

THE EU BIODIVERSITY POLICY LANDSCAPE

green  alps



EXISTING POLICIES AND THEIR PERCEIVED RELEVANCE
AND IMPACT IN KEY SECTORS IN THE ALPINE REGION



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EXECUTIVE SUMMARY

This report identifies biodiversity-relevant EU policies and programmes, and potential gaps concerning ecological connectivity and the provision of ecosystem services, based on a desk review of relevant programmes, policies and results of former European Territorial Cooperation (ETC) projects in the Alpine Space. In addition to desk-based research and feedback obtained through trans-sectoral workshops, an “expert survey” was designed to obtain feedback on the EU policy environment and on experiences with EU transnational projects from people with ground-level expertise in different sectors. Our work also looked at whether the needs expressed by pilot regions (in workshops organised by greenAlps project partner EURAC) conform to Alpine Space and EU policies.

Furthermore, we formulated recommendations on how to channel substantial funding for biodiversity conservation goals in the Alps. These are presented in a separate report.

KEY POINTS

- 1** A rich crop of policy instruments (conventions, directives, strategies and policies) directly or indirectly provide recommendations for the goals of conserving biodiversity, maintaining ecological connectivity and preserving ecosystem services. There is, however, insufficient progress in translating EU policies and strategies to a national and regional level. Implementation in Member States lags behind targets and recommendations.
- 2** Numerous policies do not have legally binding enforcement mechanisms. Those that do (e.g. the Birds Directive and the Habitats Directive) nevertheless contain important non-binding elements and are insufficiently implemented. Implementation of the EU biodiversity strategy and related policies at national level is not consistent.
- 3** The principal focus within the EU and its Member States is on economic growth, and the value of biodiversity and ecosystems is often under-appreciated (undervalued or grossly rebated). Other sectoral objectives tend to override nature conservation objectives.
- 4** Ecosystem services-based approaches could offer new impulses that demonstrate the real value of nature to society. Such approaches need to offer local stakeholders (e.g. landowners) direct economic benefits and make clear the often longer-term indirect benefits of biodiversity.
- 5** Key sectors (environment, agriculture, forestry, fisheries, energy, transport, construction, tourism and spatial/land-use planning) sometimes have conflicting goals and insufficiently coordinate actions. Integration of biodiversity targets into other (non-environmental) sectors is patchy. While there are numerous potential synergies between biodiversity conservation, spatial planning, tourism and agriculture, these are currently under-utilised.
- 6** EU projects are relatively abstract, and local actors are not necessarily included. The demand for transnational collaboration in the above-mentioned topics requires political support at ministerial level and by regional administrations, which in turn would have to be involved at the project development stage.
- 7** Some of the perceived challenges that make regional or transnational cooperation for ecological connectivity difficult include conflicting laws and regulations in different regions/countries, the generally localised nature of spatial and infrastructure planning, a lack of cooperation between different administrative levels and a general difficulty dealing with participatory processes.
- 8** Transnational collaboration on nature conservation requires political support at ministerial level. It clearly relates to the European Community's macro-regional strategy. A guiding, integrated, trans-sectoral landscape vision for the Alps needs to be developed, discussed and approved by policy makers and respective governments.
- 9** Science can provide a foundation for concrete implementation strategies, much scientific information is available, but often not in a format that is understood by decision-makers or at a grass roots level.
- 10** Much work in the biodiversity policy arena has already been previously carried out within the EU. A sample of other potentially useful tools and projects relating to biodiversity policy is listed in Annex 4 of this report. When developing future project proposals it is necessary to take complete stock of what is available to avoid further duplication of effort.

INTRODUCTION

2010 marked the International Year of Biodiversity, with many awareness-raising campaigns and ambitious activities around the world and within the European Union (EU). In the same year, the EU's original Biodiversity Strategy with 2010 targets ended, with the EU clearly having failed to achieve the goal of halting the loss of biodiversity and the degradation of ecosystem services, despite both the Convention on Biological Diversity (CBD) and the EU Habitats Directive and Birds Directive having been in operation for close to two decades. The EU followed up the original strategy with the new EU Biodiversity Strategy to 2020, which is closely modelled on CBD targets. Apart from global and EU-wide legal instruments and policies, there are also some regional instruments in the Alps, most importantly the Alpine Convention.

Progress has been made at a global level on creating science-policy interfaces, for example the international programme of biodiversity science *Diversitas*, established in 1991 by three international organisations (Diversitas 2014) and the *Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES)*, which was established in April 2012 with a similar purpose, namely "to strengthen capacity for the effective use of science in decision-making at all levels" (IPBES 2014). Also relevant for biodiversity conservation globally and within the EU, several research institutes and organisations have made efforts to make biodiversity science accessible to policy makers with a focus on particular thematic areas. For example, in 2010 the United Nations Educational, Scientific and Cultural Organization issued a policy brief on Biodiversity, Health and Wellbeing (UNESCO-SCOPE-UNEP 2010), and in 2014 the United Nations Environment Programme commissioned a report and accompanying policy brief on the importance of considering biodiversity within climate change policies, programmes and projects (Mant et al. 2014). Also outside the EU, in Switzerland the Swiss Academy of Sciences hosts the *Platform Science and Policy*, which aims to "contribute knowledge to the discourse of politics, administration, economy and society" (SCNAT 2014). The Swiss Biodiversity Forum and the Research Council of the Swiss National Park are members of the Platform's working groups.

These efforts notwithstanding, policy makers still appear to have difficulty in quickly identifying relevant research projects and accessing information in policy-relevant formats (Neßhöver et al. 2013), and the decline of biodiversity continues globally (CBD 2010).

GOALS

This report was prepared as a contribution to greenAlps Work Package 5 “Capitalization & Integration”, Action 5.1 – Policy analysis. Our analysis provides an overview of policies and findings that influence and can be used to manage Alpine ecosystems and biodiversity. Our work involved the identification of biodiversity-relevant EU policies and programmes, and of potential gaps concerning ecological connectivity and the provision of ecosystem services. Thus Activities 5.1.1 and 5.1.2 consisted of (5.1.1) a desk review of relevant programmes, policies and results of former European Territorial Co-operation (ETC) projects in the Alpine Space – the latter in cooperation with the European Academy Bolzano (EURAC) as leader of Work Package 4 on “Governance in pilot regions”, which was *inter alia* in charge of creating a database of results of relevant ETC projects (Action 4.1) – and (5.1.2) a gap analysis with regard to policy impacts on ecosystems and associated ecosystem services.

Activity 5.1.3 was an analysis of the EU Cohesion Policy 2014-2020 (the draft Common Strategic Framework) in the context of future programming potential for relevant projects on ecological connectivity and ecosystem services management in the Alpine region. In previous Operational Programmes of EU Structural Funds, thematic funding priorities were mostly targeted at sectoral policies in various Alpine countries. This sectoral approach was criticised in the ASP project ECONNECT (2008-2011) on ecological connectivity in the Alps, as connectivity and biodiversity are strongly impacted by the strategies and actions of other relevant sectors (e.g. transport, agriculture, forestry, energy and infrastructure). The project partners therefore wanted to investigate the ASP 2014-2020 approaches with regard to potentially attractive interfaces for biodiversity protection in all sectors.

Activity 5.1.4 verified whether the needs expressed by pilot regions (undertaken in Work Package 4) correspond to the Alpine Space and EU policy environment.

METHODOLOGY

Activity 5.1.1

Web-based research of EU and other websites (primarily [European Commission](#), [Biodiversity Information System for Europe \(BISE\)](#), [European Environment Agency](#), [OECD Environment page](#) and [EU Umweltbüro](#) (see, for example (BISE 2014a); EEA 2010; EEA 2013a; EEA 2013b; EEA 2013c; EU Umweltbüro 2013), all of which in turn link to other relevant pages and reports, and a general Google search (keywords: EU environment policy, EU biodiversity policy, EU agriculture policy) were used to assess the EU environment policy landscape.

Following this general review of EU-level and other global and regional environmental policy instruments, a cursory review of national level implementation was undertaken. This was based on the Environmental Performance Reviews carried out by the EU and the Organisation for Economic Co-operation and Development (OECD) for particular countries.

During the research, a number of potentially useful tools and projects relating to biodiversity policy were identified. Our resources did not permit any actual testing of the tools, but a list is included in Annex 3 (which does not claim to be exhaustive). We have included this list to emphasise that much work in the biodiversity policy arena has already been previously performed within the EU. When developing future project proposals it is necessary to take complete stock of what is available to avoid duplication of effort.

Activity 5.1.2

This activity analysed the relevance of EU environment policy instruments for the day-to-day work of people in key sectors that were identified as having a potential impact on biodiversity, ecological connectivity and ecosystem services. The sectors were identified based on partners' experience and the work of previous projects, in particular the Econnect project, and can broadly be summarised into the following categories.

- Economics
- Energy
- Environment
- Leisure and hospitality (tourism)
- Natural resources (agriculture, forestry, fishing and hunting)
- Regional planning (land use planning).



An “expert survey” was designed to obtain feedback from people with expertise in these different sectors. It was circulated online to potential respondents through partner networks (specifically to contacts of the Alpine Network of Protected Areas (ALPARC), the International Commission for the Protection of the Alps (CIPRA), EURAC and FIWI) and to participants of trans-sectoral workshops in Bolzano, Italy and Salzburg, Austria (Work Package 5) as well as participants of stakeholder workshops in Berchtesgaden, Germany and Triglav National Park, Slovenia (Work Package 4).

Activity 5.1.3

Desk research on existing policies, strategies and documents on biodiversity and ecological connectivity revealed a 2013 position paper published by the [European Network of Environmental and Managing Authorities](#) Working Group on the 2014-2020 Cohesion Policy & Biodiversity: (ENEA 2013). The [position paper](#) covers the main objective of Activity 5.1.3 and was therefore used as a basic source of information for the separate report prepared on the “Common Strategic Framework 2014-2020 & Biodiversity”.

Activity 5.1.4

This activity relied on the work of EURAC with the project’s pilot areas under Work Package 4, which produced “[needs assessment reports](#)” from these areas that are available on the [greenAlps project website](#) (greenAlps 2014). We essentially extracted information on needs that interact with the identified policies and verified whether there were any contradictions or expressed needs that are not reflected in the EU policy landscape.

RESULTS

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5.1.1 EU POLICIES AND NATIONAL IMPLEMENTATION

5.1.1.1 The most relevant EU policies

The web research yielded a rich crop of policy instruments (conventions, directives, strategies and policies) that directly or indirectly provide recommendations for the goals of conserving biodiversity, maintaining ecological connectivity and preserving ecosystem services. Those judged to have the greatest impact with respect to these goals are summarised in Table 1. Information sources are indicated where appropriate.

The most important international legal agreements for protected areas in the EU are the UN Convention on Biological Diversity and the EU Birds and Habitats Directives. Under these Directives the Natura 2000 network of protected areas was established. Additionally, there are a number of other EU environment policies, and policies from other sectors that mention or have an impact on biodiversity conservation, ecosystem services and ecological connectivity (Table 1).

The overarching [EU Biodiversity Strategy to 2020](#) (EC 2011a) is a comprehensive strategic document with six operational targets and 20 associated actions, which are closely modelled on the [Aichi targets](#) (BISE 2014a) of the [Convention on Biological Diversity](#) (UNCBD 1992). The EU targets and associated Aichi targets are shown in Annex 1 of this report. Useful lay summaries of existing EU legislation in all environmental matters can be found on the EU EUR-Lex website.

Table 1 - Existing relevant EU policies, initiatives and frameworks

<p>Global/beyond Europe: Multiple relevant conventions (Convention on Biological Diversity (CBD), Bern Convention, Ramsar Convention on Wetlands, Convention on Migratory Species, Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), United Nations Convention to Combat Desertification, European Landscape Convention, Convention Concerning the Protection of the World Cultural and Natural Heritage, regional and local level river basin conventions and mountains conventions, most importantly the Alpine Convention).</p> <p>Provisions in the UN Millennium Development Goals (MDGs), in particular Goal 7: Ensure environmental sustainability.</p>	<p>Conventions, once ratified by national governments, are supposed to be binding international legal instruments – but enforcement/penalty options are either limited or non-existent. Implementation has to happen at a national level, in some cases (e.g. Austria, which has a federal system) through provincial legislation. National governments report back annually to the CBD on progress in implementing obligations. At EU level, some policies and strategies have been elaborated based on such conventions. In particular, the EU Biodiversity Strategy 2020 is closely modelled on the CBD and its targets.</p> <p>At a global level, the eight UN Millennium Development Goals (MDGs) include environmental sustainability as Goal 7 (UN 2014). Target 7.B was aimed at achieving, by 2010, a significant reduction in the rate of biodiversity loss. Since then it has been realised that the deadline has passed and the goals have not been met, and a process is underway to define new Sustainable Development Goals. The current proposal includes Goal 15: Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss (UNDESA 2014).</p> <p>Specific to the Alpine region is the Alpine Convention, an international treaty between the Alpine countries (Austria, France, Germany, Italy, Liechtenstein, Monaco, Slovenia and Switzerland) and the EU, aimed at promoting sustainable development in the Alpine area and protecting the</p>
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EU Biodiversity Strategy to 2020
 "Our life insurance, our natural capital:
 an EU biodiversity strategy to 2020",
 incl. long-term vision of protecting
 and restoring Europe's biodiversity
 and its ecosystem services by 2050.
 (COM (2011) 244 final 3.5.2011)

interests of the people living within it. It addresses the environmental, social, economic and cultural dimensions. Its various protocols concern different aspects of sustainable development. All Alpine Space countries have ratified this Convention, and all except Switzerland have also ratified the Protocol on Conservation of Nature and the Countryside (Italy only ratified this Protocol in 2013.) (Alpine Convention 2014a)

The EU has established [more than 130 separate environmental targets and objectives to be met between 2010 and 2050](#) that potentially provide useful milestones in Europe's transition towards a "green economy". (EEA 2013a).

The Strategy is a contribution towards meeting the goals of the revised and updated Strategic Plan for Biodiversity, including the [Aichi Biodiversity Targets](#), for the 2011-2020 period. It includes a new vision: "By 2050, European Union biodiversity and the ecosystem services it provides – its natural capital – are protected, valued and appropriately restored for biodiversity's intrinsic value and for their essential contribution to human wellbeing and economic prosperity, and so that catastrophic changes caused by the loss of biodiversity are avoided". In other words, both the value of biodiversity for its own sake and its instrumental value for the good of humans are contained in the Strategy.

It acknowledges that the economic value of biodiversity is seldom captured in markets and strives to fully value nature's potential to contribute to EU strategic objectives (see various green growth strategies below). It is also cross-sectoral: it aims to integrate (e.g. through targeted Biodiversity Action Plans) biodiversity monitoring and reporting into EU legislation on nature, the Common Agricultural Policy (CAP), the Common Fisheries Policy, the Forestry Policy and the Cohesion Policy. In principle the strategy is comprehensive and contains valuable targets and recommendations, but it is non-binding, except through the application of the legal instruments on which the Natura 2000 network is built (see below). Some progress in following it up has been made, e.g. plans for green infrastructure, ecosystem assessment (platform in place, assessments ongoing) (BISE 2014b).

