

The legislative challenge of facilitating climate change adaptation for biodiversity

Abstract

Australia has an unenviable record of species extinctions, ecological fragmentation and biodiversity decline. Against that backdrop, anthropogenic climate change is rapidly emerging as a significant new threat to Australia's biodiversity. This essay argues that the explicit and implicit purposes of conservation laws are to preserve the status quo. These laws typically reflect a false presumption that nature is 'stationary', and that biodiversity can be preserved indefinitely within historical, 'native' distributions and species compositions. This presumption is demonstrably false and, without legislative reform, conservation laws based on static purposes will continue to be ill-equipped to facilitate adaptation-oriented approaches to conservation. Commonwealth and state and territory legislatures must ensure that legal frameworks for conservation provide Australia's rich biodiversity with the best possible opportunities to adapt and persist in a climate changed world.

1. Introduction

Australia is one of the most biodiverse continents on Earth, home to almost 10% of all known species,¹ but Australian biodiversity is under tremendous pressure.² Australia has the highest mammal extinction rate in the world; a growing number of species on statutory threatened species lists now face extinction; and more than 40% of the continent's forests have been

¹ Commonwealth Government, <www.environment.gov.au/biodiversity/hotspots/>; biodiversity is defined broadly in this essay to include genetic diversity, and diversity within and between species populations, ecological communities, ecosystems and landscapes.

² State of the Environment 2016; WWF International 2016.

cleared since European colonisation.³ Despite this context, Australia's environmental laws have failed to arrest ongoing biodiversity losses, prevent species extinctions, or promote ecological recovery from the impact of key threatening processes such as land clearing and the devastating impact of invasive species such as feral cats and foxes.⁴ In recent decades, climate change has emerged as a threat that is more complex and challenging for biodiversity than any other, exacerbating existing threats and triggering ecological change at an unprecedented rate.⁵ Australia's unique species and ecosystems must adapt as the climate continues to change, or face extinction. Further extinctions will have major implications for human safety and wellbeing as well as the health and ongoing function of environmental systems.⁶

Legal efforts to conserve biodiversity must rise to the new challenges posed by climate change. Australian legislatures must ensure that legal frameworks for conservation are equipped to facilitate adaptation or, at least, to ensure that that framework does not hinder biodiversity adaptation under climate change.⁷ This essay analyses the explicit and implicit purposes for which conservation laws have been designed, with particular attention on explicit objects clauses in conservation legislation.⁸ This analysis demonstrates that legislatures remain ill-equipped or unwilling to acknowledge the fundamental challenge that climate change represents for conservation law and practice in Australia. There is growing scientific consensus that the goal of preventing all extinctions, or conserving every native species within its traditional geographic distribution, will be unachievable as the climate

³ Woinarsky et al 2015; Bradshaw 2012.

⁴ State of the Environment 2016; Preston 2013.

⁵ IPCC 2014; Steffen et al 2009.

⁶ Pecl G et al 2017; e.g. coastal mangrove forests reduce the effect of storm surges and rising sea levels, and continuing declines in the health of river systems such as the Murray-Darling will have dramatic consequences for food production.

⁷ McCormack and McDonald 2014; EDO NSW 2009; the legal framework for conservation includes Australian law and policy for protected areas, threatened species and communities, critical habitat and native vegetation; considering broader natural resource management laws is beyond the scope of this essay.

⁸ Modern legislative drafting commonly includes explicit provisions in legislation that explain its purpose, typically described as objects clauses, e.g. Herzfeld and Prince 2014 at [1.25].

changes.⁹ Similarly, static boundaries around a formal protected area will not be sufficient to ensure that the species and ecosystems within those boundaries are protected from the multiple and interacting effects of climate change. A legal framework that emphasises preservation by reference to historical baselines could hinder current efforts at adaptive conservation and undermine future legal reforms to facilitate adaptation.

The role of state and Commonwealth legislatures to promote biodiversity adaptation through legal frameworks for conservation has been the subject of limited analysis to date.¹⁰ In particular, there has been little research on whether the purposes underpinning Australian conservation laws are appropriate and sufficient to facilitate conservation in an era of rapid climatic and environmental change.¹¹ This essay seeks to address that research gap by highlighting adaptation challenges and opportunities arising from the statutory purposes in Australia's legal frameworks for conservation. The analysis that follows draws on Australian conservation legislation, case law and key conservation policy instruments, along with scientific and legal scholarship.

The essay proceeds in four parts. Part 2 describes the fundamental challenge that climate change represents to the health and persistence of Australia's species, ecological communities and ecosystems in Australia. Part 3 investigates what, in a general sense, conservation laws are currently designed to achieve, that is, the 'purposes' that underpin legal frameworks for conservation. Part 3 highlights particular examples of statutory objects clauses in conservation legislation across Australia, providing the basis for an analysis of key strengths and weaknesses for facilitating adaptation. Part 4 identifies two fundamental conservation paradigms – implicit purposes – that underpin existing legal frameworks for conservation, each of which has the potential to impede adaptation-oriented conservation as the climate

⁹ Steffen et al 2009; Dunlop et al 2013; Bonebrake et al 2017.

¹⁰ Cf EDO NSW 2009; McCormack and McDonald 2014.

¹¹ But see McDonald et al 2016.

changes. Part 5 synthesises existing recommendations for reform, highlighting opportunities for Australian legislatures and policy makers to embrace the unprecedented challenge that climate change represents for conservation law and biodiversity in this country.

2. Climate change and its implications for Australian biodiversity

Climate change will have significant implications for species' abundance, geographical distributions and survival, and the composition and function of ecosystems. Projected changes to Australia's climate include temperature increases and changes in the location and timing of rainfall, triggering more frequent, severe and extended droughts, longer annual fire seasons, and more frequent and severe bushfires.¹² Ocean warming and rising sea levels will lead to more extreme and damaging inundation, erosion and tidal events.¹³ These changes will have multiple and interacting effects on biodiversity. Many species' distributions will shift or contract as their 'climatic niche' – the temperature, rainfall and other habitat conditions that they rely on to survive – shifts or disappears.¹⁴ Interactions between some species will break down as changes to the timing of species' lifecycle events such as migration, spawning, flowering and reproduction have flow-on effects for the lifecycles of other species.¹⁵ This will shuffle the components of ecosystems – including systems that provide crucial nutrient cycling, pollination and food and water services, with some systems being lost and others re-assembling into novel forms.¹⁶ Some existing invasive species will expand their ranges under more favourable climatic conditions, and new – including some native – species will become invasive.¹⁷ Coastal and estuarine species and their habitat will

¹² E.g. Steffen et al 2009; IPCC 2014.

¹³ Ibid.

¹⁴ Ibid.

¹⁵ IPCC 2014; Pecl et al 2017.

¹⁶ E.g. Hobbs et al 2014.

