

CONNECTING MOUNTAINS, PEOPLE, NATURE

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SHAPING THE FRAMEWORK FOR AN EFFICIENT
EUROPEAN BIODIVERSITY POLICY FOR THE ALPS



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Project partners



TABLE OF CONTENTS

Editorial.....	5
Executive summary	6
• Zusammenfassung.....	8
• Synthèse	10
• Sintesi.....	12
• Povzetek	14
1 A vision for biodiversity in the Alps.....	16
2 Policies, politics and participation - The challenge of trans-sectoral action in nature conservation.....	24
3 “Selling” nature - Ecosystem services as a “conservation marketing” tool	34
4 The fate of Alpine Space Programme projects - are results put into practice?	48
5 Ecological connectivity and shared needs in the Alps	62
6 How to better connect mountains, people and nature	70
Annex: What ASP projects can deliver to Alpine regions - a glimpse into the ASP toolbox!	94

EDITORIAL

Map 1 - greenAlps partners and pilot areas of Alpine Space Programme projects

- 1 Alpine Network of Protected Areas (ALPARC), France
- 2 CIPRA International, Liechtenstein
- 3 European Academy of Bolzano (EURAC), Italy
- 4 Research Institute for Wildlife Ecology (FIWI), Austria
- 5 Berchtesgaden National Park, Germany

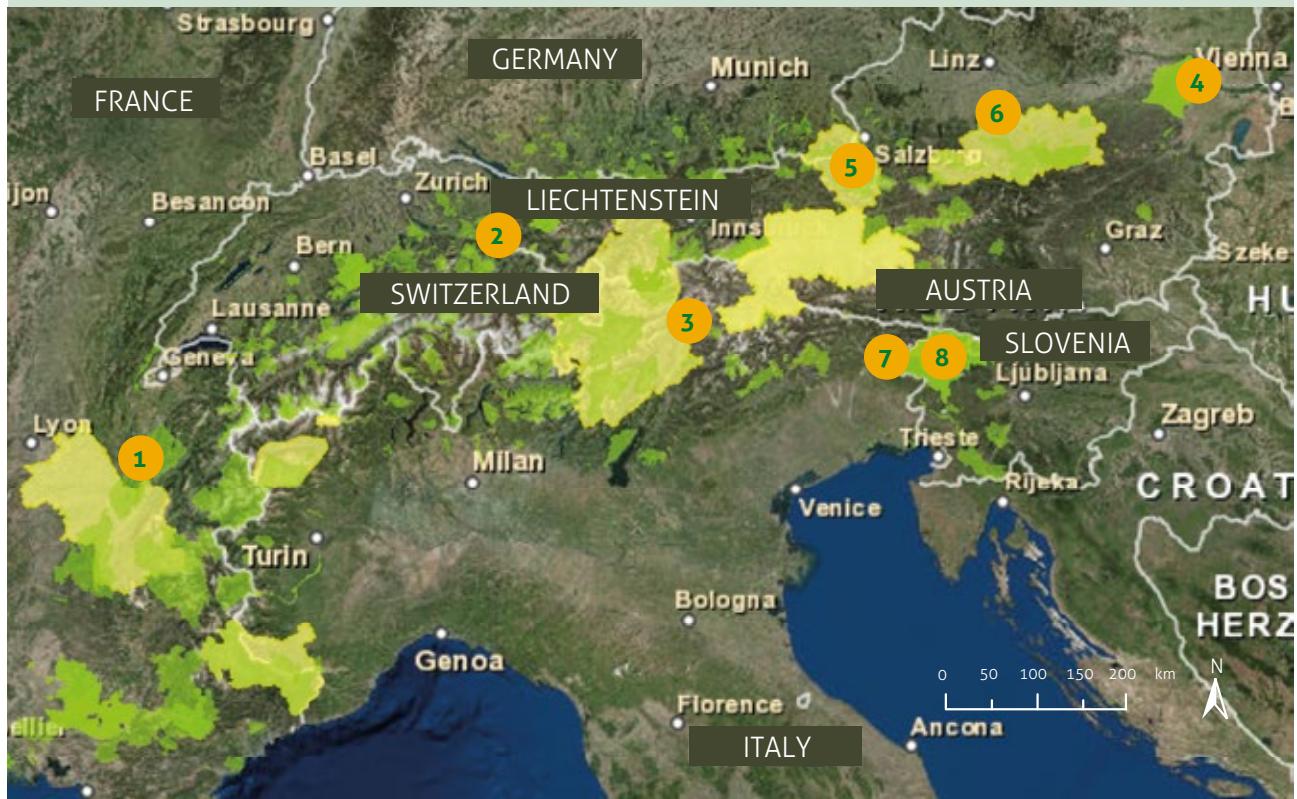
- 6 Kalkalpen National Park, Austria
- 7 Prealpe Giulie Nature Park, Italy
- 8 Bohinj Tourism / Triglav National Park region, Slovenia

-  Pilot areas greenAlps and econnect
-  Alpine Protected Areas

This map has been created in October 2014
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Dear reader,

The greenAlps project provides insights and suggestions on making Alpine environmental strategies “greener” through a better understanding of policy mechanisms from local to European Union (EU) level and by proposing improvements in panalpine cooperation to foster biodiversity conservation.

Like all policies, environmental policies are only as good as the grass-roots implementation of concrete results. For this reason, greenAlps is firmly grounded in established pilot areas. It has analysed needs and motivations within these pilot areas with regard to the actual implementation of biodiversity measures. Some more general insights were also gained into any impact EU projects have in these areas.

The key questions addressed by the project have been: how can results from EU projects be used to better protect biodiversity, how can these results be communicated and, finally, how can they be implemented on the ground?

To answer these questions, international networks, protected areas, scientific institutions and NGO’s active in the Alpine Space Programme and originating from six Alpine countries (see partnership map on the previous page)

worked together to elucidate how to improve the structure of a sustainable and efficient European environmental policy framework for the Alps. This analysis has clearly highlighted two concepts: ecosystem services and ecological connectivity. These have been identified as central to environmental policies targeting biodiversity protection. Protected areas can be a key element and stepping stone in the successful implementation of these policies, since they encompass both major aspects of landscape-level ecological connectivity and the provision of ecosystem services.

The successful day-to-day work of greenAlps partners is founded in recognising and valuing these two concepts on a European scale. Similarly, the future of Alpine and global biodiversity, sustainable environmental policies and related EU projects should be framed by ecological connectivity and a realistic consideration of ecosystem services. greenAlps has developed specific recommendations for policy and decision makers while emphasising concrete implementation aspects. These recommendations may also provide guidance for the Alpine Space Programme, especially in its forthcoming 2014-2020 phase.

Guido Plassmann
Lead Partner greenAlps
Director ALPARC

EXECUTIVE SUMMARY

How successful are biodiversity policies, strategies and projects at connecting humans and nature in the Alps? The greenAlps project surveyed how efficient and effective nature conservation instruments are from the European to the municipal level. Our ultimate goal is to stimulate pro-nature governance change in Alpine countries.

6

Chapter 1 presents a long-term vision for biodiversity in the Alps. Keeping Alpine biodiversity intact calls for spatial and land-use planning that values nature for its services to human society, but also for its own sake. It emphasises the importance of natural and human networks, and of human connections to nature. It envisages trans-sectoral cooperation among stakeholders at all levels, from the local to the transnational.

Chapter 2 provides a glimpse into EU biodiversity policy and the problems arising from the mostly voluntary nature of the various policies and strategies, which makes it difficult to engage actors from diverse sectors in nature conservation activities, even though there are potential synergies between conservation stakeholders and those from other sectors. We recommend that future transnational cooperation programmes make a concerted effort to include nature conservation in actions targeted at the “non-environment” sectors.

Chapter 3 explores the role of ecosystem services-based approaches as nature conservation tools. The EU Biodiversity Strategy highlights the role of biodiversity as “natural capital”. We build on the work of the recharge.green project to highlight the important benefits Alpine ecosystems provide to people. We reflect on the debate over the financial valuation of nature and emphasise that there are pragmatic ways of making the true social value of ecosystems clear to stakeholders outside nature conservation, especially when the EU focus is squarely on economic growth. We recommend that the EU continue to dedicate special funding to on-the-ground actions to protect and, where needed, improve ecological connectivity and the functioning of ecosystem services for the foreseeable future.

Chapter 4 relates some of our critical results analysis of relevant projects financed during the last Alpine Space Programme financing period (2007-2013). We looked at potential gaps in the project life cycle that may hinder the achievement of project visions and goals. Based on stakeholder interviews we recommend concrete implementation measures in pilot areas beyond a project's lifetime (or an extension of the project duration for this purpose). Visible results are important to avoid stakeholder disappointment and burnout. We recommend some possible changes to the project cycle to ground projects in reality, and we point out some factors that are key to project sustainability. We also highlight some interesting tools and instruments developed by various Alpine Space projects, and how they could be applied in other Alpine areas.

Chapter 5 homes in on the relevance of ecological connectivity for local stakeholders. Ecological connectivity is a central concern in nature conservation. There is, however, insufficient progress in the implementation of connectivity measures. We tried to find out whether EU policies and projects targeting this area are meaningful to local stakeholders and whether they line up with their needs. The two threats posed by local development that were most commonly mentioned by greenAlps workshop participants were the closely related themes of landscape fragmentation and the loss of local identity. Nevertheless, there is a perception in some pilot areas that regional policies and projects are too far removed from local stakeholders. It is evident that governments must define clear goals that prioritise nature conservation in a trans-sectoral context, but also meet the needs of communities and common European interests.

Chapter 6 summarises our findings and suggests key ingredients for achieving sustainable Alpine development. We propose a trans-sectoral landscape vision of the Alpine Space that includes all economic and social sectors and builds on a macro-regional approach agreed between the various countries. A common approach would be a very important step towards more successful planning and implementation of nature policies.

We invite you to delve more deeply into the subject matter and also read our additional publications, which are available for download on the greenAlps website www.greenalps-project.eu. They include the reports "Staking a claim for nature – Policy recommendations for the Alpine Space", "Ten recommendations to the Alpine Space Programme", "The EU Biodiversity Policy Landscape", "Biodiversity Stakeholder Networks in the Alpine Space", and "Common Strategic Framework 2014-2020 & Biodiversity". Workshop reports and some additional project documentation are also available.

ZUSAMMENFASSUNG

Wie erfolgreich tragen politische Maßnahmen, Strategien und Projekte im Bereich der biologischen Vielfalt zur Vernetzung von Mensch und Natur bei? Das Projekt greenAlps untersuchte Naturschutzinstrumente auf lokaler bis zur europäischen Ebene auf ihre Effizienz und Wirksamkeit. Erklärtes Endziel ist es, Lenkungsformeln mit respektvollem Umgang mit der Natur in den Alpenländern anzuregen.

8

Kapitel 1 präsentiert eine langfristige Zukunftsperspektive für die biologische Vielfalt in den Alpen. Die Erhaltung der alpinen Biodiversität erfordert einen Raum- und Flächennutzungsplan, der einerseits der Natur an sich, aber auch ihren Dienstleistungen für das menschliche Wohlergehen Rechnung trägt. Netzwerke in der Natur und zwischen den Menschen sind von grundlegender Bedeutung, genauso wie die menschliche Verbundenheit mit der Natur. Diese Zukunftsperspektive sieht eine bereichsübergreifende Zusammenarbeit zwischen EntscheidungsträgerInnen auf allen Ebenen, von der lokalen bis zur grenzüberschreitenden, vor.

Kapitel 2 befasst sich mit der EU-Politik zur Erhaltung der biologischen Vielfalt und den Problemen, die aus der vorwiegenden Freiwilligkeit der verschiedenen politischen Maßnahmen und Strategien resultieren. Diese nicht zwingende Basis kompromittiert, trotz potentieller Synergien, eine Verpflichtung von AkteurInnen aus anderen Bereichen für Naturschutzbelange. Wir empfehlen zukünftigen länderübergreifenden Kooperationsprogrammen, sich verstärkt um die Eingliederung des Naturschutzes in nicht umweltspezifische Aktivitäten zu bemühen.

Kapitel 3 ergründet Ökosystemleistungen als Grundlage für Naturschutzinstrumente. Die Biodiversität wird in der Biodiversitätsstrategie der EU als „Naturerbe“ hervorgehoben. Aufbauend auf dem Projekt recharge.green wurden wesentliche Leistungen der alpinen Ökosysteme für den Menschen aufgezeigt. Wir setzten uns auch mit der Debatte über eine finanzielle Abgeltung der Natur auseinander und betonten die Rolle von Ökosystemleistungen als pragmatische Ansätze, um den tatsächlichen gesellschaftlichen Wert von Ökosystemen EntscheidungsträgerInnen aus anderen Bereichen zu verdeutlichen, vor allem angesichts des klaren Fokus der EU auf wirtschaftlichem Wachstum. Unsere Empfehlung an die EU ist die Beibehaltung der besonderen Finanzierung zur Unterstützung konkreter Maßnahmen vor Ort, um den ökologischen Verbund und funktionierende Ökosystemleistungen zu schützen und, wo erforderlich, in einem absehbaren Zeitraum zu verbessern.

Kapitel 4 bietet eine kritische Analyse der Ergebnisse aus relevanten Projekten, die im Rahmen der letzten Förderperiode des Alpenraumprogramms (2007-2013) durchgeführt wurden. Der Projektzyklus wurde auf mögliche Lücken untersucht, die die Erreichung von Visionen und Zielen beeinträchtigen könnten. Wir interviewten EntscheidungsträgerInnen und empfahlen, davon ausgehend, konkrete Umsetzungsmaßnahmen in Pilotgebieten bereits während der Projektlaufzeit zu implementieren (oder eine Verlängerung der Projektlaufzeit zu diesem Zweck). Sichtbare Ergebnisse sind wichtig, um Enttäuschungen und einer Teilnahmemüdigkeit von Interessensgruppen vorzubeugen. Weitere Empfehlungen sind mögliche Änderungen im Projektzyklus, um Projekte besser in Realität umzusetzen. Wir weisen auf einige Schlüsselkomponenten für ein nachhaltiges Projekt hin, stellen interessante Instrumente vor, die im Rahmen von Alpine Space-Projekten entwickelt wurden und zeigen, wie diese in anderen alpinen Regionen eingesetzt werden können.

Kapitel 5 widmet sich der Relevanz der ökologischen Vernetzung für lokale Beteiligte. Der ökologische Verbund spielt im Naturschutz eine entscheidende Rolle. Allerdings sind die Fortschritte bei der Umsetzung von Vernetzungsmaßnahmen unzureichend. Wir versuchten festzustellen, ob einschlägige Projekte und Maßnahmen der Gemeinschaftspolitik sinnvoll für lokale Beteiligte sind und ihren Bedürfnissen gerecht werden. Die eng miteinander verknüpfte Landschaftszerschneidung und der Verlust der lokalen Identität sind zwei Beeinträchtigungen des ökologischen Verbunds durch die lokale Entwicklung, die greenAlps-TeilnehmerInnen am häufigsten angeführt haben. In manchen Pilotgebieten werden Regionalpolitiken und Projekte als zu weit von lokalen Interessen entfernt wahrgenommen. Es liegt auf der Hand, dass Regierungen klare Ziele formulieren müssen, die einen bereichsübergreifenden Naturschutz vorsehen und den Bedürfnissen der Bevölkerung sowie den gemeinsamen europäischen Interessen gerecht werden.

Kapitel 6 bietet einen Überblick über die gewonnenen Erkenntnisse und stellt Schlüsselemente für das Gelingen einer nachhaltigen Entwicklung in den Alpen vor. Wir befürworten eine bereichsübergreifende Landschaftsvision des Alpenraumes, die allen wirtschaftlichen und sozialen Belangen Rechnung trägt und auf dem, unter den Alpenländern vereinbarten, makroregionalen Ansatz aufbaut. Eine gemeinsame Vorgangsweise wäre ein wichtiger Schritt im Hinblick auf die Planung und Umsetzung der Naturschutzpolitik.

Wir laden Sie ein, sich näher mit dem Thema zu befassen und auch unsere zusätzlichen Publikationen zu lesen, die auf der greenAlps Website www.greenalps-project.eu zum Download stehen.

Sie beinhalten die Berichte "Votum für die Natur - Politische Empfehlungen für den Alpenraum", "Ten recommendations to the Alpine Space Programme", "The EU Biodiversity Policy Landscape", "Biodiversity Stakeholder Networks in the Alpine Space" und "Common Strategic Framework 2014-2020 & Biodiversity". Workshop-Berichte und weitere Projektdokumentation sind ebenfalls dort verfügbar.

SYNTHÈSE

Les politiques, les stratégies et les projets sur la biodiversité, permettent-ils de renforcer les liens entre les hommes et la nature dans les Alpes ? Le projet greenAlps a examiné l'efficacité des instruments de protection de la nature – du niveau européen au niveau communal. Notre but ultime est de stimuler un changement de gouvernance pour que la nature soit davantage prise en compte dans les politiques des pays alpins.

Le premier chapitre présente une vision à long terme pour le maintien de la biodiversité dans les Alpes. Cela exige un aménagement du territoire qui reconnaisse la valeur intrinsèque de la nature tout en valorisant les services que la nature rend aux hommes. Il souligne l'importance des réseaux naturels et humains, et des relations entre homme et nature. Il envisage une coopération trans-sectorielle à tous les niveaux, du local au transnational.

Le deuxième chapitre donne un aperçu de la politique européenne pour la préservation de la diversité biologique. Il souligne le fait que les différentes politiques et stratégies existantes se basent essentiellement sur le volontariat ; il est ainsi difficile de contraindre des acteurs de secteurs très variés, tels les transports ou l'urbanisme, à contribuer à des mesures de protection de la nature – malgré les synergies potentielles. Nous recommandons que les futurs programmes de coopération transnationale incluent la protection de la nature dans les actions menées dans les secteurs « non-environnementaux ».

Le troisième chapitre explore le rôle des services écosystémiques comme base pour des outils de protection de la nature. La Stratégie de l'UE en faveur de la biodiversité souligne le rôle de la biodiversité comme « capital naturel ». Nous nous appuyons sur le travail du projet recharge.green pour mettre en évidence les avantages importants que les écosystèmes alpins offrent aux hommes. Nous nous penchons sur la question de la valorisation économique de la nature et nous présentons des méthodes pragmatiques pour évaluer la valeur des écosystèmes pour la société ; cela peut aider à interpeller des décideurs qui ne sont pas issus du milieu de la protection de la nature, en particulier dans le contexte européen actuel qui mise principalement sur la croissance économique. Nous recommandons à l'UE de maintenir un financement spécifique pour des actions de terrain pour protéger et, à moyen terme, améliorer la connectivité écologique et le fonctionnement des services écosystémiques.