Action 7 of the Strategy aims to ensure "no net loss" of biodiversity and ecosystem services, by mitigating and offsetting the destruction of biodiversity and ecosystems due to economic development, in some places by protecting them and in others by enhancing them, as long as existing protection afforded by EU nature legislation (such as the Habitats Directive) is not impaired by such development. The EU has therefore commissioned an independent assessment of policy options (Tucker et al. 2014), which found that despite many measures within EU legislation designed to avoid any detrimental impact on biodiversity and ecosystem services, such measures are not always implemented effectively or sufficiently at the country level. The report points out the significant and widespread impact on biodiversity of agricultural, forestry and other land use activities, where there are policy gaps regarding the unavoidable impact of such activities outside Natura 2000 sites. At the time of writing, [a public consultation on the future EU initiative on No Net Loss of biodiversity and ecosystem services](#) was ongoing (deadline 17 October 2014).

<p>Birds Directive (2009/147/EC) (codified version of Directive 79/409/EEC as amended)</p>	<p>These are the binding legal foundations for the Natura 2000 protected area network. The Habitats Directive includes a requirement to monitor and protect species and habitats within and outside protected area networks throughout the EU area (Articles 11, 12 and 13 of the Habitats Directive). Furthermore, in Article 10 it recommends the coherence of the Natura 2000 network, but leaves this as a voluntary goal.</p>
<p>Habitats Directive (92/43/EEC)</p>	<p>Note: For all Directives (=legislation), the European Commission is responsible for ensuring legislation is correctly applied in Member States. It has the power to take legal action against any EU country that fails to comply and can refer them to the European Court of Justice (infringement procedures).</p>
<p>Water Framework Directive (2000) and Water Blueprint (2012)</p>	<p>The Water Framework Directive (WFD) is very relevant for biodiversity conservation, in particular for aquatic biodiversity and species that depend on clean water resources. It obliges Member States to protect and restore all bodies of ground water and surface water (rivers, lakes, canals and coastal water) to achieve a "good status" by 2015 at the latest. Member States must implement measures to prevent any deterioration in the status of surface water bodies, and exceptions are only possible if a project is of – very judiciously defined – "overriding public interest". All practicable steps must be taken to mitigate any adverse impact. Hydropower plants, for example, lead to a lower water status due to their effect on river continuity. Such projects consequently lead to a lowering of the water status of entire rivers.</p> <p>Specific legislation enacted:</p> <p>The Groundwater Directive 2006/118/EC in response to requirements of Article 17 of the WFD</p> <ul style="list-style-type: none"> ▪ Strategy against chemical pollution of surface waters ▪ Ecological Status: The environmental objectives are the core of the WFD. It aims to achieve "good ecological and chemical status" for all surface waters by 2015. ▪ Several transboundary river basin management plans developed.
<p>Renewable Energy Directive (2009)</p>	<p>The EC aims to generate 20% of its energy from renewable sources by 2020. Renewables include wind, solar, hydro-electric and tidal power as well as geothermal energy and biomass. Article 4 of Directive 2009/28/EC on Renewable Energy (RED) required Member States to submit national renewable energy action plans by 30 June 2010.</p> <p>On 22.01.2014 the EU recommended in a new "white book", a seemingly more ambitious goal of 27% RE by 2030, but removed the obligatory nature – effectively making it voluntary for countries to implement the recommended targets. (EC 2014b)</p> <p>RE targets now take into account the need to protect biodiversity and food supply (e.g. biofuels policy revisions to prevent indirect harm to biodiversity). Note, however, that RE development has a potential impact on particular ecosystem services (analysis from recharge.green project).</p>

Energy Efficiency Directive (2012/27/EU)

The EC is aiming for a 20% cut in Europe's annual primary energy consumption by 2020. The EC proposed several measures to increase efficiency at all stages of the energy chain: generation, transformation, distribution and final consumption. Measures focus on the public transport and building sectors, where the potential for savings is greatest. The Directive includes concrete guidelines, such as a legal definition and quantification of the EU energy efficiency target, an obligation for each Member State to set an indicative national energy efficiency target and to achieve a certain amount of final energy savings over the obligation period (January 2014 – December 2020), etc.

Energy efficiency generally should have a positive impact on biodiversity in that it would reduce pressure on the natural resources used for energy production. The European Council is scheduled to take a final decision on the new climate and energy policy framework at its meeting on 23/24 October 2014.

Communication on Green Infrastructure (GI) — Enhancing Europe's Natural Capital (COM(2013) 249 final)

The GI initiative is a key step in implementing the EU 2020 BD Strategy, specifically Target 2 that "by 2020, ecosystems and their services are maintained and enhanced by establishing green infrastructure and restoring at least 15% of degraded ecosystems".

This is in principle encouraging as it contributes towards ecological connectivity but, as recommended in the Econnect project, for example, connectivity requires more than green infrastructure or corridors. The "permeability" of the landscape to species and ecological processes needs to be achieved or maintained through multiple means. GI is only one piece in the puzzle.

The GI initiative is supported by various actions under Target 2 of the EU Biodiversity Strategy, which focuses on maintaining and enhancing ecosystem services and restoring degraded ecosystems by incorporating green infrastructure in spatial planning:

- Action 5, improve knowledge of ecosystems and their services in the EU;
- Action 6a, develop a strategic framework to set priorities for ecosystem restoration at a sub-national, national and EU level (by 2014);
- Action 6b, develop a GI Strategy by 2012 to promote the deployment of GI in the EU in urban and rural areas, including through incentives to encourage up-front investments in GI projects and the maintenance of ecosystem services;
- Action 7a, develop a methodology for assessing the impact of EU-funded projects, plans and programmes on biodiversity by 2014;
- Action 7b, proposing by 2015 an initiative to ensure there is no net loss of ecosystems and their services (e.g. through compensation or offsetting schemes).

Europe 2020 Strategy for Smart, Sustainable and Inclusive Growth

Europe 2020 is the EU's growth strategy for the coming decade. Five ambitious objectives – on employment, innovation, education, social inclusion and climate/energy – are to be achieved by 2020. Each Member State has adopted its own national targets in each of these areas.

Roadmap to a Resource
Efficient Europe
(COM(2011) 571)

Part of the Resource Efficiency Flagship of the Europe 2020 Strategy

The Roadmap aims to find cost-efficient ways to make the European economy more climate-friendly and less energy-consuming. It shows a pathway for achieving far deeper emission cuts by the middle of the century (beyond short-term objectives). It addresses transitions needed in power generation, industry, transport, buildings and construction, and agriculture.

Policy inconsistencies and market failures are to be tackled to ensure that policies are streamlined. Cross-cutting themes such as prices that do not reflect the real costs of resource use and the need for more long-term innovative thinking are also foreseen. The Roadmap takes into account adverse consequences of growth to the economy, health and quality of life, such as inefficient land use, low water quality and availability, waste, air pollution, and losses of ecosystem services, fish stocks and biodiversity.

Key resources are analysed from a life-cycle and value-chain perspective. Nutrition, housing and mobility are the sectors responsible for the majority of environmental impacts; actions in these areas are being proposed to complement existing measures.

If implemented, actions foreseen could potentially have both a positive and negative impact on biodiversity and ecosystem services (e.g. RE developments).

Roadmap for moving toward
a competitive low-carbon
economy by 2050
(COM (2011) 112)

Sustainable growth is a priority, under the motto "green economy". This is defined as "an economic model which aims to increase prosperity by using resources efficiently as well as maintaining the resilience of the natural systems that sustain societies." (EEA Report No 8/2013)

The Flagship Initiative roadmap towards a "Resource efficient Europe" (see above) falls within this.

Resource efficiency is necessary and positive, but growth potentially brings with it an impact on biodiversity and nature, even when it is labelled "green" growth.

Common Strategic Framework (CSF) = harmonised principles and main targets for all EU Structural Funds (Common Provisions Regulation), a.k.a. Cohesion Policy 2014-2020

The aim of the Union's Cohesion Policy is to remove disparities in economic and social development between Member States. Given the importance of its three strands (regional, social and economic), the Cohesion Policy has become an essential instrument in the European integration process.

In November 2013 the European Parliament Committee agreed a deal on the EU's Cohesion Policy for 2014-2020, reserving a €325 billion budget (a reduction over the previous period) for investment support in the EU's poorer regions. Priority is given to funding projects concerning research and development, innovation, SME support, energy efficiency and renewable energies, poverty reduction, the fight against unemployment, and job creation. The new [Cohesion Fund Regulation](#) (European Parliament 2013) was passed in December 2013 and includes a provision for preserving and protecting the environment and promoting resource efficiency by, among other investment goals, protecting and restoring biodiversity and soil and promoting ecosystem services, including through Natura 2000, and green infrastructure.

Funding for biodiversity is programmable in the European Regional Development Fund (ERDF), the European Social Fund (ESF), the Cohesion Fund (CF) and the European Agricultural Fund for Rural Development (EAFRD): Approach 01: Conservation in protected areas (Natura 2000) corresponds to Target 1 of the EU-BDS "To safeguard the EU's most important habitats and species"; Approach 2: Protection beyond protected areas corresponds to Targets 2, 3 and 5 of EU-BDS:

- Target 2 "To conserve and restore biodiversity and ecosystem services in the wider EU countryside"
- Target 4 "To reinforce the compatibility of regional and territorial development with biodiversity in the EU"
- Target 5 "To substantially reduce the impact on EU biodiversity of invasive alien species";

For both approaches:

- Target 10 "To substantially strengthen the knowledge base".

A recent report by the European Court of Auditors pointed out that over the 2007-2013 funding period, out of a total of 200 billion euros of ERDF funding, a mere 2.8 billion (1.4%) was used to directly promote biodiversity. The auditors state that available ERDF financing opportunities have not been exploited to their full potential by Member

States. Moreover, although ERDF co-funded projects in the field of biodiversity match Member State and EU priorities for halting biodiversity loss, their actual contribution should be better monitored, and plans funded by ERDF money need to be put into action. (ECA 2014)

Common Agricultural Policy (CAP) reform

On 16 December 2013, the Council of EU Agriculture Ministers formally adopted the four basic regulations for the reformed CAP as well as the transition rules for 2014. This follows on from the approval of these regulations by the European Parliament in November.

With these new rules, the vast majority of CAP legislation will be defined under four consecutive regulations – a significant simplification – covering

1. Rural development
2. “Horizontal issues” such as funding and controls
3. Direct payments for farmers
4. Market measures.

On the surface several provisions have been made for biodiversity and nature conservation. Three priority areas were determined for action to protect and enhance the EU’s rural heritage:

1. Biodiversity and the preservation and development of “natural” farming and forestry systems, and traditional agricultural landscapes
2. Water management and use
3. Dealing with climate change.

This is to be achieved by targeting aid at rural development measures that promote environmentally sustainable farming practices, such as agri-environment schemes (e.g. the introduction of a “Greening Payment”); and enhancing compliance with environmental laws by sanctioning infringement of these laws by farmers through a reduction in support payments from the CAP.

There is, however, criticism from environmental groups that the reforms are insufficient. According to the European Environment Bureau (EEB 2013), over one third of EU farmland will not have to include biodiversity protection elements in the landscape, and more than a quarter of agricultural land will not have to use crop diversification.

The EEB also criticises the fact that there is likely to be less financing for environmentally-friendly farmers through the Rural Development Fund. They call for optimising the quality of Ecological Focus Areas, and for ensuring that rural development programmes spend funds designated for environmental measures only on high quality measures and reject all environmentally harmful measures.

New EU Forest Strategy (20 Sept. 2013)

The Forest Strategy (FS) identifies the key principles needed to strengthen sustainable forest management and improve competitiveness and job creation, in particular in rural areas, while ensuring forest protection and the delivery of ecosystem services. The FS also specifies how the EU wishes to implement forest-related policies. It includes Biodiversity and Bioeconomy Strategies.

The FS highlights the fact that forests are not only important for rural development, but also for the environment – especially for biodiversity; for forest-based industries; bioenergy; and in the fight against climate change. Stressing the need for a holistic approach, it also emphasises that the impact of other policies on forests, as well as development taking place beyond forest boundaries, should be taken into account. In addition, the new FS underlines that forest-linked EU policies should be taken into account fully in national forest policies.

The new FS has also been criticised by NGOs as lacking teeth in the form of performance targets and an action plan (FERN 2013).

Strategic Environmental Assessment (SEA) Directive 2001/42/EC (2001)

Directive 2001/42/EC of the European Parliament and of the Council of 27 June 2001 on the assessment of the effects of certain plans and programmes on the environment requires certain plans and programmes, which are likely to have significant effects on the environment, to be subject to an environmental assessment. This assessment specifically enables environmental considerations to be integrated into the preparation and adoption of these plans and programmes. It is mandatory for plans that require an assessment under the Habitats Directive, or that are prepared for agriculture, forestry, fisheries, energy, industry, transport, waste/water management, telecommunications, tourism, town and country planning or land use and that set the framework for future development consent of projects listed in the EIA Directive (see below). The SEA and EIA procedures are very similar, but there are some differences. The SEA is stricter in the sense that environmental authorities need to be consulted at the screening stage, determination of reporting scope is obligatory, an assessment of reasonable alternatives is required, and Member States must monitor the significant environmental effects of plan implementation and, if necessary, undertake remedial action. (EC 2014a)

Environmental Impact Assessment (EIA) Directive 2011/92/EU

The EIA Directive (85/337/EEC) has been in effect since 1985 for a wide range of defined public and private projects. Some of these (those expected to have a significant effect on the environment, such as transport infrastructure and waste disposal facilities) require an EIA be carried out, while for other projects Member States decide on the basis of a screening procedure whether an EIA is needed.

The EIA Directive of 1985 was amended in 1997, 2003 and 2009, and was codified by Directive 2011/92/EU in December 2011. This was in turn amended in 2014 by Directive 2014/52/EU (Review of the EIA Directive). (EC 2014e)

At first glance, EU environmental legislation is comprehensive and supportive of biodiversity conservation and ecological connectivity. However, implementation in Member States lags behind targets and recommendations (Hochkirch et al. 2013; Santamaría and Méndez 2012; Wandesforde-Smith and Watts 2014). There is a major need to implement policy initiatives at a regional and local scale, down from the EU level (Tucker et al. 2014). The Habitats Directive affords Natura 2000 sites legal protection, but to achieve its objectives implementation needs to improve, both within and outside protected areas.

