econnect3

Output	Category	Language(s)	Target group	Remark
Implementation recommendations	Guidelines	EN	civil servants / administration; Planner; Specific institutions	“During implementation of the ECONNECT project, seven pilot regions under the leadership of protected area administrations applied a common methodology to elaborate and realize various concrete measures and to establish spatial linkages in order to improve ecological connectivity in their region. The experiences and lessons learnt from this process are summarized in the ‘Implementation Recommendations’. The Implementation Recommendations are aimed at supporting protected area administrations and experts working towards nature conservation at a regional level.” Implementation recommendations, p.1

1. GENERAL INFORMATION

Econnect. Improving Ecological Connectivity in the Alps

AS priority area: Environment and Risk Prevention Duration: 01/09/2008 - 30/11/2011
http://www.econnectproject.eu

1.1 Project Partners

- **Lead Partner:** University of Veterinary Medicine Vienna; Research Institute of Wildlife Ecology (AT) **Contact person:** Christian Walzer, Tel.: +43 (0) 6641054967, chris.walzer[at]fiwi.at
- Committee of the National Park Hohe Tauern (AT) **Contact person:** Ferdinand Lainer, Tel.: +43 (0)6562 40849 26, ferdinand.lainer[at]salzburg.gv.at
- Federal Environment Agency Ltd., Landuse & Biosafety (AT) **Contact person:** Bernhard Schwarzl, Tel.: +43 (0)664 6210331, bernhard.schwarzl[at]umweltbundesamt.at
- National Park Gesaeuse Ltd. (AT) **Contact person:** Lisbeth Zechner, Tel.: +43 (0)664 8252314, lisbeth.zechner[at]nationalpark.co.at
- University of Innsbruck, Institute of Ecology (AT) **Contact person:** Leopold Füreder, Tel.: +43 (0)512 507 6125, leopold.fuereder[at]uibk.ac.at
- Swiss National Park (CH) **Contact person:** Ruedi Haller, Tel.: +41 (0)81 851 4111, rhaller[at]nationalpark.ch
- Berchtesgaden Nationalpark Administration (DE) **Contact person:** Michaela Künzl, Tel.: +49 (0)8652 9686135, michaela.kuenzl[at]npv-bgd.bayern.de
- Cemagref Grenoble Regional Centre unit research mountain ecosystems (FR) **Contact person:** Jean Jacques, Tel.: +33 (0)4 76 76 27 79, jean Jacques.brun[at]cemagref.fr
- Council of Department of Isere (FR) **Contact person:** Jean-Guy Bayon, Tel.: +33 (0)4 76 00 39 88, jg.bayon[at]cg38.fr
- Task Force Protected Areas - Permanent Secretariat of the Alpine Convention (FR)**Contact**

person: Guido Plassmann, Tel.: +33 (0)4 79 26 55 00, guido.plassmann[at]alparc.org
- CIPRA - International Commission for the Protection of the Alps (FL) **Contact person:** Aurelia Ullrich, Tel.: +423 237 53 08, aurelia.ullrich[at]cipra.org
- Alpi Marittime Nature Parc (IT) **Contact person:** Patrizia Rossi, Tel.: +39 017 197397, patrizia.rossi[at]parcoalpimarittime.it
- Autonomus Region of Valle d'Aosta - Department of agriculture and natural ressources (IT) **Contact person:** Sedda Cristiano, Tel.: + 39 0165 527335, c.sedda[at]regione.vda.it,
- European Academy of Bozen/Bolzano (IT) **Contact person:** Thomas Streifeneder, Tel.: +39 0471 055 315, thomas.streifeneder[at]eurac.edu
- Italian Ministry for the Environment (IT) **Contact person:** Paolo Angelini, Tel.: +39 06 57228154, angelini.paolo[at]minambiente.it
- WWF Italy (IT) **Contact person:** Mauro Belardi, Tel.: +39 0348 874 98 89, m.belardi[at]wwf.it

1.2 Background:

The Alps are one of the best-known mountain ranges as well as being one of the richest in biodiversity, it is, however, also one of the most densely populated. The traditional tool used to conserve biodiversity and the natural environment has always been the creation of protected areas, however it has become increasingly obvious that a majorly important aspect in the conservation process is to connect protected areas to one another to allow the migration of species across the entire alpine range. Genetic flow across the whole alpine range is important particularly to help species to adapt to the environmental transformations brought about by Climate Change. To successfully protect biodiversity across the whole alpine range a coordinated and transnational approach is needed in accordance with the legal framework provided by the Alpine Convention.

