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Restoration: 'Garden of Eden' unrealistic
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Biodiversity: ‘Eden’ baseline is unrealistic

We consider the proposed use of a ‘pre-degradation’ state as a reference baseline for damaged ecosystems to be unrealistic (J. Kotiaho *et al. Nature* **532**, 37; 2016). Instead of this ‘Garden of Eden’ baseline, we argue that restoration should respond to current drivers of biodiversity loss and decline in ecosystem function and services.

A baseline that prescribes a list of pre-degradation species is a good place to start, but it does not take into account the dynamism of ecological communities, in which species are constantly migrating, evolving and going extinct. Moreover, native species can be difficult to propagate and invasive species may be so prevalent that they are impossibly costly to remove. Present-day climate change may necessitate the use of non-local genotypes and even non-local native species to improve restoration outcomes (see M. F. Breed *et al. Conserv. Genet.* **14**, 1–10; 2013 and R. J. Hobbs *Rest. Ecol.* **24**, 153–158; 2016).

We suggest that restoration efforts should focus on a trajectory towards functional, self-sustaining ecosystems that are resilient to climate change and provide measurable ecosystem-service outcomes — as emphasized by the Intergovernmental Science- Policy Platform on Biodiversity and Ecosystem Services (IPBES). **Martin F. Breed, Andrew J. Lowe** *University of Adelaide, Australia.* **Peter E. Mortimer** *Kunming Institute of Botany; and World Agroforestry Centre, Kunming, China.*
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