

## **Econnect newsletter March 2011**

Editorial:

Dear colleagues and friends of ECONNECT,

The snow is slowly receding, spring is lurking and we are now really in the final phases of the project. The following project months are characterized by the implementation of concrete measures – a hallmark of the project – in the respective pilot regions. After the very long planning phase it is great to see connectivity happening on the ground. Discussions on the date of the final conference have been ongoing during the winter months and with the requested project extension we will now be able to hold this very important meeting at the very end of the project during September in Berchtesgaden. I am very pleased, as it will allow us to present a complete picture of the project results. Presently the draft program has been worked out and will be circulated shortly. The next months will also require extensive consultations and requests for input in order to draft the important final documents such as the policy recommendations and of course the final report. These documents will be one of the most visible legacies of ECONNECT so a considerable effort will be needed to fully capture and communicate the complexity of the project. Remember to regularly visit the webpage, which has lots of new material, and also a vastly updated JECAMI interface where you can check out connectivity parameters for your area. I look forward to hearing from you in these next months of intensive communication and exchange and wish you all a productive spring.

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## NEWS FROM THE ECONNECT PROJECT

### Analyze the situation of ecological connectivity online!

Do you want to identify the ideal and priority surface to establish future connectivity measures? Then you can use the online tool JECAMI (Joint Ecological Continuum Analysing and Mapping Initiative-Web services), available on: [http://gis.nationalpark.ch/arcgisserver\\_app/secure/econ\\_login.html](http://gis.nationalpark.ch/arcgisserver_app/secure/econ_login.html). JECAMI covers the surface of the seven Econnect pilot regions where it e.g. enables visualizing at the same time habitats of species and results of connectivity. Pilot regions can also make use of JECAMI as support for communication with various users and authorities. JECAMI was developed by the Swiss National Park in collaboration with the Arinas company in the frame of the Econnect Project.

### Illustrating pressures of human activities on black grouse

Where do species encounter obstacles to their movements in the Alps? Econnect's work package "barriers and corridors" has now delivered first results to this question for black grouse (*Tetrao tetrix*). This large bird has been chosen to represent species that will be negatively affected by climate change. Black grouse have a sedentary lifestyle which makes them particularly vulnerable to environmental changes and human disturbance. One of the main artificial disturbances for black grouse are ski lifts. To illustrate the pressure of human activities on black grouse territories, the Econnect partners computed the density of ski resorts per 10 km<sup>2</sup> in potential black grouse breeding habitat (see the picture). Black grouse relies on several local habitat types during its annual cycle. For the survival of the bird it is crucial that these different habitats patches exist and can be reached. According to experts black

grouse requires approximately 20 hectares of continuous breeding habitat during summer. Fragmentation of these local breeding habitats by local disturbance (e.g. leisure activities and infrastructure) is seen as the main problem. For wintering habitats the frequency of perturbation is a serious problem: frequent disturbance induces stress on black grouse and causes imbalances in its energy budget. A similar analysis has been carried out for other species. Barriers were defined individually for each species with regard to their impact on the migratory behavior.

**Capture:** Density of ski resorts per 10 km<sup>2</sup> on black grouse potential reproduction habitat for the Alpine arch.

### **Riverine landscapes: CARL – Connectivity Analysis of Riverine Landscapes**

Within WP5 (barriers and corridors) a specific goal is the Connectivity Analysis of Riverine Landscapes (CARL) throughout the Alps. Recent activities were concentrated on the Alpine wide definition of riverine landscapes and the analysis of existing fragmentation. On a higher resolution level, the spatial analysis of Alpine riverine landscapes focuses on detailed analysis within two pilot regions, in particular the National Park Hohe Tauern and the Northern Limestone Alps. A potential riverine landscape was defined as the river and the surrounding areas by calculating a buffer zone of 100 meters along the river course. As mountain slopes delimit the river valleys, the defined flood plain was laterally restricted to the line where the gradient of the slope was above 35 degree. For example the resulting potential riverine landscape in the whole pilot region Northern Limestone Alps covered 23% of the area. Within these riverine landscapes different fragmentation-causing elements like land use, settlements or specific obstacles were identified and put into the spatial analysis of fragmentation. As an indicator of fragmentation the “effective mesh-size” was calculated, which is based on the probability of two points chosen randomly in an area will be connected to each other. The more barriers in the landscape, the

lower the probability that the two points will be connected, and the lower the effective mesh size. In order to compare the river landscapes among each other, the “effective mesh-size” was averaged for each smaller catchment.