1.3 Aim/ Objective

The main objective is the protection of biodiversity in the Alps through an integrated and multidisciplinary approach aimed at encouraging the promotion of an ecological continuum across the Alpine region. Particular attention will be given to the regions high in biodiversity value to establish and increase the links between them and towards other neighbouring ecoregions (e.g. the Mediterranean or Carpathian regions).

1.4 Actions:

Information gathering: • harmonise geographical data across participating countries • analyse existing physical and legal barriers to the establishment of ecological corridors • define migration corridors between high value biodiversity areas in the Alps and links to other ecoregions

Action on the ground: • create, approve and test a methodological approach for the establishment of ecological corridors and promote this procedure across the alpine region • strengthen the cooperation between relevant institutions • apply concepts and action to pilot regions of high biodiversity value

Communication: • raise awareness about the importance of ecological connectivity • spread results of the process being carried out

1.5 Methodology:

ECONNECT is based on a holistic approach for the development of ecological networks, integrating administrative, multinational and scientific institutions. It is foreseen to provide an Alpine-wide overview on the areas important to ecological connectivity by referring to quantitive and qualitative information on selected sites (core areas) and the level of interconnectivity between them (corridors). Natural, social and economic barriers to the establishment of connectivity will also be identified and proposals will be made on how to overcome them. Since the idea of ecological connectivity also refers to non-protected areas, attention will be paid both to how policies may affect their establishment and how the ecological networks may in turn affect spatial/infrastructure development and economic activities.

1.6 Hypotheses

• Coordination of sector policies to prevent exploitation of natural resources and single-sector economies • Sensitive Alpine territory requires appropriate and diversified measures (consensus-oriented multi-stakeholder approach)

1.7 Keywords

• natural heritage • biodiversity • environmental policy / legislation • knowledge transfer

1.8 Topics

• Reducing environmental damage • Enhancing and protecting natural resources and heritage • Developing access to information and knowledge

2. RESULTS/OUTPUTS

Output 1	**Policy Recommendations**
Description	This document has the objective to inform policy makers and decision makers at all levels, from local to regional to trans-national, about key conclusions of the project. It is intended, among others, for government agencies and agencies at EU ministries. The purpose of the policy recommendations is to stimulate further development of and support for the ecological connectivity concept, as its implementation will result in enhanced effectiveness of programmes to conserve biodiversity both in cultural landscapes and in
Category Result	(policy) recommendations
Language Result	En
Target group	• Policy maker
Territory / area of application	Alpine Arc region
Time frame	The recommendations were compiled in the end of 2011. The information is aging as the legal circumstances might change.

Output 1	**Policy Recommendations**
Keywords	+ connectivity, + biodiversity, + corridors, + landscape connectivity, + knowledge transfer, + protected area,+ ecological, + policy, + recommendations
Accessibility	Open access to the recommendations. Downloable from project website and AS web
Transferability and re-usability	The recommendations are applicable in the whole Alpine arc region without amendments. They are not transferable outside the AS.
Sector/sectorial policies addressed	“to inform policy makers and decision makers at all levels, from local to regional to trans-national, about key conclusions of the project. It is intended, among others, for government agencies and agencies at EU ministries. (p.1)“• agriculture• environment•management of natural resources•regional development• rural development• spatial development• transport

