

Developing online tools for increased landholder collaboration in landscape scale conservation and production

Graciela Metternicht^{1*}, Alex Baumber², Peter Ampt³, Rebecca Cross³, Emily Berry¹

¹ School of Biological, Earth and Environmental Sciences, PANGEA Research Centre, University of New South Wales

² Faculty of Transdisciplinary Innovation, University of Technology Sydney

³ Sydney Institute of Agriculture, School of Life and Environmental Sciences, University of Sydney



In a nutshell:

This research is part of a two-year project that aims to develop models and tools for incentivising on-ground collaboration on cross-property conservation and production activities. The focus of the study is the NSW Central Tablelands and Central West, particularly the areas around Mudgee-Rylstone and Cowra-Boorowa. The project involves:

- Social analysis to identify types of activities and organisational structures that foster collaboration
- Spatial analysis to determine how these activities could be linked strategically to deliver landscape-scale impacts outcomes
- **The development of an online GIS-based tool for use by landholders and other stakeholders in identifying opportunities for collaboration.**



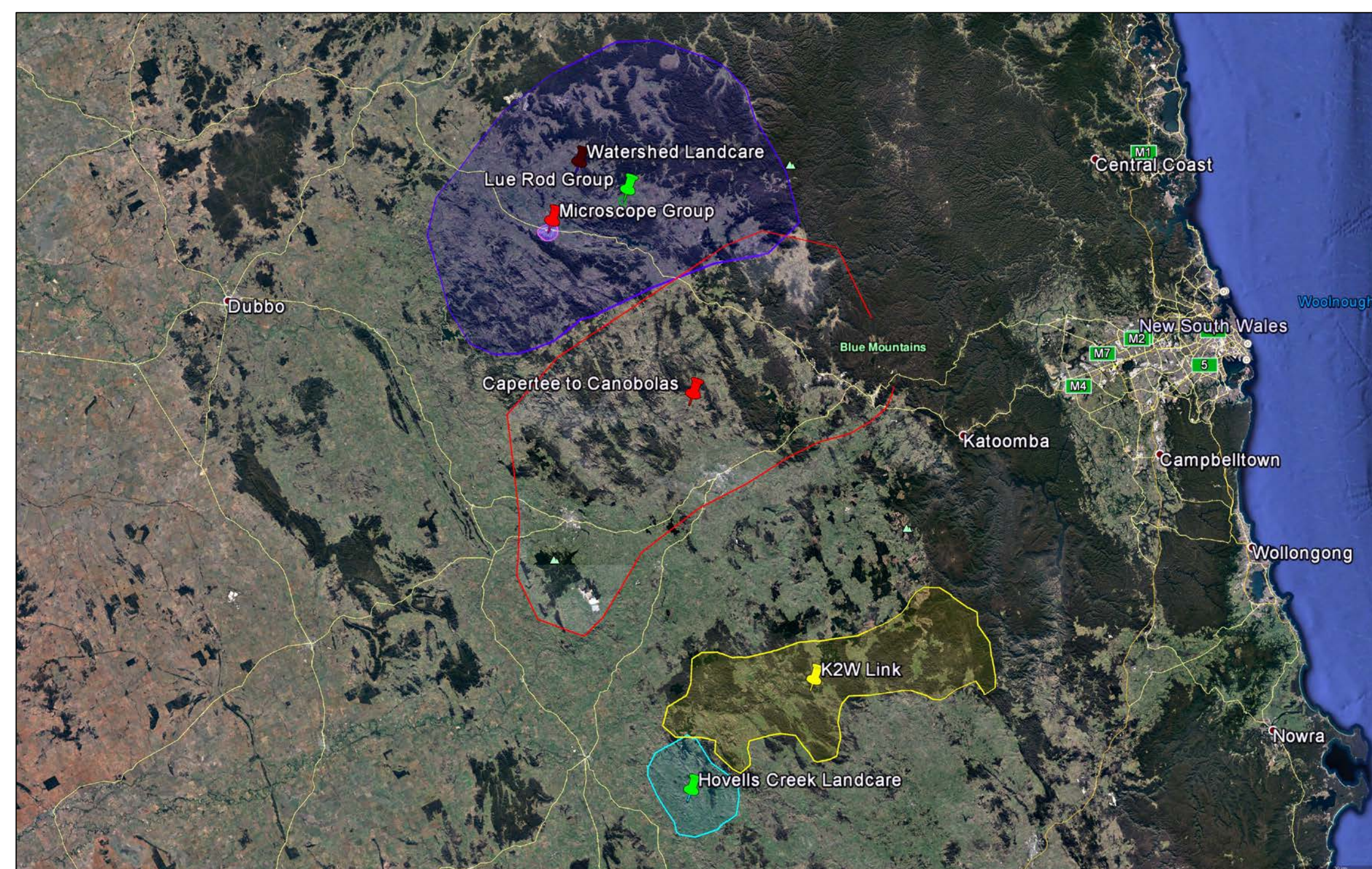
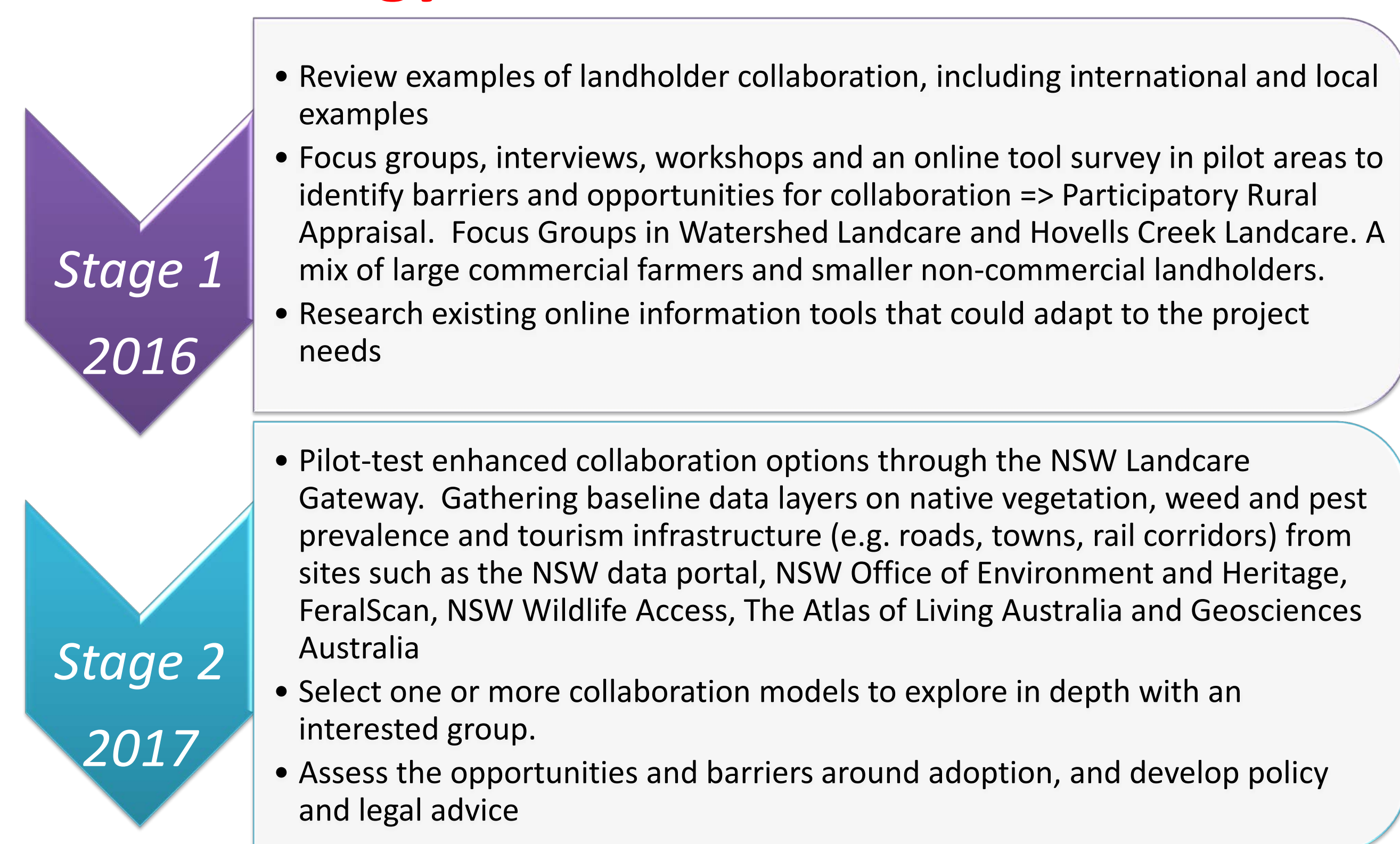
Rationale:

Cross-property collaboration has the potential to enhance the viability of environmental actions and enterprise options extending beyond individual property boundaries.

