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# Framework features enabling faster establishment and better management of privately protected areas in New South Wales, Australia

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In response to the Convention on Biological Diversity's Kunming-Montreal Global Biodiversity Framework, Australia has committed to protecting 30 per cent of lands and oceans for nature conservation by 2030. Privately protected areas are vital to meeting this target and establishing an ecologically representative and well-connected National Reserve System on land in Australia. As a federated nation, most public and privately protected areas (especially conservation covenants) are established under state or territory (i.e. subnational) legislation, as opposed to national legislation. This paper conducts a review of changes in policy and practice for private land conservation in the state of New South Wales (NSW) that has led to a marked acceleration in the establishment of privately protected areas since 2017. The historical average rate at which privately protected areas were being established in NSW under various schemes prior to the changes in 2017 was about 50 agreements and 12,000 hectares per annum. The new *Biodiversity Conservation Act 2016*, the Biodiversity Conservation Trust of NSW (BCT), and increased NSW Government funding commenced in August 2017. Since then, the rate of establishment of privately protected areas has accelerated to more than 100 agreements and 45,000 hectares per annum. Not only has the rate of establishment more than tripled (by area) but many more privately protected areas are being established in higher priority bioregions, and the BCT is now able to provide better financial and technical support to privately protected areas, leading to better conservation outcomes overall. Key changes that have strengthened the framework for establishing and managing privately protected areas in NSW include a guide for strategic investment; institutional arrangements that foster effective governance, trust and transparency; substantive NSW Government funding; an accumulating endowment fund model; in-perpetuity payments; and faster and more targeted delivery mechanisms. The paper highlights features that could be adopted in other jurisdictions in Australia to support the vital role that privately protected areas must play in achieving commitments to nature conservation.

KEYWORDS

**privately protected areas, global biodiversity framework, national reserve system, nature conservation, private land conservation, conservation covenants, biodiversity offsets**

# 1 Introduction

## 1.1 Global context for protected areas

Protected areas are considered one of the most reliable forms of nature conservation and protected area networks often form a key part of conservation strategies (Watson et al., 2014; Maxwell et al., 2020). Australia, as a signatory to the Convention on Biological Diversity, has for almost three decades been expanding its protected area estate. Australia signed on to the Convention on Biological Diversity's Kunming-Montreal Global Biodiversity Framework (GBF) in December 2022 (CBD, 2022). The GBF significantly increased the ambition for nature conservation at a global level, in recognition of the dire state of biodiversity.

One of the headline targets of the GBF is Target 3 (the '30x30' target): '*Ensure and enable that by 2030 at least 30 per cent of terrestrial, inland water, and of coastal and marine areas, especially areas of particular importance for biodiversity and ecosystem functions and services, are effectively conserved and managed through ecologically representative, well-connected and equitably governed systems of protected areas and other effective area-based conservation measures, …*'. Protected areas are critical to the success of many targets and goals in the GBF.

The Australian Government through its Nature Positive Plan (DCCEEW, 2022a) and in collaboration with subnational state and territory governments (Environment Ministers Meeting, 2022), committed to a domestic target to '*protect and conserve 30 per cent of land and 30 per cent of oceans by 2030*' prior to signing the GBF.

## 1.2 Australian context for privately protected areas

Australia's National Reserve System (NRS) is a network of public, Indigenous and privately protected areas over land and inland waters (the National Representative System of Marine Protected Areas occurs in marine environments) (DCCEEW, 2021a). Its focus is to secure long-term protection for samples of Australia's diverse ecosystems and the plants and animals they support. It is recognised that the NRS cannot be built solely on public lands and there is a significant role for Indigenous groups, local communities, private landholders, and non-government organisations to play in establishing and managing protected areas to ensure the success of the NRS. The Australian Government has played an important role in growing the private land trust sector in Australia over the past 20 years (land trusts being non-government organisations owning and managing land for conservation). Specifically, the provision of up to two-thirds of the purchase price for strategic land acquisitions through the National Reserve System Program has seen land owned by this sector grow from thousands of hectares in the mid-1990s to millions of hectares today (Fitzsimons, 2015; Fitzsimons, 2018).

The NRS is underpinned by a scientific framework that has a clear objective '*to develop a comprehensive, adequate and representative system of protected areas*,' commonly referred to as a 'CAR' reserve system (JANIS, 1997; NRMMC, 2005; NRMMC, 2009; DCCEEW, 2021b; DCCEEW, 2022b).

The extent of protected areas in Australia is mostly recorded in the Collaborative Australian Protected Area Database (CAPAD) (DCCEEW, 2023c). The 2022 CAPAD data reports 13,903 protected areas covering 169.9 million hectares or 22.10 per cent of the Australian landmass. Some 9.94 per cent of the Australian continent is in public protected areas, 10.94 per cent covered by Indigenous protected areas (IPAs) and 1.23 per cent as privately protected areas (PPAs). Therefore, in 2022, PPAs contribute at least 5.6 per cent to the total of protected areas in Australia. However, not all PPAs are reported as part of CAPAD (Fitzsimons, 2015; Clements et al., 2018).

It is important however that the data be examined at bioregional or subregional scales to understand the extent to which protected areas are ecologically representative (see analysis below).

## 1.3 The nature of PPAs in Australia

### 1.3.1 Conservation covenanting programs

One main way in which PPAs are established in Australia is via conservation covenanting programs administered by departments or statutory authorities of subnational governments. Conservation covenants, usually via their associated private land conservation agreements, typically include restrictive components (e.g. preventing development on the land) and sometimes positive components (e.g. obliging the landholder to conduct certain conservation management activities). Although there is no Australian Government control over conservation covenants, State covenanting programs can be approved by the federal environment minister under the *Income Tax Assessment Act 1997* for the purpose of access to tax concessions for eligible landholders (DCCEEW, 2023b).

CAPAD 2022 data reports 6,148 PPAs established via conservation covenants, covering 5.96 million hectares or 0.78 per cent of Australia (DCCEEW, 2023c) (although covenants have been historically under-reported in this database; Fitzsimons, 2015).

### 1.3.2 Private nature reserves

The second main way in which PPAs are established in Australia is as Private Nature Reserves (Fitzsimons, 2015). CAPAD 2022 data reports 92 Private Nature Reserves covering 3.5 million hectares or 0.45 per cent of Australia (DCCEEW, 2023c), however a 2013 estimate puts the land held by land trusts closer to 4.6 million hectares (Fitzsimons, 2015; Bingham et al., 2017).

These private nature reserves are recognised by the Australian Government as PPAs because their acquisition has been facilitated with funds from the Australian Government's NRS Program and a 99 year contract stating they are part of the NRS (Fitzsimons, 2006; Fitzsimons, 2015); and/or because '*they are managed by established environmental … NGOs*' that are '*deemed to be protected through 'other effective means' based on the organisation's purpose/mission,*

*policies and that their activities are consistent with the in-perpetuity conservation of private land.*' (Georgina Usher, DCCEEW pers. comm, 2023).

### 1.4 The importance of PPAs

PPAs, alongside IPAs and public protected areas, are vital to the success of the GBF (Bingham et al., 2021). The IUCN recognises that PPAs offer great opportunities for expanding the conservation estate to protect and manage areas of important biodiversity that lie beyond the boundaries of public protected areas (Mitchell et al., 2018a).

PPAs play a vital role in contributing to ecological representativeness, connectivity and ecosystem services, particularly in those bioregions and landscapes in Australia that are dominated by agricultural land uses, where there has been significant land clearing and fragmentation of remnant native vegetation, and where the bulk of the land is privately owned or managed (Fitzsimons and Wescott, 2001; Pasquini et al., 2011; Fitzsimons et al., 2013; Fitzsimons, 2015; Archibald et al., 2020).

PPAs that are appropriately supported with access to grants or annual payments, and access to technical support, can also bring important social and economic benefits to regional areas (Selinske et al., 2022). Funded PPAs can support rural and regional landholders with diversified sources of income for the environmental stewardship of parts of their properties, with flow-on economic benefits in their regional communities.

Palfrey et al. (2020) examined 412 articles in the global literature about the environmental and social outcomes of PPAs. They found the environmental outcomes of PPAs were mostly positive (89%), but social outcomes of PPAs were reported less (12% of all studies), and these outcomes were more mixed (65% positive). In Australia, various aspects of PPAs have been examined at the national level (e.g. Fitzsimons and Carr, 2014; Fitzsimons, 2015; Hardy et al., 2017; Ivanova and Cook, 2020) and within some states (e.g. Victoria; Fitzsimons and Wescott, 2001; Fitzsimons, 2006) but NSW has not been examined in detail.

The purpose of this paper is to document innovations that have strengthened the framework for establishing and supporting PPAs in New South Wales, with a particular focus on conservation covenants. We assess the key features of the new NSW framework and how these have accelerated the establishment of PPAs and provide increased financial and technical support to landholders managing PPAs. We also provide recommendations to further strengthen the NSW framework; the adoption of elements of the NSW approach by other sub-national governments; and the need to accelerate the establishment of PPAs nationally.

