



WWF-Australia
Level 1, 17 Burnett Lane
Brisbane QLD 4000
Postal: same as above
Tel: +61 7 3003 1480
Fax: +61 7 3229 4431
enquiries@wwf.org.au
@WWF_Australia
wwf.org.au
ABN 57 001 594 074

Committee Secretary
Agriculture and Environment Committee
Parliament House
George Street
BRISBANE QLD 4000
aec@parliament.qld.gov.au

04/07/2017

Dear Mr Chair and Committee Members

RE: Nature Conservation (Special Wildlife Reserves) and Other Legislation Amendment Bill 2017

WWF-Australia is supportive of the government's policy intent to provide a type of private protected area with permanent protection equivalent to that of a national park: the proposed Special Wildlife Reserves or SWRs.

Queensland still has the largest absolute and proportional gap for ecosystem protection of all the states and territories with 71% of the area required to meet minimum ecosystem protection standards still unprotected. Of nationally threatened species, 10% still lack any protection and another 46% have less than minimum standards of protection of their habitats.

The attached *Building Nature's Safety Net 2016* report has more details of the ecological representation analysis for protected areas in Queensland.

WWF has several concerns about the proposed legislative changes however:

1. Special Wildlife Reserves (SWRs) should not be used to diminish the government's responsibility to strategically grow the national parks estate to best conserve Queensland's unique wildlife and wild places. National parks should remain the primary vehicle for protecting wildlife habitat, abating threats and preventing extinction. Government needs to greatly increase the capital budget for parks acquisition to at least \$55m a year, along with increments in ranger staff and operations base funding to adequately manage the additional parks. See WWF's Submission to the Queensland Government's draft protected areas strategy also attached.
National Parks are also the fundamental asset of our multi-billion dollar wild nature tourism industry. It could be that proposed SWRs also become tourism destinations and add significant value to the tourism industry, like private game parks in South Africa for example, but there is little evidence for that yet. Unlike national parks, the availability of SWRs as tourism destinations depends entirely on the interest of the landholder.
2. Livestock grazing must be specifically prohibited in the proposed SWRs and also on national parks. At present the legislation is framed only around management principles and is not explicit about what activities are prohibited. This means that prohibitions must be spelled out somewhere else such as in subordinate legislation, as for example with marine parks zoning plans which list what is and is not allowed in specific zones.¹ Only mining and forestry are mentioned as incompatible uses in explanatory notes for

¹ <https://www.legislation.qld.gov.au/LEGISLTN/CURRENT/M/MarinePMBZnP08.pdf>

SWRs. All natural resource exploitation needs to be prohibited on national parks public or private. Livestock in particular have profound impacts on entire landscapes and represent a major threat to biodiversity. They have no place on national parks or SWRs, nor arguably in any type of genuine protected area.

Livestock:

- remove shelter for ground dwelling native animals, exposing them to excessive predation;
 - trample and attack even large native animals like koalas;
 - remove seed or forage resources in direct competition with native animals;
 - represent a constant nutrient drain that impoverishes entire ecosystems when stock are sent off for slaughter;
 - are a driver of weed infestations by trampling soil and carrying seeds around;
 - are ubiquitous and hence trample disturb and compact soils at vast scales, reducing rainfall infiltration and water table recharge, leading to stream intermittency, while conversely increasing runoff and water velocity when it does rain, exposing soils and speeding erosion, which ends up polluting waterways and nearshore marine habitats like the Great Barrier Reef;
 - require many kms of barbed wire fencing which snares and kills countless numbers of native animals every year, particularly night flyers like gliders, owls, nightjars, bats and the night parrot; and
 - are the driver for mass killing of dingoes, which in turn is linked to cat and fox outbreaks which decimate native animals.
3. Dingoes must be explicitly protected as native animals on all *Nature Conservation Act* protected areas including SWRs. At present, only National Parks appear to protect dingoes. Dingoes are vital top predators without which natural food chains are profoundly disrupted. Persecution of dingoes has been linked to the extinction of critical weight range mammals in Australia.²
 4. There should not be an open nominate and accept process for SWRs. Rather, government needs to map out exactly which properties are essential to protect to adequately conserve ecosystems and native wildlife, ensure there is whole of government agreement on this list of properties, and then approach landholders on the list to invite them to volunteer for SWR. An invitation only approach would avoid expending resources on second tier priorities.
 5. The provision to “ensure that the state retains options to continue a special wildlife area on leasehold land should a landholder surrender their lease or allow it to expire” is a legal oddity. If a lease expires or is surrendered, then the state as the landholder holds unencumbered title (except for native title) and an SWR becomes irrelevant. Such properties should simply be re-gazetted as fully-fledged national parks with an option to return ownership to Traditional Owners as National Park (Aboriginal Land) if the Traditional Owners are agreeable, following the Cape York tenure resolution model.
 6. The status of existing and future nature refuges remains a significant concern that is not allayed by the provision of a strictly protected alternative like SWRs. The fact they can be so readily subject to commercial levels of resource exploitation begs the question if they can legitimately be called protected areas in accord with the universally accepted definition of the IUCN that a protected area is “a clearly defined geographical space, recognised, dedicated and managed, through legal or other effective means, to achieve the long term conservation of nature with associated ecosystem services and cultural values.”³ Under this definition and IUCN guidelines some types of protected areas

² Johnson, C.N., Isaac, J.L. and Fisher, D.O., 2007. Rarity of a top predator triggers continent-wide collapse of mammal prey: dingoes and marsupials in Australia. *Proceedings of the Royal Society of London B: Biological Sciences*, 274(1608), pp.341-346.

³ Dudley N (2008) Guidelines for Applying Protected Area Management Categories. IUCN, Switzerland.

(category VI principally) may have resource exploitation, but only if it is "*low-level non-industrial use of natural resources compatible with nature conservation*"⁴ This is a high bar to reach and there needs to be processes for regular auditing, performance monitoring and certification to ensure that any exploitation which is allowed remains compatible with and does not conflict with or detract from the primary purpose of nature conservation.

Yours sincerely

A handwritten signature in black ink, appearing to read 'Martin Taylor', with a stylized flourish at the end.

Martin Taylor
Protected Areas Manager

⁴ Ibid.



WWF

REPORT

AUS

2017

Building Nature's Safety Net 2016:

The state of Australian terrestrial
protected areas 2010-2016

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EXECUTIVE SUMMARY

National parks, reserves and other protected areas are vital to the survival of Australia's unique fauna and flora – animals and plants found nowhere else in the world – and to our valuable nature tourism industry. National parks and other protected areas also provide many other valuable 'ecosystem services' (benefits of nature) including by protecting our rivers, coasts, forests and soils.

Although progress continues to be made towards a truly ecologically representative protected area system which covers at least 17% of Australia's total land area by 2020, Australia remains less than halfway to achieving this important commitment to the United Nations *Convention on Biological Diversity*. Some 1,691 Australian ecosystems and 121 species of national significance lack any representation in protected areas, while only 36 of 85 Australian bioregions have reached the 2020 commitment of 17% of total area protected. Approximately 53 million hectares would need to be protected to reach minimum standards of ecosystem protection.

The key policy initiative needed to meet the Australian commitment under the *Convention on Biological Diversity*, conserve Australian wildlife, plants and ecosystem services, is restoration of the National Reserve System grants program, which was terminated in 2012-13. This could be achieved by the Australian Government restoring \$170 million per year in funding to the National Reserve System Program from the existing Natural Heritage Trust budget. Doing so would provide sufficient funds to meet the 2020 *Convention on Biological Diversity* protected area commitment through the purchase or covenanting and management of new public, private and Indigenous Protected Areas (IPAs). No new budget measures are required.

DESERT WETLAND IN THE NORTHERN TANAMI DESERT
N PARAKU INDIGENOUS PROTECTED AREAS (IPA), WESTERN AUSTRALIA © TANYA VERNES / WWF-AUS



INTRODUCTION

The necessity and value of protected areas

Saving our threatened species and ecological communities requires enduring change in land management to reduce threats. Terrestrial protected areas are places where land management is dedicated in perpetuity to the conservation of nature and the reduction of threats. Protected areas differ fundamentally in intent from the wider landscape where the management priority is natural resource exploitation for production of goods or human habitation.

By conserving nature however, protected areas also maintain economically valuable ecosystem services to satisfy human material and non-material needs including clean water and air, climate regulation, recreation, tourism, pest control, pollination and wild genetic resources for agriculture, industry and pharmaceuticals. The ecosystem services flowing from all Australian terrestrial protected areas into our society exceed \$38 billion every year.¹

Although some ecosystem services can be difficult to quantify in dollar terms, nature tourism is not. Australian nature tourists spend at least \$23.6 billion a year and visitors from overseas comprising the bulk of that figure, one of our biggest export markets and one that relies on the national parks system for its continued existence and whose development is constrained by lack of growth in the national parks system.²

Commitments

All Australian governments in 2009 recognised the primary importance of strategic growth of protected areas to the survival of Australian wildlife and rivers, coasts, forests and soils, and the ecosystem services they provide. All jurisdictions therefore committed to long-term strategic growth targets in *Australia's Strategy for the National Reserve System 2009-2030*.³

In 2010, Australia also committed to the *Convention on Biological Diversity Strategic Plan for 2011-2020*, specifically Aichi Target 11 that:

*By 2020, at least 17% of terrestrial and inland water, and 10% of coastal and marine areas, especially areas of particular importance for biodiversity and ecosystem services, are conserved through effectively and equitably managed, ecologically representative and well-connected systems of protected areas and other effective area-based conservation measures, and integrated into the wider landscapes and seascapes.*⁴

Protected areas play an indispensable role in preventing extinction and recovery of species currently declining to extinction.⁵ Aichi Target 11 is a pre-condition to attainment of Target 12 in which Australia also committed that:

*By 2020, the extinction of known threatened species has been prevented and their conservation status, particularly of those most in decline, has been improved and sustained.*⁶

The Australian Government has asserted that it has already achieved Aichi Target 11.⁷ This briefing shows that this is not correct, by quantifying the 'gap' between the *ecologically representative protected areas* commitment under Aichi Target 11, and present levels of protection at bioregional, ecosystem and species level.

¹ Taylor MFJ, Fitzsimons JA, Sattler PS, 2014. *Building Nature's Safety Net 2014: A decade of protected area achievements in Australia*. WWF-Australia, Sydney (referred to as "BNSN 2014" hereafter).

² Ibid.

³ <https://www.environment.gov.au/system/files/resources/643fb071-77c0-49e4-ab2f-220733beb30d/files/nrsstrat.pdf>

⁴ In decision X/2, at its 10th meeting in Aichi Prefecture Japan, the Conference of the Parties adopted a *Strategic Plan for Biodiversity for the 2011-2020 period* including 20 so-called Aichi Targets (<https://www.cbd.int/sp/targets/>).

⁵ Taylor MFJ et al, 2011. What works for threatened species recovery? An empirical evaluation for Australia, *Biodiversity and Conservation* 20, 767-777.

⁶ See note 5

⁷ <http://www.areahunt.com.au/Home/LatestNews/tabid/133/ID/3093/Transcript-Doorstop-Sydney.aspx>

SYSTEM PERFORMANCE

Change in area protected

Australia's system of protected areas is also known as the National Reserve System. On land this includes federal, state and local government parks and reserves, Indigenous Protected Areas, sanctuaries run by land trusts and private properties under protected area covenants.⁸ Australia's large multi-jurisdictional marine reserve system is outside the scope of this report.

Terrestrial protected areas⁹ grew from 2010 to 2016 by about 42 million ha, bringing the total land area protected from 13.5% to 19.1% of Australia's land area. Growth was dominated by additions of large Indigenous Protected Areas primarily in Western Australia (WA) and the Northern Territory (NT) and typically in the IUCN multiple-use protected area category VI (Figure 1).