Output 2	**FINAL BOOKLET: “WEBS OF LIFE. ALPINE BIODIVERSITY NEEDS ECOLOGICAL CONNECTIVITY. RESULTS FROM THE ECONNECT PROJECT”**
Description	Final project document containing: The project in a nutshell, major achivements, connectivity and selected key species, pilot regions and implemented activities, policy recommendations, after Econnect:how to continue the process
Category Result	Report
Language Result	EN
Target group	• Policy maker; • Civil servants / administration; • Planner; Scientists; • Specific institutions; • Civil society / citizen
Territory / area of application	Project actions were implemented within the whole Alpine region as defined by the Alpine Convention. (p.12) ECONNECT selected and implemented actions in seven Pilot Regions, four of which were transnational (p.16). The 7 Pilot Regions of ECONNECT were selected following a clearly defined process and in accordance with a set of shared criteria, encompassing diverse natural and ecological conditions (p.43); The following ECONNECT pilot Regions served as case studies for comparison: • “Berchtesgaden - Salzburg” (Austria-Germany) • “Hohe Tauern and Dolomite Region” (Austria,Italy); • “Monte Rosa” (Italy, Switzerland); • “The south-western Alps” (NPs Mercantour/Alpi Marittime) (France, Italy); • “The Rhaethian Triangle” (Austria-Italy-Switzerland). (p.24); Common criteria to select areas (p.14): • Selection of the important areas for ecological connectivity at the alpine level, • Identification of the legal, social and economic barriers preventing the preservation and restoration of ecological networks and proposals on how to over- come them; • Assessment of how policies affect the establishment of ecological connectivity and how ecological networks in turn, influence spatial/infrastructure development and economic activities.
Time frame	The results were compiled from September 2008 to November 2011. The result is aging as the data and different legislations in which is based are changing.
Keywords	+ final report, + connectivity, + biodiversity, + recommendations, + actions, + raising awareness, + pilot regions, + corridors, + landscape connectivity, + knowledge transfer, + protected area, + ecological
Accessibility	open access to the report. As it is a summarizing final report, data are not directly accessible from the report
Transferability and re-usability	The report describes in a summarizing way the methods and processes which were applied during the project. The working steps are transferable to other regions. The implemented actions on the field are not transferable as they are very specific to each pilot regions, they can always serve as a model. The comunication strategies are transferables and re-usable.

Output 2	**FINAL BOOKLET: “WEBS OF LIFE. ALPINE BIODIVERSITY NEEDS ECOLOGICAL CONNECTIVITY. RESULTS FROM THE ECONNECT PROJECT”**
Sector/sectorial policies addressed	• Agriculture • Agro-tourism • Ecology • Economic development • Education• Environmental protection• nature conservation • Forestry • Land use planning • Natural resource management • Regional development • Regional planning • Risks / natural hazards • Rural development • Spatial development • Spatial planning • Territorial observation • Tourism • Transport / mobility• Urban design

Output 3	**IMPLEMENTATION RECOMMENDATIONS**
Description	The Implementation Recommendations are aimed at supporting protected area administrations and experts working towards nature conservation at a regional level. The experiences and lessons learnt from the implementation of the ECONNECT project.
Category Result	Guidelines
Language Result	En
Target group	• Civil servants / administration • Planner• Specific institution
Territory / area of application	All the Alpine Space, specially on the 7 pilot regions
Time frame	The recommendations were compiled in the end of 2011. The information is aging as the circumstances might change.
Keywords	+ connectivity, + biodiversity, + corridors, + landscape connectivity, + knowledge transfer, + protected area, + ecological, + implementation, + recommendations
Accessibility	Open access to the recommendations. Downloable from project website and AS web
Transferability and re-usability	The framework and vision in which the recommendations are based can be transfered to any other place without modifications. The recommendations themselves are very Alpine Space specific as therefore are not transferable
Sector/sectorial policies addressed	• agriculture • agro-tourism • ecology • economic development • education• environmental protection• nature conservation • forestry • land use planning • protected areas• natural resource management • regional development • regional planning • risks / natural hazards• rural development • spatial development • spatial planning • territorial observation • tourism • transport / mobility • urban design