Dans le quatrième chapitre nous proposons une analyse critique des résultats de plusieurs projets en lien avec les thèmes de greenAlps et financés par le Programme Espace Alpin (2007-2013). Nous avons examiné les lacunes potentielles des projets qui compromettaient la réalisation des visions et des objectifs des projets. Basé sur des entretiens avec les parties prenantes, nous recommandons de réaliser des mesures concrètes dans les zones pilotes le plus tôt, pendant la durée officielle du projet, voire de prolonger la durée du projet à cet effet. Des résultats visibles sont importants pour éviter la déception et la perte d'intérêt des parties prenantes. Nous recommandons que le calendrier des projets soit modifié pour être plus cohérent avec la réalité de terrain. Nous évoquons les facteurs qui sont essentiels à la durabilité d'un projet ainsi que quelques outils intéressants, développés par des projets Espace Alpin, et qui pourraient être appliqués dans d'autres régions alpines.

Le cinquième chapitre est dédié à la pertinence de la connectivité écologique pour les acteurs locaux. La connectivité écologique est une préoccupation centrale pour la protection de la nature. Le progrès dans la mise en œuvre de mesures de connectivité est cependant insuffisant. Nous avons évalué la pertinence des politiques et projets de l'UE dans ce domaine pour les décideurs locaux. Les participants aux ateliers greenAlps ont souvent mentionné que le développement local peut entraîner la fragmentation du paysage et la perte d'identité locale. D'autres témoignages suggèrent que les politiques et projets de certaines régions pilotes sont trop éloignés des acteurs locaux. Il est évident que les gouvernements doivent définir des objectifs clairs qui favorisent une approche intégrée de la protection de la nature, tout en prenant en considération les besoins des populations locales et les intérêts communautaires de l'UE.

Le sixième chapitre résume le savoir acquis au cours du projet et propose des ingrédients clés pour réaliser un développement durable dans les Alpes. Nous proposons une vision intégrée du paysage alpin qui satisfasse tous les intérêts économiques et sociaux et qui s'appuie sur l'approche macro-régionale convenue entre les différents pays. Une approche commune serait une étape très importante dans la planification et la mise en œuvre des politiques de protection de la nature.

Nous vous invitons à approfondir les sujets présentés ci-dessus et à lire nos autres publications, qui sont disponibles sur le site greenAlps www.greenalps-project.eu. Ils comprennent les rapports « Revendiquer pour la nature – recommandations politiques pour l'Espace Alpin », « Ten recommendations to the Alpine Space Programme », « The EU Biodiversity Policy Landscape », « Biodiversity Stakeholder Networks in the Alpine Space », et « Common Strategic Framework 2014-2020 & Biodiversity ». Les comptes-rendus des ateliers et d'autres produits du projet sont également disponibles en ligne.

SINTESI

Qual è il contributo delle misure politiche, delle strategie e dei progetti nell'ambito della biodiversità per migliorare il legame tra uomo e natura? Il progetto greenAlps ha esaminato l'efficacia e l'efficienza degli strumenti per la conservazione della natura dal livello locale a quello europeo. Il nostro obiettivo finale è stimolare una governance a favore della natura nei paesi alpini.

Il primo capitolo illustra una prospettiva a lungo termine per la biodiversità nelle Alpi. Mantenere intatta la biodiversità richiede una pianificazione territoriale che protegga la natura, sia come prestatore di servizi fondamentali al benessere umano, ma anche di per sé. Questa prospettiva mette in risalto l'importanza delle reti, in natura e tra gli uomini, nonché tra uomo e natura, prevedendo una cooperazione transettoriale tra le parti interessate su tutti i livelli, da quello locale a quello transfrontaliero.

Il secondo capitolo mostra una panoramica della politica europea in materia di biodiversità e i problemi derivanti dalle politiche e strategie, per lo più non vincolanti. Fatto questo che rende difficile impegnare attori chiave da altri settori in attività connesse alla tutela ambientale, sebbene esistano potenziali sinergie. L'analisi delle politiche europee mette in luce la necessità di compiere uno sforzo concertato per futuri programmi di cooperazione transnazionale, includendo la conservazione della natura in attività di settori non prettamente ambientali.

Il terzo capitolo esamina il ruolo dei servizi ecosistemici come base per gli strumenti per la protezione della natura. La strategia dell'UE sulla biodiversità la evidenzia come "capitale naturale". A partire dal lavoro svolto nel progetto recharge.green, abbiamo messo in rilievo i notevoli benefici forniti all'uomo dagli ecosistemi alpini. Ci confrontiamo con il dibattito sulla quantificazione del valore economico della natura e presentiamo approcci pragmatici per illustrare concretamente alle parti interessate di altri settori il reale valore comunitario degli ecosistemi, in particolar modo di fronte al chiaro orientamento dell'UE sulla crescita economica. Auspichiamo che l'UE continui a destinare finanziamenti speciali rivolti ad azioni concrete sul campo e, ove necessario, a migliorare la connettività ecologica ed il funzionamento degli ecosistemi per il prossimo futuro.

Il quarto capitolo riguarda un'analisi critica dei risultati ottenuti in progetti rilevanti, finanziati nel quadro del Programma di Cooperazione per lo Spazio Alpino nell'ultimo periodo di finanziamento (2007-2013). Abbiamo cercato di individuare i divari nel ciclo di vita dei vari progetti che potrebbero ostacolare il raggiungimento di obiettivi concreti e aspirazioni. Partendo da interviste ad attori chiave, consigliamo la concreta implementazione di misure in aree pilota durante la durata del progetto (o un'estensione di essa a questo proposito). Il raggiungimento di risultati tangibili è di fondamentale importanza per evitare disinteresse o disappunto delle parti interessate. Inoltre proponiamo alcune modifiche da apportare al ciclo dei progetti per una migliore traduzione in realtà e presentiamo alcuni elementi chiave per un progetto sostenibile. Infine mettiamo in evidenza degli strumenti interessanti sviluppati in progetti nell'ambito del Programma per lo Spazio Alpino e dimostriamo come essi possono essere applicati anche in altre regioni alpine.

Il quinto capitolo è dedicato alla rilevanza della connettività ecologica per le parti interessate locali. La connettività ecologica è al centro della conservazione della natura. Vi è tuttavia un progresso insufficiente nell'implementazione di misure per la connettività. Abbiamo cercato di verificare se i progetti relativi a questo settore e le misure della politica comunitaria siano applicabili per le parti interessate locali e se soddisfino i loro bisogni. Secondo i partecipanti del progetto greenAlps, le due minacce più frequenti, derivanti dallo sviluppo locale, sono la frammentazione del paesaggio e la perdita dell'identità locale, tutte e due strettamente collegate tra di loro. In alcune aree pilota, vi è tuttavia la percezione che le politiche e i progetti regionali siano troppo distanti dalle necessità locali. Appare quindi evidente che i governi debbano definire in modo chiaro degli obiettivi che prevedano la conservazione della natura in modo transettoriale e che, al contempo, tengano conto dell'interesse comunitario.

Il sesto capitolo fornisce una panoramica delle esperienze acquisite e propone elementi essenziali per lo sviluppo sostenibile nelle Alpi. Proponiamo una visione transettoriale del paesaggio che includa tutti i settori economici e sociali, basandosi sull'approccio macroregionale, concordato tra i vari paesi. Un'azione concertata costituirebbe una tappa importante verso la pianificazione e la migliore attuazione delle politiche in materia di protezione della natura.

La invitiamo ad approfondire l'argomento, leggendo anche le pubblicazioni scaricabili dal sito web del progetto greenAlps www.greenalps-project.eu. Esse includono le relazioni "Rivendicazione dei diritti della natura – Raccomandazioni politiche per lo Spazio Alpino", "Ten recommendations to the Alpine Space Programme", "The EU Biodiversity Policy Landscape", "Biodiversity Stakeholder Networks in the Alpine Space" e "Common Strategic Framework 2014-2020 & Biodiversity". Le relazioni dei workshop e l'ulteriore documentazione del progetto sono disponibili sul sito web.

POVZETEK

Kako uspešno povezujejo politike, strategije in projekti biotske raznovrstnosti ljudi in naravo v Alpah? Projekt greenAlps je raziskoval kako učinkoviti in uspešni so naravovarstveni instrumenti od lokalne ravni do ravni EU. Naš končni cilj je spodbujanje naravi prijazne politike v alpskih državah.

Poglavje 1 prikazuje dolgoročno vizijo biotske raznovrstnosti v Alpah. Ohranjanje neokrnjene alpske biotske raznovrstnosti zahteva prostorsko načrtovanje in načrtovanje rabe zemljišč, ki ceni naravo zaradi njenih storitev za človeško družbo in tudi zaradi nje same. Poudarja pomen naravnih in družbenih mrež in povezavo človeka z naravo. Vizija za prihodnost predvideva medresorsko sodelovanje med deležniki na vseh ravneh, od lokalne do nadnacionalne.

Poglavje 2 zagotavlja bežen vpogled v politiko biotske raznovrstnosti na ravni EU in probleme, ki pretežno nastajajo zaradi prostovoljne narave različnih politik in strategij. Prostovoljstvo negativno vpliva na sodelovanje deležnikov iz različnih sektorjev pri dejavnostih naravovarstva, čeprav obstajajo potencialne sinergije med deležniki iz različnih področij. Priporočamo, da se v prihodnjih programih transnacionalnega sodelovanja bolj prizadeva za vključevanje varstva narave v ukrepe sektorjev, ki se ne ukvarjajo izključno z varstvom okolja.

Poglavje 3 raziskuje vlogo uporabe ekosistemskih storitev kot orodja za ohranjanje narave. Strategija EU za biotsko raznovrstnost poudarja vlogo biotske raznovrstnosti kot "naravnega kapitala". Na osnovi rezultatov projekta recharge.green izpostavljamo koristi, ki jih alpski ekosistemi zagotavljajo ljudem. Razpravljali smo o finančnem vrednotenju narave in poudarjamo da obstajajo pragmatični pristopi za prikaz prave družbene vrednosti ekosistemov deležnikom izven naravovarstvenih krogov, še posebej glede na jasen fokus Evropske unije na gospodarsko rast. Evropski uniji priporočamo, da še naprej namenja posebna sredstva za financiranje konkretnih dejavnosti in kjer je potrebno za izboljšanje ekološke povezanosti ter za delovanje ekosistemskih storitev v bližnji prihodnosti.

Poglavje 4 prikazuje kritično analizo rezultatov relevantnih projektov, ki so bili financirani v zadnjem obdobju programa Območje Alp (Alpine Space) (2007-2013). Pregledali smo možne pomanjkljivosti v življenjskem ciklu projekta ki bi lahko ovirale doseganje vizij in ciljev projekta. Na osnovi pogovorov z deležniki priporočamo konkretne izvedbene ukrepe v pilotnih območjih tudi po zaključku projekta (ali podaljšanje trajanja projekta v ta namen). Vidni rezultati so pomembni, da se prepreči razočaranje in pasivnost deležnikov. Priporočamo tudi možne spremembe v življenjskem ciklu projekta za boljšo izvedljivost projektov v resničnosti. Opozarjamo na ključne komponente za trajnost projekta, izpostavljammo zanimiva orodja in inštrumente, ki so bili razviti v projektih programa Območje Alp (Alpine Space) in kažemo kako se le-te lahko uporablja tudi v drugih alpskih regijah.

Poglavje 5 se posveča pomembnosti ekološke povezanosti za lokalne deležnike. Ekološka povezanost igra osrednjo vlogo pri varstvu narave. Pri izvedbi ukrepov na področju ekološke povezanosti pa ni zadostnega napredka. Poskusili smo ugotoviti, če so politike in projekti EU, ki zadevajo to tematiko, pomembni za lokalne deležnike in zadovoljijo njihove potrebe. Dve najpogostejši grožnji, ki ga pomeni lokalni razvoj in sta bili najpogosteje izpostavljeni s strani udeležencev na delavnicah projekta greenAlps, sta tesno povezani s temama pokrajinske fragmentacije in izgubo lokalne identitete. V nekaterih pilotnih območjih se jim zdi, da so regionalne politike in projekti preveč odtujeni od lokalnih deležnikov. Očitno je, da si morajo vlade zastaviti jasne cilje, ki dajejo prednost medresorskemu varstvu narave in istočasno zadovoljijo potrebe prebivalstva in skupne evropske interese.

Poglavje 6 povzema rezultate in predlaga ključne sestavne elemente za doseganje trajnostnega razvoja v Alpah. Predlagamo medresorsko krajinsko vizijo za območje alpskega prostora, ki vključuje vsa ekonomska in socialna področja ter gradi na makroregionalnem pristopu sklenjenim med alpskimi državami. Skupen pristop bi bil zelo pomemben korak naprej za uspešnejše načrtovanje in izvedbo naravovarstvenih politik.

Vabimo vas, da se poglobite v tematiko in si preberete še ostale naše publikacije, ki so na razpolago na spletni strani projekta greenAlps www.greenalps-project.eu. Publikacije vsebujejo poročilo »Uveljavljanje pravice narave - Priporočila za oblikovanje politik na območju Alp«, »Ten recommendations to the Alpine Space Programme«, »The EU Biodiversity Policy Landscape«, »Biodiversity Stakeholder Networks in the Alpine Space«, in »Common Strategic Framework 2014 – 2020 & Biodiversity«. Dodatno so na razpolago tudi poročila z delavnic ter dodatna dokumentacija o projektu.

1

A VISION FOR BIODIVERSITY IN THE ALPS

16





Barbara Hendricks

German Minister for the Environment, Nature Conservation,
Building and Nuclear Safety

Nature and mankind in balance

I sincerely hope that by 2045 we will have succeeded in reconciling nature and mankind in the Alps. This means ensuring there is enough space for species to thrive. Their habitats are maintained or, where necessary, restored.

Protected areas are linked to their surroundings and connected by corridors. And also importantly, there is widespread awareness, understanding and knowledge about the unique, diverse nature in the Alps and its fundamental importance for healthy human life, among decision makers and the general public, including the more than 120 million people that visit the alpine region every year.

Cooperation among states and relevant actors in the region is key to biodiversity conservation in the Alps. Therefore, the German government - specifically as Germany holds the presidency of the Alpine Convention in 2015 and 2016 - fosters and supports cooperation across different levels. Locally, we encourage protected areas and municipalities to become pilot regions of an ecological network and to apply for nomination under the Convention. We also support new research and development projects with a focus on the implementation of connectivity measures. Additionally, we cooperate with the European Commission on developing a Macro-Regional Strategy for the Alps that considers nature as central for sustainable development.

*“Cooperation is key to
biodiversity conservation”*

Germany will also look beyond the Alps and continue to foster the fruitful exchange on biodiversity issues in mountain areas with actors of the Carpathian Convention and the Convention on Biological Diversity at a global level.



Markus Reiterer

Secretary General of the Alpine Convention

Species do not recognise borders

The Alps are our ecosystem, our habitat, the place where we live. Decision makers need to develop a better awareness of the value of ecosystems and their contribution to the lives of the people living in and around the Alps. These services need to be more fully included in all the policies in the Alpine Space. In 30 years' time, I hope we will have made great strides towards achieving an optimal balance between inhabitants' needs and ecological functions, and also between the requirements of nature protection and economic development. The Alpine Convention's "conservation of nature and countryside" protocol includes a number of important measures, for example the need

to develop an ecological network. We need to promote the concept of connectivity in the planning process and have an integrated vision for our region. A number of excellent initiatives are already being carried out at different spatial levels. We need to capitalise on them more fully, so as to make a bridge between national and transnational strategies on the one hand and local implementation on the other.

Projects such as greenAlps contribute to this capitalisation.

"Developing an integrated landscape vision for the region"

It is also crucial that we pursue coherent measures, particularly in border regions since species do not recognise borders. Improvements have already been made to this cross-border coordination – the Alpine Convention has contributed to these exchanges with its platforms and working groups, and the efforts undertaken by greenAlps project partners have been invaluable. And I am sure these efforts will continue in the future.



Luc Hoffmann

Co-founder of WWF and founder of the MAVA Foundation

Commitment to restoring natural ecosystem services

For the Alps to be a thriving ecosystem 30 years from now, we need to better understand and appreciate what nature was able to share with us before the days of continual hydropower development, seasonal increases in human populations and intensive agriculture. These have had a major impact on biodiversity. But we are learning. We are seeing a growing awareness of the importance of this valuable ecosystem to our own well-being and, as a result, we are seeing a greater commitment to restoring the natural ecosystem services that the Alps provide. Continued support for initiatives such as restoring Alpine rivers and managing Alpine pastures will help us recreate the sustainable days of the Alps in 30 years' time.

The Alps today are suffering above all from unsustainable decision-making in the pursuit of economic growth at any cost. Non-governmental organisations can be a catalyst for reversing the tide if they become stronger and more proactive in their support. They should increase their support for on-the-ground projects and improve communication among themselves. For example, they should develop ways of improving land management for ecological connectivity between protected areas and through the urban landscape.

“Developing solutions for ecological connectivity”

But equally, on a larger scale, they should voice their support by participating in political discussions on complex issues such as renewable energy development. There is great scope for all organisations to help preserve Alpine biodiversity.

LANDSCAPE

The traditional landscape of the Alps is a mosaic of different scenery and habitats. Well connected natural or near-natural habitats provide a large number of species with shelter, food and migration routes. Diverse landscapes are places where local people and guests like to stay and experience a sense of wellbeing.



LADY'S SLIPPER

Gentian, edelweiss, lady's slipper - a flower-filled Alpine meadow makes us marvel at the diversity nature can bring about. The 13,000 different species of plants in the Alps are the source of Alpine ecosystems. They provide food for animals and mankind. We use many of them for medicinal purposes.



LYNX

Lynx are beautiful, fast, silent and smart. Bears, wolves and lynx have been central elements of Alpine ecosystems for centuries. They are coming back, welcome or not. Nature benefits from the return of the large carnivores. Society needs to learn how to coexist with these animals once more.



CHAMOIS

Each chamois is unique. Small differences in their character and appearance are essential. They allow nature to select those individuals that are best able to adapt to changing living conditions. Gene exchange can only happen if habitats are linked to each other.





RIVERS

Mountain streams are a pleasure to look at. They provide a habitat for many aquatic and terrestrial species, both in the rivers themselves and along their banks. In the mountains, water shapes the landscape. In the form of floods, it can destroy our infrastructure. More than 90 percent of the electricity produced in the Alps is generated by water power.



FOREST

A mix of trees, shrubs, insects, fungi, mosses, plants, mammals and much more besides. Healthy Alpine forests are diverse and have even more diverse functions – for nature and for people. They protect our villages, we find calm at the heart of them, they filter our water and provide wood for heating and construction.



ROSALIA LONGICORN

Many insects are colourful wonders of nature. Most of them exist without us even noticing them. In the fields they pollinate the crops we harvest. They are at the base of food webs built by 30,000 animal species in the Alps.



HUMANS

Connecting mountains, people, nature. The greenAlps motto symbolises the strong link between essential elements for human existence. The Alps are home to 14 million people and a holiday destination for 120 million visitors each year. Without nature, we cannot exist. The services nature provides for us are of inestimable value.

BIODIVERSITY IN THE ALPS: THE LONG-TERM VISION OF THE GREENALPS TEAM

In the Alps biodiversity loss is halted and natural resources are exploited to an extent that is tolerable for nature. Ecological connectivity and the sustainable use of natural resources are commonly considered to be key elements for a successful ecosystem management policy. Society recognises protecting biodiversity as an important goal, and people understand that ecosystems have a limited capacity for human use. Ecosystem services are seen as an essential value for human life and economic activities. Their conservation and sustainable use are guaranteed.

