Chapter 7
Vulnerability of Avifauna and Wildlife to Tourism Impacts

Joana Salgueiro
University of Aveiro, Portugal

José Guilherme Moreira Simões Vieira
University of Aveiro, Portugal

Luis R. Vieira
University of Porto, Portugal

Ulisses M. Azeiteiro
University of Aveiro, Portugal

Amadeu M. V. M. Soares
University of Aveiro, Portugal

Fernando Morgado
University of Aveiro, Portugal

ABSTRACT
The chapter is developed on a two approach basis. In the first, it analyzed a global contextualization of the vulnerability of avifauna and wildlife to tourism impacts, where a transversal diagnosis is made. The vulnerability of wildlife to disturbance is complex and several studies suggest that animals undergoing non-threatening, predictable, and frequent disturbances can become familiarized and opportunistic. The results of a case study about tourist activities impact on birds with high and urgent importance in an environmental protection area (Cananéia-Iguape, Brazil) are also analyzed. This study consisted of fieldwork through the methodology of fixed points. The objective was to identify ecological indicators most likely to be threatened by tourism, the identification of bird species and of tourism activities susceptible to human presence. The results obtained demonstrate the need for the creation of buffer zones and the introduction of information signs. These are tools that can be used to promote the coexistence of wildlife and tourism.

INTRODUCTION
The impacts of tourism are complex, and can be economic, socio-cultural and environmental, and dependent on the way the activity is planned, implemented, monitored and the characteristics of the area and visitors, since the impacts may present different levels of intensity and in more severe cases, to compromise the attractiveness of the site (Gossling, 1999, Souza, 2009). However, several studies suggest that animals subjected to non-threatening, predictable and frequent disturbances may become
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accustomed, opportunistic and condescending (Cole, 1993; Platteeuw & Henkens, 1997; Yorio et al., 2002; Gill, 2007). In the last decades, several investigations have shown that the traffic of visitors and other tourist activities can lead to the loss of biological diversity that consequently interferes with the ecological conditions essential to the proper functioning of ecosystem productivity, which are translated by the extinction of endemic species, rare or endangered species (Gossling, 1999; Sunlu, 2003; Souza, 2009; Cunha, 2010). Given the seasonal nature of tourism, it is crucial to determine which fauna species are most likely to be adversely affected by tourism activities, with avifauna being singled out for countless jobs as one of the most affected groups’ worldwide (Koskimies, 1989; Cole, 1993; Jacobson & Lopez, 1994; Sunlu, 2003; Filho & Medeiros, 2006).

The studies on the origin of the impacts are carried out from a detailed study of the environments, and the similarity between the amount of use and the impacts is not linear, depending on the type of use of the area, identification of the causes and later in the definition of strategies of conservation and organization (Takahashi, 1998). For the evaluation of the impacts, it is imperative to know the socio-economic context of the geographic area to be studied, and the studied area is qualified as a coastal area for leisure speculation, seasonal tourism and second residence (Zilioli, 2008). The impacts caused by the tourist activity consist of alterations triggered by gradual processes of tourist development in the receptor sites, being these associated to variables that produce them and that consequently give them different intensities and directions (Zilioli, 2008). Impacts in general can be considered positive or negative (Cruz, 2009). Positive impacts may include (i) enhancement of the natural environment (conservation and improvement of the environment), (ii) adoption of measures to preserve the environment (national parks), (iii) restoration / preservation of historic buildings / places, (iv) (introduction of environmental planning initiatives), (v) greater involvement of the population (ecological / environmental awareness) and vi) promotion of discovery and accessibility to unexplored regions. Negative impacts include (i) architecture and urbanism that are excessive and / or not integrated into the landscape, (ii) increased pollution (noise, air, water, soil), (iii) increased traffic congestion, (iv) (the competition between tourism and other economic activities, (v) destruction of the natural landscape, fauna and flora, and (vi) degradation of the landscape, historic sites and monuments.

TOURISM IMPACTS ON THE AVIFAUNA: A GLOBAL CONTEXTUALIZATION AND REVIEW

The global distribution of bird species richness is characterized by large-scale spatial heterogeneity and is found mostly in the Neotropical regions, particularly in South America, especially Colombia and Brazil, followed by Indonesia, Australia and Mexico (CBRO, 2009). The research carried out by Somveille et al. (2013) evidences the discrepancy between the northern and southern hemispheres in all the patterns investigated, proposing as hypotheses that can explain this asymmetry: the evolution of migration from the tropics to the northern hemisphere, climatic seasonality, among other factors, highlighting the need and importance of a global perspective for a better understanding of biodiversity patterns. Several studies report that birds are less common in places where human presence is common, and the behavior of any bird is altered by external influences, which is translated by the deviation from normal behavior in response to unexpected events defined as disturbance (Hockin et al., 1992, Smit & Visser, 1993, Platteeuw & Henkens, 1997, Cardoni, Favero & Isacch, 2008; Hvenegaard & Barbieri, 2010). The potential for anthropogenic disturbance of seabirds is increasing and three primary causes may be listed: tourism,

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