



Conservation covenant programs in Tasmania: an economic analysis

Placing a covenant on land to protect its natural values is a commonly used policy tool for conserving biodiversity on private land. Yet, there has been no comprehensive economic analysis of private-land covenant policies at a regional level in Australia.

We analysed institutional factors and ecological factors that influence the area size, conservation value and financial incentive of covenants in Tasmania over the past decade.

Our findings offer important insights into the drivers and relative performance of conservation programs in Tasmania, and have significant implications for the design of conservation programs throughout the world.

Research outcomes

The body of knowledge on conservation programs now includes important insights from the first comprehensive economic analysis of private-land covenant policies at a regional level using long-term data. These insights will be useful to people designing effective conservation programs throughout the world.

Why did we do this study?

Conservation covenants are a valuable policy instrument

Globally there is increasing recognition of the contribution privately conserved land makes to biodiversity conservation, and the realisation that statutory-protected public lands alone are not enough. To promote biodiversity conservation on private lands, conservation covenanting has become an important addition to the suite of land-conservation policy instruments available to policymakers.

A conservation covenant is a voluntary agreement between a landholder and an authorised body, whereby the landholder sets aside some of their land for conservation, often in exchange for financial support, while retaining ownership of the land. The landholder can receive financial support such as cash and/or tax relief. In many situations, they retain some usage rights. Society benefits from the savings made in securing protection compared to outright acquisition. Depending on its duration, the covenant is binding on the current landholder and all future owners of the land.

Securing covenants on private lands is getting more costly

Increasingly, it is getting more costly to secure covenants on private lands. This may be because cheaper land areas (the 'low-hanging fruit') have already been covenanted. In the future, conservation agencies will need innovative strategies to secure funding and to design and implement programs.

The factors that influence the uptake of covenants are not well understood

To design more effective conservation incentive programs, particularly if policymakers want to reduce the financial incentives, we need to understand the factors that influence the attributes of private-land covenants. Yet, there has been limited economic analysis of private-land covenant policies at a regional level using long-term data. Studies in Australia have focused either on the economic performance of specific programs, such as Victoria's BushTender, or the ecological performance of conservation programs.

What did we do?

Our objective was to find out how institutional and ecological factors (program characteristics, location and vegetation types) influence three attributes of covenants:

- size of area (hectares)
- financial incentive (per covenant and per hectare)
- ecological value (conservation value index).

To do this, we analysed the characteristics of private-land covenants enrolled in Tasmania in the past decade.



How did we do it?

Sourcing the data

Our analysis was based on data for the period July 1999 to September 2011. The Tasmanian Department of Primary Industries, Parks, Water and Environment, in conjunction with the Australian Government Department of the Environment, gave us access to their covenant and financial incentive data.

Classifying the covenants

For analysis, we classified the covenants based on five characteristics:

- duration of covenant – set term or perpetuity
- financial incentive received (direct incentives only – landholders may have received indirect financial benefits such as tax benefits, rate rebates and management assistance, but this data was not available)
- selection process – competitive tender, or negotiation between individual landholders and government agency
- protected-area status (International Union for Conservation of Nature protected-area management classification)
- location (Interim Biogeographic Regionalisation for Australia classification).

Analysing the data

We began by using regression analysis to explore factors affecting the size of the area under covenant. Then, based on separate regressions, for each covenant we explained the relationship between the financial incentive received, the design of the covenanting program, and the landscape features (vegetation composition, location and protected-area status). Finally, for covenants that had been ecologically assessed (those secured under Tasmania's Forest Conservation Fund), we analysed the factors affecting ecological values.

What did the results tell us?

The key insights from our analysis are as follows:

- When designing new conservation programs, agencies should consider the rate of increase in direct financial incentive payments over time. Programs often run multiple tenders or calls for conservation and, over time, the lower value lands come under conservation. To acquire more land, payments to landholder need to increase to compensate for lost income. Furthermore, landholders observe the prices paid in previous schemes and, to determine the government's willingness to pay, they may increase their bids in subsequent tenders. To avoid such strategic behaviour, agencies need to consider alternative auction designs.
- Financial incentive rates for short-term covenants can be as high as those for perpetual covenants. So, where feasible, agencies should pursue perpetual covenants to achieve better conservation outcomes.
- Landholders expect to be paid more for areas with higher conservation values.

Where to from here?

We will be presenting our findings to state and federal government stakeholders. The results will be useful in designing future conservation programs. We also hope to conduct similar economic analyses of other conservation programs, both national and international.



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.

Prof John Tisdell
P: 03 6226 1783
E: John.Tisdell@utas.edu.au

Dr Sayed Iftekhar



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.

Dr Sayed Iftekhar
P: 08 6488 4634
E: mdsayed.iftekh@uwa.edu.au

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.

Louise Gilfedder
P: 03 6165 4421
E: Louise.Gilfedder@dpiwve.tas.gov.au

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.

Daniel Sprod
P: 03 6225 1399
E: dsprod@tasland.org.au

Further reading

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)

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.

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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