¹⁷ E.g. Steffen et al 2009.

be particularly threatened, and in some cases lost, as sea levels rise.¹⁸ Many species and ecological communities located on low-elevation islands and at high latitudes and altitudes will face a similar fate.¹⁹

The pace and scale of anthropogenic climate change is projected to exceed the capacity of many species and ecosystems to independently shift their range fast enough or adapt their behaviour or genetics to survive.²⁰ These challenges will be exacerbated in Australia where few species have the capacity to move long distances or access cooler habitat at higher altitudes. Examples include lichens, long-lived trees and freshwater species, and species with specialist habitat requirements. Key barriers to movement include cities, deserts and water bodies.²¹ The effects of climate change are further complicated by considerable variability across landscapes, species and communities.²² Many more species will become vulnerable, and already vulnerable species will face an increased risk of extinction.²³ Climate effects have already been observed in species populations and ecological communities in Australia, even in the context of the relatively mild climate change that has occurred, to date.²⁴

The scale of the challenge of climate change for biodiversity will require more than a renewed commitment to existing conservation approaches. As more plants and animals are exposed to climate-driven threats, such as rising seas and bushfires, some of the purposes that underpin conservation laws will become impossible to implement or achieve. As a result, Australian legislatures will need to reassess what conservation laws are designed to achieve. The remainder of this essay investigates the purposes that underpin Australia's existing

¹⁸ IPCC 2014.

¹⁹ Ibid.

²⁰ E.g. Jezkova and Wiens 2016; Thomas et al 2004.

²¹ E.g. Hughes 2012.

²² E.g. Dunlop et al 2012.

²³ Bellard 2012; Thomas et al 2004.

²⁴ Pecl et al 2017; Scheffers et al 2016.

conservation laws, as a key starting point for facilitating climate adaptation-oriented conservation in Australia.

3. The purpose of conservation law

The term ‘legal purpose’ is used broadly in this essay to describe the explicit and implicit purposes and intentions that can be identified through a doctrinal analysis of conservation laws. Legal purposes include:²⁵

- overarching environmental *goals*, such as sustainable development;
- explicit, statutory *objects clauses* that identify the broad purposes of a statute;
- implicit purposes or *paradigms* which can be demonstrated by analysing how objects clauses are operationalised in law and policy;²⁶
- prescriptive rules, standards or *principles* that guide decision making; and
- specific, measurable *objectives* that identify the intended outcome of a particular legal mechanism or process.

Legal purposes are important because they play a wide range of roles in biodiversity conservation in Australia. From a practical perspective, legal purposes inform judicial interpretation of substantive and procedural legal obligations.²⁷ For example, objects clauses can help ‘to resolve any uncertainty or ambiguity in the operative provisions’ of a statute, and may be the factor on which a judicial decision turns.²⁸ Legal purposes also guide conservation planning and practice by:

²⁵ Generally adopting the terminology of APEEL 2017.

²⁶ See Part 4, below.

²⁷ E.g. *Acts Interpretation Act 1901* (Cth), s 15AA; failing to take a mandatory consideration – e.g. a statutory object – into account may be an administrative error that can be challenged or appealed, even if the standard for conservation is very low, *Plumb v Penrith City Council and Anor* [2002] NSWLEC 223 at [36], per Pearlman J.

²⁸ Pearce and Geddes 2014 at [4.49]; cf McGrath 2016, some judges ‘tend to place little value on objects clauses even where, ironically, these are expressly included in the text’, at 371-382.

- influencing agency priority setting and decision making;²⁹
- communicating, in clear terms and for the benefit of the broader community, what a piece of legislation aims to achieve;³⁰
- reflecting and informing the many different ways that society values the environment;³¹ and
- providing criteria for evaluating the success or otherwise of conservation policies and programs, including implementation of conservation laws.³²

Identifying the purposes of a legal framework involves analysing a wide range of sources. For example, legal purposes often reflect the goals of international conservation conventions and agreements to which Australia is a party, such as the Convention on Biological Diversity.³³ In domestic law, the sources of legal purposes for conservation include federal and state legislation, regionally-administered legislation and strategies; and local-scale planning schemes and delegated legislation, as demonstrated in **Figure 1**.

²⁹ McCormack and McDonald 2014.

³⁰ McGrath 2016.

³¹ Hagerman et al 2010; Dunlop et al 2013.

³² Tear et al 2005; McGrath 2016.

³³ 1760 UNTS 79 (1993).

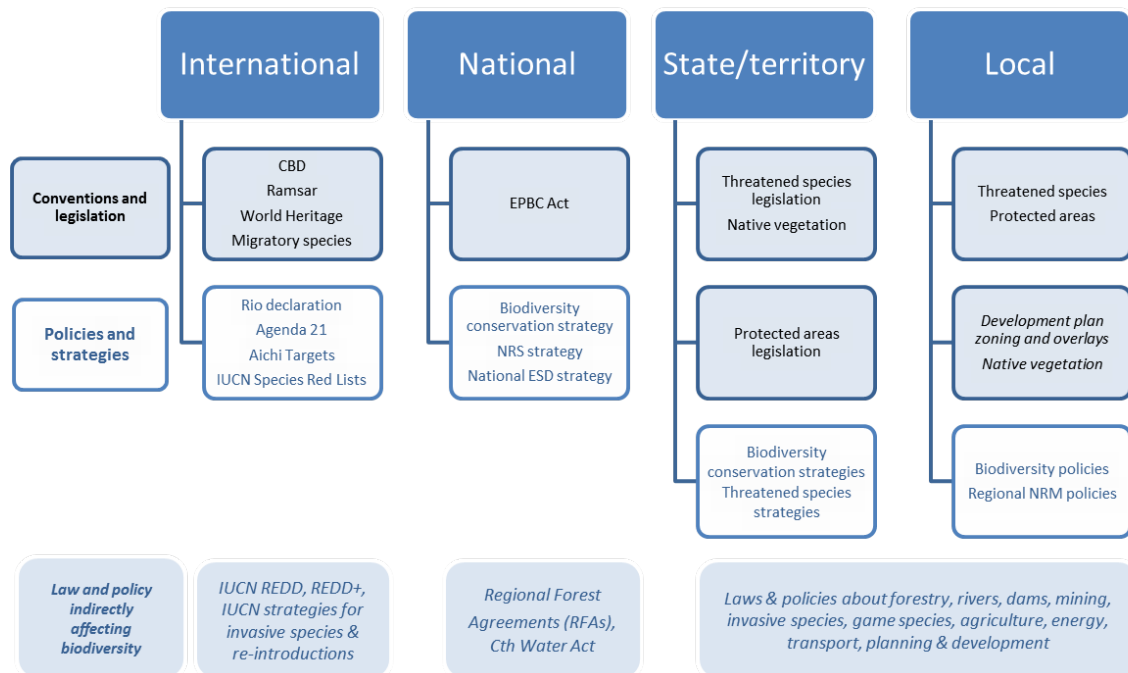


Figure 1. International and Australian sources of legal purposes in the legal framework for conservation

Legal purposes can also be found in statutory guidance for decision making such as eligibility criteria for threatened species listings,³⁴ and in statutory planning instruments, which guide the development of site-specific and species-specific management activities. Statutory planning instruments for conservation include protected area management plans, threatened species or ecological community recovery plans, and threat abatement plans.³⁵ Judicial consideration of the purpose of a law, including of objects clauses, can clarify the sources, interpretation and application of any given purpose.³⁶ Conservation agreements and covenants with private landholders may also specify the conservation purposes that apply to managing biodiversity on a specific parcel of land.

