

# Crossing Boundaries to Link Landscapes

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## Connectivity Conservation in Australia

Initiatives that aim to conserve biodiversity and enhance ecological connectivity at a landscape scale are gaining prominence.

The large scale of these initiatives fundamentally alters the nature of conservation.

Motivated by ecological imperatives, these initiatives often claim to connect people, not just landscapes.

Despite this, social and institutional connectivity receives little attention in a research agenda dominated by ecology.



**Broadscale clearing of native vegetation** - the single biggest threat to biodiversity in Australia - creates highly fragmented landscapes.

Recently, biodiversity initiatives have begun focusing on connectivity corridors, aiming to re-connect and restore patches of habitat. Such initiatives shift the focus of conservation from preserving sites and species to managing large landscapes and ecological processes.

Notwithstanding their ecological focus, connectivity corridors are also 'people projects' because individuals and agencies must change existing practices to facilitate connectivity.

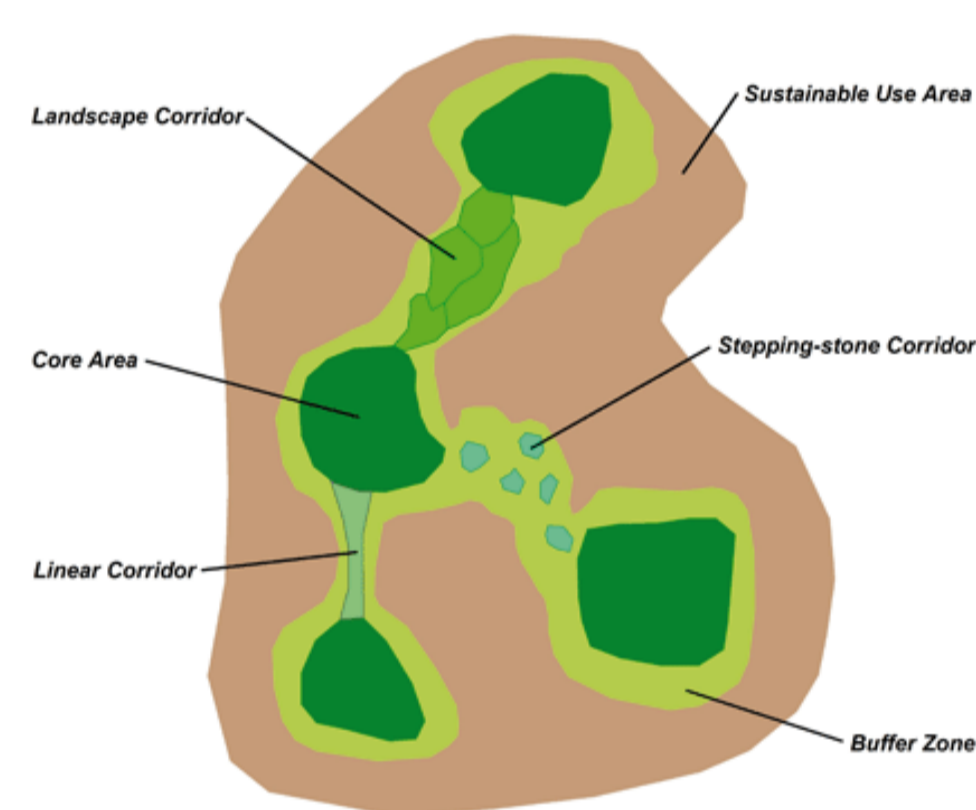
Project Websites

Gondwanalink  
<http://www.gondwanalink.org/>  
Great Eastern Ranges Initiative  
<http://www.environment.nsw.gov.au/ger/>  
Kosciuszko to Coast  
<http://www.k2c.org.au/>  
Yellowstone to Yukon  
<http://www.y2y.net/>  
Pan European Ecological Network  
<http://www.econet.org/eeconet/index.html>

Poster Layout: Clive Hilliker  
The Australian National University

## Connectivity Conservation

<http://www.aab.org/Projects/core-environment-program/why.asp>



Connectivity corridors comprise areas of high-quality habitat linked through corridors and 'stepping-stones'; these corridors and stepping stones allow species to migrate through the region. Land use in the surrounding area should, ideally, be compatible with the conservation values of the corridor.<sup>1</sup>