Strict protected areas (primarily national parks in IUCN categories I-II) showed little net growth from 2010 to 2016, remaining at 7.7% of national land area (Figure 2). This derives from two major factors. First, the Australian Government's National Reserve System program of matching grants for strategic acquisitions was discontinued in late 2012, despite having been a major driver of growth of protected areas, particularly new national parks, from 2008 to 2012.¹⁰ Second, strictly protected areas fell in the Northern Territory when three conservation reserves and 15 national parks were changed from IUCN categories I or II to categories IV, V and VI (Figure 2) in the Collaborative Australian Protected Areas Database (CAPAD) 2014. However, this change in categorisation reflects more correct application of the IUCN categories, and does not represent any material shift in management.¹¹

When the 2010 and 2016 versions of CAPAD are compared, a total of 480,000 ha in at least 107 protected areas in 2010 CAPAD ceased to appear as protected areas in 2016 CAPAD. The two major changes were Calperum Station (about 247,000 ha) which was delisted as a Commonwealth protected area in 2012 (Figure 2)¹² and removal of protected area status for state forests previously on track for transfer to national parks in 2012-13 in Queensland, in total covering about 200,000 ha. Fortunately, Calperum Station has since been added back into the National Reserve System by virtue of a Heritage Agreement under South Australian law.¹³

⁸ Covenants are commitments by landholders to refrain from damaging actions or to undertake beneficial actions that encumber land titles and bind successors in title.

⁹ Defined as those with an assigned IUCN Management category in CAPAD.

¹⁰ BNSN2014.

¹¹ Advice provided by the Parks and Wildlife Commission of the Northern Territory 21/6/2017. Also, see Box 5 in BNSN2014 for an earlier example of revising IUCN categories for South Australia.

¹² <http://www.environment.gov.au/system/files/resources/d183eae2-b91f-4200-88c2-d0720070416d/files/stateofparks1112.pdf>

¹³ Department of Environment and Energy advice as of 13/6/2017.

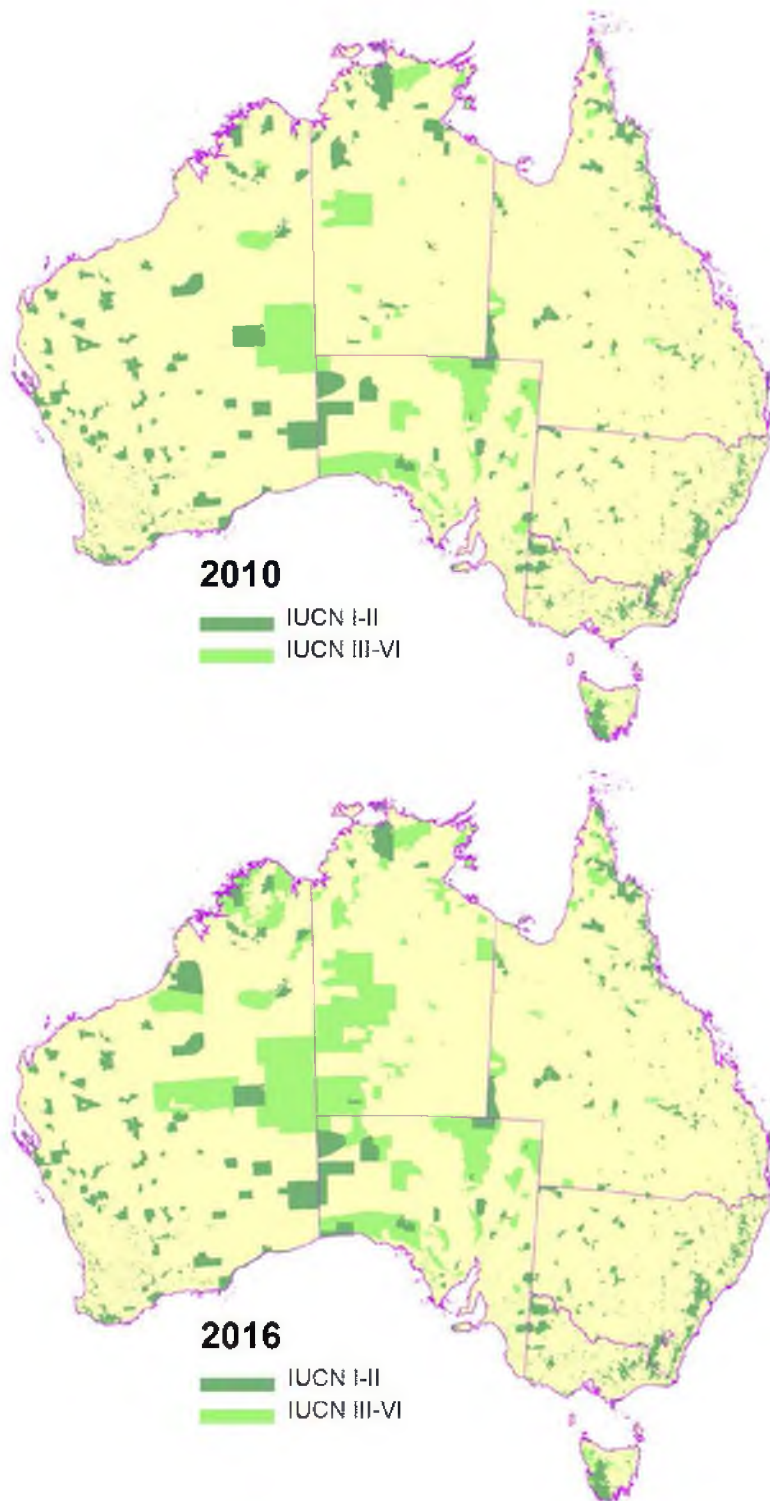


Figure 1. Protected areas on land in Australia, 2010-2016. The 2016 map is based on an interim CAPAD 2016 as provided by the Department of Environment and Energy, not the official CAPAD 2016 release, which had not yet been released at time of publication. Only areas with an assigned IUCN management category are shown.¹⁴

¹⁴ <http://www.environment.gov.au/marinereservesreview/home>

Not shown in these figures (Figure 1, Figure 2), were some major new national parks (Cape York Peninsula Aboriginal Land) in Queensland including Olkola (250,000 ha), and Shelburne National Parks (about 30,000 ha) that were not included in the Australian Government's 2016 interim CAPAD layer.¹⁵

Likewise missing from CAPAD are many private protected areas under covenants in New South Wales (NSW), Victoria (Vic) and WA. In CAPAD 2014, there were 1,223 protected areas covering 7.3 million ha that were listed as having exclusively private governance. An independent analysis reported in contrast that in 2013 there were approximately 5,000 private protected areas, covering 8.9 million ha, leaving a significant gap of 1.6 million ha unaccounted for in this analysis. Until the locations of these missing protected areas are made public we will be unable to provide a more up to date estimate of the extent to which Australia's protected area system meets Aichi Target 11.¹⁶

Bioregional protection

Having more than 17% of Australia's total land area in protected areas is not sufficient to meet Aichi Target 11. The protected area system must also be *ecologically representative*.

A minimum condition for *ecologically representative* is that each of Australia's terrestrial 'ecoregions' (termed bioregions in Australia) meet the 17% target.¹⁷

There was substantive improvement in ecological representativeness when measured at the bioregional scale from 2010 to 2016, with an increase of six bioregions moving to 17% or more of total area protected, in protected areas of all types. The number of bioregions with less than 17% of area protected have correspondingly fallen, and there is now only one bioregion (Sturt Plateau in the Northern Territory) which is below 1% protected (Table 1).

Nevertheless, only a minority of bioregions, 36 of 85, have attained the Aichi Target 11 level of 17% protected while nearly a third are still at less than half that level of protection (Table 1).

Table 1. Numbers of bioregions in classes of increasing proportion of total area protected.¹⁸

Bioregional area protected	2010	2016
<1% protected	2	1
1% to <8% protected	26	23
8% to <17% protected	27	25
17%+ protected	30	36

¹⁵ <http://statements.qld.gov.au/Statement/2016/5/11/new-laws-for-national-parks-recognise-traditional-owners-and-improve-tenure-resolution-on-cape-york>; <http://statements.qld.gov.au/Statement/2016/12/15/sands-of-shelburne-returned-to-traditional-owners>

¹⁶ Fitzsimons JA, 2015. Private protected areas in Australia: Current status and future directions. *Nature Conservation* 10, 1-23.

¹⁷ Woodley S et al, 2012. Meeting Aichi Target 11: What does success look like for protected area systems? *Parks* 18, 23-36.

¹⁸ Interim Biogeographic Regionalisation of Australia (IBRA) version 7, excluding small bioregions in external territories.

