

*Privately-owned protected areas contribute to the resilience of protected area network*

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The discourse around protected areas has traditionally positioned them outside of society, as areas where nature may thrive free from anthropogenic influence. In reality, however, all protected areas (even wilderness areas far away from people) are social-ecological systems that exist because society has decided that they should exist as protected areas. Thus, their ability to retain identities of protected areas also ultimately depends on society.

It is thought that the resilience of protected areas (i.e. how likely they are to remain functional as protected areas) is tightly linked to how diverse and connected they are. Institutional diversity — the variety of ownership and management institutions — may be particularly important for protected areas. This is because managerial responses to environmental change depend on their legal basis, ability to make and enforce rules, and socio-political acceptance and endorsement.

Given a long history of official proclamation of both state-owned and privately-owned protected areas, South Africa's protected area network offers a particularly opportune case to investigate the importance of institutional diversity for protected area resilience.

In this paper we assessed the relative contributions of state-owned and privately-owned protected areas to South Africa's formal protected area estate, and its contributions to the connectivity of the estate. We report that 25.58% of the total formal estate comprise privately-owned formally protected land, and that these private areas are the dominant protected area types in under-represented and threatened habitats. Private nature reserves also had the largest overall effect on connectivity within the national network, and were more strategically positioned to connect other types of protected areas than would be expected by chance from their extent and abundance.

Thus, our paper makes the case that

privately-owned protected areas enhance the resilience of the national protected area network. Our results highlight the valuable role of institutional diversity in building resilient habitat networks for biodiversity conservation.



*Two lions rest near a fence in the Kariega private nature reserve, Eastern Cape, South Africa (Photo credit: Cynthia Annett).*

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