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Habitat fragmentation due to transportation infrastructure: the state of the art in Italy

Road ecology, state-of-the-art, national report, Italy

Poster

Habitat fragmentation is one significant factors for the decline of biodiversity in Europe. In Italy there are 6,532 km of motorways, 17,250 km of national roads, 151,570 km of regional and provincial roads and 670,000 km of local ones, and 19,472 km of railways. 277.1 km of roads are present (2.5% of available land) every 100 sq. km. The urbanisation that accompanies infrastructure increases fragmentation. An estimate has calculated an annual loss of over 15,000 animals in every Italian province, and for the avifauna the loss is 25 birds/km of road. The costs for biodiversity and those for the human society are big: in the years 1995-2000 there were 2083 accidents with animals, and in the decade 1995-2005 human fatalities were 150 and human injuries some hundreds. The mitigation of the infrastructure impacts on biodiversity is a new chapter for conservation in Italy, although some experiences have been carried out since the 1980s. In 2008 a first report on the state of the art in Italy was published. The experiences described are: general documents, studies on road mortality, data-bank on fauna accidents, ecological studies, awareness campaign, warning signs, reflectors, fences, fauna passages, complex programmes, local ecological networks and landscape defragmentation, verge management and habitat restoration, projects for amphibian protection, actions for bird protection, fauna exits from waterways and fish passages, compensation, technical documentation, conferences, regulation and administrative measures, participation at international initiatives, projects at national level. The main problems in the Italian context are the lack of: broad acknowledgement of the topic, specific laws and technical guidelines, coordination at scientific and technical level, systematic adoption of mitigation measures. At present, many activities and programmes at local level have been activated, but the situation is variegated and discontinuous, because it is based on the direct sensibility of specific technicians or administrators.