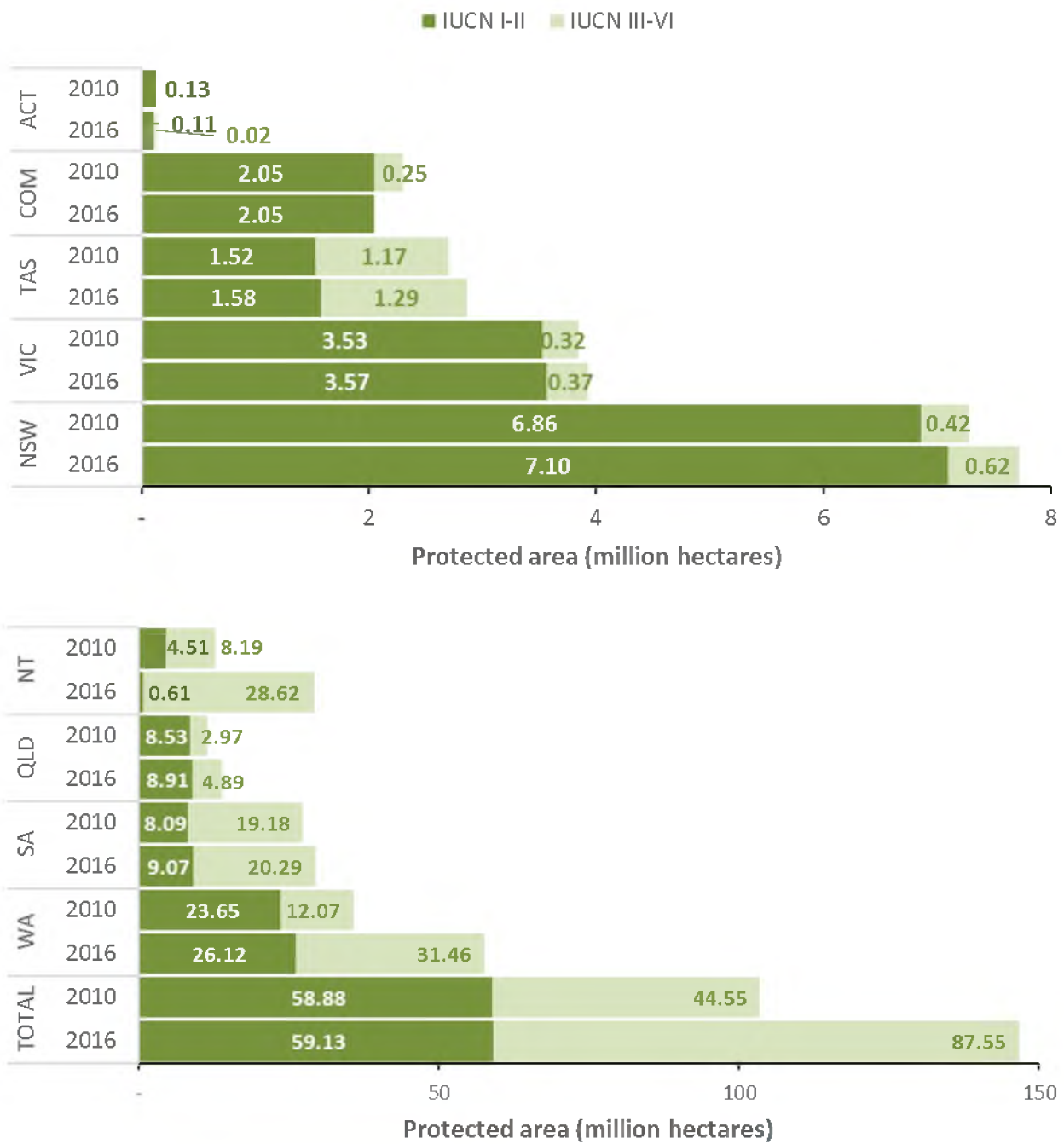
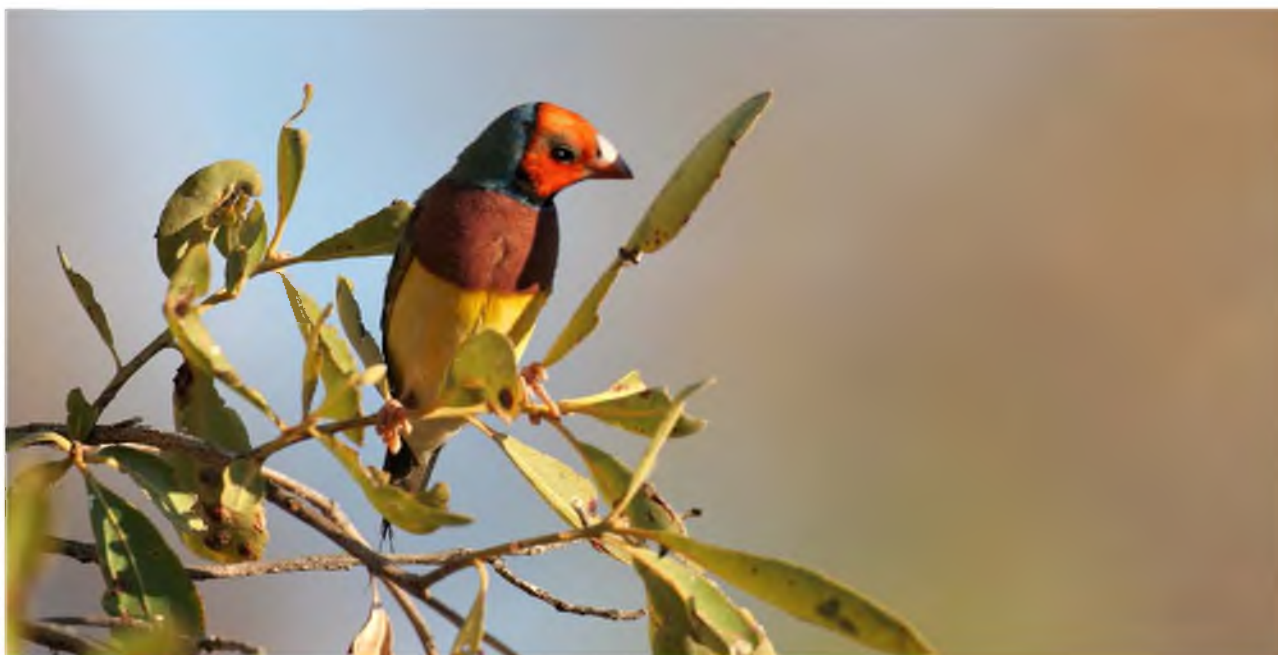


Figure 2. Extents of terrestrial protected areas by jurisdiction in 2010 and 2016. Jurisdictions are ordered by increasing area protected. The Commonwealth jurisdiction ('COM') includes Kakadu and Uluru-Kata Tjuta National Parks in the Northern Territory, Calperum and Taylorville stations in South Australia and Booderee National Park in Jervis Bay Territory, as well as external island territories, but excludes the Australian Antarctic Territory. Sources as in Fig. 1.



Ecosystem protection

Even well represented bioregions may contain *regional* ecosystems that are poorly represented. As in previous reports, we examine ecological representativeness at the finer scale of regional ecosystems.

For ecosystem proxies, we used 6,249 intersections between sub-bioregions and major vegetation subgroups. Intersections less than 100 ha and unclassified or unknown vegetation, were excluded, in total covering about 788,000 ha. While we recognise that these ecosystem proxies are not necessarily adequate proxies of functioning, discrete natural ecosystems, for simplicity we will refer to them here as ecosystems. See Methods section below for more details.

We set a minimum ecosystem protection standard of 15% of the total area of each ecosystem, or greater than 15% for smaller ecosystems.¹⁹

In 2010, 1,905 (30%) ecosystems lacked any protection, and by 2016 this had reduced to 1,691 (27%) (Figure 3). The overall gap area for ecosystem representation declined by over 8 million ha over the study period (Figure 3). As growth over the period was dominated by Indigenous Protected Areas in desert bioregions in the Northern Territory and Western Australia, advances in representation have been highly localised and primarily in arid grasslands and shrublands or semi-arid woodlands (Figure 3).

Representation in strict protected areas declined as a result of changes of IUCN categories in the NT while in other jurisdictions change was minor or static (Figure 3). Correspondingly, forest and woodlands strictly protected to the minimum standard declined over the period of study (Figure 3).

As of mid-2016, the overall ecosystem protection gap (summing across all ecosystems) was about 53 million ha. Australia is now more than halfway toward meeting the minimum protection standard for ecosystems with 55% of the total gap filled, whereas in 2010 it was less than halfway (47% filled, Figure 3).

Among broad vegetative types, wet forest ecosystems are the best protected, while wetland ecosystems have the poorest levels of protection. Only 28% by area of the minimum standard for wetland ecosystems has been met, summing across all ecosystems (Figure 3).

Queensland still has the largest absolute and proportional regional ecosystem protection ‘gap’, in the order of 17.5 million ha (or 71%), though the gap closed by a significant 1 million ha over the study period.

¹⁹ Unless 15% less than 1,000 ha, in which case at least 1,000 ha. If total ecosystem area is less than 1,000 ha, 100% of the ecosystem is required for this standard.

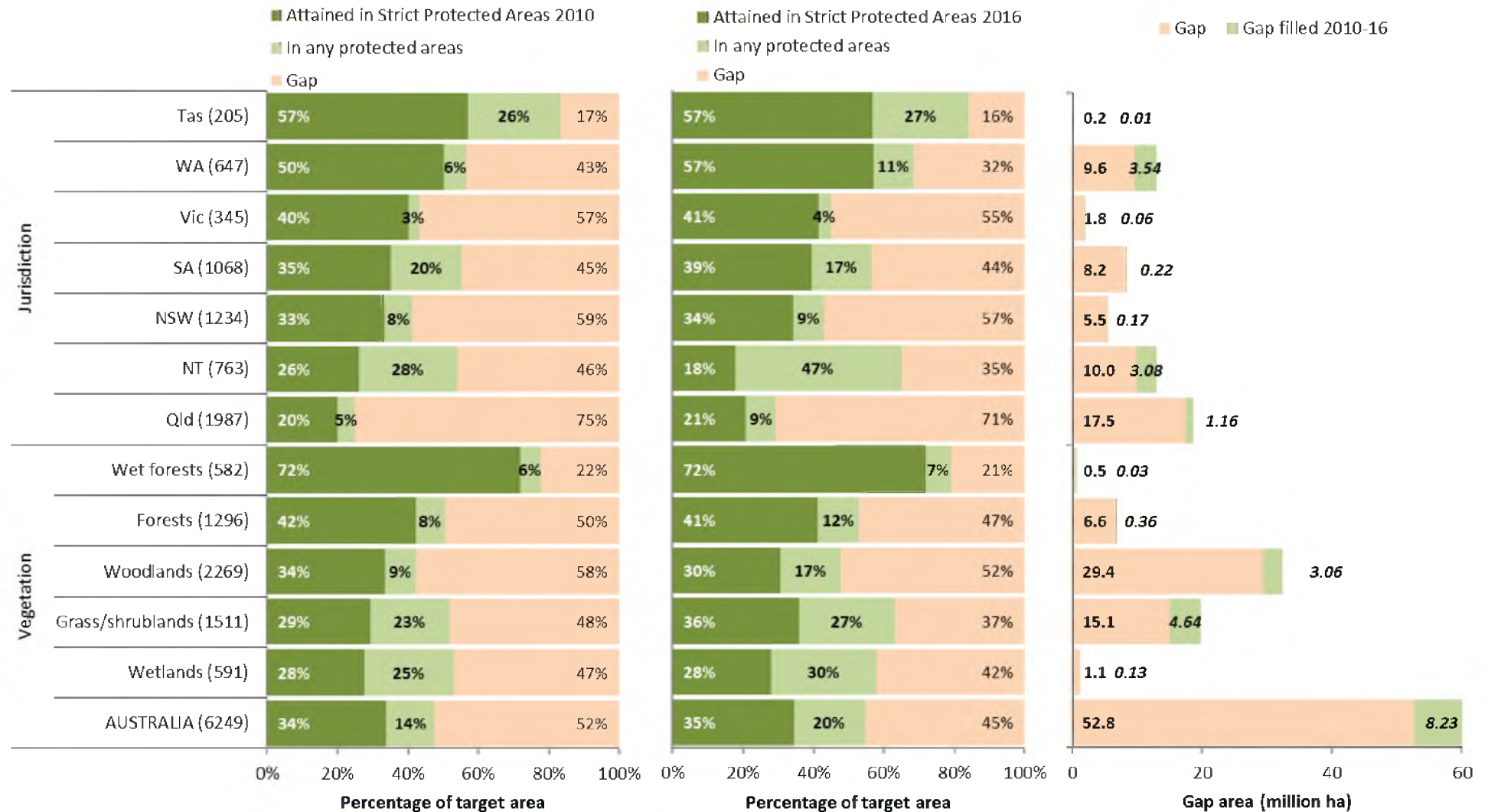


Figure 3. Areas contributing toward the minimum 15% protection standard for 6,249 terrestrial ecosystems, for strict and multiple use protected areas in 2010 and 2016 by jurisdictions and vegetation type, and the gap areas remaining to be filled to reach the standard for all ecosystems (NOTE: In contrast to Fig 2 above, Commonwealth protected areas in this graph are included in the jurisdictions in which they occur rather than being separately accounted for, while the ACT is also included in the NSW subtotal).



Protection of habitats for species of national significance

The final element of ecological representativeness examined here is species. Some 1,733 Species of National Environmental Significance (SNES) listed under the Australian Government *Environment Protection and Biodiversity Conservation Act* (EPBC Act) with terrestrial habitats are included in this analysis because they are the species most pertinent to the Australian Government’s biodiversity jurisdiction. This total includes 137 species with both marine and terrestrial habitats, such as sea lions, marine turtles or sea snakes.

As in previous reports, we set a minimum protection standard for these SNES of 30% of the total area of the mapped known- or likely-to-occur habitat as mapped by the Australian Government, or greater than 30% for smaller range size.²⁰ We separately accounted for species meeting the standard in strict protected areas alone, and those meeting the standard in all types of protected areas.

In 2016, 121 SNES had no known- or likely-to-occur habitat in a protected area, down from 133 in 2010. Numbers of SNES lacking protection declined slightly in every jurisdiction except the Northern Territory, Victoria and Tasmania, the latter two jurisdictions already with few species lacking protection (Figure 4).

