

POLICY PERSPECTIVE

Exploring the Permanence of Conservation Covenants

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Covenants; breach; release; private land conservation; private protected areas, easements; biodiversity.

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Abstract

Conservation on private land is a growing part of international efforts to stem the decline of biodiversity. In many countries, private land conservation policy often supports in perpetuity covenants and easements, which are legally binding agreements used to protect biodiversity on private land by restricting activities that may negatively impact ecological values. With a view to understand the long-term security of these mechanisms, we examined release and breach data from all 13 major covenanting programs across Australia. We report that out of 6,818 multi-party covenants, only 8 had been released, contrasting with approximately 130 of 673 single-party covenants. Breach data was limited, with a minimum of 71 known cases where covenant obligations had not been met. With a focus on private land conservation policy, we use the results from this case study to argue that multi-party covenants appear an enduring conservation mechanism, highlight the important role that effective monitoring and reporting of the permanency of these agreements plays in contributing to their long-term effectiveness, and provide recommendations for organizations seeking to improve their monitoring programs. The collection of breach and release data is important for the continuing improvement of conservation policies and practices for private land.

Introduction

It is widely recognized that stemming the decline of biodiversity requires a greater focus on conservation efforts targeting private land. With private land covering a large part of the terrestrial landmass and supporting important biodiversity, its significance for conservation is gaining prominence in many countries, including Australia, Canada, the USA, New Zealand, Chile, and South Africa (Langholz & Lassoie 2001; Ewing 2008; Fishburn *et al.* 2009; von Hase *et al.* 2010). The approaches used by policy-makers to conserve biodiversity on private land vary considerably, from voluntary to incentives-based schemes to regulation. A number of studies have recently evaluated these various approaches, including the effectiveness of incentive-based programs to protect biodiversity (von Hase *et al.* 2010), the ability of voluntary stewardship programs to conserve habitat (Platt & Ahern 1995), and the extent to which conservation easement programs contribute to reducing development pres-

sure and maintaining biodiversity (Pocewicz *et al.* 2011). Studies have also looked at the degree to which private land conservation aligns with strategic conservation goals (Kiesecker *et al.* 2007; Adams *et al.* 2014). Yet important questions still remain about the effectiveness and long-term consequences of private land conservation mechanisms (Merenlender *et al.* 2004).

Of growing importance in private land conservation policy is the establishment of Private Protected Areas (PPAs) - a protected area, as defined by the IUCN (Dudley 2008), under private governance (Stolton *et al.* 2014). PPAs are established in different ways in different countries, and the mechanisms used to protect biodiversity through legal or other effective means also vary. Here, we investigate two components central to private land conservation policy; the permanence (duration) and security (resistance to removal) of conservation agreements with landholders, focusing on conservation covenants as one form of PPA. We focus on examining these issues in Australia, which has a large number of individual

conservation covenants (Stolton *et al.* 2014; Fitzsimons 2015). We first provide background information on our case study and the challenges around permanence and security for policy-makers, before presenting our results and using them as context to highlight the central role that monitoring and reporting of covenant releases and breaches plays in ensuring the long-term effectiveness of these agreements.

Private land conservation in Australia

As in many countries, conservation policy in Australia has historically focused on public land (Figgis 2004). Although public protected areas cover more than 65 million ha across 8.5% of the continent (DotE 2014), private and leasehold land covers over 62% of Australia’s land area (AUSLIG 1993), and contains significant biodiversity value (Fitzsimons & Wescott 2001). Many of Australia’s threatened species occur entirely outside of public protected areas (Watson *et al.* 2011), as do some of the most threatened ecosystems (Figgis *et al.* 2005; Taylor *et al.* 2011). Although the long-term security of private land conservation mechanisms is not yet clear, with the continuing loss of biodiversity, and broad acceptance that the public conservation estate is insufficient on its own, private land conservation policies and programs are increasingly important (Gordon *et al.* 2011).

Conservation covenants are an important component of Australia’s private land conservation policy mix. Similar to conservation easements in North America, conservation covenants are mostly voluntary, legally binding agreements between an authorized organization and a landholder (Todd 1997). They can apply to all or part of a property and are registered on the property title (Figgis 2004), usually running in perpetuity. The vast majority are established primarily to protect land with high nature conservation value, where the landholder retains ownership but has a reduced ‘bundle of rights’, in effect giving up development and land-use rights incompatible with conservation (Iftexhar *et al.* 2014). Whilst covenants can be tailored to individual properties (Adams & Moon 2013) each covenant contains a standard set of obligations which remain relatively fixed over the term of the agreement, with limited, site-specific management requirements determined during establishment (Figgis *et al.* 2005). All Australian covenants are backed by specific enabling legislation (Fitzsimons 2015), specifying the body authorized to administer the covenant, typically a statutory authority.

