LinkPAs - Linking networks of protected areas to territorial development

Targeted Analysis

Interim Report

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Abbreviations

AC	Alpin Convention
ALPARC	Alpine Network of Protected Areas
APE	Appennine Convention
BPAN	Barents Euro-Artic Region
CNPA	Carpathians Network of Protected Areas
CSR	Corporate Social Responsibility
EC	European Commission
EEA	European Environment Agency
EGN	European Geopark Network
EGTC ESPON	European Grouping on Territorial Cooperation
ESPON	European Territorial Observatory Network
EU	European Union
EUSALP	European Strategy for The Alpine Region
EUSDR	EU Strategy for the Danube Region
GI	Green Infrastructures
IUCN	International Union for Conservation of Nature and Natural Resources
MAB	Man and Biosphere Programme
MAIA	Marine Protected areas in Atlantic Areas
MPAs	Mountain Protected Areas
NEN	National Ecological Network
NGOS	Non-Government Organisations
NDAs	Nationally designated areas
NPA	Network Protected Areas
OSPAR	Network of Marine Protected Areas
PA/PAs	Protected Area/Areas
PEBLDS	Pan-European Biological and Landscape Diversity Strategy
PEEN	Pan-European Ecological Network
PNR	Network Protected Micro Reserve
SAPA	System of Italian Alpine Protected Areas
SMEs	Small and Medium Enterprise(s)
SIC	Siti di Interesse Comunitario
SIS	Strategic Impact Sector
SMEs	Small and Medium Enterprises
SPO	Strategic Policy Objective
TEEB	The Economics of Ecosystems and Biodiversity
UNEP	United Nation Environmental Programme
WBCSD	World Business Council for Sustainable Development
WDPA	World database on Protected Areas

1 Existing NPA models and governance: opportunities and challenges

1.1 Definition of NPAs, their objectives and main characteristics

Countries and regions have different ways of identifying and designating protected areas (PAs)[1]. PAs are legally established in order to achieve different management objectives strictly linked to nature and biodiversity conservation. Box 1 summarises the main concepts and definitions used to develop the LinkPAs project.

Box 1: Concepts and definitions agreed on by all LinkPAs partners

Protected area (PA): IUCN defined a PA as a "clearly defined 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, if well managed, protected areas are able to contribute to improving the quality of life of local communities, thus becoming an example of respect for the surrounding contexts. According to IUCN (2013), PAs are classified as *Strict Nature Reserve*; *Wilderness Area*; *National Park*; *Natural Monument*; *Habitat/Species Management*; *Protected Landscape/Seascape*; *Protected Area with Sustainable Use of Natural Resources*.

Network of protected areas (NPA): it comprises two or more PAs that share common goals. A NPA can be seen as a governance instrument to ease the coordinated management of protected areas, which require joint actions for their conservation and valorisation

Mountainous protected areas (MPA): these are PAs localised in mountain regions, as defined by specific national regulations. They have social, economic and environmental capital which is of importance to the entire continent (EEA Report 6/2010: Europe's ecological backbone: recognizing the true value of mountains). MPAs are essential to sustainable development and, over the last few years, various instruments have been developed to integrate these protected areas via spatial planning methods and approaches.

Ecological network: this is "*a coherent system of natural and/or semi-natural landscape elements that is configured and managed with the objective of maintaining or restoring ecological functions as a means to conserve biodiversity while also providing appropriate opportunities for the sustainable use of natural resources." (Bennet 2004, p. 6)*

Ecosystem services: according to the *Millennium Ecosystems Assessment* (2005a), they consist of:
- Provisioning services: the products people obtain from ecosystems, such as food and crops; livestock; capture fisheries; aquaculture; wild foods, fibres (timber; cotton; hemp; silk; wood fuel), fresh water, genetic resources; (bioprospecting: natural and biochemical medicines).
- Regulating services: the benefits people obtain from the regulation of ecosystem processes, including air quality regulation, climate regulation, (global, regional, local) water regulation, erosion regulation; regulation human diseases, water purification and waste treatment; pest regulation; pollination, natural hazard regulation.
- Cultural services: the non-material benefits people obtain from ecosystems through spiritual enrichment, cognitive development, reflection, recreation, and aesthetic experiences: tourism, recreation, scenery/landscape; community identity/integrity; spiritual value; education/science.
- Support services: those services that are necessary to maintain all other ecosystem services, such as primary production, production of oxygen, and soil formation (soil quality).

Following the evolution of different approaches to biodiversity conservation and sustainable development, protected-area management is currently framed within an ecological network approach[2] (new paradigm, IUCN, 2003). Therefore, protected areas are increasingly being designated and managed as systems, rejecting the traditional view that regards protected areas as 'islands of nature', fenced off from the dangerous outside world. The objectives of biological and cultural diversity are integrated by social and economic aims, e.g. the provision of ecosystem services for settlements and human well-being. The recent new Action Plan of the EU Commission (Action Plan for Nature, People and the Economy, EC 2017), devoted to reaching the EU 2020 goals on biodiversity, identifies the following as its priority: "ensuring

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[1] A Protected Area is defined as "*A clearly defined 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*" (IUCN).
[2] The concept of Ecological Network has been formulated as a response to fragmentation processes (Bonnin et al. 2007), which today represent a serious threat to biological diversity and ecological processes (Lindenmayer and Fisher 2006).

better coherence of biodiversity conservation with broader socio-economic objectives". In order to achieve this aim, in many cases Networks of PAs (NPAs) emerged as a governance instrument in the framework of territorial sustainable development.

1.2 Overview of existing NPAs at the EU level

The LinkPAs analysis on existing NPAs in Europe (ANNEX 1) has highlighted the fact that these networks exchange information, experiences and/or managing activities for their sites' benefit, according to shared aims, geographical features and designation criteria (e.g. directives and conventions). NPAs can be seen as policy instruments (not necessary leading to new designation-based regulations for PAs), which require coordination and cooperation between PAs within territories and administrative regions. NPAs aim at enhancing the management effectiveness of PAs, harmonizing tools within specific territorial contexts, fostering cooperation among PAs, involving other institutional bodies and stakeholders, and building new partnerships. Besides different typologies of PAs (BOX 1), NPAs are systems of PAs that can be institutional or non-institutional, built around different objectives and managed according to an ecological perspective or a wider cooperation-based approach. One aim of NPAs is to facilitate nature conservation in cases where species or habitats are found in more than one geographic location. From this "ecological" point of view, two of the most important European networks of protected areas are the EU's Natura 2000 and its close relative, the Emerald Network. They make up the two main components of the Pan-European Ecological Network (PEEN) due to their political importance, geographic extension and biological and landscape diversity. Natura 2000 comes out of the Habitat Directive (1992) and it seeks to convert the ideas and recommendations on habitat conservation contained in the Bern Convention into enforceable laws, thus reinforcing its application in the member States of the European Union. The aim of the Natura 2000 network is to ensure the long-term survival of Europe's most valuable and threatened species and habitats. Since directives are legally binding, the Member States are expected to collaborate to implement them, especially considering that they propose the creation of Sites of Community Importance (SCIs) that can match the specific features of the habitats included in their territory.

The analysis of different models of NPAs necessarily starts from the analysis of the different systems of PAs within EU territory. Each country formulates a specific legislation on PAs, identifying the authority for their designation and typologies, along with the identification of measures for the conservation of habitats and species and for building ecological networks.

On the basis of the data collected in the World Database on Protected Areas (WDPA)[3], the LinkPAs project has compiled an overview of the different situations that have been reviewed across Europe (Table 1). Four main types of institutional scenarios have been observed: 1) Only one national network depending on a single agency is present; 2) More than one national networks depending on different agencies are present; 3) One or more national and subnational

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[3] maintained by IUCN and the UNEP World Conservation Monitoring Centre (UNEP-WCMC)

networks are present; 4) Only subnational networks are present. Table 1 contains a description of these different scenarios, including the countries where they are found.

Table 1: Institutional set-up in EU countries

Type	Description	Countries
1.Only one national network depending on a single agency	In the Member States with a more centralized governance, only one national network of PAs is established at the national level by a general law; in some cases, the national authority identifies PAs in agreement with the subnational authority. In some cases (e.g. Germany), there is a shared process for the identification of PAs involving local authorities.	Czech Republic; Germany; Hungary; Ireland; Latvia; Lithuania; Netherlands; Poland; Romania; Slovakia; Slovenia
2.More than one national networks depending on different sectoral agencies	Many national networks are established by sectoral authorities, e.g. the authority for forests or other sector policies. The PA system comprises more than one network relying on different institutional bodies at the national level. Generally, one PA pursues general objectives and the others seek to achieve specific objectives (e.g. forest mng., hunting).	Bulgaria; Cyprus; Denmark; Luxembourg; Malta
3.One or more national networks and subnational networks	In the Member States with shared competence on PAs, split between national and subnational authorities, a more complex situation emerges, since both national and regional laws can establish national, regional and local NPAs. The PAs system comprises one or more national institutional networks together with other networks established at subnational levels. Formally the networks are independent of one another.	Croatia; Estonia; Finland; France; Greece; Italy; Portugal; Spain; Sweden
4.Only regional (county) networks	Not linked to any national institutional body or national federal law. The PA system is determined at the subnational level and only regional (county) networks can be found.	Austria; Belgium ; United Kingdom

Source: LinkPAs project elaboration, 2018

Within and beyond this general framework, NPAs shape their organisation by seeking coordination and cooperation between PAs within national and regional contexts, bringing together different typologies of PAs, sharing knowledge, and involving different actors. ANNEX 1 provides an overview of NPAs at international and EU level, and in the stakeholders' territory. Each of these NPAs is described according to the following criteria *Legal framework ,Territorial level (International,Trasnational,National,Subnational),Geographical/Administrative area; Bodies/authorities involved; Management aspects, Typology sectoral/multisectoral; Objectives; Activities.*

1.3 **Models of governance of NPAs: opportunities and challenges**

The models of governance for NPAs can be characterised by: different levels of relationships between PAs; the presence of an institutional framework for NPAs activities and the ability to involve institutional bodies as well as other actors, be they public or private and reflecting different interests; the specificity of the activities in terms of themes and scope. In this sense, NPAs refer to a general model of polycentric governance able to involve a large number of interdependent actors such as NGOs, the private sector, scientific networks and international institutions. In order to identify models of governance for NPAs, LinkPAs has established certain criteria related to governance aspects; they can be divided into four categories referring to:

i)   the relationship between PAs within a network,
ii)   the relationship between NPAs and the related institutional framework,
iii)   the relationship between PAs and the other actors involved;
iv)   the specificity of NPA aims and activities in terms of themes and scope.

These allow an in-depth analysis of the existing NPAs' performance in terms of governance.

Categories and criteria are interrelated (cf. Table 2). Specific criteria have been used to study

how the existing NPAs are run (cf. Table 3).

Table 3 shows the performance of selected NPAs in Europe with regard to the criteria mentioned above. By clustering common behaviours, it is possible to identify four standard governance models for NPAs. Each model is based on a combination of the basic criteria recalled above. Within each cluster, the ranking of the criteria (as reported in Tab. 3) outlines the prevailing characteristics of the model. The <u>four</u> models of governance that have emerged from the analysis of the set of NPAs are described below. For each model, Table 4 considers governance features, opportunities and challenges, along with some examples.

Model 1 includes NPAs that act as instruments in implementing common policies in compliance with international agreements. It allows for the involvement of competent bodies in the field of protected areas as well as institutions responsible for the implementation of broader sustainable development policies. The actions are carried out directly by the NPA or else jointly by the NPA and its PAs. As shown by the data analysis (cf. activities in ANNEX 1), the policy sectors that are often significant on a global scale are biodiversity conservation, the ecological network and adaptation to climate change.

Model 2 includes NPAs that voluntarily choose to cooperate in order to address shared and concrete ecological and/or environmental issues. NPAs develop joint actions aimed at reaching their goals within an institutional framework, which is often fragmented, however, in terms of territorial and political competences. The actions are carried out by the PAs, according to their administrative responsibilities, within their institutional and territorial scope. Such networks help PAs to describe their specific needs to other competent authorities and also aim to facilitate the integration of PA management into wider territorial policies. As seen during the data analysis (cf. activities in ANNEX 1), the policy sectors involved are typically the conservation of biodiversity and the promotion of activities for the maintenance and sustainable management of natural resources of PAs in agriculture, forest and water management. Model 2 follows a bottom-up approach, as opposed to Model 1.

Model 3 includes networks typically characterised by a limited geographical scope, with the ability to affect territorial development policies. Their member PAs show a high degree of institutionalisation of mutual relations, and normally share programs and/or projects. NPAs have effective decision-making bodies and often use innovative legal and cooperation instruments (e.g. MAB, Marittime-Mercantour EGCT). The policy sectors involved depend on specific cooperation themes (cf. activities in ANNEX 1).

Model 4 includes NPAs aimed primarily at increasing the management efficiency of individual PAs by sharing experiences and knowledge, tools, and initiatives, regardless of the territory in which they are found and the specificities of each PA. Each PA can draw on the benefits it receives from the network to achieve its own objectives (e.g. EUROPARC, MedPAN). The actions of these networks seem less able to affect territorial policies, since their aim is to share practices.