Nature counts for everybody

Nature protection has the same significance as other sectors such as spatial planning, tourism and agriculture. Policies for mitigating adverse impacts on biodiversity and ecosystems are mandatory for all sectors. All sectors are aware of the impact their activities have on biodiversity. Synergies between stakeholders in biodiversity conservation and other sectors are optimally utilised and trans-sectoral cooperation in conservation measures is self-evident. Trans-national cooperation programmes include biodiversity conservation and the protection of ecosystems and ecosystem services in actions targeted at the “non-environment” sectors.

Biodiversity protection as day-to-day reality for local actors

EU policies and regional approaches towards successful ecosystem management are consistent. All administrative levels from municipal to national are cooperating. Activities are organised across national borders. On-the-ground collaboration is translating biodiversity policies into day-to-day reality at a regional and local level, considering the needs of local communities and nature alike. Local people from all related sectors are participating in nature conservation activities because the benefits of such activities are fully recognised.

The greenAlps project started from the assumption that maintaining Alpine biodiversity calls for long-term spatial and land-use planning, new ways of cooperation and a precautionary exchange with other key sectors. How this could become reality has been laid down by the project team in a common vision, based on the project's results.

Developing a landscape vision for the Alps

The greenAlps project recommends that policymakers from Alpine Space countries participate in the process of developing a joint guiding, integrated, trans-sectoral landscape vision for the Alps. This vision should be based on existing biodiversity policies and strategies at an EU, national and provincial level. It must be supplemented with operational action plans that will guide and finance ground-level implementation.

A pan-Alpine landscape vision would facilitate planning and implementation of biodiversity policies.

It should include all economic and social sectors and the different administrative levels. It should be embedded into the European macro-regional approach and should include influencing factors that affect ecological connectivity between the Alps and surrounding areas. The vision should be agreed by representatives of all the countries concerned. This panalpine landscape vision would facilitate a vital step towards more successful planning and implementation of biodiversity policies.

2

POLICIES, POLITICS AND PARTICIPATION

The challenge of trans-sectoral action in nature conservation

24





Horst Scheibl

Spatial Planning, Salzburg Province

Trans-sectoral cooperation – challenges of a federal system

Recently, the regional government of Salzburg Province, together with the Department for Nature Protection, wildlife experts, the local hunting community and other important stakeholders, decided on a regional programme, an inter-municipal plan covering all areas of life, for the Pinzgau region. Shortly afterwards, several municipalities wanted to scrap the wildlife corridors included in the new spatial plan. Fortunately this plan could not be reversed. Experience clearly shows that municipalities can be difficult partners because they fear for their decision-making autonomy. This is because, in Austrian spatial planning, municipalities have traditionally had unrestricted autonomy. Framework conditions are perceived as mere recommendations, federal government activities are seen as

top-down meddling and strong opposition exists when trying to develop new measures for spatial planning.

There are also cases where trans-sectoral cooperation has been successful. One is Salzburg Province's technical skiing facilities programme. Experts from different fields have been finding reasonable solutions for the past 25 years. It has to be said that in this case spatial planning and the municipalities are only concerned on the periphery, with the major aspect being tourism. One of the main achievements is that today nobody would consider building a cable car in a protected natural area in Salzburg. In other Austrian provinces this is still happening.

"My recommendation to policy makers is to establish framework conditions"

By contrast, no technical spatial planning programme has been set up. Instead, regulations that can be broadly interpreted have been established. The federal government now has to cope with a high degree of urban sprawl. My recommendation to regional policymakers is that they sit down together, establish framework conditions and develop technical programmes as a basis for reducing unrestricted land use.

Scientific background

Embedded in poorly understood, highly complex systems, the management of open-access environmental resources requires a flexible and transparent decision-making process that embraces a diversity of knowledge and values. Solving problems in the environmental realm often defeats conventional scientific knowledge production due to the intrinsic uncertainties and the high stakes involved. More often than not, facts and values become intractably interwoven, resulting in a forceful clash between the divergent cultures of science and good governance, with their conflicting rules. Participatory processes involving stakeholders are viewed as increasing the legitimacy and quality of environmental governance. For this reason, stakeholder participation in environmental decision-making is today a precondition for funding agencies and administrations. However, stakeholder involvement is often far removed from a clear understanding of what is expected of those stakeholders in specific processes. Gathering knowledge is not the same as generating support for a cause. These expectations are not always clearly explained and delineated. Successful participatory processes must address the following questions:

- why do we want participation?
- what should participation be about?
- whom do we want to involve?
- and how much participation is necessary or desirable?

After the initial general enthusiasm about the value of stakeholder involvement, it is essential to perform a critical re-evaluation and establish institutionalised frameworks within which the process is to be carried out. Beyond doubt, the successful integration of participatory principles into decision-making processes necessitates willingness and the opportunity to make real use of stakeholder contributions. Failing to adhere to these basic principles invariably leads to non-participation and stakeholder burnout.

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“Alpine Space projects are still far too sectoral. Projects are not accessible enough and subsequently find it difficult to involve a mix of sectors. Trans-sectoral collaboration is, however, key to achieving complex goals such as the conservation of biodiversity and ecological connectivity.”

— greenAlps project team

Globally, within the EU and in the Alps, 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. The most important international legal agreements for protected areas in the EU are the UN Convention on Biological Diversity (CBD) and the EU Birds and Habitats Directives. Under these Directives the Natura 2000 network of protected areas was established. The overarching EU Biodiversity Strategy to 2020 is a comprehensive strategic document with six operational targets and 20 associated actions, which are closely modelled on the Aichi targets (a set of headline targets agreed in 2010 at the Conference of Parties to the CBD (COP-10) in Nagoya, Japan). Moreover, there are a number of other EU environment policies, and policies from other sectors that mention or have an impact on the conservation of biodiversity, ecosystem services and ecological connectivity. In addition, the Alpine Convention, an international treaty between the Alpine countries (Austria, France, Germany, Italy, Liechtenstein, Monaco, Slovenia and Switzerland) and the EU, aims to promote sustainable development in the Alps and protect the interests of the people living in the area. A more detailed list of relevant global and EU policies can be found in the accompanying greenAlps publication “The EU Biodiversity Policy Landscape”, which is available from the greenAlps website.

An abundance of weak policies with insufficient follow-through

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.

The Habitats Directive gives Natura 2000 sites legal protection, but to achieve its objectives, more Natura 2000 sites would have to be designated if it is a matter of mere scientific criteria, and many Natura 2000 sites and species suffer from “unfavourable conservation status”. If all areas that are important to certain key species had already been designated as Natura 2000 sites, a much larger percentage of land area in EU Member States would be protected. This means the implementation of conservation measures needs to improve significantly, both within and outside protected areas. Countries are sometimes slow to translate even binding directives (EU law) into national laws and ensure they are enforced. Not only do existing policy measures have to be better implemented, but new measures for offsetting inevitable impacts are needed, including more strategic spatial planning approaches and the identification of opportunities for enhancing “green” infrastructure.

The European Community maintains a clear focus on economic development, and although this now emphasises the importance of “green growth” and resource efficiency, biodiversity concerns still appear insufficiently represented in the bigger picture. While biodiversity safeguards are finding their way into policy documents from sectors other than the environment sector, such as the “Roadmap for moving to a competitive low carbon economy in 2050” and the Common Agricultural Policy, biodiversity is still taking a backseat to other focus areas, such as employment, climate change and energy sustainability. 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.

In this context, the fact that most biodiversity policies and strategies (e.g. the EU Biodiversity Strategy) are of a voluntary nature, is very problematic. It means that many of these policies have no legal enforcement mechanism. It has been shown in a review of the effectiveness of voluntary environmental programmes that these have some effect, but are insufficient when paradigm shifts in behaviour are needed. Social science has shown that most people are actually willing to cooperate for the benefit of future generations, but only if compliance with the cooperative behaviour is mandatory for everybody. So to be effective, policies for mitigating adverse impacts on biodiversity and ecosystems would have to be mandatory for all sectors. In the absence of legally binding mechanisms, better governance approaches are needed to make up for this gap.

A shortage of important stakeholders for trans-sectoral integration

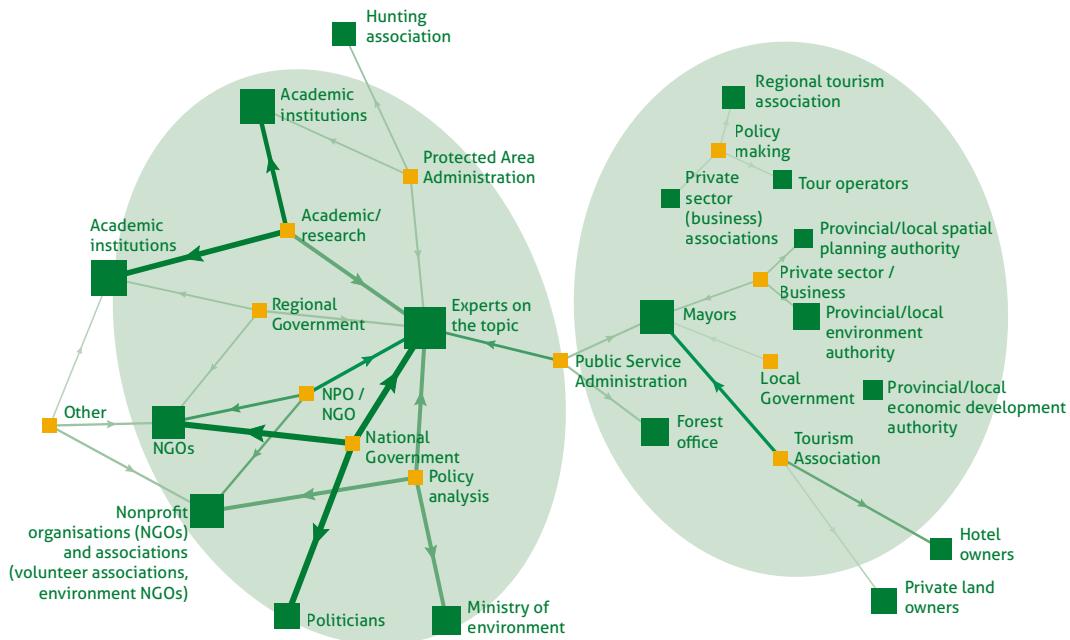
Many sectors have an impact on biodiversity and ecosystems. For some sectors, such as agriculture, forestry and fisheries, there is a direct dependence on functioning ecosystems and the services they provide, and activities in those sectors also tend to have an immediate impact on ecosystems. Depending on how these activities are carried out, the effects on biodiversity can be both positive and negative. The tourism sector in the Alpine region benefits from landscape beauty and often uses this as a selling point, but is also frequently (though again not necessarily) a contributor to habitat disturbance and loss. Other sectors, such as energy, transport and infrastructure, tend to have a large impact on ecosystems (e.g. through habitat loss and fragmentation and pollution). The dependence of these sectors on ecosystems is less obvious, but ecosystem services benefit society as a whole, and this includes stakeholders in different sectors. In general these sectors can boost their reputation if they engage in sustainable development practices. These individual sectors sometimes have conflicting goals, and it is therefore difficult to implement biodiversity policies trans-sectorally. This is compounded by difficulties in motivating stakeholders from these key sectors to collaborate in valuing and protecting ecosystems and their services. Land-use planning should by default be trans-sectoral, but the local realities of spatial planning are fraught with difficulties in different regions. During greenAlps trans-sectoral workshops, some participants pointed out that 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 ultimately prevail depends on the one hand on legal frameworks, and on the other hand on political goals and values at all levels.

While there is much potential synergy between stakeholders in biodiversity conservation and other sectors (e.g. spatial planning, tourism and agriculture), this is currently under-utilised. greenAlps undertook a biodiversity stakeholder network analysis based on an expert survey and on a review of stakeholder lists from a sample of various ETC ASP projects from 2007 to 2013. The detailed results are published in a separate report entitled "Biodiversity Stakeholder Networks in the Alpine Space", which is available on the greenAlps website.

The results of the survey showed – unsurprisingly – that if one distinguishes stakeholders with expertise (academic researchers and environmental experts) from stakeholders with power and political interests (politicians, ministries, etc.), those with power tend to be more difficult to involve. Furthermore, our analysis of contact networks showed that like-minded groups tend to talk to each other, for example experts talk to experts, NGOs to NGOs, etc. Many survey respondents criticised a lack of coordination between different sectors.

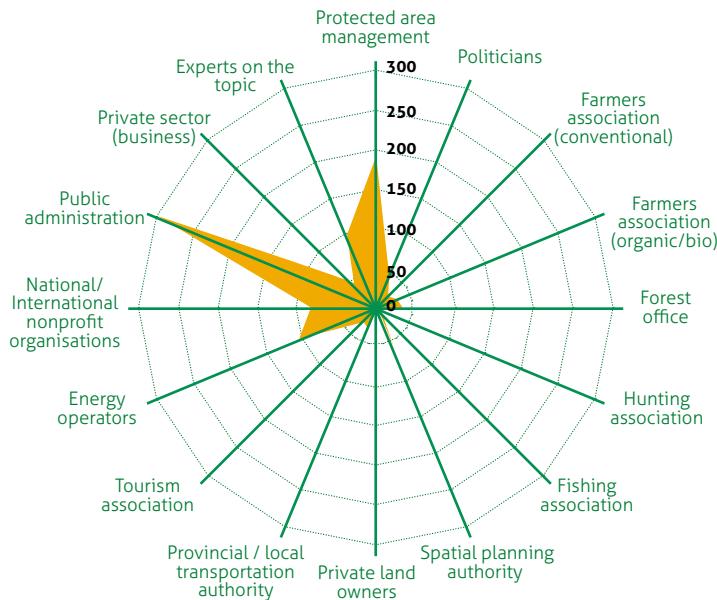
As shown in Figure 1, within the contact network one can distinguish between a cluster of experts, research institutions and NGOs (on the left-hand side) and a cluster of mainly regional or local policy makers and lobbying groups (on the right-right side). It is easier to establish contact with experts than with people (and institutions) with power.

Figure 1 - Network diagram of contacts between nature conservation stakeholders showing that stakeholders tend primarily to talk to their own peer groups. Two dominant contact group clusters are clearly visible



The greenAlps expert survey results were confirmed by a gap analysis of important stakeholder involvement in EU biodiversity projects within European Territorial Co-operation (ETC) programmes. It became evident that, of the sectors that have an important influence on biodiversity and ecosystems, only a few were involved in the sample of projects reviewed (see Figure 2). In fact, most of the stakeholders involved in projects dealing with the environment and nature were from institutions for whom biodiversity conservation constitutes a core activity. These include protected area administrations, public administration bodies and, to a lesser extent, conservation NGOs. The proportion of private sector bodies in ETC projects is very low (8-10%), and yet private (business) interests play a major role in driving biodiversity loss. This may partly be due to the public co-financing requirement in Alpine Space projects, which has been difficult for private enterprises to achieve, but also due to a lack of incentives for businesses to take part in such projects. In general, ETC transnational programmes target administrations and the legal and institutional frameworks of policies – unless they are explicitly targeting the private sector.

Figure 2 - Composition of nature conservation stakeholders in all surveyed ETC ASP projects



Source: Analysis & graph 2014 blue! advancing european projects

A call for better coordination from the start

As a priority action, future trans-national cooperation programmes and their political backstopping ministries in the EU Member States must make a concerted effort to include biodiversity conservation and the protection of ecosystems and ecosystem services in actions targeted at “non-environment” sectors. This entails launching an intensive dialogue with economic development-related sectors (e.g. settlement development, tourism, energy and transport) during the project planning stage.

Nature conservation stakeholders must launch an intensive dialogue with economic development-related sectors during the project planning stage.

Early integration will necessarily raise an awareness of the importance of biodiversity in the relevant sectors and enhance future trans-sectoral cooperation in conservation measures. The emphasis here must lie on concrete on-the-ground collaboration, resulting in the translation of existing biodiversity policies into day-to-day reality at a regional and local level.

Further reading

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3

“SELLING” NATURE

Ecosystem services as a “conservation marketing” tool





Erica Zangrando

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for Economy and Mountain Area Development

Improving local people's awareness of ecosystem services

In the Veneto region, the authorities' awareness of the importance of ecosystem services has been increasing over recent years, especially in the environment and rural policy sectors. For example, ecosystem services are taken into account in the new 2014-2020 Rural Development Programme, and the Veneto region is involved in a large number of European programmes dealing with this issue (Alpine Space, Life +, etc.). Moreover, some good examples of payment for ecosystem services, such as the voluntary local market for carbon sequestration credits, can be found in mountain areas. At a more local level, in provinces and municipalities, ecosystem services and their valuation are not yet systematically incorporated into spatial planning processes or other processes concerning land-use changes.

In the recharge.green project we are tackling the issue of renewable energy use and energy planning in mountain areas. We are especially considering the impact of forest and water exploitation, which are the most important energy resources in our pilot areas. In two small mountain valleys we are mapping and placing a financial value on ecosystem services. By doing this, we are trying to involve local people and improve their awareness of the concepts and value of ecosystem services in their mountain environment.

"Involving local people in valuing ecosystem services"

Particularly in mountain areas, we think it is important to improve people's knowledge of the services supplied by the environment and determine the correct value for them. Continuing scientific studies support this. A "green accounting" system, which integrates the social and ecological costs and benefits resulting from the natural environment into traditional economic accounting procedures, could ensure the impact of changes in land use are more accurately evaluated. This can help people understand more clearly whether it makes sense to exploit natural resources such as water and timber. Finally, this could support the development of suitable compensation policies.

Scientific background

Over the past two decades, the concept of ecosystem services has been proposed as an important tool for linking ecosystem functions to human wellbeing. In theory this concept could help individuals and institutions recognise the value of nature, engendering increased investment in conservation. However, we do not have a consistent definition of ecosystem services, nor do we possess policy and finance mechanisms for incorporating natural capital into actual land-use and resource-use decisions. So despite all the hype, ecosystem services are today of little practical use in welfare accounting.

It has been argued that the ecosystem service model, in narrowing down the complexity of ecosystems to a single service, has marked technical problems and, maybe more importantly, serious ethical implications regarding the way we perceive and interact with nature. The monetisation and commodification of ecosystem services negates the multiple values that can be attributed to single services, as it requires a single equivalent value for trading in markets and payment schemes. A conceptual structure is needed to consistently define ecosystem services and the decision context within which they are being employed. A possible solution could include a context-specific ecosystem service unit comparable to conventional goods and services found in

the Gross Domestic Product (GDP) and similar national accounting plans.

This could provide a framework that would enable comparable environmental performance measurements across a wide range of actors. However useful “green accounting” mechanisms might be, we must also be mindful that reducing nature to a stock that provides a flow of services is insufficient in addressing the global predicament we face today. The context-less use of a poorly defined ecosystem service model could blind us to the ecological, economic and political complexities we face and potentially obfuscate the necessary major institutional changes we must make to secure the future of humanity.