Since the creation of the first conservation covenant in Australia, a Wildlife Refuge in New South Wales in 1951 (DECCW 2010), the number of covenants has grown considerably to 7,491 in 2014 (Figure 1). This in-

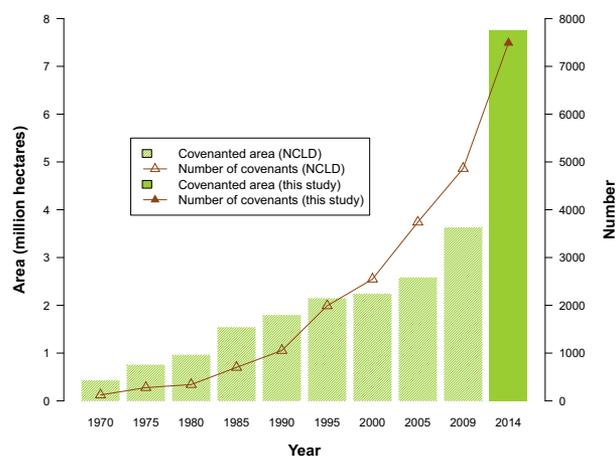


Figure 1 Cumulative trend in the number and area of covenanted properties in Australia. Columns represent covenanted area, and the triangles represent the number of covenants. Lighter green columns and hollow triangles indicate National Conservation Lands Database (DSEWPac 2011) data, the darker green column and the filled triangle represent data collected for this study.

cludes 4,894 covenants likely to meet the private protected area criteria in Australia, which require the area to be valuable, secure through statutory provisions, well-managed for conservation, and clearly defined (see Fitzsimons 2015). With the number of covenants set to grow further, it is important to evaluate their permanence as a conservation mechanism.

Permanence and security

From a conservation policy perspective, the permanence and security of agreements with private landholders are central issues. Whilst permanence can relate to a number of ecological and social factors in conservation, here we focus on ‘permanence’ as the length of time that a conservation agreement (e.g., a covenant or easement) remains in place to protect conservation values (Fitzsimons 2006). An agreement’s permanence can have substantial implications for the persistence of conservation values (Jones *et al.* 2005), and is of particular importance on private land, where landholders and land uses can change frequently, especially amid pressure from mining, agriculture, and other types of development (Cox & Underwood 2011; Pocerwicz *et al.* 2011; Adams & Moon 2013). With covenant restrictions typically associated with the property title and lasting in-perpetuity, they are commonly considered the most permanent private land conservation mechanism in Australia. Thus they are formally able to be classified as protected areas and can contribute to Australia’s international protection targets (Fitzsimons 2006, 2015).

Related to permanence is an agreement's strength (its "security"), which refers to the level of authority required to establish, alter and/or terminate or extinguish ("release") that agreement (Fitzsimons 2006). Although security provisions vary between programs, all covenants in Australia are backed by legislation (Fitzsimons 2015), with release usually requiring approval from multiple parties including a government Minister. The exception is the Wildlife Refuge program, which is only available in the state of New South Wales and is unique amongst Australian covenants for only requiring approval for release from a single party (e.g., the landholder) (Figgis 2004).

Threats to permanence

Although protected area downgrading, downsizing and degazettement (PADDD) is a known policy issue and has been noted as a threat to public reserves (Mascia & Pailler 2011), some see covenants as less secure than public protected areas (e.g., Centre for Environmental Management 1999). Of particular importance here are mineral exploration and extraction rights, which have been identified as an emerging threat to the natural values on covenanted land (Adams & Moon 2013; Root-Bernstein *et al.* 2013), although covenants in Australia do not have the legal ability to prevent such activities as mineral rights rest with governments, not landholders. Changing property ownership, market conditions and government policy have also been noted as threats to the permanence of private land conservation more generally (Figgis *et al.* 2005; Jones *et al.* 2005). In Australia, concerns over covenant permanence also relate to their relatively recent adoption (most covenants have been established since the 1990s (Fitzsimons & Carr 2014; Figure 1), compared to public protected areas, which saw considerable expansion in the mid to late 20th century and some 274 (3.6%) of which are over 100 years old (DotE 2014).

