

7 ways to protect WA's most valuable natural asset

The Wilderness Society WA
April 2021

House Shed Hill at Carlton Hill Station, Miriuwung Gajerrong Country |
Image: Wilderness Society Collection

We recognise First Nations as the custodians of land and water across Australia and pay our respects to Elders past, present and emerging. We acknowledge sovereignty was never ceded.

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Foreward

In December 2006, the then Environment Minister Mark McGowan released A 100-year Biodiversity Conservation Strategy for Western Australia: Blueprint to the Bicentenary in 2029'.¹

While acknowledging that the draft strategy was bold and challenging, the document set 10 ambitious targets, including the full recovery of 20 plants and animals currently listed on the state's threatened species list.

The Minister went on to say that "more needs to be done to prevent further decline."

One and a half decades later there is no final Biodiversity Conservation Strategy. However, it has been recognised by many in the community, both individuals and groups, that nature conservation is a shared responsibility. This is perhaps especially so where private land is concerned.

The conservation estate needs to be adequately funded and managed—with a key role for First Nations people embraced. Adequate data to support the adoption of national standards is required, as with improved opportunities for public participation at all levels of decision-making.

Critical issues remain in fire management and the preservation of native vegetation. All regions in WA require attention from the Kimberley and Pilbara in the north, to the rangelands and woodlands further south and east, and South West Forests.

The Wilderness Society WA has prepared this report to advance the conservation and protection of WA's native vegetation that underpins our cherished biodiversity. I commend this report as deserving of close attention leading to a positive response and action.



A handwritten signature in black ink, appearing to read 'John Bailey'.

Professor John Bailey

Murdoch University, Emeritus Professor of Environmental Science

Ex-Chair of the Conservation Commission of WA (2001–2009)

Western Australia Environmental Protection Authority member (1985–1993)



Gnamptophaea succulenta, Ngadju Country | Image: Jenita Enevoldsen

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Jungkajungka /Branching fringe lily (*Thysanotus multiflorus*), Whadjuk Noongar Country| Image: Jacinta Taylor

Executive summary

Western Australia's most valuable natural asset is its native vegetation. It is a carbon sink for rising emissions, a temperature regulator for heatwaves. It binds and protects ancient soils while keeping the water flow of rivers and wetlands healthy, and it's home for threatened species.

Conversely, the depletion and destruction of native vegetation is one of the primary drivers of land degradation, erosion, salinity and declining water quality, and is the biggest cause of biodiversity loss.²

The state retains some of the largest intact ecosystems of global significance covering 26 diverse botanically unique bioregions,³ many of which contain high levels of endemism unparalleled on other continents.

The Kimberley is known as one of the largest intact tropical savanna left on Earth,⁴ with lush subtropical forests, and islands that are ecological havens for threatened species. One-third of all eucalyptus species found on the Australian continent are found within the Great Western Woodlands—which is recognised as the largest temperate woodland left on Earth. Western Australia's south west old growth forests of karri, jarrah, tuart and tingle species are also globally significant and unique—being found nowhere else on Earth.

Despite these natural wonders, Western Australia also contains some of the most impacted landscapes on Earth. Over one-third of the state is covered by pastoral leases with heavy grazing over a century leading to significant degradation issues, less than 10% of old growth native hardwood forests are left standing⁵ and up to 93% of original vegetation has vanished in some local government areas of the state's south west.⁶

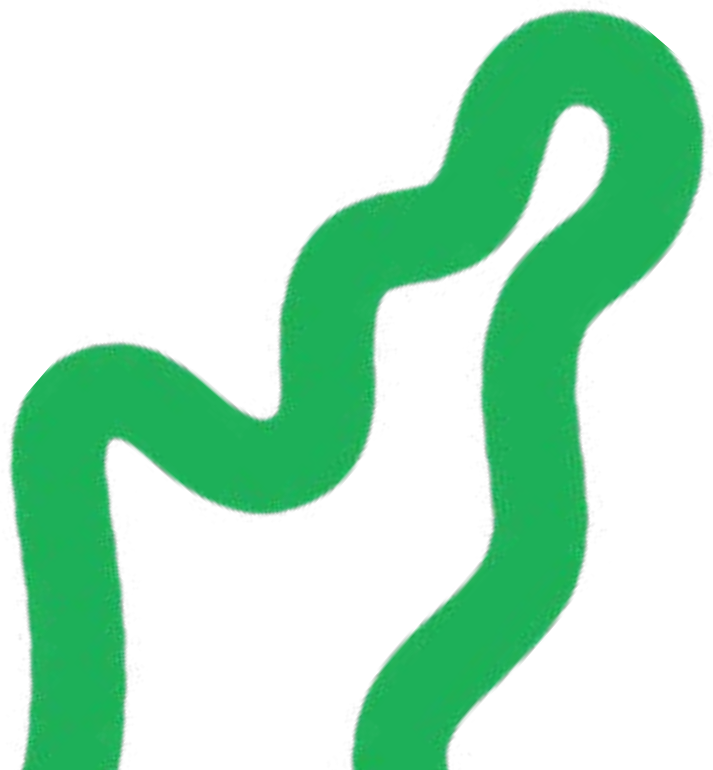
In terms of mining, the publicly available data shows that an area greater than the size of Hong Kong has been destroyed⁷ with minimal compliance oversight and limited quality rehabilitation.⁸

Boorloo's (Perth) urban footprint continues to sprawl beyond a 150km coastline, recently accelerated by COVID-19 pandemic grants resulting in more bulldozing of critically endangered ecosystems.⁹ Boorloo (Perth) is also now recovering from the most destructive and uncontrollable bushfire in its history, which destroyed 86 homes, yet provides the opportunity to rethink our rapid response and prescribed fire regimes.