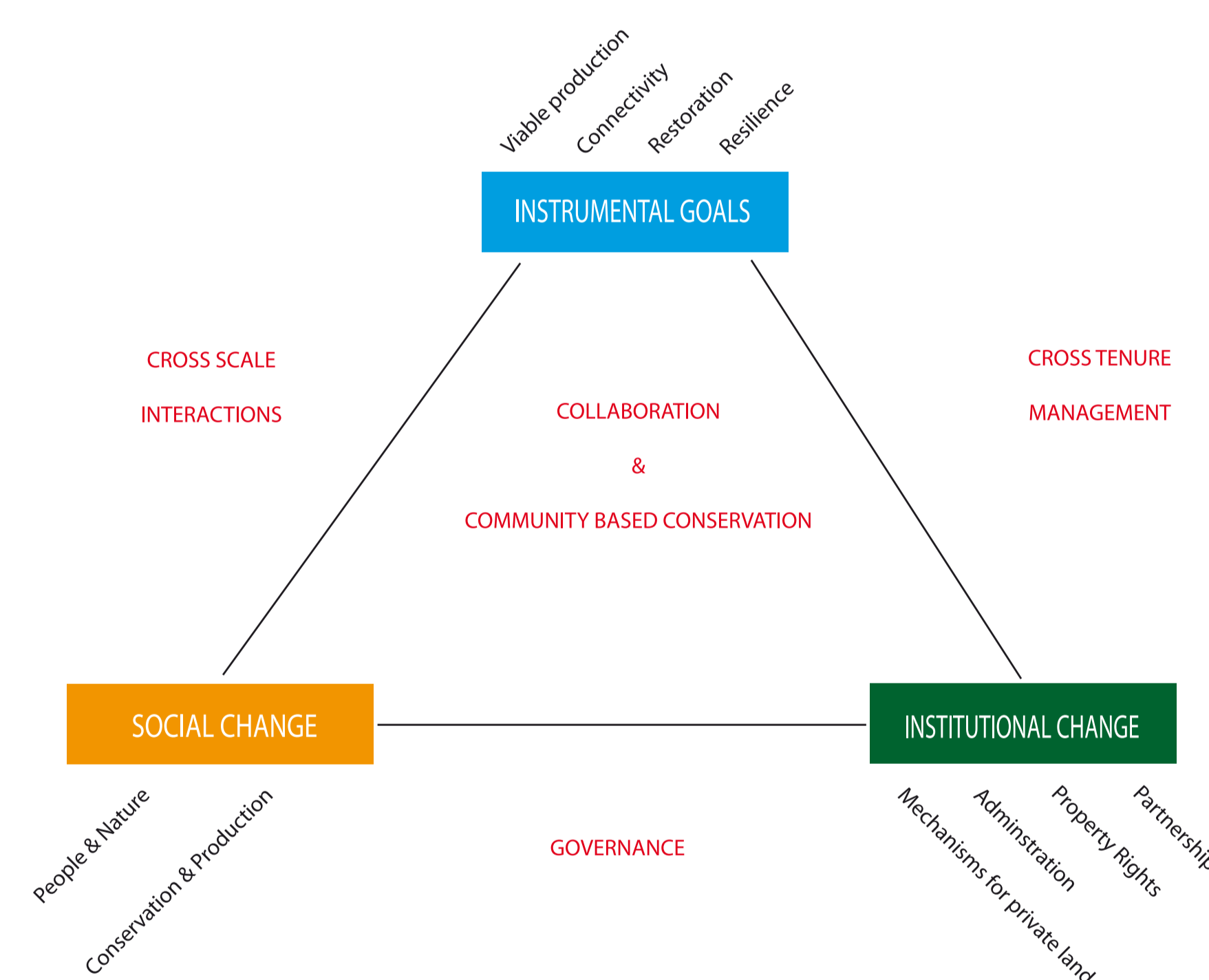
Scattered trees, a common feature across agricultural landscapes in Australia, provide important stepping-stone habitat in connectivity corridors

## Social and Institutional Connectivity

Without people, working together, landscape scale projects cannot succeed.<sup>2</sup> Thus ecological connectivity requires social and institutional connectivity across the various scales, contexts and land tenures of the corridors.

Ecological, social and institutional connectivity cannot be addressed in isolation; rather, they are necessary and complementary components of the bigger picture.

