IMPLICATION OF ANTROPOGENIC PRESSURES IN THE MORTALITY OF WILD ANIMALS: A 10 YEARS STUDY IN NORTHERN PORTUGAL

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INTRODUCTION

In the last decades, humans have induced changes on the natural ecosystems with a detrimental effect on the wild populations. There are numerous hazards for wild animals in urban centres: collision with infrastructures, collision with vehicles electrocution, traps, hunting, climate change, pollution, predation by domestic animals or introduction of exotic species.

The purpose of this study is to use the Partial Least Squares-Path Modelling (PLS-PM) method to investigate the impact of multiple and diverse anthropogenic pressures in the mortality of wild animals during a period of 10 years (2008-2017) in Northern Portugal.

RESULTS

MATERIAL AND METHODS

A retrospective study was performed using the medical records of wild animals admitted to Wildlife Recovery Centre of Gaia’s Biological Park (Avintes, Portugal) from 2008 to 2017. The data collected was classified by the following categories: class, order, species, age, localization.

Non-traumatic death causes comprise nutritional disorders, parasitism, poisoning, infectious diseases and non-trauma of unknown origin. Traumatic causes include drowning, predation, collision with vehicles, gun shot, collision with buildings and trauma of unknown origin. The data was organized in an Excel worksheet, we use SMART-PLS, where n represents the number of localities in North of Portugal and p the number of measured variables as causes of mortality and anthropogenic pressures. The anthropogenic pressures considered where: number of agricultural holdings, industry >250 employees, industry 10-250 employees, industry < 10 employees, non-residential buildings, residential buildings, human population density, density streets, total potency, number of wind farms, number of landfills, number water reservoirs, burned areas and annual rainfall.

DISCUSSION AND CONCLUSION

Based on the investigated database, it can be concluded that human activity has a significant impact on the mortality of wild animals in northern Portugal. These results confirm the outcomes of earlier studies related to the mortality of wild birds all around the globe where the predominant cause of death was associated with the direct or indirect action of humans.

Therefore, results of the presented may constitute a valuable tool to promote wild life conservation in Northern Portugal and to help educating people to value these species (in particular the predators) and to coexist with them.