Table 2 - Categories and related criteria

Categories	Criteria
Relationships between PAs/ PAs within NPA	Existence of a shared action plan or programme identifying priorities and actions to be taken by/under NPA
	Existence of a continuous coordination of the PAs activities
Institutional / NPA Legal dimension & relationship	Existence of a strategic/institutional agreement as political framework for NPA
	Funds (from any source) earmarked for NPAs management or activities
	NPA's formal participation in institutional decision-making processes at the EU/Transnational/National/Local level
	NPA holds decision-making capacity on behalf of PAs
PAs/ other actors' relationships within NPA	NPA involves PAs as well as other bodies: territorial authorities
	NPA involves PAs as well as other bodies: stakeholders
NPA themes	NPA applies to a geographical specific area
	NPA focuses on shared topics

Source: LinkPAs project elaboration, 2018

Table 3 - Different criteria and how they are addressed by selected NPAs

Criteria		NPAs												
		ALPARC	CNPA	OSPAR	DANUBEPARK	BPAN	MAIA	MAB	EGTC	EUROPARC	MedPAN	SAPA	EGN	PRNETWORK
Existence of a shared action plan or programme identifying priorities and actions to be taken by/under NPA		x	x	x	x	x	x	x	x			x		
Existence of a strategic/institutional agreement as political framework for NPA		x	x	x		x								
Existence of continuous coordination of PA activities							x	x						
Funds (from any source) earmarked for NPA management or activities														
	internal/membership	x								x				
	external	x	x											x
NPA involves PAs as well as other bodies														
	territorial authorities	x	x	x						x		x		
	stakeholders									x		x		
NPA's formal participation in institutional decision-making processes at the EU/Transnational/National/Local level		x	x											
NPA has decision-making capacity on behalf of PAs							x	x						
NPA applies to a geographical specific area		x	x	x	x	x	x	x	x		x	x		
NPA focuses on shared topics										x			x	x

Source: LinkPAs project elaboration, 2018

1.4 **Opportunities and Challenges of NPA models**

For each model, opportunities and challenges have been summarized in Table 4.

Table 4 - NPA models: governance features, opportunities and challenges

NPA models	Criteria combination (cluster)	Opportunities	Challenges
MODEL 1 - NPAs established in the framework of agreements or conventions with a wider perspective ALPARC, CNPA OSPAR, BPAN	Existence of a strategic/ institutional agreement as political framework for the NPA. Existence of a shared action plan or programme identifying priorities and actions to be taken by/under the NPA. The NPA: applies to a geographically specific area; participates in institutional decision-making processes at the EU/Transnational/National/ Local level; involves PAs and territorial authorities. Existence of specific funds – external, public or private, EU, national or regional - supporting NPA activities.	The existence of an institutional agreement within which the network is established enhances its ability to contribute to the pinpointing of territorial strategies for the related geographical area; The NPA: is able to enforce policies for the protection of biodiversity in and outside the PA area and foster the strengthening of ecological networks; it promotes the exchange of experiences between Pas, which increases the effectiveness of PA actions; it promotes connections between PAs to strengthen partnerships – applicable to some of PAs within the network - on common themes and projects. NPA can mobilize additional resources for PAs.	Enhancing the involvement of local populations in the policy processes of the individual PAs. Depending on the extension of the area involved, this may or may not be advisable; Improving the possibility of influencing directly the activation of economic processes on a local scale while maintaining its links to broader strategies; Encouraging partnerships among PAs to implement pilot projects; developing innovative tools and agreements
MODEL 2 - NPAs based on a shared programme to face common challenges from an ecological and/or environmental point of view DANUBEPARKS, SAPA, MAIA	Absence of a strategic/institutional agreement as political framework for the NPA Existence of a shared action plan or programme identifying priorities and actions to be taken by/under the NPA The NPA applies to a geographical specific area The NPA might involve PAs as well as territorial authorities.	The NPA promotes the exchange of experiences between PAs, which increases the effectiveness of PA actions; The NPA can strengthen partnerships among Pas, sharing common environmental challenges; The NPA is based on programmes and not on institutional agreements; this means that the NPA is a more flexible instrument of governance in terms of its establishment and management.	Improving the involvement of other institutional actors to activate biodiversity conservation policies outside PAs and better integrate them within territorial policies; Increasing the opportunities for PAs to develop joint activities that increase their ability to influence local decision-making processes and launch economic processes, including the possibility of attracting additional funds.
MODEL 3 - Territorial networks: NPAs for the management of specific physiographic units. EGTC Alpi Marittime /Mercantour; MAB Biosphere Reserve	Existence of a shared action plan or programme identifying priorities and actions to be taken by/under the NPA The NPA applies to a geographically specific area The NPA has decision-making power in substitution of or on behalf of PAs Existence of a continuous coordination of PA activities	The NPA is in a specific geographical, ecological, landscape area; this fosters the development of common strategies and projects for biodiversity management that are generally more effective than those that can be implemented by single PAs; Possibility of making use of well-known tools for the management of specific areas (e.g. ECTC, MAB..); The NPA can involve local populations, since it stresses the importance of the identity of such a specific area; Facing common issues with a shared programme allows for a more efficient utilization of available resources; The stable collaboration between PAs enhances their ability in proposing and/or taking part in projects and therefore the possibility of access to additional funds.	Strengthening the role of the NPA in developing wider territorial policies Strengthening the NPA's role as a model for other similar territories; Improving the ability to involve the private sector and stimulate innovation as a basis to foster SMEs' activities
MODEL 4 - NPAs as platforms addressing different topics and aiming at exchanging experiences EUROPARC MedPAN, European Geoparks Network, Protected Micro-Reserves, SAPA	The NPA involves PAs and other territorial authorities and stakeholders The NPA focuses on shared topics The NPA might apply to a geographically specific area The NPA might have some internal funds (membership fees, if applicable)	The NPA facilitates the exchange of experiences and information between PAs, and knowledge on management aspects. The NPA can improve knowledge and raise awareness of a given territory or theme; It involves heterogeneous bodies such as stakeholders, experts, managing bodies of the PAs, institutional bodies, NGOs; It identifies and disseminates common guidelines and tools that can be applied by each PA to their own contexts (e.g. the European Chart of Sustainable Tourism - ECST set up by EUROPARC).	Enhancing the participation of PA management bodies and other bodies (institutional, private, stakeholders, experts) since part of the added value of this NPA is the heterogeneity of the actors involved; Increasing the ability to disseminate the experiences already developed and the results achieved by some PAs within the NPA; Tackling a greater number of issues addressed by the NPA by taking into account both the priorities emerging from the international policies and the specific needs of the individual PAs

Source: LinkPAs project elaboration, 2018

2 Final results of the study on the role of NPAs in territorial development, NPA strategies in European regions in general and in mountain regions in particular, including determination of sectoral policies that NPAs impact on

NPA management and sector development strategies are generally integrated through planning instruments (according to national/regional legislation), which enable an NPA to adopt shared mitigation measures and policies so as to facilitate, in particular, climate change adaptation. These strategies are also able to help bio-diversity conservation across Europe, since they respect the specific characteristics of each area and its local identity. As part of its post-2010 biodiversity policy, the European Commission has been developing a strategy for an EU-wide Green Infrastructure (GI). The underlying idea of this initiative is the recognition of the environment as an infrastructural resource capable of delivering a wide range of ecosystem services. By means of its GI strategy, the European Commission aims to provide a framework for integrating GI into sectoral policies, including nature conservation. The shared model refers to a functional approach built on a coherent system of areal components[4], where PAs (under different categories of preservation, cf. Ch. 1) are included as core elements. In addition to the conservation dimension aspect (which provides a particular ecological connectivity[5]), this approach makes it possible to identify appropriate opportunities for the exploitation of natural resources, by means of activities such as agriculture, forestry, fishing, human settlement, recreation etc. If these activities are planned and managed in a sensitive manner and on an appropriate geographical scale, they can ensure the sustainable use of natural resources. The realization of GI in the European strategy is the backbone of the existing networks: the Emerald network; the EU's Natura 2000 network, the Council of Europe's Pan European Ecological Network (PEEN, under Pan-European Biological and Landscape Diversity Strategy - PEBLDS)[6]. To date, these are all the European protected areas that have been established nationally and regionally. Then Since NPAs at different levels are part of GI[7], they can either

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[4] **core areas**, where the conservation of biodiversity is of primary importance, even if the area is not legally protected; **corridors**, which serve to maintain vital ecological or environmental connections by providing physical (though not necessarily linear) links between the core areas; **buffer zones**, which protect the network from potentially damaging external influences; they are essentially transitional areas characterized by compatible land uses; **sustainable-use areas**, where sufficient opportunities are provided within the landscape matrix for both the exploitation of natural resources and the maintenance of ecosystem functions (Bennet, 2004).

[5] "Connectivity comprises two components: structural and functional connectivity. It describes how landscapes are shaped, allowing species to move. Structural connectivity, equal to habitat continuity, is measured by analysing landscape structure, independent of any attributes of organisms. [..] Functional connectivity is the response of the organism to the landscape elements other than its habitats (i.e. the non-habitat matrix). This definition is often used in the context of landscape ecology. A high degree of connectivity is linked to low fragmentation (WG GIIR 2014, p.2).

[6] At the pan-European level, protected areas are to be integrated into the Pan-European Ecological Network. The full and effective implementation of existing international instruments is of vital importance in building the Pan-European Ecological Network, since these instruments facilitate the conservation of many of the most valuable sites in Europe. These international instruments include the Bern Convention, the European Union Habitats and Birds Directives, the Ramsar Convention, the Bonn Convention, the World Heritage Convention and the Fourth Protocol of the Barcelona Convention. The Conference of the European Ministers of the Environment, held in Sofia on 25th October 1995, approved an initiative that aimed to establish a Pan-European Ecological Network within 20 years.

[7] As the object of European policy, Green Infrastructures development can exploit financing sources mainly deriving from the Operational programmes under the existing Structural and Cohesion Funds for the 2014 – 2020 period (Operational Programme Environment 2014 – 2020, Rural Development Programme 2014 – 2020, Operational Programme Human Recourses Development, Operational Programme Innovations and Competitiveness 2014-2020), LIFE Programme 2014 – 2020, Financial Mechanism of the European Economic Area and Horizon 2020 Programme, so NPAs are involved in many strategic programmes, along with single projects.

passively or actively support it. It depends on the status that each NPA has within the broad policy-setting and planning system at the national (country) and regional (states, regions) level. The NPAs can only be recognized as only ecological networks (i.e. a complex of areas that are ecologically coherent), which are managed by a single authority; alternatively, they can be autonomous networks of PAs that are managed individually (cf. Ch. 1 on the institutional set-up). A broad evaluation of the role of NPAs in defining and implementing territorial development strategies must therefore focus on the role that the NPAs have been assigned within each context. The LinkPAs project has allowed for a country-by-country analysis that could reveal which type of legal status each of the NPAs under scrutiny has been assigned within the institutional setup for development policy. The analysis has concentrated on the database provided by the Biodiversity Information System for Europe[8]. An essential preliminary distinction has been found between countries that include Ecological networks and Green Infrastructure (PEEN and GI initiative), as part of their legislation, and those that don't. Several EU Member States have committed to implementing their own national ecological networks (NENs), including Bulgaria, Croatia, Germany, Hungary and the Netherlands. This suggests that established national or regional NPAs are the main points of reference in developing integrated territorial plans that seek to tackle both general development and sectoral issues. The reason for this function is that the NPAs make up the system of core areas of ecological networks, which support the development choices for the whole region.

Another main difference that the analysis has revealed is that some countries have a planning system that integrates biodiversity concerns in all instruments; the countries that adopt different planning tools for environmental and development plans also use this system. In a number of other cases (11 countries[9]), there emerges a National Strategy on Biodiversity that always refers to the NPAs as core areas for developing national, regional and local plans, although this depends on the degree of integration with the existing spatial planning. Therefore, if a spatial planning policy explicitly includes the development of green-blue network systems between and within rural and urbanised areas, the role of the NPAs in relation to territorial development may be substantial. However, the effectiveness of the NPA's role depend on the efficiency of the planning system and institutional actors on the whole.

The role of the NPAs is also influenced by the existence of a specific governance tool for NPAs within the policy context at different levels. For instance, the NPAs play a primary role when they are officially recognised as actors that cooperate in proposing and adopting sectoral policy choices that can enhance the sustainable territorial strategy. Transboundary NPAs are often found to have this role, be they established thanks to trans-border projects or formally founded via specific Conventions. There are also networks of stakeholders or observers comprising formal/informal regional and local representatives that seek to identify opportunities, priorities and territorial challenges; these NPAs also verify whether the EU targets set for the PAs are achieved.

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[8] https://biodiversity.europa.eu/
9 Belgium, Czech Rep., France, Germany, Greece, Hungary, Luxembourg, Malta, Romania, Slovakia, United Kingdom

Among the networks considered in this study, the components of DANUBEPARKS (Network of Protected Areas along the Danube), for example, cooperate transnationally, without a legal entity that can represent the interests of the whole network in terms of fund raising, lobbying, coordination and representing the network at the European level. They work in different fields "where solutions depend on a transnationally coherent strategy"[10]. They proposed having their own role within the newly adopted EU Strategy for the Danube Region (EUSDR) so as to coordinate and boost the development of the Danube Region. "The Danubeparks "strategic document[11]" considers the implementation of the EUSDR the leading EU challenge in this European macroeconomic region and asserts its 'Strategic position' by also stressing that the network is the mediator and facilitator for all the PAs and regional authorities involved in developing a macro-regional strategy.