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“The principal focus within the EU and its Member States is on economic growth (even within the realm of the green economy). The value of ecosystem services is under-appreciated (under-valued or grossly rebated). The view is, however, expanding from requiring compensation for environmental damage to considering the valuation of and payment for ecosystem services.” — greenAlps project team

The EU policy document “Our life insurance, our natural capital: an EU biodiversity strategy to 2020”, or EU Biodiversity Strategy for short, emphasises the high economic costs that the loss of biodiversity has for society. It highlights the role of biodiversity as “natural capital”, as deliverer of ecosystem services that underpin the economy. Simply put, ecosystem services are the benefits humans obtain from ecosystems. Examples provided in the strategy are food, fresh water and clean air, shelter and medicine, the mitigation of natural disasters, pests and diseases, and climate regulation. There is little dispute that some economic sectors, first and foremost agriculture and forestry, depend directly on ecosystem services. By 2050, the EU aims to achieve the full protection, valuation and restoration of biodiversity and ecosystem services – both for biodiversity’s essential contribution to human wellbeing and for its intrinsic value.

What is an ecosystem worth?

Since the launch of the reports on the Economics of Ecosystems and Biodiversity (TEEB) at the Conference of the Parties of the Convention on Biological Diversity in 2010, various countries have initiated TEEB studies to demonstrate the economic importance of their ecosystems. The goal of these studies is to urge policy-makers to take ecosystem services and biodiversity into account. One Alpine Space country, Germany, has already initiated a TEEB project (“Naturkapital Deutschland”) that will be implemented from 2012 to 2017. The EU has recommended that Member States undertake national ecosystem assessments, some of which are currently completed or on-going. Under the Common Implementation Framework (CIF) to underpin the effective delivery of the EU Biodiversity Strategy to 2020, the EC has established a dedicated working group on mapping and assessing ecosystems and their services (MAES).

It has produced a conceptual framework for EU-wide ecosystem assessment, and in December 2013 it published the MAES digital atlas, a systematic representation of ecosystem types and services. The atlas is currently a top-level map covering all of Europe; national and subnational maps have yet to be produced. In addition, in February 2014 the MAES published a set of indicators that can be used for mapping and assessing biodiversity, ecosystem condition and ecosystem services.

Ecosystems are worth more than their individual components

The perception of biodiversity's intrinsic value as a good in itself, as something that should be protected for its own sake and not just for its utility to humans leads some to reject the idea that an ecosystem services approach could be the key to protecting biodiversity. It is worth noting, however, that compensation or payment for ecosystem services is relatively new in name only. Agricultural and forest products fall into the category of "provisioning" services (See Table 1), and nobody would dispute their financial value. Compensation payments are also frequently made for "cultural" and "supporting" services. For example, under the EU Common Agricultural Policy, payments are made to farmers for agri-environmental measures implemented on their farmland. Such payments are clearly payments for ecosystem services. However, there are many other types of services that could be valued but are currently not often considered.

The recharge.green project (www.recharge-green.eu) has drawn up a selection of important and specific ecosystem services for the Alps. This is based on ecosystem service categories reflected in various publications, including the Millennium Ecosystem Assessment (MA), TEEB and the Common International Classification of Ecosystem Services (CICES). These are shown in Table 1.

In view of the growing interest in the expansion of renewable energy technologies as a way to reduce greenhouse gas emissions within the Alpine Space region, recharge.green is investigating trade-offs with regard to nature conservation and biodiversity, land-use competition and social acceptance of such technologies. The project has examined the wide range of potential impacts renewable energy production has on biodiversity, and the team emphasises the need for a systematic approach to evaluating such impacts. The recharge.green team is currently developing new decision-support tools that take into account the impact that potential renewable energy plant sites would have on biodiversity and ecosystem services.

Table 1 - 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

The greenAlps project has built on the work of recharge.green and the MAES and produced some information material for the public, including two posters on the importance of ecosystems and the services they provide for human wellbeing, one of which is reproduced here (Figure 3).

Figure 3 - Ecosystem Services examples at Hoher Freschen (Vorarlberg/AT)



(extract from poster prepared for greenAlps by EURAC)

1 = Provisioning service, 2 = regulation & maintenance service, 3 = cultural service

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

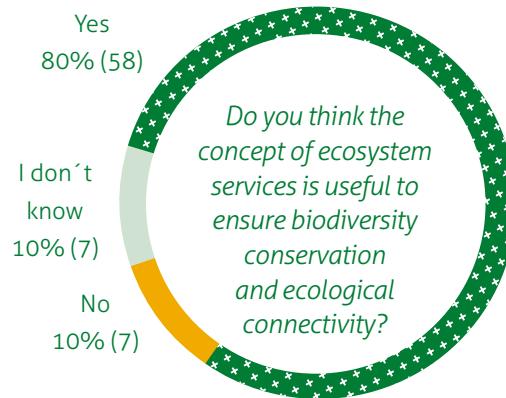
Ethical considerations – should we really put a price on the invaluable?

The greenAlps project asked experts from various sectors a number of questions on whether the concept of ecosystem services is useful for ensuring biodiversity conservation and ecological connectivity. The majority of respondents felt that the concept was useful, but many were hesitant when considering financial valuation. Of those who thought that not all ecosystem services should be economically valued (42%), the majority wanted to exclude intrinsic value, aesthetic value and habitat for flora and fauna (in that order), while about half thought air quality regulation should not be economically valued.

Opinions are divided on the use of ecosystem services-based approaches. Many feel that the concept is useful, but are hesitant when considering financial valuation.

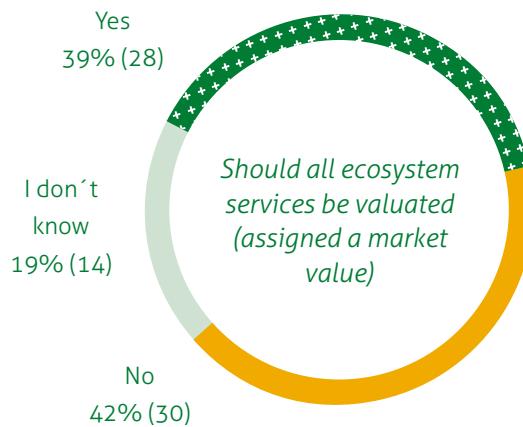
It is also worth noting that two-thirds of respondents thought that habitats for flora and fauna are an important ecosystem service for their area of work. Many respondents were from the environment sector and this is therefore unsurprising. However, many of those from other sectors also perceived habitats for flora and fauna as being important. More than half of all respondents also considered aesthetic value, recreational value and intrinsic value important. Some of the findings of the survey are shown in Figures 4 to 6. (For additional results from the expert survey, please refer to the greenAlps report on “The EU Biodiversity Policy Landscape – Existing policies and their perceived relevance and impact in key sectors in the Alpine region”, which is available on the project website.)

Figure 4 - The ecosystem services concept as a conservation tool



Source: Analysis 2014 FIWI

Figure 5 - Financial valuation of ecosystem services

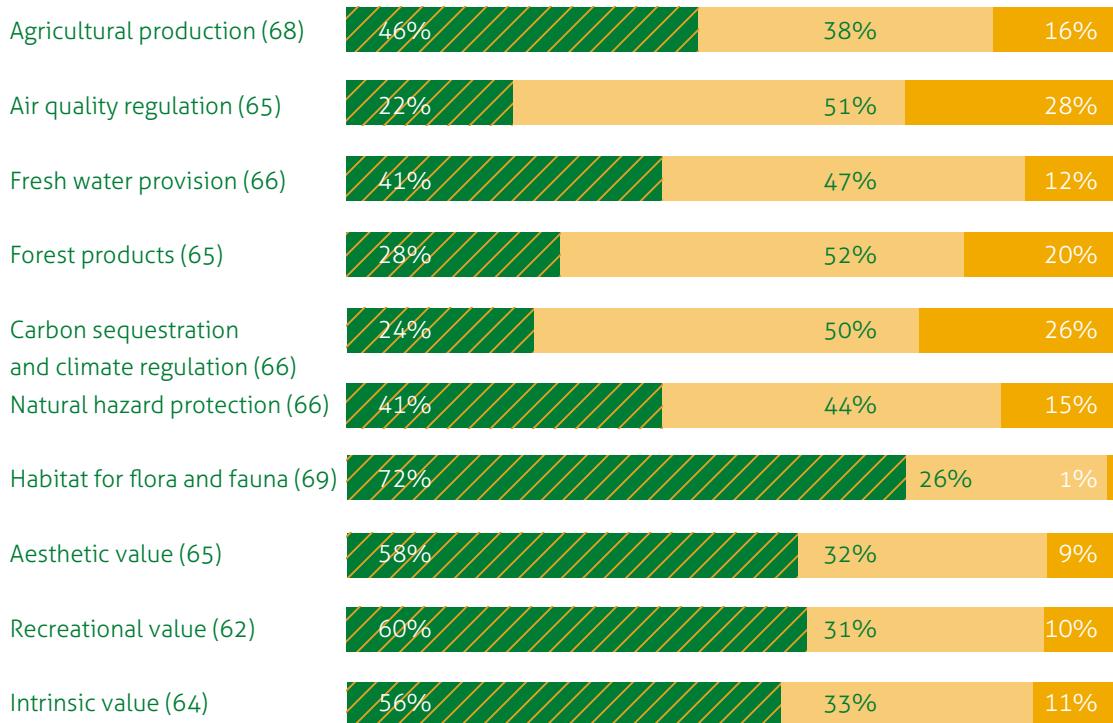


Source: Analysis 2014 FIWI

Figure 6 - 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



Source: Analysis 2014 FIWI

Some of the reservations expressed by survey respondents included concerns that the ecosystem services concept could lead to an “economisation” of nature and difficulties in applying the concept in practice. A few of the comments are highlighted in Box 1 below.

 **Box 1 - What greenAlps survey respondents say about ecosystem services**

“It is useful to point out the goods and services that ecosystems can provide to people.”

.....

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

.....

“The ecosystem services concept is a profit-oriented idea... How do you assign a cost to a wild animal?”

.....

“Some ecosystem services should be safeguarded a priori, without considering their market value.”

.....

“The concept is poorly understood by local people. It will take a long time to convince people of their value.”

.....

Given the reservations shown by some people regarding the economic valuation of biodiversity and associated ecosystem services, it is worth reiterating that in the bigger picture of EU policy development, and despite the existence of the Biodiversity Strategy 2020, biodiversity is still taking a backseat to economic growth as the principal focus.

Although this development now emphasises the importance of “green growth¹” and resource efficiency, the EU headline targets for 2020 do not include biodiversity as a priority. In this context, it may be pragmatic to emphasise the financial value of ecosystems to society to make their real value clear to stakeholders outside nature conservation groups.

Bridging sectoral gaps through ecosystem services-based approaches

Ecosystem services-based approaches could offer a new impetus for trans-sectoral collaboration. These approaches have the advantage that they necessarily bridge multiple sectors, science and practice, thereby stepping beyond narrow disciplinary boundaries. Key sectors that have an interest in and potential impact on the functioning of ecosystems (environment, agriculture, forestry, fisheries, energy, transport, construction, tourism and spatial/land-use planning) often have conflicting goals and insufficiently coordinate actions. Yet potential synergy exists between these sectors and should be further exploited. To work, ecosystem services-based approaches probably need to offer local stakeholders (e.g. landowners) direct benefits. In addition, the ecosystem services concept could be employed as a “translation” tool to make the more indirect benefits provided by nature protection visible to non-expert stakeholders.

We are not, however, advocating an ecosystem services approach as a panacea. There are some areas in which ecosystem service impacts are not easy to evaluate, and where a proposed development may positively impact on one type of ecosystem service but harm another (trade-offs between ecosystem services). In such instances, prioritisation – which is a political act – is needed. In all instances, trans-disciplinary thinking is required.

Our recommendation is that the EU continue to support, with special dedicated funding, on-the-ground actions to protect and, where necessary, improve ecological connectivity and the functioning of ecosystem services in the coming funding period and for the foreseeable future. Any initiatives in this direction should by default be cross-sectoral and include stakeholders from different interest groups.

¹ According to the UN Environment Programme’s simplified definition, a green economy is low-carbon, resource efficient and socially inclusive (UNEP 2011).

Further reading

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4

THE FATE OF ALPINE SPACE PROGRAMME PROJECTS

Are results put into practice?

48





Michael Vogel,

Director, Berchtesgaden National Park

Project tools must be used in the long term

The results, tools and scenarios of many European projects end up in a drawer after the publication of the final booklet. This must be avoided! It is crucial that the results and tools generated by projects get implemented and applied for everyday use once the projects have finished. One major problem that we encountered was that there is no funding available at this stage. To take an example: the “Jecami” tool developed by the Econnect project serves to visualise ecological connectivity. Berchtesgaden was lucky to have been involved in its development, so we could easily implement this tool. To make the *Jecami* tool accessible to other pilot areas, they would need to collect data, develop scenarios and work with the tool. These activities are not included in any funding and are therefore often missing.

The Berchtesgaden National Park takes advantage of various project results for two purposes – on the one hand to support the park’s management, and on the other to assist in regional development.

“Win-win projects for municipalities and the park”

Obviously not every result can be implemented. We choose from a wide range of project results focusing on bringing benefits to municipalities and the national park alike. In Interreg projects, for example, we conducted research and gathered knowledge on water balance models and visitor monitoring. Based on these projects, new infrastructure was built, the public drinking water supply was improved and transport networks were expanded. To sum up, we managed to create a win-win situation for local municipalities and the national park management.

In order to repeat these scenarios and valorise project results, the Alpine Space Programme could provide special funding for the implementation of project results after projects finish. I am not referring to large sums, but to some sort of incentive for project partners to transform project results into a tangible reality.

Scientific background

The perception of project success has changed over the years from definitions limited to the implementation of the project life cycle to those that reflect an understanding of success over the entire project and beyond. Project and programme management strive to bridge the gap between project delivery and grass-roots project implementation. Today the distinction between project and process work is harder than ever to recognise. However, the present-day project cycle paradigm is strictly performance based and its use in the environmental arena with inherent complex dynamics, rapid rates of change and many sources of uncertainty may exacerbate tensions between project delivery and implementation.

Like other environmental change processes, biodiversity loss is characterised by long time lags – often more than a human generation – between human action and environmental response. Furthermore, the issues are embedded in complex, poorly understood systems and involve a myriad of global collective goods linked to a wide range of human activities that defy unilateral sectoral solutions. A solely performance-based approach to project management and delivery attempts to reduce uncertainty – both in knowledge and the societal response to it – but may result

in overconfidence and a disregard for policy and societal stagnation. It has been argued that embracing uncertainty in project and programme management can have a positive impact by driving knowledge gain, promoting cautious action and contributing towards keeping societies adaptable. Biodiversity protection is a complex societal, political and ultimately necessary imperative of today's global society. In order to foster multi-lateral solutions, projects need to embrace and communicate an alternative attitude towards uncertainty.

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“The project lifecycle does not correspond to reality and is not guaranteed beyond the end of projects: tool development is not and cannot ensure the long-term use of the developed tools, results or databases, largely because of insufficient funding and staff. Creativity is needed, and cooperation does not always require money.” — greenAlps project team

In greenAlps the main focus was on benefiting from the results of Alpine Space projects in the field of resource efficiency and ecosystem management, with a special emphasis on the work done on biodiversity conservation, ecological connectivity and ecosystem services. Projects on these topics should produce concrete and visible changes in Alpine landscapes, and they should be able to integrate the needs of all the inhabitants of a particular area: humans, wildlife and plants. greenAlps undertook a critical analysis of the results of relevant projects financed during the last Alpine Space Programme financing period (2007-2013). The projects listed in Table 2 dealt with environmental issues, and their results can be used to tackle questions related to ecological connectivity or biodiversity protection. Moreover, we looked at potential gaps in the project lifecycle (procedures and financing) that could hinder the achievement of project visions and goals.

Table 2 - Overview of Alpine Space project results with relevance for ecological connectivity and biodiversity protection

ETC projects	Tools used/developed	Main results
ALPENCOM	<ul style="list-style-type: none"> → "ViViTo" (Virtual Visit Tool, prototype) ▪ Innovative tool for general public information - overview of the whole Alpine region plus protected areas. 	<ul style="list-style-type: none"> ▪ Strategy for common communication of protected Alpine areas. ▪ Map of protected Alpine areas. ▪ Prototype of "ViViTo" (Virtual Visit Tool) software. ▪ Development of an exchange platform based on the Alparc website as a central tool to enable managers of protected areas to exchange information.
AlpsWaterScarce	<ul style="list-style-type: none"> ▪ Tools to mitigate the risk of water scarcity. ▪ Instruments for long-term water resource management that support the decision-making process in times of crisis 	<ul style="list-style-type: none"> ▪ User forum to increase public participation in sustainable water management processes ▪ Water scarcity warning system ▪ Prediction of changes in water quality as a result of decreasing groundwater replenishment ▪ Transnational strategies for water management ▪ Demonstration of best practice in pilot regions and exchange of knowledge and experience ▪ Handbook for water resource management focused on water scarcity problems for policy makers ▪ Generalisation of drought effects on ecosystem goods and services across the Alps – report
Econnect	<ul style="list-style-type: none"> ▪ "JECAMI" (Joint Ecological Continuum Analysis and Mapping Initiative) - a GIS platform for Alpine-wide analysis of ecological networks - web-based geodata and metadata catalogue 	<ul style="list-style-type: none"> ▪ Spatial analysis: comparison of legal frameworks for protected areas in different Alpine countries ▪ Implementation recommendations – ecological connectivity ▪ Policy recommendations – ecological connectivity ▪ Study on how to use the European Grouping of Territorial Cooperation instrument within the legislative frameworks of Alpine states ▪ Stakeholder dialogues in seven pilot regions and implementation of concrete conservation measures

ETC projects

Tools used/developed

Main results

MANFRED	<ul style="list-style-type: none"> → Web-GIS tools: FIRES, BIOTIC & ABIOTIC FACTORS, ▪ WebGIS database on extreme forest events 	<ul style="list-style-type: none"> ▪ Climate change dossiers (handbooks, maps) – climate and land-use scenarios and silvicultural strategies 2020-2050-2080 ▪ Training courses ▪ Alternative, adapted seed sources handbook & map of trans-Alpine provenance regions
recharge-green	<ul style="list-style-type: none"> → “BeWhere model” (Alpine scale) → “BIOMASFOR” (pilot area level) → “Sample hectare” (strategy for ecosystem service valuation) → List of important ecosystem services in the Alps → Renewable energy potential in the Alps for hydropower, biomass, wind and solar power 	<ul style="list-style-type: none"> ▪ Geographically explicit tools “BeWhere model” and “BIOMASFOR” to optimize size and geographical distribution of renewable energy production plants. ▪ Final results available spring 2015
SHARE	<ul style="list-style-type: none"> ▪ SHARE toolbox including different software ▪ SHARE SMART Mini-Idro - An EXCEL tool to evaluate the main parameters of a given hydroproject project ▪ VAPIDRO-ASTE 4.0 – a GIS tool to evaluate the residual hydropower potential of water courses ▪ SESAMO-SHARE - A stand-alone software application that implements classic multi-attribute analysis ▪ SHARE CASiMiR Software - CASiMiR Model Concept Riverine: Habitat models ▪ Methods for estimating discharge in river basins 	<ul style="list-style-type: none"> ▪ Sustainable hydropower strategies for the Alps with full set of tools to assess and valuate hydropower and related impacts for Alpine rivers ▪ Criteria for river vulnerability mapping ▪ Criteria for river vulnerability mapping checklist ▪ Online seminar on problem-solving approach to the sustainable management of hydropower and river ecosystems ▪ A problem-solving approach to the sustainable management of hydropower and river ecosystems in the Alps – handbook

