**The formula we used to calculate was adapted from Certain et al. 2015.**



Where: **Collision (Co)** We used a study by Thaxter et al. (2017) that analysed the ecological traits and phylogenetic characteristics that make different taxonomic groups more sensitive to collision. They assigned a collision probability to most landbird species worldwide. We summarised this value at the family level (average value). Then, we categorised this value between 1 and 4 by using a Jenks break classification.

**Displacement (Di)** refers to reducing the habitat use of areas under the influence of wind energy facilities. Its importance and magnitude are difficult to quantify due to the scarcity of robust studies. We referred to Hötker (2017), who reviewed all the evidence from scientific and grey literature reporting displacement in birds in Europe, We assigned the following values to each species: 1 = Displacement never reported; 2 = Displacement reported in at least one study; 3 = Displacement more often reported, but differences not statistically significant; 4 = Displacement more often reported and differences statistically significant. The whole family received the value of the highest-scoring species included in that family. Exceptionally, some families were added according to other studies and expert knowledge

**Global Red List (GRL)** was assigned at the species level using the IUCN Red List categories (BirdLife International, 2022) as follows: 5 = Critically Endangered (CR); 4 = Endangered (EN); 3 = Vulnerable (VU); 2 = Near Threatened (NT); 1 = Least Concern (LC) or Data Deficient (DD).

**SPEC [Species of European conservation concern]** is an index created to assess the conservation status of species regularly occurring in Europe. These categories are: SPEC 1 = Species of global conservation concern (NT, VU, EN or CR); SPEC 2 = Species whose global population is concentrated in Europe, and which is classified as Regionally Extinct, NT, VU, EN or CR at European level (BirdLife International, 2022), or Declining, Depleted or Rare in Europe; SPEC 3 = As SPEC 2, but species whose global population is not concentrated in Europe (unless it is marginal in Europe, not decreasing and qualifies solely under Criterion D; IUCN, 2012); Non-SPECE = Species whose global population is concentrated in Europe, but whose European population status is considered secure; Non-SPEC = Species whose global population is not concentrated in Europe, and whose European population status is considered secure. We assigned the following values: SPEC 1 = 5, SPEC 2 = 4, SPEC 3 = 3, Non-SPECE = 2, and Non-SPEC = 1.

**Population (Pop)** present in each country as a percentage of the total European population. This value extracted from Burfield et al. (2023) captures the importance of the national population at the European scale. We assigned the following categories: % Pop ≥ 20% = 5; % Pop ≤ 20% - 9% = 4; % Pop ≤ 9% - 4% = 3; % Pop ≤ 4% - 1% = 2; % Pop ≤ 1% = 1.

**Annual adult survival (Su)**. Most affected by wind development tend to be K-selected. Adult mortality has large impacts on K-selected species’ populations. As a proxy we employed annual adult survival, which has been recently calculated for all bird species (Bird et al., 2020). Then we categorised this value between 1 and 4 by using a Jenks breaks classification.

**Identifying Priority Species:** There are many ways to identify priority species. You can apply an algorithm to identify a pool of species or set a threshold. After that, it is crucial to review all the species and decide if you can exclude some or include, for instance, important species that consider wind farm impact.

**References:**

* Bird, J.P., Martin, R., Akçakaya, H.R., Gilroy, J., Burfield, I.J., Garnett, S.T., Symes, A., Taylor, J., Şekercioğlu, Ç.H. and Butchart, S.H.M. (2020), Generation lengths of the world's birds and their implications for extinction risk. Conservation Biology, 34: 1252-1261. https://doi.org/10.1111/cobi.13486
* Burfield IJ, Rutherford CA, Fernando E, et al. Birds in Europe 4: the fourth assessment of Species of European Conservation Concern. Bird Conservation International. 2023;33:e66. doi:10.1017/S0959270923000187
* Certain, G., Jørgensen, L. L., Christel, I., Planque, B., and Bretagnolle, V. Mapping the vulnerability of animal community to pressure in marine systems: disentangling pressure types and integrating their impact from the individual to the community level. – ICES Journal of Marine Science, 72: 1470–1482.
* Hötker, H., Krone, O., & Nehls, G. (Eds.). (2017). Birds of Prey and Wind Farms. doi:10.1007/978-3-319-53402-2
* Thaxter CB et al. 2017 Bird and bat species’ global vulnerability to collision mortality at wind farms revealed through a trait-based assessment. Proc. R. Soc. B 284: 20170829. http://dx.doi.org/10.1098/rspb.2017.0829