Unbelievably, due to a myriad of exemptions for clearing native vegetation, **no public data exists that reveals how much, or where, native vegetation is cleared illegally.**^{10,11} This needs to change.

Western Australia's native vegetation is currently managed by a complex and piecemeal system. If the value of biodiversity and the critical role of native vegetation in supporting threatened species across Western Australia is to be realised, then this system requires urgent transformation.

The recommendations outlined below indicate opportunities and solutions that can be implemented in order to improve the protection and understanding of important forests, bushlands and outback. If undertaken these recommendations would have flow-on benefits for biodiversity outcomes, First Nations custodianship and management, and the rights of communities to conserve their valuable natural and cultural assets.



7 ways to protect WA's most valuable natural asset

1. EXPAND OUR CONSERVATION ESTATE— protect the most important forests, bushland and outback across the state

by expanding the *Plan for our Parks* initiative across Western Australia's bioregions. Prioritise biodiversity hotspots or areas under-represented by the comprehensive, adequate and representative protected areas approach, whilst providing joint vesting and management opportunities for First Nations people. Major Bioregions like the Kimberley, Pilbara, Boorloo (Perth) & Swan Coastal Plain and south west regions, are all earmarked for opportunities to better integrate comprehensive, adequate and representative protection.



2. INVEST IN USEFUL AND ACCURATE DATA— adopt a long-term and sustainable \$10 million annual monitoring program

to assess the extent and condition of native vegetation and biodiversity data across the state. The Biodiversity Monitoring Program will also deliver on the primary strategy direction of the draft 100-year Biodiversity Conservation Strategy and build biodiversity knowledge and improve information management.¹² Where critical data gaps exist in regions earmarked for future development—High Conservation Value forests, bushlands and outback ecosystems and prioritise them for monitoring. As far as is practicable, all data, mapping, monitoring and enforcement should be governed by a sole government agency. To ensure its conservation, we need to know what biodiversity we have and what it requires to survive.



3. SECURE A NET GAIN GOAL— adopt a whole-of-government reform towards net gain of WA's native vegetation

to avoid the current rates of clearing of unique, biodiverse and carbon-rich ecosystems. A policy directive of protective boundaries for the management of Threatened Ecological Communities and endangered species habitat—consistent with international conventions—to reverse the biodiversity and extinction crises. Ensure offsets are only used sparingly and by exception, where genuinely like-for-like biodiversity outcomes can be found. Implement and adapt policy and legislation accordingly to secure the protection of the most valuable natural assets and open up opportunities for land restoration.



4. RETHINK FIRE MANAGEMENT— review rapid response and prescribed burns.

The management of fires has been a contentious issue for some time in WA, which was highlighted through the loss of peat ecosystems in the Walpole Wilderness Area following planned prescribed burning,¹³ and the recent Perth Hills bushfire tragedy. Fire management across Australia has been reviewed by the Royal Commission into National Natural Disaster Arrangements. The findings provide the WA government the opportunity to rethink rapid response to fire and the massive prescribed burning target of 200,000 hectares per year—botanists have documented as having a negative impact on biodiversity outcomes¹⁴—and adopt the key recommendations to focus on rapid response, ecological fire regimes and engage First Nations people in the process as a matter of urgency.



5. EXPAND LAND RESTORATION— increase funding of the land restoration program to \$100 million

and allow for the incentivisation of genuinely restorative and regenerative land management practices—to retain quality habitat, increase carbon stocks and flows in the landscape and improve degraded land across WA. Land restoration has become an area of public policy that is recognised as an interconnected solution to a range of pertinent environmental issues, including climate change mitigation, emissions reduction, reforestation, regenerative agriculture, and native vegetation regeneration.¹⁵ In addition to public investment, bodies such as the UN Environment Program have recognised the potential benefits of attracting private investment contributions in order to meet international obligations and navigating a sustainable economic recovery following the COVID-19 pandemic.¹⁶



6. EMBED COMMUNITY RIGHTS—

enshrine basic universal community rights in legislation

to allow for greater public participation in decision-making, transparent information access and the right to seek access for justice and merit reviews of public decisions. Government agencies need to be sufficiently resourced to conduct genuine community consultation and proper state-wide enforcement that addresses the declining rates of native vegetation. This also means expanding access to information about biodiversity which is used in decision-making processes, and opportunities to empower concerned parties to hold the perpetrators of illegal clearing directly to account.



7. ADOPT ENHANCED NATIONAL STANDARDS—

boost government accountability, compliance and enforcement—as

recommended by the Independent Review of the *Environment Protection and Biodiversity Conservation Act* (the *EPBC Act Review*) by Professor Graeme Samuel¹⁷—to ensure that Matters of National Environmental Significance (MNES) are protected in WA. If state governments were to take on this role, they would assume a large part of the responsibility for protecting MNES via regulating and mitigating direct threats to MNES. It is also critical that the WA government transparently outline how they would be able to meet these enhanced national standards. Increasing state government accountability would include: legislative reform, investment in government compliance processes and systems for monitoring clearing permits, tightening exemptions and acting on illegal clearing through publishing data, and appropriate prosecutions of illegal perpetrators.