ETC projects	Tools used/developed	Main results
SILMAS	<ul style="list-style-type: none"> ▪ Virtual laboratory, to define current ecological state of lakes and anticipate changes due to climatic and biological dynamics ▪ Assessment of existing governance tools dealing with regulation of land/resources, testing decision-making instruments on lake sites ▪ Information and education tools for sustainable lake management 	<ul style="list-style-type: none"> ▪ Guides to lake management ▪ Educational material (teacher's book, field guide for children) ▪ Lake Adventures: A serious game (www.lake-adventures.com) ▪ Alpine lakes videos ▪ Valorisation of those outputs beyond project end, through partner networks and institutions ▪ Environmental management of ports: lakes experiences
SEDALP	<ul style="list-style-type: none"> ▪ GIS-based fluvial information system tool for mapping catchment-scale sediment connectivity and availability ▪ Manual for stakeholders ▪ Conceptual soil erosion model to explain long-term variations in suspended sediment yields 	<ul style="list-style-type: none"> ▪ Strategy for integrated management of sediment transport in Alpine basins incl. efficient sediment extraction and use ▪ Improved mitigation and management of sediment-related natural hazards (floods and debris flows) ▪ Better cooperation on environmental aspects of sediment and riparian forests in national parks and protected areas ▪ Guidelines for ranking basins and channel-reaches in terms of geomorphic activity and hazard potential ▪ Dataset on sediment and wood transport rates and volumes for different regions in the Alps

(Analysis 2014 EURAC and blue! advancing european projects)

Stakeholder involvement in both project development and implementation is key to project success but if, once a project is complete, no concrete measures are taken to implement the recommended actions, stakeholder disappointment may translate into scepticism vis-à-vis all things “EU”. Funding tends to be scarce for day-to-day work in many protected areas, and there is a trend to cut funding even further. Creativity is therefore needed to maximise what can be achieved with limited financial and human resources. The above statement highlights this fact. For example, a mayor in one community can negotiate with his/her counterparts in neighbouring communities to use some of the funding available to them to undertake implementation measures. Some concrete steps can be achieved without much funding, requiring little more than coordinated planning and action. Extra funding is however needed for a more comprehensive translation of project results into ground-level cooperation measures. People’s time is also a resource that should not be taken for granted. One should not expect staff members of local infrastructure, forest or municipal administrations to be able to set aside large blocks of time “on demand” – rather, patient negotiation and longer timeframes will be required.

Bridging different worlds

For projects dealing with ecosystem conservation and ecological connectivity, which should connect people with nature, and different habitats with each other, some of the principal questions are:

- How can we fill the gap between the world of the conservation community and that of other stakeholders?
- How can we communicate to make cooperation possible?
- How can we develop a common language?
- Are projects built on the real needs of a particular area?
- How can we explain the added value of cooperation beyond municipal, provincial or national borders?

For projects to be grounded in local reality, the project development phase should ideally already involve local stakeholders. Simultaneously, project proponents have to garner political support from ministries and regional administrations. This implies consultation prior to project submission rather than afterwards, but this is not what usually happens.

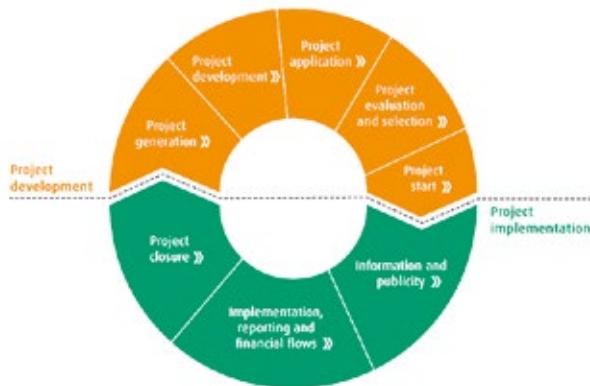
During the greenAlps stakeholder workshops the disaffection felt by some key local actors towards international projects became clear. In addition to resource constraints, park administrations sometimes have to deal with antagonistic attitudes towards the EU and European projects. In some pilot areas, though not all, criticism was expressed concerning the limited extent to which real, local needs are integrated into projects financed by public money.

After the project – what’s left?

For our investigation on the fate of past projects, we attempted to find out whether and how projects results were transferred to local stakeholders, and whether concrete implementation measures followed. We also checked whether project websites were kept up to date after the end of the project, and whether all the necessary information was available to external users in an understandable format. For a closer look at previous projects, readers may wish to refer to a database of nature projects financed in the ETC programme Alpine Space 2007-2013, which was put together by WIKIAlps and to which greenAlps has contributed.

According to the Alpine Space programme (www.alpine-space.eu), the ideal project lifecycle should follow the steps in Figure 7.

Figure 7 - Project lifecycle



Source: Adapted from ASP (<http://www.alpine-space.eu/project-life-cycle/>)

In general, our review of project websites found that project results are often difficult to understand, and in our estimation hard for regional stakeholders to translate into concrete action without further explanation. Many projects conclude with no follow-up, websites are not updated and contact points disappear. Large quantities of reports, recommendations, plans and maps are produced and usually remain freely downloadable, but whether stakeholders use them or are even aware of them is not clear.

As information and publicity components are built into all Alpine Space projects, project partners (in nature projects, these partners are often protected areas) should be able to convey the project's message and instigate follow-up measures. In reality, however, insufficient financial support often impedes follow-up action (*see below and chapter 5*). As already pointed out above, to remedy this to some extent, the creative use of available local resources is important to translate results from the EU project to the local level.

Benefits for pilot areas

The ideal Alpine Space project should be able to launch a new and improved regional development process in a particular area. The public money spent during the project lifecycle should bring about social, economic and environmental benefits. Our site visits and stakeholder workshops allowed us to gain an overview of the potential benefits these projects could have brought to the pilot areas.

There are of course differences between greenAlps pilot areas in the extent to which past project results were picked up and integrated into local plans and actions. It seemed to us that in general many recommendations remained on "paper". Some projects, however, produced concrete results in pilot areas. For example, improvements were made to the drinking water supply in Berchtesgaden (see interview with Michael Vogel), the first trans-provincial cooperation between the Gesäuse National Park and the Kalkalpen National Park was launched as a result of the ECONNECT project and resulted in the "Netzwerk Naturwald" initiative, and negotiations between the Julian Prealps Nature Park and the Triglav National Park took place on the possibility of creating a trans-border nature park. The JECAMI tool (see Box 2) developed by the ECONNECT project was used by the Swiss National Park, the Parco Naturale Alpi Marittime and the Berchtesgaden National Park for environmental restoration that improved local ecological connectivity with the support of local actors.

New actions for connectivity and for the valorisation of natural resources took place in the Triglav National Park as a direct result of its participation in Alpine Space projects (recharge.green). During the greenAlps project it used JECAMI to identify barriers to connectivity and define actions needed to improve it. Some of the visible results and benefits derived from EU projects for local people are mentioned in the greenAlps workshop reports, available on the project website. A selection of the ASP tools that can be employed to meet pilot area needs is provided as an annex to the final booklet.

Several pilot area partners suffer from a lack of financial support. This is the case in the Julian Prealps Nature Park, the Triglav National Park and the Kalkalpen National Park, and it makes it difficult for park managers to engage in activities outside their day-to-day operations. Participation in EU projects, although it may provide important funding that can benefit the park and surrounding communities, is generally perceived as extremely difficult due to resource constraints. Berchtesgaden National Park is an exceptional case among our pilot areas, as it has a secure funding base from the Bavarian State, and can more easily dedicate time and resources to additional activities such as EU projects. Berchtesgaden National Park is an important actor in the regional development process and has been able to capitalise on its participation in EU projects through continuing actions, which have led to concrete benefits for both ecosystems and local communities in the area.

Giving stakeholders room to express their views

The fact that project results are not implemented may also be the result of insufficient communication between project team members, the financial programme and stakeholders. While in Berchtesgaden local people know and appreciate the presence of the park because the park management communicates proactively and transparently with all stakeholders on all aspects of project design and implementation, in other pilot areas there is insufficient awareness of the role of the parks and of the projects they promote in the community. It is important to create a climate of trust where stakeholders are free to express their opinions. This obviously takes a lot of organisation and sometimes requires park managers to develop a “thick skin”, but it pays off in the form of a greater likelihood of sustainable results.

Box 2 - JECAMI

Joint Ecological Continuum Analysing and Mapping Initiative

The above-mentioned JECAMI is a mapping tool that was developed by the Alpine Space project ECONNECT to allow users to assess the ecological connectivity potential of an area. It uses specific indicators to measure this potential. When referring to an ecological continuum, the underlying concepts are *structural connectivity* (physical aspects of the landscape, such as shape, size, topography, land use, fragmentation and protection status) and *functional connectivity* (the way in which wild animals respond to landscape conditions based on their habitat needs and behavioural characteristics).

Several influencing factors are built into JECAMI as indicators. JECAMI calculates the Continuum Suitability Index (CSI) and the Species Mapping Application (SMA) for a selected number of indicator species (brown bear, black grouse, lynx, wolf and red deer). The CSI is a combined analysis of structural landscape connectivity and landscape permeability. The landscape is considered as a matrix in which each element or sector helps or hinders ecological connectivity.

The CSI tool gives users an initial estimate of the current situation for a landscape. The SMA helps users to detect migration corridors or potential barriers for the sample species based on habitat and connectivity maps at a spatial resolution of 1500m. The Species Mapping Application shows which areas are suitable for different species. The SMA tool calculates the optimal path for a selected species and highlights the barriers and corridors along this path.

Try Jecami online at www.jecami.eu/

Figure 8 - The JECAMI mapping tool visualises potential migration corridors and barriers for lynx.



If local administration offices and stakeholder categories are involved from the conception of a project, then local needs can be better integrated than if projects are formulated based only on what their proponents (be they researchers, park administrators or non-governmental organisations) perceive as important. The involvement of local actors could generate projects that are directly relevant to the needs of a community. Project developers should try to integrate administrations and local stakeholders earlier in the project lifecycle and convince actors that transnational cooperation can bring benefits for their administration and their people. It is partly up to the Alpine Space Programme to set the course in this direction by allowing for longer project preparation phases.

Rome was not built in a day

In this context we should point out that projects financed under the EC's INTERREG IVB funding stream are by default transnational and targeted at public administrations with the aim of putting European policy and legislation into practice. They have a strong link to spatial planning and regional development planning, so it is the task of national and regional governments to pick up and use the recommendations and tools developed for them. Pilot areas in these projects only serve as testing grounds to establish whether a strategy or instrument can work. It cannot and should not be the task of EU projects to staff underfunded administrations – this is the responsibility of national and provincial governments.

A timeframe of three years is rather short to achieve any meaningful change. At best, it may be long enough to catalyse some action, but the change in attitudes and practices that is needed to bring about lasting results in nature conservation takes rather more time. The Managing Authority of the Alpine Space programme and other regional territorial cooperation funds may wish to consider extending the maximum timeframe of projects with a view to sustainability. The final year or two of projects should then be dedicated to the task of "winning hearts and minds" through concrete local implementation activities. The Alpine Space Programme could also set up a separate pot of funding dedicated to the implementation of project results after projects are complete. Local administrations and communities, both within and outside project pilot areas, could be entitled to apply for such funding. Within the project runtime it should be mandatory to develop a strategy for the follow-up use of project results, with the participation of interested municipalities. With regard to awarding grants, it would seem reasonable that implementation actions are at least 50% co-financed by the Alpine Space Programme, but funded 50% by the interested regions themselves.

Political will has to trigger follow-up action

The availability of interesting tools and results is only the first step in the right direction. The second and for the pilot areas most important step is the political will in their regions to develop concepts and implement them with sufficient support from the different administrative levels. Closing the gap between the strategic administrative and policy level and the local and regional levels in all Alpine countries is an urgent requirement. The Alpine Space Programme delivers valuable inputs, but cannot replace the motivation and means of national and regional governments. This is especially true in the field of nature and biodiversity conservation, where goals tend to be non-binding and are therefore ignored or postponed in favour of short-term economic gain.

greenAlps calls for new approaches in local and regional governance, combining the responsibilities of different sectors and adapting them to regional or local conditions. One example of this is the 'Pilot Regions' nominated by the Alpine Convention, which go beyond protected areas and were designated as "operating units" during the ETC ASP project ECONNECT.

The Alpine Space Programme delivers valuable inputs, but cannot replace the motivation and means of national and regional governments. greenAlps calls for new approaches in local and regional governance.

The EU needs to be connected to grass-roots realities, and local politicians from the municipal to the provincial level should be involved in such processes in order to become familiar with the benefits of transnational cooperation. The common mantra "think globally, act locally" could then be translated into "only through actions at a local level is it possible to guarantee transnational action". In the context of nature, this may mean that ecological connectivity on a local scale connects not only the environment but also human societies at EU level.

Further reading

- Alpine Space Programme projects: www.alpine-space.eu/projects/projects
- Berchtesgaden National Park: www.nationalpark-berchtesgaden.bayern.de/00_englisch/index.htm
- Kalkalpen National Park: www.kalkalpen.at/system/web/default.aspx?sprache=2
- Prealpi Giulie Regional Park: www.parcoprealpigiulie.it/en/Home.aspx
- Triglav National Park: www.tnp.si/national_park

5 ECOLOGICAL CONNECTIVITY AND SHARED NEEDS IN THE ALPS

62





Peter Kasal

Director of the Office of Landscape Ecology,
Bolzano Province

To use a tool you have to know what you want to achieve with it.

In the Province of Bolzano there is an enormous lack of knowledge on ecological connectivity. Many local politicians and stakeholders do not know what the term means and there is no acceptance of the concept. In general, different towns focus only on their own small areas, implementing small steps that promote conservation. We are not able to use all the available instruments such as tools developed by projects, because we lack clear targets. To use a tool you first have to know what you want to achieve.

Implementing connectivity measures is very difficult. We are already doing all we can to avoid the destruction of corridors. Establishing new corridors is normally out of the question. In the valleys, intensive agriculture is typical and expanding, threatening to consume the corridors. Once lost, restoring them is hard. Mountain-top nature parks can be connected relatively easily, but the few corridors left in

the principal valleys are impossible to connect. There have been some limited successes: South Tyrol has produced a landscape concept which includes "blue corridors" for water courses, "green corridors" for forest areas and "bird corridors" related to wind power. The Lake of Kaltern with its corridor protecting connectivity is a positive example of landscape being effectively protected.

"Ecological connectivity is not on the horizon for spatial planners"

In Bolzano Province and at a national level there are no trans-sectoral goals for ecological connectivity. Spatial planning is a policy field which is important for ecological connectivity, and yet the subject of connectivity is almost unknown in this field. The Department of Flood Protection is deeply committed to rebuilding natural fluvial systems, including measures to restore connectivity for fish migration. My recommendation to regional policymakers is to improve their knowledge, meetings, conferences and publications. But don't aim too high. We need small-scale local projects because decisions are often made on this scale. Huge international projects scarcely register with local stakeholders.

Scientific background

Landscape-scale ecological connectivity measures are evidently increasing globally to protect and restore indigenous vegetation and biodiversity. Most of these strategies have originated in response to fragmented habitats and intensified land use in order to enhance the flow of organisms and ecological processes across landscapes. Currently these measures are increasingly viewed within the context of climate change adaptation and ecological resilience. Implementing ecological connectivity is still a poorly understood phenomenon, since connectivity measures constitute a paradigm shift from the traditional focus on “sites and species” to landscapes and processes – a marked increase in complexity. However, undergoing this shift and embracing the complexity would seem essential, as scientific research over the last two decades has demonstrated that the long-term sustainability of fragmented populations can only be safeguarded by ecological connectivity between the remaining patches of landscape. While much research has been done on connectivity, there is a lack of knowledge on the essential conditions for implementation. Today

most effort is focussed on mapping, modelling and conserving areas that maintain population connectivity and promote climate adaptation. Surprisingly little effort is being made to map barriers that have a strong impact on movement potential. While connectivity measures necessitate integrated cooperation between multiple players – governmental, non-governmental and the private sector – implementation is being significantly hampered by the challenge of conflicting interests and communication across diverse alliances and agendas.

Further reading

- Heller, N.E., and Zavaleta, E.S. (2009) Biodiversity management in the face of climate change: a review of 22 years of recommendations. *Biological Conservation* 142:14–32.
- Taylor, P.D., L. Fahrig, K. Henein, and G. Merriam. (1993) Connectivity is a vital element of landscape structure. *Oikos* 68:571–572.
- Parker, K., Head, L, Chisholm, L.A., and Feneley, N (2008) A conceptual model of ecological connectivity in the Shellharbour Local Government Area, New South Wales, Australia. *Landscape and Urban Planning* 86, 47–59.

“Ecological connectivity is a central concern in nature conservation. There is, however, insufficient progress in the implementation of connectivity measures.” — greenAlps project team

It is not for lack of stated EU policies that progress in establishing ecological networks is slow. As the greenAlps report “The EU Policy Landscape” makes clear, EU strategies and policies contain ample references to the need to ensure connected networks of natural areas in order to protect biodiversity. There are initiatives to promote green infrastructure as one of the pieces in the connectivity puzzle. Yet, as we also point out in the policy report, national implementation of EU policies in general is not on target.

One may wonder, then, whether this is because recommended policies are clashing with local needs. EU policies are not created in a vacuum, they are voted on by representatives of national governments in the European Parliament, so on the whole they should be expected to conform to national priorities. But do they also reflect local needs?