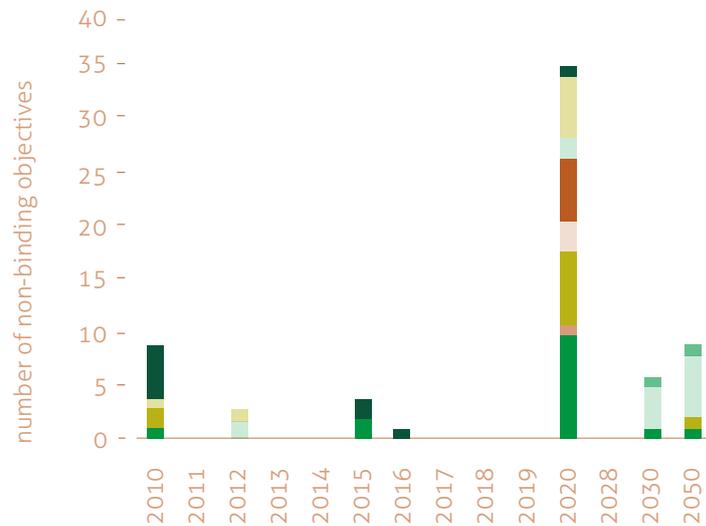
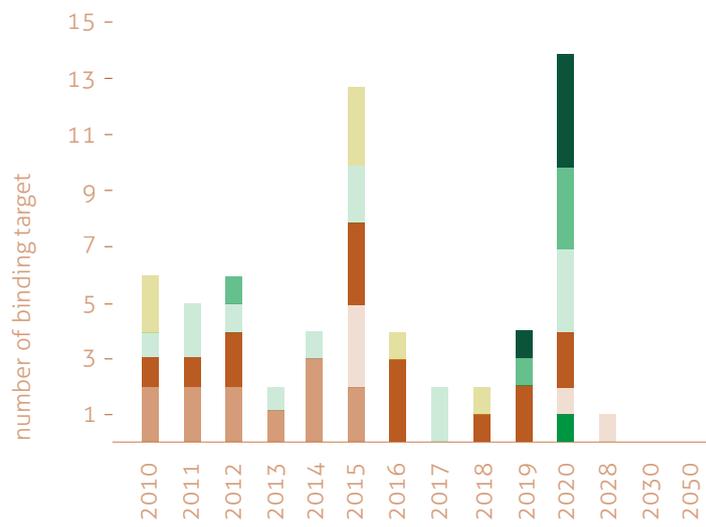
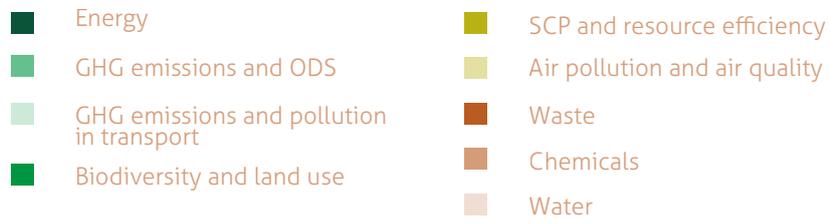
Some policies do not sufficiently capture important issues. For example the EU Biodiversity Strategy has been criticised for not being ambitious enough in the targets and actions laid out in the strategy, precluding accountability as many targets are not measurable, and lacking a clear definition of responsibilities at EU, Commission and Member State level (EHF 2011). Not only do existing policy measures have to be better implemented, but new measures for offsetting inevitable impacts are needed, as is public and private support to address all stages of the “mitigation hierarchy”¹ (Tucker et al. 2014). More strategic spatial planning approaches, including the identification of opportunities for enhancing “green” infrastructure, are also recommended in the report by Tucker and his colleagues.

While it is encouraging to see that biodiversity safeguards are finding their way into policy documents from sectors other than the environmental sector, such as the Roadmap for moving to a competitive low carbon economy by 2050 and the Common Agricultural Policy, the EC still maintains a focus on economic development. Although this now emphasises the importance of “green growth”² and resource efficiency, biodiversity concerns still appear to be insufficiently represented in the bigger picture. For example, the [five targets for the EU in 2020](#) do not include biodiversity as a priority (EC 2014c). A rough and unedited text analysis of the [EU Roadmap to a Resource Efficient Europe](#) (EC 2011b) using the [Wordle](#) tool yields an interesting graphic (Figure 1), where “biodiversity” is visible, but certainly less prominent than would be warranted if one considers [the important contribution its associated ecosystem services reportedly make to the economy and to human wellbeing](#) (see for example Sukhdev et al. 2010; TEEB 2012).

1 Actions should be taken in the following priority sequence of mitigation of biodiversity impacts: avoidance, reduction/minimisation and restoration/rehabilitation of impacts, offsetting of residual impacts (Tucker et al. 2014).

2 By the simplified definition of the UN Environment Programme, a green economy is low-carbon, resource efficient and socially inclusive (UNEP 2011).

Figure 2 - Binding targets and non-binding objectives by category



Source: Adapted from EEA Report No 8/2013 "Towards a Green Economy in Europe" (EEA 2013b)

EU-wide reviews of the state of nature and biodiversity in Europe show that biodiversity is still decreasing, driven by land conversion and degradation, intensification of farming practices, and pollution of terrestrial and freshwater ecosystems from industrial and agricultural emissions (EEA 2010).

Despite this downward trend, a recent Eurobarometer survey has found that slightly less than half of Europeans have heard of the term "biodiversity" and know what it means. However, more than a quarter have never heard of it. The proportion of Europeans who believe that biodiversity loss in their home country is a very serious problem has declined compared with the last two surveys. By 2013, just 35% of respondents thought biodiversity loss was a very serious problem in their own country, down from 2010 (37%) and 2007 (43%). Furthermore, about three-quarters of Europeans have never heard of the Natura 2000 network. (TNS Political & Social 2013)

However, the survey also yielded some less discouraging results. For example, 89-100% of respondents believe that protected areas are important for environment conservation and environmental health. Two thirds agree that the extent of protected areas in Europe should increase. Within the Alpine Space region, 80% of Austrians and Germans at least know what biodiversity means; in France half of respondents know; in Italy and Slovenia, however, only 38% and 35% respectively are aware of biodiversity. Interestingly, in the EU as a whole between 77% and 96% of respondents believe that the decline and loss of a variety of natural habitats is a serious problem. (TNS Political & Social 2013) This may reflect an insufficient knowledge of the connection between biodiversity and natural habitats.

Slightly less than half of Europeans (45%) think that economic development should be prevented if it damages nature protection areas. The majority of respondents believe that the EU should create financial rewards for farmers or fishermen for furthering nature conservation and that subsidies to the agriculture and fisheries sectors should also take biodiversity into account. (TNS Political & Social 2013)

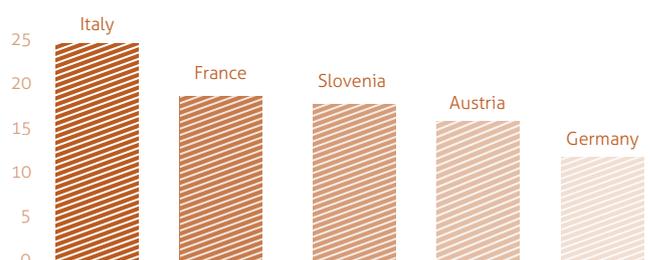
Under the circumstances, the transition to a green economic model in which human well-being, an efficient economy and resilient ecosystems are in balance will be difficult to achieve, or is likely to happen so gradually that biodiversity losses will continue for the foreseeable future. The fact that funding for biodiversity research within the EU has been on the decline for more than a decade and is being severely curtailed in the new Framework Programme for Research and Innovation "Horizon 2020" further undermines the chances of scientifically well-informed policies being developed and implemented (Santamaría and Méndez 2012).

5.1.1.2 Implementation at national level

Implementation of the EU Biodiversity Strategy and related policies at national level is not consistent. Even when directives are binding (EU law), countries are sometimes slow in translating them into national laws. As mentioned above, the EC may, in instances of non-compliance, launch infringement proceedings against Member States.

Such proceedings are launched on a regular basis, as exemplified by data from 2013 (Figure 3).

Figure 3 - DG Environment - Infringements in Alpine countries in 2013



Source: Adapted from DG Environment - law enforcement statistics on environmental infringements (EC 2014f)

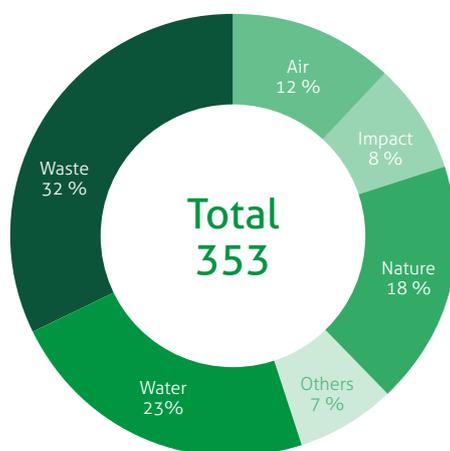
As shown in Figure 4, in 2013 for the EU as a whole 18% of all cases concerned violations against nature legislation, while the bulk were breaches of water and waste legislation.

Some concrete examples from the Alpine Space serve to illustrate the type of transgressions on which the EC may take enforcement action. In 2012 the EC began infringement proceedings against Austria for not carrying out required and appropriate assessments of certain flood protection and other water-related projects to wildlife conservation areas (EC 2012g), and in 2014 the EC again took Austria to court over its failure to protect water quality on the Schwarze Sulm river – one of the longest undisturbed rivers in Styria – by permitting the construction of a power plant (failure to respect the water quality requirements of the Water Framework Directive) (EC 2014d). Similarly, Italy has been requested to comply with the Water Framework Directive by transposing it into national laws for water protection (EC 2012f), and on three occasions (in 2008 and twice in 2010), the EU Court of Justice has found that Italian law falls short of EU standards for the protection of wild birds under the Birds Directive (EC 2011c). The EC has also taken legal action against other Alpine Space countries for infractions of EU environmental legislation.

In addition to undertaking its own studies and assessments, the EC is assisted in its review of national compliance by complaints and petitions submitted by EU citizens, organisations and the EU Parliament. In September 2009, the Secretariat General of the Commission set up a system whereby complaints and enquiries are now recorded in a [central registry](#). EU citizens and organisations also have the right to petition the European Parliament with concerns regarding the application of Community law. By the end of 2009, about a third of the petition workload in the EC fell in the domain of the Environmental Directorate General. (EC 2014g)

In 2010 the EC commissioned a study of the main environment and resource-efficiency related policy initiatives in its Member States. The independent study authors developed country profiles for each Member State based on information collected up to mid-2011.

Figure 4 - DG Environment - infringements by sector in 2013



Source: Adapted from DG Environment - law enforcement statistics on environmental infringements (EC 2014f)

Some of the findings from the Alpine Space countries are shown below (EC 2014h).

Note that EU country reviews were last undertaken in 2010 and progress made since then is not reflected in statements derived from them. In addition to the environmental assessments of Member States by the EU, the Organisation for Economic Co-operation and Development (OECD) undertakes regular environmental performance reviews of OECD Member States. Some of the latest OECD findings and recommendations are also shown below. (For [France](#) and [Switzerland](#) the OECD reviews date back to 2005 and 2007 respectively, so they are no longer up to date and are therefore not summarised here.)

Austria

In terms of biodiversity-relevant implementation measures, Austria formed the "Cluster for long-term ecosystem research" (LTER) in 2010 (Umweltbundesamt 2014). The Cluster focuses on long-term impact research on ecosystems, biodiversity and nature protection as well as interactions between the environment and socio-economic development. Its members include the Ministry of Science, Research and the Economy (BMWFV), the LTER-Austria Association, the Federal Environment Agency (Umweltbundesamt) and individual provinces (Länder). In November 2010 Austria published a new compendium on the country's biodiversity, which contains an overview of the existence, status and risk levels of the various ecosystems across Austria. (EC 2012a)

Austria's proportion of Natura 2000 terrestrial area as a percentage of its total surface area was below the EU average, at just around 15%. However, the area of Austria being farmed organically in 2009 was just under 20%, way above the EU average of about 5%. Water quality was generally good, with the exception of high nitrate loads. In mid-2011 a Guideline for River Basin Management in Austria was published, and management plans have been adopted for several districts. In other environment policy areas Austria made improvements to the Environmental Impact Assessment Law, transposed the EU VOC Solvents Emissions Directive into Austrian law, and amended the end-of-life vehicles ordinance, transposing an EU decision on harmonising the list of permitted pollutants in the automotive industry. Austria also developed MORIS (Monitoring & Research Information System), an online database for managing environmental data. (EC 2012a)

The third OECD Environmental Performance Review of Austria (2013) provides 27 recommendations to support the country's further environmental progress. According to the OECD, Austria needs to make further progress on some domestic and international environmental objectives. These include curbing emissions of greenhouse gases (GHGs) and nitrogen oxides (NO_x), improving air quality in urban areas, enhancing the conservation status of habitats and species, and reducing the amount of grassland and arable land lost to housing and infrastructure development. Among other policy recommendations the OECD recommends a comprehensive "socio-ecological tax reform", an analysis of the potentially negative environmental impact of existing subsidies, and a reduction of perverse incentives for car use. It points out that although Austria adopted a National Biodiversity Strategy in 2005, it has not achieved targets for biodiversity loss and land degradation. The OECD attributes this partly to the "fragmented approaches adopted by the Länder" (decentralised governance by the provinces, to whom environmental policy implementation is delegated), and also to "the absence of a coherent national spatial development strategy that strikes an appropriate balance between the growth of built-up areas and the conservation of natural spaces and biodiversity". (OECD 2013b)

France

In 2010 France began revising the National Strategy for Biodiversity post-2010 (MEDDE 2014) and adopted a new strategy for 2011-2020. It created a National Observatory for Biodiversity (ONB 2014), and six Regional Observatories are operational. Also in 2010 it passed the so-called "Grenelle II" law, which encompasses a range of measures and sets targets for biodiversity conservation, and many other environmental targets. The law also creates "green and blue corridors" to link sites of importance for biodiversity conservation to overcome fragmentation. France's proportion of Natura 2000 terrestrial area as a percentage of its total surface area was less than 13%, also well under the EU average. The share of organic farming is tiny, only about 2% of its entire agricultural area and way below the EU average. In other environmental areas, France made improvements to the environmental impact assessment (EIA) procedure for a better implementation of the EIA Directive with the creation of the national Environmental Authority in 2009. This Authority is in charge of EIA evaluations at a national level, in addition to evaluations that take place at a regional level. France adopted a Strategy for Sustainable Development, which aims to integrate this theme into public policies for wider implementation. The country has developed five national objectives to translate the Europe 2020 targets to a national level, among them the reduction of greenhouse gases and an increase in renewable energy consumption, as well as the promotion of green growth. (EC 2012b) After the last EC country profile was published, some regions issued Ecological Connectivity Schemes ("Schémas de Cohérence Ecologique"), which define these corridors. First steps in implementing corridors have been taken, dating back to preparatory work begun before the Grenelle II law was passed.

Germany

Germany introduced a key legislative initiative, the Federal Nature Conservation Act (later amended in 2013, see Bundestag 2013), and biodiversity is a key focus in it. This is a uniform nationwide legal statutory basis for nature conservation, which is a major advance that facilitates the translation of EU directives into national laws, vis-à-vis other Alpine countries with decentralised nature conservation law systems (such as Austria). A biodiversity handbook for the private sector has also been published. (EC 2012c)

Germany's share of Natura 2000 terrestrial area is slightly more than 15% of its total surface area. Organic farming accounts for about 5.5% of the total farmed area (EC 2012c). Although a large part of land area is under some form of protection, Germany is not achieving its biodiversity policy objectives according to most indicators. On average 87 hectares of land were converted per day in 2007–10, far from the target of limiting such conversion to 30 hectares per day by 2020. Compared to other OECD countries, the numbers of endangered mammals, birds and vascular plants are relatively high. (OECD 2012a)

In other areas, Germany has an ambitious energy savings strategy, and its environmental policy continues to focus on resource efficiency.