The current state of potential barriers and obstacles in the Alpine riverine landscapes are overlaid with the potential and effective habitats of key species. These analyses are still ongoing but we already see very interesting preliminary results.

### **French bibliography on ecological connectivity**

A list of publications and articles on ecological connectivity is now available in the “download area” on the Econnect web. The bibliography puts its focus on French publications and on those related to legal aspects. It has been compiled by CIPRA France in the framework of their work for the “legal barriers” work package.

### **Processing and communicating Econnect’s results**

The knowledge transfer work package (WP 8) plays a crucial role in bringing together other Alpine and European activities and projects dealing with ecological connectivity. Thus the key findings of a meeting of representatives from the Alps and the Carpathians in the Czech Republic in September 2010 have been presented as a poster. The poster summarises specific goals, results and outlooks of a common implementation strategy. It has been produced in cooperation with the German Agency for Nature Protection, the Platform Ecological Network, CIPRA and ALPARC. You can download the poster from the Econnect website.

Furthermore, within WP 8 the final products are being prepared based on methods, analysis, results and recommendations from all work packages of Econnect. The main outcomes will be a toolbox on methods and application procedures, a synthesis for policy makers (which is a summary of recommendations derived from project results) and the project’s synopsis. This will help to make results of Econnect

available and understandable to a large number of persons. Poster download:

[http://www.econnectproject.eu/cms/?q=download\\_area](http://www.econnectproject.eu/cms/?q=download_area)

© Pictures in this collage with courtesy of Leopold Füreder, Kerstin Lehmann, Yann Kohler, Martin Pavlik, Matevz Premelc and Thomas Waldner

## NEWS FROM THE PILOT REGIONS

### Five Econnect pilot regions officially rewarded at the Alpine Conference

On 8 March 2011 the Alpine Conference has officially recognised and rewarded eight Alpine regions – among which five Econnect pilot regions – for their exemplary work aiming at the creation of an alpine ecological network. The XI<sup>th</sup> Alpine Conference in Brdo pri Kranju, Slovenia, honoured the efforts of these regions in improving ecological connectivity and implementing in that way article 12 of the Nature Protection protocol of the Alpine Convention. Representatives from the regions received the diplomas in a festive atmosphere with some prominent guests such as the German State Secretary for Environment. The Alpine Conference also decided to transfer the presidency of the Platform from France – who had organised and promoted the rewarding of the regions – to Germany. The eight pilot regions for ecological connectivity of the Alpine Convention (from south-west to north-east):

- South-western Alps (National parc Mercantour/Nature parc Alpi Marittime, France/Italy)
- French department Isère
- Transboundary ecoregion Gran Paradiso - Mont Avic - Mont Emilius (Italy)
- Ecoregion Alpe Veglia ed Alpe Devero (Italy)
- Rhaetian triangle (Engadin/Southtyrol/Trentino/Tyrol, Switzerland/Italy/Austria)
- Transboundary region Berchtesgaden - Salzburg (Germany/Austria)
- Transboundary ecoregion Alpi Giulie (Italy)

- Northern Limestone Alps region (Austria)

The nomination concept is available on <http://econet.4teamwork.ch/about-us/platform-ecological-network/pilot-regions> (e, d, annexes also in f, i, s)

Captio: Handing over of the diploma to Berchtesgaden – Salzburg pilot region.

### **Berchtesgaden – Salzburg: revitalisation project of the Saletbach river**

The “Saletbach” river could play an important role in the regional ecological network in the Pilot Region “Berchtesgaden-Salzburg”. To reach this objective, Econnect is supporting the revitalisation of the Saletbach. In early summer of 2011 the riverbed will be widened in order to develop natural structures and dynamics. Moreover, a study will evaluate if it is necessary to reconnect the Saletbach with the lake Obersee. Relevant stakeholders have been informed about Econnect’s activities at the Saletbach during an information evening in the beginning of March. The Pilot Region is also active in other fields. Soon a study on amphibians will start and activities to maintain extensively used grasslands of high ecological value will be implemented in early spring. A workshop on landscape planning and ecological networks for regional decision makers from the German and Austrian part of the Pilot Region is scheduled for May 2011.

