

# Conservation scientists asking wrong questions on climate change impacts on wildlife

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Scientists studying the potential effects of climate change on the world's animal and plant species are focusing on the wrong factors, according to a new paper by a research team from the Wildlife Conservation Society, University of Queensland, and other organizations. The authors claim that most of the conservation science is missing the point when it comes to climate change.

While the majority of [climate change](#) scientists focus on the "direct" threats of changing temperatures and precipitation after 2031, far fewer researchers are studying how short-term human adaptation responses to seasonal changes and [extreme weather events](#) may threaten the survival of wildlife and ecosystems much sooner. These indirect effects are far more likely to cause extinctions, especially in the near term.

The review appears online in the international journal *Diversity and Distributions*.

"A review of the literature exploring the effects of climate change on biodiversity has revealed a gap in what may be the main challenge to the world's fauna and flora," said the senior author Dr. James Watson, Climate Change Program Director and a Principle Research Fellow at the University of Queensland.

The research team conducted a review of all available literature

published over the past twelve years on the impacts of climate change on species and ecosystems. In their review, the authors classified studies examining the projected changes in temperature and precipitation as "direct threat" research. Direct threats also included changes such as coral bleaching, shifting animal and plant life cycles and distributions, and habitat loss from sea level rise. Human responses to climate change—including everything from shifting agriculture patterns, the construction of sea walls to protect cities from sea level rise, changes in human fishing intensity, diversion of water, and other factors—were classified as "indirect threats."

The authors found that the vast majority of studies (approximately 89 percent of the research included in the review) focused exclusively on the direct impacts of climate change. Only 11 percent included both direct and indirect threats, and the authors found no studies focusing only on indirect threats.

"The reactions of human communities to these changes should be treated as a top priority by the research community," said Dr. Watson. "The short-term, indirect threats are not merely 'bumps in the road'—they are serious problems that require a greater analysis of social, economic, and political issues stemming from changes already occurring."

Provided by Wildlife Conservation Society

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