Output 4	**LEGAL BARRIERS EXECUTIVE SUMMARY: “THE ECONNECT PROJECT AND THE WORK PACKAGE 6”**
Description	The purpose of the WP6 Legal Barriers Study is focused expressly on the need to identify all the existing barriers to the connectivity and the legal tools to remove or overcome them.
Category Result	Executive summary / policy oriented summary
Language Result	En
Target group	• Policy maker; • civil servants / administration; • Planner; Scientists;• Specific institutions; • Civil society / citizen
Territory / area of application	• Alpine protected areas, • Natura 2000 sites in Austria, France, Germany, Italy, Slovenia and Switzerland
Time frame	The activities were undertaken between September 2008 and November 2011. The information is aging as the circumstances and legislation might change.
Keywords	+ connectivity, + biodiversity, + corridors, + landscape connectivity, + protected area, + ecological, + special conservation Zones + european directives,
Accessibility	Open acces to the document. Downloable from project website and AS web

Output 4	**LEGAL BARRIERS EXECUTIVE SUMMARY: "THE ECONNECT PROJECT AND THE WORK PACKAGE 6"**
Transferability and re-usability	Part of the document can be transferable to other places as it deals with documents at the European level. Other part are very Alpine space especific and cannot be transfered.
Sector/sectorial policies addressed	• education• agriculture • agro-tourism • ecology • economic development • forestry• land use planning • natural ressource management • environmental protection• nature conservation • regional development • regional planning • risks / natural hazards • rural development • spatial development • spatial planning • territorial observation • tourism • transport / mobility • urban design •protected areas
Output 5	**JECAMI – "JOINT ECOLOGICAL CONTINUUM ANALYZING AND MAPPING INITIATIVE"**
Description	To analyze and visualize ecological connectivity in seven pilot regions which are situated in different ecological and social regions of the European Alps.JECAMI was built with the Javascript - Google Maps API and contains ArcGIS Server 10 – based geoprocessing and mapping functionality. JECAMI combines three different approaches: the analysis of the landscape as a whole in a continuum suitability index (CSI), the distribution and migration of specific key species (SMA and service) and the connectivity analysis of riverine landscapes (CARL service).
Category Result	Tool
Language Result	EN
Target group	• Policy maker; • civil servants / administration; • Planner; Scientists; • Specific institutions; • Civil society / citizen
Territory / area of application	Some information is available for the whole alpine space region and other is only available for the pilot regions selected
Time frame	
Keywords	+ connectivity, + biodiversity, + corridors, + landscape connectivity, + protected area, + ecological, + special conservation Zones+ continuum suitability index + distribution and migration of specific key species (SMA), connectivity analysis of riverine landscapes (CARL), + application, google maps,
Accessibility	Open access; The application is freely accesible on internet. The data in which the tool is based is not available, but it is very well explained where it comes from.
Transferability and re-usability	the method described is probably applicable for other regions with adaptions
Sector/sectorial policies addressed	• education• agriculture • agro-tourism • ecology • economic development • forestry • land use planning • natural ressource management • environmental protection• nature conservation • regional development • regional planning • rural development • spatial development • spatial planning • territorial observation • tourism • transport / mobility • urban design
Output 6	**ECOGAME**
Description	A game on ecological topics developed within the sphere of the ECONNECT project.
Category Result	Public relation
Language Result	De
Target group	•Civil society / citizen