**Photo:** ECONNECT will support the development of more natural dynamics of the Saletbach (© Berchtesgaden National Park)

### **Pilot region Isère: improving terrestrial and aquatic connectivity**

In the Isère pilot region a new green bridge facilitates connectivity for terrestrial animals. A fence on its margins prevents the animals from noise and light of the cars. The bridge has been visited in January. In addition, works for the rehabilitation of a river will start in March. In April a study trip will be organized to present the

system of agroforestry to the farmers of the project's area. More information:

<http://www.pathsoflife.eu> (en, fr) or Ms Anne-Sophie Croyal: [as.croyal@cg38.fr](mailto:as.croyal@cg38.fr)

**Photo:** Representatives from the government of Isère and the regional highway company visiting a new green bridge.

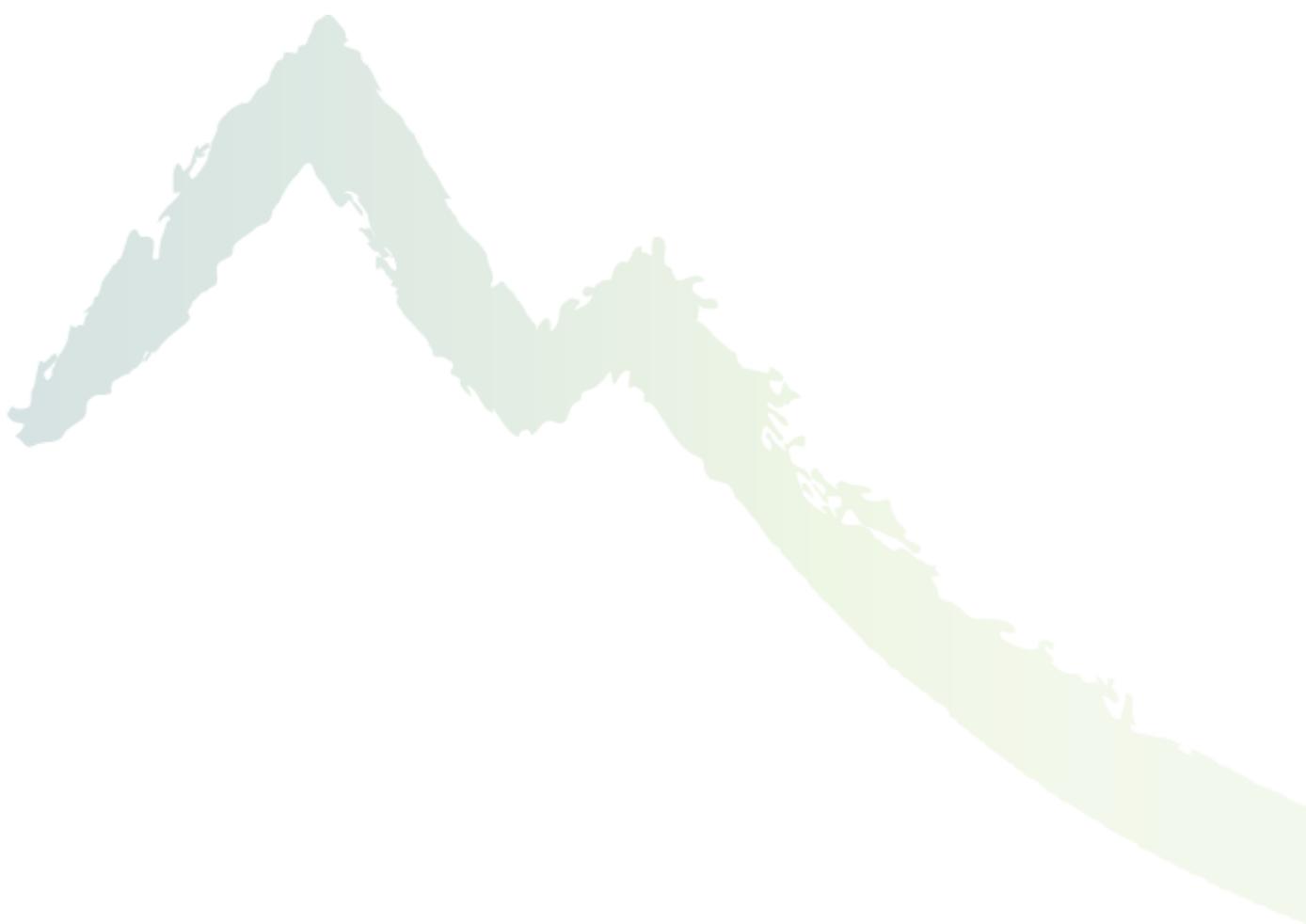
### **Future of protected areas: isolated islands or center of a green network?**

