



How a biodiversity conservation tender works: a Tasmanian case study

In 2007, the Australian Government initiated a competitive tender — the Midlands Biodiversity Hotspot Tender — to conserve biodiversity on private lands in the Midlands of Tasmania.

Collaborating with the Tasmanian Land Conservancy, who conducted the tender, we reviewed and documented how the tender process operated and we summarised outcomes of the auction. Using the original bid data, we also explored the consequences of varying the procurement budget and the weighting applied to the duration of each project proposed.

Our report informs the development of tools, techniques and policy options to integrate biodiversity into regional-scale planning.

Research outcomes

How the Midlands Biodiversity Hotspot Tender works and performs is now documented, along with insights on how the auction budget and the weighting scheme can affect the selection of projects and the conservation outcomes of a competitive tender.

Why did we do this study?

Tasmania's Northern Midlands bioregion has significant biodiversity conservation values, including endemic plant and animal species, numerous threatened plant and animal species, and important wetlands. The region was one of the first parts of Australia cleared for agriculture and less than 30% of the original vegetation remains, in small patches and in poor condition. There are more than 5900 patches of less than 10 hectares in size, and 1895 patches of 10–50 hectares, most of which are on private lands.

Without enough land to expand public reserves, in 2007 the Australian Government contracted the Tasmanian Land Conservancy to conduct a competitive tender — the Midlands Biodiversity Hotspot Tender — to conserve biodiversity on private lands. The purpose of the tender was to maximise conservation outcomes with the funds available, test the cost efficiency of a tender approach, and set market values for the conservation values and services.

It is important to review how environmental policies are performing and see what we can learn from them so that future policies can be better crafted. We reviewed the performance of tenders conducted by the Tasmanian Land Conservancy to see if we could help to make them more cost-effective in the future. The Midlands Biodiversity Hotspot Tender was one of these.

30%

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What did we do?

We described how the Midlands Biodiversity Hotspot Tender worked and performed. Using the original bid data, we examined the consequences of varying the auction budget and the weightings applied in the selection process. We also explored the impact of project duration and compared the cost efficiency of the tender approach to a hypothetical uniform payment scheme.

How did we do it?

We collaborated with the Tasmanian Land Conservancy to review and document the tender process, the original bid data, the selection process and the winning bids. They provided information on the prices and conservation value (index) of the bids under a commercial-in-confidence agreement. Aggregating bids by, for example, cost and ecological benefit allowed us to explore alternative tender designs and provide policymakers with what-if outcomes.

Bidders were able to choose the duration of their project and in the selection process longer projects received more weight. To explore the consequences of varying the weighting scheme, we ran simulations of the selection process using the original bid data but with four different weighting scenarios.

Bids were selected on the basis of maximising the environmental benefits, within the constraints of the Tasmanian Land Conservancy's procurement budget. To explore the consequences of varying the procurement budget, we ran simulations of the selection process using the original bid data, varying the original budget.

We also compared the cost efficiency of the tender approach, where each bidder sets their price, with a scheme wherein all successful bidders receive the same payment rate per unit of conservation benefit.

What did the results tell us?

How the Midlands Biodiversity Hotspot Tender works

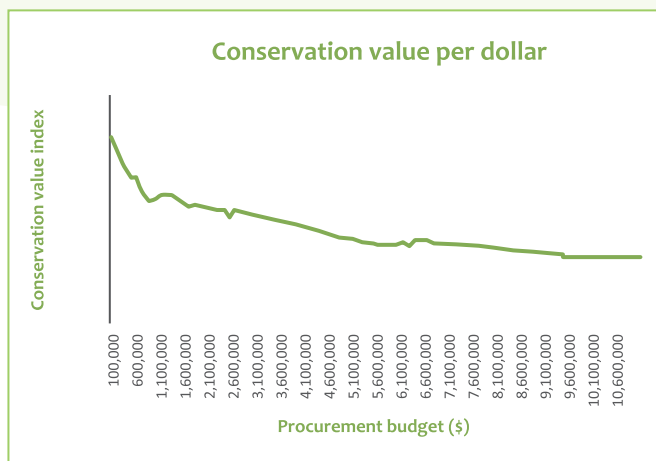
The tender was conducted as a sealed-bid auction, with 54 bids submitted. Landholders determined the size and shape of the land in the bid, the level of conservation service they were offering, the duration of the agreement and the asking price. Field officers assessed biological values and condition, and assigned a conservation value score to each bid. Each bid was then evaluated and assigned a cost-benefit score based on the conservation value of the land, the duration of the project and the price. A panel of experts assessed the results and prepared the investment package. Offers were prepared and contracts were drawn up with the successful landholders. The successful contracts totalled 8089 hectares from 32 bids.

There are trade-offs in selecting long versus short projects

The weighting scheme tends to select longer-term projects but the conservation value of these projects is lower than that of shorter projects. Valuing longevity over quality may not be the most effective strategy. Where regulatory regimes are likely to change, securing high-quality sites for shorter periods is likely to provide a greater guarantee of protecting valuable habitat into the future.

More budget does not always mean better conservation outcomes

As the procurement budget increases, the projects that are more expensive are selected, and this drives down the program's conservation value per dollar. This is largely unavoidable.



Project value: As the procurement budget increases, the projects that are more expensive are selected, driving down the program's conservation value per dollar.



Hotspot: Tasmanian Midlands

A tender approach is more cost-effective than a uniform payment approach

The discriminatory price approach, where the bidder sets the price, proved to be more cost-effective than a hypothetical uniform payment scheme, and in our simulations this remained true even when we increased the auction budget.

Where to from here?

We are now exploring tender designs that capture ecosystem interdependencies across the landscape and designs that allow landholders to submit joint bids. Managing connected parcels of land has benefits for landholders and results in better ecological outcomes.

Who are the researchers?

Professor John Tisdell



John leads the hub's Economic Futures team which is developing a conceptual landscape bio-economic model and an associated experimental economics platform to evaluate policy options.

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Sayed is an environmental economist and was a major contributor to the hub's Economic Futures team. He focused on designing economic instruments to promote biodiversity management at the landscape scale.

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Daniel Sprod



Daniel is the Tasmanian Land Conservancy's Landscape Ecologist. His career has focused on strategic planning, use of market-based instruments and innovation in land-use change, connectivity science and spatial prioritisation.

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Louise Gilfedder



As the hub's Knowledge Broker for the Tasmanian Midlands, Louise helps to integrate the research and deliver it to stakeholders. Louise also works for Tasmania's Department of Primary Industries, Parks, Water and Environment whose Private Land Conservation Program is the overarching program in Tasmania for private land conservation.

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Further reading

Iftekhar MS, Tisdell JG & Sprod D (2013) *A review of conservation project selection criteria in the Midlands Biodiversity Hotspot Tender, Tasmania: sensitivity to project duration and auction budget*. University of Tasmania, Hobart, Tasmania.

Iftekhar MS, Tisdell JG & Gilfedder L (2014) Private lands for biodiversity conservation: Review of conservation covenanting programs in Tasmania, Australia. *Biological Conservation*. vol 169, January 2014, pp 176–84. [doi:10.1016/j.biocon.2013.10.013](https://doi.org/10.1016/j.biocon.2013.10.013)

About the NERP Landscapes and Policy Hub

The Landscapes and Policy Hub is one of five research hubs funded by the National Environmental Research Program (NERP) for four years (2011–2014) to study biodiversity conservation.

We integrate ecology and social science to provide guidance for policymakers on planning and managing biodiversity at a regional scale. We develop tools, techniques and policy options to integrate biodiversity into regional-scale planning.

The University of Tasmania hosts the hub.

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