

Conserving nature and dollars: Delivering cost-effective biodiversity protection

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A more flexible approach to the expansion of protected area systems could ultimately protect much more biodiversity for the same budget according to a new paper in the scientific journal *Nature*. Lead author Dr Richard Fuller of the CSIRO Climate Adaptation Flagship and The University of Queensland said that without spending extra money "we could dramatically improve the performance of protected area systems by replacing a small number of poor performing areas with more cost-effective ones".

Protected areas are one of the most important tools in modern [nature conservation](#), with over 100,000 sites covering about 12 per cent of the land and territorial waters of countries worldwide.

The paper examines how effectively different sites can conserve a range of vegetation types.

"Replacing the least cost-effective 1 per cent of Australia's 6990 strictly [protected areas](#) could more than double the number of vegetation types that have 15 per cent or more of their original extent protected," Dr Fuller said.

"We can do this if we reverse the protection status of the least cost-effective sites and use the resulting capital to establish and manage new protected areas."

The authors of the paper, including colleagues from CSIRO and The

University of Queensland, acknowledge that community values would need to be incorporated when considering changes to the protected status of selected reserves. However, the benefits of reducing management costs in low performing areas are also worth exploring.

By being informed by this analysis method, future investments in protected areas could better protect biodiversity from threats such as climate change.

"As the rate of investment in new protected areas has slowed globally in recent years ensuring the best places are protected is more important than ever," Dr Fuller said.

The Climate Adaptation Flagship is enabling Australia to adapt more effectively to the impacts of climate change and variability. This includes developing adaptation options to protect Australia's marine and terrestrial species, ecosystems and the services they provide.

Provided by CSIRO

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