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The Australian Rangeland Society

Title: AusPlots-Rangelands progress after two years

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AusPlots-Rangelands developed and is implementing continental scale, plot-based biodiversity survey and sampling methods for rangelands bioregions. The plot data provides consistent, quality baseline data for soils and vegetation accessible through the TERN Eco-informatics portal, with the ability to track future changes and include additional biodiversity information.

The method has stand-alone modules investigating soils (to 1 m with multiple samples in each plot for carbon, bulk density, nutrient and metagenomic analyses), vegetation (plant vouchers for inclusion in herbaria and leaf samples for DNA and isotope analyses) and cover. The modules use accepted methods (e.g. point intercept) and have developed innovative ways to: collect data (a field data collection app to minimise data double handling); track data (scanned sample barcodes); and describe plots (3D plot photo panoramas and searchable images). Integral to AusPlots-Rangelands are collaborations with TERN facilities and wider e.g. universities, herbaria, National Soil Archive, Beijing Genomics Institute, BioPlatforms Australia. Survey training plus a detailed survey manual (downloadable at www.tern.org.au/ausplots) ensures data consistency.

Methods were developed collaboratively with numerous relevant stakeholders: state, territory and federal governments; universities; national bodies; conservation organisations; land managers; NRM groups, practitioners etc. Diverse participants and their varied agendas, time and resources limitations, all produced challenges necessitating compromise. Nonetheless, the method provides valuable information for varied disciplines, as well as fulfilling the needs of state and territory governments, conservation groups and land managers.

Surveys commenced in late 2011 (NT), early 2012 (NSW, SA) and late 2012 (WA, Qld) with a target of 700 permanent plots across the rangelands. AusPlots-Rangelands is part of TERN (Terrestrial Ecosystem Research Network) a national science research infrastructure project.