As for the potential role of the NPAs in spatial planning, two main cases have emerged from the analysis.

In one case, the spatial planning focuses on the connectivity and accessibility of the natural and cultural components, thus improving:

I. the bio-connectivity of biocoenosis and different living environments, in order to reduce fragmentation in landscape continuity (e.g. by means of ecological corridors, greenways, buffer zones)
II. the accessibility of networks of protected areas and other open spaces (e.g. natural environments and urban natural areas), which are accessed for recreational activities and have a special importance in terms of landscape planning.

In the second case, the spatial planning concentrates on the socio-economic interaction between established protected areas and the territorial contexts. In this case, the main objectives are:

a) developing fruitful interactions between protected areas and settlements, highlighting the inhabitants' growing interest in natural or semi-natural areas in and around cities, including specific ecosystem services. This is especially important for the policies concerning parks and protected areas, in order to avoid or reduce isolation and demonstrate their economic and social impact;
b) maintaining or improving the interaction(s) between protected areas and the local communities by developing and enhancing the relationships between semi-natural environments (uses) and traditional or new communities (i.e. new migratory phenomena, neo-rural inhabitants, etc.). To this end, IUCN highlights the need to extend protective measures and benefits beyond the boundaries of protected areas in order to involve local populations in valorisation strategies. The opportunity to initiate non-controversial planning, 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 PAs guarantees the quality of ecosystems, economic development and widespread care of the territory.

In the first case described above, the NPAs work mainly to ensure conservation, environmental protection, and landscape development and facilitate the transition towards sustainability; in the second case, NPAs can help to preserve the identity of protected areas, often linked to resident communities. Both approaches can be seen in the cases of NPAs considered in this study (Ch. 1).

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[10] www.danubeparks.org: River Morphology and Revitalization; Floodplain Management and Habitat Network; Conservation of Danube Flagship Species; Monitoring and Natura 2000; Nature Tourism.
[11]Baumgartner and Blumer 2012

As for **mountain regions**, the role of the NPAs in territorial development appears particularly strategic, considering that: 1) in Europe, most mountain regions extend beyond national borders and cooperation between neighbouring countries is crucial for these regions' sustainable development; 2) mountain areas (with large forest coverage in the European context) have a central role in providing most ecosystem services from a quantitative and qualitative standpoint[12], and for this reason protected areas play a strategic role in promoting a more balanced development model.

Among the 'mountain' networks the LinkPAs project has examined, ALPARC (the Alpine Network of Protected Areas) includes all the different types of protected areas set out in the Alpine Convention. ALPARC works closely with the Permanent Secretariat of the Alpine Convention to implement all those activities aimed at the conservation of protected species. Its main task was laid down in Article 12 ("Nature conservation and landscape management"), but ALPARC is also active in the sustainable development of the regions that include protected areas, and in the fields of information and environmental education. This NPA plays a significant role within the Alpine Convention, developing detailed programmes and offering a sound vision and strategy for the areas involved. Furthermore, it works actively to put forward 'political demands' regarding the role of protected areas in the Alpine macro-regional development (cf. Ch. 3). As the NPA itself explains: "The significance of networking between protected areas and with concerned local and regional stakeholders must thus be acknowledged on all political levels and the protected area administrations must extend their activities beyond the protected area borders in an intermediary and networking manner and shall also receive the necessary political support to do so" (Alparc, Political demands. p.2)

ALPARC strives to develop an Alpine-wide understanding of how integrated regional development – with protected areas and their assets at its centre – should work. The actions thus far developed show ALPARC's multilevel approach to influencing territorial development within its area. ALPARC Action Plan 2016-2021 lists the following priorities:

- Cooperation with the Alpine Convention and Alpine macro-region
- Regional development (Pilot regions): ALPARC will support the sustainable regional development plans of the Alpine regions hosting protected areas and promote active exchanges among these regions. The collaboration among the Pilot regions is crucial and will be enhanced by promoting networking strategies.
- Local territorial involvement: Networking programme for territorial coordinators to lease with national and international partners. This process offers municipalities and territorial bodies within the Alps a decentralized platform that provides information and communication tools that promote innovative approaches to sustainable territorial management (e.g. cooperation project with Municipalities Networks "Alpine Alliances" – AIDA). Considering the multifaceted relationship of the Alpine Convention governance and the ongoing Alpine macro-regional Strategy, the role of ALPARC appears to be strategic, since it works as a mediator with local authorities to implement territorial development strategy.

As for the Carpathian Network of Protected Areas (CNPA), the Carpathian Convention previously acknowledged its existence; therefore, CNPA did not need to refer to the nature

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[12] Mountain areas provide: i) provisioning services: food, fibre, fresh water; ii) regulatory services: erosion control, climate regulation; iii) cultural services: recreation and ecotourism, aesthetic values and spiritual values (Millennium Ecosystems Assessment, 2005b)

protection protocol, as is the case for ALPARC and the Alpine Convention. This implies that CNPA plays a more important role in relation to the implementation of the Convention's main aim, which is to develop: "comprehensive policy and cooperation for the protection and sustainable development of the Carpathians with a view to inter alia improving quality of life, strengthening local economies and communities, and conservation of natural values and cultural heritage and major concern for Spatial planning" (Art 5). Therefore, the Parties to the Convention shall aim at coordinating spatial planning in bordering areas, developing transboundary and/or regional spatial planning policies and programmes, and enhancing and supporting co-operation between relevant regional and local institutions.

As for EGTC Alpi Marittime – Le Mercantour, the creation of a specific governance tool for territorial cooperation, in order to protect and enhance the transboundary territory "seen as a whole from a geological and landscape point of view", has resulted in the establishment of a global strategy of homogenization of conservation politics for the sustainable development of both parks and their related territories. Alpi Marittime and Le Mercantour share a particular mountain landscape that is also close to the sea; this unique blend of flora and fauna is part of both the Arctic-Alpine and the Afro-Mediterranean domains, but they have different approaches, and this is likely to influence potential territorial development strategy. Creating the NPA according to the EGTC model has led Le Mercantour Park to develop a greater interest in territorial development; this has also led Alpi Marittime Park to focus on achieving stringent objectives in conservation politics (while also maintaining its missions, as established by the Italian law).

Table 5: *Summary of effects of selected NPAs on regional development and territorial planning*

Effects on regional development				
+ = indicated directly (+) indicated indirectly - = not indicated	ALPARC	Alpi Marittime Mercantour	Abruzzo Region	Razlog
Economic effects				
Economic value added	(+)	+	+	+
Creation of infrastructure	-	+	(+)	-
Visitor expenses	-	+	+	+
Local income	(+)	(+)	+	+
New jobs (job creation)	-	-	(+)	(+)
Tax revenue	(+)	-	(+)	-
Keeping people in region	(+)	+	+	+
Cross-sector cooperation	(+)	(+)	+	-
Other economic impacts (external funding)	+	+	+	+
Impacts on other regions, countries	+	+	-	-
Involvement of NPAs in territorial development process				
Influence on planning processes of the PA areas within regional development	**(+)**	**+**	**+**	**(+)**
Mechanism to be involved in regional strategy development and regional planning	**+**	**+**	**(+)**	**-**

Source: LinkPAs project elaboration, 2018 on the matrix of Jungmeier et al. 2006

The situation in the stakeholders' mountain territories has been thoroughly analysed by investigating the formal documents that established the networks under scrutiny. In addition,

regional strategic and planning documents, as well as regulatory legislation, especially as far as the Abruzzo region is concerned, have been take into consideration[13].

The effects on regional development and the importance of NPAs in territorial development processes have been qualitatively assessed[14] in relation to the presence/absence of positive links with the issues considered (Table 5).

2.1 Determination of sector policies* that NPAs impact on

A preliminary account of the sector policies impacted by NPAs can be provided by identifying which GI policy areas can be integrated into mainstream Green infrastructures. These policy areas include: Nature/Biodiversity; Spatial planning; Urban policy; Agriculture; Forestry; Tourism and leisure; Transport infrastructure; Energy; Water/flood management and disaster risk reduction; Climate change; and Marine and coastal policy. Considering that the NPAs are the backbone of European and national ecological networks, the NPAs play a major role in the agriculture, forestry, soil conservation and water sectors, underscoring those functions that have increased tree cover on land, which can prevent erosion and flooding, as well as the protection of water supplies.

According to EU current policy on the green economy[15], the development of green infrastructure, green business and green tourism in the Natura 2000 network has been identified as a priority under a number of National action plans for the programming period 2014-2020[16]. Within the framework of environmental and biodiversity policy, some productive sectors (such as forestry and agriculture) have begun a process of "active conservation" outside and within established PAs. Thanks to businesses acting within PAs (particularly SMEs), this process has led to the adoption of sustainability-oriented voluntary standards at the international and EU level[17]. This means that now, within these PAs, it is possible to reconcile the production of goods and biodiversity conservation, thus helping to move towards a more integrated development model. These sectors already play pivotal roles in planning and financing EU climate change and biodiversity policies; they are strongly connected to the NPAs' initiatives. Considering the GI policy areas and building on the work of the Commission on key benefits for Green Infrastructure (COM2013) 149[18], the LinkPAs project has compiled a list of potential policies that relate to the sectors impacted by the NPAs (Table 6).

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[13] The complete list of documents is provided in the Annex 2.
[14] Economic value added: Does a potential economic value added related to the NPAs in the area exist?; Creation of infrastructure: Did the NPA lead to a helpful, necessary infrastructure?; Visitor expenses: Did the NPA intend to increase /succeed in increasing visitors' spending?; Local income: Did the NPA contribute to long-term effects on local income?; New working places: Can the number of existing jobs be increased by the NPA?; Tax revenue: Do the NPA activities contribute to increase tax revenue?; Keeping people in the region: Do the NPA activities contribute to keeping people in the region?; Does the NPA contribute to diminishing "brain drain" and commuting? Does it help to make the region more attractive to "newcomers"; Cross-sector co-operation: Are there cross-sector co-operations? Are there multiplier effects to other economic sectors within the region?; Other economic impacts: Is there any other economic impact for the region? In what way is the NPA activity innovative and in what terms?; Impacts on other regions: Is there an economic impact on other regions or countries? Did the NPA transfer its?? experience to other sectors and regions?
[15] EC (2015), Closing the loop - an EU action plan for the circular economy
[16] The **ERDF** Regulation (EU No 1303/2013) in Article 5, paragraph 6, point e) identifies GI as one of the investment priorities under the environment protection objectives.
[17] Such as the Environmental Quality Certification (under ISO Standards 14:000 and 64:000 series; Eco-Labels; EMAS Audit scheme, etc.)
[18] COMMISSION STAFF WORKING DOCUMENT Technical information on Green Infrastructure (GI) (SWD 2013) 155 Accompanying the document (COM2013)149

Table 6. Sector policies impacted by NPAs

Sector policies NPAs impact on	Policy Objectives	Case studies			
		ALPARC	Alpi Marittime-Mercantour	Abruzzo Region	Rila National Park
Enhanced efficiency of natural resources	Maintenance of soil fertility				X
	Ensuring biological control				X
	Increasing pollination				X
	Storing freshwater resources			X	X
Climate change mitigation and adaptation	Improving resilience to deal with climate impact			X	
	Reduction in GHGs				
	Improving temperature control				X
	Improving storm damage control				X
Biodiversity	Sustaining and improving biodiversity	X	X	X	X
Disaster prevention	Ensuring erosion control				
	Reducing the risk of forest fires			X	
	Reducing flood hazards				
Water-related agriculture	Regulating water flows				X
	Increasing water purification				X
	Improving water provisioning				X
Land and soil management	Reducing soil erosion			X	X
	Maintaining/enhancing soil organic matter				X
	Increasing soil fertility and productivity				
	Mitigating land take, fragmentation and soil sealing				
	Improving land quality and making land more attractive				
	Enhancing property values				
Conservation benefits	Promoting existence value of habitat, species and genetic diversity	X	X	X	X
	Conserving habitat, species & genetic diversity for future generations	X	X	X	X
Agriculture and forestry	Promoting multifunctional resilient agriculture and forestry		X	X	X
	Enhancing pollination				X
	Enhancing pest control				X
Low-carbon transport and energy	Improving energy supply & safety, promoting biomasses and renewable energy			X	X
	Delivering better integrated, less fragmented transport solutions		X		
	Offering innovative energy solutions	X			X
Investment and employment	Conveying a better image of NPAs	X		X	X
	Increasing investments	X			
	Increasing employment	X			
	Increasing labour productivity	X			
Health and well-being	Improving air quality and noise regulations				X
	Improving accessibility to exercise areas and amenities	X		X	
	Improving health and social conditions	X			
Tourism and recreation	Making destinations more attractive	X	X	X	X
	Increasing range and capacity of recreational opportunities	X	X	X	X
Transport	Encouraging sustainable travel (multimodal links & integration of transport systems)	X	X	X	
Education	Creating teaching resources and 'natural laboratories'	X	X	X	X
Ecoservices	Resilience	X		X	X

Source: LinkPAs Project Analysis, 2018

The relationships between the NPAs and the territorial system serve as the basis for determining which sectoral issues the NPAs might have effects on. They can also define those sector policies that have linkages with the management of the PAs involved. LinkPAs has analysed the main policy documents referring to the regional and local contexts of the case

studies under scrutiny (Table 5 above); LinkPAs has also interacted with the local stakeholders involved. Table 6 includes the results of a survey on the strategic policy documents regarding each Stakeholder territory. This has made it possible to establish which sector policies are impacted by the NPAs in relation to each case study area. The policy sectors on which the NPAs seem to have a significant impact, within the stakeholder regions, are: Biodiversity; Conservation; Tourism and recreation; and Education. In addition, close links can be found in relation to Agriculture and Forestry in order to promote multifunctional resilient agriculture and forestry; NPAs are also linked to Investment and employment when it comes to promoting a better image of NPAs themselves; NPAs contribute to enhancing Transport by encouraging sustainable travelling (e.g. multimodal links and integration of transport systems). Lastly, NPAs are connected to the Ecoservices in order to improve the resilience of these areas.