Despite the multitude of sources and range of roles that legal purposes play, their importance should not be overstated. Principles of statutory interpretation give primary emphasis to the

³⁴ E.g. *Flora and Fauna Guarantee Act 1988* (Vic) ('FFGA Vic'), s 11, 'a taxon or community of flora or fauna is eligible to be listed if it is in a demonstrable state of decline which is likely to result in extinction...'

³⁵ E.g. *Environment Protection and Biodiversity Conservation Act 1999* (Cth) ('EPBC Act'), ss 194A, 266B.

³⁶ See discussion in Preston 2016.

words of substantive legislative provisions being applied, and considering legal purposes such as objects clauses may not provide any additional clarity.³⁷ Further, legal purposes are not the most significant barrier to climate adaptation in conservation laws, nor are they the most significant weakness in laws for conserving biodiversity, more generally.³⁸ Legal purposes nevertheless provide an important starting point for considering the broader question of how Commonwealth and state legislatures should best respond to the challenges that climate change represents for Australia's legal frameworks for biodiversity conservation.

3.1. Objects clauses: a useful example of legal purposes in conservation law

Objects clauses are the most common form of purpose statement in modern environmental legislation.³⁹ They are a useful tool for comparing legislative approaches to conservation across jurisdictions as they are explicit, readily identifiable and play a broadly similar role across legal frameworks. This Part analyses objects clauses in Commonwealth, state and territory conservation statutes, and demonstrates the early stages of a promising shift in the focus of conservation objects clauses by state and territory legislatures. In particular, recent legislative reforms have introduced, for the first time, explicit acknowledgement of the challenge of climate change for biodiversity and the value of landscape-scale ecological processes that will be critical to facilitating climate change adaptation.

The oldest conservation statutes in Australia do not include overarching objects clauses. However, objects directed at particular processes such as protected area management demonstrate an emphasis on preserving biodiversity in current geographic locations and ecological compositions. For example, the *Territory Parks and Wildlife Conservation Act 1977* (NT) objects for wildlife management include ensuring that wildlife survives in

³⁷ Taking a 'purposive approach' to statutory construction in which the language of the Act is central, see Herzfeld and Prince 2014 at [1.75].

³⁸ E.g. ANEDO 2014.

³⁹ Fisher 2000; APEEL 2017.

‘natural’ habitats, and managing ‘identified areas of habitat... to ensure the survival of populations of wildlife *within those areas*’.⁴⁰ Similarly, the *National Parks and Wildlife Act 1972* (SA) sets management objectives for protected areas, including ‘the preservation and management of wildlife...[and] features of geographical, natural or scenic interest’.⁴¹

Explicit, overarching objects clauses in more recent conservation legislation also typically focus on preserving and protecting the natural environment by reference to historical distributions of species and compositions of ecosystems. For example, both the *Threatened Species Protection Act 1995* (Tas) and *Flora and Fauna Guarantee Act 1988* (Vic) seek to ensure or guarantee that all native flora and fauna ‘can survive, flourish and retain their potential for evolutionary development in the wild’.⁴²

Some objects clauses demonstrate a broader approach, such as the *National Parks and Reserves Management Act 2002* (Tas), which sets a proactive object to ‘protect against, and rehabilitate following, adverse impacts such as those of fire, introduced species, diseases and soil erosion’.⁴³ The *Environment Protection and Biodiversity Conservation Act 1999* (Cth) (‘EPBC Act’) objects recognise the value of conserving ecological communities and ecosystems outside the protected area network, and addressing threatening processes.⁴⁴

However, these objects still do not anticipate – and so cannot provide guidance for responding to – the scale of biodiversity loss and change that is projected to result from climate change.

⁴⁰ s 31(1)(a)-(c), emphasis added, and see s 25AB(a)-(c).

⁴¹ s 37(1)(a)-(l); wilderness protection areas and wilderness zones in reserves provided for in the *Wilderness Protection Act 1992* (SA); see also *Nature Conservation Act 2002* (Tas), Sch 1; *National Parks and Reserves Management Act 2002* (Tas), Sch 1.

⁴² *Threatened Species Protection Act 2002* (Tas) (‘TSPA Tas’), Sch 1, cl 3; FFGA Vic, s 4(a); *National Parks Act 1975* (Vic) (‘NPA Vic’), s 4(ab)(i) and (ii).

⁴³ Sch 1, cl 1, column 2.

⁴⁴ EPBC Act, s 3(2)(e)(i), (iii), (iv); see also FFGA Vic, s 4(a).

Recent legislative reform in the ACT illustrates a new approach to object clause drafting, and appears to signal a shift in the scope of legal purposes for conservation. Structurally, the *Nature Conservation Act 2014* (ACT) is unusual. It specifies a primary object: ‘to protect, conserve and enhance the biodiversity of the ACT’, and then lists subsidiary objects that describe how the primary object should be achieved.⁴⁵ In terms of novel content, the objects relevantly include:

- (a) protecting, conserving, enhancing, restoring and improving nature conservation, including— [native species and their habitat; ecological communities; genetic, species and community diversity; ecosystems, and ecosystem processes and functions; ecological connectivity; significant landforms including geological and geomorphological features and processes; and landscapes of natural significance.]⁴⁶

Until NSW enacted new legislation, the ACT’s *Nature Conservation Act 2014* included the only statutory reference in Australia to the conservation significance of ecological connectivity, ecosystem processes and functions and landscapes – each of which have been identified in adaptation literature as critical for facilitating biodiversity adaptation under climate change.⁴⁷

The most recent conservation legislation enacted in Australia, the *Biodiversity Conservation Act 2016* (NSW), continues that trend.⁴⁸ The overarching object of this new legislation is ‘to maintain a healthy, productive and resilient environment for the greatest well-being of the community, now and into the future, consistent with the principles of ecologically sustainable

⁴⁵ s 6(1), see Part 3.3, below for more discussion of the structural changes; the *Nature Conservation Act 1992* (Qld), s 4 also sets a single object (‘the conservation of nature’) with subsidiary objects to be set out in an ‘integrated and comprehensive conservation strategy for the whole of the State’, s 5(a)-(g).

⁴⁶ s 6(2)(a)(i)-(vii), paraphrased.

⁴⁷ E.g. Heller and Zavaleta 2009; Mawdsley et al 2009.