Donnelly State Forest, site of proposed dam earmarked for the Donnelly River,
South West WA, Bibbulmun Country | Image: Wilderness Society Collection

Context

Australia is one of 17 mega-biodiverse countries globally, with Western Australia (WA) being home to over half of the biodiversity hotspots recognised nationally.¹⁸ Biodiversity hotspots are highlighted internationally because they are regions of extreme flora and fauna richness, yet also face multiple threats.

WA is not only one of the most biodiverse locations on the continent, but is globally unique with some of the highest rates of endemism on the planet. As of 2021, WA is home to a total of 14,457 different species of native flora—identified by the WA Herbarium through Florabase.¹⁹

Unfortunately, WA's native vegetation is collectively in a state of decline and the threatened species list continues to grow. This is due to a combination of native vegetation clearing, land degradation, habitat fragmentation, climate change, fire, feral animals and weed invasions.

One-third of all threatened species nationally are found in WA. As of January 2021, the tally of nationally-listed threatened species in WA reached 582 species. Eighty-eight species²⁰ are critically endangered—and facing extinction without sufficient management and rectification.

The National Land Audit noted in 2001 that the clearing of bushlands, forests and other ecosystems had led to a loss of one-third of all native vegetation across the continent.²¹ Unfortunately since its introduction in 1999, the ongoing application of the national environment law—the *EPBC Act*—has failed to reverse this decline.

Since the *EPBC Act* has been in operation it's estimated more than 7.7 million hectares of habitat for nationally-listed threatened species has been destroyed—with 93% of that habitat not even being referred for assessment.²² This highlights the *EPBC Act* is almost completely ineffective at limiting the ongoing loss of existing and potential habitat for listed terrestrial species and communities.

This ineffectiveness of existing laws to protect nature has led to **Australia being named the second worst country in the world for biodiversity loss**—only marginally behind Indonesia.²³ With threatened species habitat destruction being a key factor in driving 90 native species to extinction, including 34 mammals.²⁴

A major review of national environmental laws in July 2020 found that Australia's environment is in an unsustainable state of decline. The report described the *EPBC Act*'s monitoring, compliance, and enforcement

as "too weak". It said "serious enforcement actions are rarely used" and concluded that legally binding national environment standards to support decision-making and a properly resourced "strong, independent cop on the beat are required."²⁵

The final review by Professor Graeme Samuel found that **cumulative impacts are not being assessed**, there are no national protection standards in place to protect matters of global significance and alarmingly projects have been approved that allow extinction to occur.²⁶ A prime example is WA's Yellerie uranium mine,²⁷ which if approved would allow stygofauna to go extinct under the "god clause"—the weakest link of WA's *Biodiversity Conservation Act*.

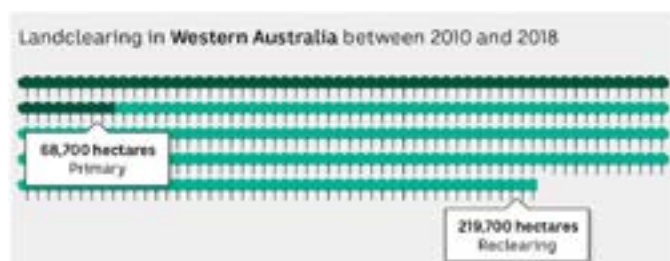
In WA, over 18 million hectares of land has been cleared²⁸ since records began in 1890. Some of this clearing was mandated by the government, as a condition of sale of land post-colonisation with little regard for the ecosystems that relied on these rich and unique habitats.

Shockingly, as of February 2021, still no government accountability framework exists to report on the illegal bulldozing of native bushland and forests across the state of WA.²⁹

Legislation and policy settings for land clearing over the long-term have also failed to acknowledge First Nations systems of sustainable land management. Systems that were in existence for millennia and were keeping the country healthy.

The Western Australian Environmental Protection Authority (EPA) in its 2016 Annual Report stated that, **"land clearing is one of the biggest threats to WA's biodiversity"**.³⁰ The report outlined: "The EPA is particularly concerned by the cumulative impact of clearing in the Perth, Peel, Wheatbelt and Pilbara regions." The EPA outlined the key impacts of clearing to include biodiversity threats, salinity and erosion.

According to the National Greenhouse Gas Inventory, **WA had the third highest rate of primary clearing in Australia** (after Queensland and NSW) over a period of eight years from 2010–2018. Of the 288,400 hectares cleared in WA, 68,700 hectares were primary forests.³¹ As reported by the ABC, "that roughly equates to a one-kilometre-wide piece of land 2,884 kilometres long or from Darwin to Adelaide with change."³²



Land clearing in Western Australia between 2010 and 2018, where one tree represents 1,000 hectares (ABC: Emma Machan)

These figures are not captured or tracked in any way by the WA government. With the corresponding figures for 'approved' clearing for the 2015–2016 year at less than half that figure—for not just forest but all vegetation types—according to the publicly available WA clearing data.³³ This data does not include native forest logging figures from the Forest Products Commission.

