

# Ecological Corridors in the Bolzano Province. Challenges and Opportunities

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The Bolzano Province, or South Tyrol, is an Italian Province located at the north-eastern corner of central-eastern Alps. Due to the high level of anthropic presence and to the size, mainly, of ungulate population, animal-vehicle collisions (AVC) are around 700 cases per year, on all the main local, provincial and national roads. These kind of car accidents provoke a series of environmental, social, legal and economic consequences. The Province Administration is currently engaged in a detailed study on the provincial territory in order to detect the most probable wildlife pathways across the road network, identify the most important ecological corridors to be preserved and find, together with the local actors, the best ways to reduce and prevent AVC.

The Hunting and Fishing Office of the Autonomous Province of Bolzano is collecting, since 2012, AVC data on the entire provincial road network with the aim to identify the locations where AVC occur more frequently than expected (hotspots) and better define the further steps for the subsequent implementation of mitigation measures. Several initiatives have been undertaken in the Provincial territory to promote the local ecological network (i.e, revitalization of channels and ponds, underpasses, involvement of schools, etc), enhance the knowledge of local people and stakeholders on this matter and prevent/reduce AVC. One aspect to take into account is the contribution given by the media to the general knowledge of people, when highlighting an AVC case or the return of large carnivores, like bears and wolf. From a sociological point of view, the chosen words to describe the facts have a great importance in creating people's attitude towards these issues.

The Province of Bolzano cooperates with the Alpine Convention and with the Italian Network of Alpine Protected Areas, in order to promote the passage from the "ecological network" concept to the "Green infrastructure" one.

Currently, the Province administration have published a study on the empirical identification of ecological corridors and wildlife movements using the direct experience and knowledge of local hunters, hunting guards and wildlife managers. This work can allow the identification of the local contributing factors and the prioritization of hotspots in order to allocate effectively limited resources to a feasible number of identified hotspots and reduce the current degree of AVC in the South Tirolean road network

In order to promote the creation, conservation and renovation of primary importance landscape elements for the migration, and support the spatial distribution and genetic exchange of wild flora and fauna specie, the Province Administration is integrating the concept of ecological connectivity inside existing nature protection criteria, defining the priority zones for the creation of a provincial ecological network.