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# Assessing the impacts of land use change on China's biodiversity

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## Abstract

Land use change is the main direct driver causing biodiversity loss worldwide. China is one of the 12 mega-biodiversity countries in the world. China also one of the countries that experienced the most rapid land use change globally due to the huge social and economic development in nearly 30 years. The accelerated land use change brings threats to China's biodiversity and increase pressures on species and ecosystem. In this study, the coupling GLOBIO3 and CLUE model was used to identify the impacts of land use changes on current and future China's biodiversity. The mean abundance of original species relative to their abundance in undisturbed ecosystems (MSA) was used as the indicator for biodiversity change. Besides, four land use scenarios, which were baseline scenario (1990-2000 trends), baseline scenario (2000-2008 trends), policy scenario, conservation scenario, were further developed to projection of China's future biodiversity change in 2050. Our results showed that the China's MSA value currently had significant spatial variation and presented different trend under four scenarios. Some suggestions were put forward to reduce the land use change on China's biodiversity.

**Keywords:** Land use change, Biodiversity, MSA value, China

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