Internationally 2011–2020 was earmarked as the United Nations global decade to focus on biodiversity. Australia is one of the 160 countries that is a signatory to the Convention

on Biological Diversity.³⁴ However at a global, national and local level, the efforts to reduce land clearing and protect threatened species habitat have not gone far enough. In late-2020, the *UN Global Biodiversity Outlook* highlighted a failure to meet any of the 20 Aichi global biodiversity targets. Targets set a decade ago at the Global Biodiversity Congress. The UN has also called for ending primary forest deforestation globally by 2025.³⁵

Despite these global, national and local trends, recent research has shown that this highly concerning trajectory of impacts of habitat loss could be reduced by a rethinking and reform of long-term investment in environmental protection.³⁶


The United Nations Declaration on the Rights of Indigenous Peoples³⁷ declares in article 8 that Indigenous peoples and individuals have the right not to be subjected to destruction of their culture. In addition, states shall provide effective mechanisms for prevention of and redress for any action which has the aim or effect of dispossessing them of their lands, territories or resources.

The Wilderness Society recognises that native vegetation forms part of First Nations people's cultural heritage and their rights and interests in all aspects of land and water management. This includes decision-making based on free, prior and informed consent.

Global community calls on Australia to act:

The IUCN World Conservation Congress 2020—at its October session in Marseille, France—passed a motion calling on the Australian government to demonstrate national leadership in environmental protection and ensure reform of its national environment law.³⁸ This motion specified that Australia:

- *prevent the destruction of primary, remnant, old growth or High Conservation Value forests.*
- *prevents the avoidable extinction of native fauna and flora.*
- *protect and recover key biodiversity areas, Threatened Ecological Communities and threatened species, including strict protection for their critical habitats.*
- *substantially reduce Australia's greenhouse gas pollution and increase carbon sequestration in biodiverse landscapes and seascapes.*



"As we emerge from the immediate impacts of the pandemic, we have an unprecedented opportunity to 'build back better' this new agenda must be to tackle the twin global challenges of climate change and biodiversity loss in a more coordinated manner."
—António Guterres, Secretary-General, United Nations.³⁹

A spotlight on WA's complex system

WA's native vegetation is one of the state's most valuable natural assets. It strengthens conservation and biodiversity values but is currently managed through a complex and piecemeal system, which requires urgent transformation if the critical role of native vegetation is to be realised.

WA's independent watchdog, the EPA, has for several years been shining a spotlight on the key threatening processes affecting biodiversity. The EPA's 2016 annual report stated **"the clearing of native vegetation is a key threat to WA's biodiversity"**.⁴⁰

Yet five years on, there is no single consistent approach to valuing, monitoring or regulating native vegetation across WA.

WA does not have a single data set of the extent and condition of the state's native vegetation. There is no data to sufficiently inform decisions on cumulative impact and whether to approve or reject developments on this basis.

The McGowan Government's 2019 Native Vegetation Issues Paper recognises this complex legislative spaghetti stating that, **"more than 10 government departments and authorities play a role in managing activities that affect native vegetation, applying 16 Acts which have widely varying primary goals."**⁴¹

This complex and piecemeal system is ineffective and is the result of decades of departments working in silos. Disparate data monitoring methodologies and objectives have evolved within these siloes, which are often at odds with environmental outcomes.

Agencies such as the Department of Mines, Industry Regulation and Safety and Main Roads WA have been overseeing clearing of Threatened Ecological Communities on roadsides throughout the Wheatbelt and within remote woodlands. While this clearing is intended to facilitate road widening or mine site access, there appears to be little thought to the benefits of contiguous vegetation for these bioregions that already have high levels of clearing.⁴²

A further example of the distorting effect of the current legislative spaghetti is the delegation to the Department of Mines, Industry Regulation and Safety to assess and approve land clearing for resources exploration and development. This legal destruction of bushland is allowed to occur without sufficiently robust fauna or flora assessments and is supported through an annual \$10 million grant from the WA government—known as the Exploration Incentive Scheme.⁴³

The quantum of government investment in biodiversity monitoring programs is less than half of what is provided to corporations to legally destroy native vegetation—before it is understood what exists and which threatened species might call it home.

Clearing for mining activity has continued to expand rapidly with little community awareness or commensurate oversight.⁴⁴ Public reporting in 2018 found that the amount of land disturbed by miners was "larger than Hong Kong" (approximately 110,000 hectares).⁴⁵ By 2020, mining activity had disturbed 188,731 hectares across WA—with just 22% of that total being rehabilitated in some form.⁴⁶

The annual report for the mining rehabilitation fund is the only aggregated source of data that reveals how much native vegetation has been cleared for mining. However it is limited to reporting only the clearing in hectares, rather than provide further detail on threatened species, habitat, condition or even bioregional location.

To begin to address the climate, extinction and biodiversity crises, a commitment must be made to transform the system of WA's native vegetation management using a whole-of-government approach.