Numbers of SNES meeting the 30% minimum standard entirely in strict protected areas actually fell from 577 to 574 from 2010 to 2016. However, numbers meeting the standard in any protected area increased from 705 to 741 (Figure 4). The former figure is attributed to the reassignment of national parks to multiple use categories in the NT and latter figure to the extensive growth of multiple use Indigenous Protected Areas over the period relative to strict protected areas (Figure 2).

Not shown as a separate category are species primarily in external and Commonwealth territories (160) or species covering multiple jurisdictions (59 species with less than 50% of range in any given jurisdiction). These species are included in the national totals but not shown in their own category (Figure 4).

As in the previous report, much lower proportions of critically endangered species met the standard in any protected areas. Also, the proportion of critically endangered species with no protection at all (15%) was more than double that for endangered (7%), or vulnerable species (5%) (Figure 5). In 2016, 28 of 190 critically endangered species lacked any habitat protection.

Under-representation of critically endangered and endangered species is associated with generally smaller range sizes. Species with smaller ranges were much less likely to have attained the standard than were large range species (Figure 5). Also, critically endangered and endangered species are more likely to have smaller range sizes (Figure 6).

Invertebrates, fish and reptiles have the lowest proportions of species attaining the minimum standard, while frogs, mammals and birds have higher proportions meeting the standard, a situation little changed since 2010 (Figure 5).

²⁰ For habitats, we used spatial data for known and likely to occur habitats of *Species of National Environmental Significance* provided by the Australian Government in Jan 2016. May-occur habitats and species for which only may-occur habitats were available were disregarded. See Methods below for more detail.

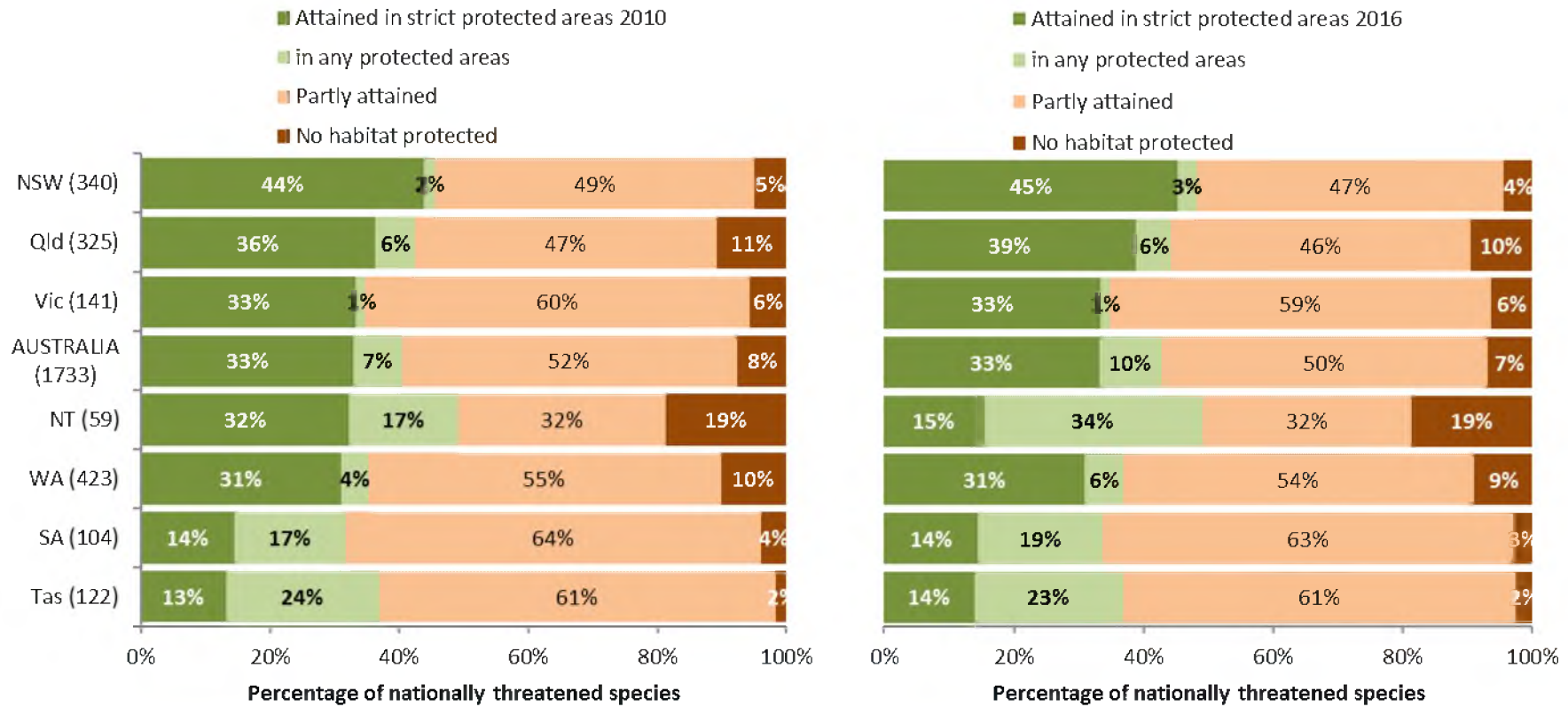


Figure 4. Species of National Environmental Significance (SNES) meeting the minimum 30% habitat protection standard in 2010 and 2016 by jurisdictions in which at least 50% of their range falls. 111 species too wide-ranging to be assigned to a single jurisdiction or in an external or Commonwealth jurisdiction were included in the national total, but not as separate categories.

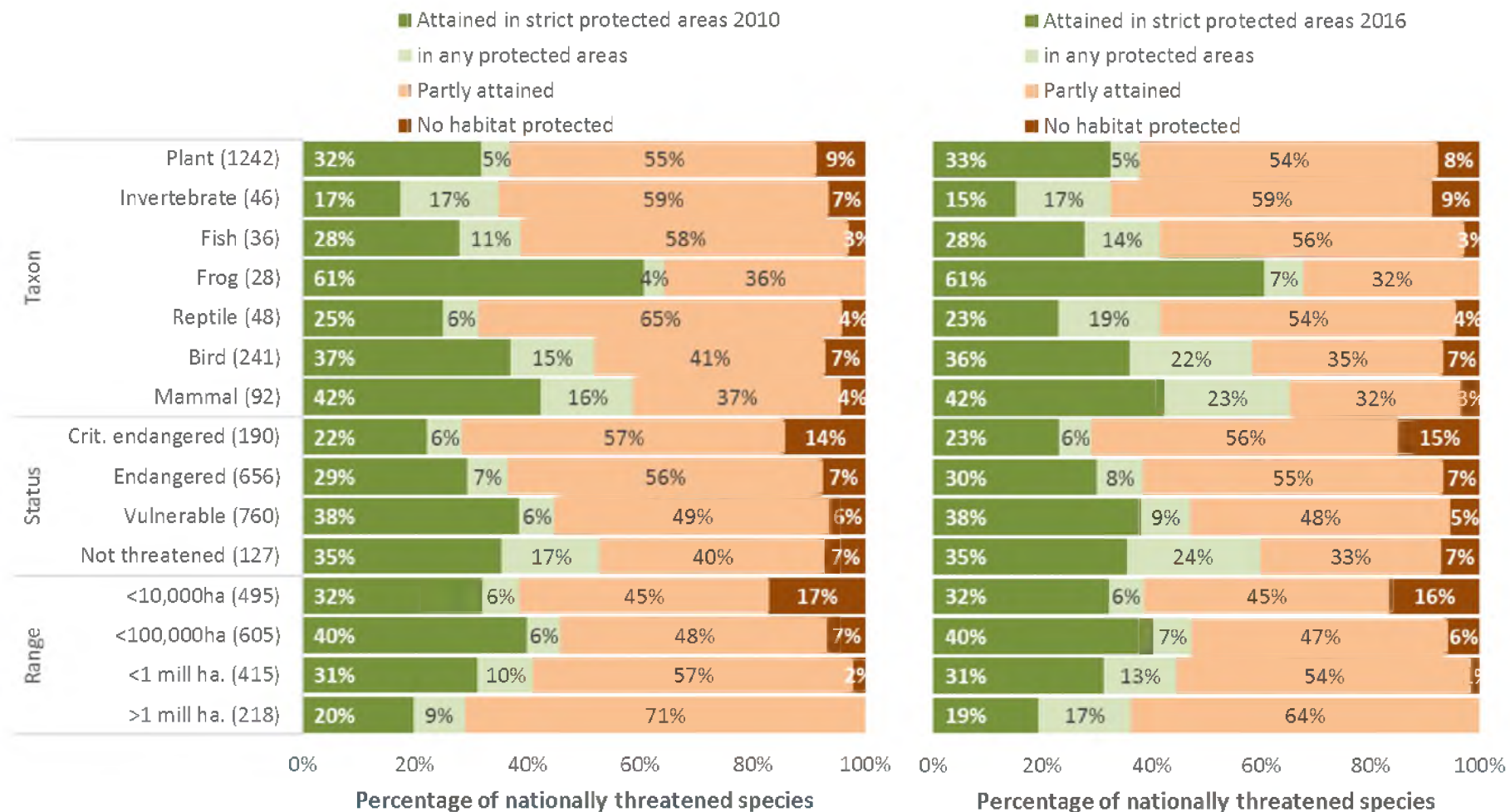


Figure 5. Species of National Environmental Significance (SNES) meeting the minimum 30% protection standard for known or likely to occur habitats, in 2010 and 2016 by taxon, conservation status under the EPBC Act, and range size.

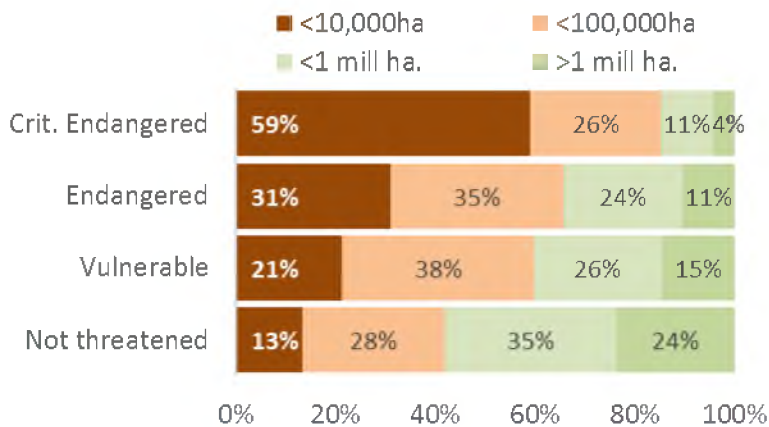


Figure 6. Distributions of range sizes of Species of National Environmental Significance (SNES) of different conservation status.

Application of IUCN categories

As in previous reports, we have distinguished between strict protected areas in IUCN categories I-II (wilderness, scientific reserves and national parks) and other ‘multiple-use’ protected areas (categories III-VI) in which some natural resource exploitation may occur, most commonly livestock.²¹

The presence of commercial natural resource exploitation on protected areas raises the question of whether the protected areas conform to the internationally accepted IUCN definition of protected areas and the management guidelines for the categories claimed to apply.²²

Transparent collection and sharing of evidence is needed to demonstrate that allowed levels and locations of resource exploitation on multiple use protected areas are consistent with IUCN guidance and do not impair the primary nature conservation purpose.

However, even strict protected areas in IUCN categories I-II are not guaranteed to be free of resource exploitation. Queensland has the aberrant situation that 85 separate grazing authorities are current over 32 national parks. Almost all are term leases, the longest of which does not expire until 2039, at such point the current government intent is that they will not be renewed.²³

For purposes of this analysis we have not attempted to analyse whether IUCN category listed in CAPAD is correct. Recent changes in IUCN categories in NT and SA have recognised that previous listing of certain national parks under category II were incorrectly assigned and a significant number of national parks and other reserves have been moved to multiple use categories.

