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Establishing ecological networks in the Central Alps - ECONNECT's pilot region Inn - Etsch

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Abstract

ECONNECT is a three-year project (2008-2011) within the Alpine Space Programme of the EU. Sixteen partners from six Alpine countries jointly promote new approaches for the conservation of the natural heritage in the Alps by establishing ecological networks. The general aims are a) to identify corridors and barriers for ecological connectivity in the Alpine space and b) to implement concrete measures improving spatial links for species between protected areas in seven pilot regions. The Swiss National Park is the leader of one of these pilot regions. Together with a group of regional stakeholders the aims of ECONNECT should be realised in the area between the Inn river in the North and the Lake Garda in the South, including two national parks and several regional natural parks in Austria, Italy and Switzerland.

Keywords

connectivity, biodiversity, protected areas

Introduction

In the Alps currently more than 350 areas larger than 100 ha are legally defined as protected areas. This is some 23-25% of the whole Alpine bow (ALPARC 2007, JUNGMEIER et al. 2006). Protected areas in the Alps constitute major properties for the protection of species, biodiversity, the protection of natural, humanly unaffected territories and are – as in the Swiss National Park important research areas. But many of these protected areas are in high altitudes where the conservation is guaranteed anyway because of limited land use intensity (KOHLER 2009). Regarding this we have to ask, whether protected areas are sufficient for the preservation and advancement of the natural diversity of species and the safeguarding of an adequate exchange of genetic materials.

The ecological trouble spots are located in the valleys, are used intensively by humans and underlie neither protection nor affirmative action for improvement of the ecological situation. Some of the researchers are analyzing today genetic diversity to find out how strong ecological connections are needed (FRANKHAM 2006). Other studies are analysing if the large protected areas are linked sufficiently and try to propose precise measures for improving the linkage (JUNGMEIER et al. 2006). To implement such connectivity measures between neighbouring countries or between agriculture and forestry, coordination and communication is essential, but often still missing.

Aims and approach of the ECONNECT project

The project, named 'ECONNECT- restoring the web of life' aims to advance the ecological connectivity in the Alpine countries, as specified in Article 12 of the Nature Conservation Protocol of the Alpine Convention. The project works on two levels. First, it is foreseen to provide an Alpine-wide overview where corridors are necessary, where the preconditions are adequate and where barriers exist. This will be exemplary implemented on the basis of single species like the otter, black grouse, bullhead, red deer and the group of the large predators.

Second, concrete measures should be planned and realized in the 7 alpine pilot regions. The Swiss National Park (SNP) coordinates the work in one of these pilot regions named 'Inn-Etsch'.

Area of Study

The pilot region ranges from the river Inn in the North to the Lake Garda in the South, including the Etsch valley in the South Tyrol and the Trento area in Italy (fig. 1). Two geographical regions of the area are of particular interest for the project: In the main valleys with higher population density and intensive agriculture, ecological connectivity may already be reduced. This includes the Etsch valley from the Reschenpass until the river enters the Po-area in the South as well as the other main river system in the North, the Inn valley in the Grison (CH) and the Tyrol (A).
The second important area is located between the existing protected areas: the Swiss National Park and the National Park Stilfserjoch, the Biosphere Val Müstair, the Natural Parks Kaunergrat and Adamello /Adamello Brenta as well as parts of the South Tyrolean Natural Parks.