The 2010 Indicator Report on the German Sustainability Strategy showed that while renewable energy sources increased and greenhouse gas emissions were reduced, there is a clear need for action in other sectors. (EC 2012c)

The third OECD environmental performance review of Germany (2012) presents 29 recommendations on how performance could be improved. The OECD reports that Germany has continued to consolidate its ambitious environmental policy framework, and that it has been shifting from a sector-specific to a more comprehensive cross-cutting approach. However, high population density, extensive industrial and agricultural activity and the dispersed nature of settlements exert significant pressure on land use and ecosystems. In agriculture, for example, Germany's intense use of agricultural inputs remains among the highest in the OECD and is contributing to a high nitrogen surplus. (OECD 2012a)

The OECD policy recommendations include, inter alia, a suggestion to build upon the assessment of the economics of ecosystems and biodiversity (TEEB) to guide implementation of the National Strategy on Biological Diversity and to strengthen inter-institutional cooperation in this area. As with Austria, they also recommend introducing a mechanism to systematically screen existing and proposed subsidies for their potential environmental impact, with a view to phasing out those subsidies that are environmentally harmful and inefficient. Policy coherence could, the OECD argues, be further enhanced by strengthening the assessment of the environmental impact of economic and sectoral policies (e.g. in the transport and agricultural sectors), and of the economic aspects of environmental policies (e.g. biodiversity). As with Austria, the Länder (provinces) are primarily responsible for policy implementation, and the OECD expresses concerns that resource and capacity constraints are leading to an "implementation deficit" in some Länder. The OECD also recommends making greater use of policy coordination approaches and implementation tools embedded in the National Sustainable Development Strategy. (OECD 2012a)

Italy

In 2010 Italy approved a National Biodiversity Strategy. Within the framework of the Europe 2020 Strategy, Italy adopted a National Reform Programme in April 2011, identifying nine intervention areas. Measures have been taken to support energy efficiency (an area in which improvements lag far behind other EU Member States) and development of renewable energy. In 2010 Italy made several corrective adjustments to environmental legislation, concerning Strategic Environmental Assessment procedures, air quality and pollution standards, as well as waste management, and quality standards for surface waters. However, Italy has long had difficulties in implementing regulations, having the highest number of infringement cases among EU Member States. To improve the implementation of biodiversity conservation measures, in 2011 it approved a new legislative decree that introduced new types of environmental crimes, including crimes relating to protected plant and animal species, and habitats on protected sites.

Italy's share of Natura 2000 terrestrial area as a percentage of its total surface area is higher than the EU average, at about 19%, and the area being organically farmed is about 8%, also above the EU average and quite important in terms of total production. (EC 2012d) However, high population density and extensive industrial and agricultural activity exert significant pressure on ecosystems and land use, and threats to mammals, freshwater fish and amphibians are greater than in many other European countries. Water governance is also a significant challenge in Italy, with attempts to implement the EU Water Framework Directive adding additional layers of complexity (OECD 2013a). The third OECD review of Italy's environmental performance (2013) does not provide any detail on biodiversity measures needed, but presents 29 recommendations on how environmental performance in general could be improved.

The OECD sees Italy's "green growth" agenda as a positive trend, but environmental governance and policy enforcement need improvement. A variety of mechanisms exist to vertically coordinate policies in general (such as the Unified State-Regions-Municipalities Conference), and environmental policies in particular (such as the Network of Environmental Agencies and the National Observatory of Organisation and Management of Environment Agencies) but, according to the OECD, the potential of these bodies has not been fully exploited. (OECD 2013a)

Slovenia

Slovenia adopted the Danube River Basin Management Plan in 2010 and a National Reform Programme 2011-2012 that integrates a gradual transition to an environmentally efficient, low-carbon society. The country receives substantial financial support under the LIFE programme, the Cohesion Policy Fund and the European Agricultural Fund for Rural Development for large infrastructure projects in the field of the environment, including waste management, drinking water and waste water treatment, transport and sustainable energy. Pollution and waste management are important challenges.

The Slovenian Environment Protection Act was amended to transpose several EU directives. Because there is a large proportion of relatively inaccessible forest, three-quarters of forest habitat types are estimated to have a favourable ecological status. Sustainable forest management is one of the country's goals, and over 6% of farmland is being farmed organically. The country's share of Natura 2000 terrestrial area as a percentage of its total surface area is the highest of any Alpine country, at around 35.5%, well above the EU average, and 12.6% is protected under domestic law, but the sufficiency index for site designation under the Habitats Directive is only 72.6%, and 36% of Slovenian mammals are threatened. (EC 2012e)

The OECD reviewed Slovenia's environmental performance for the first time in 2012 (OECD 2012b). It presented 36 improvement recommendations. Progress in greening the economy was part of the assessment. While over the decade preceding this review Slovenia had experienced rapid economic growth, it had also established a comprehensive framework of environmental policies and strengthened its environmental institutions. According to the OECD it has successfully translated most of the EU environmental directives into national laws.

The OECD criticised Slovenia's failure to address urban sprawl and fragmentation of habitats over the past two decades. Slovenia has exceptionally rich biodiversity, but 8% of mammal species, 27% of bird species and 47% of freshwater fish species are threatened, high threat levels compared to many other OECD countries. However, the ecological status of rivers is mostly "good" to "very good", with relatively low levels of nitrate pollution from agriculture compared to other countries.

As in other countries, there are environmental governance challenges – for example, environmental legislation is complex and suffers from gaps, overlaps and contradictions between various decrees and ordinances (OECD 2012b). Added to this complexity, neighbouring local authorities seldom coordinate their land use planning, and national environmental authorities are often unaware of the environmental performance of local bodies.

On the positive side, the OECD also referred to local implementation of the Alpine Convention and provided some examples of the application of good practice by municipalities in certain areas, e.g. mountain agriculture and forestry, transport and tourism, as a key to the Convention's implementation (OECD 2012b).

5.1.2 POLICY RELEVANCE AND IMPACT PERCEPTIONS

Results of the expert survey

A total of 96 people from all countries connected to the Alpine Space responded to the survey. Most respondents came from Italy, followed by Austria and Germany.

Caveat: Due to the small sample size and a relatively strong bias among respondents towards those with a background in environmental issues, the survey results should not be taken to be representative of the views of the population at large. In terms of organisational affiliation (Figure 6), there is a somewhat less pronounced bias towards respondents from academia, followed by local government, protected area administrations and NGOs. Notably only three respondents work in policy-related areas.

Despite this caveat, we are presenting in Figure 7 the picture that emerged from this limited sample of respondents for selected questions. It is purely descriptive but reveals interesting insights.

Figure 5 - Number of respondents by country

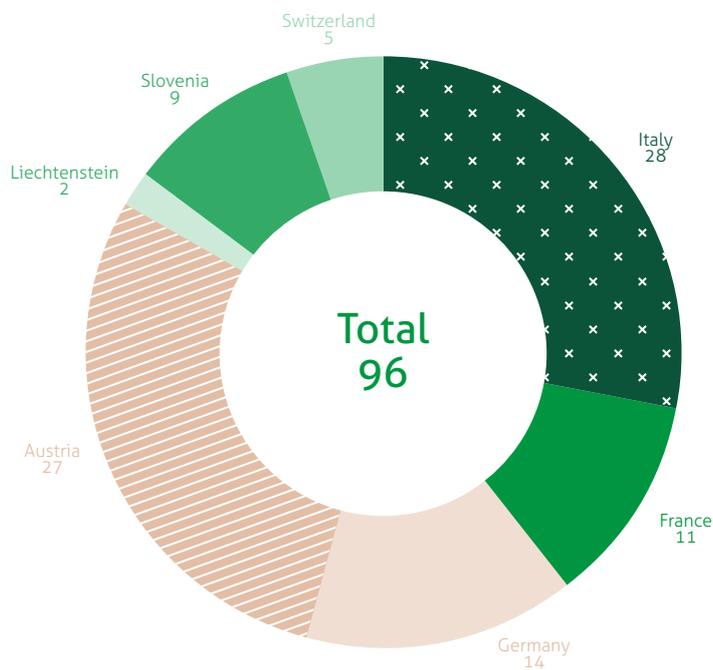


Figure 6 - Distribution of survey responses by area of work (organisational affiliation)

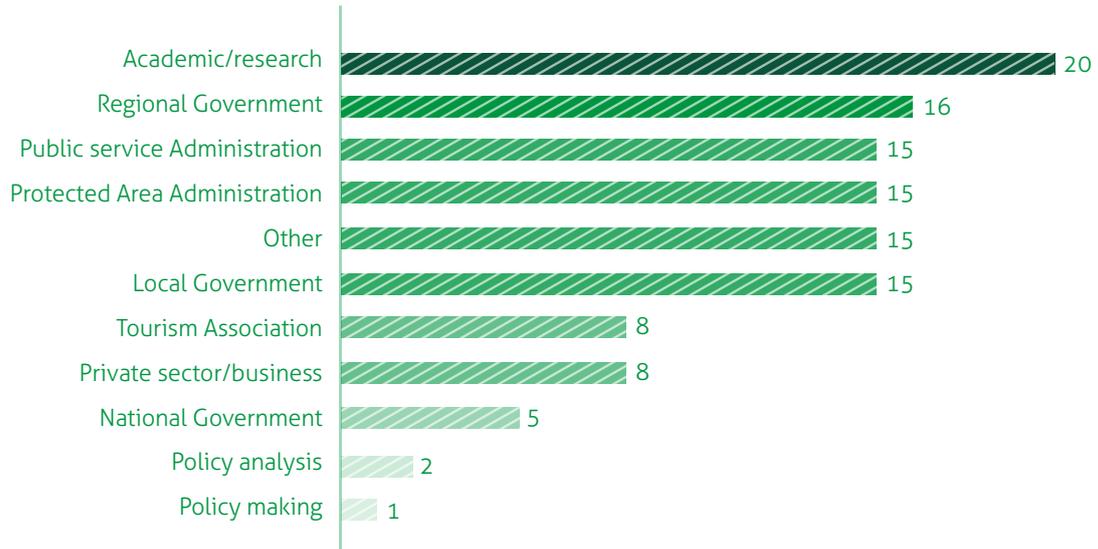
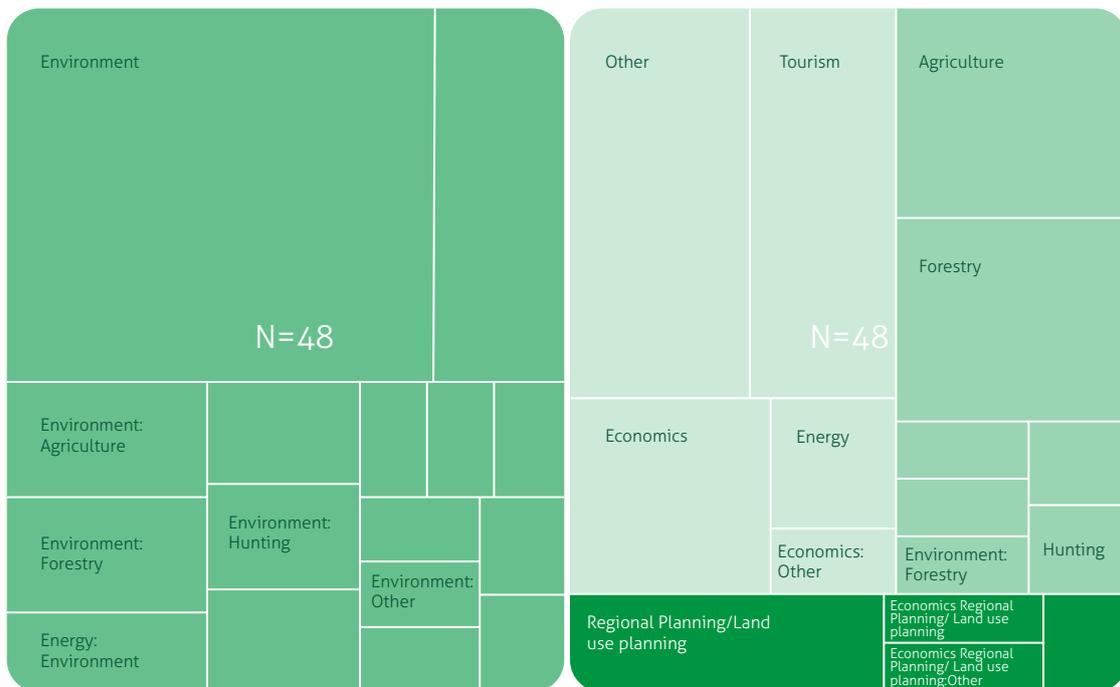


Figure 7 - Distribution of survey responses by sectoral expertise, including combinations



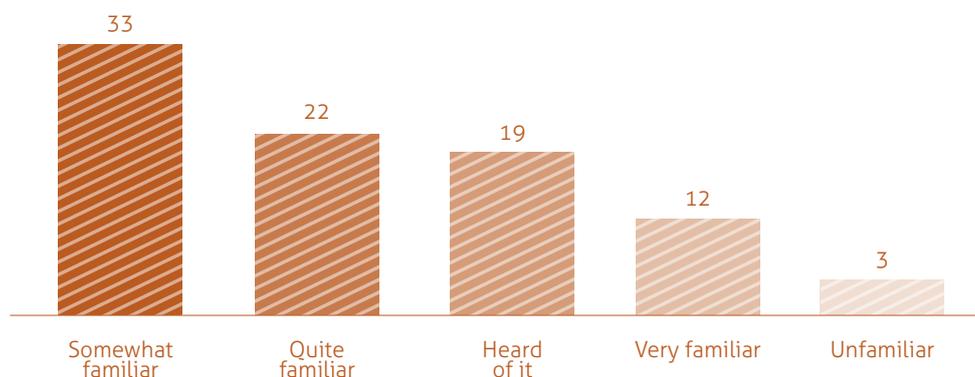
Fifty percent of respondents had at least some expertise in environmental sectors (Figure 7), biasing the results.

Familiarity with EU nature/biodiversity projects

Several respondents had heard of or been involved in EU (Alpine Space, Interreg, FP7) projects in the area of nature conservation/biodiversity³. Only 10% of respondents had never heard of any such projects. This is hardly surprising, since respondents were contacted through project partner networks.

Figure 8 - Familiarity with the Alpine Convention

How familiar are you with the network, policies, and activities of the Alpine Convention?



The majority of respondents were at least somewhat familiar with the Alpine Convention; only 3% had never heard of it.

Within the Alpine Convention, several protocols are important for biodiversity conservation. Respondents were asked if they were familiar with the protocols.

Figure 9 shows familiarity with individual protocols. Circle size represents the relative number of respondents familiar with the respective protocol. The number in each circle is the exact number of respondents familiar with the protocol in question. Different colours represent different protocols.

³ Projects listed were: Alcotra, ALPENCOM, AlpENMat, Alps Mobility II, AlpStar, AlpStore, AlpWaterScarce, CIPRA, dynAlp-climate, dynAlp-nature, Econnect (JECAMI), FanAlp, greenAlps, Grenzraumanalyse Bayern-Österreich (border area analysis), Grünkorridore Pinzgau (green corridors), HABITALP, Life-Natura (various), Manfred, recharge.green, SEE HydroPower, Silmas, TUSEC-IP, VOLANTE. Note that CIPRA is an international NGO, not a project, but it was listed among the responses as a project.