Beyond these broader issues, a particular challenge for private land conservation policy globally is the identification and enforcement of "breaches," which are instances of landholders failing to meet their obligations or violating the conditions of their agreement in some way (Owley 2011). Breaches can vary in severity, and in extreme cases could lead to a release of the covenant. It is possible that the reasons behind breaches are similar to releases, and understanding these could allow for early and targeted intervention to prevent release. However, identifying breaches can be difficult for administering bodies, with the need to account for the agreement's flexibility (Rissman 2010), variability in permitted land uses (Rissman *et al.* 2007), changing ecological and

social conditions (Rissman 2014), and financial and practical limitations on their capacity to monitor covenanted land (Kiesecker 2007; Korngold 2007; Fitzsimons & Carr 2014). Moreover, how administering bodies respond to breaches is important for ensuring the effectiveness of these agreements, faced with the costs of pursuing legal action (Rissman & Butsic 2011) or the consequences of modifying the boundaries and/or obligations of these agreements ("amendments") through time (McLaughlin 2007; Jay 2013).

Little information exists on the permanence and security of PPAs in Australia. Here, for the first time, we collate and examine the available data on covenants from all major Australian covenanting programs (Table 1). Our initial motivation was to determine if data was available to answer the following three questions: (i) what proportion of conservation covenants within the major covenanting programs have been released; (ii) what proportion are known to have had their conditions breached; and (iii) what were the main reasons for the release or breach, and what factors could help predict these; and if so what are the main issues affecting the permanence of covenants?

Methods

Between October 2013 and January 2014, we asked individuals within the 13 major Australian covenanting organizations who were familiar with and had access to database records to provide the numbers of and reasons for covenant releases and breaches. We followed up responses with further questioning where needed. The programs involved cover all states and territories (with the exception of the Australian Capital Territory, where covenants are not present; Table 1).

Database records varied across organizations and programs – both in the detail (e.g., the type of impact caused the breach) and the style of recording (i.e., hard copy or electronic). Detailed information was not always available due to confidentiality, limited record-keeping, or the difficulty of retrieving data when resourcing restrictions precluded their ability to sift through hard copy records. Where only limited data was available, we asked program staff to instead provided estimates. The type of information provided by staff clearly fell into two categories: (1) "minimum bound estimates," where staff provided the known cases but indicated that the true number was likely greater but unknown; (2) "rough estimates," where staff were unsure of actual cases and could only provide a rough estimate. The description of the activities behind the covenant release and breach data were used to categorize these into common themes.

Table 1 Details of the covenanting programs included in this study

State	Covenant program	First covenant	Covenanting organization	Security
New South Wales	Conservation Agreement	1990	Office of Environment and Heritage	Multi-party
New South Wales	Trust Agreement	2005	Nature Conservation Trust of NSW	Multi-party
New South Wales	Registered Property Agreement	1997	Office of Environment and Heritage	Multi-party
New South Wales	Wildlife Refuge	1951	Office of Environment and Heritage	Single-party
Northern Territory	Conservation Covenant	2009	Parks and Wildlife Commission NT	Multi-party
Queensland	Nature Refuge and Coordinated Conservation Area	1994	Department of Environment and Heritage Protection	Multi-party
South Australia	Heritage Agreement	1994	Department of the Environment, Water and Natural Resources	Multi-party
Tasmania	Conservation Covenant	1999	Department of Primary Industries, Parks, Water and Environment	Multi-party
Victoria	Conservation Covenant	1986	Trust for Nature (Victoria)	Multi-party
Victoria	Section 69 Agreement	1987	Department of Environment and Primary Industries	Multi-party
Western Australia	Conservation Covenant	1971	The National Trust of Australia (WA)	Multi-party
Western Australia	Nature Conservation Covenant	1990	Department of Parks and Wildlife	Multi-party
Western Australia	Conservation Covenant	1980	Department of Agriculture and Food	Multi-party

Covenant releases and breaches

We considered covenants “released” if they had been signed over a particular piece of land in the past but had subsequently been removed from the land title (i.e., the covenant had been terminated in accordance with the relevant security provisions). Because obligations vary between programs, we considered a covenant “breached” if its obligations had not been met, but the covenant had remained in place. We did not count third-party damage (e.g., by neighbors) as a landholder breach, but recorded this information separately, as we consider this type of damage reasonably beyond the immediate control of the landholder and the administering body.