## 2 Assessment of the new NSW framework for PPAs

### 2.1 NSW operating context

Of Australia's 89 bioregions, 19 occur wholly or partly in NSW. In NSW, four bioregions exceed 30 per cent protected, one exceeds 17 per cent protected, while seven are less than 17 per cent protected, and another seven are less than 5 per cent protected. There are 14 bioregions representing more than 88% of NSW which have less than 17 per cent of the land included in protected areas (DCCEEW, 2023c).

Many of these under-protected bioregions occur in the NSW wheat-sheep belt and other regions where agriculture is the dominant land use (see Figure 1), where there has been significant land clearing, and where the bulk of the land is privately owned or managed. Over 75 per cent of NSW is used for agriculture: 47 per cent for grazing native vegetation (mainly in the western division); 15 per cent and 13 per cent for modified pastures and cropping, respectively, mainly in the central division wheat-sheep belt and the Monaro; and 0.12 per cent for horticulture (ABARES, 2022). Some 249 of 571 NSW (Mitchell) Landscapes (Mitchell, 2002; NSW Government, 2023) have been cleared by more than 50 per cent, of which 161 have been cleared by more than 70 per cent (DPE, 2022).

The NSW Biodiversity Outlook Report found that several NSW bioregions are close to a point of accelerating biodiversity loss. It explored ecological carrying capacity, defined as a measure of effective habitat after accounting for the time-delayed extinction loss of sensitive species following clearing (NSW Department of Planning, Industry and Environment, 2020) (Figure 2).

Given this context, PPAs must play a far greater role in building the NRS in NSW and contributing to the GBF's Target 3, particularly in the landscapes dominated by private ownership, agriculture, over-clearing, and loss of ecological carrying capacity.

### 2.2 NSW reforms

The NSW Government conducted a large-scope land management and biodiversity conservation reform process from 2013 that culminated in the *Biodiversity Conservation Act 2016* (the Act) and amendments to the *Local Land Services Act 2013*.

The reforms introduced stronger and more contemporary legislative provisions for the protection and management of biodiversity in NSW, including the offences, penalties and licensing regime for protecting native plants and animals; supporting recovery of threatened species and ecological communities; and for private land conservation.

Prior to 2017, the framework for private land conservation in NSW was administered by the then environment department and complemented by a former statutory authority: the NSW Nature Conservation Trust. However, there had been very limited funding in prior years and PPAs were being established at a relatively low rate (see analysis below).

The reforms included a commitment to funding of AU$240 million over the first five years and AU$70 million per annum ongoing (escalated with inflation) for a new private land conservation program to be administered by a new Biodiversity Conservation Trust (BCT). The BCT is a not-for-profit statutory authority governed by a semi-independent board. The reforms and the BCT commenced in August 2017. This aspect of the reforms is examined in detail in this paper.

While we see merit in these aspects, two key challenges have arisen from the broader reforms. Amendments to the *Local Land Services Act*

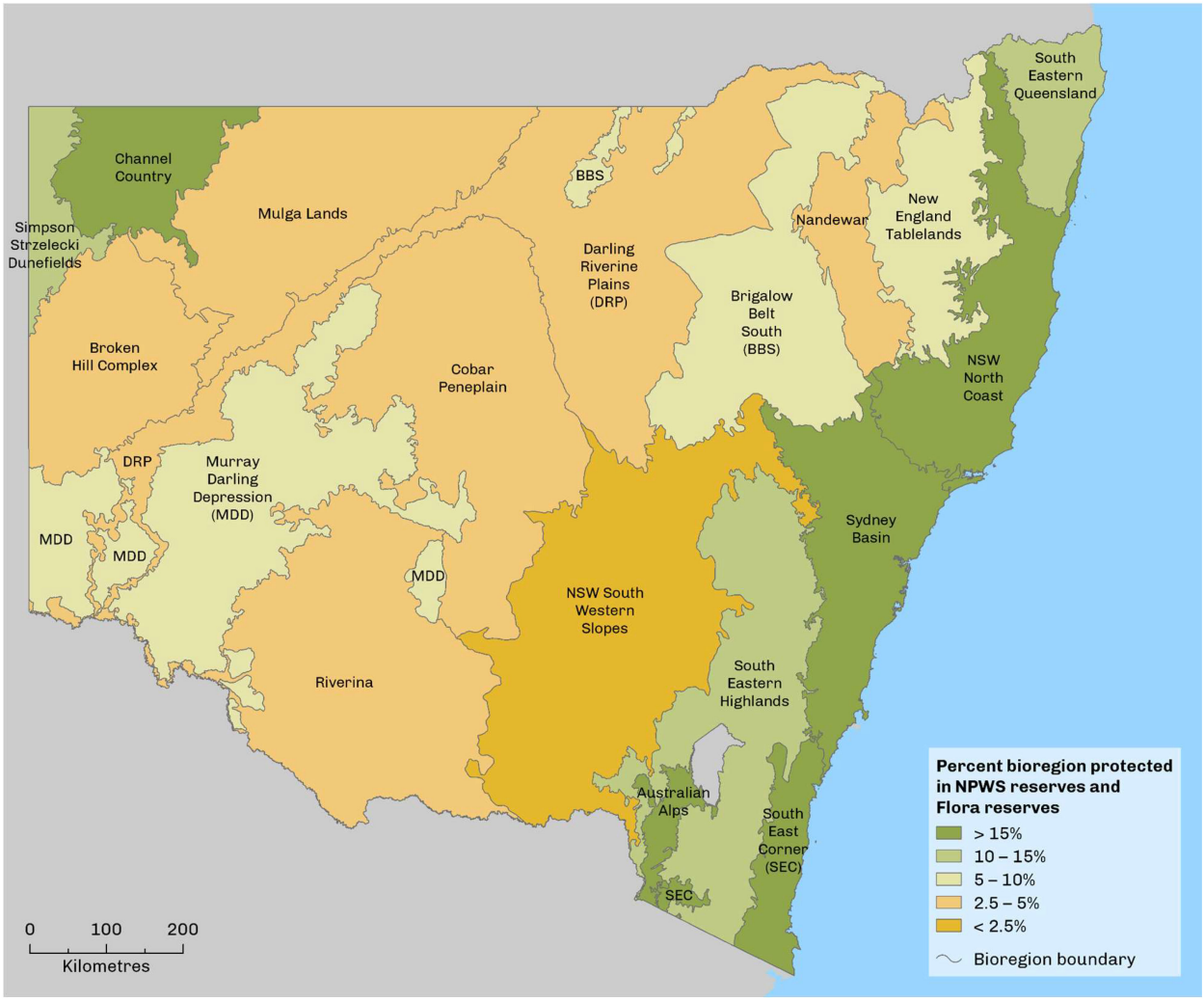


FIGURE 1
The percentage of bioregions in New South Wales included in protected areas (NSW EPA, 2021).

*2013* allowed greater scope for clearing of native vegetation for agricultural development or expansion without the normal offset obligations imposed on other forms of land development. This has resulted in higher rates of clearing of native vegetation in NSW since 2017 (DPE, 2022; DPE, 2023). The reforms also introduced the NSW Biodiversity Offset Scheme, which has many positive design features, but the implementation of which has been subject to some critical scrutiny through both a NSW Auditor General's performance audit (NSW Audit Office, 2022) and a NSW parliamentary inquiry into the integrity of the scheme (NSW Parliament, 2022).

## 2.3 Innovative features in the new NSW framework for private land conservation

### 2.3.1 A contemporary legal and institutional framework

Through the 2017 biodiversity conservation reforms (Parts 5, 6 and 10 of the Act), NSW established a robust and contemporary legal and institutional framework to support the establishment and management of private land conservation agreements (some of which count as PPAs).

The Act establishes strong governance arrangements for the BCT as the sole government entity for private land conservation in NSW. A key feature of the BCT's strategic approach is a diversity of programs, delivery mechanisms and private land conservation agreements.