Figure 9 - Familiarity with protocols in the Alpine Convention

Which of the protocols, if any, are you familiar with?



Additionally, respondents were asked how relevant the various protocols were in their field of work (Figure 10).

Figure 10 - Relevance of protocols of the Alpine Convention

Please indicate how relevant the different Protocols are for your work.

	not at all relevant	somewhat relevant	very relevant
Protocol on conservation of nature and countryside	8	31	28
Protocol on energy	24	24	10
Protocol on mountain farming	20	27	9
Protocol on mountain forests	16	29	12
Protocol on soil conservation	22	23	10
Protocol on spatial planning and sustainable development	14	36	12
Protocol on tourism	19	26	10
Protocol on transport	24	18	9

Colour represents the relative number of respondents choosing the level of relevance for the respective protocol. The number in each field is the exact number of times the combination was chosen.

Respondents for whom the Alpine Convention protocols are not relevant for their work were asked to explain why not. Apart from those who were totally unfamiliar with the Convention or did not have anything to do with it in their daily work, some explanations that are illustrative are summarised here (responses have been rephrased without changing their meaning).



The Alpine Convention serves as an international reference point, but is not really applied in practice.

The Protocols are the foundation for political action, but are too general for explicit implementation.

There is not enough information on the Environment and Sustainable Development network. Much more information is needed for local politics.

Within the Alpine Convention, the theme "Population and Culture"⁴ should receive greater support, which in the respondent's view would lead to more interest in the other Convention Protocols.

Protocols are likely to be respected in national legislation and probably influence work this way.

⁴ It was not until 2006 that the Ministers of the Alpine Convention countries agreed on a Declaration concerning this theme. The Declaration is legally less binding than the Protocols. It emphasises the shared responsibility of the Alpine and non-Alpine populations for maintaining the cultural uniqueness of the Alpine environment. (Alpine Convention 2014b).

Relevance and implementation of EU legal and policy instruments

One section in the questionnaire dealt with instruments and policies that already exist and how their relevance and implementation are perceived by the experts (Figure 11).

Figure 11 - Relevance of EU legal and policy instruments

Wich of the EU instruments (policy directives, strategies, and roadmaps) below are relevant for your work ?

	not at all relevant	somewhat relevant	very relevant
Birds Directive and Habitats Directive	10	19	42
EU Biodiversity Strategy to 2020	11	37	27
Water Framework Directive	17	31	23
Common Agricultural Policy (Reform 2013)	24	27	16
Renewable Energy Directive	22	28	16
Forest Strategy (Reform 2013)	23	28	14
European Landscape Convention (Florence Convention)	28	25	8
Roadmap for moving towards a competitive low-carbon economy by 2050	33	22	8
Roadmap to a Resource Efficient Europe ("Green Growth", 2011)	30	24	8

Colour represents the relative number of respondents choosing the level of relevance for the respective protocol. The number in each field is the exact number of times the combination was chosen.

Several respondents commented on the impact selected instruments have on their work.



EU policies are the key framework documents for my area of work (either legally or as reference documents).

They provide a good framework for action.

Policies are translated into national laws and regulations that guide conservation management actions.

Policy instruments are included in forest management plans and are especially relevant because of the close link between forestry and biodiversity.

Some policy instruments are used for environmental impact assessments on plants, animals and habitats.

EU policies are the foundation for conservation planning and management.

The species lists in the Birds Directive are used to manage hunting.

EU financing can be used to protect habitats for threatened species.

The policies are referred to for teaching and research.

The Biodiversity Strategy 2020 imposes a duty on Member States to work for ecological connectivity; it can in fact be used as a way of exerting pressure on governments to protect natural areas.

The EU research strategy Horizon 2020 is important for orienting research towards policy instruments.

EU policies are important for environmental awareness-raising.

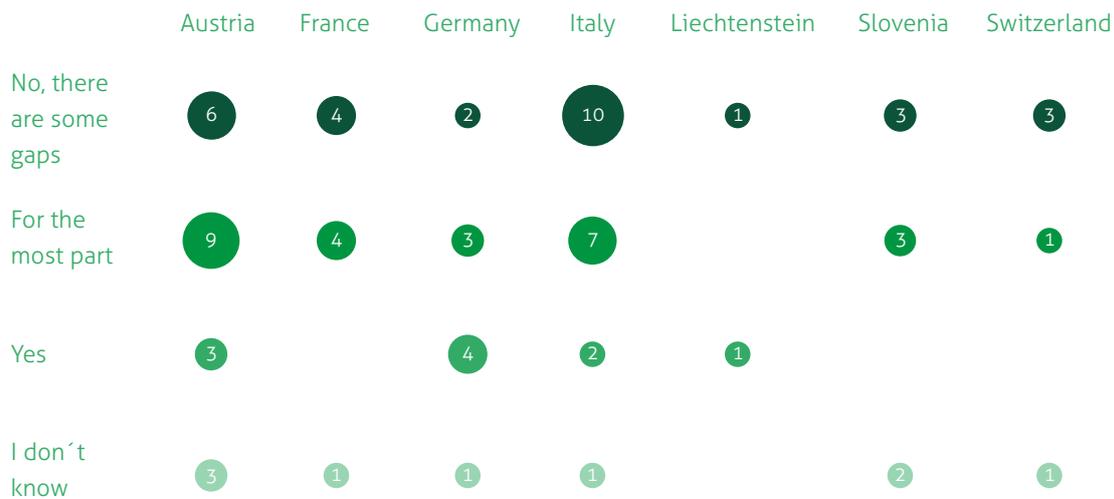
Many aspects of EU policies on the environment are sectoral, separating conservation from use. We should use the concept of a "socio-ecosystem" and prioritise the needs of local populations.

Asked about important policies in the context of biodiversity conservation that were not mentioned in the questionnaire, some respondents pointed to the importance of Alpine macro-regional policies, the EC Directive on the assessment of the effects of certain public and private projects on the environment (recently amended as [Directive 2014/52/EU](#)), the United Nations [Convention on Environmental Impact Assessment in a Transboundary Context](#), the Bern and Ramsar Conventions (mentioned in Table 1, but not in the survey), the [Common Fisheries Policy](#), the [Soil Thematic Strategy](#) and bilateral agreements (e.g. between the EU and Switzerland).

Concerning the translation and implementation of EU policies at a national level, almost half of all respondents thought that this happens (always or for the most part), while 39% felt that there were gaps and 12% did not know. If analysed by country (even though the differences in participant numbers clearly distort the picture) a different picture unfolds (Figure 12).

Figure 12 - National implementation of EU policies by country

In your area of work, in your country and/or region, are EU policies and strategies concerning biodiversity and ecological connectivity consistently translated and implemented?



Different colours represent the different possible answers. Circle size represents the relative number of times an answer was chosen. The number in each circle is the exact number of respondents familiar with the protocol in question.



Policies are not translated sufficiently to the lowest administrative level (municipality), so that existing and valid policies and legal instruments can be overlooked by political decision makers (e.g. Landrat).

Implementation suffers from short-term concepts both at a national and municipal level, an insufficient background on ecological principles, and a lack of ecologically orientated framework concepts (for Germany: Landschaftsplan).

Part of the problem is that most of these concepts are not legally binding but only have an indicative character, and non-implementation is not sanctioned.

Lack of financial resources for implementation can be a problem.

At a pan-European level implementation is failing.

Some policies, even if translated, lack instruments such as management plans, publicity and local participation, or are inefficiently implemented. Some are not properly translated at all.

Federal systems, such as in Austria, are a problem, because there is a lack of national representation in nature conservation, i.e. no national framework, and responsibility is passed back and forth between provincial and national agencies, or there is a lack of political interest in some countries or provinces.

Some instruments are regulated by national norms too late, or are not accepted by the Province that has direct competence on many matters (as in the case of the Habitat and Birds Directives).

Concerning ecological connectivity, Austrian law assigns responsibility to different legislative authorities (every federal state has its own law), and the same goes for spatial planning. So diverging legislation at a provincial level often makes large scale, landscape-level planning difficult.

There is a lack of coordination at a national level concerning ecological connectivity, which focuses mostly on the connectivity needs of large species (carnivores, red deer and other very mobile species), but there should be more emphasis on achieving a functional compound of ecosystems at a regional level to stop the loss of biodiversity.

Natura 2000 areas need to be expanded. More areas, or more significant areas, have to be nominated.

Private property interests are strongly protected and make monitoring or large-scale management difficult. There is powerful lobbying by industry, tourism operators, etc.

There tends to be a lack of political support for biodiversity conservation and a lack of social acceptance, partly because the benefits provided by intact ecosystems via ecosystem services are not fully understood by the public, nor are they well documented or quantified.

EU policies and strategies are implemented at a sectoral level, and some contradictory actions are taken regarding environmental issues. For example, nature protection (including ecological connectivity) is not integrated into spatial planning.

There is a focus on profit at a local level, so biodiversity is often forgotten in favour of economic goals.

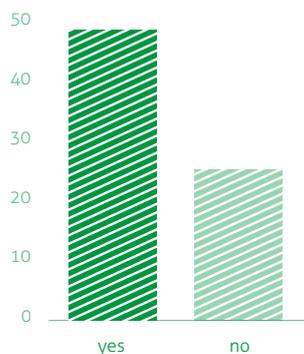
The Common Agricultural Policy does not adequately protect biodiversity and places too little emphasis on agro-ecology practices.

Trans-sectoral collaboration

Interestingly, despite many respondents' criticism of a lack of coordination between different sectors, 66% of those who chose to answer the question reported being involved in joint planning activities between different sectors, and 68% agreed that they had had some positive experiences where regional and/or transnational co-operation worked well to ensure biodiversity conservation and ecological connectivity (Figure 13).

Figure 13 - Trans-sectoral and transnational cooperation

Are you involved in joint planning activities between different sectors?



In your work, have you had any positive experiences where regional and/or trans-national co-operation worked well to ensure biodiversity conservation & ecological connectivity?

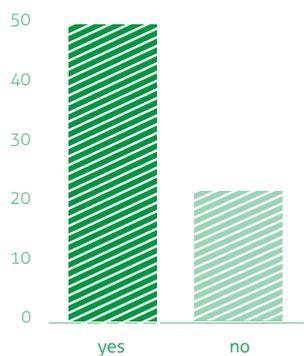
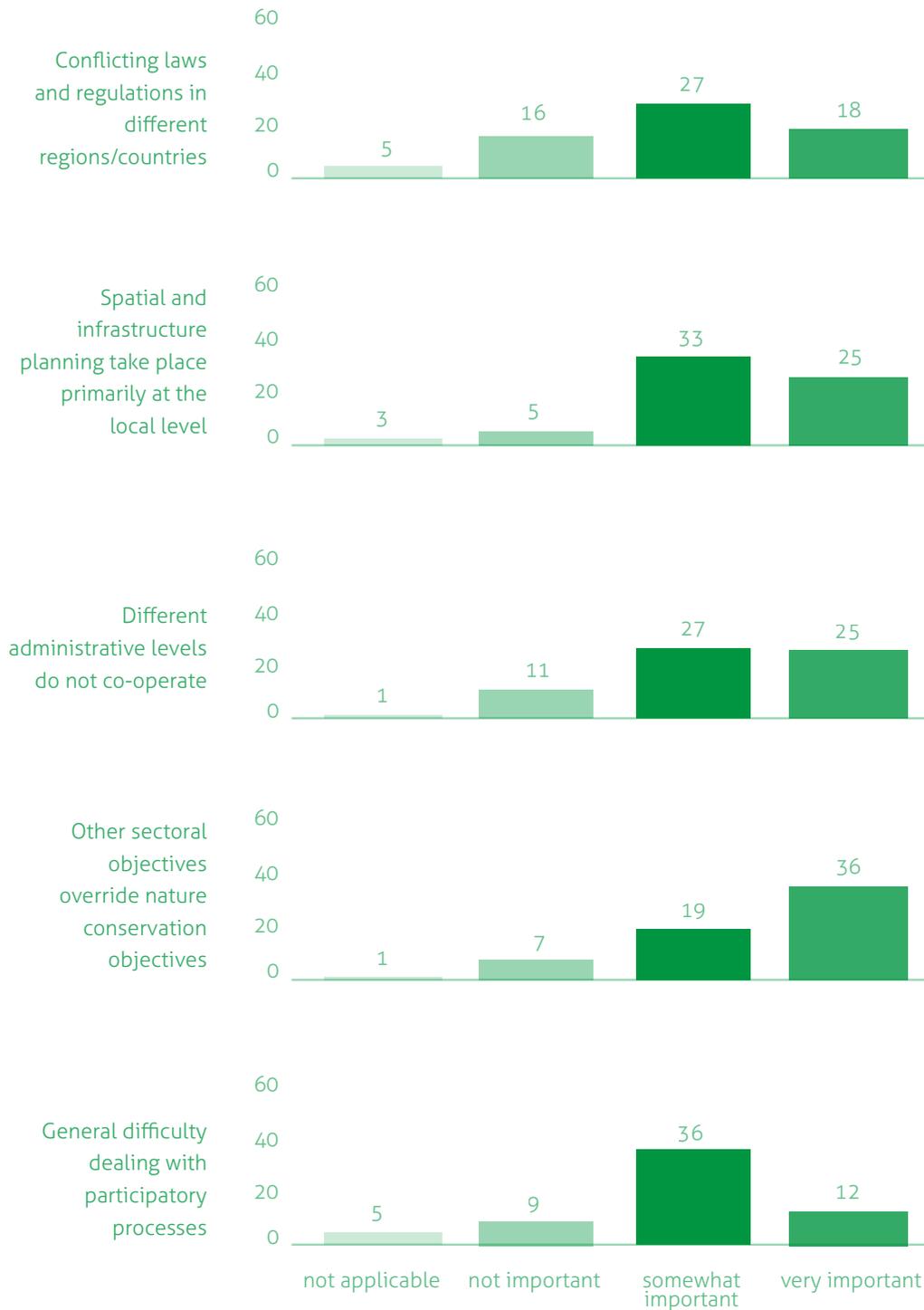


Figure 14 - Principal challenges that make transnational connectivity measures difficult to achieve

In your work, what are the principal challenges that make it difficult to cooperate regionally or transnationally?

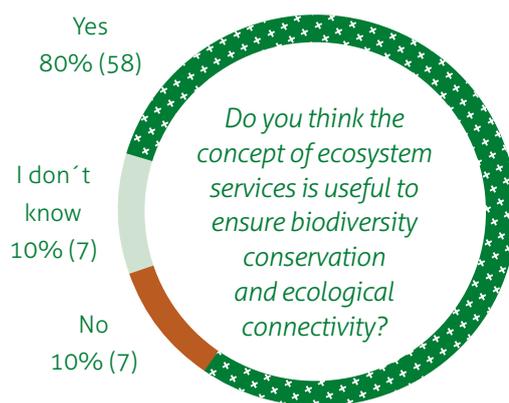


Concerning the principal challenges that hamper regional and transnational cooperation for ecological connectivity, we prompted respondents to rank some factors (i.e. "Conflicting laws and regulations in different regions/countries", "Spatial and infrastructure planning take place primarily at the local level", "Other sectoral objectives override nature conservation objectives", "Different administrative levels do not cooperate" and "General difficulty dealing with participatory processes"). Most respondents agreed that these factors were either very important or somewhat important (Figure 14).