Results

Covenant releases

The single-party NSW Wildlife Refuge covenants had by far the highest number of releases, although this was based on the estimate provided by program staff (130 of 673). A total of eight out of 6,818 multiparty covenants (0.12%) had been released across Australia, with Victoria (4) and Western Australia (3) having the highest numbers of releases (Table 2).

For multi-party covenants, the reasons for release varied considerably, ranging from unauthorized timber removal to government acquisition or administrative error (Table 3). As examples, two early covenants were established on old farms, which were released after it became clear they had limited conservation value and were unsuitable for covenanting. Another covenant at Ironbark

Basin in Victoria was released when the land was transferred to the State Government for inclusion in a national park. Arguably, in this case “release” may not be the most appropriate term given the conservation values remained protected. Equivalent data for single-party Wildlife Refuges was unavailable, however indications from program staff suggests that these releases occurred predominantly at the request of the landholder.

Covenant breaches

Detailed breach data was not available from most programs, which precluded deeper quantitative analysis. Of the available data, 71 breaches were reported (Table 2), with most of these in Western Australia (42) and Tasmania (20). However, given the constraints on covenant monitoring by the programs (Fitzsimons & Carr 2014), these reported breaches should be interpreted as minimum bound estimates, with the true number likely to be greater.

Some 43 of the 71 breaches (60%) had insufficient information for classification (Table 4). Of those able to be categorized, as a percentage of all reported breaches, most arose from land clearing and/or development (13%), road construction (7%), forestry operations (7%), or unauthorized timber removal (7%). Some 25% of all breaches were attributed to a third party. In one third-party breach, forestry contractors working on a neighboring property cleared vegetation on a covenanted property where the boundary delineation was unclear; in another case, a third party had gained illegal entry to the property and collected firewood.

Table 2 Number of covenants, area covenanted, releases and breaches, by covenant type

State	Total number covenants in place	Area covenanted (ha)	Percentage of private land area ^a in the jurisdiction that is covenanted	Number released	Percentage released	Number breached	Percentage breached
<i>Single party covenants</i>							
New South Wales	673	1,889,791.52	2.65	130 ^b	19.31	n/a	n/a
<i>Multi-party covenants</i>							
Western Australia	2,016	1,322,684.69	1.20	3	0.15	42 ^c	2.08
South Australia	1,523	646,280	1.12	0	0	1 ^c	0.07
Victoria	1,419	64,741	0.42	4	0.28	4 ^c	0.28
New South Wales	672	170,595.35	0.24	0	0	4 ^c	0.60
Tasmania	731	84,655	3.11	1	0.14	20	2.74
Queensland	455	3,439,875	2.20	0	0	0	0
Northern Territory	2	131,043.01	0.19	n/a	n/a	n/a	n/a
National total (multi-party only)	6,818	5,859,874.05	1.22	8	0.12	71	1.04
National total (single and multiparty covenants)	7,491	7,749,665.57	1.61	138	1.84	71	0.95

^aincludes indigenous land.^bDetailed records unavailable and the numbers represent staff member's rough estimate.^cDetailed records unavailable and the numbers here are cases specifically known to staff and represent minimum bounds.

Discussion

The importance of strong security provisions

Using Private Protected Areas (PPAs) to conserve biodiversity is a growing approach in conservation policy. By definition, PPAs require protection through legal or other effective means (Stolton *et al.* 2014), and by extension, their effectiveness as a permanent conservation mechanism relates directly to the ease in which that agreement can be released, amended or enforced.

Focusing on Australian covenants as a form of PPA, our case study found only a small number of multi-party covenants had been released, suggesting they are a conservation mechanism with high permanence. Moreover, our study also highlights a clear distinction in the proportion of releases between covenants with differing security provisions, with a relatively high proportion of single-party Wildlife Refuge releases (19%) compared with multi-party covenants (0.12%). Considering the extent of legal challenges that permanent agreements face (Rissman & Butsic 2011) and are likely to face in the future, this is a clear demonstration to policy-makers of the value of strong security provisions, whereby requiring authorization from multiple parties reduces the potential for release, and contributes towards ensuring these agreements meet their promise of in perpetuity protection (McLaughlin 2007). We thus emphasize the importance for policy makers to consider and prioritize multi-party provisions to secure their agreements. However, this extra security would have to be weighed up against the potential for these provisions to act as a deterrent to landholders entering the program (Kabii & Horwitz 2006).