²¹ For example, in Queensland, regional parks are generally IUCN III but can allow livestock grazing. In the NT, the Lake Woods Conservation Covenant listed as IUCN IV, is also grazed by stock.

²² <https://www.iucn.org/theme/protected-areas/about/protected-areas-categories>

²³ Briefing provided by the Dept of National Parks Dec 2015.

CONCLUSION

The chief policy driver for protected area system growth has been Australia's commitment under the Convention on Biological Diversity Aichi Target 11 that "By 2020, at least 17% of terrestrial and inland water" will be protected in "ecologically representative and well connected systems of protected areas" among other things. In this report, we assess the ecological representativeness of Australia's protected area system, a critical performance issue for protected area systems in Aichi Target 11.

Although Australia's terrestrial protected area system covers more than 17% of land area nationwide, it is still far from meeting the *ecologically representative* element of Aichi Target 11 with only 36 of 85 bioregions at or above the 17% protection level, and even within these bioregions, ecological representation may still be poor.

The overall 'ecological representation gap' has been closed by about 8 million ha between 2010-2016. However, to reach minimum ecosystem protection standards for all ecosystems still requires the protection of a further 53 million ha. Some 1,691 ecosystems (27% of the total), and 121 species of national environmental significance (7% of all such species) lack any protection. Forty-three endangered species and twenty-eight critically endangered species lack any habitat protection. Australia's protected area system remains well short of being truly ecologically representative.

Key findings

- Australia has not met Aichi Target 11, primarily because the protected area system is not ecologically representative.
- The Australian Government should restore funding to the National Reserve System Program to at least \$170 million per year with a view to meeting Aichi Target 11 by 2020.²⁴ This funding includes grants to government or non-government partners for strategic acquisitions of new protected areas; and grants for establishing and managing Indigenous Protected Areas (IPAs) and protected areas on private land (PAPL) secured by covenants.

Key advances

- Traditional Owners were responsible for a massive increase in Indigenous Protected Areas which accounted for most of the growth in protected areas over the 2010-2016 period. The Traditional Owners were assisted with funding by the Australian Government Indigenous Protected Areas program. This program received \$15 million in funding for new Indigenous Protected Areas in the 2017-18 federal budget, although concerns remain over ongoing funding for Indigenous Protected Areas.²⁵
- Queensland gazetted 15 of 25 properties listed as 'gazetted in progress' in the Collaborative Australian Protected Areas Database 2014. This represents 61% of the 674,616 ha covered by the 25 properties.
- Western Australia had the greatest improvement in strict protection, increasing by 2.5 million ha, and the greatest overall reduction in ecosystem protection gap of 3.54 million ha.

Key retreats

- The Australian Government terminated the major engine for advancing the ecological representation of Australia's protected area system, the National Reserve System grants program, in late 2012.

²⁴ For details see BNSN 2014.

²⁵ <http://www.abc.net.au/news/rural/2017-05-30/future-of-existing-indigenous-protected-areas-uncertain/8557532>

- Queensland removed protection from many state forests previously committed to National Parks. Queensland remains the state with the lowest proportion of land area protected and the highest absolute and proportional ecosystem gap.
- The Northern Territory recategorised most of its national parks from IUCN II to IUCN V, but this merely better reflects IUCN category definitions and does not represent any actual change in management.

Key threats

- The threats facing Australian biodiversity have not diminished, and some have grown considerably. The 2016 Australian Government State of the Environment report states:

Australian biodiversity is generally poor, given the current overall poor status, deteriorating trends and increasing pressures. Our current investments in biodiversity management are not keeping pace with the scale and magnitude of current pressures. Resources for managing biodiversity and for limiting the impact of key pressures mostly appear inadequate to arrest the declining status of many species. Biodiversity and broader conservation management will require major reinvestments across long timeframes to reverse deteriorating trends.²⁶

- Protections against large-scale habitat destruction has been significantly weakened in Queensland²⁷ and more recently in NSW.²⁸
- Australian species and ecosystems are already shifting in response to climate change and, as a result, many species are now more vulnerable to extinction.²⁹ Although this might seem to represent a challenge to planning of future reserves, multiple analyses suggest that the ecosystem representation principles are robust to climate change. Existing reserves will also be just as important and valuable in the future as now, although the species inhabiting them will change.³⁰



GREATER BILBY (MACROTIS LAGOTIS), AUSTRALIA © MARTIN HARVEY / WWF

²⁶ Cresswell ID & Murphy HT, 2017. *Australia state of the environment 2016: biodiversity*. Independent report to the Australian Government Minister for the Environment and Energy, Australian Government Department of the Environment and Energy, Canberra.

²⁷ Taylor M, 2015. *Bushland destruction rapidly increasing in Queensland*. WWF-Australia Briefing paper;

²⁸ Perry N, 2016. The NSW government is choosing to undermine native vegetation and biodiversity. *The Conversation*, 9 May 2016 <http://theconversation.com/the-nsw-government-is-choosing-to-undermine-native-vegetation-and-biodiversity-59066>

²⁹ Lee JR et al, 2015. Mapping the drivers of climate change vulnerability for Australia's threatened species. *PLoS one*, 10(5), p.e0124766.

³⁰ Dunlop M et al., 2012. *The implications of climate change for biodiversity conservation and the National Reserve System: final synthesis*. Canberra: CSIRO, p.80.

METHODS

Protected areas

We obtained from the Australian Government Department of the Environment updates to CAPAD 2014 up to Jan 2016, to construct an 'interim' CAPAD 2016. We classified protected areas into strict protected (IUCN I-II) and all other categories ('multiple use'). We flattened layers to remove any overlapping or duplicated protected area polygons, removed any protected areas lacking an IUCN category, and clipped the layer to the Geoscience Australia 1:100,000 coasts and islands dataset, to ensure only entirely terrestrial protected areas were used in analysis.

Ecosystem and bioregional protection

To generate regional ecosystem proxies, we intersected IBRA version 7.0 sub-bioregions, with National Vegetation Information System Major Vegetation Subgroups version 4.2, after converting both to aligned 100 m x 100 m (1 ha) grids. For consistency, we calculated the extents and proportions of bioregions protected for Table 1 using this same intersection. We discarded combinations with a total area 100 ha (1 sq km) or less or for unclassified or unknown Major Vegetation Subgroup (MVS) types. This left 6,249 ecosystem proxies. We intersected the map of ecosystem proxies with the terrestrial protected area layers for 2010 and 2016 (as described above) converted to the same aligned 1 ha grid.

The minimum protection standard was set for each ecosystem in the same way as in BNSN 2014: 15% of the total pre-clearing area of an ecosystem, or if this is less than 1,000 ha then at least 1,000 ha. If pre-clearing extent itself is less than 1,000 ha, then 100% of pre-clearing extent was taken to be the minimum standard.

Ecosystems were assigned to bioregions and jurisdictions based on the subregions which fell in these respective regions. Likewise, they were assigned to broad vegetation type based on the MVS description. Target attainment areas were summed across ecosystems in these different categories to produce aggregate attainment and gap areas.

Species protection

We obtained the Species of National Environmental Significance 2016 release from the Department of the Environment. We retained only terrestrial species, and only 'known' or 'likely to occur' distributions. Species with only 'may occur' distributions were disregarded. We assigned each species to the state or territory with 50% or more of the known or likely range, to prevent double-counting of species in the state and territory breakdown. Species with less than 50% in any given jurisdiction were classed as multi-jurisdictional.

We intersected these species distributions with the terrestrial protected area layers described above, and summed the areas. Species were classified as having attained their minimum standard in strict protected areas, in any protected area, partway to attainment or no protection at all (less than 1 ha protected, to discount errors due to small area intersections). The minimum standard for protection varied depending on distribution size as follows: 30% of the mapped known or likely to occur habitat in the SNES database, or if this is less than 1,000 ha then at least 1,000 ha. If greater than 10 million ha, the minimum standard was capped at 10 million ha. If total habitat itself is less than 1,000 ha, then 100% was the minimum standard.

WWF advancing environmental protection in Australia since 1978

TREE-CLEARING

WWF-Australia campaigns alongside farmers, industry and local and state governments to help see excessive tree-clearing in Queensland and New South Wales significantly reduced.

FOOD

WWF works towards having sustainable food more widely available than ever before while striving for deeper reductions in food wastage.



SPECIES

WWF focuses on bringing some of our most-loved Aussie wildlife species, including the black-flanked rock-wallaby, green turtle, quokka, and koala, back from the brink of extinction.

LOW-CARBON FUTURE

We promote innovative, low-carbon and zero carbon solutions to achieve a more climate-resilient future before 2050.

PROTECT OUR MARINE LIFE

We work with partners, governments, Indigenous communities and corporate partners to protect the marine migratory pathways of our turtles, whales, penguins and other marine species.



Why we are here

To stop the degradation of the planet's natural environment and to build a future in which humans live in harmony with nature.

wwf.org.au

WWF-Australia National Office

Level 1/1 Smail Street,
Ultimo NSW 2007
GPO Box 528
Sydney NSW 2001

Tel: +1800 032 551
enquiries@wwf.org.au
[@WWF_Australia](https://www.facebook.com/WWF_Australia)
wwf.org.au



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Draft Queensland Protected Areas Strategy

Executive Summary

- A greatly expanded National Parks system is essential both to save Queensland's declining wildlife and to build the state's multi-billion-dollar nature tourism industry.
- For Queensland to grow its tourism industry in a way that doesn't degrade our existing natural assets, it is essential that we have a much larger parks system offering a richer menu of destinations.
- National parks also secure ecosystem services like clean water, clean air and fisheries, which provide significant economic benefits to Queenslanders.
- Queensland has the lowest parks coverage and the largest ecosystem protection gap of all the states and territories.
- The benefits that Queenslanders draw from national parks greatly outweigh the amount of government investment required for parks growth and maintenance.
- WWF welcomes the aspiration of the government to expand all protected areas to 17% of the state land area, however this goal will not be realised without an increase in government investment.
- WWF urges the Queensland Government to increase its investment, by providing, at a minimum a \$55 million per year capital budget for both land purchases or buyouts of interests over state lands and waters identified as high priority for the parks estate. Parks management budgets should be increased proportionately to ensure biodiversity conservation management is prioritised and is of the highest standard.

- The growth of indigenous and private protected areas should be welcomed and encouraged with additional incentives, but should not be used as a substitute for government investment in national parks.
- WWF supports a new category of private protected areas with the same standard of protection as for national parks, closed to all resource extractive or consumptive uses.

A strong case for strategic growth of parks

The final Queensland protected areas strategy should contain both a stronger recognition of the value of parks on sea and on land (to support Queensland's economy and quality of life) and a stronger expression of commitment to strategic growth of parks and protected areas.

The statement in the draft regarding "transition to a larger protected area system may mean forgoing other economic uses for some land" is of concern.

A national park is already a highly economically valuable and productive use of land, perhaps not in terms of private profit realised, but in terms of saving wildlife and ecosystem services benefiting all Queenslanders. This is particularly the case for nature tourism.

The strategy needs to go into much greater detail on the values of parks in saving wildlife or threatened species, as neither of these issues is mentioned in the draft.

Critics of national parks, say they are not needed or not enough.¹ Rather, what is needed is "good land management". That is true, and that is precisely what a national park does. A national park is a permanent commitment to manage land or waters for conservation of threatened species and native wildlife in the public interest, in contrast to the wider landscape, where non-conservation, private interests dominate.