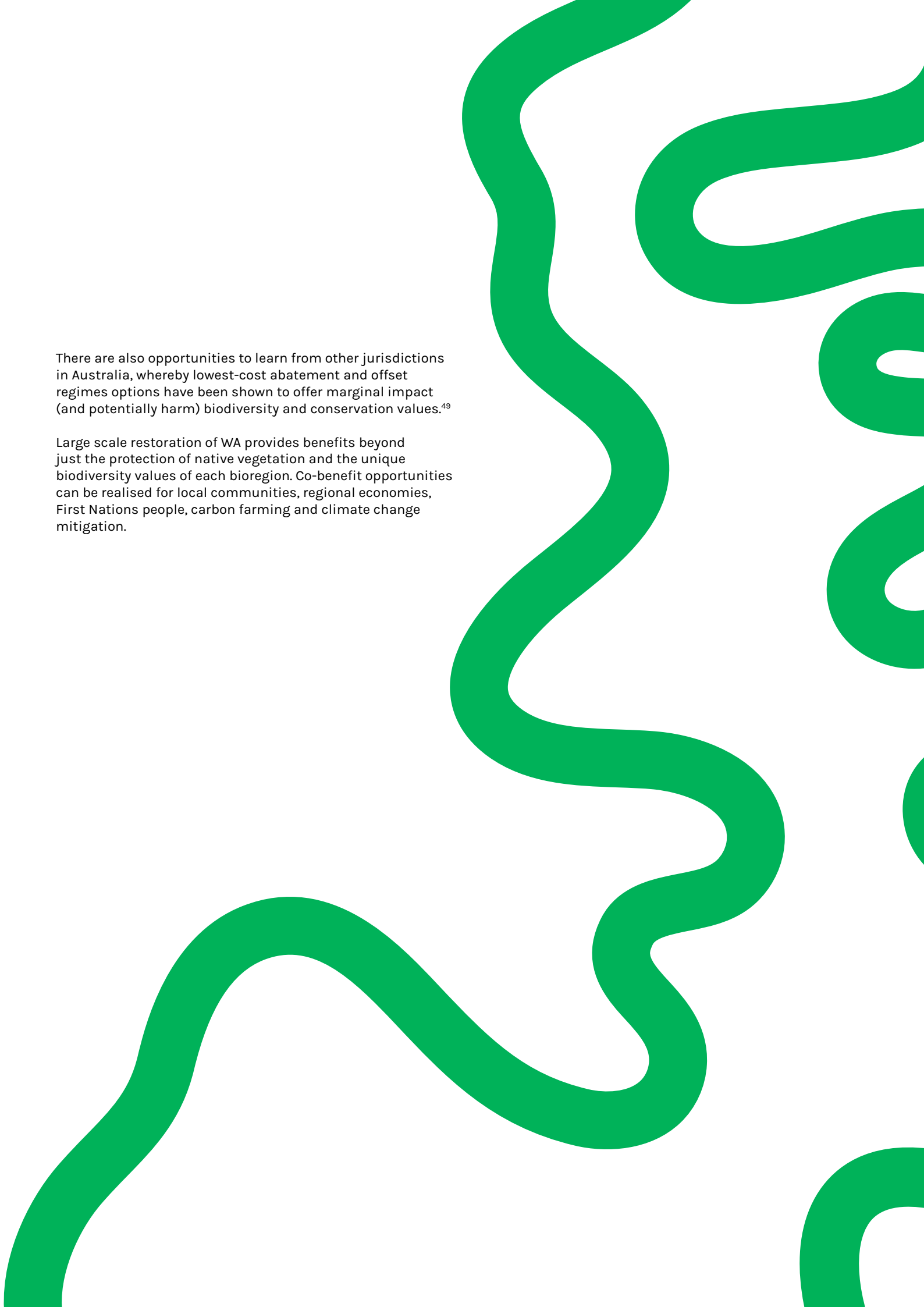
Aspiration and commitment are needed now more than ever. The McGowan Government have begun to reflect on opportunities to transform the system. Through the current review of the WA native vegetation policy, public consultation and feedback has been sought on how to reform the system and which policy settings should underpin a statewide approach.⁴⁷

Positive steps have been taken by the McGowan Government to enhance transparency and community rights, through the release of previously unpublished land clearing data.⁴⁸ The need now is to step up compliance and enforcement of illegal clearing, including publishing data on illegal clearing. The current system falls well short of consistent world class regulation, enforcement and decision-making across the state.

A commitment to sustainable long term monitoring of native vegetation in WA can inform the protection and restoration of the most important bushland, outback and forest. This will be an important step towards understanding what critical habitat remains for the state's threatened species.

There are also opportunities to learn from other jurisdictions in Australia, whereby lowest-cost abatement and offset regimes options have been shown to offer marginal impact (and potentially harm) biodiversity and conservation values.⁴⁹

Large scale restoration of WA provides benefits beyond just the protection of native vegetation and the unique biodiversity values of each bioregion. Co-benefit opportunities can be realised for local communities, regional economies, First Nations people, carbon farming and climate change mitigation.





Major bioregions of concern

The development of the state of WA has had an unparalleled period of growth over the last few decades. Yet, over the same period of time the recent review of national environment laws revealed that cumulative impacts of these developments across major bioregions of concern are failing to be addressed.

The management and protection of WA's native vegetation is in need of a bioregional approach driven by biodiversity strategies that are informed by updated monitoring data, assessments and mapping of critical habitat for threatened species and Threatened Ecological Communities.

These plans should be created through consultation with First Nations people and local communities in order for the WA government to understand the immediate threats to bioregions and gaps in data monitoring practices. Opportunities can also be sought to protect and restore ecosystems.

It is important to understand the key drivers of deforestation and bushland clearing that are specific to the state's various bioregions. By reflecting on the industries and processes that are continuing to drive the destruction of native vegetation, a foundation can be laid for the boundaries that are needed to see threatened species not only survive, but thrive.