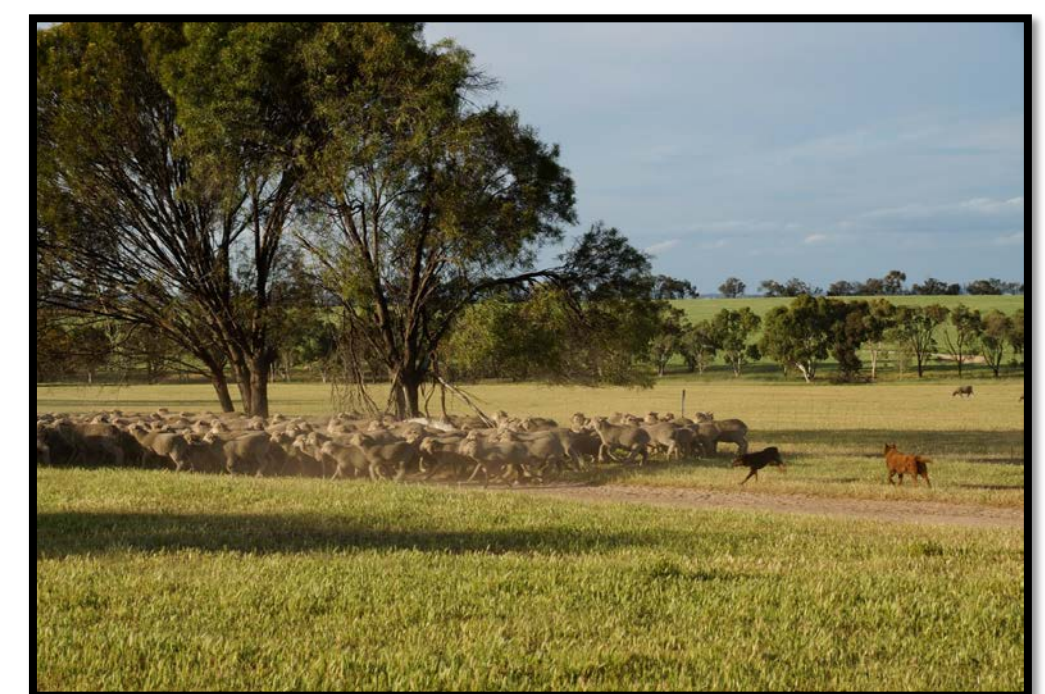
Environmental issues such as habitat connectivity, riparian management, soil erosion and weed and pest control could benefit from increased collaboration, while collaborative commercial activities could potentially include ecotourism, agroforestry, biobanking, carbon farming and kangaroo management.

Recent developments around online spatial tools offer enhanced opportunities for collaboration by enabling landholders to connect with one another, to identify landscape-scale opportunities for environmental or commercial collaboration, and to act as a repository of user-generated spatial data including monitoring results and case studies.

Methodology:



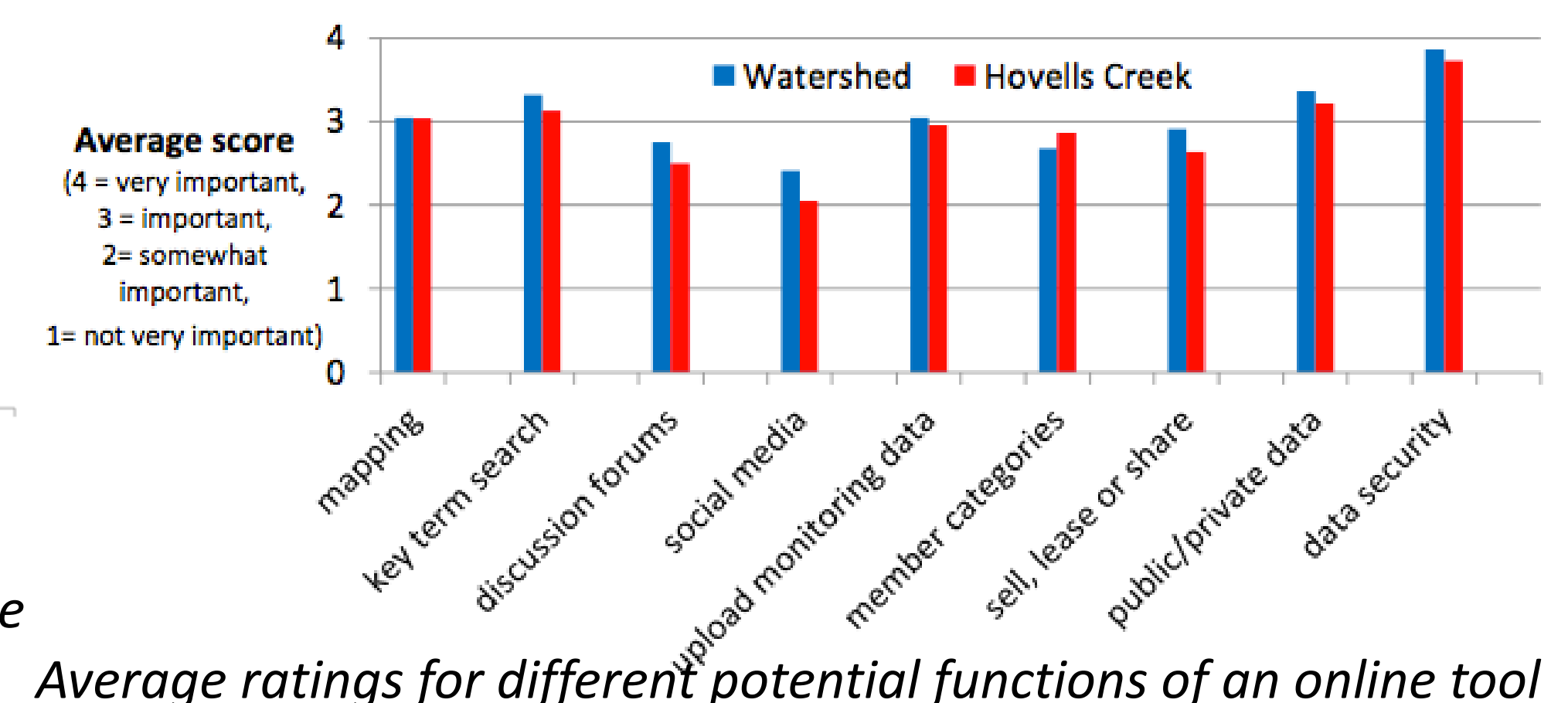
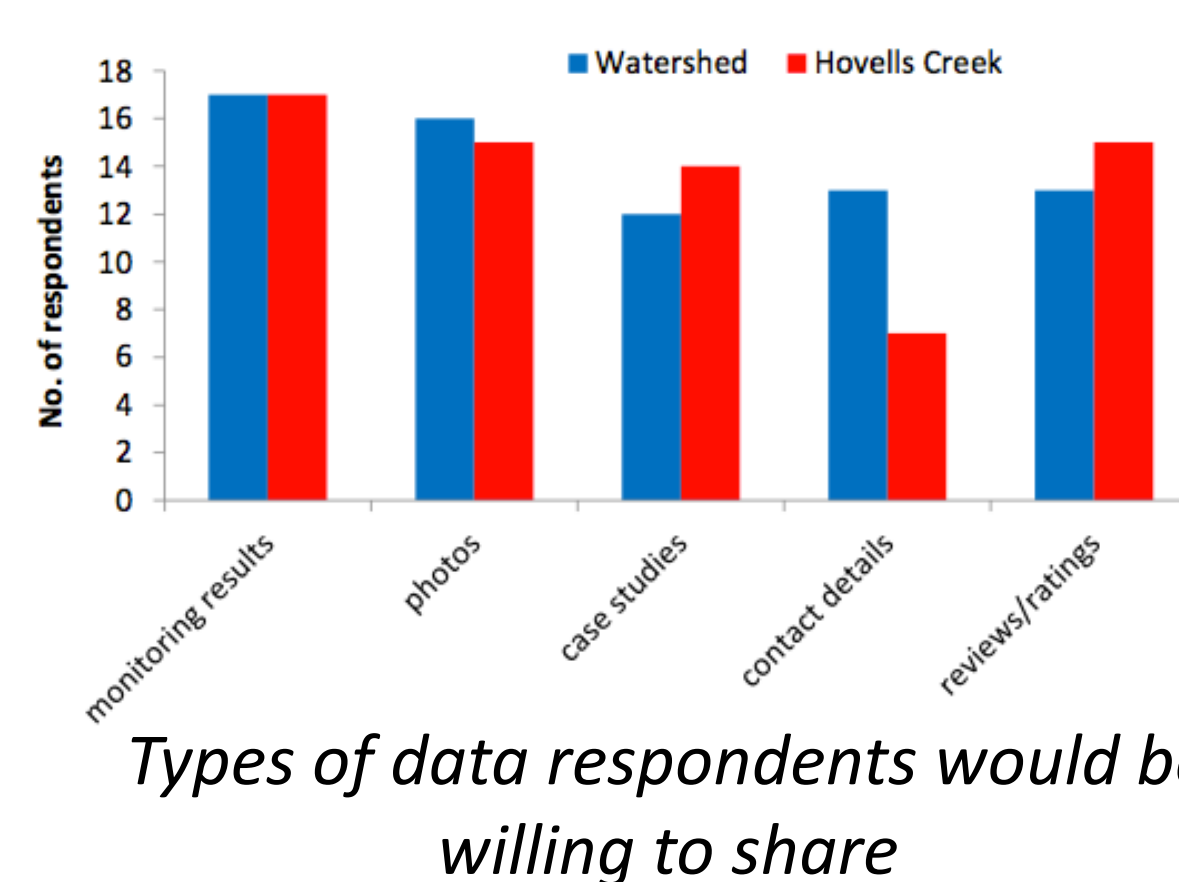
Study area: Central Tablelands of NSW