Critics also allege that national parks "lock-up" land. This turns reality on its head. When a grazing property (and that's usually what it is) is acquired to become national park, it is in reality unlocked from private exclusive use and opened to the public to enjoy.²

We reject the criticisms outlined above, on the basis of the abundant evidence that national parks are the best option for conserving biodiversity and ecosystem services.

Australians are proud of their national parks. WWF-Australia unequivocally supports national parks. They are essential in conserving Australia's biodiversity and ecosystem services.

Queensland needs many more national parks. Despite progress, Queensland still lags behind other states in building the national parks system to best conserve our wildlife and biodiversity.

WWF-Australia
unequivocally supports national parks. They are essential in conserving Australia's biodiversity.

¹ <http://theconversation.com/the-future-for-biodiversity-conservation-isnt-more-national-parks-11027>

² <http://theconversation.com/national-parks-are-the-least-locked-up-land-there-is-15138>

Parks the best option to save wildlife

The best investment Queensland can make to save our unique wildlife is a new national park over critical habitat for these species.

Queensland would have lost the bilby, the bridled nailtail wallaby, and the northern hairy-nosed wombat, among other endangered animals and plants by now, if national parks (such as Astrebla, Taunton and Epping) had not been gazetted in time to save the last remaining wild populations.

WWF and University of Queensland research shows that national parks and other strict protected areas are the only conservation measures correlated with improving or stabilised population trends of threatened species, particularly in the developed world.³

Parks growth essential for tourism growth

Australia's national parks, and the unique wildlife and wild places they protect, are a fundamental asset that provides more than \$25 billion per year through wild nature tourism.⁴

Wild nature tourism represents the majority of international tourism spending in Australia (60-70%),⁵ which exceeds Australia's coal exports.⁶

Visitors to national parks in Queensland spend about \$5.6 billion a year, at least \$952 million of which can be directly attributed to the existence of national parks.⁷ The GST on this spending flows back to the Queensland treasury via the Commonwealth grants system, a contribution that is not often publicly recognised by governments. When looking at GST revenue generated by wild nature tourism, almost twice as much is returned to states and territories than these same governments are spending on building and maintaining the fundamental asset, the National Reserve System.⁸

Wild nature tourism represents the majority of international tourism spending in Australia (60-70%), which exceeds Australia's coal exports.

The statement in the draft strategy that only 18% of visitor-related taxpayer costs are currently recovered⁹ takes too narrow a view and ignores the \$95 to \$560 million in GST revenue generated by or associated with national park visitor spending each year in 2016 dollars – revenue that makes its way back to the Queensland Treasury.

³ Taylor, M.F., Sattler, P.S., Evans, M., Fuller, R.A., Watson, J.E. and Possingham, H.P., 2011. What works for threatened species recovery? An empirical evaluation for Australia. *Biodiversity and conservation*, 20(4), pp.767-777. Also confirmed in the global analysis of Barnes et al 2016, Wildlife population trends in protected areas predicted by national socio-economic metrics and body size. *Nature Communications* DOI: 10.1038/ncomms12747

⁴ Taylor MFJ, Fitzsimons JA, Sattler PS, 2014. *Building Nature's Safety Net 2014: A decade of protected area achievements in Australia*. WWF-Australia, Sydney. Hereafter "BNSN 2014"

⁵ Ibid

⁶ <http://www.abc.net.au/news/2017-01-20/tourism-surge-set-to-help-fill-mining-massive-hole/8198756>

⁷ \$4.43 b total spending and \$749 million directly attributed spending in 2006 adjusted to 2016 dollars from Ballantyne, R., Brown, R., Pegg, S. and Scott, N., 2008. Valuing tourism spend arising from visitation to Queensland national parks. *Sustainable Tourism Cooperative Research Centre, Gold Coast*.

⁸ BNSN 2014

⁹ *Draft Queensland Protected Area Strategy*, Queensland Government, Brisbane 2017.

According to Tourism Research Australia data provided to WWF, Queensland attracted 45% of all international wild-nature based tourists in 2013, significantly less than the 58% that visited NSW. Queensland attracted only 21% of all domestic wild nature tourists, compared to 33% for NSW.¹⁰ Queensland should be the leading wild-nature destination, not the least because it has the Great Barrier Reef.

The main constraint on the growth of the wild nature tourism industry in Queensland is the very small national parks system, which covers only 5.2% of the state's land area.¹¹

In contrast, the Great Barrier Reef marine national park, our single largest national park and our single greatest tourism asset, alone attracts over \$6 billion a year and provides 69,000 jobs.¹²

Need for tourism sector commitment to parks strategic growth

Despite the critical importance of the parks system to our tourism sector, the state tourism strategy does not mention 'national parks' or wildlife, apart from the Great Barrier Reef. The state nature-based tourism strategy is focussed on exploiting natural assets as they are, encumbering them with more hard infrastructure and tourism products, rather than trying to expand the fundamental asset itself, the parks system.¹³ This approach is repeated at the national level, where the national strategy mentions nature-based tourism assets but makes no provision for strategic growth of parks.¹⁴

Reform in the tourism sector is desperately needed, moving towards a more constructive, forward looking partnership, integrated with the state protected areas and biodiversity strategy. A principal objective of the state tourism strategy should be the strategic growth of the parks system, in a way that optimises biodiversity conservation alongside tourism opportunities, whilst also ensuring the negative impacts of tourism on wildlife and parks values are negligible.¹⁵

A much larger parks system, offering a richer menu of destinations and experiences, is essential for Queensland to grow its tourism industry in a way that doesn't degrade the assets we have.

A much larger parks system, offering a richer menu of destinations and experiences, is essential for Queensland to grow its tourism industry in a way that doesn't degrade the assets we have.

¹⁰ Note that these percentages do not add up to 100% because many visitors are double counted in more than one state. A state is recorded as attracting a visit if the visitor questioned reported a nature-based activity in that state.

¹¹ Based on 2015 Qld parks estate figures, not including major new National Parks (Cape York Peninsula Aboriginal Land) in Queensland including Olkola (250,000ha), and Shelburne National Parks (about 30,000ha) recently declared.

¹² <https://www.environment.gov.au/sustainability/publications/economic-contribution-great-barrier-reef-march-2013>

¹³ Develop new and refreshed ecotourism, nature-based and cultural heritage products and experiences • Implement the Queensland Ecotourism Plan 2016–20 to support investment in tourism infrastructure, the Great Barrier Reef islands and tourism products that showcase the Great Barrier Reef. • Encourage the development of Indigenous, cultural and heritage tourism products, events and experiences across the state. • Encourage the development of products and experiences on waterways and islands within close proximity of major tourism destinations. • Undertake market research on consumer behaviour and travel preferences for the development of new nature-based experiences in Queensland.

¹⁴ http://www.tourism.australia.com/documents/Tourism_2020_overview.pdf

¹⁵ Advancing Tourism 2016–20 Growing Queensland Jobs

Ecosystem service values

There are many other ecosystem services besides tourism that are enjoyed by Queenslanders and which flow from national parks and other protected areas. These services are more difficult to cost, and include climate and water cycle regulation, clean water and air, amenity value, existence value, protection of wild genetic resources vital to agriculture and pharmaceutical industries, pollination, and pest control. We estimate that these values exceed \$38 billion a year across all Australian protected areas.¹⁶ The ecosystem values such as coastal protection, carbon storage, fisheries and genetic resources flowing from marine protected areas are greater again, estimated at over \$197 billion a year.¹⁷

A key action under the strategy should be a periodic estimation of the dollar values of all ecosystem service flows being delivered by the Parks estate, with nature tourism a particular focus, on sea and on land.

Marine parks need to be included in strategy

WWF urges the Government to include marine parks expansion and management into this strategy. At present, the draft strategy is entirely terrestrial in focus.

Marine and terrestrial parks are linked, especially in the case of the Great Barrier Reef which has thousands of islands with terrestrial parks. A key action under the Great Barrier Reef long term sustainability plan is the expansion of terrestrial protected areas in the Great Barrier Reef coastal zone. In particular:¹⁸

“EHA7 Prioritise functional ecosystems critical to Reef health in each region for their protection, restoration and management.

“EHA9 Maintain and work to add to the island and coastal protected area estate and continue to provide funding for protected area management in the Great Barrier Reef coastal zone.

“EHA10 Improve connectivity and resilience through protection, restoration and management of Reef priority coastal ecosystems including islands through innovative and cost-effective measures.”

The government recently purchased the grazing lease on Springvale Station on Cape York specifically to prevent excessive soil erosion and pollution of the Reef, arising from grazing livestock on fragile soils. It is of concern therefore, that there seems to be no immediate plan to fully protect Springvale as a national park.¹⁹ Beyond the marine-terrestrial linkage however, marine ecosystem and species protection must be provided for in its own right.

The marine parks estate might be well developed in the Great Barrier Reef coastal zone, but it is still below standard in other state waters:

- Moreton Bay Marine Park is only 16% national park²⁰;
- Great Sandy Marine Park is still below 5% in national parks;
- The Gulf of Carpentaria, Sunshine and Gold Coast have no marine parks;

¹⁶ BNSN 2014.

¹⁷ Ibid.

¹⁸ <https://www.environment.gov.au/system/files/resources/d98b3e53-146b-4b9c-a84a-2a22454b9a83/files/reef-2050-long-term-sustainability-plan.pdf>

¹⁹ <http://www.businessinsider.com.au/the-queensland-government-just-spent-7-million-buying-a-huge-farm-to-stop-run-off-into-the-great-barrier-reef-2016-6>

²⁰ <https://www.npsr.qld.gov.au/parks/moreton-bay/zoning/pdf/marine-park-user-guide.pdf>

- Estuarine habitats are frequently excluded from protection and are under great pressure throughout the state.

Commitments

In 2009, all Australian governments recognised the primary importance of strategic growth of protected areas to the survival of Australian wildlife and wild places, and the ecosystem services they provide. All jurisdictions therefore committed to long term strategic growth targets in *Australia's Strategy for the National Reserve System 2009-2030*.²¹

This important strategy should be referenced in the draft Queensland Strategy (although it also has primarily a terrestrial focus), in particular the following targets:

- *“Include examples of at least 80 per cent of the number of regional ecosystems in each IBRA region”;*
- *“Include examples of at least 80 per cent of the number of regional ecosystems in each IBRA subregion”;*
- *“Include critical habitats and core areas important for the long-term survival of rare, migratory, threatened or other priority species and ecological communities”;*
- *“Include critical areas to ensure the viability, resilience and integrity of ecosystem function in response to a changing climate”.*

In 2010, Australia also committed to the *Convention on Biological Diversity Strategic Plan for 2010-2010*, specifically Target 11 that:

*By 2020, at least 17 per cent of terrestrial and inland water, and 10 per cent of coastal and marine areas, especially areas of particular importance for biodiversity and ecosystem services, are conserved through effectively and equitably managed, ecologically representative and well connected systems of protected areas and other effective area-based conservation measures, and integrated into the wider landscapes and seascapes.*²²

Protected areas play an indispensable role in preventing extinction and recovery of species currently declining to extinction. Target 11 is therefore vitally important in attaining Aichi Target 12, in which Australia also committed that:

*By 2020, the extinction of known threatened species has been prevented and their conservation status, particularly of those most in decline, has been improved and sustained.*²³

The draft strategy references *Australia's Biodiversity Conservation Strategy 2010–2030*, however regrettably, this strategy does not reference the Aichi Targets for 2010-2020 decade and does not have a protected areas target. Although consultation on a revised strategy closed in Sept 2015, this strategy has not yet been released by the Australian Government.²⁴

The Queensland Government has committed “to secure and conserve representative and resilient samples of all of Queensland’s biogeographical regions” and “to work towards the United Nations Convention on Biological Diversity target of 17% terrestrial protected area coverage.” For clarity, the

²¹ <https://www.environment.gov.au/system/files/resources/643fb071-77c0-49e4-ab2f-220733beb30d/files/nrsstrat.pdf>

²² In decision X/2, at its 10th meeting in Aichi Prefecture Japan, the Conference of the Parties adopted a Strategic Plan for Biodiversity for the 2011-2020 period including 20 so-called Aichi Targets (<https://www.cbd.int/sp/targets/>).