3 The concrete contribution of NPAs to the development and implementation of territorial development strategies in the stakeholder territories: initial case studies report

The current paradigm shift in conservation, from a focused sectoral approach to a broader landscape-based approach, comes along with a new understanding of protected areas and PA networks' having a stronger role in territorial development. NPAs have the potential to interlink the different sectors, promote synergy and overcome sectoral and administrative limits. However, most protected area networks that have been formed in the past 20 years, as a response to the new landscape approach, still face many challenges and have not evolved to their full potential. This chapter provides an insight into four case studies – European protected area networks of different sizes and complexity. For each case study, the explanation of the governance structure is followed by an analysis of the NPAs' ability to shape territorial development.

3.1 The transnational level: ALPARC

ALPARC was created in 1995 to implement some aspects of the Alpine Convention (AC) and, most importantly, the Protocol on Nature Protection Convention (i.e. Art. 11 and 12). ALPARC is an association under French Law and it represents roughly 400 large protected areas within the whole Alpine region.

Governance of the NPA and the role of ALPARC

ALPARC serves as an implementation tool for the Alpine Convention and a platform for the cooperation and facilitates the exchange of experiences among the Alpine PAs. The Permanent Secretariat of the AC and ALPARC consolidated their collaboration in 2013 with a Memorandum of Cooperation. The goals of ALPARC are defined in its statutes and strategic documents (e.g. Strategy 2016 – 2021). This NPA is actively involved in the territorial development of the Alpine region. In order to do this, ALPARC works on: (1) obtaining funds, (2) the implementation of policies/strategies and (3) territorial development (see Figure).

The organization of ALPARC comprises a General Assembly (including all members) and a Council (PA managers only) that collaborate to define the general mission of ALPARC. There is also a President and two Vice-Presidents representing the Council and ALPARC, along with a Coordination Unit in charge of managing projects and an elected Board of five members.

Impact on territorial development and sectors

Projects and initiatives. Since its foundation, ALPARC has performed numerous actions having both direct and indirect effects on the Alpine region. Direct territorial effects are linked to the implementation of projects and tangible initiatives and addresses, including:

1. Alpine ecological connectivity (through projects and targeted initiatives),
2. sustainable regional development & quality of life (through projects), and
3. environmental education and training (through events, tools, campaigns).

Lobbying & networking. Indirect territorial effects are related to activities that have effects on the region in the long run. These effects are mainly linked to lobbying, networking within and

outside the Alpine territory, since the members of network are institutional decision-making bodies, which address the following topics:

1. Alpine ecological connectivity (AC permanent committee & AC Ecological Network Platform as an observer; EUSALP AG7 as active member; EU initiatives on ecological connectivity and green infrastructures) and
2. Sustainable regional development & quality of life (again: AC & EUSALP).

ALPARC is a valuable organization that can link practical experience with pan-Alpine strategy development; it plays a major role in policy and institutional initiatives at the Alpine level (e.g. AC, EUSALP), as well as in the territorial implementation of transboundary EU projects. It has succeeded in sharing its governance model beyond its borders (e.g. the CNPA in the Carpathians). ALPARC's strategic documents underline the shift from a conservation-focused network towards an integrated development network. In the future, ALPARC aims to invest in further lobbying capacities at all political levels to increase its impact.

Figure 1: ALPARC's spheres of influence: (1) Funding, (2) Policy and Strategy and (3) Territorial impact
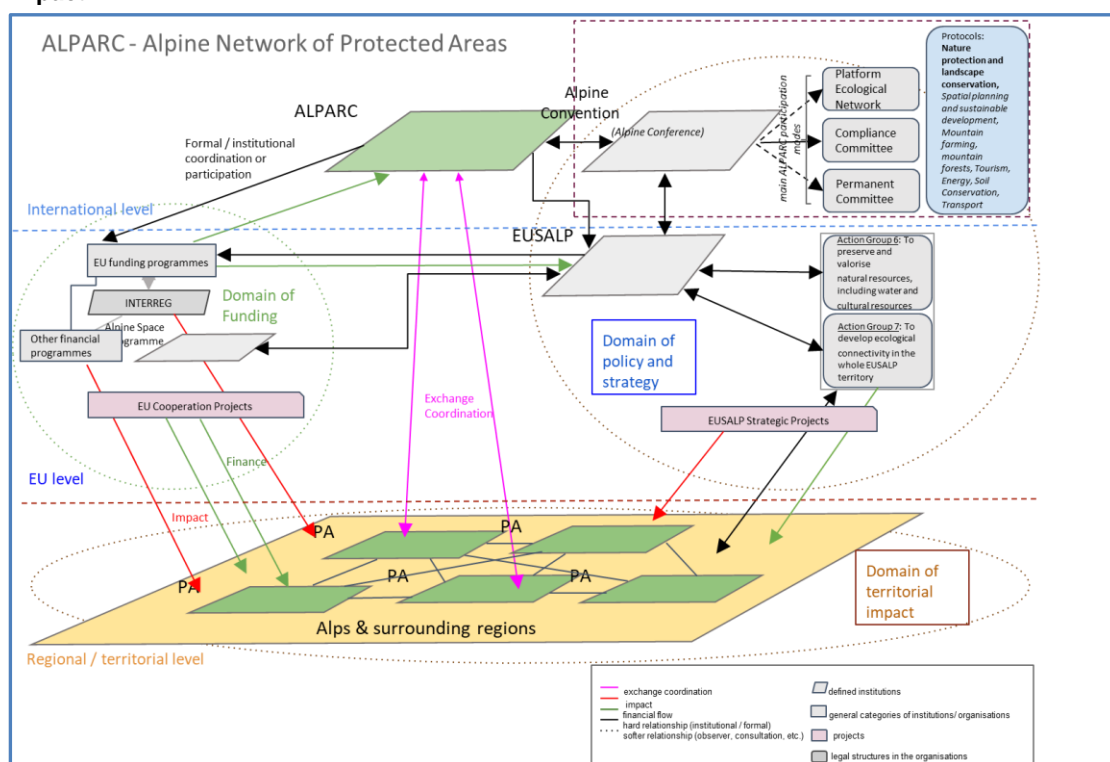
Source: LinkPAs project elaboration, 2018

Experience and knowledge sharing. The transfer of experience related to PA management and governance is a strategic objective. It is operationalized by supporting initiatives with the stakeholders' involvement (e.g. Alpine PA managers) and cooperation projects involving other territorial networks.

3.2 The transboundary level: The European Park Marittime-Mercantour

Sharing a common natural and cultural heritage in adjacent territories, the Alpi Marittime Nature Park and Mercantour NP represents an NPA of about 1,000 km² on the French/Italian border. This informal partnership was originally motivated by the need for a joint management of the

wildlife in this area. However, it has more recently developed into a shared vision of sustainable development with a new juridical structure. As a result, the European Grouping of Territorial Cooperation (EGTC) was formed. The six priorities for the territory of the Marittime-Mercantour Park include the protection of its natural and cultural heritage, territory management and planning, environmental education, sustainable tourism and sustainable mobility (see Marittime-Mercantour Integrated Transboundary Plan).

Governance of the NPA and the role of EGTC

Through the EGTC, the Marittime-Mercantour network has established a joint strategy for the harmonization of policies in the field of nature conservation and sustainable development for all its territories. The EGTC is currently the final and most advanced transboundary European PA Network strategy. The EGTC has decision-making power for all the policies directly related to the NPA, as laid down in its legally bounding document. The document gives an explicit definition of the cooperation of PA directors and local politics in the decisions of the transboundary actions of the NPA. Even though national territorial decisions remain the responsibility of the individual park, all transboundary decisions are taken by the EGTC.

Impact on territorial development and individual sectors

Cooperation with municipalities. One of the key impacts of this transboundary network is that it is able to smooth the tensions that often arise between the PAs and the administrators of these territories. When the Mercantour NP was in its infancy, some municipalities considered it responsible for missed economic opportunities, and this resulted in the latter's opposition to certain Mercantour NP-related projects. However, overall, the NP's transboundary policies were met with great interest by the municipalities and, after seeing the positive impact they could have, the municipalities agreed to cooperate.

Alignment of management goals. Inspired by the inputs and positive development-oriented approach shown by its Italian counterpart, the French National Park reasserted its role within the region, thus becoming an "Aire d'Adhesion" allowing the municipalities to subscribe to the Charter of National Parks. On the one hand, this approach changed the relationship between park and territory, leading to an improved integrated territorial management of the area. On the other hand, Italy's Alpi Marittime Natural regional park followed the example of France's Mercantour national park regarding its strong conservation objectives and integrated aspects of these objectives into its own management approach. The EGTC combines the two core objectives (biological conservation and sustainable development) in its strategy.

Increase funding opportunities & visibility. The transboundary network allowed for the use of FEDER ALCOTRA financial funding (ERDF/Interreg), a main funding instrument, and has increased its visibility in terms of territorial marketing in ecotourism. Direct impacts on the development of the territory are strongly linked with the six strategic objectives of EGTC and FEDER ALCOTRA. The latter is the key tool for creating applied projects aiming at biological conservation and the sustainable development of the territories, which includes transboundary ecosystem restoration, transboundary tourism infrastructure, joint environmental education activities, a transboundary tourism strategy and transboundary networks of tourism actors.

Since 1991, 27 ALCOTRA projects have made it possible to complete €18.5M worth of transboundary projects.

Success factors and potential extension. The EGTC's success factor is likely due to the fact that it is both a juridical entity and an efficient transboundary decision-making entity. This exceptional status makes it one of the few institutions that can enact and coordinate transboundary territorial development measures. Its tireless efforts to be included on the UNESCO World Heritage List as a joint Alpi del Mediterraneo - Alpes de la Méditerranée network makes it a model for all NPAs. Moreover, the results this NPA has achieved in landscape planning and ecotourism have led other protected areas and municipalities to seek to join this territorial project. The network has managed to evolve from a network that focused purely on nature conservation to a platform devoted to regional development. This evolution includes outcomes such as the process of homogenization of Natura 2000 management plans and a joint development of Geosites.

3.3   The regional level: Abruzzo

Abruzzo is a mostly mountainous region and one third of its territory is included in protected areas. Its three national parks, 1 regional park, 1 marine protected area, 14 national nature reserves, 25 regional nature reserves, 59 Natura 2000 sites and 6 general protected areas are valuable assets of this region. Abruzzo also features one of the highest population rates within PAs in Europe; therefore, the ecosystems and functionality of these PAs are strictly connected to human activities.

Governance of the NPA and the role of Abruzzo NPAs

Abruzzo has a complex system of PAs in which two different institutional networks coexist: the national network and the regional network. The national network of PAs coordinates the national parks and national reserves across Abruzzo. The Italian Ministry for the Environment is the legal authority this complex system refers to and the managing bodies are respectively the managing bodies of national parks and the regional offices of the national policy for biodiversity in charge of the management of the national reserves. In addition, Abruzzo also features a regional network of PAs that was established under regional law and includes its regional park and some smaller reserves. The Natura 2000 network is part of the regional PA network. It is an instrument and an ecological network fostering the dialogue between national and regional management bodies.

Abruzzo works to ensure the implementation of the objectives of its regional policies in relation to the management of regional PAs. However, pursuing these objectives within the national parks requires intensive cooperation because the national parks are first and foremost bound to the priorities defined by national laws and national policies. Abruzzo is currently working on the creation of an overarching coordinating framework that will be able to cater to the needs of all protected areas and help to better coordinate the priorities of all parties involved, addressing natural capital management and territorial development strategies in Abruzzo.

Impact on territorial development and individual sectors. Presently, the territorial impact of the NPAs in Abruzzo cannot be exhaustively assessed due to the diverse and multifaceted

nature of all the institutions involved. Direct impacts on territorial development are strongly linked to the **ongoing management** of the protected areas and **implementation of national policy in conservation**. In recent years, Abruzzo has boosted its **green territory label,** leading to a significant development of the region that includes the **enhancement of the ecotourism circuit** and the improved quality of Abruzzo's products and services. At the local level, some Regional Nature Reserves work on the promotion of **sustainable tourism and infrastructures** to valorise biodiversity (e.g. the European Charter for Sustainable Tourism in Protected Areas), given that nature and cultural tourism is the key potential for development in the area. Regional nature reserves are managed by municipalities, and this fosters the involvement of local cooperatives and shows that local initiatives are able to link conservation of biodiversity, sustainable development and the creation of SMEs. Local activities include research, education, dissemination, valorisation of local products and contributions to the shift to organic farming. One regional instrument for integrated management of natural resources is the so-called "River Contract", a voluntary negotiated and participatory strategy to help manage river basins. This model is being tested in protected areas as a tool that can link these areas to the civil society and private sector.

