN Category I (Wilderness area). The governance model of the Rila NP is defined in the Protected Areas Act, including all aspects of management, planning and

protection of the territories. The Rila NP Directorate is part of the Ministry of Environment and Waters in Bulgaria. The former is a legal entity subject to governmental budget.

ECONOMIC SECTOR

The service sector provides more than half of the value-added of the region. The agricultural sector produces only a small amount of this value - less than 10%. The main production sectors include wood and timber production, rough materials for the furniture industry and firewood, manufacturing of metal items, textile and garment production, paper and cardboard production, plastic items production. The agricultural sector includes actions to increase the productions of vegetables and tree-planting. In recent years, the concept of ecosystem services has been increasingly discussed in terms of goods and benefits that nature provides to people and society. The territory of Rila National Park is highly valuable and it can deliver a wide variety of ecosystem services. Rila and the territory included in the National Park are among the preferred tourist and recreational destinations in Bulgaria. The forest and alpine parts of the Park provide unique opportunities for researching and monitoring natural habitats, as well as analysing populations of plants, animals and mushrooms.

POLICY QUESTIONS

Over the past few years, the conflict between NGOs and the Ministry of Environment and Waters has exacerbated. This conflict is due to the decision taken by the Council of Ministers to remove the “Rila Buffer” zone from the list of proposed sites to be included in the “NATURA 2000” sites. Many NGOs and non-governmental organizations have launched protest actions to raise awareness and fight against this decision; they claim that the exclusion of the “Rila Buffer” zone has been motivated by private interests that seek to exploit the area.

Box 7: Preliminary list of stakeholders to be involved in the Razlog Municipality

The local partner Forest Research Institute/Bulgarian Academy of Science has been cooperating closely with the main stakeholder, the Municipality of Razlog. The local partner will be in charge of contacting and working with the local stakeholders. Local-based discussions have led the local partner to identify the following list of relevant stakeholders:

Key stakeholders:

- Ministry of the Environment and Waters;
- Ministry of Agriculture, Food and Forestry;
- National Nature Protection Service;
- Executive Environmental Agency;
- Rila National Park Directorate, Blagoevgrad;
- The Municipality of Razlog;

Potential key/secondary stakeholders:

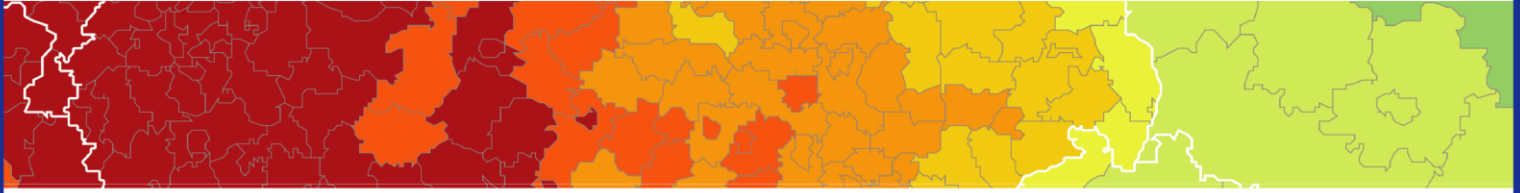
- Executive Forests Agency;
- Regional Environmental Inspectorate Blagoevgrad;
- Southwest University “Neofit Rilski”
- Rila Park Information Center, Blagoevgrad;

- WWF
- Local initiative group “Razlog”
- NGO “Local Action Group Razlog”
- NGO “Destination Razlog”;
- NGO “Eco Razlog”;
- Ecoorganization “Children of the Earth” – Blagoevgrad
- Bulgarian Biodiversity Foundation
- Bulgarian Society for the Protection of Birds
- Local bio-based industries
- Traditional eco- and bio-products producers
- Local investors, SMEs, tourist societies and companies

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