Output 6	**ECOGAME**
Territory / area of application	The project was developed in Switzerland, however the games are taking place in urban areas widespread all over the Alpine area. This includes cities of Switzerland, Germany, Austria, Italy and France.
Time frame	The game activities were held throughout the year 2010. The results, which can be considered as the reaction of people on public games, can change in time. That can cause different awareness towards
Keywords	+ connectivity, + biodiversity, + protected area, + ecological, + special conservation Zones (SCZ), + knowledge transfer, + eco-innovation + green learning; + ecological continuum,+ game, + public relation+ distribution and migration of specific key species (SMA)
Accessibility	Ecogame is open accessible
Transferability and re-usability	The games used in Ecogames are transferable also to other places outside the Alpine Space. The method of mediating new information and creating interest for sensitive topics can be reused also considering topic unrelated to the Alps.
Sector/sectorial policies addressed	These games should as well serve the public sector “to demonstrate the need for connectivity across the Alps as well as exploring the best options for coordinated action and the development of innovative tools to promote ecological connectivity” (ecconect Webpage/Home)• social inclusion, • education, • environment, • protected areas

Output 7	**MAP OF ECONNECT PILOT REGIONS**
Description	Map showing the location of the project Pilot sites
Category Result	Map
Language Result	En
Target group	•Policy maker;•civil servants / administration; •Planner; Scientists; •Specific institutions; •Civil society / citizen
Territory / area of application	The map represents the alpine space and it fringes. Especially the 7 pilot regions of the project: - The french department Isere, - The Southwestern Alps Mercantour/ Alpi marittime, -The Rhaethian Triangle (engadin/Southtyrol/Trentino/Tyrol), - The transboundary area Berchtedgaden - Salzburg, - The Hohe Tauren region, - The Northern limestone region
Time frame	The map was created in 2009 and it is timeless.
Keywords	+ connectivity, + biodiversity, + corridors, + landscape connectivity, + knowledge transfer, + protected area, + ecological, + pilot areas, + map
Accessibility	Open access; The map is available in pdf version and downloable from the AS and project website
Transferability and re-usability	As the map is a picture it is not useful in other contexts and cannot be re-used or modified.
Sector/sectorial policies addressed	• education• agriculture • agro-tourism • ecology • economic development• forestry • land use planning • natural ressource management • environmental protection/nature conservation • regional development • regional planning • risks / natural hazards • rural development • spatial development • spatial planning • territorial observation • tourism • transport / mobility • urban design • protected areas

Output 8	**FRENCH BIBLIOGRAFY ABOUT ECOLOGICAL NETWORKS: “BIBLIOGRAPHIE INDICATIVE «RÉSEAUX ÉCOLOGIQUES EN FRANCE»”**
Description	Literature overview on ecological networks in France.
Category Result	Literature review
Language Result	Fr

Output 8	**FRENCH BIBLIOGRAFY ABOUT ECOLOGICAL NETWORKS: "BIBLIOGRAPHIE INDICATIVE «RÉSEAUX ÉCOLOGIQUES EN FRANCE»"**
Target group	• Policy maker; • civil servants / administration; • Planner; • Scientists; • Specific institutions;
Territory / area of application	The bibliografy is about the ecological reserves in France and particularily about the judirical aspects.
Time frame	The documents in this bibliography go from 1986 to 2010. They are mainly from the first decade of the 2000´s.
Keywords	+ connectivity, + biodiversity, + corridors, + landscape connectivity, + protected area, + ecological, + pilot areas, + laws,
Accessibility	Open access; The map is available in pdf version and downloable from the AS and project website
Transferability and re-usability	The documents refer to France and specially to the french alp region, but can serve as a starting point to find literature about ecological connectivity.
Sector/sectorial policies addressed	• education• agriculture • agro-tourism • ecology • economic development • forestry • land use planning • natural ressource management • environmental protection/nature conservation • regional development • regional planning • risks / natural hazards • rural development • spatial development • spatial planning • territorial observation • tourism • transport / mobility • urban design •protected areas

3. GENERAL QUESTIONS

Are the results or some of them directly or indirectly suitable or applicable for practitioners / politicians and civil servants / administration? The main results of the projects are suitable and applicable for practitioners / politicians and civil servants / administration. They serve to inform and increase the knowledge (state of the art) of ecological connectivity.