⁴⁸ Though note, the *Biodiversity Conservation Act 2016* (WA) provides only two, overarching objects, which are very general and do not progress the trends identified in this essay.

development'.⁴⁹ The Act sets out 15 subsidiary objects including for assessing species extinction risk, regulating human interactions with nature, supporting threat abatement, and taking a collaborative approach to conservation. The following subsidiary objects are of particular interest for this essay:

(b) to maintain the diversity and quality of ecosystems and enhance their capacity to adapt to change and provide for the needs of future generations, and

...

(d) to support biodiversity conservation in the context of a changing climate, and

(e) to support collating and sharing data, and monitoring and reporting on the status of biodiversity and the effectiveness of conservation actions, and

...

(i) to support and guide prioritised and strategic investment in biodiversity conservation.⁵⁰

The objects of the *Biodiversity Conservation Act 2016* (NSW) were explicitly designed with climate change in mind and appear to anticipate more dynamic and adaptive conservation approaches than other statutes described in this section.

3.2. Opportunities to facilitate adaptation through objects clauses

The analysis above indicates a shift in the purposes, and particularly objects, of conservation laws. This shift includes increasing recognition for a broad range of environmental values and, most recently, from preservation to enhancing adaptive capacity and responding to climate change. However, all of the statutory objects analysed above – old and new – provide some opportunities for facilitating biodiversity adaptation under climate change.

⁴⁹ cl 1.3.

⁵⁰ Ibid.

First, objects clauses are typically broad in scope, with limited direct enforceability except through obligations to take them into account in decision making.⁵¹ This has provided some leeway for environment agencies to begin to implement statutory processes, such as protected area management planning, in more adaptation-oriented ways.⁵² In the absence of statutory reform, these objects clauses may continue to provide scope for some climate adaptation strategies. For example, existing conservation objects clauses clearly support adaptation strategies such as reducing or removing the effect of invasive species on native biodiversity, to improve the resilience of plants, animals and ecosystems to climate changes.⁵³

Second, there is a strong sense of ambition in the expression of many objects clauses. The language of the *Flora and Fauna Guarantee Act 1988* (Vic) provides a particularly strong example in its *guarantee* that all native flora and fauna will be able to survive and flourish.⁵⁴ This is a bold and aspirational claim, which some have argued is particularly important under climate change, even though it may be difficult or impossible to achieve.⁵⁵ Similarly, the main object of the *Nature Conservation Act 2014* (ACT) is not simply to avoid losing biodiversity in future, but to enhance and improve biodiversity – a statement that may help to drive increasing levels of effort if biodiversity continues to decline.

Third, the emphasis in many statutes on conserving biodiversity ‘in the wild’ demonstrates an intention to facilitate self-sustaining population processes and avoid creating conservation-dependent biodiversity. This is admirable, as conservation dependent species and ecological communities are likely to be both increasingly common and increasingly

⁵¹ But see Part 3.3, below.

⁵² See e.g. Parks Victoria 2015.

⁵³ Heller and Zavaleta 2009; McCormack and McDonald 2014.

⁵⁴ FFGA, s 4(a).

⁵⁵ E.g. EDO NSW 2009.

challenging to sustain as the climate changes and already limited conservation budgets become even more stretched.⁵⁶

Finally, the objects of the most recent conservation statutes demonstrate an effort to overcome the limitations of older clauses. For example, objects in the *Nature Conservation Act 2014* (ACT) highlight the environmental value of characteristics such as connectivity, ecosystems, and landscape- and ecosystem-scale functions and processes.⁵⁷ These characteristics have traditionally been ignored in conservation laws, but are both valued by human communities, and crucial for improving adaptive capacity in plants, animals and ecological communities and reducing climate vulnerability.⁵⁸ The NSW statute also acknowledges the importance of environmental change, including climate change, for conservation.⁵⁹ These new objects clauses may be difficult to operationalise and the links between the objects and substantive legal mechanisms in both the ACT and NSW statutes are limited, at best.⁶⁰ However, they represent an apparent shift in the attention of legislatures towards more adaptive and dynamic conservation approaches.

3.3. Limitations for facilitating adaptation through objects clauses

While objects clauses in Australian conservation legislation generally express high levels of ambition, their clarity, implementation and climate-readiness leave much to be desired. Despite progress in NSW, there remains an almost universal failure to acknowledge climate change as a challenge to biodiversity conservation. This failure simultaneously complicates ‘the tasks of prioritizing conservation efforts and choosing conservation tools’.⁶¹ Setting aside that challenge, Part 3.3 identifies four weaknesses in the way existing objects clauses

⁵⁶ Waldron et al 2013.

⁵⁷ s 6(2)(x).

⁵⁸ E.g. Dunlop et al 2013.

⁵⁹ *Biodiversity Conservation Act 2016* (NSW) (‘BCA NSW’), cl 1.3(b),(d).

⁶⁰ See Part 3.3, below.

⁶¹ Camacho 2010 at 21.

are expressed and operationalised. While these weaknesses are not explicitly related to climate change, all four must be overcome to effectively facilitate adaptive conservation.

First, objects clauses are currently too long, complex and sometimes inconsistent within a single piece of legislation.⁶² For example, 31 separate clauses make up the overarching objects of the EPBC Act,⁶³ with another 18 objects applying only to specific Parts of that Act,⁶⁴ and many more applying only to particular divisions, subdivisions or sections.⁶⁵ There is no indication of the relative importance of the different objects, either within a single clause or in objects clauses scattered across a statute, as in the EPBC Act.⁶⁶ Climate change will sometimes result in irreconcilable differences between objects clauses.⁶⁷ For example, as climate change triggers species redistributions, objects clauses seeking to preserve species in their native habitats may come into conflict with clauses that seek to prevent species extinctions, *per se*. Failing to articulate desirable or acceptable conservation outcomes under climate change will make the task of balancing conflicting objects clauses far more complex, less transparent, and potentially more controversial.

Second, objects clauses often incorporate multiple ‘kinds’ of purpose into a single legislative provision. A single list of objects often includes *overarching goals* such as sustainability or ecologically sustainable development;⁶⁸ *outcome-oriented objects* such as ‘protecting native species’;⁶⁹ and procedural or *directing principles*, which describe how a law should be implemented, such as by encouraging community participation, collaboration and

⁶² E.g. Hawke Report at 17, 57.

⁶³ EPBC Act, ss 3, 3A.

⁶⁴ E.g. EPBC Act, Part 13A (7 clauses), Part 14 (11 clauses).

⁶⁵ E.g. EPBC Act, s 390C (division objects), s 303ER (subdivision objects), s 303GN (section objects); NPA Vic, s 4 *cf* s 17(2)(a).

⁶⁶ E.g. between preserving the character of wilderness areas and promoting the study of ecology and other sciences, NPA Vic, s 4(a)(i), (iii); Hawke Report at 17.

⁶⁷ Camacho 2010 at 22.

⁶⁸ E.g. EPBC Act, s 3.