While there are hundreds of threatened flora and fauna species across the state, this report highlights a number of species that are integral to ecosystem function and are important markers of ecosystem health.

For the purposes of this report, we have combined many of the nationally categorised Interim Biogeographic Regionalisation for Australia (IBRA) into six geographically major bioregions of concern—based on collective values, threats and opportunities.

The six major bioregions are: the Kimberley, the Pilbara, WA's Outback—Rangelands, the Great Western Woodlands, the Boorloo (Perth) & Swan Coastal Plain, and the South West Forests.

The Kimberley

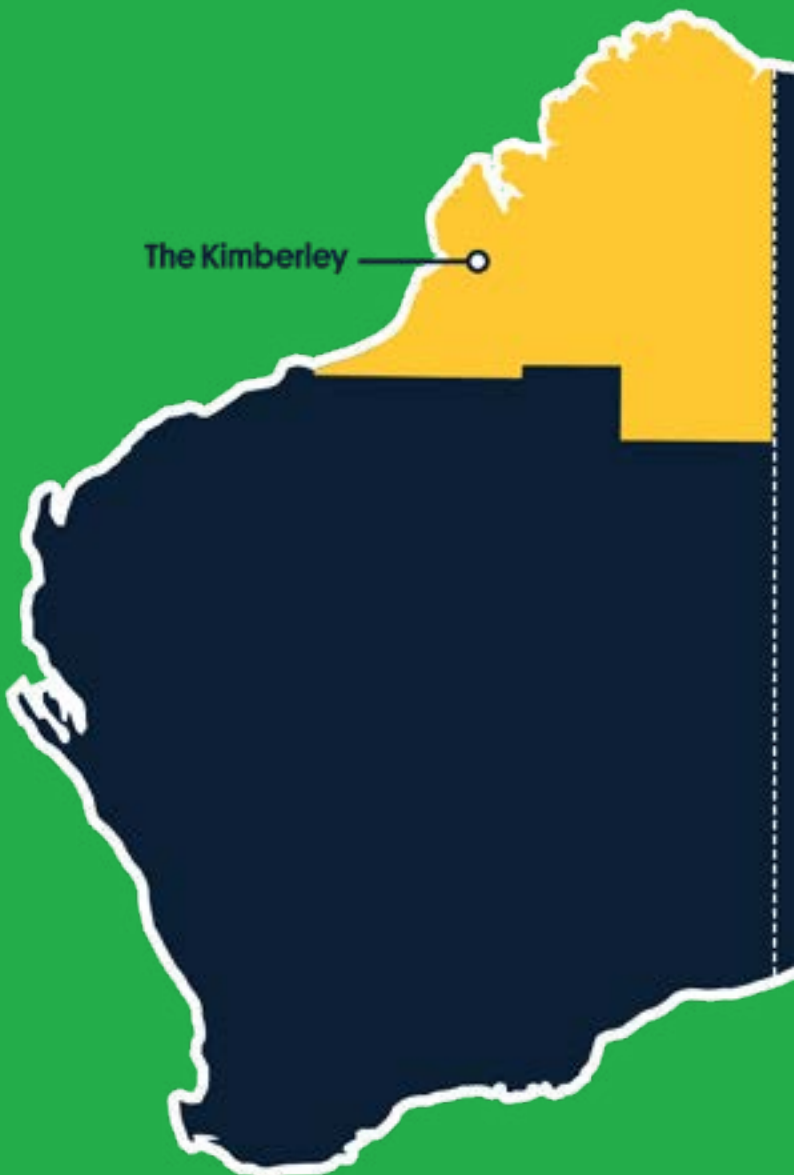
The Kimberley is the largest interconnected land and sea cultural landscape on the planet. This region is known as the Northern Botanical Province, with many unique and unprotected species like the boab (*Adansonia gregorii*), that hold cultural significance for First Nations people across the entire north west of the state. Action is needed to protect and manage this major bioregion of global significance.

The intact nature of this global icon is threatened by plans for up to 80,000 hectares of irrigated agriculture across the region⁵⁰—from the mighty Fitzroy River to the ‘La Grange’ eighty mile beach coastline—for commodities such as cotton and cattle fodder. Other threats to the region include proposed mines and fracking exploration in sensitive habitats which would impact the intact nature of this vast land and seascape’s global natural and cultural heritage values. Many of the pastoral leases in the region have been degraded by generations of cattle grazing since colonisation. Several cases of illegal clearing have been discovered by the community, yet have not been prosecuted by compliance officers.

In regards to current bushland clearing permits being granted to fossil fuel exploration in the region by the Department of Mines, Safety and Industry Regulation: there are no public comment periods, no appeals and no information is made publicly available on applications or decisions. This needs to change, if the government is to deliver on improved government accountability, transparency and enhanced community rights.

