Traditional approaches to studying extinction risks don't always paint a full picture. This study uses a wide variety of data to offer a new perspective on the global extinction crisis.

SUMMARY BY: JOSH O'RIORDAN | ORIGINAL STUDY BY: FINN, C., GRATTAROLA, F., & PINCHEIRA-DONOSO, D. (2023) | PUBLISHED: JANUARY 10, 2024

Have you ever heard of a species being classified as "endangered," of "least concern," "vulnerable," or "extinct?" These categories come from the International Union for the Conservation of Nature (IUCN)'s Red List, which is currently the most common method that governments and researchers use to measure wild animal populations.

The IUCN Red List classifies a species using factors such as population size and how widespread the species is. The thing is, these factors only tell us how threatened a species is *right now*. **A species whose population is quickly declining might be classified as non-threatened if the population is still large enough. However, a currently "non-threatened" species nose-diving towards extinction may need more urgent help than a "threatened" but slowly declining species.**

Additionally, many species haven't been looked at yet by the IUCN and are given a "data-deficient" or "non-assessed" label. This means there is little to no information on what conservation efforts are needed, if any. Finally, the authors point out that many studies on extinction threats tend to only focus on the species experiencing declines, overlooking those that remain stable or increase.

This study presents a more in-depth analysis of wild animal population dynamics across the globe. **Researchers combined the IUCN Red List labels with population trends, habitat type, and geographical distribution for a better view of the situation.** A species that goes extinct will, of course, decline in population over time. This means that population trends are a useful tool for predicting a species' future and assessing how threatened they are.

The researchers found that **48% of animal species globally are declining in population. Similarly, 49% of animal species remain stable. Only 3% of animal species showed population increases.** These numbers are averages, which is why they don't add up to 100%. Because there are so many unassessed and data-deficient species, it's possible that the true percentage of declining and stable species is different — specifically, the authors estimate a range of 23-76% for both categories.

The authors also found that the majority of mammal, bird, amphibian, reptile, fish, and insect species are declining or stable, while hardly any are increasing. For mammals, birds, amphibians, and insects, most species were found to be decreasing in population. **Unfortunately, 33% of species that the IUCN classified as non-threatened are actually in decline.** If these

trends don't change, this would mean an additional 2,136 species eventually being classified as threatened.

Population Trends Across Species By Taxonomic Group

Legend: Amphibians, Birds, Fishes, Insects, Mammals, Reptiles
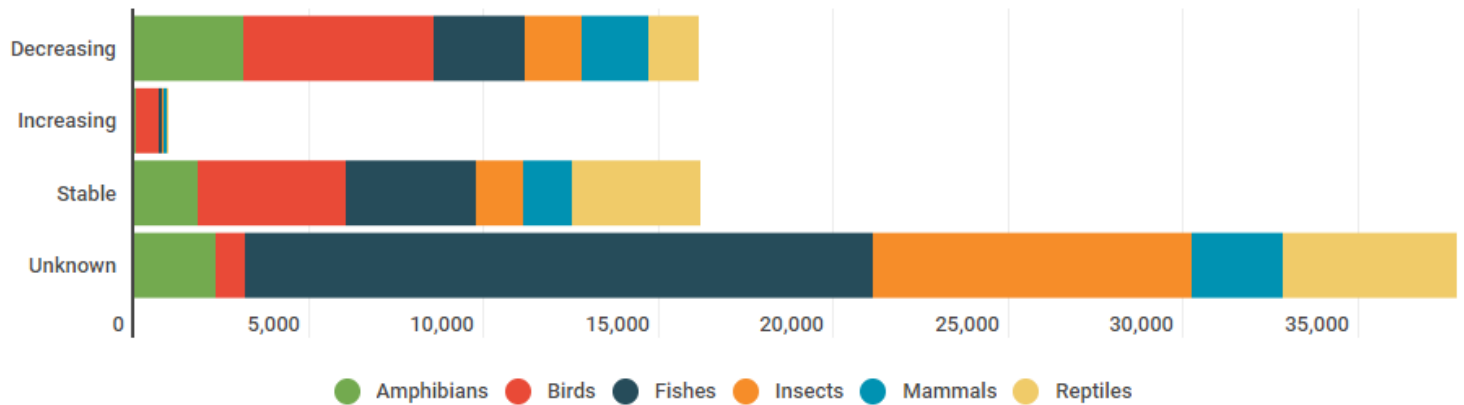
Source: IUCN Red List / Finn, Grattarola, & Pincheira-Donoso (2023)

Globally, most declining, or stable animal populations are concentrated around some of the lowest-income countries in South America, Africa, and Southeast Asia. This might be a result of limited conservation funding, but the researchers also point out that these countries receive significant conservation funds from richer countries. So, it might be that the data is biased — in other words, there might be more information about these regions, making it seem like they have higher rates of decline.

The authors argue that the current biodiversity crisis is a global problem that needs immediate attention. **They emphasize the need for countries to work together to form policies and other mitigation efforts to protect species that aren't classified as threatened yet — this could potentially prevent over 2,000 species from becoming endangered.** The results can also inform where conservation efforts are needed most in terms of geographical location and animal type.

External Link:

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