⁶⁹ E.g. EPBC Act, s 3(2)(e)(i); though a major critique is how process-driven objects are far more common than objects about outcomes.

conservation education.⁷⁰ Failing to clarify the different roles that these purposes play can undermine accountability in decision making and complicate decisions about balancing and prioritising objects in any given scenario.⁷¹ Addressing this weakness will require a more disciplined approach to legislative drafting.⁷²

Third, objects clauses are often framed ‘indirectly’, that is, they focus on procedural rather than substantive outcomes. Legislation interposes verbs such as to ‘promote’, ‘further’ or ‘provide for’, before describing a substantive conservation outcome.⁷³ For example, one EPBC Act object is ‘to provide for the protection of the environment, especially those aspects of the environment that are matters of national environmental significance’.⁷⁴ This indirect framing creates a procedural purpose, to ‘provide for protection’, rather than a substantive purpose, to achieve a protected environment. As the climate changes, indirect objects clauses may be insufficient for determining conservation success or failure, and constitute an inappropriately low standard for accountability. A related limitation is the operationalisation of objects clauses through narrow and weak statutory duties. No conservation legislation in Australia currently imposes a duty to actually achieve its statutory purposes, with duties instead imposing obligations to ‘have regard to’, ‘try’, ‘endeavour’, ‘aim’, ‘promote’ or ‘pursue’ the purposes.⁷⁵ Even comparatively strong duties, such as requiring a decision to be ‘consistent with’ statutory purposes have been interpreted as requiring no more than that a decision is ‘not antipathetic’ to the purposes.⁷⁶ Stronger duties could enhance the

⁷⁰ E.g. EPBC Act, s 3(1)(f); Hawke Report at 17.

⁷¹ APEEL 2017

⁷² Ibid.

⁷³ Fisher 2000 at 494.

⁷⁴ EPBC Act, s 3(1)(a).

⁷⁵ E.g. *Nature Conservation Act 2014* (ACT), ss 6(3), 95(1)(c); *Biodiversity Conservation Act 2016* (WA), s 80; TSPA Tas, s 5, Sch 1, cl 1(a); FFGA Vic, s 7(1); Fisher 2000.

⁷⁶ ‘It is not necessary to demonstrate that a [decision] promotes or is ancillary to these objectives, nor even that it is compatible with them’, *Coffs Harbour Environment Centre Inc v Coffs Harbour City Council* (1991) 74 LGRA 185 at 192 per Clarke JA.

implementation of objects clauses, and help to ensure that reformed legal purposes support more adaptive conservation under climate change.

Fourth, statutory duties are not necessarily applied to every action taken under conservation legislation, or to every decision maker. For example, the EPBC Act only imposes a duty in relation to its objects clauses in four decision making contexts, relevantly including that ‘regard must be had to the objects of [the] Act’ in making recovery plans, threat abatement plans and wildlife conservation plans.⁷⁷ The objects of the *Biodiversity Conservation Act 2016* (NSW), including the only Australian climate-related object clause, are only relevant to the development of the state’s Biodiversity Conservation Investment Strategy, for which the Minister need only ‘consider...the purpose of this Act’,⁷⁸ and for establishing a Biodiversity Assessment Method for which ‘the Minister is to have regard to the purpose of this Act’.⁷⁹ The *Biodiversity Conservation Act 2016* (WA) is more limited, only requiring the objects to be considered in making threatened species recovery plans and in five-yearly reviews of the Act’s operation and effectiveness.⁸⁰

The limitations identified here should be addressed in any reform of legal purposes to facilitate climate adaptation. Meeting the challenge that climate change represents for biodiversity – including on private land – will require more than weak, narrow and indirect duties that are prevalent in existing laws, and that have often proved difficult or impossible to enforce.

⁷⁷ EPBC Act, ss 270(3)(a), 271(3)(a), 287(3)(a).

⁷⁸ BCA NSW, cl 5.3(4)(a).

⁷⁹ BCA NSW, cl 6.7(3)(a).

⁸⁰ *Biodiversity Conservation Act 2016* (WA), ss 97, 277.

4. Legal purposes are informed by conservation paradigms that may undermine adaptation

In order to address the limitations outlined above, it is important to understanding *why* objects clauses are out of step with environmental reality and conservation best-practice.⁸¹ In Australia, there are three key paradigms that may be particularly problematic for reforming objects clauses to facilitate biodiversity adaptation. These paradigms have been identified by analysing how Australia’s legal frameworks for conservation are interpreted and implemented, drawing on a growing body of literature about legal barriers to biodiversity adaptation under climate change.⁸² Legal purposes that reflect these paradigms, including by promoting fidelity to historical baseline conditions, may actively undermine efforts to redirect practical legal tools for conservation towards more adaptive outcomes.

Paradigm 1: nature is stationary and remains essentially unchanging over time

Conservation laws entrench a ‘stationarity’ paradigm that presumes environmental equilibrium and a natural world that essentially does not change over time.⁸³ Conservation laws typically emphasise preserving and ‘recovering’ species populations to historical levels and historical locations – that is, where they are ‘native’ – without acknowledging that climate change will trigger dramatic and irreversible species redistributions.⁸⁴ This paradigm is most evident in older legislation, such as the *National Parks and Wildlife Act 1972* (SA), which includes an object to *preserve* wildlife and other features of interest.⁸⁵ However, many

⁸¹ E.g. Heller and Hobbs 2014.

⁸² E.g. EDO NSW 2009; Kundis Craig 2010; Ruhl 2010.

⁸³ Milly 2008; Kundis Craig 2010; McCormack 2017.

⁸⁴ E.g. McCormack and McDonald 2014.

⁸⁵ *National Parks and Wildlife Act 1972* (SA), s 37(1)(a)-(l).

of the more modern statutes also presume that existing species assemblages are settled and permanent, as illustrated by statutory definitions of what constitutes ‘native’ biodiversity.⁸⁶

In Australia, the EPBC Act defines a species as native if, among other factors, it was ‘present in Australia or [an] external territory before 1400’.⁸⁷ Conversely, species are *not* native to Queensland if they were ‘introduced to another part of Australia by human intervention after the year 1600 and later spread naturally’ to Queensland.⁸⁸ Species that commenced migrating into NSW from any other state after European settlement are not considered ‘animals’ for the purposes of the protective provisions of the *Biodiversity Conservation Act 2016*, with implications for species adapting to climate change by shifting their distribution.⁸⁹ Further, only native species, ‘naturally occurring in Tasmania’, may be listed as threatened under the *Threatened Species Protection Act 1995* (Tas) and thus qualify for substantive and prioritised legal protection, including through threat abatement, recovery planning, and prohibitions on taking or disturbing species or their habitat.⁹⁰ Uniquely, the *Nature Conservation Act 2014* (ACT) may allow for the possibility of conserving species as they redistribute into the territory from other jurisdictions as the climate changes, as it states that,

...a native species is eligible to be included in the ‘provisional’ category on the threatened native species list if: ...