Besides tourism, other sectors (e.g. livestock & farming, silviculture and energy production) show a strong thematic link with the management of PAs. Furthermore, the water sector, natural hazards control (i.e. forest fires, soil erosion, flood, avalanches) and climate regulation through forests are crucial ecosystem services in the area. Moreover, PAs and NPAs can contribute to the implementation of a variety of regional policies. Noteworthy examples are: The National Strategy for Inner Areas, a cohesion strategy aiming to improve the quality of life and economic well-being of people living in relatively isolated and sparsely populated areas and increase the attractiveness of these areas through the rationalization of essential social services; and The Regional Strategy of Adaptation to Climate Change, which focuses on the resilience of territory and society and was implemented within the framework of the Regional Plan for Abruzzo Region. The protected areas in Abruzzo are involved in a wide range of regional development plans, but they are mainly responsible for developing their own management plans. An example worth mentioning is a cooperation initiative called Apennine Park of Europe – APE, a project involving the Abruzzo Region and all the mountainous PAs in Italy that led to the Apennine Convention (2007). The main challenge in terms of regional environmental policies and territorial strategies is to successfully combine the protection of natural assets and landscapes with a thriving socio-economic development. Abruzzo has different networks and managing bodies, but it lacks a common framework for the implementation and development of regional strategies on natural resources management, green economy and territorial development.

3.4 **The local level: The Razlog Municipality**

The Municipality of Razlog in Bulgaria covers an area of 440 km² and is located within an ecologically significant region comprising several protected areas. Razlog is the most dynamic and fast-developing municipality in the Blagoevgrad region. Razlog Municipality covers large parts of National Park "Rila" and smaller areas of National Park "Pirin". The entire territory of the National Parks "Rila" and "Pirin" (IUCN Cat. II, some parts Cat. I), along with one Bulgarian Nature Park in Rila Mountains (IUCN Cat. V) and many other protected sites have been included in the Natura 2000 network. The network of local protected

> *Management planning of NPs – tool for territorial development*
> Management plans, the legal instrument for park management of the park territories, are in place in Pirin NP (endorsed) and in Rila NP (draft). The Rila NP management plan comprises social and environmental aspects, providing a sustainable approach to territorial development. The operational programmes have 10 prioritized directions (e.g. programmes for conservation, for tourism, municipality income generation, and the joint management of natural resources.

areas includes different types ranging from development-oriented nature parks to strictly protected wilderness areas.

Governance and role of the NPA

The governance of the protected areas within the stakeholder territory is defined in the Bulgarian Protected Areas Act and refers to the IUCN categorisation. The Bulgarian Protected Areas Act outlines all aspects of management, planning and protection of the territories. The Rila NP Directorate is under the administrative governance of the Ministry of Environment and Waters, and its National Nature Protection Service is responsible for the development of strategies, programmes, plans and legislative documents regarding conservation and NPA management in Bulgaria. Consequently, the Rila network is mainly formed by national authorities and actors from the conservation sector.

Impact on territorial development and individual sectors

Weak intersectoral cooperation. The network's objectives are conservation-oriented, focusing on the preservation of natural resources and natural heritage within its boundaries. Consequently, the NPA follows a sectoral approach focusing on the implementation of international conventions and national conservation guidelines (Natura 2000, CBD, UNESCO MaB Seville Strategy, National Priority Framework for Action in Natura 2000 Areas). Regional territorial development strategies are not connected to this park network, as these are the legal responsibility of other ministries and agencies. As regional development strategies consider Razlog a local urban centre, there is an increasing need for integrated NRM and spatial planning.

High potential for synergies & territorial impact. The NPA under scrutiny could contribute substantially to the development goals defined by the *Municipal Development Plan for the Razlog Municipality* (e.g. environmental protection, preserved traditions, human well-being, stable economy, (eco)tourism). However, territorial development strategies (e.g. European 2020 Strategy, National Development Programme for Bulgaria 2020, National Strategy for Regional Development, and Strategy for Regional Development of Blagoevgrad Region 2014-

2020) make little mention of the support that the NPA and the conservation sector could provide. The diversity of protected areas has great potential for the development of ecotourism and sustainable use of abundant natural resources. That said, bringing together the large number of existing PAs, with their different objectives, and overcoming the sectoral approach are still major challenges. The park directorate has put forward proposals that seek to develop the park in terms of sustainable tourism/recreation, eco-friendly livelihood, infrastructure, R&D and education. LAG Razlog supports all stakeholders in preparing proposals for additional funding. Natural capital investments PES of Rila and Pirin NPs have not yet been implemented. Extending local partnerships to other sectors (e.g. tourism, community development) and developing integrated regional planning are viable potential approaches.

Conclusions

The preliminary results obtained through the data analysis of the case studies considered here have shown the existing heterogeneity of the networks under scrutiny, their different focuses and impacts. International networks (e.g. ALPARC) fulfil a matchmaking function, influencing policy frameworks and global strategies on territorial development, thus having a concrete territorial impact. They carry out projects and contribute to general policy and strategy development. For its part, EGTC is a strong network at the transboundary level that has achieved the harmonization and reconciliation of local policies and regional territorial development. Conversely, Abruzzo is a region rich in protected areas and natural resources with a complex network. Its status is difficult to pin down due to the lack of a coordinating framework, even though the administration has acknowledged the need for integrated territorial approaches; the resulting situation is that the NPAs in this region play a minor role in territorial development. Razlog is a local network with a strong but sector-restricted mission (i.e. conservation). Hence, its influence outside its own territory and its integration into regional strategies is rather limited.

Territorial impact: shaping or implementing policies and strategies

The analysis has showed that NPAs are able to influence territorial development in 3 ways: i) by shaping strategies and policies, ii) by implementing projects or strategies, and iii) by sharing knowledge with and among different actors. Whereas legally established bodies seem to have the advantage of getting into the right working groups and setting their overall direction, local or non-governmental networks enjoy greater freedom in their attempt to involve other actors, such as SMEs.

Funding

The analysis indicates that a permanent funding mechanism, which goes beyond project-based funding, is essential to ensure the functioning of protected area networks and the implementation of their projects. Whereas ALPARC and EGTC can count on regular funding opportunities, which allow them to carry out their activities, previous efforts of cooperation among PAs in Abruzzo, within the framework of an Apennine Convention, failed, due in part to the lack of funding.

Sectoral and inter-sectoral aspects

NPAs serve specific purposes. Depending on their individual missions, NPAs may have a conservation-only focus, an integrated territorial development approach or a regional development objective. The data analysis of the case studies has confirmed that not all NPAs have been fully established. However, this investigation has also shown that all NPAs are slowly but steadily moving towards a more integrated approach that seeks to include sustainable economic development, green economy, ecosystem services and integrated spatial development.

Challenges and needs

Each case study reveals specific challenges and needs. For instance, Razlog needs to link territorial and spatial planning more effectively so as to fulfil its mission, as defined by its management plan as well. This requires appropriate funding mechanisms and an innovative governance structure. The EGTC Marittime-Mercantour model will soon have a greater reach that will involve many more stakeholders, thus requiring an extremely careful adaptation of the existing model. This is the Abruzzo Region have already stressed their need to establish a new framework for national and regional PAs, in order to better integrate territorial planning in economic and ecological terms. ALPARC is well designed with regards to the policy dimension and will continue its political lobbying campaign; however, it needs to strengthen its weaker implementing end (e.g. by adding new partners to its network).

Further research to be carried with the LinkPAs project will provide a more detailed analysis of the networks and their impact on territorial development. It will also analyse challenges such as funding, governance models, territorial scope and inter-sectoral cooperation, common to all NPAs despite their specific cultural, legal and political contexts.

4 First results on opportunities for integrating NPA management into sector development strategies

The four models of NPAs identified and their governance have different impacts on sectoral development strategies, due to both their specific characteristics and their activities (Ch. 1 and 2). Drawing on the findings of the data analysis regarding the four case studies under inquiry (cf. Ch. 3), the sectors impacted by NPAs are: Biodiversity; Conservation; Tourism and recreation; and Education. Extremely close connections can also be found to: Agriculture and forestry, in order to promote the NPAs' multifunctional resilience; Investment and employment, so as to convey a better image of the NPAs; Transport, in order to encourage sustainable travel (e.g. multimodal links and integration of transport systems); and Ecoservices, in order to improve resilience. All these sectors are also linked to GI.

Since sectoral development strategies are designed at different levels by many actors, in order to integrate NPA management into sector development strategies, the LinkPAs project identified some common organisational elements found in all governance models:

a) all NPAs are directly linked to the involved PAs and consequently, in different ways, to the municipalities; b) all NPAs have direct connections with central and regional administrative bodies;

b) all NPAs pay particular attention to international and EU conservation policies, especially to GI;

c) all NPAs focus on monitoring tools;

d) all NPAs consider financial and communication aspects as important to involve local actors such as SMEs, citizens, NGOs, etc.

NPAs promote, organise and manage activities in accordance with their territorial context. They can: carry out analyses of the sectors that have an impact on the PAs and related businesses; support the development of sustainable strategic plans to integrate PAs into territorial polycentric development, in accordance with the national/regional strategies; suggest programs that foster territorial cooperation between PAs; help PAs to access funds; enhance communication, exploitation and dissemination of the added value represented or produced by PAs; help to increase PA relations with economic actors, particularly SMEs, in order to attract new investments as well; and monitor and offer guidelines to draft territorial planning activities and PAs management. Lastly, NPAs can promote research and development, innovation and assessment within PAs.

The methods and approaches that can be used to integrate NPA management into sectoral development strategies depend on the institutional set-up and the governance model of the NPAs analysed.

The main features of a broad organisation and management model that can be applied to integrate NPA management into sector development strategies are proposed below:

- Establishing a unified and harmonised planning strategy that sets forth a well-defined role for the NPAs within a given territory; this must be done well in advance and before the NPAs are set up. This planning approach must be formally laid down in a convention or agreed upon on a voluntary basis by signing an official agreement proposed by the government and/or region that legally represents the territory in which the PAs are located. This strategic planning document should clearly define the role of the NPAs, which consequently become:

- ✓ Bodies of territorial cooperation aiming at: orienting policy; maintaining international and European relations; linking with EU cooperation programs; interacting with international, European, transnational, national and regional strategies; suggesting innovative paths for sustainable territorial development; and assessing PA actions qualitatively and quantitatively, along with ex ante and ex post assessment tools. The NPAs can actively relate to the government, regions, and municipalities in accordance with their institutional set-up and sectoral focus. They can coordinate PA actions; they can collaborate on and promote the development of development strategies within PA territory.
- ✓ Instruments that allow to receive, interpret and implement the directives linked to GIs on the basis of territorial diversity. The NPAs operate at technical level and interact with the political actors, thus also enhancing lobbying activities.

A preliminary outline of how NPAs should be organised in order to be integrated into sectoral development strategies is provided below.

Fig. 2: First results on NPA management
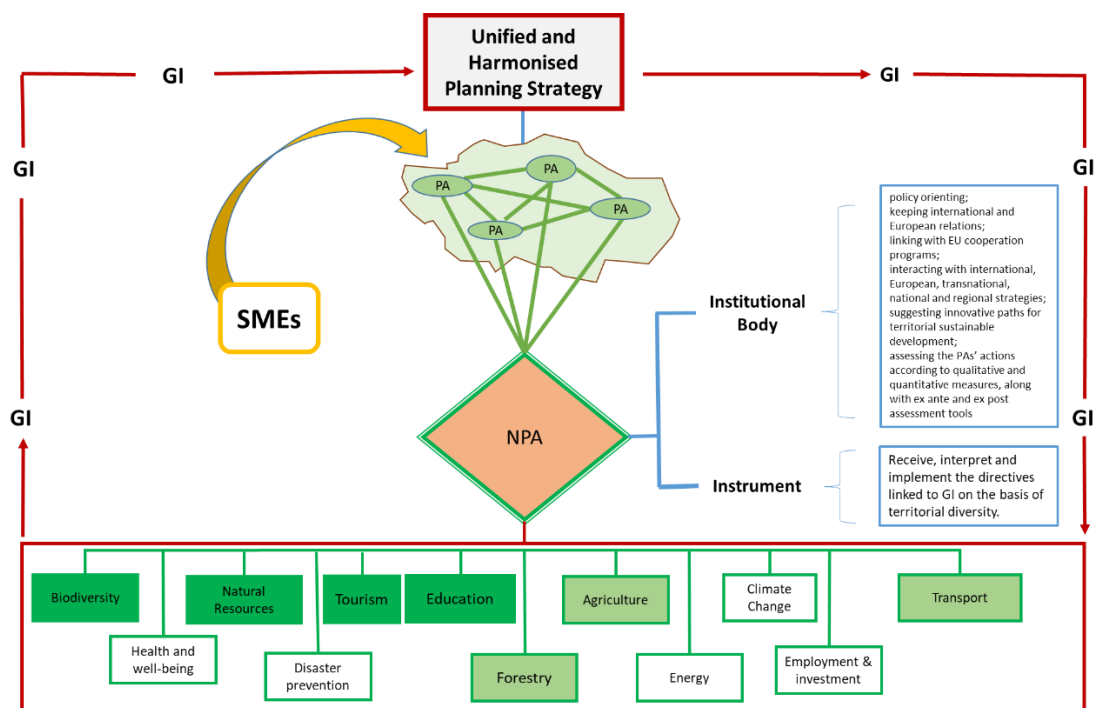
Source: LinkPAs project elaboration, 2018

5 First proposals for possible measures to involve local actors (particularly SMEs) in the implementation of NPAs and to mobilize private sector investment in sustainable territorial development within NPAs

Assuming that the spatial delimitation of PAs is a consequence of special protection measures that apply to "a clearly defined geographical space" (Dudley & Stolton 2008), *all* territorial policies with a broader geographical scope of application also refer to the PAs localised within that scope – at least, if those policies do not allow for actions that are non-compliant with the act deliberating a PA's "special protection" (Lausche 2011).

