

Center for Community-Based Resource Management (CBRM)

Natural Resources Institute, University of Manitoba

CBRM Database

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Case Study Name:	Comparing Spatially Explicit Ecological and Social Values for Natural Areas to Identify Effective Conservation Strategies		
Author:	Bryan B.A., Raymond, C.M, Crossman, N.D and King, D.		
Document Type:	Paper in scientific journal		
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Region:	Oceania		
Country:	Australia		
Ecosystem Type:	Wetlands		
Social Characteristics:	Community inside/bordering protected areas		
Scale of Study:	Watershed		
Resource Type:	Habitat conservation, species conservation, protected areas		
Type of Initiative:	Research-driven project		
Community Based Work:	Other (conservation planning)		
Keywords:	biological diversity, conservation planning, environmental values, landscape, policy instruments, spatial prioritization		

Summary:

Consideration of the social values people assign to relatively undisturbed native ecosystems is critical for the success of science-based conservation plans. We used an interview process to identify and map social values assigned to 31 ecosystem services provided by natural areas in an agricultural landscape in southern Australia. We then modeled the spatial distribution of 12 components of ecological value commonly used in setting spatial conservation priorities. We used the analytical hierarchy process to weight these components and used multi-attribute utility theory to combine them into a single spatial layer of ecological value. Social values assigned to natural areas were negatively correlated with ecological values overall, but were positively correlated with some components of ecological value. In terms of the spatial distribution of values, people valued protected areas, whereas those natural areas underrepresented in the reserve system were of higher ecological value. The habitats of threatened animal species were assigned both high ecological value and high social value. Only small areas were assigned both high ecological value and high social value in the study area, whereas large areas of high ecological value were of low social value, and vice versa. We used the assigned ecological and social values to identify different conservation strategies (e.g., information sharing, community engagement, incentive payments) that may be effective for specific areas. We suggest that consideration of both ecological and social values in selection of conservation strategies can enhance the success of science-based conservation planning.