In the last forty years, continental vertebrates have suffered a sharp decline in Catalonia. Many autochthonous species are threatened due to habitat loss and fragmentation, environmental pollution, and interaction with invasive alien species. A hybridization between autochthonous species and exotic or domestic species is occurring. The number of exotic species has increased markedly, especially among fish, and the exotic species are beginning to exceed the autochthonous ones. Most of the species currently cataloged as exotic could become invaders if appropriate management measures are not taken. Although the ecological quality of continental waters has improved in recent years thanks to the implementation of wastewater treatment plants, other substances that cannot be eliminated (emerging compounds) are accumulating in the freshwaters and damaging aquatic fauna. Continental fish require an urgent taxonomic review. Amphibian populations are affected by the appearance of diseases caused by fungi and viruses, requiring the application of preventive health guidelines. Terrestrial vertebrates are affected by accidents in a road network not designed to be crossed by wildlife. Reptiles are also affected by a loss of open habitats, excessive reforestation and human persecution (snakes). Birds are most affected by land use modifications, extensive agriculture and hunting activity (still regulated by the old Spanish Hunting Law 1/1970, of April 4th). Birds and mammals require a more sustainable hunting model and an environmental management that respects species and habitats. There is an urgent need for the approval of a catalog of endangered species to allow the preparation and execution of the respective conservation plans, which are indispensable for the survival of continental vertebrate species.