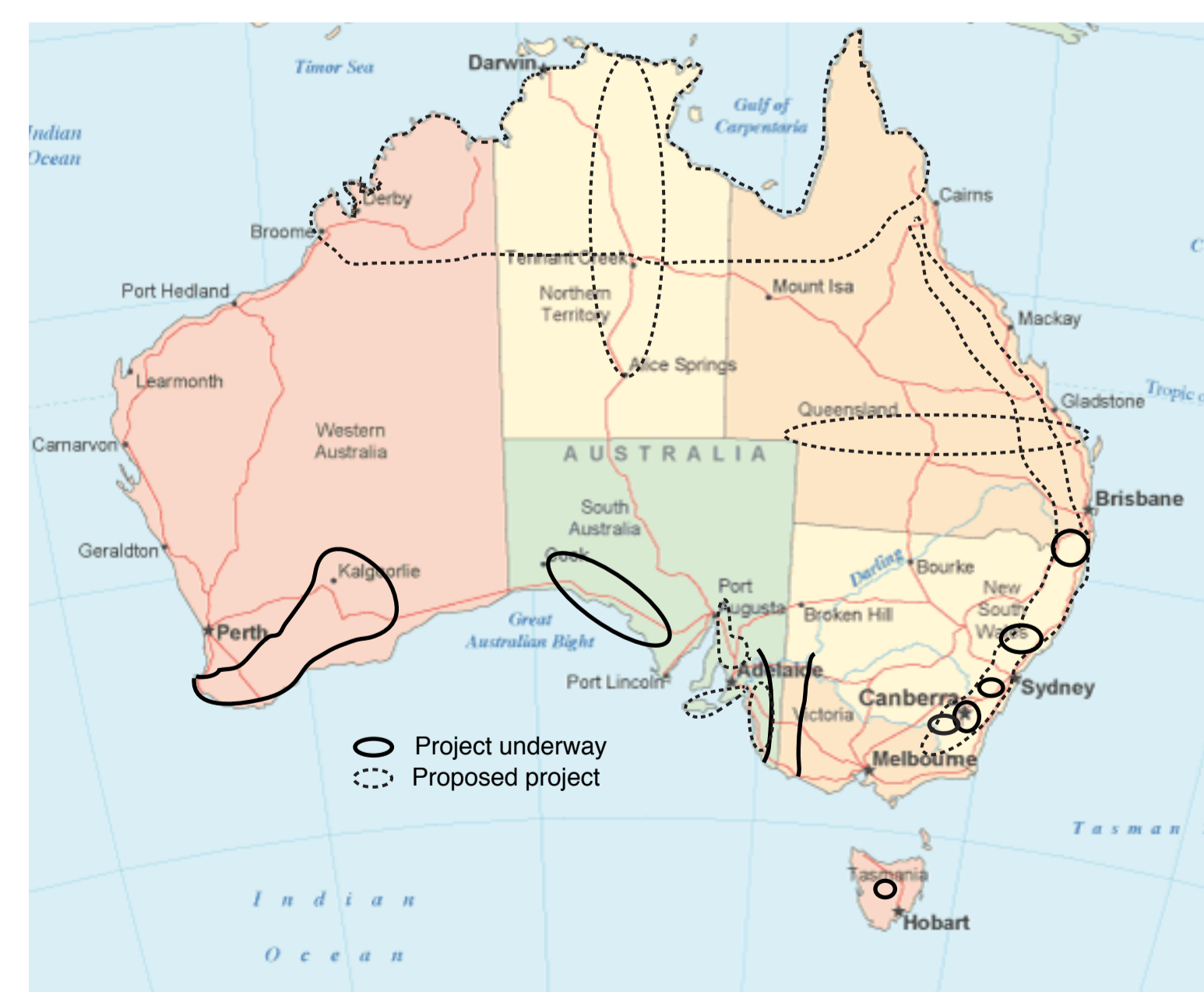
A conceptual framework can facilitate thinking about the components of connectivity conservation.



In this conceptual framework, instrumental goals are the desired changes in landscape that will contribute to ecological connectivity. Such changes will improve resilience, conserve biodiversity and create viable production landscapes: instrumental goals will be achieved through changed practice (by landholders, NGOs and government agencies) on the ground. Necessary institutional changes to enable changed practices include public-private partnerships for conservation, consideration of property rights and land tenure arrangements, administrative structures for managing and working at a landscape scale, and incentive mechanisms for conservation on private land.

Current thinking in mainstream Australia does not conceptualise people as part of landscapes, or value the integration of conservation and production at a landscape scale. Collaboration and community-based conservation are therefore placed at the centre of the conceptual framework. Around the edge of the framework are three hypothetical pillars of a successful, large-scale, collaborative initiative: good governance, communication across spatial and geographical scales, and integrated conservation across multiple land tenures and jurisdictions.

## Connectivity in Australia



Connectivity initiatives have been driven by alliances of NGOs, government agencies and community organisations.

Ten initiatives (some in progress, some proposed) aim to link landscapes over thousands of kilometres; twenty more initiatives currently work on a relatively smaller scale.

**Connectivity initiatives are underpinned by**

- An interconnected system of properties managed for conservation
- Coordinated efforts to achieve a single goal
- Collaboration between landholders, agencies and NGOs
- Land acquisition and restoration
- Reserves on private land

## Future Research Questions

- What are appropriate models of collaboration to work across large and diverse socio-ecological landscapes?
- How do social and institutional challenges change when shifting management from a small to large scale?
- How to create an interdisciplinary endeavour out of an ecologically motivated agenda?

Landscape-scale connectivity initiatives present an opportunity for integrated land management that works to protect and restore ecological processes. For such initiatives to be successful a paradigm shift is required in thinking about management of the Australian landscape.

Connectivity conservation is not just about landscape ecology and connecting habitats; connectivity conservation is also about connecting individuals and agencies. Research is therefore required to understand the social and institutional relationships that will enable individuals and agencies to collaborate across vast and diverse landscapes.

### References

- <sup>1</sup> Crooks, K., & Sanjayan, M. (2006). Connectivity conservation: maintaining connections for nature. In K. Crooks & M. Sanjayan (Eds.), *Connectivity Conservation* (pp. 1-21). Cambridge: Cambridge University Press.
- <sup>2</sup> Lovett, S., Lambert, J., Williams, J., & Price, P. (2008). *Restoring landscapes with confidence - an evaluation of the science, the methods and their on-ground application. Final Report.* Canberra: Land and Water Australia.