Ecosystem services

72 people answered the question on whether the concept of ecosystem services is useful to ensure biodiversity conservation and ecological connectivity. Of these 80% answered yes, while about 10% answered no, and the rest were unsure (Figure 15).

Figure 15 - The ecosystem services concept as a conservation tool

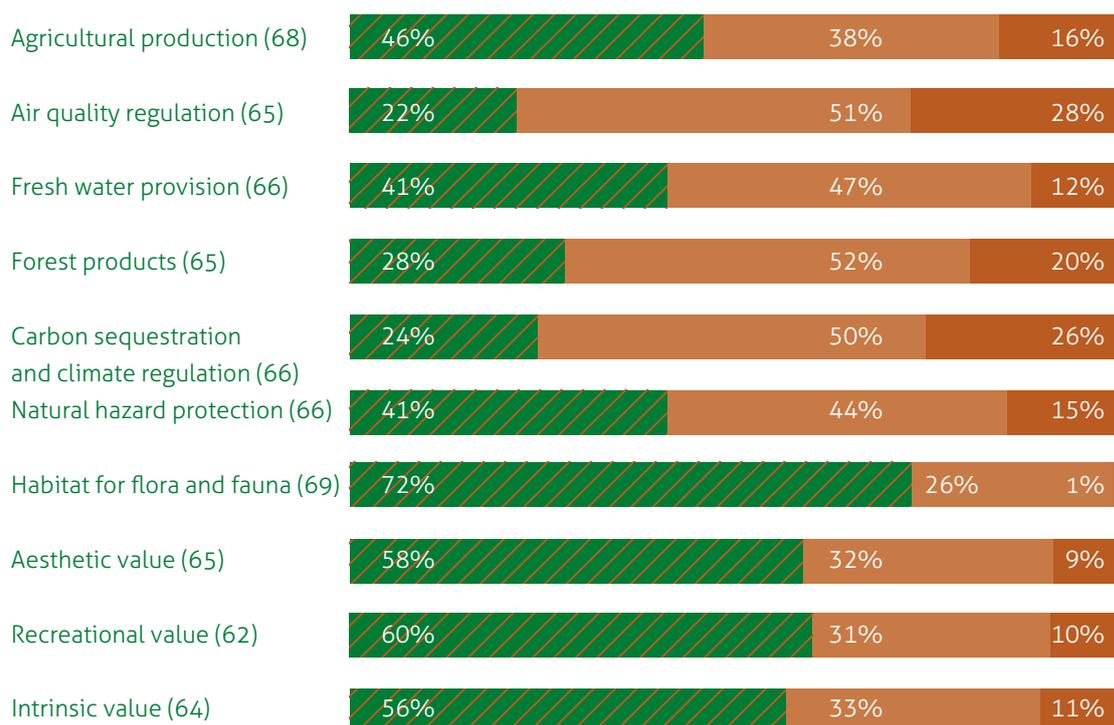


It is worth noting that two-thirds of respondents thought that habitats for flora and fauna were an important ecosystem service for their area of work. Many respondents were from the environmental sector and this may therefore be unsurprising, but there were still many from other sectors who perceived this as important. More than half of all respondents also considered aesthetic value, recreational value and intrinsic value important (Figure 16.)

Figure 16 - The importance of ecosystem services for respondents' work

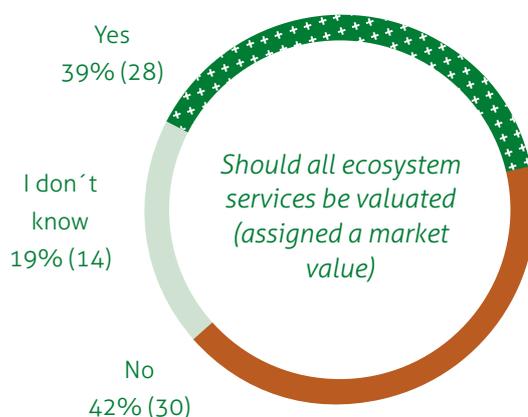
From the list below please indicate how important selected ecosystem services are for your area of work.

- Very important
- Somewhat important (but not a big influence on my work)
- Not at all important



While the majority of respondents felt that ecosystem services were useful as a conservation tool, only about 39% thought that all ecosystem services should be valued (assigned a market value), whereas 42% thought that not all of them should be assigned a financial value and the rest was unsure (Figure 17).

Figure 17 - Financial valuation of ecosystem services

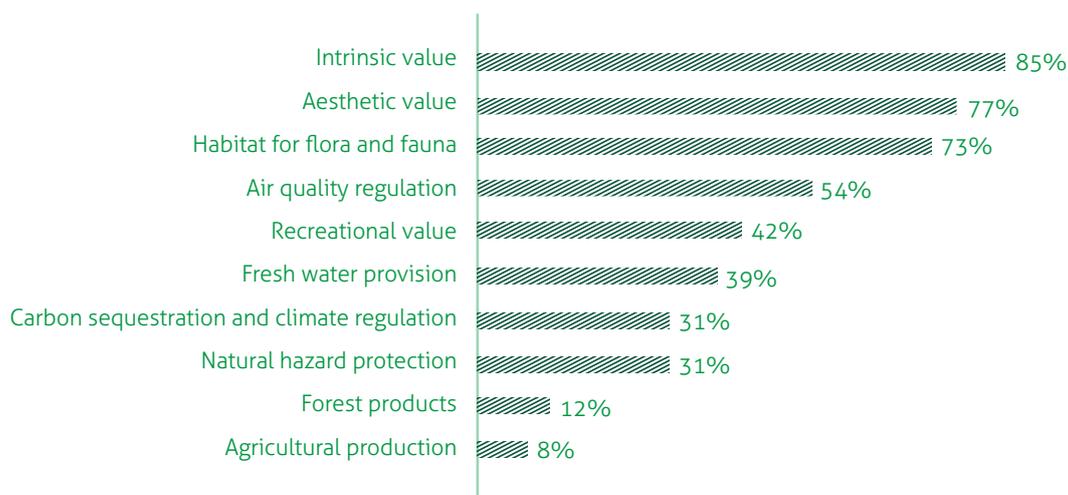


It was pointed out in the optional comments that in Alpine forestry some regulating services have been recognised for a long time through local forest protection regulations, in particular to prevent soil erosion and control flooding.

Of those who thought that not all ecosystem services should be economically valued, the majority wanted to exclude (in that order) intrinsic value, aesthetic value, and habitat for flora and fauna, while about half thought air quality regulation should not be economically valued (Figure 18).

Figure 18 - Ecosystem services that should not be financially valued

Which ecosystem services should not be assigned market value?



Reservations expressed by some respondents on using the ecosystem services concept as a tool for biodiversity conservation are summarised here. It should be noted that some are contradictory, reflecting the diverging opinions of respondents.



The ecosystem services concept is a profit-oriented idea concerning the services we get from biodiversity, whereas ecosystem functions are about more than the conservation of biodiversity, and the services people draw on change depending on social factors. It would be useful to describe the services, but financial valuation is viewed more critically. How do you assign a cost to a wild animal?

While the concept of ecosystem services is a useful tool for policy planning, such evaluations tend to underestimate the real value of these services because a complete and objective evaluation of such services is not possible.

Most of the time the concept of ecosystem services is too hypothetical and far removed from practice, and is poorly understood by local people. It will take a long time to convince people of its value. It needs to be translated from the highly abstract level into one that is better understood by people. Conservation biologists and managers have to make themselves familiar with different approaches to this concept, and be aware of linkages with EU directives and national implementation.

The concept is useful, but we have to be careful with the financial valuation aspect. Some ecosystem services should be safeguarded a priori, without considering their market value. The concept is anthropocentric and assumes that a number can be placed on everything, it tends to disregard the emotional and deeper connections of humans and the rest of nature.

Ecosystems have to be protected not only because they are useful to us, but also because they have intrinsic value. The fact that we need this concept shows that the human connection to nature is being/has been lost, needing such a valuation to show its true worth.

Preservation for intrinsic value alone is insufficient, it is useful to point out the goods and services they can provide to residents and the wider population.

Feedback from trans-sectoral workshops

Part of this work package involved the organisation of trans-sectoral workshops. These were intended as dissemination activities for project findings, but were primarily used to discuss problems and opportunities relating to regional planning and how they interface with ecological connectivity and biodiversity conservation concerns.

The importance of ecological spatial planning for ensuring the conservation of biodiversity, ecological connectivity and ecosystem services cannot be overstated. This requires trans-sectoral approaches, i.e. on the one hand policies that apply to all sectors and, on the other hand, working with stakeholders from all sectors that have an impact on land-use choices.

Detailed minutes of the workshop discussions are published in separate workshop reports. Some of the salient points are shown below.

- Participants confirmed that European legislation influences spatial planning in the Alps on a pan-Alpine scale and at a more local level. There is a need for more direct vertical communication, e.g. between the EU Commission and provinces. Self-imposed regulatory mechanisms are also necessary.
- Ecological connectivity is a central concern for biodiversity conservation. However, insufficient progress has been made in implementing connectivity measures. Clear future perspectives to prevent any further fragmentation of the landscape have to be elaborated, and biodiversity conservation should be prioritised. Next steps should tackle existing problems and secure the cooperation of important actors for the wider implementation of the many existing concepts and experiences.
- The local realities of spatial planning are similar and fraught with difficulties in different regions. Difficulties in reaching agreement on issues such as ecosystem protection measures are not always or not only related to disagreements about planned projects, but are sometimes caused by historic underlying conflicts between different stakeholders. Which interests prevail in the end depends on the one hand on legal frameworks, and on the other hand on political goals and values at all levels. It is probably essential to provide financial and other incentives to land owners when land-use questions come into play. Private actors are key partners who have not been sufficiently involved in the Alpine Space programme.
- While it is clear that ecological spatial planning has to be trans-boundary in scale, in practice this is an enormous challenge, because it is difficult for communities to co-operate even beyond their own municipal level.
- The demand for transnational collaboration in the above-mentioned topics requires political support at ministerial level. It clearly relates to the European Community's macro-regional strategy and could provide a new impetus for transnational collaboration. Ecosystem service-based approaches can offer new impulses to emphasise the connection between resource uses and users and jointly develop concepts. The concept can also be used to illustrate the real value of nature conservation in Alpine ecosystems and provide economic incentives to people.

- At national government level, the environment domain is subsumed by different Ministries in the different Alpine Space countries (e.g. in Austria, it is the Federal Ministry of Agriculture, Forestry, Environment and Water Management; in France there is a Ministry of Ecology, Sustainable Development and Energy; in Germany it is the Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety; in Italy the Ministry of the Environment and Protection of Land and Sea; and in Slovenia it is the Ministry of Agriculture and the Environment). In some instances, this results in internal trade-offs, requiring prioritisation of one domain over another.
- Information and communication must extend beyond those directly involved in spatial planning activities, including the different sectors and the public. Environmental education as an awareness-raising tool should not be neglected.
- Organic agriculture is making an important contribution to biodiversity conservation and ecological connectivity, over and above that made by protected areas. Nevertheless, there are often conflicts between nature-protection targets and the rising demand for agricultural production, and also concerning land use on private property. Farmers view mandatory regulations as problematic, even if they share biodiversity goals. This is an area where micro-economic factors (at farm level) can be reconciled with ecological connectivity goals. Farmers' associations could play an important communication role in this area.
- It is particularly difficult to obtain the cooperation of the tourism sector in nature conservation programming, unless projects involve concrete tourism infrastructure planning. This may be due to a lack of awareness of the importance of landscape protection for tourism. Future project work must target tourism representatives at regional and national levels. "Landscape beauty" is an ecosystem service that is seen as a "free" resource by the tourism sector. As in the renewable energy sector, it is important to ask how use of this resource could be "compensated".
- Science can help, information is available, but often not in a format that is digestible by decision-makers.

5.1.3 PRIORITIES FOR BIODIVERSITY-RELATED PROJECTS IN THE ALPINE SPACE PROGRAMME 2014-2020

We have formulated some recommendations on how to channel substantial funding for biodiversity conservation goals in the Alps. The detailed analysis for Activity 5.1.3 is presented in the separate greenAlps report “Common Strategic Framework (CSF) 2014-2020 and Biodiversity”. The main findings from that report are shown below.

- According to the classification of the EU Structural and Investment Funds Regulations, all Alpine regions belong to the “developed regions” except one (Franche-Comté, which is a “transition region”) (Alpine Space Programme 2014). This means that access to structural and investment funds is more difficult than in less developed regions and requires integrated project approaches and cooperation with other relevant sectors in order to achieve positive effects for biodiversity protection. It will therefore become increasingly important for regions and institutions (in their capacity as potential beneficiaries) to be aware of the need for cooperation, exchange and joint efforts.
- It will be useful to initiate a more intensive dialogue with the investment-related sectors (e.g. settlement development, tourism, energy and transport) in order to raise their awareness of the need for biodiversity.
- There is a direct link to spatial planning and development of human settlements, in view of the demographic trends in the Alps and in Europe as a whole. It is very important to prepare strategies for systematically incorporating biodiversity and nature conservation within spatial planning and settlement development.
- Tourism is one of the main sources of income for many Alpine regions, and at the same time it is one of the main investors in the Alps. It depends heavily on beautiful landscapes – the interconnections between nature/biodiversity protection and the availability of beautiful landscapes should be made very clear and new fields of cooperation sought.
- Biodiversity conservation has to be implemented on the ground – therefore it is essential to factor in sufficient manpower to provide strategic results at a grass-roots level, specifically tailored to suit regional conditions. This applies to both the administrative and investment-related elements of conservation and protection measures.
- The needs of nature and biodiversity protection are very often not clear to the wider public – awareness and understanding must be raised. Staffing and funding are therefore needed to “translate” these needs in order to convince people. The model role of the Alps and the European Union as a trendsetter in global sustainability may help to develop new ideas and concepts and establish cornerstones in this respect.
- Investment priorities must not, as a rule, take precedence over nature conservation and biodiversity priorities, given the intrinsic value of biodiversity and the extreme vulnerability of Alpine landscapes.

5.1.4 COMPATIBILITY OF POLICIES WITH PILOT REGION OBJECTIVES AND NEEDS

In Work Package 4, Activity 4.2, project partner EURAC prepared synthesis reports on the derived needs and interfaces of ecological connectivity and selected ecosystem services in four pilot regions: Berchtesgaden National Park (Germany), Kalkalpen National Park (Austria), Julian Prealps Nature Park (Italy) and Triglav National Park (Slovenia). These are reflected in separate "synthesis reports" on the derived needs and interfaces of ecological connectivity and selected ecosystem services for each pilot region.