The Act preserved, rationalised, and strengthened the legislative basis for three types of statutory private land conservation agreements and their associated covenanting mechanisms. The three types of private land conservation agreements are: wildlife refuge agreements (which can be revoked) and conservation agreements (which can be for a set term or in-perpetuity) established under the NSW Government's private land conservation program; and in-perpetuity biodiversity stewardship agreements established under the NSW Biodiversity Offsets Scheme. Those conservation agreements that are in-perpetuity and biodiversity stewardship agreements meet the definition of

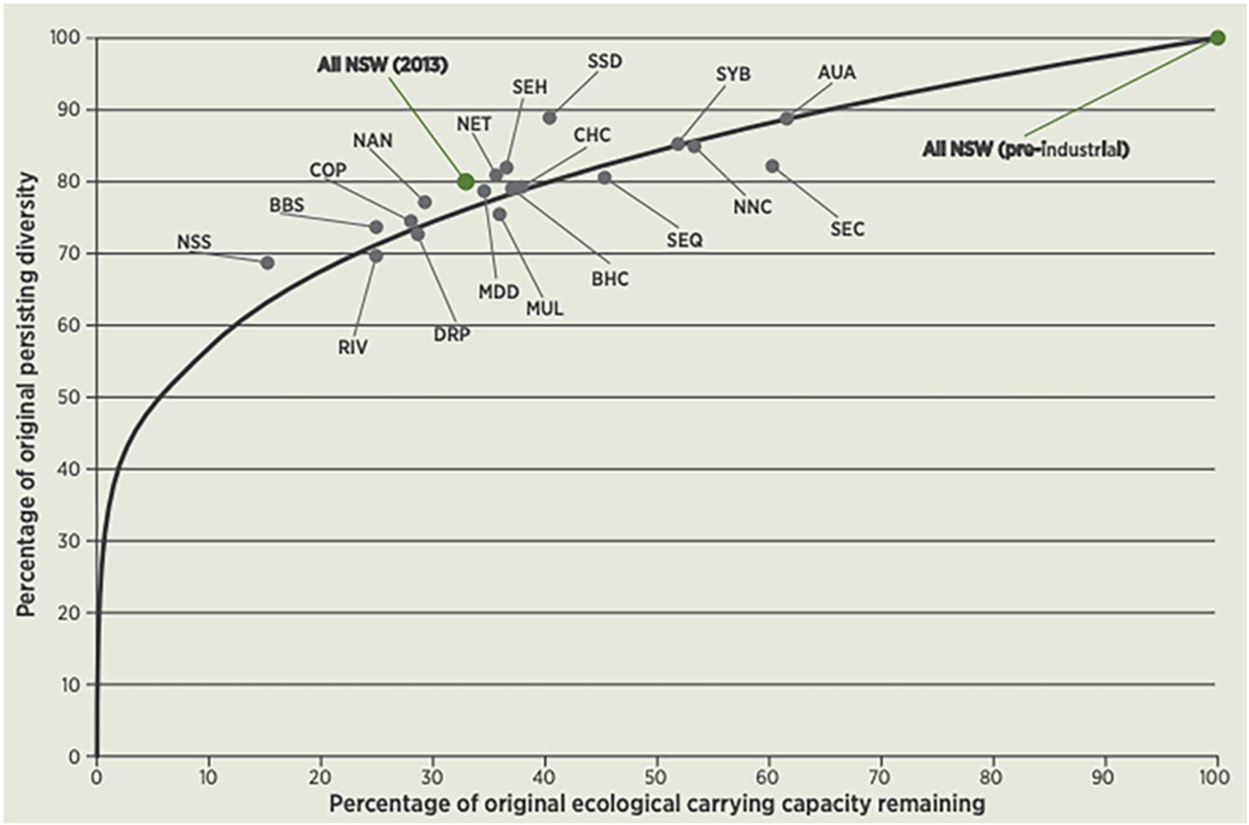


FIGURE 2
Declining ecological carrying capacity in NSW bioregions. Graph represents percentage of persisting diversity of vascular plant ecosystems for each bioregion, plotted against percentage of ecological carrying capacity remaining. The line shows the theoretical relationship between effective habitat and persisting diversity. Bioregion codes NSS, NSW South Western Slopes; BBS, Brigalow Belt South; COP, Cobar Peneplain; NAN, Nandewar; NET, New England Tablelands; SEH, South East Highlands; SSD, Simpson-Strzelecki Dunefields; CHC, Channel Country; SYB, Sydney Basin; AUA, Australian Alps; RIV, Riverina; DRP, Darling Riverine Plains; MDD, Murray-Darling Depression; MUL, Mulga Lands; BHC, Broken Hill Complex; SEQ, South East Queensland; NNC, NSW North Coast; SEC, South East Corner. Source: NSW Department of Planning, Industry and Environment, 2020.

PPAs. Set-term conservation agreements and wildlife refuge agreements do not.

The BCT retained, strengthened, and extended existing programs and delivery mechanisms previously operating in NSW (revolving fund, grants and voluntary applications for wildlife refuges or conservation agreements); and added new programs and mechanisms (fixed price offers, conservation tenders, co-investment partnerships).

Under the BCT's Conservation Management Program, under which the BCT enters agreements with annual payments in priority investment areas, the delivery mechanisms are: (1) fixed price offers; (2) conservation tenders; (3) co-investment partnerships; and (4) a revolving fund (BCT, 2023l).

Under the BCT's Conservation Partners Program, under which the BCT enters partnership conservation agreements with access to grants, the delivery mechanisms are: (1) landholder applications for conservation agreements; (2) landholder applications for wildlife refuge agreements; (3) conservation partners grants; and (4) the revolving fund (BCT, 2023k).

The BCT has developed further mechanisms under the Biodiversity Offsets Scheme, including the management of biodiversity stewardship agreements.

This diversity of programs, delivery mechanisms and agreements operate to provide alternative pathways to private land conservation for landholders with diverse interests, and to maximise the scope to advance private land conservation and PPAs in NSW by targeting a range of nature conservation objectives through tailored mechanisms.

### 2.3.2 Strategic investment

An important enhancement to the NSW framework is provision in the Act for the Minister to make a Biodiversity Conservation Investment Strategy. The strategy must include a map of identified priority investment areas (Figure 3) and principles that guide investment in those priority investment areas. The purpose of the science-based strategy is to guide the government and the BCT in prioritising investment in biodiversity conservation.

### 2.3.3 Fostering trust and transparency

The provisions establishing the BCT and the BCT Board are important in establishing transparency and trust with prospective and participating landholders.

In establishing a government-sponsored entity to deliver public-private partnerships in private land conservation, the

government, including as an enabling and funding partner, has a legitimate interest in being able to control the entity. That said, transparency and a degree of independent and sound governance are vital to enable trust to exist between the government-controlled private land conservation entity and private landholders.

Recognising the need to strike a balance, the Act provides for BCT to be subject to the control and direction of the Minister *and* provides that the BCT must publish any directions made by the Minister. This transparency requirement appropriately positions the BCT Board as a semi-independent body to govern the BCT and its relationships with participating landholders.

The Act states BCT must conduct its activities in accordance with a business plan approved by the Minister *and* requires the business plan to be published. The BCT is also required to prepare an annual report (e.g. BCT, 2022b), including the BCT's financial statements, which must be tabled in Parliament and published.

BCT manages and controls three funds, which have prescribed functions, and to act as trustee of money or other property vested in the BCT, including the monies held, managed and invested to support term or in-perpetuity annual payments to agreement holders. These provisions impose a strong duty of care on the BCT to exercise rigorous and prudential funds and investment management. These provisions were designed to give confidence to prospective and participating landholders that the government and the BCT will honour agreed payment arrangements.

### 2.3.4 Substantive NSW government funding for BCT operations

The lack of suitable and adequate funding arrangements has been a key factor inhibiting the role of PPAs in contributing to the NRS. In NSW prior to 2017, funding was generally modest, sporadic and short term.

In NSW, the BCT manages over 2,270 private land conservation agreements (as at 31 March 2023) and is seeking to enter a further 400 during its current four-year business plan.

The BCT currently spends about $25 million per annum to operate and support private land conservation in NSW. Of this $25 million, about $7 million is expended on management and governance of the BCT (i.e. overheads) and the balance is expended on program delivery and landholder support, including program design, program delivery to procure new agreements (e.g. the conduct of conservation tenders to bring new landholders in to private land conservation), funds and investment management, grants for agreements not including annual payments, ecological monitoring, and vitally, education (BCT, 2023j) and participating landholder support programs.

The amount to be expended on operations can be expected to grow over time as more landholders participate in private land conservation, but this would be incremental as significant economies of scale can be anticipated. This can be supported also by making provisions from the investment budget (see below) for ongoing functions like landholder support. If, for example, the pace of investment was to double or triple (which may be required to achieve a CAR NRS and nature-positive outcomes by 2050), the operational budget of the BCT may only need to increase to about $30 to $35 million per annum.

### 2.3.5 Substantive NSW government funding for investment in PPAs

Landholders entering private land conservation agreements face three main costs: the opportunity cost of foregone alternative uses of the land, transactions costs in establishing an agreement (e.g. application fees, environmental assessment, legal advice, taxation advice), and ongoing conservation management costs (with higher

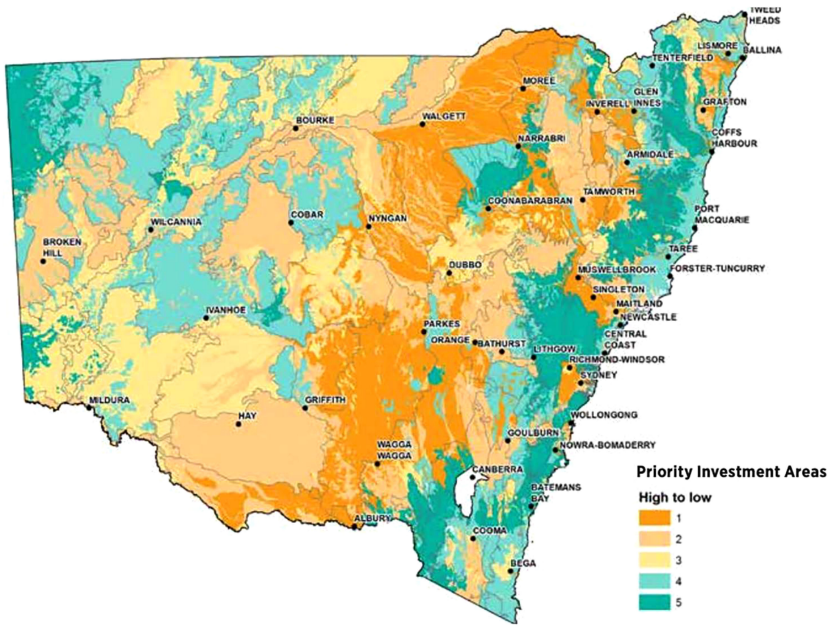


FIGURE 3
NSW priority biodiversity conservation investment areas. Source: NSW Office of Environment and Heritage, 2018.

expenditures usually occurring in the earlier establishment years and sporadically thereafter as a result of *force majeure* events). In addition, some altruistic landholders may accept significant or some net losses to participate in private land conservation while others may expect to make some level of profit from engaging in private land conservation.