Preparing for threats to agreements

Whilst strong security provisions may help prevent release, the early identification of threats to these agreements could help policy-makers prepare and adapt to emerging issues. Part of this requires understanding the reasons why covenants are being released. The data analyzed in our study showed no standout cause for multi-party covenant release and instead, each appears a product of individual circumstances. However, in the single party Wildlife Refuges program, the higher number of releases was attributed to landholders opting to withdraw. Further research is needed to understand why landholders are leaving the program, for example by investigating landholder commitment and satisfaction with the covenanting program (e.g., Selinske *et al.* 2015).

Beyond release, some breaches of obligations are a potential threat to the permanence of agreements, through damage to ecological values of the property which may

Table 3 Reported reasons for covenant releases

	Reason	No. reported cases
Multi-party releases	Site subsequently deemed unsuitable	2
	Acquired by state government for development	2
	Ceded to government as reserve	1
	Unauthorized timber removal	1
	Administrative error – unintended covenant	1
	Elderly landowner – unable to meet obligations	1
	Total multi-party releases	8
Single-party releases	Releases at landholder request	130 ^a
	Total single-party releases	130

^aDetailed records unavailable and the type and number of releases represent staff member’s rough estimate.

Table 4 Summary of available information on covenant breaches and the responsible parties. Numbers represent minimum bound estimates

Reason	Party responsible			No. reported cases
	Landholder	Third party	Unknown	
Land clearing and/or development	6	3	–	9
Road construction	1	4	–	5
Forestry operations	–	5	–	5
Unauthorized timber removal (e.g., firewood)	–	5	–	5
Dumping rubbish	2	–	–	2
Management actions incomplete	1	–	–	1
Recreational vehicles	–	1	–	1
Unknown/insufficient information	–	–	43	43
Total reported breaches	10	18	43	71

in some extreme cases cause major loss in values, leading to covenant release. It is possible that the reasons behind breaches may be similar to releases, providing room for organizations to intervene early to prevent release. In our study, of those breaches with sufficient information, land clearing showed up as the biggest issue. Due to the limited available data, the extent of this issue is unclear, as are the reasons for clearing, but it highlights one of the key challenges for policy makers – how to minimize unwanted landholder behavior from a distance with minimal intervention. One approach could be for private land organizations to increase the level of enforcement and consider strengthening the compliance components within the legal agreement if needed (see Jay 2013). However, maintaining a strong and constructive relationship with landholders could help prevent the substantial costs associated with enforcement (Rissman & Butsic 2011) and as a preventative measure, an increased focus on landholder support may help clarify landholder understanding of their obligations (Stroman & Kreuter 2014) and help uncover the reasons behind this clearing.

In response to breaches, a number of organizations mentioned covenant amendment as a preferred method

of resolution to release, provided the property’s ecological values remained protected. This fits with the findings of Rissman (2010), who noted that land trusts in the United States have an incentive to act moderately when obligations are not met. We did not look directly at amendments, and the data available from our study was insufficient to determine how many covenants have been amended, or even the nature of these changes (e.g., renegotiating boundaries or obligations). However, as amendments can relate to the permanence of covenant obligations and the effectiveness of these agreements for use in conservation policy, we highlight the need for programs to monitor and record the nature and extent of any amendments to permanent agreements and suggest this as an important area requiring further research.

Some organizations suggested that the turnover of conservation covenants to successor landholders may be developing into a policy issue, which has also been noted elsewhere (Collins 2000; Czech 2002; Rissman & Butsic 2011; Stroman & Kreuter 2014). These are landholders who, for example, have purchased or inherited the property from the original covenantor. Without being original parties to the covenant, their ownership of protected properties may result in higher rates of legal challenge

(Rissman & Butsic 2011) and/or breaching of conditions. It may be that successor covenants prove an important predictor of covenant breach or requests for release, although understanding the reasons behind this requires further research. Policy-makers would be well placed to consider ways of engaging and supporting new owners, as well as elderly covenants who may need additional support in order to meet their obligations (see also Fitzsimons & Carr 2014).

Although a significant policy challenge, dealing with current and future owners of protected properties is only one dimension of permanence. Our case study suggests that policy-makers also need to account for actors outside of the direct agreement. Most breaches in our study for which detailed information was available were attributed to damage from a third party (25% of all known breaches), also noted as an issue for easements in the United States (Rissman & Butsic 2011). This raises an important question for policy makers about who holds responsibility for monitoring, preventing and rectifying damage to covenanted properties resulting from trespass, particularly if the third party remains unidentified. Trespass is an issue for conservation areas in general, impacting both the public and private conservation estate.

