

- Cardillo, M. et al. Human population density and extinction risk in the world's carnivores. PLoS Biol. 2, e197 (2004).
- McKee, J., Chambers, E. & Guseman, J. Human population density and growth validated as extinction threats to mammal and bird species. *Hum. Ecol.* 41, 773–778 (2013).
- Center for International Earth Science Information Network CIESIN -Columbia University, and Centro Internacional de Agricultura Tropical - CIAT. Gridded Population of the World, Version 3 (GPWv3): Population Density Grid http://sedac.ciesin.columbia.edu/data/set/gpw-v3-population-density (2005).
- 61. Green, R. E., Cornell, S. J., Scharlemann, J. P. W. & Balmford, A. Farming and the fate of wild nature. *Science* **307**, 550–555 (2005).
- Friedl, M. A. et al. MODIS Collection 5 global land cover: algorithm refinements and characterization of new datasets. Remote Sens. Environ. 114, 168–182 (2010).
- 63. Stephens, P. A. et al. Consistent response of bird populations to climate change on two continents. *Science* **352**, 84–87 (2016).
- Harris, I., Jones, P. D., Osborn, T. J. & Lister, D. H. Updated high-resolution grids of monthly climatic observations – the CRU TS3.10 dataset. *Int. J. Climatol.* 34, 623–642 (2014).
- Kleijn, D., Cherkaoui, I., Goedhart, P. W., van der Hout, J. & Lammertsma, D. Waterbirds increase more rapidly in Ramsar-designated wetlands than in unprotected wetlands. J. Appl. Ecol. 51, 289–298 (2014).

- Pavón-Jordán, D. et al. Climate-driven changes in winter abundance of a migratory waterbird in relation to EU protected areas. *Divers. Distrib.* 21, 571–582 (2015).
- UNEP-WCMC and IUCN. Protected Planet: The World Database on Protected Areas (WDPA) www.protectedplanet.net (2015).
- Mace, G. M. ét al. Quantification of extinction risk: IUCN's system for classifying threatened species. Conserv. Biol. 22, 1424–1442 (2008).
- Sanderson, F. J., Donald, P. F., Pain, D. J., Burfield, I. J. & van Bommel, F. P. J. Long-term population declines in Afro-Palearctic migrant birds. *Biol. Conserv.* 131, 93–105 (2006).
- Robbins, C. S., Sauer, J. R., Greenberg, R. S. & Droege, S. Population declines in North American birds that migrate to the neotropics. *Proc. Natl Acad. Sci. USA* 86, 7658–7662 (1989).
- Pocock, M. J. O. Can traits predict species' vulnerability? A test with farmland passerines in two continents. *Proc. R. Soc. Lond. Ser. B* 278, 1532–1538 (2011).
- Owens, I. P. F. & Bennett, P. M. Ecological basis of extinction risk in birds: habitat loss versus human persecution and introduced predators. *Proc. Natl Acad. Sci. USA* 97, 12144–12148 (2000).
- Wilman, H. et al. EltonTraits 1.0: species-level foraging attributes of the world's birds and mammals. Ecology 95, 2027 (2014).