PPAs established under State-administered schemes are effectively public–private partnerships. The landholder manages the land for the long-term conservation of nature while the covenant issued by the State is the legal means that establishes the clearly defined geographical space that is dedicated permanently (or long-term) for this purpose. One complexity that arises in such public–private partnerships is funding arrangements for PPA establishment and ongoing conservation management.

By comparison, the management and funding of public protected areas such as national parks is conceptually simpler. In these cases, the government owns, controls and manages the land pursuant to an Act of the State, and is responsible for funding capital and recurrent expenditure requirements. While conceptually simpler, in practice quality conservation outcomes in public protected areas are dependent on the will of governments of the day to invest adequately in effective conservation management.

To be successful in achieving intended conservation outcomes, a PPA, as a permanent or long-term government–landholder partnership, must be supported by an adequate permanent or long-term funding arrangement negotiated between the government and the landholder, ideally with both parties contributing proportionate to the benefits they derive.

While some benefits of a PPA may flow to the individual landholder (e.g. through ecosystem services) many and usually most benefits (e.g. protection of threatened species and conservation of biodiversity at landscape and bioregional scales) flow to surrounding landscapes and the broader community (Archibald et al., 2021). Therefore, the government partner should make an appropriate and sustainable financial contribution to fund these positive externalities. The extent to which the government partner may fully or partially contribute to the overall costs of a PPA will depend on many factors, including the government partner's objectives and method of procurement, and the motivations and interests of the participating landholder (and any third-party co-investors).

Long-term funding arrangements are therefore critical to supporting both participation in PPAs and to maintaining long-term, good-quality conservation outcomes.

The NSW Government has recognised this; that governments, alongside the private and non-government sectors, must contribute to building the PPA estate in Australia. From August 2017, the NSW Government committed funding for private land conservation of $70 million per annum (escalated with inflation), including the $25 million for BCT operations as set out above, and $45 million per annum for investment in new funded conservation agreements. This is an impressive start but whether it is sufficient is explored later in this paper.

### 2.3.6 Payment certainty through an accumulating endowment fund

To encourage participation, landholders must feel that they can trust the government and its private land conservation entity to honour the private land conservation agreement and any associated funding arrangements. NSW is one jurisdiction at least where some scepticism about private land conservation programs had arisen in prior decades due to longer-term funding promises being abandoned.

A key innovation in the new NSW framework was the establishment of a new Biodiversity Conservation Fund under the Act.

Once a private land conservation agreement has been prepared via one of the BCT's delivery mechanisms, it specifies the annual payments the landholder will receive for the term of the agreement, including for in-perpetuity agreements. The approach allows for variable payment amounts over the first 15 years and a fixed amount thereafter. It codifies how payments will be indexed each year due to realised inflation. The BCT can include annual funding provisions to support the BCT's ongoing functions such as agreement management, landholder support and ecological monitoring. The BCT then determines a present value of these future payments and provisions using a discount rate.

The discount rate is set by the BCT Board annually having regard to its financial risk appetite; advice from the NSW Treasury Corporation (TCorp) on long-term investment return and volatility forecasts, and inflation assumptions; BCT and TCorp fund management fees; modelling from actuaries on the forecast probability of future fund adequacy; and advice from actuaries on an appropriate investment market risk adequacy margin.

The BCT uses the Biodiversity Conservation Fund to hold, up-front, the assets (i.e. full present value of future payments) required to support the inflation-indexed annual payments for the term or in-perpetuity life of each new funded conservation agreement it enters.

The BCT Board aims to maintain the fund at present level of asset adequacy of 120 per cent relative to the present value of all future conservation agreements payments and BCT provisions, to mitigate the risk of market downturns.

The funds set aside for each agreement in the Biodiversity Conservation Fund are invested via TCorp in inflation-hedged investments. The principal amounts and proceeds of investment are used to make the annual payments. For term agreements, the principal amount is drawn down over the life of the agreement, whereas for in-perpetuity agreements, the aim is to retain the principal amount (managing fluctuation from year to year due to market volatility).

From the Biodiversity Conservation Fund, the BCT makes annual term or in-perpetuity payments for conservation agreements established in priority investment areas (BCT, 2023a). As at 31 March 2023, the BCT was *"investing more than $239.9 million to support these agreements. … Landholders with funded agreements are typically being paid between $5 and $432 per hectare, per annum to manage these conservation areas."* (BCT, 2023d). In the 12 months to 31 March 2023, the BCT made payments worth $10.3 million to the 165 holders of funded conservation agreements (BCT, 2023d).

The Biodiversity Conservation Fund is in effect an accumulating endowment fund and provides substantial certainty for the participating landholders that the term or ongoing annual

payments will be honoured. It also mitigates against any risk that already participating landholders would become disadvantaged if a future NSW Government opted to cease investing in new private land conservation agreements.

### 2.3.7 New, faster and targeted delivery mechanisms – fixed price offers and conservation tenders

PPAs in Australia have been established historically by landholders voluntarily applying to enter private land conservation agreements (with associated covenants) with governments (Fitzsimons and Carr, 2014). This has sometimes been supported by incentives to support establishment and/or short-term grants for conservation management. This has been effective in some jurisdictions over time but the levels of landholder participation, pace of establishment of PPAs, and the quality of conservation outcomes have been hampered by an absence of or insufficient funding for establishment costs and/or ongoing conservation management costs.

Voluntary mechanisms have largely relied on altruistic landholders willing to bear the bulk of or all costs of establishing and managing a PPA. This reliance on altruism has skewed establishment of PPAs into only some bioregions or subregions where it is attractive to landholders to manage a conservation property as a lifestyle option. In NSW for example, voluntary private land conservation agreements are concentrated in coastal and hinterland regions (BCT, 2023d), similar to some other jurisdictions (Fitzsimons and Wescott, 2001; Fitzsimons, 2015).

The quantum and ongoing commitment of NSW Government funding enabled the BCT to go beyond traditional delivery mechanisms like the revolving fund and unsolicited and unfunded voluntary agreements, and to accelerate the establishment of conservation agreements in priority investment areas. To achieve this, the BCT designed two primary delivery mechanisms aimed at achieving private land conservation agreements (mainly PPAs) at a greater pace and scale, and in priority investment areas: fixed price offers and conservation tenders.

The BCT offers a standing fixed price per hectare per year for the conservation of biodiversity in certain priority investment areas (BCT, 2023g). These areas contain threatened ecological communities, habitat for threatened species and/or important wetlands. They are under-represented in the NRS. Landholders can express interest at any time and the BCT assesses applications annually.

The BCT typically conducts three conservation tenders each year in targeted priority investment areas for specified conservation values.

The main difference between the two mechanisms is that one involves a fixed annual payment offered by the BCT, whereas in conservation tenders bidders set their own schedule of proposed annual payments. Both are competitive processes aimed at eliciting value-for-money conservation agreements. In both mechanisms, the BCT funds and conducts biodiversity value assessments and assists landholders to participate through a supported, two-stage process.

In both mechanisms, after receiving expressions of interest in the first stage, the BCT checks eligibility and shortlists the best prospects for on-site assessments. During site assessments, the BCT works with the landholder to identify conservation values, and a suitable conservation area, and drafts a conservation agreement and associated conservation management plan. At this stage, the BCT also assesses the site using its peer-reviewed Assessment Metric to determine a Biodiversity Value Score (BCT, 2022a).

Once a set of conservation agreements have been prepared for a conservation tender, the BCT invites the landholders to price their agreement, by specifying the annual payments they wish to receive, and to submit the draft agreement and payment schedule as a tender bid (similar to other tender-based approaches in Australia: Rolfe et al., 2017; Whitten, 2017). In the case of fixed price offer rounds, the BCT invites the landholder to apply to enter the draft agreement based on the BCT relevant fixed price offer.

