

Encouraging biodiversity conservation by north Australian pastoralists through a mix of financial incentives and legal liability provisions

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Tropical savannas cover around one quarter of the Australian continent and span across three states. Savanna landscapes support an abundance of endemic plants and animals, which are adapted to the harsh climatic conditions. The ecological condition of Australia's tropical savannas has widely declined since European settlement, in large part due to cattle grazing. Tropical savannas endure a combination of relative under-representation in the formal conservation estate and low participation of cattle producers in on-farm conservation.

Cattle grazing is the predominant land use of Australia's tropical savannas. Cattle grazing enterprises tend to be large. They can be $>10,000 \text{ km}^2$ in size and carry tens of thousands head of cattle. Nowhere is conservation action more critical than on farms that cover vast tracks of land with high ecosystem values because one farmer's land use decisions can have implications for biodiversity conditions at the regional scale.

This paper reports the results of empirical research conducted with north Australian beef producers ('pastoralists'). The first line of investigation explored what pastoralists thought were 'reasonable and practical' conservation measures to adopt under their environmental duty of care, which provided a legal liability provision. The second line of investigation used discrete choice modeling to estimate the financial incentives and contract conditions that would be required to entice pastoralists to participate in voluntary biodiversity conservation.

On the basis of empirical evidence the paper proposes that a combination of financial incentives (voluntary biodiversity conservation contracts), statutory provisions (environmental duty of care legislation) and land administrative rules (lease renewal conditions) can ensure that private landholders contribute sufficiently to safeguard the biodiversity of Australia's tropical savannas.