



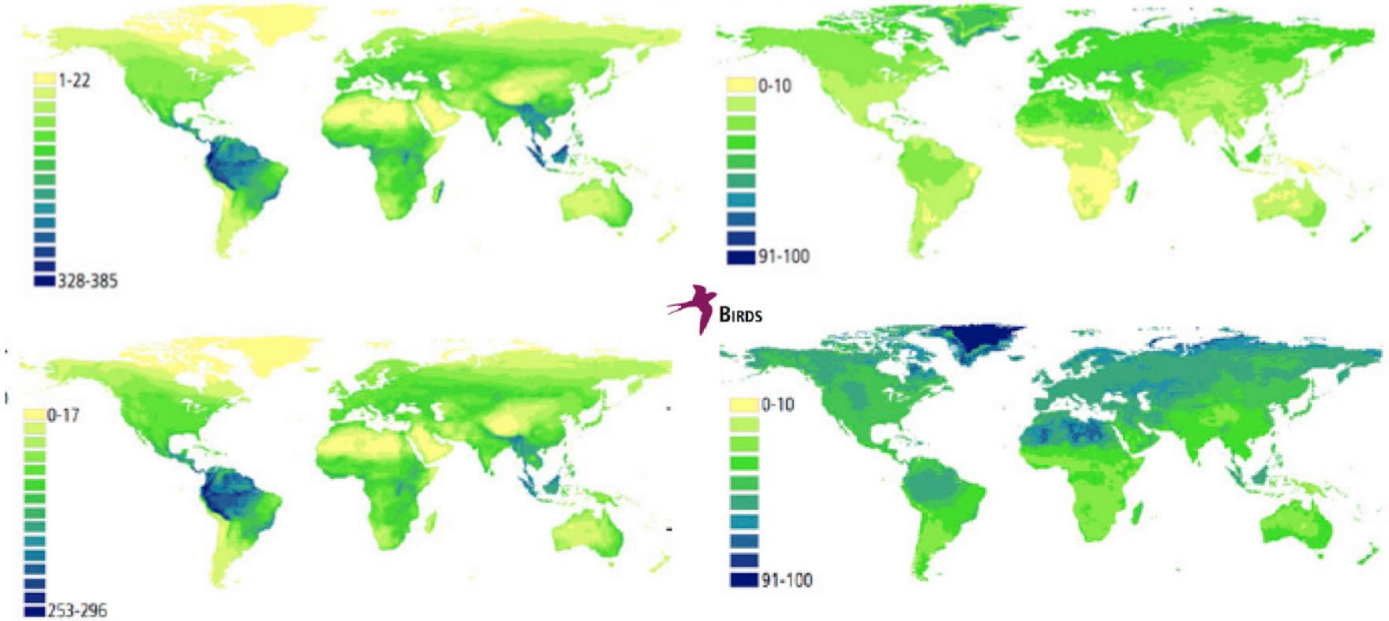
Vertebrate Declines and the Sixth Mass Extinction

Absolute number of decreasing species

Percentage of decreasing species

LAND VERTEBRATES

BIRDS



Caption: Global distribution of species declines over the past 115 years (1900–2015). Declines are measured as the number and percentage of species that declined per 10,000 km² area. The left panels show the absolute number of species whose populations have declined in each region; the right panels show the percentage of species that declined in each region. The top panels include all land vertebrates (amphibians, birds, reptiles, and mammals), whereas the bottom panels represent only bird species.

BACKGROUND INFORMATION

Extinctions are a regular occurrence over the course of geologic time. But catastrophic events in which many species go extinct over brief periods of time are rare. When our planet loses more than 70% of its species within a relatively short geological time interval, scientists refer to these cataclysmic losses as mass extinctions. In the past 540 million years alone, scientists estimate that there have been at least five such mass extinction events. Many experts warn that a sixth mass extinction may be on our doorstep, triggered by human activities and a rapidly growing human population that has destroyed habitats and ecosystems around the world. Today, we are seeing massively accelerated extinction rates that exceed normal extinction rates by a factor of 12. Experts estimate that at the current rate, 75% of our species will disappear in less than 200 years. Species extinctions are nearly always preceded by high regional population declines. In this study, researchers measured species population declines on a global scale that may contribute to the sixth mass extinction. The figure shows the results of a study examining population trends for 27,600 land vertebrate species from 1900 to 2015. The researchers found that 32% of these species, many of which are mammals and birds, are currently in decline. The researchers argue that aggressive species and habitat conservation within the next couple of decades are the only ways to avoid a catastrophic sixth mass extinction.