(b) the species—

(i) occurs *or is likely to occur* in the ACT; and

(ii) is listed as a threatened native species under a law of another jurisdiction...’.⁹¹

⁸⁶ E.g. the IUCN defines a ‘native or indigenous species’ as a: ‘species that is assumed to be intrinsically part of the ecosystem, owing to having developed there, having arrived in the area long before record of such matters was kept, having arrived by natural means (unaided by human action)’, IUCN Glossary at 70.

⁸⁷ EPBCA, s 528, the same definition has been adopted in the *Biodiversity Conservation Act 2014* (ACT), s 16 and *Biodiversity Conservation Act 2016* (WA), s 8(2).

⁸⁸ *Nature Conservation Act 1992* (Qld), s 160(7).

⁸⁹ BCA 2016 (NSW), s 4.3(1) and (2).

⁹⁰ s 3 (definition), ss 27, 25, 32, 51 respectively.

⁹¹ s 64(7), emphasis added.

Defining a species as native – that is, that it ‘belongs’ in one place and not in another – is often ecologically arbitrary, spatially based on political boundaries, and temporally, often based on colonial timeframes.⁹² Nevertheless, the distinction is critical in law, as conservation action is directed at conserving ‘native’ biodiversity and removing or controlling non-native biodiversity. At the Commonwealth scale and in every Australian state and territory, only native biodiversity qualifies for broad legal protection against ‘taking’, that is, actions such as killing, harming or moving native animals and plants or destroying or interfering with species’ habitat.⁹³

The implications of this native/non-native distinction will become more significant for biodiversity as climate change triggers species redistributions. This includes redistributions across state and national boundaries, and local extinctions in areas where a species is ‘native’ despite it persisting in other locations, including novel habitats.⁹⁴ Basing the application of conservation laws on whether a species is defined as native and restricting conservation activities to a jurisdiction that will not provide viable habitat for the species in future is unhelpful, and may hinder adaptive conservation strategies. In particular, the legislative distinction may undermine conservation agencies’ efforts to manage new ecological interactions as plants and animals arrive in their jurisdiction for the first time as a result of changing temperature and rainfall conditions. If, for example, a bird that has previously only been found in Queensland will only persist in Victoria in future, only conserving that bird under Queensland law is nonsensical. Conservation laws must be sufficiently flexible to

⁹² E.g. Davis 2011.

⁹³ E.g. *Nature Conservation Act 2002* (Tas); *Wildlife (General) Regulations 2010* (Tas); *Nature Conservation Act 2014* (ACT).

⁹⁴ McCormack 2017.

provide protection for such species as they shift, including with mechanisms to anticipate and conserve a range of future ‘climate refuge’ habitat.⁹⁵

Paradigm 2: conservation laws idealise nature that is ‘untouched’

Conservation laws tend to idealise ‘wild’ nature, uncompromised or untouched by humans, despite climate change undermining the capacity of many species and ecosystems to persist and function without human-planned, climate adaptation interventions. For example, the TSPA (Tas) seeks to ensure that ‘all native flora and fauna in Tasmania can survive, flourish and retain their potential for evolutionary development *in the wild*’,⁹⁶ where wild is defined as ‘an independent, unpossessed or natural state and not in an intentionally cultivated, domesticated or captive state...’.⁹⁷ The presumption that ‘wild’ nature exists in a form entirely free from human influence, runs counter to research suggesting that natural, wild and pristine landscapes in this sense ‘haven’t existed for thousands of years’.⁹⁸ There is extensive evidence of indirect human effects on the environment in places far from human habitation, including as a result of climate change.⁹⁹ Privileging pristine wilderness may therefore no longer be a practical goal for lawmaking, and may impede the development of adaptive conservation actions into the future.

Legal frameworks for conservation primarily emphasise the value of ‘the wild’ through wilderness legislation¹⁰⁰ and wilderness protected area categories and zoning.¹⁰¹ For example, wilderness parks in the *National Parks Act 1975* (Vic) are to be managed to ‘maximise the extent to which those parks are undisturbed by the influences of the European

⁹⁵ Strict definitions of nativeness may similarly complicate proactive, human-mediated introductions of species to areas outside their historical distribution, e.g. *Ibid*; Bonebrake et al 2017.

⁹⁶ TSPA (Tas), Sch 1(3)(a), emphasis added.

⁹⁷ TSPA (Tas), s 3.

⁹⁸ Boivin 2016.

⁹⁹ E.g. Jamieson 2017; Scheffers 2016.

¹⁰⁰ E.g. the *Wilderness Protection Act 1992* (SA), ‘an Act to provide for the protection of wilderness and the restoration of land to its condition before European colonisation’.

¹⁰¹ E.g. NPA Vic, Part III, Div 1A, Sch 2A (‘wilderness parks’); and NPA Vic, s 22(4A) or (5), Sch 5 (‘wilderness zones’ in other categories of protected area).

settlement of Australia'.¹⁰² Efforts to exclude human influences on nature are also apparent in protected area management planning. For example, the Tasmanian Freycinet National Park and Wye River State Reserve Management Plan 2000 prohibits the introduction of fauna or fish that are 'not historically indigenous *within the boundaries of the Park or Reserve*', even if they are native to Tasmania.¹⁰³ Such blanket restrictions on intervention may prevent some undesirable environmental changes, such as the introduction of invasive species, but cannot ensure that ecosystems will be unchanged by multi-faceted pressures such as climate change. Restricting human-induced changes may also hinder adaptation strategies such as sourcing climate-adjusted plant species for rehabilitation, and enhancing genetic diversity by introducing 'warm-adapted' native plants and animals from populations outside the protected area.¹⁰⁴

Some human impacts, such as mining, and transport and energy infrastructure, should clearly be excluded from high biodiversity-value areas.¹⁰⁵ Conservation legislation seeking to protect a wild and unchanging nature from human influence may have been particularly successful, to date, in achieving this outcome.¹⁰⁶ For example, mining is prohibited in wilderness protection areas and zones in South Australia, but not necessarily in other classes of reserve, including national parks.¹⁰⁷ However, with growing numbers of threatened species, heavily fragmented environments, and some ecosystems on the verge or in a state of collapse,¹⁰⁸ many species and systems are already close to the limits of their independent adaptive

¹⁰² NPA Vic, s 4(ab)(i); see also *Wilderness Protection Act 1992 (SA)*; although proactive intervention is supported in some circumstances, such as for eradicating invasive species and managing bushfires, e.g. NPA Vic, s 17A(2)(d) *cf e.g. Wilderness Act 1964 (USA)*, s 2(c).

¹⁰³ At 39, emphasis added.

¹⁰⁴ As well as restricting the use of conservation introductions for individual species' or ecosystem-scale adaptation, including assisted migration and ecological replacements, see McCormack 2017.

¹⁰⁵ E.g. Laurence 2012.

¹⁰⁶ E.g. Laurence 2012; Taylor 2017.