5.1.4.1 Berchtesgaden National Park (Germany)

Background

Work on ecological connectivity and biodiversity conservation is quite advanced in the Berchtesgaden region compared to other pilot regions. Berchtesgaden National Park management is active on the Alpine Convention's Platform for Ecological Connectivity. The Park has also participated in several European projects (ECONNECT, ALPENCOM, HabitAlp, GLORIA, Glochamora, Permanet, EUregio-projects and greenAlps), some of which have led to specific protection measures, such as the creation of bike paths, the zoning of some areas for pasture, public bus connections (internal and trans-boundary), improved security within the Park, improved communication with local communities, and new scientific information. Additional projects have had a high impact in the region and were supported by the activities of the park (Carbomont, Gloria, Glowa, DAV and ATEAM). Carbomont, a comparative ecosystem analysis project focusing on carbon sequestration and flux partitioning in differently managed non-forest ecosystems (meadows, pastures, dwarf shrub communities and abandoned areas) introduced EU policies on mountain areas. The stakeholder consultations identified contrasting policy scenarios of land use in European mountain areas in order to develop specific recommendations.

The National Park administration has strong relationships with the surrounding local communities, which cooperate in the development of regional landscape plans. The Park also promotes transboundary cooperation, for example with the Weißbach Protected Area in Austria, which has led to the development of joint conservation, environmental education and visitor programmes.

The Park is already well advanced in the area of ecosystem services valuation, in line with the interest taken in the area by the EU. At the time of assessment, the Park's services were valued at an estimated 10 million euros. Although this figure is questionable, the valuation itself is a way of explaining the Park's value to politicians and administration officials and gaining support from the local population and donors.

Identified needs

Some of the needs expressed by the Park communities concern:

- Traffic and mobility: There is a perceived need to improve tourism management and promote alternative mobility to reduce the number of private vehicles allowed to enter the park so as to limit their impact.

- Maintenance of traditional agricultural land by farmers: Farmers have expressed a need for compensation for environmental services they are being asked to provide by existing laws, and for damage caused by wildlife (e.g. the bark beetle) and natural processes (windbreaks and snowbreaks). The Park needs to earmark part of its budget for developing compensation programmes. Furthermore, more scientific research is necessary into the interaction of different farm management practices and biodiversity.
- Population growth: The Park and local communities need to work together to identify spaces for regional development and conservation outside the Park's boundaries that respect both the needs of the environment and of the humans living in it
- Governance: Local communities want to be more involved in the Park's governance. More of an effort should be made to bring together stakeholders from different sectors such as agriculture, gastronomy, hoteliers, business development, skilled crafts and trades. There is already a series of ongoing and planned activities that could facilitate wider participation.
- Mapping: The Park needs to update its habitat mapping and devote part of its budget to environmental status reports.

All the expressed needs are compatible with and supportive of EU policies and strategies concerning biodiversity, ecological connectivity and ecosystem services. It is important for the regions that the EC considers topics and challenges not only at a transboundary but also at a regional level. For the regional level, the implementation of concrete activities is most important. Funding is needed for this, and support from the programme level is vital.

5.1.4.2 Kalkalpen National Park (Austria)

Background

Wilderness protection is the principal mission of greenAlps project partner Kalkalpen National Park (a partner of the greenAlps project). It attempts to let natural ecological processes re-establish themselves (allowing natural succession to take place and using a "non-intervention" approach). The wilderness concept has already been implemented in 75% of the Park. The Kalkalpen National Park also participated in the Econnect project, in which the Gesäuse National Park was the official project partner leading connectivity activities, with the Kalkalpen National Park and Wilderness Area Dürrenstein participating in joint activities. Econnect thereby prompted the first cooperation between different communities in the Park and across provincial borders (e.g. with Styria, where joint activities with the Gesäuse National Park were implemented). The National Park administration now promotes the establishment of an ecological network ("Netzwerk Naturwald") outside the Park boundaries. The Netzwerk Naturwald project envisions an ecological network between protected areas in the three provinces of Upper Austria (Kalkalpen National Park), Styria (Gesäuse National Park) and Lower Austria (Wilderness Area Dürrenstein). The area between these three large protected areas includes several other smaller protected areas containing natural forests, making this an excellent region for creating an ecological network. It is a difficult process, as the national legal framework (Austria's federal system of governance), which has three different levels of nature conservation legislation, includes three levels of decision-making, effectively acts as a barrier to stimulating internal cooperation between different provinces and causes many internal conflicts and even a sense of competition between provinces. Some initial success was recently achieved through the designation of a first pilot "stepping stone" for forest species between the Kalkalpen and Gesäuse National Parks (Nitsch 2014). Here, a forest area is being managed by Styrian Provincial Forests (Steiermärkische Landesforste). 16 hectares of forest will be fully protected and a further adjacent 24 hectares will be managed in accordance with ecological management principles.

Relationships with the area's inhabitants are sometimes difficult, as they do not always recognise the economic opportunities the presence of the Park can offer. The National Park's territory and its surroundings, with high peaks separating narrow valleys, historically has not allowed much cooperation between the different communities. To this day the Park administration perceives that there is a sense among local residents of "not belonging" to the National Park area. However, recreational tourists from urban areas are very appreciative of the wilderness areas. The Park administration is tackling local perceptions through awareness-raising programmes and projects related to regional development, including cooperation with regional tourism associations and local business partners (e.g. hotels for walkers, guesthouses, agricultural producers and outdoor activity providers). The Park is also working to develop agreed protocols within local communities. Local stakeholders have been involved in many European projects (i.e. Econnect and greenAlps), but expectations for some projects have been dashed because the ideas gathered were not used for concrete interventions on the ground. Econnect, as mentioned above, did result in concrete measures that continue to be pursued.

The "Leader" programme, which is part of the Austrian Programme for Rural Development (see Netzwerk Land 2014), is very active in the Kalkalpen region and cooperates with the National Park to stimulate people to take the initiative for local actions. For example, in the Enns Valley a foundation was created to implement a project to maintain the cultural landscape of the Kalkalpen National Park as a contribution to conservation and nature tourism (LeaderRegion Nationalpark Kalkalpen 2014). Leader funds have been provided for ecological agriculture measures, but only a few concrete actions have followed. The Leader programme has stimulated more tourism but this is largely niche tourism that has not provided local people with any substantial new economic opportunities.

Identified needs

Many of the needs expressed by the Park administration relate to legal and governance issues, while some also point to the need for new economic instruments:

- A national nature protection framework (as the absence of such a framework places limits on concrete actions for connectivity on the ground).
- Increased cooperation between local authorities, civic organisations, local businesses, local government and the Protected Area administration to harmonise conservation action at a local level.
- Development of sound policies that engage local communities in local development.
- Development of a resilient planning system for climate change adaptation, the promotion of ecological connectivity and the valuation of locally relevant ecosystem services.
- Integration of Protected Area administrations into planning processes for the development and management of the surrounding landscape. Planning should be based on an ecosystem approach.
- Development of inter-provincial cooperation such as joint tourism programmes and destination management, in order to improve the tourism offering and encourage tourists to stay in the area for more than one day.
- Encouraging the participation of local communities in the development of a process for the assessment of ecosystem services (economic, social, cultural and spiritual benefits of natural areas inside and outside protected areas), and the creation of partnerships between the communities and the Park administration for conservation and the valuation of ecosystem services based on community and Park needs.
- Development of community-based conservation initiatives (e.g. preserving local land-use practices developed by inhabitants over generations).

All the expressed needs are compatible with and supportive of EU policies and strategies concerning biodiversity, ecological connectivity and ecosystem services.

5.1.4.3 Julian Prealps Nature Park (Italy)

Background

The Julian Prealps Nature Park was created in 1996 and covers an area of about 100km² in the province of Udine. It has a high level of biodiversity due to the intersection of three different biogeographic areas (Mediterranean, Illyrian and Alpine). The Park's main mission is to protect the high ecological quality and wilderness of the territory. The Park's territory provides clean water and non-timber forest products for more than 300,000 people.

The Park promotes the establishment and conservation of ecological connectivity with neighbouring parks. The possibility of creating a Transboundary Area for ecological connectivity was first envisaged in the "PALPIS" project (InterReg Italy – Slovenia 2005 – 2007), which undertook cross-border participative planning in areas of outstanding natural value in Triglav, the Julian Prealps Nature Park, the Northern Julian Pre-Alps Site of Community Importance and the Natura 2000 and MAB-UNESCO areas located in the municipalities of Bovec (Plezzo) and Kobarid (Caporetto). In addition, efforts are being undertaken jointly with the Nockberge National Park in Austria (Carinthia) to strengthen the transnational network, with the aim of providing mutual support for the development of these outstanding natural areas (LAG Nockregion-Oberkärnten 2010).

The Park and the municipalities surrounding it have been able to turn local features and local history (natural beauty, local traditions and even the earthquake of 1976 – through the creation of an earthquake museum) into economic opportunities for local people and tourism. The Park is a promoter of a local "quality brand" – an institution that brings together all the municipalities in cooperative activities such as environmental education, excursions, sports, folklore events and job creation.

However, the Park administration perceives the existence of a "culture of the immediate", which does not take into account the long-term benefits of nature. Most people take ecosystem services for granted, and awareness-raising efforts are difficult. In addition, the region suffers from the typical problems of mountain areas, including depopulation/an ageing population and a scarcity of economic opportunities for young people.

Identified needs

- The Park should be thought of as a common platform by the surrounding municipalities. To achieve this, a structured planning mechanism is needed that draws on the Park as a tool for local development.
- A sense of belonging to the Park needs to be instilled in local inhabitants. Currently it appears that inhabitants see themselves as "guardians" of the Park's natural assets for the use of others without receiving any recognition for their efforts.
- A proportion of local inhabitants' water bills could be allocated to fund Park operations.
- Sustainable accommodation (e.g. "albergo diffuso", an Italian concept of hospitality where small historic villages turn various historic buildings into lodgings for tourists) options are currently lacking. Such options would be needed to improve the appeal to tourists, especially for nature tourism.
- Expansion of the Park's boundaries to include municipal settlements would be beneficial – but this is hampered by the absence of a regional legal framework. On the one hand, the political will needed to change regional legislation is lacking, and on the other hand, some political lobbies want to restrict the Park's boundaries.
- Inclusion in a "Transboundary Biosphere", joining with Triglav, as an opportunity to increase the visibility of the Park and opportunities for regional development, promote local and transboundary stakeholder dialogues and stimulate a sense of belonging to the same environment, to name but a few of the potential benefits.

5.1.4.4 Triglav National Park (Slovenia)

Background

Triglav National Park manages several ecosystem services to fully protect the environment and provide opportunities for regional development. Its provisioning services (e.g. biomass and fresh water) are also a foundation for habitat and gene pool protection, soil formation and composition, and regulating services such as water retention, natural hazard regulation and nutrient regulation. The wilderness areas in the remote parts of the Park provide habitats for diverse wildlife and plant species. Triglav National Park is active on the Alpine Convention's Platform for Ecological Connectivity and promotes actions on the ground, especially in cooperation with the Julian Prealps Nature Park (Italy). (See the background section for the Julian Prealps Nature Park above for further details of this trans-boundary park initiative.)

Identified needs

- Traffic and mobility: There is a perceived need to offer alternative mobility options, but infrastructure and resources for public transport are currently inadequate. The number of private vehicles entering the Park during high season is perceived as excessive.
- Maintenance of traditional agricultural land by farmers: Farmers need compensation for damage caused by wildlife.
- Governance: Local communities need to become more involved in the Park's governance. There is currently a lack of understanding/interest by the local population. For example, Triglav National Park is a pilot area for the Alpine Space project *recharge.green*, but the stakeholder community reportedly does not know about this project. They are also not interested in the UNESCO Biosphere label, seeing it as an additional administrative burden.
- Finance: Due to recent budget cuts, the Park needs to increase its financial resource base and has proposed to charge entrance fees for visitors. The concept of paying for ecosystem services is under discussion, as are other forms of self-financing.

All the expressed needs are compatible with and supportive of EU policies and strategies concerning biodiversity, ecological connectivity and ecosystem services. The principal challenge seems to be of a financial nature. Our research points to the fact that Slovenia already receives a substantial amount of EU funding for various nature protection activities, but it appears that at least as far as Triglav National Park is concerned, this funding is nevertheless insufficient.

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ANNEXES

- Annex 1 - EU biodiversity targets and related global Aichi targets
- Annex 2 - Overview table of relevant ecosystem services in the Alps (from recharge.green project)
- Annex 3 - Other relevant EU environment policy projects

Annex 1: EU biodiversity targets and related global Aichi targets

<p>EU Biodiversity Target 1</p>	<p>Aichi targets 1, 11, 12</p>
<p>Target 1: Fully implement the Birds and Habitats Directives To halt the deterioration in the status of all species and habitats covered by EU nature legislation and achieve a significant and measurable improvement in their status so that, by 2020, compared to current assessments: (i) 100% more habitat assessments and 50% more species assessments under the Habitats Directive show an improved conservation status; and (ii) 50% more species assessments under the Birds Directive show a secure or improved status.</p>	<p>1: By 2020, at the latest, people are aware of the values of biodiversity and the steps they can take to conserve and use it sustainably. 11: By 2020, at least 17% of terrestrial and inland water, and 10% of coastal and marine areas, especially areas of particular importance for biodiversity and ecosystem services, are conserved through effectively and equitably managed, ecologically representative and well connected systems of protected areas and other effective area-based conservation measures, and integrated into the wider landscape and seascapes. 12: By 2020, the extinction of known threatened species has been prevented and their conservation status, particularly of those most in decline, has been improved and sustained.</p>
<p>EU Biodiversity Target 2</p>	<p>Aichi targets 15, 14, 8, 10</p>
<p>Target 2: Maintain and restore ecosystems and their services By 2020, ecosystems and their services are maintained and enhanced by establishing green infrastructure and restoring at least 15 % of degraded ecosystems.</p>	<p>15: By 2020, ecosystem resilience and the contribution of biodiversity to carbon stocks has been enhanced, through conservation and restoration, including restoration of at least 15% of degraded ecosystems, thereby contributing to climate change mitigation and adaptation and to combating desertification. 14: By 2020, ecosystems that provide essential services including services related to water, and contribute to health, livelihoods and well-being, are restored and safeguarded, taking into account the needs of women, indigenous and local communities, and the poor and vulnerable. 8: By 2020, pollution, including from excess nutrients, has been brought to levels that are not detrimental to ecosystem function and biodiversity. 10: By 2015, the multiple anthropogenic pressures on coral reefs, and other vulnerable ecosystems impacted by climate change or ocean acidification are minimized, so as to maintain their integrity and functioning.</p>

EU Biodiversity Target 3	Aichi targets 7, 5, 13
Target 3: Increase the contribution of agriculture and forestry to maintaining and enhancing biodiversity	
<p>Agriculture: By 2020, maximise areas under agriculture across grasslands, arable land and permanent crops that are covered by biodiversity-related measures under the CAP so as to ensure the conservation of biodiversity and to bring about a measurable improvement(*) in the conservation status of species and habitats that depend on or are affected by agriculture and in the provision of ecosystem services as compared to the EU2010 Baseline, thus contributing to enhance sustainable management.</p>	<p>7: By 2020 areas under agriculture, aquaculture and forestry are managed sustainably, ensuring conservation of biodiversity.</p> <p>13: By 2020, the genetic diversity of cultivated plants and farmed and domesticated animals and of wild relatives, including other socio-economically as well as culturally valuable species, is maintained, and strategies have been developed and implemented for minimizing genetic erosion and safeguarding their genetic diversity.</p>
<p>Forests: By 2020, Forest Management Plans or equivalent instruments, in line with Sustainable Forest Management (SFM), are in place for all forests that are publicly owned and for forest holdings above a certain size** (to be defined by the Member States or regions and communicated in their Rural Development Programmes) that receive funding under the EU Rural Development Policy so as to bring about a measurable improvement(*) in the conservation status of species and habitats that depend on or are affected by forestry and in the provision of related ecosystem services as compared to the EU 2010 Baseline.</p>	<p>7: By 2020 areas under agriculture, aquaculture and forestry are managed sustainably, ensuring conservation of biodiversity.</p> <p>5: By 2020, the rate of loss of all natural habitats, including forests, is at least halved and where feasible brought close to zero and fragmentation is significantly reduced.</p>