In performing a "positive" analysis of local actors' potential mobilisation in the EU (particularly in terms of the growth of SMEs), the LinkPAs project assumes that a general "*external business environment*" influences SMEs' decisions and strategies (Worthington & Britton 2009). However, LinkPAs also considers the distinctive features of PAs and NPA activities assisting such a process. In turn, NPA support helps create an additional "*external PA environment*" which provides opportunities to SMEs. This PA environment is shaped by a specific number of territorial policy sectors on which green infrastructures (GI) have a relevant impact (EC 2013). The sectors are consistent with each PA's specific features and economic potential.

In performing a "normative" analysis of the current and prospective role of NPAs in mobilising investment for regional development, the distinctive features of alternative NPA models have been taken into account. Different "governance models" are effective in performing specific actions that can support investment and business development decisions. In general, different NPAs display distinctive features (e.g. specific governance or legal status, decision-making capacities, etc.), which indicate the capability of a NPA to perform specific actions. Consequently, with an understanding of each NPA's capabilities and strategic potential, targeted strategies may be designed.

## 5.1 PAs as a special business environment for European SMEs

PAs localised in a given area can participate in regional development. Since PAs are often organised in networks, NPAs can facilitate certain forms of territorial development within the PAs they include and their surroundings.

From a business-oriented standpoint, an "external environment" is a system that comprises different social, cultural, economic and ethical components influencing (and occasionally being influenced by) business behaviour – including strategic planning, decision making, and management choices (Worthington & Britton 2009). Usually, "environmental analysis" techniques concentrate on the broad external environment; however, they can also focus on a well-defined objective. In the latter case, PAs operate in accordance with the guidelines set by IUCN, and this approach has also been found in the regions under inquiry. Depending on their own specificities, PAs can shape unique environments, which in turn are characterised by distinctive features such as "nature, (…) associated ecosystem services and cultural values" (Dudley & Stolton 2008), as IUCN itself suggests. Consequently, an "external PA environment"

can be defined as the domain that includes specific features and territorial policies that typically impact the PA involved and its immediate surroundings. Therefore, LinkPAs analyses the features of the PAs and ecosystems *that most clearly relate to business activities.*

The qualitative analysis concentrates on the "materiality" of ecosystems and the benefits SMEs can obtain from biodiversity. This analysis draws on the findings included in major thematic reports that drew on cases and statements concerning the existing relationship between industries and ecological goods and services (Bishop 2012, EC 2018, WBCSD 2011). Materiality is intended to signify the threshold over which a material dimension becomes important to an organisation because it shapes its external impact (be it economic, social or environmental) or influences the stakeholders' decisions. It is possible to rank material aspects according to their relative priority for an organisation (GRI-Robecosam 2015, GRI-G4 2016). SMEs have to deal with a range of external environmental factors, which can also be determined by policy sectors. Thanks to an analysis that investigates materiality, it is possible to determine which topics and sectors are more strategic to given SMEs' business operations. Moreover, this qualitative assessment can consider the main links between: a) the list of policy sectors impacted by PAs and GI across Europe, and b) the main business sectors relating to the "external PA environment", as set forth by Bishop (2012) and WBCSD (2011). Furthermore, this investigation has been supported by a materiality index developed for each policy sector (Figure 3).

Fig. 3: How SMEs benefit from PAs and ecosystem services, according to sector
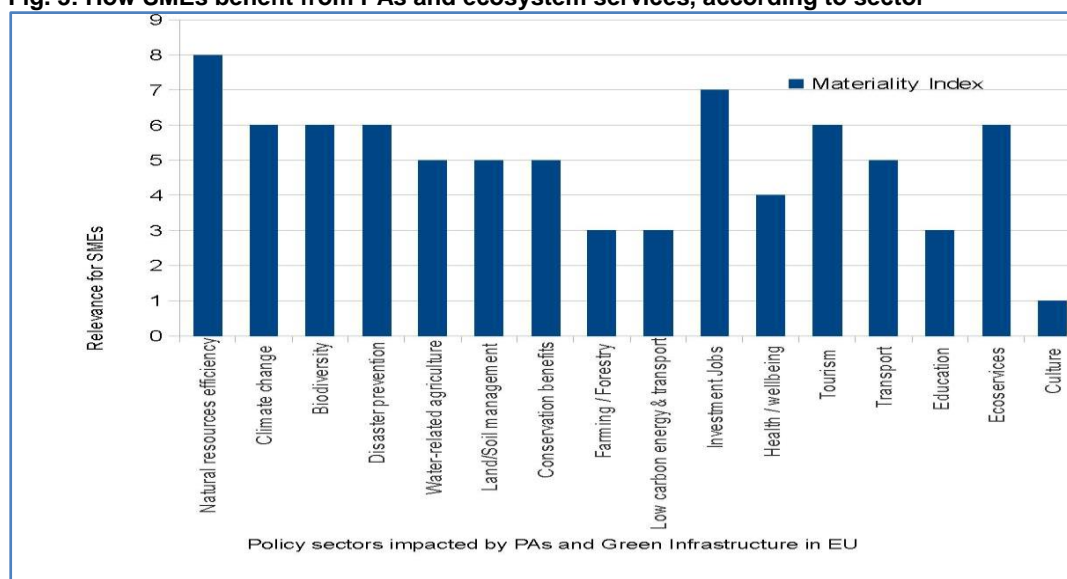
Source: LinkPAs project elaboration based on EC 2013, Bishop 2012, WBCSD 2011)

As can be inferred, the list of the most "material" policy-impacted sectors for businesses (regardless of the industry they refer to) includes those that relate to natural resource efficiency, investment and jobs creation, followed by climate change, biodiversity, disaster prevention, tourism and ecoservices. These sectors show a *higher level of materiality* for SMEs.

The most important material sectors for SMEs have been identified by considering those policy sectors most likely to be impacted by GI and NPAs (as suggested by EC 2013; cf. also Ch. 2). These sectors (SIS) and objectives (SPO) have been defined as "strategic" (Table 7)

Tab. 7: Strategic impact sectors (SIS) and strategic policy objectives (SPO) for NPAs and Green Infrastructures (GI)

NPA / Green Infrastructure Strategic Impact Sectors (SIS)	Strategic Policy Objectives (SPO)
Enhanced efficiency of natural resources	Maintaining soil fertility
	Ensuring biological control
	Increasing pollination
	Storing freshwater resources
Investment and employment	Conveying a better image of NPAs
	Increasing investment
	Increasing employment
	Increasing labour productivity
Climate change mitigation and adaptation	Improving resilience to deal with climate impact
	Reducing GHGs
	Improving temperature control
	Improving storm damage control
Disaster prevention	Ensuring erosion control
	Reducing risk of forest fires
	Reducing flood hazards
Biodiversity and conservation benefits	Sustaining and improving biodiversity
	Promoting values relating to habitats, species and genetic diversity
	Conserving habitats, species and genetic diversity
Tourism & recreation	Making existing destinations more attractive
	Increasing the range and scope of recreational opportunities
Ecoservices	Resilience

Source: LinkPAs project based on EC 2013, Bishop 2012, WBCSD 2011)

5.2 PAs as a source of business opportunities: industry- and opportunity-based analysis

Biodiversity loss and ecosystem decline are linked to major trends affecting businesses (e.g. social, economic and environmental change). Impacts and dependencies can affect the competitive position and performance of a company. Businesses face several risks (WRI et al. 2008) that may decide their success or failure. For instance, costumers' preferences may be influenced by the company's willingness to commit to biodiversity and offer ecosystem services (Bishop 2012). Public perception of business, corporate reputation and ability to maintain the legal or social "license to operate" may depend on the impact that a company has on the environment. Table 8 details the main opportunities that ecosystem-based approaches can offer to businesses (Bishop 2012). The potential benefits that SMEs (by category) can obtain have been estimated by considering the "external PA environment". The analysis shows that the external PA environment can have a greater impact on some industries than others. This is also likely to depend on the fact that the industries showing a greater impact are more dependent on their PA environment that those showing a less marked impact. Industries such as water supply and management, tourism and forestry show a higher interest in the potential benefits they can obtain from their collaboration with PAs. It is generally agreed that businesses can enhance their economic performance by integrating biodiversity into a business's decision-making processes (e.g. by reducing risk and costs, increasing revenues, improving products, etc.). Businesses can also exploit the potentially enormous opportunities that biodiversity can

offer as regards to creating new products and services. Moreover, scaling up new markets for biodiversity and ecosystem services could provide major business opportunities and help businesses obtain additional funds to enhance biodiversity. As a matter of fact, such opportunities are different depending on the industry considered (Bishop 2012); hence, they have been lumped under homogenous categories (Table 8) and analysed per relevant industry.

Tab. 8: Business opportunities from ecosystems and their services for SMEs

Broader categories of Business Opportunities	Business Opportunities (detail)
Operational	Increasing quality, decreasing cost of inputs
	Increasing output or productivity
	Sustainability of business operations
	Supply chain opportunities
Regulatory and legal	Lower transition costs in anticipating new policies
	Mitigation of risk due to environmental disasters
Reputational	Improved brand or image
	Attracting new customers
	Reaching new niche markets
Markets and products	Changes in consumer preferences
	Purchaser requirements
Financing	Attracting growing SRI investment

Source: LinkPAs project adapted from Bishop 2012

Figure 4: Business opportunities for SMEs localised within PAs, by category of business opportunities (Source: LinkPAs Project, 2018)
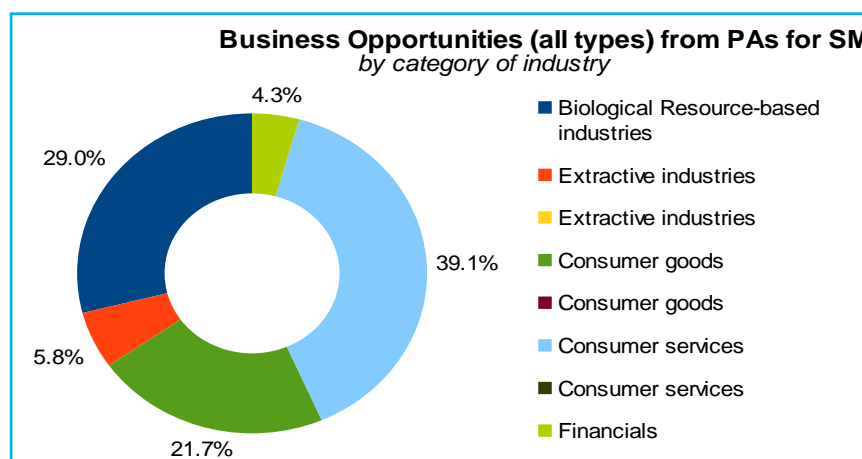
As shown in figures 4 and 5, business opportunities deriving from PAs may be mostly offered to SMEs related to industries such as consumer servic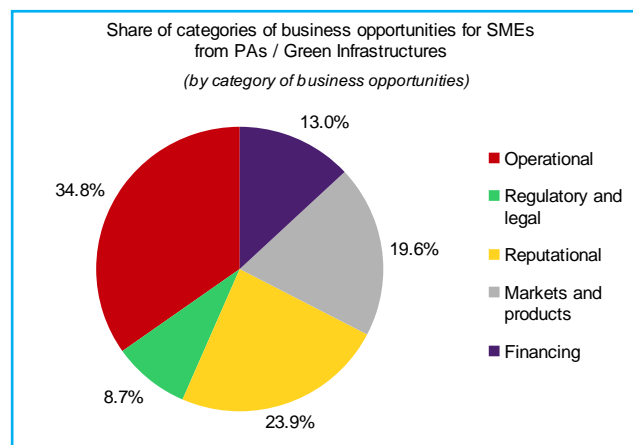es and consumer goods; SMEs operating within the biological resource-based industries are also likely to benefit positively from these opportunities.

SMEs share some categories of benefits (mainly deriving from ecosystem goods and services), which are reputational, operational, market or products-related.

Strategic policy sectors for territorial development in NPAs and their policy-making role

The qualitative analysis of the case studies under scrutiny has allowed LinkPAs to establish which policy domains are most likely to facilitate the mobilisation of SMEs and investments in the territories where NPAs exist.

Figure 5: Business opportunities for SMEs localised within PAs, per relevant industry

Share of categories of business opportunities for SMEs from PAs / Green Infrastructures
(by category of business opportunities)

- 13.0%
- 34.8%
- 19.6%
- 8.7%
- 23.9%

Legend:
- Operational
- Regulatory and legal
- Reputational
- Markets and products
- Financing

Source: LinkPAs Project, 2018

The shortlisted SIS included in Table 8 above have been chosen according to specific policy actions that aim at delivering SPO. Depending on their capabilities, different models of NPAs can contribute to steering territorial development (cf. Ch. 4), mainly by providing expert knowledge, experience and policy-making abilities in fields such as natural resource and biodiversity management, as well as sustainable regional

development. This proactive attitude is in line with the different strategic priorities and goals underlying the formal establishment of each NPA.