Opportunities to better protect the Northern Botanical Province of the Kimberley, include:

- expanding the conservation estate to 15% of the region by 2025. This is subject to Traditional Owner agreement, as just 7% of the Kimberley land mass is currently included in the conservation estate.⁵¹
- investing in biodiversity monitoring programs to close data gaps that exist in the region.
- boosting funding for the enforcement of illegal clearing. There have been international calls for the region’s protection as a matter of global priority.⁵²



Spotlight species



Nyikina Country | Image: Damian Kelly Photography

Boab tree (*Adansonia gregorii*)

This giant ancient ‘tree of the people’ stands out tall and proud amongst the rolling savannah woodlands of the Kimberley. They can live up to an incredible 1,500 years old, making them among the oldest living organisms in Australia.⁵³ Local Traditional Custodians have used boab trees in many ways, including as food, medicine, fibre, shelter, navigation and even a water source as its hollow trunk can directly capture rainfall and can be collected through cavities within its branches.⁵⁴ Traditional artists use the boab nuts to create intricate artwork, as well as marking the trunk of the tree to leave messages. It’s the only species of baobab tree found in the continent, which makes it so valuable from an environmental and cultural perspective—and yet no protections exist for the boab.



Yawuru Country | Image: Damian Kelly Photography

Greater bilby (*Macrotis lagotis*)

The greater bilby (*Macrotis lagotis*) are a nocturnal creature and an important species for biodiversity health—they create habitat for a range of smaller reptiles and invertebrates through digging a series of underground burrows, which are used frequently and cryptically. Threats to this species are the overarching cumulative impact on their habitat through piecemeal clearing for fracking exploration, large scale irrigated agriculture proposals, and illegal clearing by pastoralists.^{55,56}

Systemic failure: Illegal clearing—failure to prosecute.

In June 2019, Nyikina Traditional Custodians discovered 120 hectares of boab rich tropical savannah had been illegally cleared on Yakka Munga Station. This is 60 times the size of Perth’s Optus Stadium. It took a blockade by Traditional Owners and several thousand people emailing the Environment Minister to force the government to act and for the Pastoral Lands Board to issue the Chinese owned company ‘Shanghai Zenith’ a notice to rehabilitate the land.⁵⁷ As of January 2021, there has still been no prosecution of this highly publicised case, which could incur a fine of up to \$500,000.

The Pilbara

This bioregion is globally significant for its vast plateaus of savannah grassland, incredible gorges, and some of the most ancient banded ironstone ranges on Earth—some dating back 2.4 billion years. The region is home to 150 "conservation-significant" flora species, the greatest reptile diversity in WA, as well as being an international hotspot for subterranean fauna.⁵⁸

The remoteness of the Pilbara means that many of the region's species are poorly understood or unknown to science, with new species frequently being described. For example, 12 new species of *Acacia* were described in 2008⁵⁹ by Dr Stephen van Leeuwen and colleagues.

The region has been dubbed the 'engine room' of Australia, with iron ore mining bringing great wealth to the state. Yet it also has been singled out as the largest driver of threatened habitat and cultural heritage destruction, as noted by the EPA in its 2016 annual report.⁶⁰ The impact has been so great, that a specific Pilbara Environmental Offset Fund has been set up to attempt to 'offset' the impacts of continuing to clear threatened species habitat.

As reflected in the final report of the Independent Review of the EPBC Act, offsets should be a last resort, not the normal practice. As stated by Professor Samuel, "some proponents see offsets as something to be negotiated from the outset, rather than making a commitment to fulsome exploration (and exhaustion) of options to avoid or mitigate impacts."⁶¹ This colloquial approach to environmental protection and management needs to change.

The current application of an 'avoid-mitigate-offset' hierarchy has not been effective in preserving WA's aggregate biodiversity values. As a globally recognised biodiversity hotspot, any use of offsets need to be strictly prohibited where key environmental values are present, such as habitat for critically endangered species, World Heritage properties and values that cannot be restored.

An opportunity exists through extending national parks in the region—as part of the *Plan for our Parks*.⁶² As well as also putting in place strict boundaries for clearing habitat of native vegetation, inline with the Aichi targets in the international Convention on Biological Diversity.⁶³



Spotlight species



First Nations Country unknown | Image: DPAW

Leeuwen's wattle (*Acacia leeuweniana*)

Leeuwen's wattle (*Acacia leeuweniana*) is a rare WA endemic, known only from three granite outcrops in the central Pilbara.⁶⁴ The trees grow 4–8 metres tall and adolescent plants have conifer-like appearance, yet the most striking feature of the tree is that its bark looks like golden red pencil shavings, known as 'Minni Ritchi'.⁶⁵ This unique species was only recently discovered by western science when it was described by research scientist Dr. Steven Van Leeuwen in 2008. It was hence named after him in recognition of the major contribution that he has made to understanding the Pilbara flora. An opportunity exists to engage with and fund Indigenous Rangers and First Nations leaders in the region to focus on priority threat management,⁶⁶ which will help to better protect cultural heritage and Pilbara species of conservation significance.



First Nations Country unknown | Image: Jiri Lochman

Northern quoll (*Dasyurus hallucatus*)

Northern quoll (*Dasyurus hallucatus*) are threatened by habitat destruction through land clearing for mining—with a suggested 1.6 million hectares of habitat lost since 1999.⁶⁷ Critical data gaps exist for this shy species' current range and critical habitat, including impacts of feral predators currently impacting them such as the cane toad.⁶⁸ This species is a prime candidate to receive priority for funding for gathering data on threatened species, to inform and protect critical habitat.