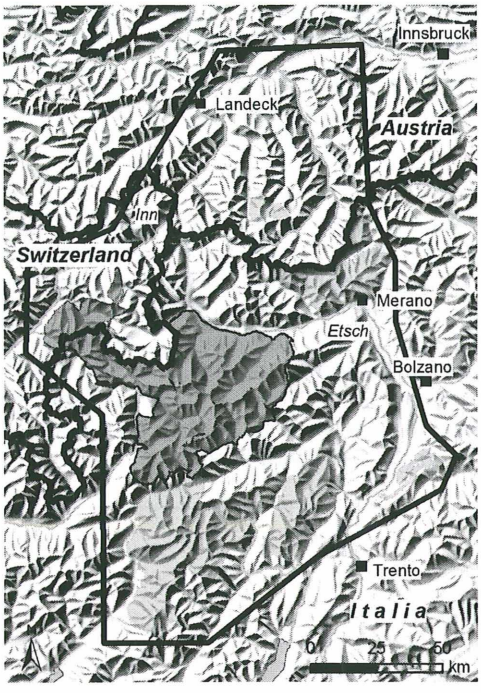

Figure 1: Pilot region Inn – Etsch

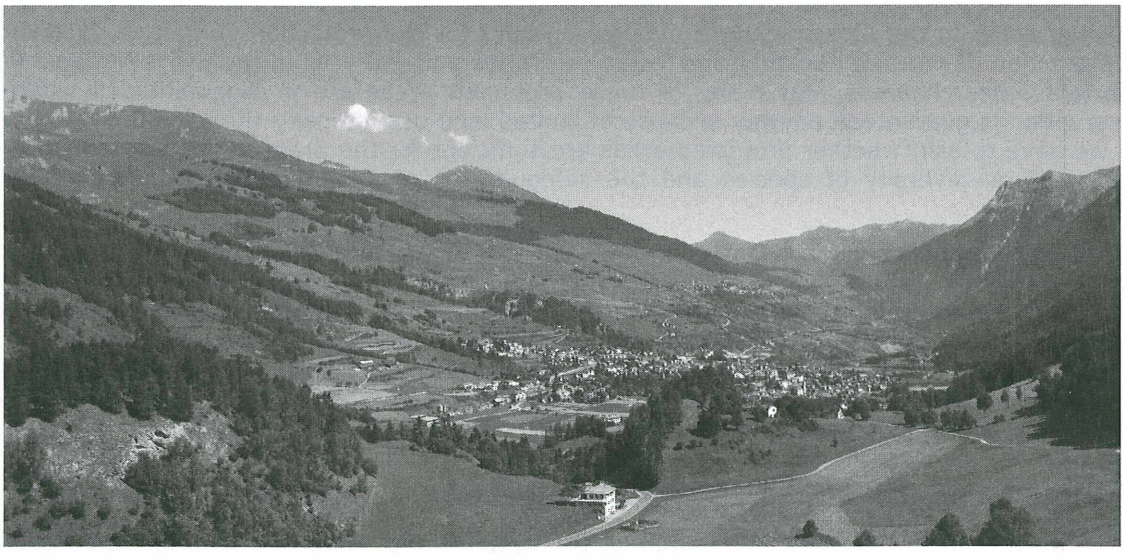

Figure 2: The Lower Engadine valley constitutes an important corridor between the Eastern and Western Alps or rather between the Swiss National Park and the large protected areas in Tyrol.

Expected results

At the end of the project, an overview on existing ecological network element, spatial and legal barriers and possible solutions for identified problems and the implementation of measures will be established. The outcome will be a map with a classified potential for areas for the successful realisation of ecological corridors. A main purpose will be improved connections between the large protected areas in the pilot region.

In addition existing measures in the pilot region are collected, georeferenced and assessed following their profit for the ecological connectivity. The pilot region has planned to submit or even to realize one new spatial connection and three (contractual) measures. A capacious goal, as the project is not fully supported by governmental funding like the other pilot regions.

In the last few months, 3 project outlines have been worked out, which are important for the pilot region Inn - Etsch and could have pilot character for measures in these sectors.

The first project should assure the spatial link (for example fish migration) between the recently restored Rom stream in the Mustair Valley (CH) and the planned restoration of the Etsch river realized within the framework of the River Space Programme in Glurns - Prad in South Tyrol (I).

The second project is located in the upper Vinschgau (I). The apple cultivation has a fragmentation effect on the dry meadow belt. A further development of fruit cultivation is aspired with promotion by the government. The spatial expansion will lead to gaps within the dry meadow beit. The project planned would like to reduce these effects and increase the awareness for the importance of ecological connectivity along valleys.

The third project is working on a habitat network along the Inn valley in the Engadine and the Tyrol, where dry meadows and dry pastures are common. However, they are suppressed by the intensive land use. In a project initialized in the Kauner Valley and in regional networking projects in the Engadine and the Val Mustair, missing linkage structures will be established or regenerated, for example through the conservation and maintenance of dry grassland and dry pasturage.

Discussion

The project ECONNECT is not the only dealing with connectivity issues. Everywhere and especially outside of protected areas, remarkable efforts have been made until today in order to conserve and advance the ecological diversity. One of these initiatives is the foundation Pro Terra Engiadina and the project INSCUNTER in the Lower Engadine. The project *INSCUNTER – tourism, forestry and agriculture, nature and landscape protection on a collective way* will enhance coordinated teamwork of the different policy sectors. In the foundation Pro Terra Engiadina, whose creation was a goal of INSCUNTER, the teamwork in the Lower Engadine continues. Econnect would like to pick up this exemplary course of action for other territories in the Alps. This shows exemplary, that ECONNECT's project team is searching for the collaboration with other regional initiatives and indicates the characteristics of the ecological connectivity. Moreover, Econnect tries to communicate good project approaches from one region in the Alps to another.

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