²³ See note 5

²⁴ <https://www.environment.gov.au/biodiversity/conservation/strategy/review-australias-biodiversity-conservation-strategy-2010-2030>

final strategy should also include bioregional, ecosystem and threatened species habitat minimum protection standards. In particular, the 17% target should be clearly applied as a bioregional level protection target, not just statewide, and across both land and waters.

Strategic parks growth should be guided by the overriding purpose of recovering threatened species and ecosystems, by abating threats and preventing more species and ecosystems becoming threatened.

Performance

Terrestrial bioregional representation

The Australian Government has stated that it has already achieved Aichi Target 11. In 2014, the former Environment Minister Greg Hunt MP told the World Parks Congress, “Our position is absolutely clear – we have achieved the 17% Aichi goals for our terrestrial parks.”²⁵

This claim overlooks the fact that only 36 of 85 bioregions having achieved the 17% target. As a result, the national reserve system is far from meeting the ecologically representative criterion of Aichi Target 11.²⁶ Only two of 13 Queensland bioregions have reached the 17% 2020 target (Table 1). Coastal and Cape York regions are already moderately to well represented, while inland bioregions remain poorly protected.

Table 1. Bioregions of Queensland under Queensland Parks and Wildlife Service (QPWS) protected areas (PAs) and nature refuges, as at October 2016 (Source: QGlobe)

Note: bioregions are ordered by the declining proportions that are protected. Those below 17% are highlighted in red.

Bioregion	Total (ha)	QPWS PAs (ha)	Nat. Refuges (ha)	QPWS PAs (%)	All PAs %
Wet Tropics	1,992,899	983,744	28,821	49.4%	50.8%
Cape York Peninsula	12,305,219	2,431,278	1,425,456	19.8%	31.3%
Southeast Queensland	6,248,417	856,185	31,150	13.7%	14.2%
Central Qld Coast	1,484,277	190,769	5,540	12.9%	13.2%
Channel Country	23,217,288	1,555,503	1,061,456	6.7%	11.3%
Northwest Highlands	7,343,635	378,439	196,414	5.2%	7.8%
Einasleigh Uplands	11,625,726	499,464	285,052	4.3%	6.7%
Gulf Plains	21,910,942	691,302	368,489	3.2%	4.8%
Mulga Lands	18,605,811	685,181	179,097	3.7%	4.6%
New England Tableland	774,795	27,015	6,311	3.5%	4.3%
Brigalow Belt	36,528,106	915,735	341,613	2.5%	3.4%
Desert Uplands	6,941,095	186,561	34,506	2.7%	3.2%
Mitchell Grass Downs	24,162,329	345,144	16,082	1.4%	1.5%
TOTAL	173,140,541	9,746,320	3,979,987	5.6%	7.9%

²⁵ <http://www.greghunt.com.au/Home/LatestNews/tabid/133/ID/3093/Transcript-Doorstop-Sydney.aspx>

²⁶ Taylor MFJ 2017, *Building nature's safety net 2016: the state of Australian protected areas 2010-2016*. WWF-Australia Briefing. (“BNSN2016”)

Terrestrial threatened species habitats and ecosystems

Of terrestrial species listed as threatened under national legislation and with the majority of their range in Queensland, less than half meet WWF's minimum protection standard. This requires at least 30% of their known and likely to occur habitat in national parks, and another 9% in other protected areas. 31 such species (10%, of which all but three are plants) have no habitat in a protected area, based on Australian Government maps.²⁷

Likewise, Queensland has the lowest ecosystem protection of all states and territories, with 29% of the total area required to meet WWF's 15% minimum ecosystem protection standard filled so far, leaving 71% unfilled. This represents a total gap of 17.5 million ha. Queensland did make progress however, over the period 2010-2016, closing the gap by 1.16 million ha.²⁸ Nonetheless, at current rates of growth, it will take 90 years to meet minimum standards of ecosystem protection in Queensland.

Clearly, even if we are to meet minimum standards in Queensland, much greater investment in strategic growth of parks is necessary in order to effectively conserve the state's biodiversity.

Marine protection

WWF's national analysis of marine protection found that:

*A comprehensive, adequate and representative marine reserve system, which meets a standard of 15 per cent of each of 2,420 marine ecosystems and 30 per cent of the habitats of each of 177 marine species of national environmental significance, would require expansion of marine national parks, no-take or green zones up to nearly 30 per cent of state and Australian waters, not substantially different in overall extent from that of the current marine reserve system, but different in configuration.*²⁹

Filling this gap will require coordination and concerted action by Queensland and the Commonwealth similar to the actions taken during the historic rezoning of the Great Barrier Reef, which saw marine national park rise from 5% to 33%. At present, state waters are far below meeting these minimum standards for species and ecosystem protection.

Planning and investing in strategic growth

Strategic growth of national parks

It is the fundamental role of government to provide for the public good. National parks and the valuable ecosystem services they provide to the community are unmistakably a public good. Although the private sector can make a valuable contribution within the limits of philanthropy, the protection of Queensland's wildlife and wild places cannot be left to the private sector alone. If Queensland had left wildlife habitat protection to private initiative 50 years ago we would still be below 3% national parks. In addition, the bilby, the northern wombat and the bridled nailtail wallaby, among other icons, would already be extinct in Queensland.

²⁷ Ibid

²⁸ Ibid

²⁹ BNSN 2014

The current state government capital budget for strategic parks growth of \$5 million is clearly insufficient and out of all proportion to the economic value of the parks estate, including tourism visitation and spending and other ecosystem services. By contrast, the state built infrastructure budget is over \$10 billion, which is over 2000 times greater.

The central concern of the Strategy should be:

- development of a definitive map of future parks and other protected areas;
- securing whole of government recognition of the value of the strategic growth of the national parks system; and
- securing whole of government commitment to greatly increase government investment in strategic growth of the national parks system.

A credible allocation from general revenue should be the principal means of funding strategic growth of parks. However, additional revenue raising options have been explored in the past and deserve to be explored again. These include:

- Restore the former waste levy instituted by the Bligh government and used, in part, to fund parks expansion.
- In conjunction with local governments, explore a state-wide bushland preservation levy on rates.
- Encourage the Federal Government to reinstate NRS grants.

Key recommendations:

1. In consultation with the departments responsible for resources extraction, government should develop and agree on a single plan, down to the property level, of areas shown by careful cost-benefit analysis to be irreplaceable for inclusion in the parks estate (including the proposed new private national parks) to save Queensland wildlife. For inclusion at a lower tier (with a greater ability to be amended) should be conservation parks or nature refuges. Such a plan should be kept confidential at property level.
2. All non-park state land whether USL, leasehold, state forests or other reserves flagged as irreplaceable in such an analysis should be put into a new NCA holding tenure of future national park (as a generalised form of Forest Reserves), where no new extractive authorities, leases or permits can be issued. In addition, priority should be given to prompt buy-out or phase-out, as appropriate for existing resource extractive authorities, leases or permits.
3. At least \$55 million per year capital budget with carry-over should be dedicated to:
 - a. voluntary purchase of irreplaceable freehold properties for new national parks, or
 - b. buy-outs of interests over irreplaceable state land and conversion to national park.
4. The capital budget must be matched by appropriate increments in base funding for increased ranger staffing and operations costs.
5. The capital budget could also be used for grants to encourage conversion of properties identified as irreplaceable into private national parks where purchase is not an option, as well as other incentives, such as tax relief.
6. Queensland should use the leverage of the increased capital budget to encourage the Federal Government to restore the National Reserve System program, terminated in 2012-13, which offered up to \$2 in land purchase grants for every \$1 of proponent's capital investment.

Livestock on national parks

As soon as possible, special attention should be given to buying out and eliminating grazing leases currently valid over national parks. Some of these leases do not expire for another 29 years. The government should put national parks with grazing leases into a holding tenure until these leases can be eliminated. It is not appropriate to have areas subject to commercial livestock production listed as national parks.

All the evidence in the scientific literature is that commercial livestock production is not compatible with the purpose of a protected area to conserve nature.³⁰

Livestock grazing alters entire plant communities, especially ground and mid-story vegetation, with detectable impact on the fauna even at light levels.³¹ Livestock alter the hydrology of entire catchments by soil compaction and removal of cover, reducing rainfall infiltration and increasing runoff and erosion. Removal of cover also exposes ground dwelling fauna to excessive predation. Consumption of grasses and vegetation removes food resources for many native animals, especially granivorous birds like the black-throated finch. Ubiquitous barbed wire fencing entraps native wildlife (particularly night flying birds and mammals such as night parrots, owls and flying foxes). Finally, water points and bores installed for stock attract feral pests into arid areas naturally free of them.

Livestock production is a land use inimical to biodiversity conservation, and has no place in a national park.

Ongoing management of national parks

The employment of a professional well-resourced ranger corps, dedicated to fulfilling the primary purpose of parks in conserving wildlife and wild nature, is indispensable for an effective parks system.

Any capital fund for strategic growth of the parks estate must also be coupled closely with appropriate increments in park ranger positions and operations funding.

However, the government must also ensure park ranger resources are used efficiently and not diverted into activities of little value for conservation. In particular, the reality that dealing with visitor and neighbour pressures dominates park management spending should not be allowed to detract from the more critical role of threat abatement and threatened species recovery, and enforcement of the *Nature Conservation Act*.

The proposed provision for conservation authorities (A17) to allow third party management of national parks may have merit to the extent that the Queensland Parks and Wildlife Service ranger force can be used more efficiently with focus on the core Queensland Parks and Wildlife Service obligations under the *Nature Conservation Act*.

More efficient deployment of the ranger force is needed to arrest the disturbing declines and losses of threatened species from national parks. For example, the loss of the purple-necked rock wallaby from

³⁰ Williams, J.E. and Price, R.J., 2010. Impacts of red meat production on biodiversity in Australia: a review and comparison with alternative protein production industries. *Animal Production Science*, 50(8), pp.723-747.

³¹ Martin, T.G. and McIntyre, S., 2007. Impacts of livestock grazing and tree clearing on birds of woodland and riparian habitats. *Conservation Biology*, 21(2), pp.504-514.

Bladensburg National Park, the possible loss of the northern bettong from Mount Windsor National Park. and the significant decline of the transplanted bilby population at Currawinya National Park.³²

Greater engagement of Traditional Owners in management of national parks, up to and including handover of ownership, as on Cape York, has great potential for improving long term governance, equity and management effectiveness. This should be pursued state-wide.

Dingoes

Dingoes are protected native wildlife on the parks estate, where they provide extremely valuable top predator ecosystem services. Killing top predators is highly ecologically damaging to functioning food chains, and is thought to be behind small mammal extinctions in Australia by releasing cats and foxes from regulation.³³ Dingoes and other native predators need protection, not only on national parks but on all protected area categories under the NCA.

At present it appears that they are protected only on national parks, and even there they are not entirely safe. Under the 'good-neighbour policy' "*QPWS will also consider approval of 1080 baiting on its lands by lessees, permittees and neighbours, subject to conditions*"³⁴ This runs directly counter to the biodiversity priority of national parks and needs to be halted permanently – the policy should be reformed or removed.