¹⁰⁷ *Wilderness Protection Act 1992 (SA)*, s 25, *cf National Parks and Wildlife Act 1972 (SA)*, s 43(2) and (5).

¹⁰⁸ State of the Environment 2016; MacNally 2009.

capacity.¹⁰⁹ In this context, the IPCC has emphasised that human intervention will have an important, if not defining, role in facilitating adjustments in natural systems.¹¹⁰ To facilitate climate change adaptation, human intervention should not be excluded as a default position in law or policy.

Legal scholarship around the world increasingly supports a shift from a ‘stationarity’ or ‘preservation’ paradigm towards more dynamic conservation approaches.¹¹¹ Law reform will be needed to accomplish this shift. In particular, legal purposes and the legal mechanisms that implement them, may need to abandon strict, temporal reference points for conserving and restoring the environment;¹¹² remove the entrenched legal dichotomy between biodiversity that is conserved *in situ*, that is, ‘in nature’, and *ex situ*, that is, ‘out of nature’ or ‘out of place’;¹¹³ and explicitly accept that some species, ecological communities and ecosystems will not be able to be conserved without planned and potentially ongoing human management.¹¹⁴

Paradigm 3: biodiversity can be effectively conserved by focusing on ‘pieces’ and ‘pockets’ of nature

While some legal purposes are couched in broad terms, such as ensuring that all native flora and fauna can survive and flourish,¹¹⁵ most conservation laws are implemented far more narrowly. In practice, conservation management is typically directed at nature that demonstrates ‘exceptional’ characteristics such as rarity or endangerment. For example, statutory lists of threatened species and ecological communities are ranked according to their proximity to extinction – from rare or vulnerable to critically endangered or extinct in the

¹⁰⁹ E.g. Jezkova and Wiens 2016.

¹¹⁰ IPCC 2014; Lorenzoni et al 2009.

¹¹¹ Kundis Craig 2010.

¹¹² McDonald et al 2016; Heller and Hobbs 2014.

¹¹³ Braverman 2014 at 47.

¹¹⁴ Ibid.

¹¹⁵ TSPA Tas, Sch 1, cl 3; FFGA Vic, s 4(1).

wild – and funding and conservation effort is prioritised accordingly.¹¹⁶ This hierarchy emphasises rarity, which becomes the basis of value.¹¹⁷ This emphasis on rare species and ecological communities rather than, for example, their ecological roles, levels of interactivity or adaptive potential, can be described as prioritising ‘pieces’ of nature over ecological processes, connections and functions. This is not to suggest that individual species populations close to extinction should not be the subject of conservation effort. Rather, that effort to conserve threatened, native, and often charismatic species should be supplemented by recognition that ecological interactions are also critical, and will be dramatically affected by climate change, with flow on effects for species and their habitat.¹¹⁸

The National Reserve System (‘NRS’) demonstrates a somewhat more holistic approach, as it is targeted at developing a comprehensive, adequate and representative network of protected areas. However, these criteria are typically operationalised by reference to the ‘original’ extent and assemblages of a given bioregion. In practice, the ecosystems and ecological communities that are economically valuable – such as forestry, farming and mining – continue to be underrepresented in the NRS.¹¹⁹ Further, while the NRS will continue to be fundamental for conservation as the climate changes,¹²⁰ it cannot address the impact of intensive human activity on biodiversity located outside of the NRS, even activities that take place on the boundaries of established protected areas. Despite the best intentions, the legal framework that establishes the NRS still prioritises ‘pockets’ of nature, over broader, whole-of-landscape conservation.

A legal emphasis on conserving ‘the rest’ – that is, biodiversity located outside the NRS and species and ecological communities that are not currently threatened – is more important

¹¹⁶ E.g. EPBC Act, s 179 and TSPA Tas, s 13.

¹¹⁷ E.g. the 20 priority mammals, birds and plants listed in the Commonwealth Government’s ‘Action Plan 2015-6’, developed under the Threatened Species Strategy 2015.

¹¹⁸ Hawke Report.

¹¹⁹ Taylor 2017.

¹²⁰ Dunlop et al 2012.

under climate change than it has ever been. This is, in part, because many important areas for biodiversity and ecologically critical biodiversity such as soil microbes occur on private land that may never be included in the NRS. ‘The rest’ is also critically important because climate change will trigger some species redistributions from within the NRS to land outside its boundaries. Legal frameworks – from objects clauses to conservation mechanisms such as statutory planning obligations – must be reformed to practically and effectively overcome this paradigm of prioritising ‘pieces and pockets’.

The challenges of this paradigm for conservation have long been recognised. This is demonstrated in the level of support for strategies that enhance connectivity across landscapes, including in agricultural regions.¹²¹ A more holistic approach in legal frameworks for conservation could allow multiple diverse values to be prioritised, including values associated with abundant, highly interactive, or non-native plants and animals and novel ecosystems, as well as ‘pristine’, representative and critically endangered biodiversity. As climate impacts have cascading effects across human and non-human communities and systems, a conservation focus on ‘pieces and pockets’ will be increasingly inappropriate for triggering conservation intervention.

5. Considerations for developing adaptation-oriented objects

To conclude this discussion, Part 5 synthesises scholarship on reforming both the content and structure of legal purposes for conservation. This Part illustrates the ways in which scientific and legal literature are already beginning to respond to some of the broad challenges set out above, and identifies key components that must be addressed in any legislative reform agenda for biodiversity adaptation.

¹²¹ E.g. Whitten 2011.

At its most simplistic, legal purposes must shift from a focus on *preventing* ecological change, to *managing* inevitable change.¹²² This transition will require legal purposes to be ‘forward looking’¹²³ – while anticipating ongoing change, not a future, stable state – and to embrace the challenge of ‘managing change to minimise loss’.¹²⁴ Facilitating ecological change and adaptation will require a renewed focus on reducing climate vulnerability for species, ecological communities, habitats and ecosystems rather than ‘protecting everything’ from extinction. To the extent that specific species continue to be valued by society, and remain a focus of conservation laws, legal purposes will need to shift to emphasising the ‘continued existence of species’, allowing their ‘specific locations and abundances’ to be transient.¹²⁵ Legal purposes may need to explicitly acknowledge that as species and ecosystems respond to climate change, reducing the *likelihood* of species becoming extinct will be feasible, but it will be ‘infeasible to prevent all extinctions due to climate change (and other threats)’.¹²⁶

Ecosystem-scale conservation will become more important in adaptation-oriented purposes, including recognising the value of ecological health and ecosystem services and functions, over ‘native’ component species and assemblages.¹²⁷ To avoid presumptions about nature being static, and able to be preserved in an historical state, adaptive ecosystem-scale conservation purposes must be able to focus on biodiversity ‘as it comes and goes and changes’ at a particular location, rather than on whether the ecosystem type that occurs there is well-represented or endangered elsewhere.¹²⁸

¹²² Dunlop and Brown 2008; EDO NSW 2009.