As noted elsewhere, we also agree that the decoupling of above- and below-ground property rights is an important issue for conservation covenants (Adams & Moon 2013; Root-Bernstein *et al.* 2013). In Australia, covenants do not provide protection for underground resources, with mineral exploration and extraction rights remaining in government ownership. Although this study shows that mining activities have not yet resulted in covenant release, it is likely that in the near future coal extraction will be permitted on a Nature Refuge covenant in the Galilee Basin in Queensland (Lauder 2013). This is an important policy issue, not only because mineral extraction can result in the loss of ecological value, but also because of the potential loss of public investment (McLaughlin 2012) and faith in conservation that has played an important role in funding the development of the private conservation estate.

A need for improved monitoring and recording

It is likely that the growth in permanent conservation agreements will continue, particularly with their increasing use via new pathways such as biodiversity offsets, which are growing in prominence internationally and in all Australian jurisdictions (Bull *et al.* 2013). It is possible that this will also lead to an increase in the number of releases and breaches, making effective monitoring of these agreements essential for identifying issues, supporting

enforcement (Rissman & Butsic 2011), and evaluating their ecological contribution. Whilst our study showed few releases, detailed breach information was limited, with the number of breaches occurring largely unknown. This is surprising given the prominence of permanence as a key feature of the mechanism, but such fragmented and incomplete data is not unique to covenants, having also been noted before for easements in the United States (Wilson Morris & Rissman 2009).

The relevant policy questions therefore become where, how and what to monitor? Limited resourcing of covenanting organizations makes monitoring a particular challenge (Fitzsimons & Carr 2014), and organizations may be best to focus their efforts where and when the probability of breach is highest (Czech 2002). From this study, a starting point may be in areas with known concentrations of successor covenants or hotspots for third-party trespass. Aerial photographs, remote-sensing and predictive modeling techniques offer opportunities to identify possible breaches remotely, which could be used where resourcing limitations impede the recommended annual site visits (LTA 2004). Where breaches are hard to detect remotely, indirect observations, self-reporting and direct questioning of landholders could be used (see Gavin *et al.* 2010), and more generally, specialized landholder questioning techniques could help obtain estimates of noncompliance (Nuno & St. John 2015; Thomas *et al.* 2015). When organizations collect breach data, we suggest other data should be recorded in addition to the location, actor (*i.e.*, the landholder or a third party), and the type and extent of the damage. This should include both the landholder type (*i.e.*, originator or successor) and where possible, the intention of the actor (*i.e.*, accidental or intentional). Of course beyond identifying a breach, organizations must also ensure there are sufficient resources and capacity available for enforcement (Rissman & Butsic 2011).

Our study provides insights into the methodological challenges of multi-jurisdictional studies on conservation agreements. Obtaining sufficient and consistent breach data proved particularly difficult, due largely to organization resourcing constraints on its collection, differences in how breaches are monitored and recorded across organizations (*i.e.*, centrally or regionally, electronically or in hard copy), and privacy concerns over sharing this type of information. There were also challenges in analyzing across different programs (*e.g.*, what constitutes a breach under different legislation or landholder agreements). However, our study highlights an opportunity to share data, pool resources and collaborate across organizations to allow for more detailed quantitative and qualitative studies in the future. For this, support is needed from policy-makers for more consistency in covenant

monitoring (e.g., LTA 2014), as well as a coordinated approach to recording and sharing breach and release data in ways that address confidentiality concerns. This data should be in digital form in centralized and secure databases, such as the National Conservation Easement Database in the USA (USEFC 2014), with data sharing provisions to allow for comparison across different agreement types, such as U.S. easements and Australian covenants. In Australia, the National Conservation Lands Database (DSWEPaC 2011) has the potential to be an equivalent portal, although its future viability is currently uncertain.

As the role of PPAs in protecting biodiversity grows, so does the need to ensure they remain an effective part of the conservation policy toolkit. The numbers of covenant releases and known breaches in our case study were low, suggesting that covenants may be an enduring mechanism for conservation, although we acknowledge the likely under-reporting and minimal data available for breaches. However, ongoing compliance monitoring of covenant breaches and releases will allow policy-makers to respond to issues as they arise, and will also enable future comparison of the permanence of PPAs to the public estate and other protected area categories. This data is key to understanding the permanence and long-term effectiveness of these agreements and crucial for improving the sustainability of conservation policy on private land.

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