5.3 Mobilizing finance and investment for sustainable territorial development

In general, financing PAs and their buffer and bordering zones is the real challenge. This is mainly due to the structural shrinking of public funding for nature conservation and the increasing surface of PAs worldwide. Most importantly, PAs are mostly funded by the public sector, although schemes funded by private investors can also be found. The lack of funding for nature conservation and sustainable development in PAs has, however, led to the creation of innovative financial mechanisms (e.g. Integrated Territorial Investment, Social Investment Bonds) and funding earmarked for biodiversity conservation and enhancement (Cetara 2014). Although many PAs still rely massively on public funds, others have chosen to seek support from private funds so as to mobilise private investment; these funds are also used in part for PAs to achieve financial sustainability. It is widely agreed that most funds for conservation will continue to be public, but several initiatives coming from the private sector are driven by the existing and potential benefits that biodiversity can offer in terms of business risk management and CSR policies. Put more simply, new measures aiming at biodiversity conservation and the positive exploitation of natural capital should be implemented.

The LinkPAs Target Analysis has focused on the special features of PAs relating to nature protection regulations. In particular, it has concentrated on how NPAs can assert their role in facilitating shared conservation and regional development goals by enhancing their local assets and natural capital. NPAs' goals are achieved through voluntary actions and public policy that we assume to be primarily concentrated in the identified SIS, which aim to achieve their SPO. Thus, the approach proposed in this report suggests mobilising funds to be invested in the territories of the PAs and their surrounding regions. This approach is grounded in the specific natural and "governance" characteristics of each PA and NPA and uses the policy instruments available to achieve a set SPO, i.e. programming and planning strategies, as well as documents at different levels.

5.4 Recommendations for the integration of NPAs into regional policy-making for sustainable territorial development

Considering all the above, it is recommended that actions mobilising investment within PAs and the surrounding regions should take into account:

1. Financial policies and instruments addressing SIS and SPO;
2. Assets, natural capital and cultural heritage localised within PAs;
3. Conservation and territorial development goals of NPAs;
4. Governance and institutional models and mechanisms of NPAs;
5. The decision-making capacities of NPAs in specific policy and institutional contexts;
6. Regional policy instruments (programmes, plans, strategic documents) relating to SIS.

Some preliminary recommendations for facilitating the role of NPAs, therefore, are listed below:

1. *examine well-focused financial programmes and schemes with a regional or thematic scope, and investigate their accessibility to NPAs and their members;*
2. *before recommending any particular strategy or action, survey the natural capital endowment (i.e. natural and cultural heritage, economic and natural assets, ecosystem goods and services, etc.) for each PA or NPA;*
3. *identify and prefer strategies and actions in line with, or at least not in conflict with, the conservation and regional development goals at basis of the PAs and NPAs under inquiry;*
4. *for each model and specific NPA, carefully assess the distinctive characteristics of each internal governance scheme (including all members and institutions involved); investigate the existing formal and informal relations with decision-making bodies and influential stakeholders that contribute to real decision-making processes within policy and institutional contexts of NPAs (e.g. consultative or deliberative power, influence on binding decisions relating particularly to investment mobilisation and significant policy changes, etc.);*
5. *encourage good practices collection and continuous information exchange, which can help to detect existing trends in relation to the SMEs' interests; analysis should be carried out according to different industries, which can help to better understand the benefits deriving from the natural capital found in PAs / NPAs and the strategic advantage obtained in investing in the PAs and their surrounding regions;*
6. *identify effective market-based schemes and mechanisms available within the private sector (particularly in the financial industry) to support private investment in biodiversity and natural capital; assess the coherence of SPO and programming/planning documents with market evolution and innovation; eventually, seek the consistent alignment of both domains (biodiversity and natural capital)*
7. *investigate the procedures and timing that can contribute to modifying and integrating the SIS, along with emerging policy innovations aimed at mobilising local actors and investments. To this end, consider the existing regional policy instruments (i.e. programmes, plans, strategic documents) relating to SIS; this should be done by pinpointing the distinctive features of each NPA, its know-how and expertise, as well as considering the characteristics pertaining specifically to the NPAs' institutional members.*

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List of Annexes

Annex 1: Overview NPA

Annex 2: List of documents for case studies

Annex 1: Overview NPAs

N.	Network	Territorial level I/EU/T/TB/N/SN	Legal framework	Geographical/Administrative area	Bodies/authorities involved	Management aspects	sectoral/multisectoral	objectives	activities
1	ALPARC - Alpine Network of Protected Areas	T	Association under French law established in 2013. In the same year it signed a Memorandum of Cooperation with the Permanent Secretariat of the Alpine Convention	Alpine Convention border	Associated PAs and PAs within the perimeter of the Alpine Convention	Managed by a Council composed of managers of the Alpine PAs and representing by President. The General Assembly is where all members participate, and the Board acting as one executive bodies. The Coordination unit manages the implementation of joint projects.	M	Implementing Art. 11 and 12 of the "Nature protection and landscape conservation" Protocol of the Alpine Convention with the aim to establish a pan-alpine ecological network	- Developing research and projects on biodiversity and ecological connectivity, regional development and enhancing life quality - Fostering mountain cooperation and partnerships among protected areas - Educational activities and raising awareness on biodiversity and ecological networks
2	CNPA - Carpathian Network of Protected Areas	T	Established in 2006 by the Kiev Conference of the Contracting Parties of the Carpathian Convention	Carpathian Convention border	PAs within the perimeter of the Carpathian Convention	The CNPA's Coordination Unit is responsible for coordinating activities and to produce reports and recommendations to be submitted to the Carpathian Convention	M	Implementing the Carpathian Convention and fostering cooperation between PAs in the Carpathians and other mountain ranges for sustainable development in the Carpathians	- Fostering closer cooperation among Carpathian protected areas, including monitoring large carnivores, forest management, developing sustainable tourism and habitat conservation.
3	OSPAR - Network of Marine Protected Areas	I	Established in 2003 by the OSPAR Ministerial Meeting adopting the Recommendation 2003/3 on a network of marine protected areas	OSPAR Convention border	Marittime PAs (MPAs) within the perimeter of the OSPAR Convention	The Contracting Parties of the OSPAR Convention are the bodies in charge for the implementation of the MPAs Network. Guidances and background documents have been developed in order to facilitate the processes.	S	Implementing the OSPAR Convention, especially contributing to protect, conserve and restore species and habitats, and establishing an ecologically coherent network of MPAs in the North-East Atlantic	- Assessing the ecological coherence and management of MPAs was based on OSPAR's principles for an ecologically coherent network of MPAs. 4. Developing periodic Status report for MAPs, increasing the OSPAR MPA database, developing tools for MPAs

4	DANUBEPARKS Network	T	Established in 2007 by signing the Declaration of Tulcea. An Association was founded in 2014.	9 Countries sharing Danube river (Romania, Serbia, Hungary, Croatia, Slovakia, Austria, Bulgaria, Germany, Moldova)	Managing bodies of 16 PAs,represented by different partner institutions (public authorities, public enterprises, NGOs)	According to the Associations' Statues, the Management Board is the elected body steering the operational work of the organisation, it has to be elected every three years by the General Assembly.	S	Enhancing nature conservation of the Danube River Protected Areas and their management thus promoting sustainable development	- Developing pilot projects; implementing common plans locally and across the Danube River - Improving nature protection and strengthening cooperation - Making more efficient use of national and local resources and enhancing capacity building in the management of protected areas
5	Barents Protected Area Network - BPAN	I	Set up in 2010, BPAN is an initiative of the Barents Euro-Arctic Council (BEAC) Working Group of Environment.	Barents Euro-Arctic Council (BEAC) border. It involves four countries (Finland, Norway, Russia and Sweden).	PAs within the perimeter of Countries of the Barents Euro-Arctic Council	The BPAN is being implemented by the nature conservation authorities, scientific institutes and NGO's of Finland, Sweden, Norway and Northwest Russia.	S	Enhancing the conservation of biodiversity and adaptation and mitigation of climate change in Barents Region. t also supports natural ecosystems and maintains ecosystem services.	- Development of recommendations for strengthening the Protected Area Network in the Barents Region - Development of regional pilot projects on threatened high conservation value areas - Communication and awareness raising
6	MAIA - Marine protected areas in Atlantic arc	I	Set up in 2010 by France, Spain, Portugal and the UK	It covers three of the five regions defined by the OSPAR Convention; and the areas of three Regional Advisory Councils	Marine protected areas in Atlantic arc	Partly resulting from exchanges held within OSPAR, MAIA works in close connection with the executive secretariat, namely within the framework of activities of the Intersessional Correspondence Group on Marine Protected Areas (ICG_MPA).	S	Enhancing the implementation of the OSPAR recommendations and guidelines relatives to MPAs in the Atlantic arc.	- Promote sharing of experience and approaches; - Compiling and analysing data relative to MPA management - Involving the stakeholders in MPA designation and management processes - Establishing indicators in the MPAs and monitoring strategies.
7	NPAs under the UNESCO's Man and the Biosphere Programme (MAB)	TB/SN	NPAs established since 1971 under the UNESCO's Man and the Biosphere Programme (MAB)	It depends on NPAs.	Biospheres reserves sharing terrestrial and coastal/marine ecosystems, or a combination	Management and coordination structures is defined by local authorities competent for the area	S	MAB is an Intergovernmental Scientific Programme that aims to establish a scientific basis for the improvement of relationships between people and their environments.	- Development of methods for the sustainable management of natural resources and to establish a new relation between people and the environment. - Development of methods support of local employment initiatives. - Monitoring biodiversity

8	European Park Marittime - Mercantour	T	European Grouping of Territorial Cooperation established in 2013	Transboundary area of the European Park Marittime - Mercantour	Alpi Marittime Natural Park (Italy) Mercantour National Park (France)	The director and deputy director for the EGTC are also the directors of the two founding member parks. EGCT compiles an Action Plan every 5 years	M	Fostering and promoting cooperation among transboundary PAs. Enhancing the coordination and management of the transboundary area	Project management in the following areas: -Monitoring and protection of biodiversity - Restoration and enhancement of natural and cultural landscapes -Environmental education and bilingualism - Sustainable mobility - Agriculture and sustainable tourism
9	EUROPARC Federation	EU	Federation of European PAs under German law established in 1973	37 Countries	Management bodies of PAs, regional and provincial authorities, associations, institutions	The Federation is organised in 8 regional and national sections. Thematic Commissions are established (6 so far, as Agriculture and Protected Areas, Natura 2000, etc.)	M	Improving the management of PAs in Europe through international cooperation	- Strengthening cooperation and fostering experience exchange among PAs and responsible authorities across Europe - Developing guidelines, reports and tools fostering the effectiveness of management of PAs - Developing initiatives in the fields of sustainable tourism in PAs and Natura 2000 sites (e.g. the European Chart of Sustainable Tourism - ECST)
10	MedPAN - Network of Mediterranean Marine Protected Areas	T	Association under French law established in 2008	19 Mediterranean Countries	Management bodies of MPAs, International, national and regional administrations, associations and NGOs	Main governance bodies are the General Assembly, Board of Directors, Secretariat, Scientific Committee and Advisory Committee	M	Fostering cooperation among MPAs and giving them support to manage activities. Promoting and implementing cooperation programmes and strategies, improving NPAs effectiveness	- Encouraging protected areas to participate in European and local projects - Reporting on the status of MPAs in the Mediterranean - Developing MAPAMED, the database of Mediterranean Marine Protected Areas, in collaboration with RAC/SPA - Facilitating experiences exchange among managers (workshops, exchange visits, trainings)

11	SAPA Network - System of Italian Alpine Protected Areas	SN	Memorandum of Understanding signed in 2013	Italian Alpine area under the Alpine Convention (Italy)	Management bodies of PAs, regional and provincial authorities, associations, research centers, public and private institutions (e.g. Federparchi, ISPRA, Eurac research)	The Network is managed by a Board of members. This coordination board is linked to the Italian Delegation in the Alpine Convention (IMELS). It compiles Action plans defining NPAs' main activities	M	Contributing to implementing Alpine Convention Protocols relating to PAs within the Italian Alpine area. Fostering international cooperation among mountain PAs	- Implementing the Protocols of the Alpine Convention in the Italian Alpine Region - Promoting studies, actions, data collection and data sharing within the Italian Alps - Strengthening cooperation among Italian alpine protected areas, fostering their participation in international networks
12	European Geoparks Network - EGN	EU	Network established in 2000 by the European Geoparks charter. Since 2005 with the signature of the the Madonie declaration EGN is recognized as the official branch of the UNESCO – Global Geoparks Network in Europe	EU 28	UNESCO Geoparks located in Europe (Institutional Members). Are foreseen also Individual, Honorary and Cooperating Members (e.g. International Organizations, institutions or persons)	The EGN is composed by a Coordination Committee, an Advisory Committee, an Operational Secretariat and Working groups. European Geoparks Conference and Meetings are organized regularly.	S	Protection of geological heritage and the promotion of sustainable development of their territories in Europe	- Promotes geotourism as a driver for economic development and job creation - Contributes to informal and formal education by sharing their accumulated scientific, historical and cultural knowledge, skills and values with visitors of all ages - Promotes the development of the science of geology - Combines the protection and promotion of the geological heritage with sustainable local development