In both mechanisms, the BCT establishes independent panels to assess value for money in accordance with a tender evaluation plan. A key determinant for ranking successful bids and applications is value for money determined by calculating a Biodiversity Value Index, where the Biodiversity Value Score is the numerator, and the present value of the proposed payments and provisions is the denominator. Other assessment criteria are also applied to ensure the BCT is only selecting good, value-for-money conservation agreements.

The BCT has to date conducted six rounds of fixed price offers and 17 conservation tenders (BCT, 2023d). Figure 4 shows funded conservation agreements, established via fixed price offers and conservation tenders under the BCT's Conservation Management Program, have been effective in the establishment of more PPAs in the priority investment areas of NSW, i.e. in priority investment areas 1, 2 and 3 shown in Figure 3 (BCT, personal communication, 25 July 2023).

### 2.3.8 New delivery mechanisms – co-investment partnerships

In June 2022, the BCT launched a co-investment partnerships prospectus inviting the corporate and philanthropic sectors, and the Australian Government, to co-invest with the BCT in private land conservation and biodiverse carbon projects (BCT, 2022c). The prospectus lists five co-investment partnership pathways: (1) biodiversity plus carbon projects; (2) supporting Aboriginal landholders; (3) real property, real conservation; (4) large-scale conservation properties; and (5) protecting endangered species and ecosystems. The objective of these new delivery mechanisms is to leverage third-party investment in PPAs, in addition to BCT and landholder investment, by highlighting and enabling access to the BCT's high-integrity mechanisms for investing in nature conservation and biodiverse carbon projects.

Two tangible outcomes have arisen to date. Firstly, the BCT has entered its first co-investment partnership for a large-scale conservation and cultural heritage site arising from its first co-investment partnership with an Indigenous landholder (the Nari Nari Tribal Council), and an NGO (The Nature Conservancy Australia). This single agreement entails a very large PPA at Gayini (55,220 ha) in a high priority bioregion, with Nari Nari Tribal Council to receive annual funding of about $1 million per annum (BCT, 2023h).

Secondly, the BCT is currently conducting its first biodiversity plus carbon conservation tender (BCT, 2023i). Telstra (a national

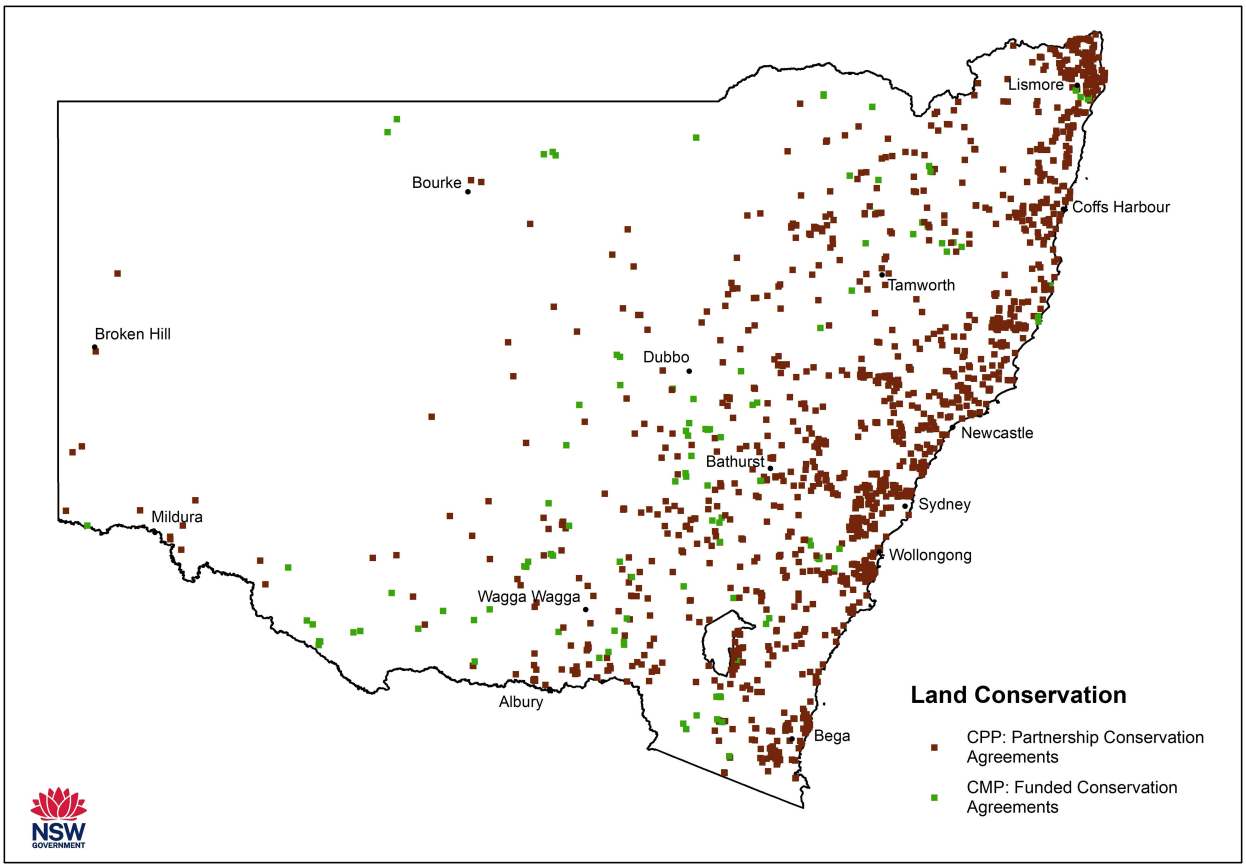


FIGURE 4
Conservation agreements resulting from the NSW Biodiversity Conservation Trust's Conservation Partners Program (CPP) and Conservation Management Program (CMP) as at 31 March 2023. Source: NSW Biodiversity Conservation Trust.

telecommunications company) has entered into a co-investment partnership with the BCT to support this new type of tender. Telstra may offer long-term contracts to successful landholders to purchase Australian Carbon Credit Units generated over the life of the carbon project; and the BCT will make payments for the long-term biodiversity values that arise from the biodiverse carbon project, to be located within the conservation covenant. There is enormous potential for the BCT to further accelerate the establishment of PPAs by leveraging more corporate investment in nature conservation or in biodiverse carbon projects.

Currently, the BCT is in effect purchasing the protection of all or most of the biodiversity values that arise from conservation agreements that receive annual payments and some of the values from those landholders that receive grants.

The BCT is exploring development of a tradable biodiversity unit for conservation agreements that could be used to support corporate investment in biodiversity projects alongside carbon projects (BCT, 2023m).

## 2.3.9 Strengthened delivery mechanism – revolving fund

Some organisations use 'revolving funds' to buy land, place it under permanent protection, and on-sell it to landholders willing to manage the land for conservation under a conservation covenant. In the past, the former NSW Nature Conservation Trust managed a revolving fund.

Revolving funds can be highly effective by being opportunistic in the real estate market and securing properties with high conservation values (Hardy et al, 2018a; Hardy et al, 2018b; Hardy et al, 2018c). However, they can only establish PPAs at considerable capital or transactional cost. Historically, these significant costs and the opportunistic nature of these mechanisms means they have only established PPAs slowly. For example, the NSW BCT has only 'revolved' 11 properties in five years, albeit that most have very high conservation values, and some are of significant scale.

The BCT has retained this mechanism but reoriented it to focus predominantly in priority investment areas, with resulting conservation agreements supported via fixed-price-offer annual, in-perpetuity payments. Payments improve resale value, enabling the revolving fund to operate more cost effectively.

## 2.3.10 Strengthened delivery mechanism – conservation partners grants

Prior to the BCT, some modest grants were available from time to time via the NSW Environmental Trust and earlier departments. Early on, the BCT identified the need to provide better technical and financial support to existing agreement holders to ensure they can

achieve good conservation outcomes in their conservation areas. BCT offers grants of up to $15,000 per annum for up to three years for agreements that do not include annual payments, known as 'partnership conservation agreements' (BCT, 2023b). These include agreements established prior to the creation of the BCT, the bulk of which do not include ongoing annual payments, and new agreements established outside priority investment areas, which also do not include annual payments.

The establishment of the BCT and this grants mechanism in particular reinvigorated landholder interest in participating in partnership conservation agreements. Early in its life, the BCT was overwhelmed by hundreds of new applications for partnership conservation agreements, and at 31 March 2023, the BCT had entered 236 new partnership conservation agreements and still had 232 applications under assessment (BCT, 2023d).

To 31 March 2023, the BCT has approved grants worth $7.11 million over 105,600 hectares of both new and previously established partnership conservation agreements (BCT, 2023d).

#### 2.3.11 Enabling adaptive management

During program design and landholder consultation, in designing long-term or in-perpetuity conservation agreements, the BCT identified a concern that the landholders could become locked-in with an inflexible conservation management and payments regime. The conservation management needs for a conservation area may evolve over time if the threats to conservation values change.

Recognising this, the BCT includes a provision in each agreement for reviews at five-yearly intervals. This allows the conservation management plan to be updated if required. The BCT adopted a policy that, if a suitable business case can be made at the time of a review, it may also consider an increase in the future annual payments to address additional conservation management needs, subject to the BCT having sufficient uncommitted investment budget available at the time of the review to support the present value of proposed increases in future payments.

