
Population monitoring and management

Data papers as a valuable reporting tool to improve the management and conservation of vertebrate populations in Europe

Illanas, Sonia¹; Fernández-López, Javier^{1,2}; Vicente Baños, Joaquín¹; Ruiz-Rodríguez, Carmen¹; López-Padilla, Sergio¹; Sebastián-Pardo, Mario¹; Preite, Ludovica^{1,3}; Gómez-Molina, Azahara¹; Acevedo, Pelayo¹; Blanco-Aguiar, José Antonio^{1*}

¹ Instituto de Investigación en Recursos Cinegéticos (IREC), Ciudad Real, Spain

² Universidad Complutense de Madrid (UCM), Madrid, Spain

³ European Food Safety Authority (EFSA), Parma, Italy

* joseantonio.blanco@uclm.es

DOI: 10.20315/evmc.2025.043

Biodiversity data are essential for wildlife management and conservation. The open access to standardized information on wildlife distribution and abundance, and more generally, biodiversity, favour the use of large databases to generate new research at large scales (but also locally) that otherwise would not be possible. In addition to improving the quality of available data, data papers are key to adequately document data collection protocols and subsequent processing, facilitating the recognition of authors and data owners while dealing with limitations on data privacy.

We review the publication trends of data papers on vertebrates in Europe; as a case study, we present the reporting of hunting statistics of big game species in Spain, describing the procedures used to generate more than 1 million records. The datasets provide long-term information (2013-2022) of the only-presence of eight wild ungulates and red fox derived from harvest data in a grid of 5x5 km for mainland Spain (21,836 cells). The collected data are presented on a yearly basis as well as grouped into two monitoring periods. The spatial resolution (as well as the selection of the specific grid used) and periods match the characteristics of obligatory data reporting on biodiversity by countries to the EU, as required by the Habitats Directive. This case illustrates the utility of data papers to publicly provide information that subsequently can easily contribute to data reporting by countries, facilitating the early mobilization of data and reducing workload by national administrations (which often struggle to transfer complete and up to date quality data). We conclude that the publication of data papers by the scientific community following EU standards for biodiversity data reporting are set to become essential in the frame of future schemes of biodiversity monitoring in Europe, such as the proposed EU Biodiversity Observation Coordination Centre (EBOCC). Finally, some proposals to encourage collaborative science and the reuse of biodiversity data are discussed.