Which of the project results are usable for which aspect of SSD and which are the most relevant for practitioners / politicians and civil servants / administration? Policy recommendations, Implementation recommendations, Legal_barriers_Executive_summary, JECAMI, French bibliography about ecological networks

Are there results which need further steps to be useful for practitioners / politicians and civil servants / administration? It appears essential to better integrate the established pilot regions in all future Alpine-wide initiatives and actions. […]in upcoming initiatives the integration of other essential sectors that markedly influence the decisions in respect to ecological networks in the Alps can be improved on. This urgently calls for trans-sectoral funding schemes, the development of a common language and a thorough evaluation process. […]information has not reached the actors in the field. […]in order to address the complex issue of the ecological continuum it appears necessary to apply a forward reasoning approach which identifies possible future scenarios and integrates uncertainties (p.65. final booklet).

Which kinds of stakeholders have been involved, how have their competences been used in the project and are there options for a better implementation? Non-professional photographers were invited to take pictures showing barriers and corridors in the Alps and to share their images through an on line service (Flickr). A class of photograph students was invited to use their creativity to explore ecological connectivity: images taken at the Alpi Marittime Natural Park (one of the ECONNECT pilot regions) were used to set up an exhibition that was displayed at the Econnect Final Conference. Moreover, local key stakeholders and communities were targeted by

specific information/communication events in many pilot regions: • stakeholder involvement for road management in Département Isere (F); • stakeholder involvement for grassland management in Berchtesgaden (D); • stakeholder involvement for the Rombach river in the Raethian Triangle (CH). Finally, specific knowledge-transfer activities reached key actors at all levels of governance (stakeholders, managers, NGOs, GOs, scientists) and territorial coverage (local, alpine, European). (p. 27, final booklet) It seems necessary to foresee a shift of competences towards a central unit, that should be responsible for transnational, transboundary or trans-provincial projects (at the administrative level). This unit should be provided with sufficient financial and personal resources and able to work in a trans-sectoral dimension. Finally, the administrations of protected areas within the Pilot Regions need to be equipped with adequate financial and personal resources to pursue their complex tasks and functions. (p.57, finalk booklet)

Are the results (tool, method, indicator, recommendation) directly or indirectly addressing the strategic objectives for the Alpine Space ? The results address two of the strategic objectives: Sustainable managed biodiversity and landscapes & Sustainable resource management and production

What could be long-term outcomes of this project? If none, why low impact? Why high impact? What is needed to achieve outcomes in the long-run? Econnect contributed significantly to increasing the knowledge about existing ecological barriers and corridors in the Alps and their inherent complexity.By looking at the landscape from a functional,rather than a structural perspective, and evaluating how suitable or unsuitable an area is for the ecological continuum, ECONNECT delivered technical support to those who are improving landscape permeability on the ground. Moreover, this was the very first project to investigate how national and regional legislations affect the Alpine web of life. Finally, ECONNECT explored and put into effect new ways of communicating such complex topics. (Final Report p.19)

4. QUESTIONS ON MAIN OBJECTIVES

Further synergies The documents on different animal species could be done for other species.

Achievements that could be further implemented The evaluation of priority areas can be based on the indicators of the JECAMI tool (Continuum-Suitability-Index – CSI) (Affolter et al. 2011). These indicators provide valuable statements on the interface between regional and the Alps wide level of conservation and connectivity objectives. (p.12 implementation recommendations) The results derived from this analysis process will serve as a basis for future spatial planning processes so that the spaces not yet fragmented and essential for species movements can be preserved (p.26, final booklet) Establishment of a common management system for geographic data (p.63, final booklet

Remaining gaps “there is a limited knowledge on the complex theme of ecological connectivity among the administrations, stakeholders and the population;” (p.57, final booklet) “the administrations of protected areas within the Pilot Regions need to be equipped with adequate financial and personal resources to pursue their complex tasks and functions”(p.57 final booklet)

Emerging contradictions: “landowners and stakeholders are strongly concerned about the establishment of additional protected areas resulting in limitations in land use or even heteronomy;” (p.57, final booklet) this statement continues to be valid although the project has raised the landowners awarenes.