#### 2.3.12 Technical support and networks

The IUCN guidelines for PPAs (Mitchell et al., 2018a) note the importance of recognition, technical support, and private land conservation networks as powerful incentives for PPAs. All private land conservation entities operating in Australia recognise the importance of technical support for participating landholders. Because it has sufficient operational funding, the BCT has been able to put in place a well-funded and comprehensive Landholder Support Program (BCT, 2023c).

The BCT relies on its base funding to provide this technical support to the stock of agreement holders it inherited, and now sets aside funds for each new agreement so that this capacity grows over time proportional to the growth in agreements.

Anecdotal evidence and feedback to the BCT via landholder surveys have indicated that technical support, education, and networking are vital to the satisfaction of almost all landholders participating in private land conservation.

### 2.4 Progress under the new NSW framework

The innovations and enhancements to the NSW private land conservation framework have been very successful in accelerating the establishment of private land conservation agreements and PPAs in priority investment areas in NSW.

As at 31 March 2023, the BCT reports 1,496 PPAs (in-perpetuity conservation agreements and biodiversity stewardship agreements) over 475,666 hectares (BCT, 2023d; BCT, 2023e). Figure 5 shows the growth in the numbers and hectares of PPAs in NSW since 1990 (BCT, unpublished data, 25 July 2023).

Excluding the early years from 1990 to 1998, the historical average rate at which PPAs were being established in NSW from 1999 to 2017 was around 50 agreements and 12,000 hectares per annum. The new *Biodiversity Conservation Act 2016*, the BCT, and increased NSW Government funding commenced in August 2017. From 2018 to 2023, the rate of establishment of PPAs has accelerated to more than 100 agreements and 45,000 hectares per annum. Not only has the rate of establishment tripled (by area), but many more PPAs are now being established in much higher priority bioregions, meaning more valuable conservation outcomes. The BCT is also now able to provide more comprehensive financial and technical support to all past and new participating landholders, leading to more informed landholders and potentially better overall conservation outcomes across the entire private land conservation estate.

While numbers and hectares of PPAs are important quantitative measures of outcomes, the return on investment in PPAs should also be measured qualitatively. Under its Ecological Monitoring Module, the BCT recently published its first biodiversity outcomes report, providing a baseline assessment of the condition of the private land conservation estate in NSW (BCT, 2021; BCT, 2023n).

In NSW, term conservation agreements or wildlife refuge agreements, which are revocable, while not meeting the IUCN definition of a protected area, are also important forms of private land conservation. The BCT manages 774 such agreements across more than 1.79 million hectares, which do not count as part of the NRS, but some longer-term agreements may qualify as potential OECMs based on future assessments. The BCT has incentives and programs in place to encourage these agreement holders to upgrade to permanent agreements. In total, as at 31 March 2023, the BCT is managing 2,270 private land conservation agreements with landholders over 2.263 million hectares, representing around 2.8 per cent of NSW (BCT, 2023f).

## 3 Discussion

### 3.1 Addressing native vegetation clearing

We suspect that, with the increased rates of native vegetation clearing in NSW since 2018 (DPE, 2023; Henry et al., 2023), the loss of biodiversity values is likely to be outstripping gains in

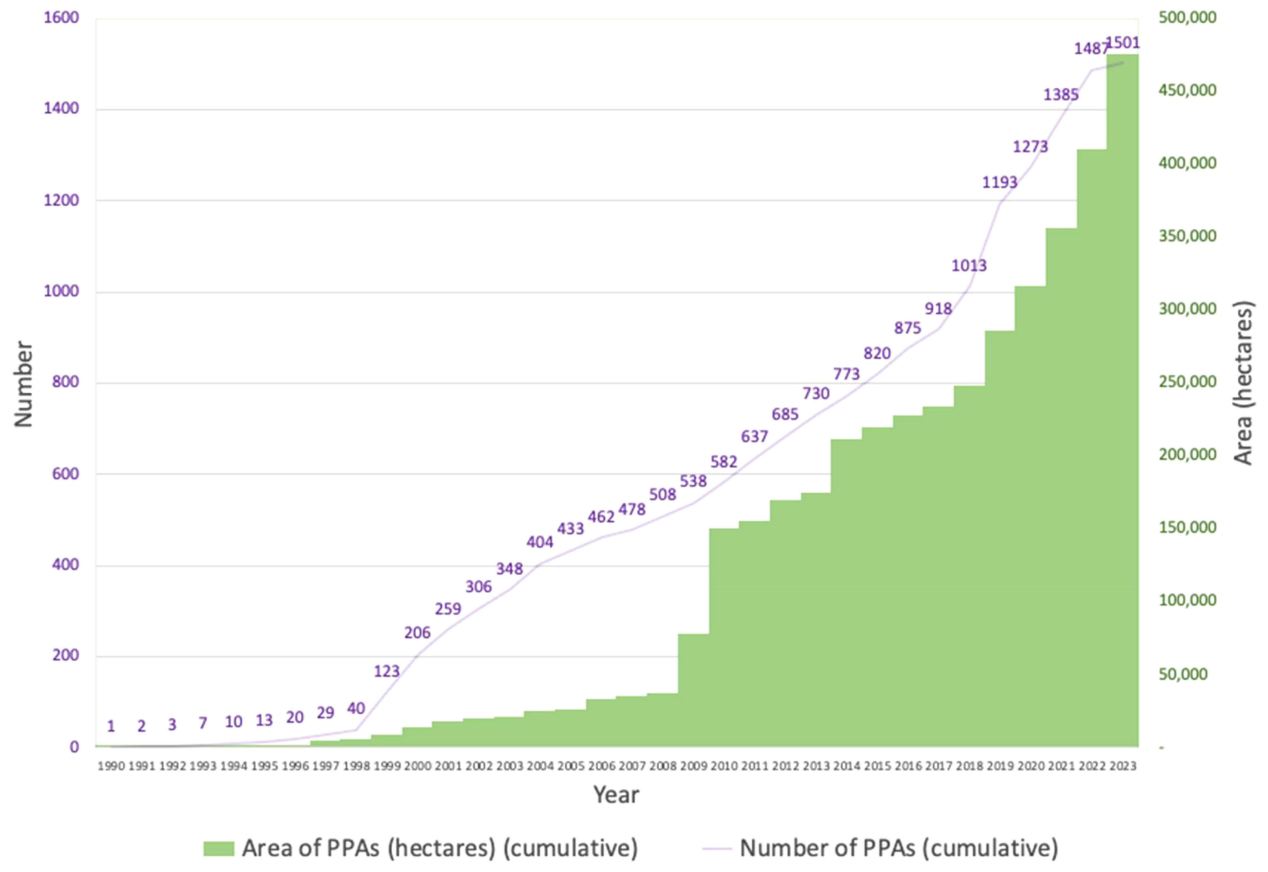


FIGURE 5
Growth in the numbers and hectares of PPAs in NSW since 1990. Source: NSW Biodiversity Conservation Trust, 2023.

biodiversity values in several bioregions of NSW, even after accounting for the positive effects of the enhanced NSW framework for PPAs and the ongoing establishment of national parks in NSW. The current rates of land clearing in NSW and in some other Australian jurisdictions may be inconsistent with the GBF and Australian and NSW government ambitions for nature positive (Henry et al., 2023).

## 3.2 Possible refinements to the NSW framework

While the NSW framework has resulted in a significant increase in the rate of establishment and increase in priority values protected by PPAs and has many elements that are seen as a model in Australia, we have identified some measures that could strengthen it further.

### 3.2.1 Aligning the BCIS and BCT programs with the GBF

An important element of the NSW framework is the Biodiversity Conservation Investment Strategy. The *Biodiversity Conservation Act 2016* provides for this strategy to be reviewed every five years. There is an opportunity for the strategy and BCT programs to be brought into stronger alignment with the goals and targets of the new GBF.

The current strategy places emphasis on sampling of unrepresented and under-represented landscapes and on socio-economic benefits for landholders and regional communities. While these are important, the strategy's objectives could be broadened to align with the wider suite of objectives of the GBF, such as restoration of degraded ecosystems, nature-based solutions to climate change, sustainable agriculture, ecosystem services, and benefit sharing for traditional owners.

For example, current settings in the strategy, BCT eligibility requirements, and the BCT assessment metric may unintentionally undervalue investment in long-term restoration of well-functioning ecosystems in landscapes which are over-cleared and with at-risk ecological carrying capacity.

### 3.2.2 A separate fund and risk management framework

The BCT's Biodiversity Conservation Fund holds the assets required to support the annual payments under funded conservation agreements but is also used for all the BCT's other revenues and expenditures for its private land conservation and

biodiversity offset scheme functions. Holding agreement assets and the BCT's other purpose revenues in one fund creates complexity and potentially undermines transparency.