The Hohe Tauern National Park hosts an international conference on protected areas and their role in ecological networks. On 3<sup>rd</sup> and 4<sup>th</sup> May 2011 current projects and initiatives on ecological connectivity in Europe, in the Alps and in the Hohe Tauern Pilot Region will be presented in Mallnitz/A. The German speaking conference "Future of protected areas" will show the latest results and highlight the challenges for the future. The Hohe Tauern National Park as the largest protected area in the Alps is an essential part of their ecological network. Despite its remarkable size of more than 1800 km<sup>2</sup>, it only offers habitats for a limited number of individuals of certain species. A golden eagle needs for example a territory which measures between 50 and 100 km<sup>2</sup>, the home range of a bearded vulture may comprise several 100 km<sup>2</sup> and the movement radius of a lynx raises up to 1'000 km<sup>2</sup>. A single protected area cannot ensure the protection of species with such huge spatial requirements. The unique biodiversity of the Alps can only be secured through a functioning ecological network. Further information and registration:

[http://www.hohetauern.at/index.php?option=com\\_content&view=article&id=1426:zukunft-der-schutzgebiete&catid=127](http://www.hohetauern.at/index.php?option=com_content&view=article&id=1426:zukunft-der-schutzgebiete&catid=127)

**Picture:**

More habitat for the wood grouse: improvement of habitat connectivity in and around the Hohe Tauern National Park



## NEWS FROM THE CONNECTIVITY SCENE

### **New tool for custom-made connectivity solutions**

Do you want to facilitate the migration of animals within and between their habitats? There are many different ways to do this. Whether you are a farmer, a mayor or leading a tourist company: the detailed search of the new online “measure catalogue” shows you possible activities to improve ecological connectivity that are adapted to your individual situation.

The catalogue gives good practice examples of implementation, explains which stakeholders can get active in improving and establishing ecological networks and describes the legal basis of connectivity measures. All measure descriptions and good practice examples are as well available for download as pdf. You can enrich the measure catalogue with your own implementation examples. The online catalogue is available in English, German, French and Italian. It is provided by the “Ecological Continuum Initiative” and has been realized with financial support from the German Federal Agency for Nature Protection with funds from the German Environment Ministry.

<http://www.alpine-ecological-network.org/information-services/measure-catalogue/>

(e,d,f,i)

**Photo:** Connectivity measures can be implemented in many fields of work.

### **Use “The Wall” at your events to emphasize the importance of ecological connectivity**

Are you organizing an event which aims at raising awareness on the problem of habitat fragmentation? Then borrow one of the six colourful installations the “Ecological Continuum Initiative” created for its action “The Wall”. Borrowing as well as information material as artwork in four languages (d/f/i/sl) are at your free disposal. You only have to organize the transport from one of our storage places.

More information and photos: [http://www.alpine-ecological-network.org/about-us/ecological-continuum-initiative/the-wall/Die\\_Mauer\\_weiterverwenden](http://www.alpine-ecological-network.org/about-us/ecological-continuum-initiative/the-wall/Die_Mauer_weiterverwenden) (e, d, i, f)

Contact: [mateja.pirc@cipra.org](mailto:mateja.pirc@cipra.org)

**Photo:** Borrow one of the six walls to raise the awareness on habitat fragmentation.

### **Initialising follow-up activities to the Econnect project**

The Econnect project approaches its end in autumn 2011. To develop visions and projects beyond Econnect, the Continuum Initiative organised a think tank workshop last November in Bolzano/I. The objectives were to ensure that good Econnect activities will continue and to involve experts of the think tank in new projects. 20 experts contributed to a differentiated exchange of ideas and the development of projects. Based on presentations of the status quo of ongoing activities within the Econnect project, the participants discussed and defined in four simultaneous working groups the need for future work. Each group developed some promising elements for potential follow-up projects. Several priority aspects were worked out as well. A detailed report on both think tank workshops in 2010 (first one on stakeholder integration in April 2010) is available here (<http://www.alpine-ecological-network.org/about-us/ecological-continuum-initiative/think-tank/ecological-continuum-initiative/think-tank/ReportThinkTankWorkshops2010.pdf>)

More information on the think tank: <http://www.alpine-ecological-network.org/about-us/ecological-continuum-initiative/think-tank>

### **New guideline for ecological corridors in Styria**

In order to implement a “Green Network” in the Austrian province of Styria, guidelines for regional, interregional and cross-border development strategies creating ecological corridors have been elaborated. This work has been done in

close collaboration between the disciplines of spatial planning and ecology in the framework of the “Natreg” project. The Styrian approach contains many interesting elements for connecting open spaces which can be an inspiration for similar processes in other regions of Europe.