Results:

Online tool survey: What are your issues?

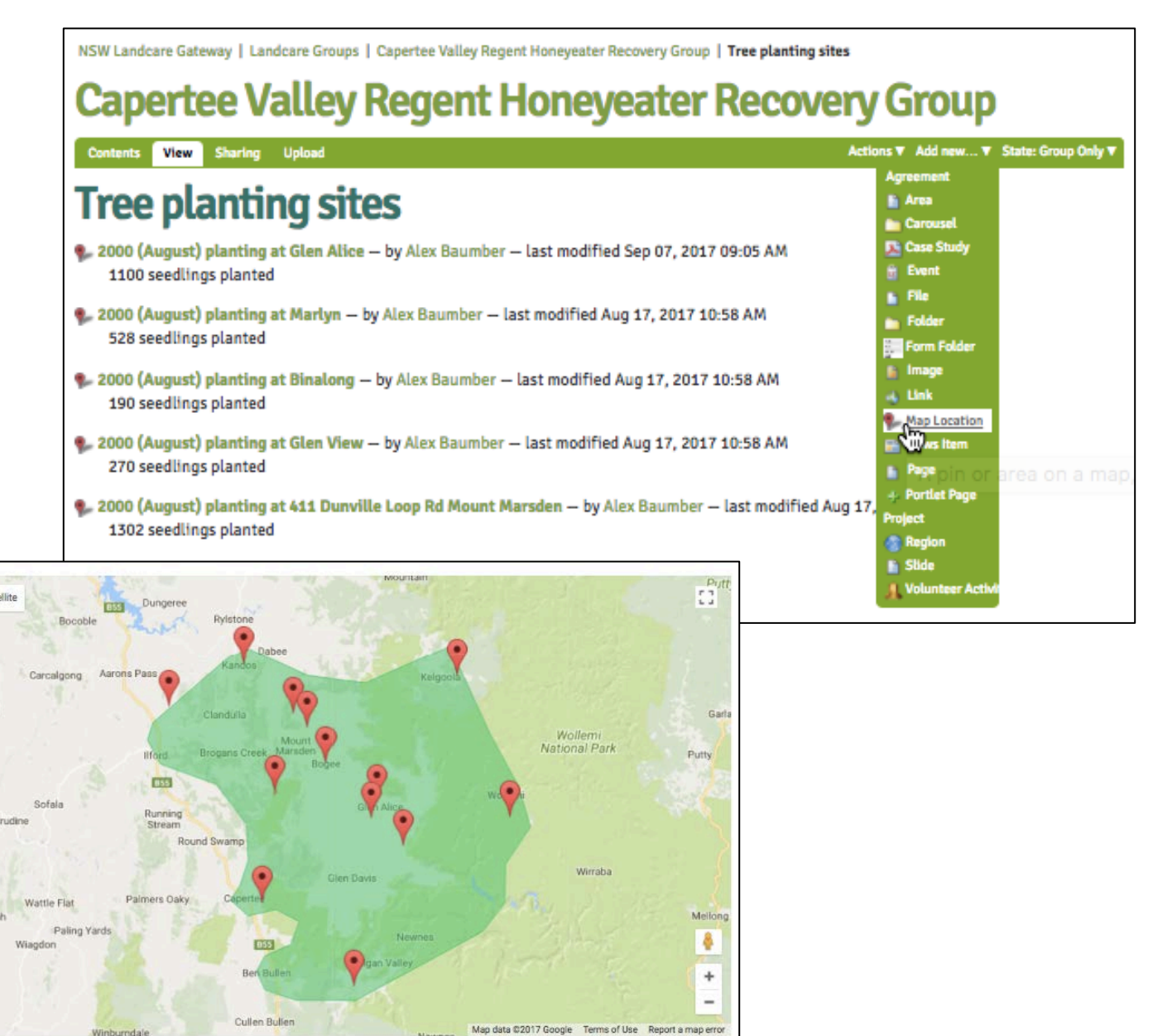
- **Leading issues** identified for inclusion in the pilot-testing of the tool in 2017 include weed and pest management, landscape-scale revegetation corridors and ecotourism.
- Strong interest in a tool with **different levels of access to share information**. Data security was highly valued in relation to contact details and anything that can be linked to an individual property.
- **Cross-platform compatibility**: any tool needs to be able to be used on PCs, phones and tablets, as landholders have differing levels of reliance on these devices.
- **Poor internet access**: any new online tool needs to account for the prevalence of slow and unreliable internet access for many landholders.
- **Fee**: Landholders may be willing to pay a fee, but the value of the site would need to be demonstrated first.
- **Other ideas** : developing new conservation activities, exploring eco-tourism opportunities and implementing novel agro-ecological land management initiatives.



On line group collaboration pilot project through the NSW Landcare Gateway

Building on the NSW Landcare Gateway platform, new functionalities identified during the surveys are being developed. The tool is designed to enable local groups to:

- Share monitoring and other data they have collected around local issues such as wildlife movements, revegetation, weeds, pests, fire and grazing management
- Share case studies and photos from monitoring and management activities in their area
- Link monitoring and management activities to specific locations on a group map to highlight local patterns and assist planning
- View relevant spatial information for their local area, such as ranges of threatened species, climate data and priority hotspots for revegetation activities, soil protection and weed management
- Share relevant reports, guides and other resources
- Choose how each type of data is shared – i.e. private (only visible to the person who added it), group (visible to anyone in the group) and public (visible to non-members visiting the group's page)



Pilot Testing the Online Collaboration Tool

Three groups and associated initiatives will be used to pilot test the bespoke tool before the end of 2017:

- **Capertee group**: landscape scale conservation related to revegetation corridors. Using available data to pilot test the software, its functionalities and to illustrate to the three groups below its functions and capabilities
- **Lue Rd Group**: kangaroo monitoring by farmers; gathering and sharing basic information about kangaroo distributions
- **Watershed Landcare**: work with the Microscope Group mapping spider occurrence as proxy indicator of landscape health
- **Kanangra Boyd to Wyangala Link (K2W)** including LachLandcare, Hovells Creek Landcare and Neville Landcare: monitoring use of nesting boxes installed for squirrel gliders as part of the Glideways project.



Pilot testing will include visioning exercises; encouraging users to experiment with the tool and include extra information that they want to map/monitor – for example, local visions for eco-tourism trails, evidence of past conservation initiatives in the landscape, or locations of local cultural heritage preservation works.

Expectations: to learn through user feedback how the tool *is* and *can be* used, to determine its attractiveness as a vehicle for locally-based digital communication.