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Reviews

Biodiversity, ecosystem function, and resilience: ten guiding principles for commodity production landscapes

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Biodiversity conservation in forestry and agricultural landscapes is important because (1) reserves alone will not protect biodiversity; (2) commodity production relies on vital services provided by biodiversity; and (3) biodiversity enhances resilience, or a system's capacity to recover from external pressures such as droughts or management mistakes. We suggest ten guiding principles to help maintain biodiversity, ecosystem function, and resilience in production landscapes. Landscapes should include structurally characteristic patches of native vegetation, corridors and stepping stones between them, a structurally complex matrix, and buffers around sensitive areas. Management should maintain a diversity of species within and across functional groups. Highly focused management actions may be required to maintain keystone species and threatened species, and to control invasive species. These guiding principles provide a scientifically defensible starting point for the integration of conservation and production, which is urgently required from both an ecological and a long-term economic perspective.

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