¹²³ Stein et al 2013 at 505-6.

¹²⁴ Dunlop and Brown 2008.

¹²⁵ Dunlop et al 2013 at 95.

¹²⁶ Ibid.

¹²⁷ E.g. Hawke Report at 10, 21.

¹²⁸ Dunlop et al 2013 at 97.

Broader again are recommendations to focus conservation at landscape scales, conserving landscapes as combinations of geological, ecological and human components or influences.¹²⁹ Joshua Lawler and colleagues have described this landscape focus as prioritising conservation for ‘centres of evolution’.¹³⁰ A landscape focus might include measures for conserving a ‘quantity of nature’ in a landscape rather than its quality, providing a mechanism for recognising and conserving ‘human-crafted, degraded, hybrid, novel and restored ecosystems and ecosystems in transition’ as well as ‘native and historically recognisable ecosystems’.¹³¹

Dunlop and colleagues have developed three broad propositions that synthesise many of the above recommendations. Their propositions suggest that conservation attention should be directed towards:

- accommodating ‘large amounts of ecological change and the likelihood of significant climate change–induced loss in biodiversity’;
- with the capacity to ‘remain relevant and feasible under a range of possible future trajectories of ecological change’;
- while seeking to ‘conserve the multiple different dimensions of biodiversity that are experienced and valued by society’.¹³²

These propositions are not, on their own, intended as new conservation purposes or objects clauses for legislation. However, they are a first attempt to develop clear, specific parameters for adaptation-oriented conservation.

In addition to reforming the *content* of legal purposes to facilitate adaptation, research has also begun to emerge on the task of improving the *structure* of legal purposes. This includes

¹²⁹ Dunlop et al 2013.

¹³⁰ Lawler et al 2015.

¹³¹ Dunlop et al 2013; Hobbs et al 2014.

¹³² Dunlop et al 2013.

clarifying the status and role of objects clauses and directing principles in legal frameworks for conservation.¹³³ Recommendations for structural reform are targeted at four key stages. First, an overarching, national conservation goal – such as sustainability or sustainable development – should be embedded as the explicit, primary and overarching goal of all environmental laws.¹³⁴ By straddling all environment-related laws such a goal could improve national consistency in decision making while helping to overcome a ‘siloe’d’ approach that limits the significance of biodiversity conservation in the context of other land use and natural resource management decision making.¹³⁵ Second, additional explicit objects should be limited to those deemed necessary, for example, to specify discrete, desirable outcomes on the individual subject matter of a statute.¹³⁶ In this formulation, objects clauses should only focus on outcomes, not processes;¹³⁷ and where there are multiple objects, explicit guidance should be provided on their relative weight.¹³⁸ Third, procedural objects, for example that emphasise cooperation and community engagement, should be expressed instead as ‘directing principles’.¹³⁹ Directing principles are legally enforceable and guide how a statute is implemented, for example, by guiding decision makers as they exercise statutory functions.¹⁴⁰

Fourth, clear, qualitatively or quantitatively measurable conservation objectives will be essential for promoting transparency and accountability; supporting monitoring and compliance activities; and supporting the allocation of resources between competing conservation purposes and management actions.¹⁴¹ Such objectives must be able to be

¹³³ Fisher 2000; APEEL 2017.

¹³⁴ APEEL 2017; Hawke Report.

¹³⁵ Preston 2013.

¹³⁶ APEEL 2017.

¹³⁷ Ibid.

¹³⁸ Preston 2013; Hawke Report.

¹³⁹ Or ‘guiding principles’ as in the *Climate Change Act 2017* (Vic), Part 4.

¹⁴⁰ APEEL 2017 at 3, 39; the Hawke Report’s recommendations for ‘descriptive or explanatory subsidiary objects’ would fall under this category.

¹⁴¹ E.g. Tear et al 2005.

regularly reviewed, and revised or replaced over time, a role for which statutory provisions are not well-suited. Instead, Commonwealth and state and territory conservation legislation should require measurable objectives to be included in all statutory instruments, such as protected area management and threat abatement plans, conservation advices and threatened species recovery plans. These obligations could take the form of existing EPBC Act provisions requiring that recovery plans, threat abatement plans and conservation agreements ‘state criteria against which achievement of the objectives is to be measured’.¹⁴² One of the most widely-accepted methods for setting conservation objectives in this way is the ‘specific, measurable, attainable, realistic and time-bound’ (SMART) approach.¹⁴³ As the climate changes, SMART objectives can also help to identify whether particular conservation interventions are helping or hindering biodiversity adaptation, and whether they represent an efficient, effective and equitable use of limited conservation funds.

6. Conclusion

This essay argues that alongside responses to existing environmental challenges, Australian legislatures, and the Australian conservation community more broadly, must prepare for the future. In particular, legal frameworks for conservation must facilitate adaptation in parallel with laws that address existing threats, to minimise the catastrophic biodiversity losses that will otherwise be inevitable.

The task of designing new purpose clauses for conservation legislation is an inherently values-driven process – involving normative questions about how society values different components and assemblages of biodiversity,¹⁴⁴ the desirability of particular conservation interventions, and how responsibility for achieving conservation outcomes should be

¹⁴² EPBC Act, s 271(2)(b) (‘threat abatement plans’).

¹⁴³ E.g. Senate Committee 2013 at 75-6.

¹⁴⁴ E.g. Dunlop et al 2013.

allocated and funded.¹⁴⁵ Reforming legal purposes for conservation, including the underpinning paradigms that could hinder adaptive approaches to conservation, must involve extensive engagement with Australian communities at local, regional and national scales, and across Indigenous, scientific, legal and policy sectors.¹⁴⁶ The complexity of conducting a national conversation of this kind will be a significant challenge for politicians, agencies, and Australian legislatures, particularly given ongoing, heated, and arguably unhelpful, binary political debates about conserving or developing Australia's natural assets.¹⁴⁷

Besides improving the content and structure of legal purposes for biodiversity adaptation, legislatures must also provide clear paths for achieving adaptation-oriented goals, objects and objectives. An important starting point for implementation is the statutory duties attached to objects clauses. This essay argues that those duties ought to be strengthened and broadened to enable legal purposes to support adaptive conservation – and adaptation outcomes – in practice.

This essay is designed as a specific and proactive effort to identify challenges for the legislature. A fundamental challenge identified here is to design conservation laws premised on the inevitability of change – acknowledging the dynamic nature of Australia's environment, and the certainty that existing cycles and scales of change will be amplified and accelerated by anthropogenic climate change. Current conservation efforts and the application of conservation laws will be wasted unless legal purposes can also facilitate climate adaptation for Australia's rich and unique biodiversity.

¹⁴⁵ E.g. Sandler 2010.

¹⁴⁶ McDonald et al 2016; Hagerman 2010; EDO NSW 2009.

¹⁴⁷ E.g. for irrigation in the Murray Darling catchment and mining in Qld and NSW; Debus 2014.

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