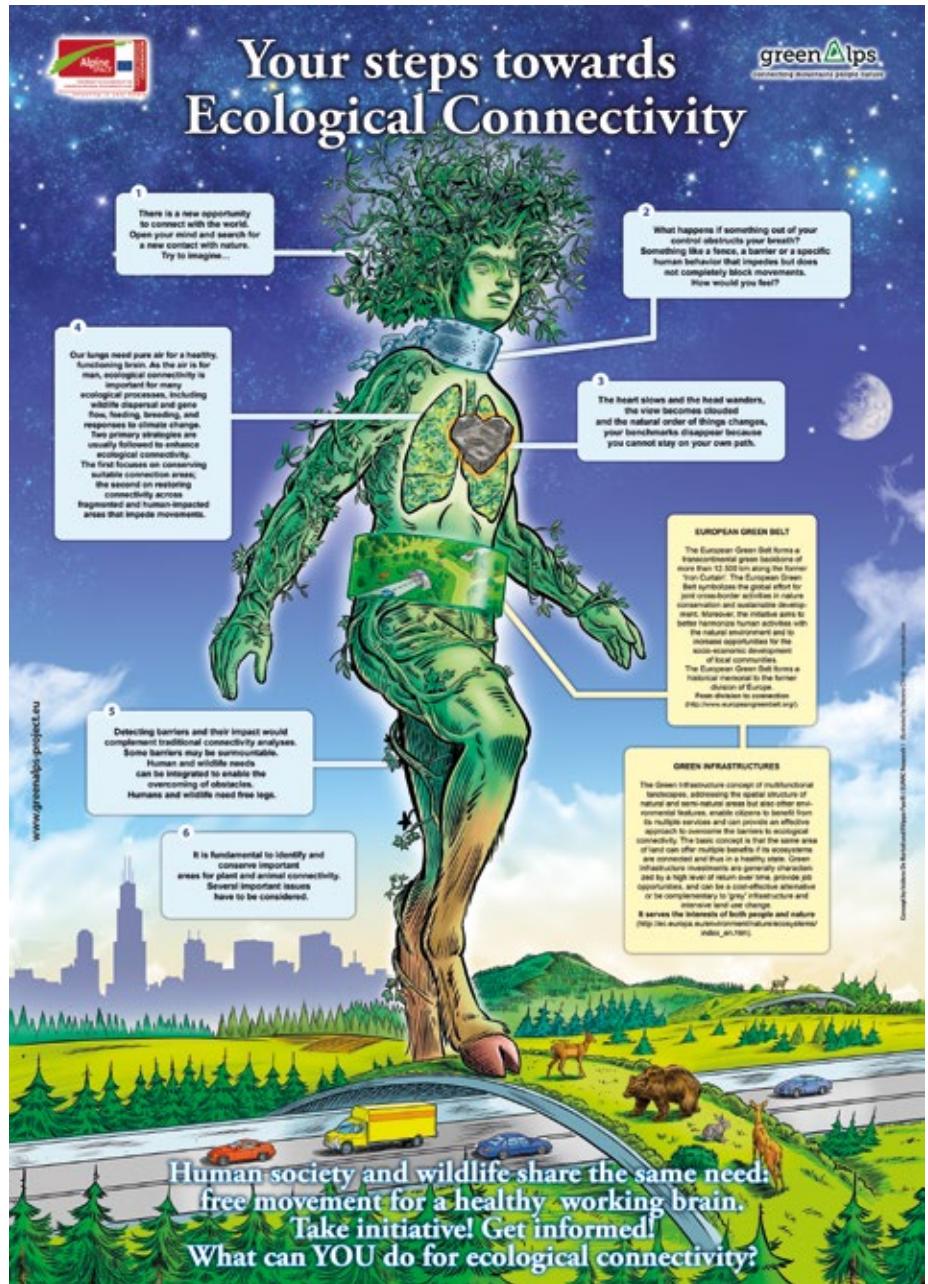
Looking for connections

greenAlps discussed these issues in a series of stakeholder workshops in pilot areas. Some of the stakeholder concerns expressed during these workshops have already been mentioned in the preceding chapter. If we now focus on the connectivity issue, it turns out that the two threats of local development most commonly mentioned by greenAlps workshop participants are landscape fragmentation and the loss of local identity. The maintenance of unfragmented landscapes is a need shared by many interested stakeholders in pilot areas. Such unfragmented landscapes are the very foundation of ecological connectivity. They also support many of the ecosystem services that directly or indirectly supply benefits to people living in an area (see also Chapter 3). Yet the concept of connectivity is poorly understood by non-experts. We have already pointed out the importance of transparent communication with stakeholders at all levels. In translating EU policies to a local level, care has to be taken to ensure communication is not only open and regular, but also in a format that can be understood by everyone. In an attempt to simplify the connectivity concept, greenAlps has developed an infographic poster showing symbolically how connectivity is at the heart of the interaction between humans and the rest of nature in a landscape (Figure 9).

Figure 9 - Infographic showing the importance of ecological connectivity for people

- 1 Imagine your body like an ecosystem...
- 2 Fences, barriers, behaviours make it hard to breathe.
- 3 Restrictions on movement and function affect your heart.
- 4 Ecological connections are like air for our lungs.
- 5 You want your legs to be free to move – so do wild animals and plants.

Source: EURAC 2014, produced as poster for greenAlps



The other issue that is most important to stakeholders in pilot areas is a type of local development that maintains a local or regional identity. In a sense this is a different type of connectivity issue, one that addresses the connection of people to their community and to their landscape. Local brands (e.g. "Berchtesgadener Milch"), customs, architecture and special landscape features all contribute to the maintenance or creation of such an identity, which can also provide new economic opportunities, including sustainable tourism development. Importantly, many of these local development opportunities also depend on unfragmented landscapes.

Participatory planning requires effort

Local development plans need to reflect such community priorities, and these priorities need to be fed back up the ladder to the regional and national policy level. Alpine Space projects in turn need to respond effectively by ensuring a space for local concerns. There is a perception, at least in some pilot areas, that regional policies do not sufficiently capture important issues because they are too far removed from local stakeholders. Of course participatory planning presents many challenges and involves a trade-off between efficiency and inclusiveness.

The complexity of community needs, the skills and experience of those participating, the nature of the intervention, and – unfortunately – often also time constraints all determine the actual shape of the planning process.

Dealing with inconvenient truths

If you consult with people in the community, you must then pay attention to what they tell you. For example, local communities have to be involved in the development of a process for the assessment of ecosystem services and be allowed to express their own views of economic, social, cultural and spiritual values provided by a protected area, even if these views do not coincide with the "experts" views. Sometimes it will be necessary to develop compensation programmes for land-use restrictions or for new natural resource management obligations so that local stakeholders are willing to support new policies.

It is rarely easy to balance conservation needs with local development needs, but policies must mirror local needs or they are doomed to failure. Development decisions should be based on a dialogue between the grass-roots level and the top level, a combination of the bottom-up/top-down dichotomy. We do not advocate that all decision-making be based on popular demand coming from the community level – there is a danger in this too, as local needs also often originate from the interests of particular individuals or companies. What is needed from the top down is a strategic concept – in this case covering the requirements for connectivity on a larger scale. Local interests can then be compared to larger-scale strategies, and compromises have to be found. If people realise that everyone is contributing to conserving unfragmented landscape, their willingness to do so will increase as well. But it must become an important aspect of daily policy discussions.

Dialogue between the grass-roots and the top is important to make sure that EU policies are implemented locally.

Development should therefore be seen as a process of continuous exchange between different policy levels and the communities that are being asked to undertake certain activities, and the process should be managed as a natural organic process rather than according to plans, goals, objectives, targets and schedules. Goals and targets may change and there should therefore be a degree of flexibility in projects.



Resource requirements constrain local action

Some of the specific needs of the greenAlps pilot areas are summarised in our Policy Landscape Report and detailed in workshop reports (available from the project website). At a very general level, none of the ideas expressed contradict existing EU policies and strategies. Needs expressed during workshops in the different regions include tourism development, limiting tourism traffic and mobility inside protected areas, maintaining traditional agricultural land, adding value to the local economy through the production and sale of local products, compensation for wildlife damage and the impact of natural hazards on the economy.

Local governance issues are also a concern. Some stakeholders stated a need for increased cooperation between local authorities, civic organisations, local businesses, local government and protected area administrations to harmonise conservation action at a local level and engage local communities in local development activities.

From the point of view of protected area administrations, there is a need to integrate protected area planning into the management of surrounding landscapes based on an ecosystem approach. Parks may promote cooperation between different municipalities or across borders, but are in some cases faced with reluctance by municipal administrations to cooperate outside their own boundaries. Cooperation may be hampered by unsupportive legal regimes, and the operational possibilities of park administrations are sometimes constrained by a lack of legal authority. A secure financial base is of course a prerequisite for effective park operation, but is not always guaranteed by national or provincial governments.

None of this is new or surprising, and none of it runs counter to strategies that promote biodiversity conservation and ecological connectivity. It is, rather, symptomatic of government policies that undervalue nature, despite statements to the contrary. Governments must define clear goals that prioritise ecosystem connectivity and conservation in a trans-sectoral context, but that also meet the needs of communities and common European interests. A vision of conservation and connectivity has to be developed on a larger scale, but including the views of local people who must then also participate in implementing concrete measures. We have included this and our other points in a set of policy recommendations, which are also available from the project website. We talk about our overall vision for a sustainable Alpine future in the next chapter.

6

HOW TO BETTER CONNECT MOUNTAINS, PEOPLE AND NATURE

70



greenAlps wants to make people understand how a sustainable European biodiversity strategy and its implementation can be more efficient by involving the people who live in and around the Alps. The implementation of EU, national and regional policies and their procedures regarding nature protection within the Alpine States aims to better connect humans and nature. Concrete pilot areas are helping to generate some interesting programme and policy-level inputs. These will create a suitable framework within which to implement the recommendations made in this chapter on how to strengthen cooperation between all the relevant political levels and stakeholders.

Recognising ecosystem services and their value in human societies helps to bring people closer to nature as it helps them understand the underpinning function of Alpine natural habitats. One essential requirement for connecting human activities and nature more closely in all relevant projects is for land-use planning to take account of ecological needs. This is especially important for improving ecological links with sectors such as agriculture, tourism and of course nature conservation.

In this sense an intact Alpine biodiversity demands long-term spatial and land-use planning, new ways of cooperation and a precautionary link to other key sectors. Research into successful governance models for pilot areas involving protected sites as core areas with a special awareness of nature protection is crucial in order to assess the viability of strategies and their possible incorporation into European policies. Furthermore, actual grass-roots implementation in these pilot areas and beyond demonstrates the feasibility of such an approach and leads to proposals and recommendations being made on how to link nature protection policies more closely to regions and areas.

Policies are drawn up for people in order to improve a given situation or maintain existing results. Mountains have ecological, economic and sometimes social peculiarities. Most environmental policies are not tailored to specific landscapes or regions, and they don't need to be because they are defining general and logical principles that can be implemented in all kind of regions with some adaptations. However, the ways in which they are implemented and involve partners, stakeholders and decision makers are probably specific to different geographical situations, and these varying approaches need to be well defined.

How to better connect mountains, people and nature is in this sense a very demanding issue and difficult to describe as it requires the specific situation in each region to be integrated into a common framework of European biodiversity policies, panalpine strategies and local realities.

It was for this reason that the greenAlps project brought together proposed strategies and policies with real existing territories and stakeholders – a difficult task producing clear statements and occasionally resulting in frustration. As well as all the obstacles and prejudices towards such an analytical approach, the project produced some interesting information and insights into the pilot areas and the projects that had been implemented. These findings enabled the project to discuss how to make European nature protection more efficient in the Alps by considering national and regional influences and realities on the ground.

The ongoing discussion about the macro-regional strategy has been included because its scope goes beyond artificial borders and it involves complex interrelations between the Alps and surrounding areas. The concept of a macro-regional approach to Alpine biodiversity seems to be crucial, particularly for ecological connectivity. Previous projects such as ECONNECT have shown that the inner Alpine perimeter as defined by the Alpine Convention is insufficient for complex ecological needs – migration goes beyond such borders and gene exchange needs larger territories. The subtitles in this chapter reflect some of the key preconditions for a successful biodiversity policy drawn up for and by the people living in the Alps and beyond.

A - IMPROVING PEOPLE'S UNDERSTANDING OF NATURE

The success of improving biodiversity conservation and therefore the success of projects aimed at meeting this objective depends not only on the work of project partners, experts and administrations. It also depends heavily on the support of the population and various stakeholder groups. In order to gain their support or at least approval for complex issues of global importance such as ecological connectivity and the sustainable use of renewable energy, these subjects must be communicated in an understandable manner.

Communication, education and public awareness is therefore fundamental to persuading decision makers and the global public to take action on conservation. Biodiversity science provides the foundations of the understanding, and is essential for policy making. However, it rarely succeeds in inspiring public action on its own.

Sound science is fundamental to understanding the consequences of biodiversity loss. It also has the potential to be a powerful incentive for conservation action. But only if the global population understands what this science is saying, and only if people care about what it means. The challenge for biodiversity communicators around the world is to translate complex science into compelling messages that will inspire the action required to conserve biodiversity. Success lies in understanding the communications formula that turns science into action, ensuring a smoothly-functioning interface between science and policy-making.

Messages for life and nature – science and policy-making can help

Most people are not rational, and don't make daily decisions based on logical scientific analysis. Instead they are motivated by a mixture of emotion, habits and social norms. It is how biodiversity makes them feel, not think, that leads them to act. Biodiversity is the world's most elaborate scientific concept, but also, potentially, its greatest story. For most people, a love of nature is about awe, wonder and joy, not habitats, ecosystem services or extinction.

Translating complex biodiversity topics into understandable, emotional messages also contributes to the Aichi Biodiversity Target 1 formulated at the 10th Conference of Parties (COP) to the Convention on Biological Diversity in October in Nagoya, Japan, in 2010: "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".

In pilot areas, it is not only the message that matters but also the messenger. It is the duty of the project responsible to identify key players and opinion makers in the area concerned who can be won over to achieve the project's targets and act as advocates for the transmission of messages to the various stakeholder groups and population as a whole.

During workshops organised in the greenAlps pilot areas, the local population and stakeholders pushed for increased cooperation between local communities and protected areas, particularly in the field of spatial planning and regional development. Integrated planning tools should foster cooperation between individual municipalities and also with the protected areas concerned in order to achieve a win-win situation instead of letting the process be driven by the interests of individual bodies.

B - WORKING WITH PILOT AREAS BY INVOLVING STAKEHOLDERS FROM DIFFERENT SECTORS AT ALL LEVELS

Working with pilot areas in a project has previously proved successful in the ECONNECT project (another biodiversity project within the Alpine Space Programme) and was extremely useful for verifying methodologies and tools developed in order to analyse the potential of ecological connectivity in a given area. The verification of policies and stakeholder involvement on the ground is essential for the credibility of the proposed approaches. Taking concrete action to promote biodiversity conservation and improve ecological connectivity makes it possible to illustrate the theoretical background developed in EU projects (see examples in section C).

“Haute couture” rather than “ready made”

When implementing efficient European environmental policies, it is necessary to address multiple facets of complex social, political and ecological systems that differ depending on cultural circumstances. There is no universal formula for solving the challenges of successful project implementation in this field. Each region and mix of stakeholders requires tailored approaches and unique solutions. However, the analysis of various Alpine Space projects has highlighted some general recommendations on the best way to guide the process. These recommendations appear to be widely applicable in a European context.

Effective communication is a cornerstone to success and a cross-cutting theme. In particular communication should be adapted and tailored to the different stakeholder groups and be based on sound ecological foundations and understanding.

One of the key factors is recognising that biodiversity policy implementation is a step-by-step process that can therefore take some time to progress from vision to reality. As most biodiversity projects are long-term projects, priorities and actions should always remain open to discussion and adaptation as the project progresses. Implementation plans and actions should be adapted over time to the new insights acquired by experience. Key stakeholders should be flexible and adaptable and, where appropriate, base their decisions on consensus (and recognise that achieving consensus occasionally takes some time).

Transparency and long-term involvement

This point needs to be stressed even further given the distrust that could be observed among stakeholders mainly at a local level during several of the stakeholder workshops organised in the greenAlps pilot areas. Stakeholders in pilot areas (also covering protected areas) are often confronted with requests to participate projects or in surveys emanating from a large number of different projects funded by diverse European funding schemes. These are often one-off contacts or, if they are repeated, it may be in the context of a different project. The relationship between different projects – if indeed there is one – is sometimes not made clear to stakeholders. Furthermore, many stakeholders complain about a lack of information on project results after they have been invited to join a project workshop or some other activity. Repeated requests that do not deliver visible benefits in terms of stakeholder cooperation lead to distrust towards such projects and stakeholder fatigue. This makes it increasingly difficult for projects to involve the necessary actors in their activities, even though stakeholder involvement is crucial for project success. Closer long-term cooperation between local communities and protected area administrations is needed.

greenAlps recommends that visible and concrete activities with stakeholders are included in projects from the start to keep stakeholders mobilised and motivated. Furthermore, the involvement of stakeholders has to have a “pay-off”, showing them how their views, expertise and expectations are considered in project outcomes. To retain the trust of these actors, there should be regular contact between the project team and stakeholders.

This has to be ensured by a competent partner in the regions who is able to explain the links between different projects and activities and who will ensure a regular exchange and information flow over the long term.

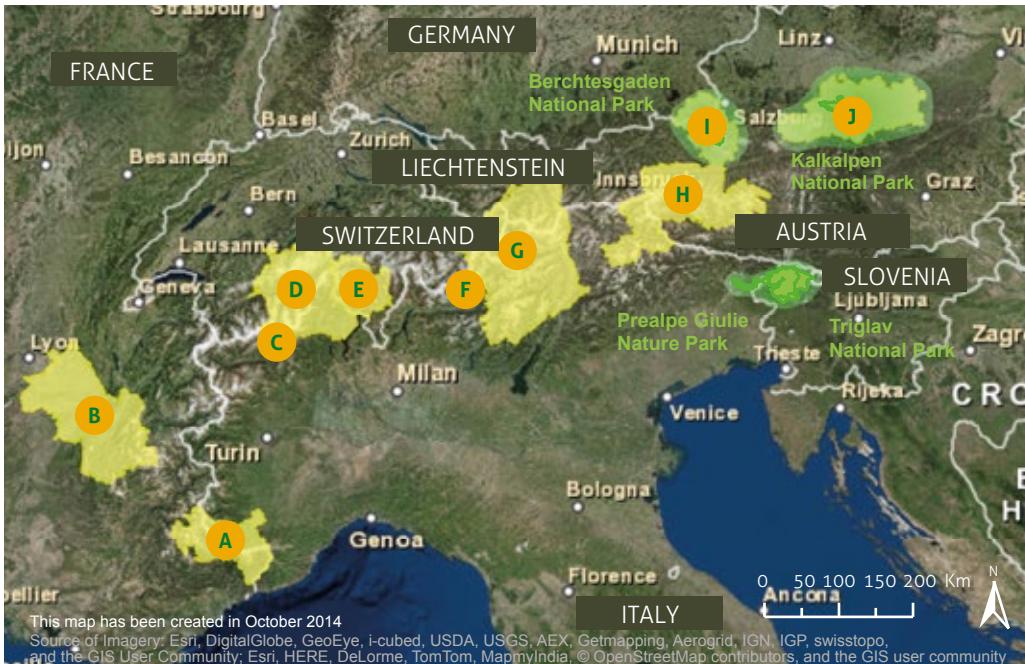
More than just workshops and information meetings

One key question is how to encourage capable stakeholders to actively participate in the implementation process in order to achieve better, more harmonised results. This question could be addressed by adapting new ways of contacting stakeholders, going beyond conventional information events and making involvement in the decision-making and governance process more interesting: a clear and defined strategy with a detailed schedule rather than an improvised approach; developing new forms of participation for large-scale projects (at a regional, national or Alpine level); having the courage to try out new styles of communication involving culture, the arts and improving social interactions; and having legal representatives clarify the similarities and differences between participation processes and conventional democratic decision-making. The involvement of social science can generate significant added value.