For technical accounting reasons, the present value of future conservation agreement payments cannot be treated as a liability against the agreement assets. This creates an undesirable accounting revenue–expenditure mismatch and uncertainty or confusion about why the BCT is apparently accumulating net assets over time.

By comparison, assets held for funded, in-perpetuity Biodiversity Stewardship Agreements are held in a separate Biodiversity Stewardship Payments Fund that does not form part of the BCT's balance sheet. Legislative provisions quarantine assets held in the Biodiversity Stewardship Payments Fund for Biodiversity Stewardship Agreements and associated costs; and establish risk management arrangements.

It would simplify BCT accounting and reporting, and increase transparency and certainty for participating landholders, if the Act established a separate fund for the assets held for funded conservation agreements, and an associated risk allocation and management framework.

### 3.2.3 Limiting the use of term agreements

The BCT offers only in-perpetuity agreements through all but one of its delivery mechanisms. The BCT offers the option of term conservation agreements, with a minimum term of 15 years, through its conservation tenders. This approach was adopted to encourage greater participation by those landholders anxious about the implications of permanent agreements. However, term agreements do not count as PPAs.

To date, the BCT investment in funded conservation agreements disaggregates into 71 per cent in-perpetuity agreements and 29 per cent term agreements (BCT, 2023d). The BCT could consider further restricting access to term agreements. Options include only making term agreements available under the fixed price offer mechanism rather than through conservation tenders, and/or setting a tighter cap on the total proportion of the BCT's investment that can flow to term agreements.

### 3.2.4 Better strategic coordination with public protected areas

NSW currently has a Biodiversity Conservation Investment Strategy 2018 to guide the BCT's investment in PPAs and a National Parks Establishment Plan 2008 (DECC, 2008) to guide the establishment of public protected areas. Better outcomes may be achieved if NSW developed an integrated and science-based strategic investment plan for the establishment of all types of protected areas and OCEMs across the State, in line with IUCN guidelines (Mitchell et al., 2018a).

## 3.3 Voluntary markets and their intersection with PPAs

A voluntary environmental market is where an individual or company purchases environmental values (often called 'credits') without being legally obliged to do so. Voluntary markets are becoming common in addressing climate change, where companies seek to buy carbon credits to offset or compensate for the emissions from their business activities, motivated by many factors including the Taskforce on Climate-related Financial Disclosures (TCFD, 2023) and investor/shareholder expectations.

There is now also growing demand for voluntary investment in nature conservation or biodiverse carbon projects. Demand is being driven by both philanthropy and by the concept of Environmental, Social and Corporate Governance (ESG) being adopted by many corporations. Demand will be further motivated by the work of the Taskforce on Nature-related Financial Disclosures (TNFD, 2023) and Target 15 in the GBF that requires policy action on corporate disclosure of impacts on biodiversity (CBD, 2022).

The BCT is exploring development of a voluntary market for the values created by conservation agreements (BCT, 2023m). The Australian Government is aiming to establish a 'Nature Repair Market', where 'a single tradable certificate will be issued for each project, which can be sold to buyers under commercial contracts' and that 'certificates will provide standardised information to enable the market to confidently compare and value projects' (DCCEEW, 2023d).

A key challenge for all Australian governments and all private land conservation entities operating in Australia will be to ensure that PPAs are properly recognised and valued in emerging voluntary markets for nature conservation. We contend that voluntary markets for biodiversity values should be designed, everything else being equal, to place greater market value on PPAs, as permanent private land conservation agreements with covenants on title, relative to the market value attributed to set-term private land conservation agreements, OECMs or other forms of short-term or less secure investment in nature conservation projects.

Care is also needed to ensure that voluntary and compliance markets are not inappropriately conflated. Compliance markets for biodiversity credits like the NSW Biodiversity Offset Scheme have different priorities. They prioritise like-for-like offsets typically nearer to the relevant development, which sometimes may and sometimes may not arise where the highest priorities for investment in nature conservation and restoration are located. They drive offsets to be located nearer to development, typically in areas of higher land value. As compliance markets, they also face higher up-front assessment and ongoing compliance costs. These three factors mean that on average credits secured under compliance markets will cost more per equivalent unit of biodiversity value than credits secured in voluntary markets. As at 31 March 2023, the BCT was managing and investing $6,278 in assets in the Biodiversity Stewardship Payments Fund for the average hectare of all biodiversity stewardship agreements (in the compliance market) compared to managing and investing $778 for the average hectare of all funded conservation agreements in the Biodiversity Conservation Fund. While these figures should be interpreted with caution as they do not account for varying biodiversity value, they demonstrate that biodiversity stewardship agreements are on average far more expensive than conservation agreements.

## 3.4 Sub-national level legislative, policy, and institutional frameworks

The new framework supporting the establishment and better management of PPAs in NSW includes several innovative features and has proven effective. We see merit in sub-national governments in Australia establishing new or stronger frameworks to better support the role that PPAs must play in achieving Australia's commitments under the GBF.

We believe that the BCT model of a dedicated, board-governed, and properly-funded statutory trust established explicitly to deliver all aspects of private land conservation programs, and to provide ongoing technical and financial support to the growing estate of privately managed protected areas, provides a range of benefits and efficiencies compared to programs operating from within government departments. As per previous discussion on similar models (e.g. Whelan, 1997), this model seems more likely to be effective in establishing trust and eliciting the participation of private landholders in PPAs.

Other key features of the NSW framework that we commend to State and Territory governments include the NSW legislation (as it relates to operation of the BCT), the Biodiversity Conservation Investment Strategy, the BCT's diversity of programs and delivery mechanisms, and the role the Biodiversity Conservation Fund plays as an accumulating endowment fund.

## 3.5 State and Territory government funding for viable private land conservation entities

A vital element is funding. There is only merit in proceeding with stronger legislative, policy and institutional arrangements with adequate funding. To support the establishment and effective ongoing management of PPAs at a suitable pace and in an efficient and cost-effective manner, State and Territory governments must provide foundational funding to enable an efficiently functioning private land conservation entity to facilitate establishment and ongoing management of private land conservation agreements and PPAs with thousands of landholders. Based on the NSW experience at $25 million per annum, we estimate this would require from around $20 million per annum in Victoria to possibly as much as $40 million per annum in Queensland.

## 3.6 Australian and State and Territory government investment in PPAs

It is also vital that governments, alongside the private and non-government sectors, contribute to investing in the PPA estate in Australia. While private sector participation in compliance (offset) regimes and voluntary markets will play an important role, as will philanthropic investment, these alone will be insufficient in many bioregions; and governments must play their part to both redress past market and government failure that has led to over-cleared landscapes and threatened species, and to fund, at least in part, the positive externalities arising from PPAs.

Improved frameworks and sub-national government spending on viable private land conservation entities, along with national and sub-national government investment in PPAs, are also vital to establish a critical mass of activity and proof of concept to induce greater corporate and philanthropic investment in PPAs.

The amount of investment required, and the relative proportions that governments, corporations, NGOs and others should contribute to the overall mission—to meet the GBF's 30 per cent by 2030 target, to build a CAR NRS and achieve the nature-positive concept of full recovery by 2050—is complex to determine and beyond the scope of this paper. Quantifying the quantum, pace, sources, and nature of investment needed to achieve the 30x30 target in Australia is a pressing research need. That said, the current absence of detailed answers to these questions should not be used as a pretext to delay government action and initial investment. To give some sense of scale, we estimate the level of investment needed from Australian governments collectively will be in the order of hundreds of millions of dollars per annum for the next three decades, considerably more than is being invested currently.

To maximise good outcomes, the Australian Government could direct investment in PPAs in an optimal mix through both NGOs to support more private nature reserves and through State and Territory conservation covenanting programs.

While it could be strengthened in its next edition, the Biodiversity Conservation Investment Strategy in NSW appears effective in guiding investment in PPAs to where it is needed most. We see merit in the sub-national governments making equivalent investment strategies, and the Australian Government making a national level biodiversity conservation investment strategy that is consistent with and complements sub-national level strategies.

## 3.7 National policies and targets for protected areas and OECMs

Further work is required to establish the policy framework and targets for implementation of the GBF in Australia.

Figure 6 shows the rate at which protected areas have been established in Australia from 2000 to 2022. This includes the addition of 18 million hectares between 2020 and 2022, with 96 per cent of this figure contributed from large new IPAs. The Australian Government is currently supporting the establishment of a further 14 IPAs expected to protect another 21 million hectares (DCCEEW, 2023d). While critical for protecting some of Australia's largest and most intact landscapes, the majority of these IPAs are likely to be created in only some bioregions in some jurisdictions. There has been a significant decline in the underlying rate of establishment of protected areas in most bioregions from 2014 to 2022 (Taylor, 2021).

This macro-level data also disguises the rate at which protected areas may be being established in an ecologically representative and well-connected manner at bioregional scales. It is important that the data be examined at bioregional scales (Woodley et al., 2012; or perhaps subregional scales in some cases) to understand the extent

to which protected areas and OECMs together will be sufficient to achieve the full intent of Target 3 of the GBF which requires these areas to be '*ecologically representative*' and '*well-connected*' and inclusive of '*areas of particular importance for biodiversity and ecosystem functions and services*.' An ecologically representative network of protected areas and OECMs will be necessary to achieve the nature-positive concept of full recovery by 2050 (Nature Positive, 2023) and to materially reduce extinction risk of the more than 1,700 species and ecological communities known to be threatened and at risk of extinction (DCCEEW, 2021c).

