# Lecture – Do rarity and global change drivers explain population change in the Anthropocene?

Gergana Daskalova, University of Edinburgh

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Non-random patterns of biodiversity change can be attributed to intrinsic factors, such as species traits, and/or extrinsic factors, such as intensity of human modifications to ecosystems. I am integrating open source databases of population time series, metrics of species rarity and gridded datasets of land use change and climate change to determine the predictive power of species traits and global change drivers to explain population change, a predecessor of biodiversity change. In particular, I am testing the following hypotheses: 1) Rare species are more susceptible to population change than common species, and 2) Areas of higher intensity of both land use change and climate change are experiencing more population change. So far, I have found that vertebrate population trends vary spatially, but the observed differences are not explained by rarity metrics (geographic range, population size and habitat specificity), suggesting that rare species do not experience more population change than common species.
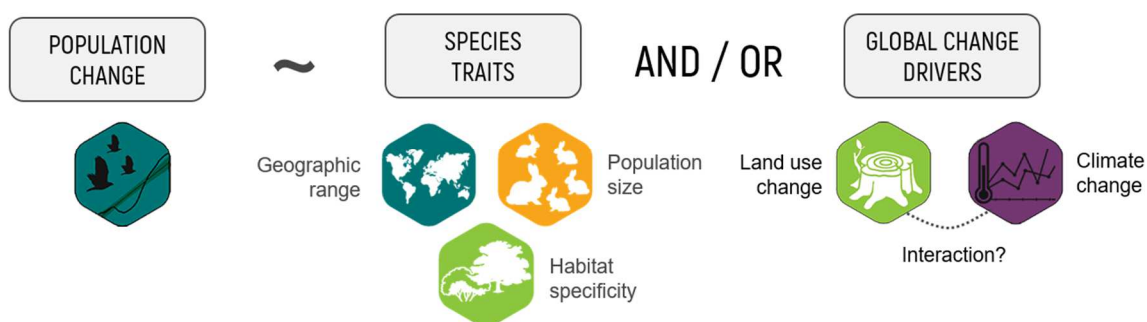
Gergana Daskalova is interested in biodiversity change, global change drivers, conservation and agroecology. For her PhD research, she is conducting an attribution analysis of biodiversity change on local and global scales to determine if land use change explains biodiversity trends https://gndaskalova.com/