

Tracking the effects of global change on the future of Earth's biodiversity

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Biodiversity, or the variety of life found in a particular habitat, responds to changing environmental forces such as habitat destruction or climate change, but the responses may not be noticeable until long after the forces first exerted their effects.

While current concepts addressing such lagged biodiversity responses are limited to single drivers affecting a few biodiversity components such as species numbers or [population size](#), new research indicates that there is an interacting and cumulative nature to time lag phenomena.

"The failure to give adequate consideration to widespread time lags often masks the full extent of biodiversity losses that have already been triggered by the accelerating deterioration of the environment," said Dr. Franz Essl, lead author of the *Diversity and Distributions* article.

"This is worrisome, as effects that are particularly detrimental for human livelihoods—such as changes in the provision of ecosystem services—may emerge with the most pronounced delay."

More information: Essl, F., Dullinger, S., Rabitsch, W., Hulme, P. E., Pyšek, P., Wilson, J. R. U., Richardson, D. M. (2015), Historical legacies accumulate to shape future biodiversity in an era of rapid global change. *Diversity and Distributions*. [DOI: 10.1111/ddi.12312](https://doi.org/10.1111/ddi.12312)

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