The guideline explains the basic ideas, goals, strategies and working steps of connecting open spaces and elucidates the importance of spatial planning, which in the end can protect green zones and habitat corridors with means of legally binding instruments. Furthermore information is given on the method of sectoral working steps as well as the combination of the sectoral results to an expert-proposal for the demarcation of green zones and living space corridors. The chosen method takes into account in particular those regions where there are conflicting interests between nature protection and other human land uses, whereas areas in high altitudes and protected areas are not considered. Open space is considered in its multiple functions. Apart from ecological corridor- and habitat functions, open space also fulfils numerous positive functions for humans regarding social welfare and recreation. Between these functions, numerous synergies exist and the additional value of these areas is highlighted.

The guidelines are available on <http://www.natreg.eu/joint-strategy> (en, bottom of page)

**Photo:** The Styrian Green Network does not only take wildlife corridors into account but also areas which are important for recreation. © Natreg project

### **TransEcoNet: The landscape functionality assessment**

Actions within the TransEcoNet project create basic information for the conservation and development of ecological networks. One part of project activities is focusing on the assessment of biodiversity and ecosystem services in ecological networks. In the

last months the main objective was to assess and visualize actual landscape functionality in selected transboundary areas in Central Europe based on parameters such as landscape structure, fragmentation, connectivity and biodiversity. This landscape functionality assessment has generated a series of maps which will provide valuable information for the action plan for sustainable management of ecological networks to be elaborated in 2011.

Further Information: <http://www.transeconet.eu>

Source: TransEcoNet News, Dec. 2010

### **A design competition for ecologically responsive wildlife crossings**

ARC, the International Wildlife Crossing Infrastructure Design Competition, engaged the best and most innovative international interdisciplinary design teams – comprised of landscape architects, architects, engineers, ecologists and other experts – to create the next generation of wildlife crossing structures for North America's roadways. This competition sought innovation in feasible, buildable context-sensitive and compelling design solutions for safe, efficient, cost-effective, and ecologically responsive wildlife crossings.

The ARC competition short-listed five interdisciplinary teams to develop concept designs for a wildlife crossing structure along I-70, a very busy highway in Colorado. In January the jury selected the winning team which envisioned a crossing that merges seamlessly with the surrounding. The winning team as well as the other four finalist teams are presented at <http://www.arc-competition.com>

**Photo:** Importance of green bridges is obvious: roads have been acknowledged as a major obstacle to landscape connectivity and ecological vitality.

### **Abstracts and proceedings from connectivity events now online**

The first international IENE conference "Improving connections in a changing environment" was held in Velence, Hungary, at the end of September 2010. All

abstracts can be found linked from the programme at <http://www.cbm.slu.se/iene/conf2010/programme.php>.

In November 2010, the European Commission organized a workshop in Brussels on the implementation of Green Infrastructure. The meeting was a follow-up to the March 2009 workshop "Towards a Green Infrastructure for Europe," and intended to further develop the implementation of the Green infrastructure concept in the EU. Proceedings from the meeting can be found at

[http://ec.europa.eu/environment/nature/ecosystems/green\\_infrastructure.htm](http://ec.europa.eu/environment/nature/ecosystems/green_infrastructure.htm). In both events Econnect and the Alps wide initiatives have been presented.

### **Importance of ecological networks gains (inter)national recognition**

Government representatives from around the world underlined how important ecological networks are for safeguarding biodiversity. On the 10th meeting of the Conference of the Parties (COP 10) of the Convention on Biological Diversity in Nagoya/Japan in October 2010 Governments agreed on a package of measures that should help to ensure that the ecosystems of the planet will continue to sustain human well-being into the future. One of the outcomes of the conference is the Document "Decision on mountain biological diversity X/30", which also emphasizes the importance of ecological networks. It states: "Establish, inter alia, conservation corridors and connectivity, where appropriate and possible and taking into account in particular, endemic species, while avoiding the spread of invasive alien species, and transboundary mountain protected area systems, taking into account the need to integrate protected areas into wider landscapes." See the document here: <http://www.cbd.int/cop/cop-10/doc/advance-final-unedited-texts/advance-unedited-version-mountains-en.doc>

Following up the COP 10, 300 experts representing science, politics, administration and practice met in November 2010 on the conference "Future of biodiversity in

Switzerland". A declaration with 11 suggestions has been elaborated stating also the importance of ecological infrastructure in Switzerland composed of large and long-term secured connecting elements.

<http://www.biodiversity.ch/downloads/DeklarationBiodiversitaet.pdf> (D),

<http://www.biodiversity.ch/downloads/DeclarationBiodiversite.pdf> (F)

