

From road project to road management: strategies and measures applied to reduce wildlife-vehicle collisions

Carme Rosell, MINUARTIA and Universitat de Barcelona, Spain

Corresponding author: crostell@minuartia.com

Although in recent years the number of traffic accidents in Catalunya Region has decreased the number of road collisions with wildlife has registered a great increase. The number of accidents involving wildlife and related information is registered by the road administration that each 5-years integrate the information compiled by traffic police, road maintenance patrols, insurance companies and other sources. The information is analyzed by means of GIS to identify UVC (Ungulate-Vehicle Collision) clusters, which are the stretch of roads where the accidents are concentrated. On this basis 36 priority management hot spots have been identified. The UVCs are characterized by descriptors such as speed limit, geographic and vegetation features, shape of the road etc. The measures applied to reduce the number of road casualties with wildlife in these hot spots are defined according to their features. In highways they are mainly the adaptation of wildlife crossings in existing crossing structures such as bridges, underpasses, culverts etc. and the installation of fences. In conventional roads several measures are under experimentation such as the cutting of grass and shrubs on road sides in order to increase visibility and the installation of road signs to raise attention of drivers. Moreover, the feasibility of three new measures is being assessed: 1. the installation of ADS (Animal Detection Systems), connected with alert signs for drivers, 2. The use of electrified road mats to avoid the entrance of ungulates using the access roads on highways and 3. the installation of a virtual fence, consisting in road side reflectors emitting sounds and lights, which can be regulated from remote. To do all this work it is essential that several stakeholders are involved. On the one hand, it is fundamental the cooperation between traffic, wildlife and road administrations. It is also important to increase the awareness of the drivers about the AVC problem, not only for leading them to adopt a more careful driving behavior, but also to gain the contribution of the public to provide data and information. On the other hand, hunters and wildlife managers can be involved directly in on-hand activities as well as for trying to reduce the densities of wild boars, which are in some areas extremely high. It is therefore important to increase communication with these groups, in order to start cooperation on some management issues and to train people that are most interested in being involved on a voluntary basis.