Policy on other effective area-based conservation measures (OECMs) in Australia is in its formative stages (DCCEEW, 2023a) and no OECMs have yet been defined (although see Mitchell et al., 2018b). The Australian Government's consultation paper on principles for OECMs states that meeting the 30 per cent target for land '*requires an additional 60 million hectares to be protected or conserved*' as either protected areas or OECMs. While stating this, the paper is silent on the relative contribution that should be made by protected areas and OECMs or the scale(s) at which the target (or sub-targets) should be measured. Depending on the role that protected areas may need to play within each bioregion, this figure of 60 million hectares may be understated.

Figure 6 projects the rate at which protected areas (and perhaps some OECMs) would need to be established to achieve the GBF's Target 3 of 30 per cent by 2030. Figure 6 presents different pathways based on five alternative example targets for the role of protected areas in bioregions. This is illustrative only as it uses an average target for all bioregions, whereas in reality there may need to be different targets for protected areas in different bioregions.

Using these examples, Figure 6 shows that the overall additional area to be protected would range from a minimum of 61 million hectares, if it was decided that protected areas should make up 15 to 20 per cent of each bioregion; 78.4 million hectares, if it was decided that protected areas should make up 25 per cent of each bioregion; and 102.8 million hectares, if it was decided that protected areas should make up 30 per cent of each bioregion.

The Australian Land Conservation Alliance (2020) has called for the role of PPAs to increase to 5 per cent of privately managed lands by 2030, which would require at least an additional 13.6 million hectares of PPAs. The authors consider this a realistic estimate of the role that PPAs will need to play to ensure progress towards a comprehensive, adequate and representative NRS by 2030 in those bioregions dominated by agricultural land uses.

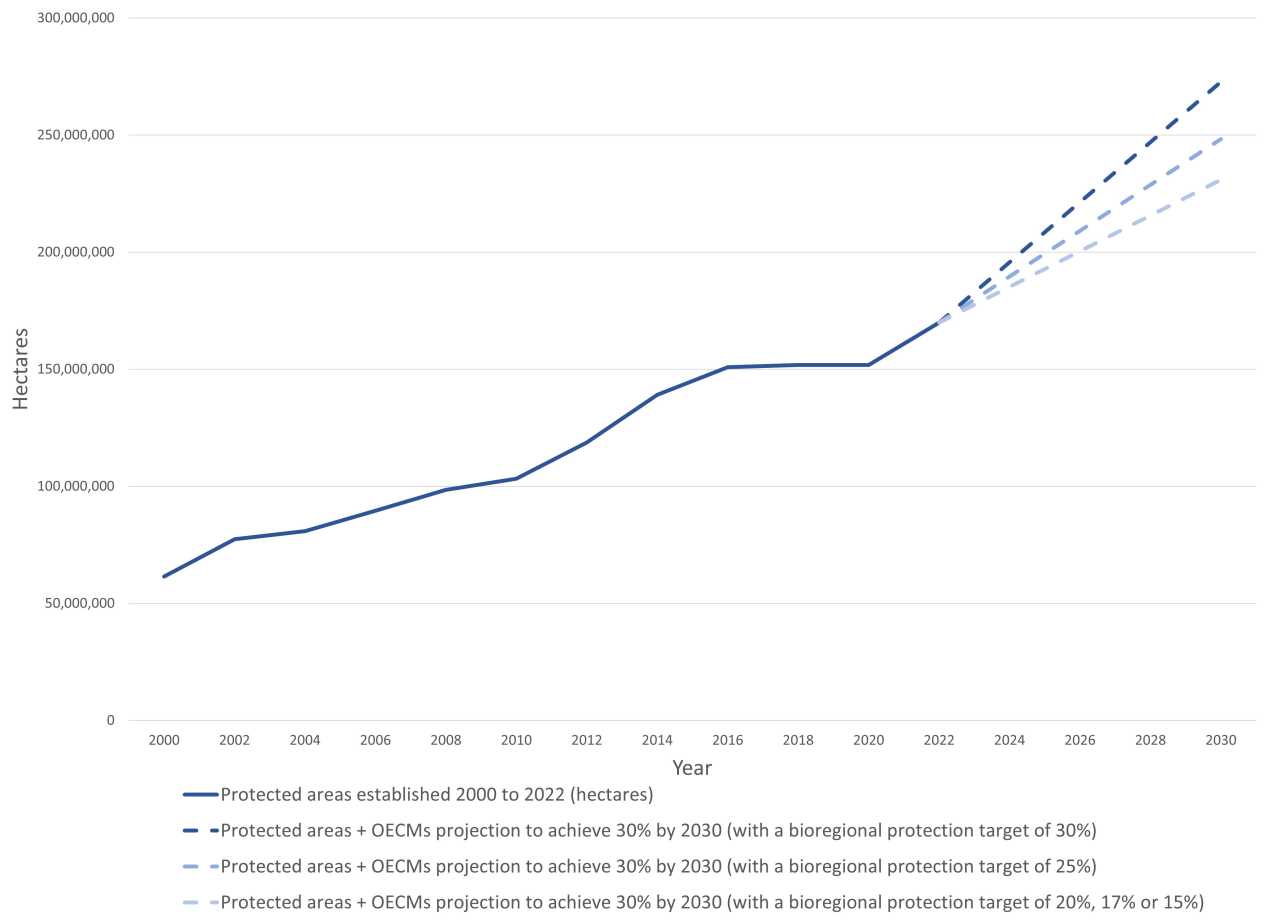


FIGURE 6
Establishment of protected areas in Australia (actual from 2000 to 2022 (solid line); and alternative possible projections to achieve 30 per cent by 2030 in protected areas and OECMs using five different bioregional reservation targets (dashed lines)). Source DCCEEW CAPAD 2022 data, 2023; and analysis by authors.

Conservation covenants were first established in Victoria in 1978 and in NSW in 1990. It has taken about four decades to establish 9.4 million hectares of PPAs nationally. An additional 13.6 million hectares may only be realistically achieved sometime after 2030. For example, to establish 13.6 million hectares of PPAs by 2040 would require the historical pace to more than triple from 250,000 hectares per annum to about 800,000 hectares per annum.

Even in NSW, where the rate has reached 45,000 hectares per annum under its new framework, investment by governments and the private sector in NSW would need to more than triple again to achieve about 150,000 hectares per annum to contribute to this suggested national goal.

## 4 Recommendations

We make the following actionable recommendations to support the vital role that PPAs must play to achieve Australia's 30x30 protection commitments and to achieve the nature-positive concept of full recovery and the broader goals of the GBF by 2050.

(1) Australian governments should significantly reduce the rate of native vegetation clearing, to be consistent with Target 1 of the GBF.

(2) The NSW Government should further strengthen its framework for PPAs by considering the four ideas suggested in this paper: (a) aligning the BCIS and BCT programs with the broader goals and targets of GBF; (b) a separate fund and risk management framework for the assets held for funded conservation agreements; (c) prioritising in-perpetuity agreements and limiting the use of term agreements; and (d) better strategic coordination with public protected area establishment processes.

(3) Governments and private land conservation entities operating in Australia should ensure that PPAs are properly recognised and valued in emerging voluntary markets for nature conservation (relative to OECMs and any other forms of investment in nature conservation that do not qualify as PPAs).

(4) Sub-national governments in Australia should establish new or stronger legislative, policy, institutional and financial frameworks to accelerate the establishment of PPAs, and to better support the ongoing management of PPAs in their jurisdictions, consistent with the effective features highlighted in this paper.

(5) Sub-national governments in Australia should fund effective and efficient private land conservation entities in their jurisdictions to support existing PPAs and to accelerate the establishment of new PPAs.

(6) Sub-national governments and the Australian Government (along with private sector actors) should invest sufficiently in PPAs (alongside investment in establishment and management of public protected areas and IPAs), to achieve Target 3 of the GBF by 2030, and the nature-positive concept of full recovery and an ecologically representative National Reserve System by 2050. Further research and analysis are required to quantify the level of investment required but this should not be used as a pretext for delay. This investment should be guided by a national biodiversity conservation investment strategy that is consistent with and complements sub-national level investment strategies for increasing the rate of establishment of protected areas.

## Author's note

PE was Executive Director Policy with the NSW Office of Environment and Heritage from October 2012 to August 2017 involved in the NSW biodiversity conservation reforms; and was CEO of the BCT from August 2017 to August 2022 involved in the delivery of private land conservation programs in NSW. PE and JF have previously served on the Board of the Australian Land Conservation Alliance, the peak body for the private land conservation sector in Australia.

## Author contributions

PE: Writing – original draft, Writing – review & editing. JF: Writing – original draft, Writing – review & editing.

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## Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

## Publisher's note

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