Trans-sectoral cooperation makes biodiversity policies efficient

Beside governance principles, the recognition of eco-system services and the establishment of an ecological network, other fields of cooperation permit an integrated and efficient approach to biodiversity conservation. Pilot areas allow theory to be transformed into reality, and work in cohesive territories permits the involvement of relevant stakeholders and decision makers from different sectors. With this in mind, the Joint Ecological Continuum Analysing and Mapping Initiative (JECAMI) tool was developed to allow an integrated approach with different parameters. The tool was tested in very different areas of the Alps [see map 2 – Alpine areas analysed by JECAMI] covering different economic, demographic, social, cultural and ecological realities. The tool evaluates the local potential for connectivity and if it proves reliable in very different situations it could be used as an analysis tool for the entire Alpine region. However, it will always be reliant on the quality of the data available.

As a complementary approach for transforming theory into reality, a dialogue process with the local population and stakeholders from different economic sectors helps to define goals and common actions in specific regions. EU projects potentially allow this approach and it should be used to make projects more concrete and verify the relevance of approaches in real-life circumstances. Needs frequently expressed during greenAlps investigation phases in pilot areas concerned subjects such as traffic and mobility. There is in fact a perceived need to improve tourism management and promote alternative mobility by reducing the number of private vehicles allowed to enter the park so as to limit their impact. The maintenance of traditional agricultural land by farmers is another key issue. Farmers have expressed a need for compensation for the environmental services they are being asked by law to provide, and for damage caused by wildlife (e.g. the bark beetle) and natural processes (windbreaks and snowbreaks).



Map 2 - Alpine areas analysed by JECAMI

- A** South Western Alps - Mercantour - Alpe Maritime, France/Italy
- B** Department Isère, France
- C** Monte Rosa region, Italy
- D** Haut Valais - Ossola - Val Grande - Alpe Veglia e Devero, Switzerland/Italy
- E** Locarnese region, Switzerland
- F** Val Poschiavo region, Switzerland
- G** Rhaetian Triangle, Switzerland/Austria/Italy
- H** Hohe Tauern region, Austria/Italy
- I** Berchtesgaden - Salzburg region, Germany/Austria
- J** Northern Limestone Alps, Austria

Yellow shaded areas: Regions/areas with JECAMI analysis implemented
 Green shaded areas: greenAlps Pilot Areas



One essential step towards achieving this "integrated approach" to local management that is so crucial for the protection of biodiversity is to achieve a higher degree of joint governance of local communities together with protected areas and all the relevant economic sectors such as agriculture, gastronomy, hoteliers, business development, skilled crafts and trades. To respond to all these needs and better understand and integrate grass-roots issues, it is essential to work with pilot areas. Using pilot areas in projects **makes it possible to test procedures and strategies in the "real world" and demonstrate that EU projects can have very concrete results.**

C - ENSURING THE SUSTAINABILITY OF PROCESSES BEYOND INDIVIDUAL PROJECTS AND ACTIONS

greenAlps trans-sectoral workshops and also stakeholder workshops and interviews with project partners of other Alpine Space Projects have revealed that, for many project targets, the current project life cycle does not correspond to the real needs of the project partners and potential beneficiaries of the project results. Often the projects invest a large amount of time and money in developing tools. But once the project is over, the long-term maintenance of tools and their further development or modification, if needed, is not guaranteed, primarily due to a lack of manpower and funding.

The JECAMI tool developed by the ECONNECT project is a positive example: its continued use and application have been successfully managed. It has even been enhanced thanks to investment by single project partners and the wish of the former ECONNECT partner to actively use the tool in other projects, promote this use and seek political support by gaining recognition at an Alpine level via the Alpine Convention. However, this is not possible for all the tools developed. The long-term use of project results should therefore be more fully incorporated into the project life cycle from the very beginning and form an integral part of the project's development phase.

Include long-term perspectives and the dissemination of project results and tools in the initial project design

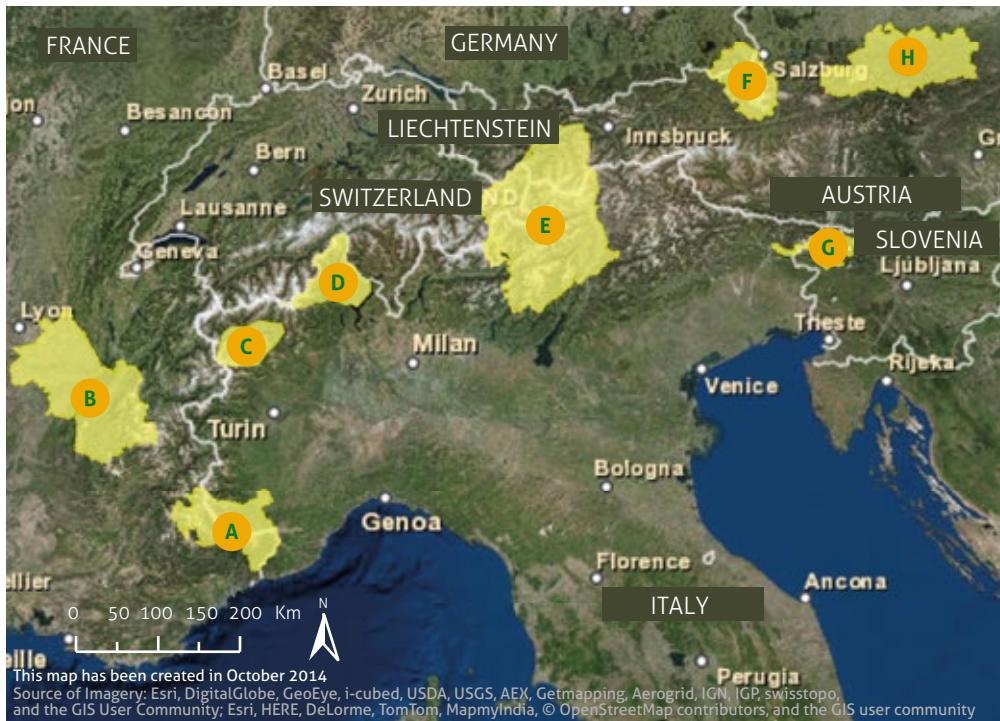
Various projects from the previous phase of the Alpine Space Programme have issued policy recommendations on biodiversity protection and nature conservation. These are usually well formulated and available for general use (at all levels) and for many different sectors. But there is a lack of concrete action to restore and maintain functional ecosystems during the project life cycle and beyond. Therefore the population and stakeholders that were involved in the project complain that the project results are not visible enough. Even small actions such as the implementation activities carried out in the Alpine pilot areas for ecological connectivity in the ECONNECT project can improve the visibility of project results and the acceptance of the entire project among stakeholders and populations, as visible and sustainable “proof” of the projects can be shown.

For this reason, the Alpine Convention has initiated an “official pilot regions” procedure (see map 4). This idea originated from the ECONNECT project and the desire to use procedures, results and tools beyond the end of the project.

Implementation activities can improve local stakeholders' acceptance of projects.

The nomination of official pilot regions is always linked to an evaluation of the region's ecological connectivity. In almost all cases, JECAMI has been a central tool supplementing the official evaluation and facilitating an appreciation of the potential for ecological connectivity in these pilot regions.

The use and communication of project results needs to be efficient and integrated within EU policies and strategies. However, results are often not communicated widely enough, even at EU level. This leads not only to an insufficient use of available knowledge but also to the fact that some issues are addressed several times by different projects without them knowing about their respective activities. Also the results of older projects in related fields are often not taken into account sufficiently in current ASP projects. They should be valorised beyond the project life cycle. A project database containing details of all the projects within a programme should be available with suitable key words to facilitate the transmission of information and knowledge. This would be a valuable tool for both the programme authorities and project developers.



Map 4 - Official Pilot Regions of the Alpine Convention

- A** South-Western Alps - Mercantour - Alpe Maritime, France/Italy
- B** Department Isère, France
- C** Gran Paradiso - Mont Avic - Mont Emilius, Italy
- D** Alpe Veglia e Devero, Italy
- E** Rhaetian Triangle, Switzerland/ Austria/Italy
- F** Berchtesgaden – Salzburg region, Germany/Austria
- G** Prealpe Giulie – Triglav region, Italy/Slovenia
- H** Northern Limestone Alps, Austria
- Pilot Regions nominated by the Alpine Convention

 Box 3 - Recommendations to the Alpine Space Programme

1) Improve the sustainability of the project life cycle
.....

2) Strengthen the dissemination of project results at targeted administration levels
.....

3) Organise the targeted dissemination of project results with the European Commission
.....

4) Provide a project database and thematic information events for better dissemination and greater evidence of project results
.....

5) Make the “observer concept” more flexible
.....

6) Building up confidence and conducting a dialogue is an asset!
.....

7) Relax the indicator system and draw up a set of quality and soft fact indicators to measure project success
.....

8) Change pre-financing by project partners to the standard approach for pre-financing project activities applied by other European programmes
.....

9) Negotiate simple procedures to enable partners from non-EU Alpine states and key countries or partners to participate in particular issues
.....

10) Simplify administrative procedures and strengthen the capacity of first-level control bodies
.....

From: Ten recommendations to the Alpine Space Programme (Badura et al. 2014)

More recommendations to the programme bodies of the Alpine Space Programme have been drawn (see report "Staking a claim for nature - policy recommendations for the alpine space", to be obtained from www.greenalps-project.eu), which may be widely discussed by all interested actors of the Alpine Space.

Main conclusions can be found by analysing links between projects and interfaces between individual project activities

In single projects, analysing the results of every work package individually would not appear to be sufficient. This is the conclusion of ECONNECT, recharge.green and greenAlps. The most interesting part of the analysis work was found at the interfaces between policy research and stakeholder feedback – comparing the desk-based policy analysis findings to real needs expressed in pilot areas and verifying whether they match.

D - MAKING ENVIRONMENTAL POLICIES SUCCESSFUL

What is the recipe for making make environmental policies successful – is there one? During the project and especially when comparing local needs to implement a better and more efficient biodiversity strategy with European policies, some key recommendations were identified. These recommendations indicate the principal features needed for human-nature relations to be respected and applied if environmental policies are to be successful. The greenAlps recommendations to policy makers (see box for headlines) have been published in a separate document.

 Box 4 - Policy recommendations for the Alpine Space

1) Develop an integrated, trans-sectoral landscape vision for the Alps

2) Migrate from practices that require compensation for environmental damage to the valuation of and payment for ecosystem services

3) Ensure project results are visible and given due consideration in EU policies and strategies

4) Bring EU projects to the people and avoid stakeholder burnout by making concrete results visible and improving communication

5) Ensure concrete pilot implementation activities

6) Empower municipalities to implement strategic biodiversity conservation and ecological connectivity measures

7) Authorise protected area administrations to operate beyond the borders of protected areas

8) Strengthen cooperation in “working regions”

9) Ensure trans-sectoral implementation of ecological connectivity measures

10) Improve compliance monitoring for the realisation of biodiversity conservation actions

From: Staking a claim for nature – policy recommendations for the Alpine Space (Badura et al. 2014)

Assertive nature protection actors are needed

The image of nature and biodiversity protection must change from one of “preventing activities” to that of an active key player representing a sector with equal opportunities, having concrete and justified demands of other sectors (which is the case only at a theoretical level) and securing the participation of the population concerned.

Nature protection does not occupy a prominent position today, either in European strategies or at a local level, even though it is an important investment in the future. If it did, the current financial and economic crises would not be influencing biodiversity issues so much by cutting relevant budgets: when nature conservation is not a priority issue for the governments of countries facing financial problems it is hard for society to change its mind set and participate more fully in environmental issues. A paradigm shift is needed because protecting the environment and natural resources of European countries can also contribute to European economic systems.

A common consensus about the position that nature protection and biodiversity conservation in particular should occupy in EU economies would provide a more solid basis for this issue, and its place in the economy would not need to be discussed at every impending crisis or budgetary shortfall.

“It would be helpful to make biodiversity and ecological connectivity as prominent as the subject of climate change.”

— **Chris Walzer, 2014.**

The institutions, NGO’s and public organisations working to conserve biodiversity are not considered to be discussion partners on the same level as commercially-oriented sectors. If nature protection is to be efficient, this is a fundamental condition.

This is also evidenced by the fact that measures to enforce biodiversity protection and environmental policies are insufficiently monitored. It would be useful for Alpine countries to draw up some common standards/criteria for enforcement procedures so that legally binding regulations to protect nature could be observed.

Cooperation with key sectors is crucial... as part of a pragmatic approach

Particularly in the Alps, it will be crucial for the future to strengthen **cooperation at different levels and with key sectors** such as agriculture, forestry and tourism. New types of cooperation are needed. Regional cooperation is sometimes well developed, but links to the strategic level (nationwide or panalpine) are often missing. At the same time, bottom-up approaches seem to be more effective than top-down ones. A time-consuming broad multi-level stakeholder process seems to be inescapable. However, combining both processes would be an extremely pragmatic approach.

... and with the help of creativity

Creativity is needed. And not all types of cooperation require money! Administrative barriers can be reduced and motivated people and structures can contribute significantly to environmental policies. But these efforts and concrete contributions have to be better recognised if they are to continue. Numerous associations and also motivated people in administrations are participating in nature protection processes that transcend administrative and bureaucratic obstacles. This form of civil responsibility and courage is often overlooked and under-appreciated, but is fundamental for the success of environmental policies.

EU programmes promote biodiversity policies beyond national and administrative borders

Besides encouraging a dialogue process with local stakeholders and populations, especially at a regional level, the new EU Alpine Space Programme is intended to foster relationships between ASP projects and nature conservation administrations in different Alpine countries.

EU projects are frequently rather abstract, and do not necessarily include local actors. The demand for transnational and trans-sectoral collaboration as well as for local stakeholders within Alpine Space programmes requires political support at a ministerial level and through regional administrations, which would have to be involved at the project development stage.

Biodiversity conservation can only be successful if all administrative levels (municipality, region, canton/Land, national level) are involved and cooperating and if the activities and measures are organized across national borders. At a local municipal level, sustainability is often of little importance. There is a lack of long-term strategies, integrative approaches and approaches take into account neighbouring municipalities, particularly in border regions.

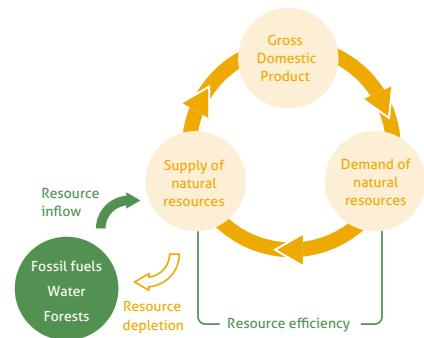
From compensating environmental damage to payment for ecosystem services

The principal focus within the EU and its Member States is based on economic growth (even within the realm of the green economy). Ecosystem services are under-valued or grossly rebated. To make environmental policies successful requires at least one new principle: incorporating the value of eco-system services into conventional commercial approaches.

As a supplementary concept to economic growth, in 2011 the OECD published its strategy entitled 'Towards Green Growth' – a document offering options and pathways for developing economic growth based on sustainable concepts of resource use, consumption patterns, environmental standards, etc. This concept has been widely accepted in the EU and delivered input to the EU 2020 strategy, but still needs to be further integrated into all sectoral policies. In order to illustrate the concept of green growth, the following infographic explains the relationship between natural resources and economic growth.

Figure 10

Natural resources are both a driver and a possible constraint of economic growth. The higher GDP, the higher demand for natural resources; growing demand leads to higher production, which depletes stocks – all else being equal. Declining stocks, on the other hand, reduce potential medium- to longer-term production of natural resources, potentially constraining economic growth. Resource efficiency is promoted in the GER, to reduce demand and improve the management of supply. The rebound effect is also taken into consideration, as it normally reduces the intended benefits of efficiency improvements by increasing demand.



Source: www.unep.org/greeneconomy/Portals/88/documents/ger/ger_final_dec_2011/Green%20EconomyReport_Final_Dec2011.pdf

One of the key statements is that it is vital to develop mechanisms for “pricing pollution and natural resource use through mechanisms such as taxes or tradable permits” (for OECD Green Growth Strategy see: www.oecd.org/greengrowth/towardsgreengrowth.htm). To achieve this, approaches based on ecosystem services could provide a new impetus, but would need to offer direct economic benefits to local stakeholders (e.g. landowners) if they were to be accepted. Key sectors (environment, agriculture, forestry, fisheries, energy, transport, construction, tourism and spatial/land-use planning) frequently have conflicting goals and poorly coordinated actions. Biodiversity targets are integrated into non-environmental sectors to varying degrees, but this situation could be improved by financially valuing ecosystem services.

The following ecosystem services relevant to the Alpine region may be used in that context (Source: TEEB 2012 in Hastik 2014, ASP recharge.green project, not yet published): Food, local climate, habitat for species, recreation (see the full table and information about eco-system services in chapter n°3, page 39).

There is much potential synergy between biodiversity conservation, spatial planning, tourism and agriculture; this is currently under-utilised. EU policies should support actions relating to ecological connectivity and the valuation of ecosystem services in society with special dedicated funding.

The financial value of at least some ecosystem services must be recognised.

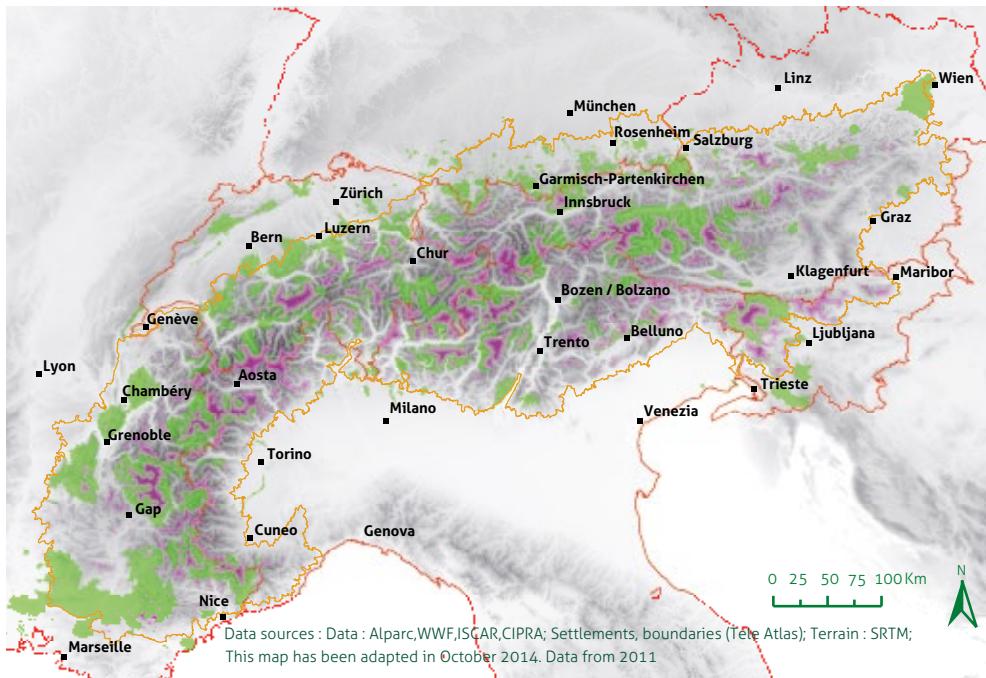
Towards a trans-sectoral landscape vision for the Alps

A stronger identification with the Alpine region and Alpine strategies is needed if a consistent panalpine vision and policy are to be achieved. The Alpine Convention and the macro-regional approach in particular could contribute to greater identification that also includes links between the Alps and their surroundings.