<p>EU Biodiversity Target 4</p>	<p>Aichi targets 6, 7, 10</p>
<p>Target 4: Ensure the sustainable use of fisheries resources Achieve Maximum Sustainable Yield (MSY) by 2015. Achieve a population age and size distribution indicative of a healthy stock, through fisheries management with no significant adverse impacts on other stocks, species and ecosystems, in support of achieving Good Environmental Status by 2020, as required under the Marine Strategy Framework Directive</p>	<p>6: By 2020, all fish and invertebrate stocks and aquatic plants are managed and harvested sustainably, legally and applying ecosystem based approaches, so that overfishing is avoided, recovery plans and measures are in place for all depleted species, fisheries have no significant adverse impacts on threatened species and vulnerable ecosystems and the impacts of fisheries on stocks, species and ecosystems are within safe ecological limits.</p> <p>7: By 2020 areas under agriculture, aquaculture and forestry are managed sustainably, ensuring conservation of biodiversity.</p> <p>10: By 2015, the multiple anthropogenic pressures on coral reefs, and other vulnerable ecosystems impacted by climate change or ocean acidification are minimized, so as to maintain their integrity and functioning.</p>
<p>EU Biodiversity Target 5</p>	<p>Aichi Target 9</p>
<p>Target 5: Help combat Invasive Alien Species By 2020, Invasive Alien Species (IAS) and their pathways are identified and prioritised, priority species are controlled or eradicated, and pathways are managed to prevent the introduction and establishment of new IAS.</p>	<p>9: By 2020, invasive alien species and pathways are identified and prioritized, priority species are controlled or eradicated, and measures are in place to manage pathways to prevent their introduction and establishment.</p>

EU Biodiversity **Target 6**

Aichi targets **2, 3, 16, 17, 20**

Target 6: Help avert **global biodiversity loss**

By 2020, the EU has stepped up its contribution to averting global biodiversity loss.

2: By 2020, at the latest, biodiversity values have been integrated into national and local development and poverty reduction strategies and planning processes and are being incorporated into national accounting, as appropriate, and reporting systems.

3: By 2020, at the latest, incentives, including subsidies, harmful to biodiversity are eliminated, phased out or reformed in order to minimize or avoid negative impacts, and positive incentives for the conservation and sustainable use of biodiversity are developed and applied, consistent and in harmony with the Convention and other relevant international obligations, taking into account national socio economic conditions.

16: By 2015, the Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization is in force and operational, consistent with national legislation.

17: By 2015, each Party has developed, adopted as a policy instrument, and has commenced implementing an effective, participatory and updated national biodiversity strategy and action plan.

20: By 2020, at the latest, the mobilization of financial resources for effectively implementing the Strategic Plan for Biodiversity 2011-2020 from all sources, and in accordance with the consolidated and agreed process in the Strategy for Resource Mobilization, should increase substantially from the current levels. This target will be subject to changes contingent to resource needs assessments to be developed and reported by Parties.

Horizontal Issues	Aichi targets 4, 18, 19
Partnerships for Biodiversity	<p>4: By 2020, at the latest, Governments, business and stakeholders at all levels have taken steps to achieve or have implemented plans for sustainable production and consumption and have kept the impacts of use of natural resources well within safe ecological limits.</p>
Building on the Biodiversity knowledge base	<p>18: By 2020, the traditional knowledge, innovations and practices of indigenous and local communities relevant for the conservation and sustainable use of biodiversity, and their customary use of biological resources, are respected, subject to national legislation and relevant international obligations, and fully integrated and reflected in the implementation of the Convention with the full and effective participation of indigenous and local communities, at all relevant levels.</p> <p>19: By 2020, knowledge, the science base and technologies relating to biodiversity, its values, functioning, status and trends, and the consequences of its loss, are improved, widely shared and transferred, and applied.</p>

Source: BISE 2014a

Annex 2: Important Ecosystem Services in the Alps

	Ecosystem Services	Description
provisioning	Provision of forest and agricultural products	Products obtained directly from ecosystems such as agricultural products, forest products and aquaculture products (includes production function of soils)
	Provision of fresh or potable water	Provision of fresh or potable water, including water filtering function of soils
supporting & regulating	Carbon sequestration and climate regulation	Carbon dioxide (and other greenhouse gases) sequestered by the ecosystem for regulating the global atmospheric composition
	Air quality regulation	Mediation of toxic and other polluting particles in the air (e.g. dust) by the ecosystem -> ecological habitat quality
	Protection against natural hazards	Mediation/buffering of flows (mass, liquid, gaseous) for avoiding extreme events (floods, soil erosion, landslides, avalanches, storms, rock falls, ...)
	Ecological habitat quality	Overall habitat quality for wild plant and animal species. Habitat quality is (mutually) dependent on nutrient cycling, seed dispersal and pollination. Long term ecosystem stability (=resilience) and resistance against pests affecting human health and forest or agricultural production are an expression of high ecological habitat quality.
cultural	Aesthetical value	Experiencing the natural world (through different media), landscapes as source of inspiration or cultural values, and a "sense of place" in general, associated with recognised environmental features
	Recreational value	Value for recreational activities (e.g. walking, hiking, skiing, climbing, boating, leisure fishing and leisure hunting), possibility for relaxation, reflection, and general absence of "noise pollution"
	Intrinsic value	Value of ensuring the particular character of an ecosystem for future generations; the value of the ecosystem's existence for its own sake

Source: University of Innsbruck (Clemens Geitner & Richard Hastik), for recharge.green project

Annex 3: Other relevant EU biodiversity policy projects

This is a listing of some relevant EU projects beyond the Alpine Space region that we came across during our policy research. It makes no claim of completeness.

BiodivERsA

BiodivERsA is technically not a project, but a network of 21 research-funding agencies across 15 European countries. It is a second-generation ERA-Net initiative, funded under the EU's 7th Framework Programme for Research. BiodivERsA works to coordinate national research programmes on biodiversity across Europe and to organize international funding for research projects in this field, on a competitive basis. Over the past four years of co-operation, BiodivERsA partners have launched four pan-European joint calls and funded around 35 pan-European research projects for a total cost of 75 M€. BiodivERsA also mapped the biodiversity research landscape for Europe in an original way, and produced a wide range of innovative tools to promote the production and dissemination of new scientific knowledge for the conservation and sustainable management of biodiversity and ecosystem services. In 2008, BiodivERsA launched a major European call on biodiversity, through which 12 international research projects were selected and supported for a total funding of €14.2M. The consortium launched a second European call on "biodiversity and ecosystem services" in November 2010, through which 7 projects were selected for €9.5M. In November 2011, BiodivERsA partners launched the Network's third call for research proposals on "biodiversity dynamics: developing scenarios, identifying tipping points and improving resilience" for a total budget between 6 and 8M€. In November 2012 a call for research proposals on "invasive species and biological invasions" was published. 9 projects were funded for a total amount of €8,9M. In November 2013, a call on "Promoting synergies and reducing trade-offs between food supply, agriculture and ecosystem services" was jointly launched with FACCE-JPI. The final list of funded projects will be known upon national decisions by BiodivERsA and FACCE partners in October 2014. The [list of recommended projects](#) can be found on the website (Biodiversa 2014).

This (currently second) phase of BiodivERsA will come to an end in late 2014. A final conference will be held on 2 October 2014 and a kick-off meeting for the research projects funded under its 2012-2013 joint call on the theme "Invasive species and biological invasions" on 3 October in Paris.

BioScore

BioScore was a Specific Targeted Research project under the EU Sixth Framework Programme for Research and Technological Development (FP6), Priority 8.1.B.1: Sustainable management of Europe's natural resources. It ran from February 2006 to February 2009. The BioScore project developed a tool for linking pressures from policy sectors to the (change in the) state of biodiversity as measured by the presence and abundance of individual species (Delbaere, Nieto, and Snethlage 2009). The tool contains a database that holds information on the ecological preferences of individual species in relation to individual sectoral pressures and relating to selected Community policies as well as the EU headline biodiversity indicators. This tool can be applied for assessing possible impacts of changes in selected environmental conditions. The database is able to assess more detailed impacts and the effectiveness of biodiversity conservation policies based on historic data as well as forecast future impacts based on existing scenario studies. The tool and BioScore final report are available from the website (BioScore 2009).

ENEA-MA (European Network of Environmental Authorities for the Cohesion Policy)

(Working Group "2014-2020 Cohesion Policy & Biodiversity")

The ENEA-MA Working Group was established in October 2011, building on the results of previous working groups under the ENEA-MA umbrella. It carried out a strategic analysis on the integration of biodiversity into the 2007-2013 Cohesion programming, identified the main obstacles, and proposed ten recommendations on how to improve the integration in the 2014-2020 Multiannual Financial Framework. (ENEA 2013)

KEN “Knowledge for ecological networks – Catalyzing the involvement of stakeholders in the implementation of ecological networks in Europe”

The Pan-European Ecological Network (PEEN) has been mapped and translated into a series of national ecological network maps waiting to be implemented. Ecological network projects are being planned across Europe, but implementation can be complex and slow due to the involvement of a wide range of stakeholders with often conflicting views. The objectives of this research project were to describe the current level of involvement and participation of different stakeholder groups in the practical delivery of ecological networks in Europe. This knowledge should result in a better understanding of the processes of stakeholder involvement across Europe and lead to the identification of best practices which can contribute to a better and more effective implementation of ecological networks. The project also aimed to disseminate the knowledge acquired through a network of interested practitioners. The duration of the KEN project was two years (2007-2009). The KEN project was funded by the Netherlands Ministry of Agriculture, Nature and Food Quality.

The KEN project work plan was split into six work streams, which were coordinated and part of an integrated strategy. All outputs can be found on the website (ECNC 2009). The final report ‘[Making the connection! Guidelines for involving stakeholders in the implementation of ecological networks](#)’ (Jones-Walters et al. 2009) has been published on this website.

KNEU – Developing a Knowledge Network for European expertise on biodiversity and ecosystem services (BiodiversityKnowledge)

BiodiversityKnowledge is an initiative by researchers and practitioners to help all societal actors in the field of biodiversity and ecosystem services to make better informed decisions. The project aimed to develop an innovation called Network of Knowledge - an open networking approach to boost the knowledge flow between biodiversity knowledge holders and users in Europe. The EU-project KNEU - Developing a Knowledge Network for European expertise on biodiversity and ecosystem services to inform policy making economic sectors was funded under FP7 as coordination action (Grant No.265299). The project comprises a consortium of 18 leading institutions in Europe on biodiversity and ecosystem services research and governance. The consortium understands itself as a facilitator in developing the Network of Knowledge, aiming at a broad involvement from partners across the biodiversity knowledge landscape. A Final BiodiversityKnowledge conference (“Towards a consolidated Network of Knowledge on biodiversity and ecosystem services in Europe”) took place at the EU parliament on 1 April 2014. The KNEU project’s main deliverable was a [White Paper](#), entitled “A recommended design for “BiodiversityKnowledge”, a Network of Knowledge to support decision making on biodiversity and ecosystem services in Europe” (KNEU 2013).

RESPONSES project

The RESPONSES – “European responses to climate change: deep emissions reductions and mainstreaming of mitigation and adaptation” was financed under FP7 and is not strictly a biodiversity project, but its outputs included a biodiversity-relevant analysis. The objective of the RESPONSES project was to identify and assess integrated EU climate-change policy responses that achieve ambitious mitigation and environmental targets and, at the same time, reduce the Union’s vulnerability to inevitable climate-change impacts. The empirical focus of the project was on five EU policy sectors: water and agriculture, biodiversity, regional and cohesion policy, health, and energy. One of the project’s outputs was a review report on present EU biodiversity policy, published in March 2011 (van Teeffelen et al. 2011). The report provides an overview of the impacts of climate change on biodiversity, strategies suggested to alleviate these impacts, and it looks at gaps between policy and scientific recommendations in the EU biodiversity policy in effect at the time. It also includes a summary of observed and potential interactions between biodiversity conservation and mitigation and adaptation strategies in other sectors.

Some of the recommended policy adaptation strategies mirror those of projects such as [Econnect](#), such as enlarging existing protected areas to make ecosystems more resilient and decrease extinction risk, improving connectivity between protected areas to allow species range shifts, and increased flexibility in conservation area designation. It also recommends more frequent assessments of favourable conservation status under the Bird and Habitats Directives, and a more dynamic implementation of the Directives by Member States (van Teeffelen et al. 2011).

[SPIRAL – Interfacing Biodiversity and Policy](#)

SPIRAL was an interdisciplinary research project funded under the 7th Framework Programme. The overall aim of SPIRAL was to enhance the connectivity between biodiversity research and policy making to improve the conservation and sustainable use of biodiversity.

To achieve this objective the SPIRAL project comprised work packages for stocktaking and assessment of existing science-policy interfaces for biodiversity governance; assessment of factors constraining and facilitating communication on the role of biodiversity in underpinning livelihoods and ecosystem services; assessment of mechanisms for encouraging behaviours that reduce negative human impacts on biodiversity; and for designing and testing science-policy interfaces for biodiversity governance.

The [SPIRAL Handbook](#) and [SPIRAL Synthesis Report](#) (collection of all SPIRAL briefs) are available at the project website (Young et al. 2013).

[SURF nature](#)

14 partners in 10 different EU member states came together to enhance regional policies for the promotion and preservation of biodiversity and nature. The project ran from January 2010 to December 2012 with the Austrian Environment Agency (Umweltbundesamt) as Lead Partner. It was funded through Interreg IVc.

The overall objective of the SURF-Nature project was to improve regional policies and practices with regard to promotion and preservation of natural heritage, biodiversity, and nature conservation through improving opportunities for and the impacts of financing these measures from ERDF funds. To achieve this goal, the analysis and communication of good practice was one of the sub-objectives. The project produced a number of publications, among them a "Handbook on Financing Biodiversity", "European Regional Development Funding for Biodiversity - An analysis of selected Operational Programmes", various thematic booklets, and more. A [list of SURF publications](#) is available on the project website (SURF nature 2012).



greenAlps – connecting mountains, people, nature

The greenAlps project has screened EU biodiversity policies and results from other EU projects and assessed their relevance for current and future nature conservation strategies in the Alpine Space. It has drawn on this analysis and experiences gathered from local stakeholders in pilot areas to reveal opportunities for, and also obstacles to, an effective strategy for the conservation of biodiversity and the sustainable use of natural resources in the Alpine Space. The project ran from September 2013 to November 2014. It was co-financed by the European Regional Development Fund in the frame of the European Territorial Cooperation Programme Alpine Space.

This publication identifies biodiversity-relevant EU policies and programmes, and potential gaps in policies and their implementation. Together with other project publications, it can be downloaded from www.greenalps-project.eu

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