Annex 2: List of documents for case studies

ALPARC

ALPARC Strategy 2016-2021 available in French, German, Slovenian, Italian at http://www.alparc.org/the-alparc-network/alparc-s-objectives

Plan d'action ALPARC 2016 – 2021 available in French, German, Slovenian, Italian at http://www.alparc.org/the-alparc-network/alparc-s-objectives

ALPARC Political Demands available in English and German at http://www.alparc.org/the-alparc-network/alparc-s-objectives

ALPARC Vision available in French, German, Slovenian, Italian at http://www.alparc.org/the-alparc-network/alparc-s-objectives

Activity programme 2016-2021 available in English at http://www.alparc.org/the-alparc-network/alparc-s-objectives

Protocol "Nature Protection and Landscape Conservation" to the Alpine Convention available at http://www.alpconv.org/en/convention/protocols/Documents/protokoll_naturschutzGB.pdf

Multiannual Work Programme of the Alpine Conference 2017-2022 (Alpine Convention, 2016) Alpine Convention available at http://www.alpconv.org/en/convention/workprogramme/Documents/MAP2017-22_en.pdf

Alpine Convention - Mandate Platform Ecological Network available at http://www.alpconv.org/en/organization/groups/WGEcologicalNetwork/Documents/ECONET2 017-2018_EN.pdf

EUSALP - 3rd Thematic Policy Area "Environment and Energy"- Action Group 7 "To develop ecological connectivity in the whole EUSALP territory" https://www.alpine-region.eu/action-group-7

EGCT Alpi Marittime/Le Mercantour

Statute of EGCT "Parc européen/Parco europeo Alpi Marittime Mercantour" (2013) - Statuto - Gruppo europeo di cooperazione territoriale "Parc européen/Parco europeo Alpi Marittime Mercantour" Statuto – available at http://fr.marittimemercantour.eu/media/380b48f1.pdf

Constitutive Convention of of EGCT "Parc européen/Parco europeo Alpi Marittime Mercantour" (2013) - Convenzione Costitutiva - Gruppo europeo di cooperazione territoriale "Parc européen/Parco europeo Alpi Marittime Mercantour" available at http://fr.marittimemercantour.eu/media/2ea922ed.pdf

Candidate Dossier for adopting ECST - European Charter for Sustainable Tourism in Protected Areas Dossier De Candidature CETD "Promouvoir à l'échelle des parcs Mercantour et Alpi

Marittime, un tourisme durable à forte valeur ajoutée locale qui contribue au maintien de la biodiversité, des paysages et à la préservation des patrimoines culturels" available at http://fr.marittimemercantour.eu/media/2d1326a0.pdf

http://it.marittimemercantour.eu/progetti/alcotra-2007-2013-progetto-turismo

Transborder Integrated Plan - Piano Integrato Transfrontaliero Alpi Marittime - Mercantour, financed by tranborder cooperation programme ALCOTRA 2007-2013,available at http://it.marittimemercantour.eu/progetti/pit,

http://it.marittimemercantour.eu/media/177dbf87.pdf

Abruzzo Region

A strategy for inner areas in Italy: definition, objectives, tools and governance (2014) - http://www.agenziacoesione.gov.it/opencms/export/sites/dps/it/documentazione/servizi/materi ali_uval/Documenti/MUVAL_31_Aree_interne_ENG.pdf

Abruzzo Landscape Plan – Preliminary document (2004) - PIANO PAESAGGISTICO DLgs n. 42 del 22 gennaio 2004 e ssmm Artt. 142 e 143 RAPPORTO PRELIMINARE D.Lgs152 e ssmm e i, art 13, available at https://www.regione.abruzzo.it/system/files/urbanistica-territorio/PPR/RapportoPreliminare27_10.pdf

Abruzzo Regional Energy Plan (2009) - Piano Energetico Regionale della regione Abruzzo available at https://www.regione.abruzzo.it/content/pianificazione-energetica

Ecological Impact assessment of Regional Waste management Plan on Natura 2000 sites (2017) - Adeguamento del Piano Regionale di Gestione dei rifiuti. Studio di incidenza sui siti della rete natura 2000, Dgr. n. 4345/2001 e Dgr n. VII/14106/2003 available at http://www.regione.abruzzo.it/xAmbiente/asp/redirectApprofondimenti.asp?pdfDoc=xAmbient e/docs/rifiuti/505/8Studio_Incidenza_Ecologica_072017.pdf

Guidelines for elaborating Management plans of Natura 2000 sites (2002) - LINEE GUIDA PER LA REDAZIONE DEI PIANI DI GESTIONE DEI SITI NATURA 2000 NELLA REGIONE ABRUZZO available at http://www.regione.abruzzo.it/xAmbiente/docs/zpsSic/LG_PianiGestSICabruzzo.pdf

Guidelines for planning Wind power plants in Abruzzo Region (2007) - Linee Guida atte a disciplinare la Realizzazione e la Valutazione di Parchi Eolici nel territorio abruzzese approved with D.G.R. n. 754 del 30 Luglio 2007 available at https://www.regione.abruzzo.it/content/pianificazione-energetica

Hydrogeological asset plans (2007) - Piani di assetto idrogeologico (Piano Stralcio di Bacino per l'Assetto Idrogeologico dei Bacini Idrografici di Rilievo Regionale Abruzzesi) http://autoritabacini.regione.abruzzo.it/index.php/pai

In Abruzzo Region are envisaged 4 "area strategy": Basso Sangro - Trigno; Val Fino - Vestina; Valle Roveto; Subequana; Alto Aterno-Gran Sasso-Laga. Area Strategy for Abruzzo Region

(2017) - Regione Abruzzo Strategia Regionale per le Aree Interne Strategia area Basso Sangro-Trigno

http://www.agenziacoesione.gov.it/opencms/export/sites/dps/it/documentazione/Aree_interne/ STRATEGIE_DI_AREA/Strategie_di_area/Abruzzo/Strategia_Area_26gen17.pdf

Italian National Biodiversity Strategy (2010) – Strategia Nazionale per la Biodiversità http://www.minambiente.it/sites/default/files/archivio/allegati/biodiversita/estratto_strategia_en g.pdf

National Strategy for Sustainable Deevlopment (2017) – Strategia Nazionale per lo Sviluppo Sostenibile   available   at http://www.minambiente.it/sites/default/files/archivio_immagini/Galletti/Comunicati/snsvs_otto bre2017.pdf; Related General Nationa objectives available in English at http://www.minambiente.it/sites/default/files/archivio/allegati/sviluppo_sostenibile/obiettivi_eng .pdf

Plan of 'Gran Sasso and Monti della Laga' National Park (1999) not completely in force – Piano del Parco Nazionale del Gran Sasso e Monti della Laga http://www.gransassolagapark.it/pagina.php?id=16

Plan of 'Maiella' National Park (2009) – Piano del Parco Nazionale della Maiella, documents available at http://www.parcomajella.it/ente-parco/piano-e-regolamento/piano-del-parco/ as well as other Planning tools within the Park area http://www.parcomajella.it/ente-parco/piano- e-regolamento/

Plan of Abruzzo, Lazio and Molise National Park (2010) not completely in force – Piano del Parco Nazionale d'Abruzzo, lazio e Molise, available at http://www.parcoabruzzo.it/pagina.php?id=424, as well as other Planning tools within the Park area http://www.parcoabruzzo.it/pagina.php?id=344

Regional air quality plan recovery Piano di Risanamento Qualità dell'Aria (2007) https://www.artaabruzzo.it/download/aree/aria/20130312_qa_all_n05.pdf

Regional Environmental protection Three-year plan - Piano Regionale Triennale Tutela Ambiente 2006-2008 (2013-2015) available at https://www.regione.abruzzo.it/content/piano- regionale-triennale-tutela-ambiente-2006-2008

Regional forest fire control plan (2011) – Piano Antincendio Boschivo regionale; Specific Plans for National Parks in the Abruzzo Region, available at https://protezionecivile.regione.abruzzo.it/index.php/piano-a-i-b

Regional Law n.38/1996 – Framework law for protected areas in Abruzzo Region aimed to Appennine European Park (Legge Regionale 21 giugno 1996, n. 38 "Legge-quadro sulle aree protette della Regione Abruzzo per l'Appennino Parco d'Europa") L.R. n.38/1996 envisaged for each Regional Natural Reserve the adoption of a Natural Layout Plan (PAN)

Regional Law on Forestry and pastures (2014) - **Legge Regionale 4 gennaio 2014, n.** Legge

organica in materia di tutela e valorizzazione delle foreste, dei pascoli e del patrimonio arboreo della Regione Abruzzo)with Regional forestry plan Piano regionale forestale envisaged by the Law

Regional Reference Framework (2007) Quadro di Riferimento Regionale (QRR) approved in compliance with Agreement between Region and Parks- – Regional Policy for territorial planning and protection. available at https://www.regione.abruzzo.it/content/quadro-di-riferimento-regionale

Regional Strategy for adaptation to climate change (2015) - Decree of the Regional Executive n° 308 of 29 April 2015 Abruzzo Resilient Region: realization of , the Regional Plan for Adaptation to Climate Change Piano di adattamento ai cambiamenti climatici, Abruzzo resiliente Documento programmatico 2015 available at http://www.efficienzaenergetica.enea.it/regioni/abruzzo/immagini/Doc.ProgrammaticoAprile20 15.pdf

Regional Waste management plan (2017) – Piano Regionale di Gestione dei Rifiuti available at
http://www.regione.abruzzo.it/xAmbiente/asp/redirectApprofondimenti.asp?pdfDoc=xAmbient e/docs/rifiuti/505/5Documento_Piano_072017.pdf

Rural Development Programme (Regional) Abruzzo – Programma di Sviluppo Rurale (2017) - available at https://www.regione.abruzzo.it/system/files/pagina-base-psr/programmaCompleto.pdf

Smart Specialization Strategy - Regional Innovation Strategy (2017) - Strategia di Innovazione regionale available at https://www.regione.abruzzo.it/system/files/europa/porFesr2014-2020/atti-amministrativi/DGR281-2017.zip

Statute of the 'Sirente Velino' Regional Park (1998) – Statuto del Parco Regionale Sirente Velino, available at http://www.parcosirentevelino.it/pdf/Statuto.PRSV.pdf

Water protection plan (2015) - Piano di Tutela delle Acque della Regione Abruzzo, available at http://www.regione.abruzzo.it/pianoTutelaacque/

Razlog Municipality

Bulgaria Rural development Programme 2007-2013 (2011) available at http://www.naas.government.bg/en/Documents in Bulgarian Language

Bulgaria Rural development Programme 2014-2020 (2015) available in Bulgarian Language http://www.prsr.bg/attachment/nb_docs/file_96.rar in Bulgarian Language

Information system of protected area in the ecological network Natura 2000 in Bulgaria available at http://natura2000.moew.government.bg/Home/Natura2000ProtectedSites in Bulgarian Language

Plan for development of Razlog Municipality 2014-2020 (2013). Available at

http://razlog.bg/administracia/ikonomicheski-deinosti/item/4149-obshtinski-plan-za-razvitie-na-obshtina-razlog-2014-2020g in Bulgarian Language

Management Plan of Rila National Park 2015-2024 – Draft. Available at http://rilanationalpark.bg/assets/userfiles/DZZI/PU_RILA_20151018_DL.pdf in Bulgarian Language

Management Plan of Pirin National Park 2014-2023 available at http://www.pu-pirin.pirin.bg/images/dokumenti_do_DNP-Pirin/PUNPP_16.05.2016/00-PUNPP_16.05.2016-dnpp.pdf ; http://pirin.bg/wp-content/uploads/2017/07/Plan-za-uprav.pdf in Bulgarian Language

Other reference documents for Razlog Municipality case study

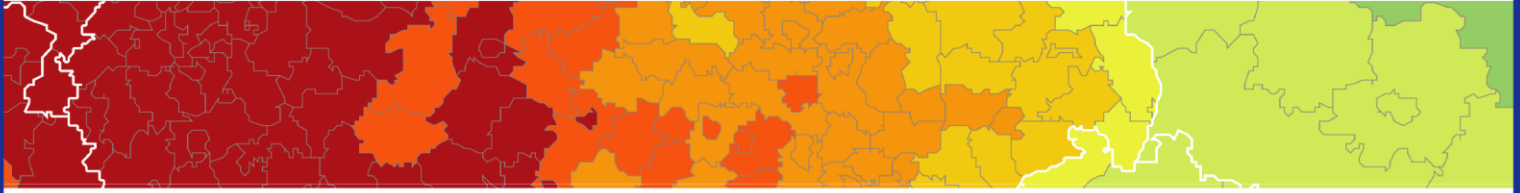Council of Europe. Convention on the Conservation of European Wildlife and Natural Habitats. Bern, 1979.

Council of the European Communities. Directive on the Conservation of Natural Habitats and of Wild Fauna and Flora. 21 May 1992.

EUROPARK Federation, (2001): Loving them to death – Sustainable tourism in Europe's Nature and National

Parks European Commission, (2000): Managing Natura 2000 Sites.

IUCN (1999): Richtlinien für Management-Kategorien von Schutzgebieten, FONAD

Sustainable Mountain Regions: Challenges and Perspectives in Southeastern Europe. 2016. Editors: Koulov, Boian, Zhelezov, Georgi (Eds.). Doi: 10.1007/978-3-319-27905-3