As part of a macro-regional strategy for the Alps, such a landscape vision would make it possible to categorise and prioritise issues such as ecological connectivity. For example, this could be carried out in regions where a special effort is needed to defragment the land, or in regions that are still fairly intact and where conservation policy needs to ensure a favourable conservation status is retained.

Analysis of such priority regions has already been carried out in previous projects, some of which have contributed to the ECONNECT project. In particular, two maps have been created indicating the last unfragmented areas of the Alps overlaid with protected areas and hypothetical barriers to ecological connectivity for the Alpine region, which is helping to define “action areas”.

[map 5 - Non-fragmented areas & protected areas and map 6 - Map of hypothetical barriers]



Map 5 - Non-fragmented areas and protected areas in the Alps

- Early stage
- Transformation stage
- Advanced stage
- Core area
- Protected areas
- Alpine Convention
- Main cities
- Alpine Countries

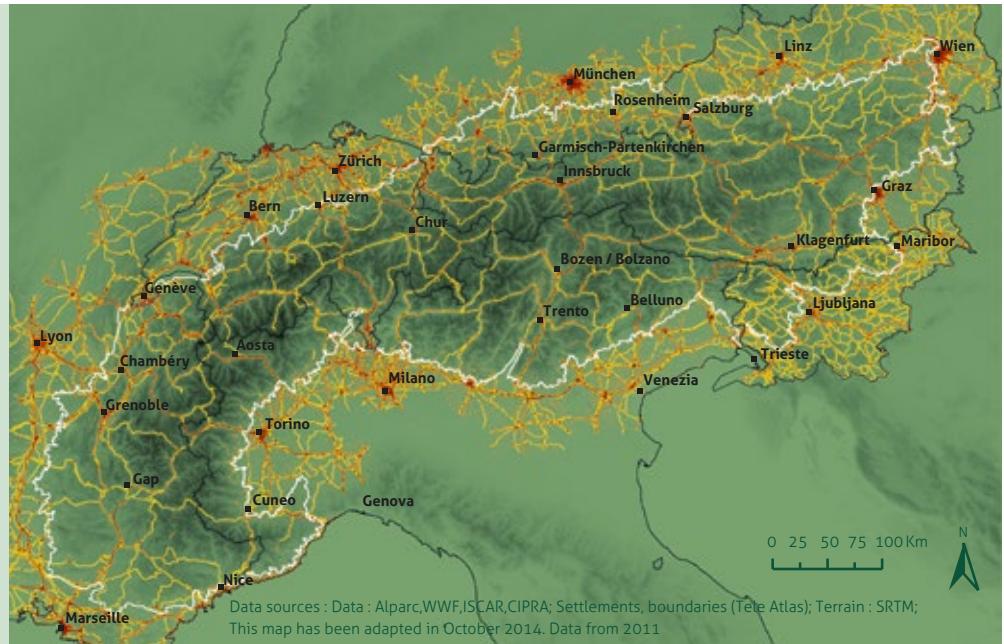
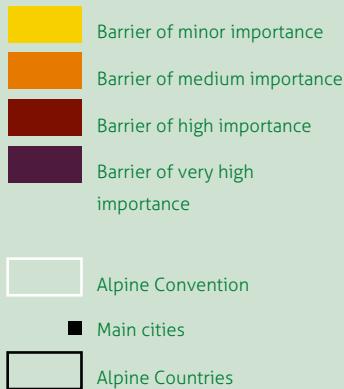
Produced by:



These maps have helped the project define three types of ecological connectivity “action area”:

- Areas where fragmentation has already progressed so far that interlinked habitats and a transparent landscape matrix are no longer a realistic option using reasonable, viable interventions. This is the situation in some of the intensively used inner Alpine valleys. Here, it probably only makes sense to use one-off measures to permit species migration.
- Areas that still have considerable potential for connectivity and where connectivity should be conserved. Such areas are characterised by a sparse infrastructure, dispersed settlements and large natural areas at mid-altitude.
- Areas in which larger, more or less natural non-fragmented zones could easily be created, especially by connecting protected areas [map 7 - Large protected areas of the Alps]. Another very important issue would be to connect protected areas in transboundary regions both physically and by coordinating and harmonising their management systems.

Map 6 - Hypothetical barriers to ecological connectivity in the Alps

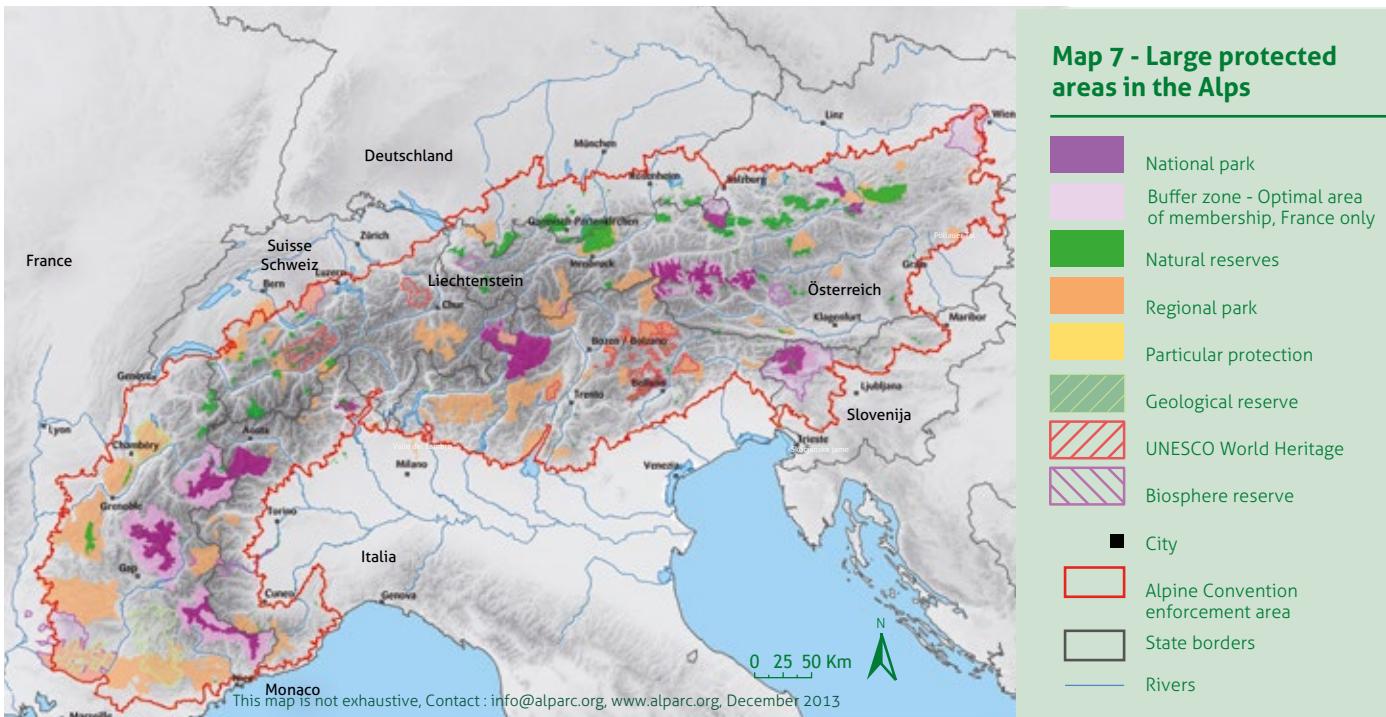


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A trans-sectoral landscape vision of the Alps including all economic and social sectors and in particular the macro-regional approach, agreed between the different countries, might be a vision for the future, but it will be a very important step towards more successful planning and implementation of biodiversity policies. In order to establish connectivity to and from the Alps, it will be crucial to involve external Alpine influences.

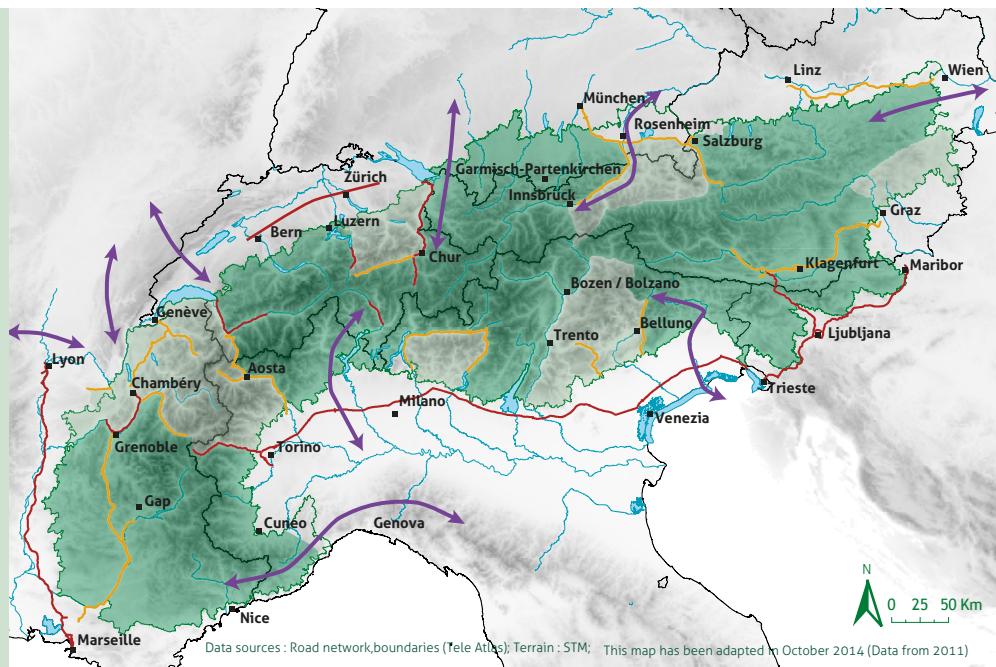
The principal barriers surrounding the Alps have been identified, but not those within the massif itself. These external barriers could be used to define a fourth category of "action area", as connections to and from the Alps are crucial for the long-term conservation of Alpine species [map 8 - Exploratory map].



Produced by:



Map 8 - Exploratory map of Alpine ecological connectivity



Produced by:



With the help of a well-defined macro-regional strategy, the Alpine region could and should take account of the economic and demographic influence of the very dynamic area surrounding it in order to develop an integrated approach that takes account of European biodiversity protection policies. There is absolutely no doubt that the rich diversity of species found in the Alps is under threat from policies agreed outside the region. Very close cooperation is therefore needed and the Alpine environment needs to be considered in a wider European context, including the major conurbations that surround the Alps.

Close cooperation is needed with the conurbations that surround the Alps to safeguard the rich Alpine biodiversity.

If this macro-regional approach is not adopted, the Alps could increasingly be side-lined and transformed into a playground for the rich and densely populated conurbations situated in a wide circle around the Alpine arc. This new way of **“thinking the Alps” by designing a larger area including the external Alpine decision-making centres and stakeholders** will therefore be one of the crucial factors in developing the Alps in a sustainable manner.

ANNEX

What ASP projects can deliver to Alpine regions – a glimpse into the ASP toolbox!

greenAlps attempted to analyse the needs of the pilot areas involved with regard to European funding schemes such as the Alpine Space Programme and with regard to European sectoral policies that could have an impact on these pilot areas.

A series of interesting tools and instruments have been developed in different Alpine Space projects. It would be possible to use them in other Alpine areas with some adaptation and collection of relevant data. Two examples are shown here that illustrate some of the concrete needs of pilot areas and the options offered by the Alpine Space Programme or other sources/processes that may offer solutions to the problems indicated.

Example 1 - Berchtesgaden-Salzburg (DE/AT) transboundary region with Berchtesgaden National Park

	Needs formulated by the pilot areas during greenAlps workshops*	Suggestions for solutions, information, possible action and funding
Agriculture	Guidance for farmers ('einzelbetriebliche Beratung') with regard to the two pillars of the Common Agricultural Policy and its national implementation	Task can be covered within rural development concepts, in general by national funding
	Ecological development concept (jointly elaborated by the agricultural administration and Berchtesgaden National Park)	JECAMI analysis (ECONNECT, ASP*) Stakeholder dialogue
	Development and marketing of typical products	Methodology described in ASP project 'RegioMarket' (2006-2008), to be implemented by private businesses, common branding supported by Leader or national funding
	Establishment of Land Care Association	Output of stakeholder dialogue, regional funding
	Increase opportunities for advanced training	Pilot measure in transnational ASP project or ETC cross-border project

	Needs formulated by the pilot areas during greenAlps workshops*	Suggestions for solutions, information, possible action and funding
Nature conservation	Develop programme of landscape conservation measures	Selection of territories based on JECAMI analysis (ECONNECT, ASP), consultation with farmers within rural development concept
	Develop a strategy for implementing wildlife corridors to increase acceptance	JECAMI analysis (ECONNECT, ASP) stakeholder dialogue, awareness-raising measures
	Develop manual for construction projects which are not subject to approval	See results of ASP project AlpBC
	Analysis and documentation of changes to the landscape	Cultural landscape assessment, analysis of future development e.g. by dynamic JECAMI analysis (time factor to be included)
	Mapping of wetlands	National funding, implementation of Bavarian biodiversity strategy & action plan
Forestry and forest management	Implementation of a concept for the restoration of protection forests	MANFRED (ASP) handbook on adaptive forest management strategies incl. adaptive seed sources
	Assessment of geological risks and consideration in urban land use planning	SHARE (FP-7 project) – set of maps and seismic model for risk assessment
	Develop concept for the implementation of conservation measures in forests	MANFRED handbook on adaptive forest management strategies incl. adaptive seed sources
	Increase regional marketing for forest products	recharge.green (ASP) – optimum location of renewable energy plant for forest biomass
Water management	Assessment and declaration of flood plains	Follow up of existing risk maps (at Bavarian State level), dialogue on concrete extension and territories
	Implementation of measures for the river management plan (German: GEP)	Concrete implementation of maintenance measures (municipal & regional funding), advanced analysis with results and tools of SHARE

	Needs formulated by the pilot areas during greenAlps workshops*	Suggestions for solutions, information, possible action and funding
Water management	Development and implementation of a common flood protection project (water management authority, national park, municipalities)	SHARE (ASP) or JECAMI customised analysis, then ETC cross-border or national funding
	Develop regional concept for utilisation of hydropower (including exclusion areas)	<ul style="list-style-type: none"> ▪ recharge.green (ASP) – potential analysis for hydropower; definition of constraints, trade-offs, opportunities SHARE (ASP), e.g. criteria for river vulnerability mapping checklist, and: ▪ SHARE SMART Mini-Idro - An EXCEL tool to evaluate the main hydropower project parameters of a given hydroproject ▪ VAPIDRO-ASTE 4.0 – (SHARE ASP Project Customised Version) A GIS tool to evaluate the hydropower residual potential in a water course
Tourism	Develop common vision of the five municipalities based on situation analysis	Regional dialogue between stakeholder groups, cooperation with existing networks on sustainable tourism development
	Increase offers of environmental education and networking between tourists and providers of tourism services	Capacity building measures within ETC ASP project or ETC cross-border project
	Consideration of regional construction culture	See results of ASP project AlpBC
	Increase public transportation options	ASP projects AlpENMAT, Alps Mobility II, 'Alpine Pearls'; inter-municipal or regional concept
	Haus der Berge as key element for linking up the five municipalities	Regional knowledge platform, concept to be developed

* ASP = Alpine Space Programme 2007-2013

Source: Analysis 2014 EURAC and blue! advancing european projects

Example 2 - Julian Prealps Nature Park (IT) / Triglav National Park (SI)

	Needs formulated by the pilot areas during greenAlps workshops	Suggestions for solutions, information, possible action and funding
Agriculture	Support for cultivation and marketing of typical products (garlic, "slow food")	Methodology described in ASP 'RegioMarket' project (2006-2008), to be implemented by private businesses, common branding supported by Leader or national funding
	Development of a quality brand for products from the nature park	Stakeholder dialogue, Leader funding, national funding
Nature conservation	Finalisation of plan for wildlife conservation and management of the park (ongoing process since 1996) for PNPG	Selection of territories based on JECAMI analysis has been carried out (ECONNECT, ASP)
	Implementation of management measures in cooperation with local and regional authorities	As pilot cases in transnational ASP projects, ETC cross-border projects with Triglav NP, national funding
	Develop a strategy for game management (in accordance with regional hunting administration and stakeholders)	Improved exchange with specialist regional authority, stakeholder dialogue
Forestry and forest management	Concept for the implementation of forest conservation measures has been drawn up.	MANFRED (ASP) handbook on adaptive forest management strategies incl. adaptive seed sources
	Increase regional production of forest biomass within the boundaries of the biosphere reserve	recharge.green (ASP) – optimum location of renewable energy plant for forest biomass stakeholder dialogue to be continued
Water management	Safeguarding of water provisioning service to the people (currently water for 300,000 people)	AIM, SHARE toolbox, AlpsWaterScarce (all ASP)

	Needs formulated by the pilot areas during greenAlps workshops	Suggestions for solutions, information, possible action and funding
Education	Concept and capacity for raising awareness of local population	As pilot cases in transnational ASP projects, ETC cross-border projects with Triglav NP, national funding
	Capacity building for staff of protected areas and local/regional administration staff on topics of nature conservation and sustainable development	As pilot cases in transnational ASP projects, ETC cross-border projects with Triglav NP, national funding
Sustainable tourism / Regional development	Elaboration of a dialogue on regional development opportunities based on the amenities of the nature park/national park and/or the biosphere reserve	As pilot cases in transnational ASP projects, ETC cross-border projects with Triglav NP, national funding
	Improving tourism offerings (accommodation, cultural and historical values, etc.)	Various ASP projects dealing with SME and network development, e.g. OPEN Alps, FIDIAS, COMUNIS, etc.
	Develop a concept for and increase sustainable mobility in the pilot area (PNPG & TNP)	AlpInfoNet, Alp Store, concept of 'Alpine Pearls', AlpENMAT (all ASP)
	Management of non-wood products in line with park requirements (legal aspects)	Adaptation of legal framework to needs of the park at a regional/national level
	Marketing activities for promoting sustainable & inclusive tourism in protected areas (cross-border and in both areas)	As pilot cases in transnational ASP projects, ETC cross-border projects with Triglav NP, national funding

Source: Analysis 2014 EURAC and blue! advancing european projects