Dingoes need to be fully protected under legislation as native wildlife on all *Nature Conservation Act* categories including nature refuges, and all persecution of dingoes on parks should be halted. In particular, any capacity to approve killing of dingoes to appease neighbours needs to be removed.

Conservation parks

The fact the conservation parks can be placed wholly under the authority of a third party trustee, rather than Queensland Parks and Wildlife Service is an ongoing concern, as is the fact that they can be open to livestock grazing.

Livestock production has significant negative biodiversity impacts as detailed above and should not be permitted on conservation parks. If permitted, then there needs to be a transparent program of regular auditing or review of appropriateness of such commercial uses, to assure the public that the protected area designation is justified.

It is recommended that proposed action 17 should be modified to replace future trusteeship arrangements with conservation authorities under which Queensland Parks and Wildlife Service retains oversight and enforcement powers.

Resources reserves

Resource reserves also can be placed wholly under the authority of a third party trustee, and can be open to mining and quarrying. The recommendation in regard to replacing trusteeships with conservation authorities above applies here as well.

³² Woinarski JCZ, Burbidge AA, and Harrison PL (2014) *The Action Plan for Australian Mammals 2012* (CSIRO Publishing, Melbourne).

³³ Johnson, C.N., Isaac, J.L. and Fisher, D.O., 2007. Rarity of a top predator triggers continent-wide collapse of mammal prey: dingoes and marsupials in Australia. *Proceedings of the Royal Society of London B: Biological Sciences*, 274(1608), pp.341-346.

³⁴ <https://www.npsr.qld.gov.au/policies/pdf/op-pk-cor-good-neighbour-policy.pdf>

An additional recommendation is that resources reserves should be treated as a temporary holding tenure, not a permanent state. After sufficient time has elapsed of mineral or petroleum exploration permits turning up no prospectivity, say 20 years, resources reserves should leave the holding pattern and automatically upgrade to national park upon expiration of current permits.

Nature refuges

Nature refuges are currently only weakly protected under the *Nature Conservation Act*. They can be subject to commercial levels of resource extraction and consumption, livestock and mining in particular. This raises the question of whether they do in fact meet the IUCN definition and guidelines for protected areas. There needs to be a transparent program of regular auditing or review of appropriateness of commercial resource uses, to assure the public that the protected area designation is justified and the primacy of the conservation purpose is not being compromised.

The proposed solution of another category of private national parks is a very welcome step, but does not address ongoing concerns over the appropriateness of commercial uses of nature refuges, which will still be retained as a *Nature Conservation Act* tenure.

The major funding requirement for private protected areas is to cover transaction costs of establishment, administration, monitoring and auditing, and to provide incentives and support for ongoing management.

The drop in valuation of land occasioned by a covenant (or nature refuge agreement) can be claimed as a tax deduction under ATO rules.³⁵ Statistics on uptake are not public, but poor uptake of covenants suggests it is a poor incentive. There are also no deductions for ongoing management costs. Although there is a landcare deduction, this is only applicable to the “productive” part of the property (usually livestock), not to protected areas dedicated to conservation.

One way the government could reduce transaction costs is to develop a definitive map and list of properties it would like to see as nature refuges, focussing on the second tier priority properties where values are not irreplaceable and/or where purchase costs might be prohibitive. Once such a list is signed off by government across departments, transaction costs, red-tape and delays could be reduced dramatically.

Ideally, all landholders would have to do is enter their property description on a website to see if it is in the list and see the standard contract and map applicable to their property. They would then provide proof they are the owners and sign a standard agreement to enter the program, if willing to do so. This would also prevent government using administrative resources to deal with requests for nature refuges that are not priorities on the definitive map and list.

The Commonwealth NRS grants program also provided purchase grants to private buyers. Hence effort put into reviving that program would also see a major revival of NGO contribution to adding new protected areas in Queensland.

Secure and adequate funding for ongoing management (Nature Assist) provides a major incentive for landholders to enter into the nature refuge program. Other incentives which should be explored include:

³⁵ <https://www.ato.gov.au/Non-profit/Gifts-and-fundraising/How-supporters-claim-tax-deductions/Claiming-conservation-covenant-concessions/>

- Land tax relief, or rates rebates (with agreement of local governments);
- Require the \$80 million in regional natural resource management funding from DNRM to be spent only on new or existing nature refuges³⁶;
- Work with regional NRM bodies to secure a general policy of favouring nature refuges for grants for conservation land management;
- Prioritise, streamline and assist appropriate ecotourism developments on nature refuges as alternatives to resource extraction-based income.

Indigenous Protected Areas

Indigenous Protected Areas (IPAs) are short term funding agreements under a Commonwealth program.³⁷ The Working on Country program³⁸ also provides a source of ranger funding, but is not exclusive to IPAs.

The proposal to recognise IPAs in the Queensland system has merit, but attention must be given to improving the security and long term funding assurance, which is primarily a Commonwealth responsibility. Ideally IPAs would be recognised under the *Nature Conservation Act* as nature refuges or National Park (Aboriginal land) with the consent of the traditional owners.

Queensland should also provide long term ranger funding for such IPAs, in recognition of the contribution to state protected area targets, and should also seek cooperative management arrangements with Queensland Parks and Wildlife Service.

Beyond IPAs, co-management or joint management of all state protected areas should be the aspirational norm, and the handback arrangements currently only applicable on Cape York should be explored for the entire state to maximise the engagement of Traditional Owners in caring for their country and helping to better manage state protected areas.

³⁶ <https://www.qld.gov.au/environment/agriculture/sustainable-farming/nrm-investment-program/>

³⁷ <http://www.dpmc.gov.au/indigenous-affairs/environment/indigenous-protected-areas-ipas>

³⁸ <http://www.dpmc.gov.au/indigenous-affairs/environment/indigenous-rangers-working-country>

Recommendations on proposed actions

Action	Recommendation/comment
1. Establish an informal coordination group of major conservation land owners, managers and/or investors to facilitate coordinated protected area management and investment	This would be better as a formal roundtable. It should not be limited only to land conservancies but include conservation NGOs, threatened species and protected areas science experts, the tourism sector and Traditional Owners.
2. Continue to innovate and build on the success of existing initiatives being implemented by government that engage Traditional Owners in protected area management	WWF supports the maximum possible engagement of Traditional Owners in national parks management in particular, but also more broadly in the protected area system.
3. Continue working with Traditional Owners to dedicate and manage land as national parks (CYPAL)	WWF supports the progressive handback of state land to Traditional Owners, under perpetual protection and would like to see the Cape York model considered statewide.
4. Continue to facilitate Indigenous participation in protected area management, including through the Queensland Indigenous Land and Sea Ranger Program	See above
5. Recognise Indigenous Protected Areas by including them in Queensland's protected area reporting	WWF supports a progressive program of bringing IPAs under <i>Nature Conservation Act</i> tenures. Unfortunately, the Commonwealth program is based only on short term funding agreements.
6. Protect private lands of outstanding conservation value from incompatible land uses by creating a new class of privately managed protected area (Special Wildlife Reserve) under the <i>Nature Conservation Act</i>	<p>WWF supports a new <i>Nature Conservation Act</i> tenure of nature refuges equivalent to national parks so long as they are truly like national parks closed to livestock, mining and extractive or consumptive uses of any kind. The name should be changed to better reflect the intent.</p> <p>The protection of existing nature refuges also needs to be raised. At the moment they can be exploited, and dingoes are not protected there as native wildlife. There needs to be a systematic program of audits to ensure that conservation of nature remains the primary purpose rather than production, and that protected area status remains warranted.</p>
7. Recognise conservation as a consistent lease purpose on leasehold land where a protected area has been declared	This is supported with the concern that grazing properties, no part of which is free of stock, may not legitimately be considered protected areas. The best approach to high conservation value leasehold land which is already owned by the state is the Delbessie agreement provision for ultimate transfer to National Park. In cases where NGO conservancies are lessees already, they should be allowed to transition from a lease to a fully-fledged National Park under a conservation authority per proposed Action 17.
8. Broaden the range of regulatory tools available under the <i>Nature Conservation Act</i> to better protect privately managed conservation lands	It is unclear what is intended here, but if it is about tightening up what can happen on nature refuges and introducing systematic auditing, then WWF supports it.

Action	Recommendation/comment
9. Consider alternative and innovative ways to deliver the NatureAssist incentives scheme to encourage the establishment, and assist in the ongoing management, of private protected area	Qld should coordinate with the Commonwealth, which has a tax break already for new covenants, but no relief for ongoing management. Queensland should explore land tax or rates relief, carbon finance, and ensure regional NRM funding is applied to nature refuges.
10. Explore and facilitate uptake of alternative income streams such as carbon schemes, stewardship approaches and offsets schemes on private protected areas	Stewardship payments should only flow to permanent protected area covenants or nature refuges. Offsets as practiced are problematic because they are often zero sum, no net gain or in the case of offsets involving protection of already intact land, result in net loss and so, not a real offset.
11. Investigate options to reduce government charges and other disincentives for private protected area owners	Strongly supported.
12. Explore options with local government for protecting their significant conservation reserves in Queensland's protected area system	Supported. Hopefully the new private national park category could be used to bring local government reserves and VCAs with private land holders under the one umbrella.
13. Review revenue and funding mechanisms to reflect the value of the benefits provided by the parks estate with the aim of ensuring consistency within the existing fee structure and with other states, and promoting a more equitable and transparent system	There is no substitute for a credible annual allocation from general revenue. Parks entry fees are unpopular and can have perverse effects and need to be studied carefully.
14. Explore alternative options to encourage partnerships, volunteering, sponsorship and promotional activities that contribute to park management	Supported, but government has to be realistic and work out whether cost of trying to organise and administer relative to return might be better spent on more park rangers.
15. Undertake socio-economic analysis to identify potential economic and social benefits associated with the parks estate to help inform investment decisions and partnership opportunities	The valuation of tourism and ecosystem services is strongly supported and should be at least a biennial rigorous quantitative, empirical public "Value of parks" report, to put dollar values on ecosystem services and especially nature tourism that parks are providing to the state.
16. QPWS aims to balance and promote responsible community use of protected areas while ensuring similar opportunities are available for future generations to enjoy. We will do this using contemporary and adaptive management tools and by continuing our funding commitment to best practice park management	Parks growth provision must always include funding not just for acquisition but also for rangers and operations. The current good neighbour policy allows actions directly contrary to the parks biodiversity mission and should be reformed or dropped.
17. Develop a legislative mechanism under the Nature Conservation Act 1992 to allow for sole or partnership management of national parks by third parties, such as conservation groups and Traditional Owners	Tentatively supported depending on specifics. As long as QPWS retains oversight and enforcement powers, this could be a useful way to outsource activities that are not core to the QPWS conservation mission, saving the ranger force for the core activities. Trusteeships should be completely replaced with such arrangements provided QPWS retains oversight and enforcement authority.

Action	Recommendation/comment
18. Prepare a prospectus to encourage international and domestic philanthropic investment in the parks estate	Philanthropists largely look to the NGO conservancies and quite reasonably expect government to fund parks expansion and growth from governments' own considerable revenue.
19. Develop a medium-term target for working towards a 17% terrestrial protected area coverage, including relative contributions of private and public areas	<p>At a minimum the 17% should apply to every bioregion. WWF also recommends ecosystem and threatened species minimum standards of 15% and 30% respectively.</p> <p>Whether acquisition as a national park is preferred over a private protected area should be decided by the irreplaceability and importance of the biodiversity values on the property, but also more practically, on landholder willingness to sell and at what price.</p> <p>The strategy must also set the same target for marine bioregions, and map out a plan for extending marine national parks across all state waters, where irreplaceable planning units are identified for protection of biodiversity.</p>