WA's outback—the Rangelands

The Rangelands cover a vast swathe of WA's outback, and are dominated by slow growing perennial shrubs and spinifex grasslands. This *Eremaean Botanical Province* extends across the arid deserts and woodlands of central WA.⁶⁹ Over the last decade, there have been many recent attempts to diversify the vast region from sheep and cattle overgrazing to the areas of tourism and regenerative agriculture. Proposals for Rangelands reform and WA's outback could change the story of continued land degradation.⁷⁰

Yet many pastoralists are still battling decades of land degradation, salinity and erosion with little policy or financial support for long term land sustainability.

The portion of this estate comprising the northern Perth Basin and southern Kimberley is now threatened by the process of hydraulic gas fracking.⁷¹ Exploration and production proposals threaten the water quality, and viability of farms and pastoral estates in these regions.

Recent innovative methods of de-stocking and land regeneration have been highlighted by pastoralists and have gained momentum. Pastoralists such as David and Frances Pollock on Wooleen Station have allowed the perennial native grasses and 'bluebush' to regrow. Their battle to de-stock their 135,000 hectares has been documented through their book *The Woolen Way*.⁷²

Shockingly, more than a self-reported 61% of the pastoral estates were overstocked with cattle—with some areas 450% overstocked—yet not a single pastoralist has ever been prosecuted for overstocking land.⁷³

Overstocking of the state's pastoral estate has led to land degradation, salinity and erosion across one-third of WA.

The Auditor General's report on WA's pastoral lands from 2007 revealed that the **management of pastoral estate is in disrepair with no agreed definition of ecological sustainability, and no consistent data monitoring of native vegetation.**⁷⁴

A more coordinated approach is required to achieve genuine Rangelands reform. Pilot projects showcasing how to secure ecological sustainability are a welcome step forward.⁷⁵ Yet a more comprehensive approach is needed to strike the balance between policy settings and the integration of onground long term planning—beyond the supporting certain carbon methodologies⁷⁶—in the Rangelands.



Spotlight species



First Nations Country unknown | Image: Jean and Fred

Sandalwood (*Santalum spicatum*)

Sandalwood (*Santalum spicatum*) is a slow growing, long lived plant valued for its aromatic fragrance, healing properties and as a food source by First Nations people.⁷⁷ Due to a long period of overgrazing of the Rangelands and subsequent loss of species which dispersed wild seed, such as the woylie, the natural recruitment of wild populations has been poor. Expanded sandalwood farming opportunities for First Nations people have continued to emerge, yet an updated understanding of the extent and condition of this species is essential to inform sustainable harvests and an ability for the species to thrive. Unless investment is made in onground long term surveys to find out how much wild sandalwood exists across the Rangelands—with the current yearly quota set at 2,500 tonnes per annum⁷⁸—it may be on the path towards extinction.



First Nations Country unknown | Image: Michal Sloviak

Woylie (*Bettongia penicillata*)

Woylie (*Bettongia penicillata*) are a small marsupial which has an important connection to native sandalwood, historically known for dispersing seed throughout the Rangelands. The woylie population has been reduced significantly—mainly due to feral predation. Will the future decline of this quiet creature seal the fate of another extremely valuable natural asset—being unique native sandalwood?

The Great Western Woodlands

The Great Western Woodlands (GWW) is an area of great biological richness that extends over 16 million hectares—about the same size as England. This biodiverse treasure trove lies in the heart of the WA goldfields and is also home to one-third of all eucalyptus species on the planet. It is regarded as the largest remaining area of intact Mediterranean-climate woodland left on Earth. The GWW contains about 3,000 species of flowering plants—about one-fifth of all known flora in Australia.

Recent studies have shown that up to a million hectares of threatened species habitat within the GWW has been cleared without being referred to the *EPBC Act*.⁷⁹ This is referred to by ecologists as the ‘death by a thousand cuts’ effect. For example, every small mining exploration proposal builds its own roads to save time, many of which have had little to no rehabilitation. These cleared and rarely used vehicle tracks become feral predator highways and create further threats to threatened native species.⁸⁰

Many of these exploration proposals, approved through the Department of Mines, Industry Regulation and Safety require no detailed fauna or flora studies to be done before they are bulldozed—a concerning element that needs to change. These tracks also modify the hydrology of the region, driving erosion and allowing whatever precious rainfalls in the region to further erode the landscape. This landscape with its unique cultural and natural values is threatened by unrehabilitated clearing for mining exploration, intense bushfires caused by climate change, longer dry seasons and prescribed burning programs. If these impacts are not properly managed the nature of the GWW can be changed irreversibly into the future.

If there was a single state government department responsible for housing all biodiversity data and assessing all native vegetation clearing proposals—for any and all purposes—then government accountability would be clearer and decision-making would be more robust.

Opportunities for the region include a 10 year review and update of the *Biodiversity and Cultural Conservation Strategy for the Great Western Woodlands of 2010*.⁸¹ Another excellent step forward would be to invest significantly in First Nations conservation efforts and directly employ more rangers. This would help to ensure fire management and cultural heritage protection can be effectively deployed across the largest intact temperate woodland on earth.



Spotlight species



Kalamia Kapurn Country | Image: Greg Warburton

Gimlet gum (*Eucalyptus salubris*)

The gimlet gum (*Eucalyptus salubris*) is a standout feature of the GWW landscape—due to their shining copper bark. The gimlet can reach an age of 400 years old and is a fire sensitive species and dies upon being burnt. Therefore they are vulnerable to changes in landscape scale management and bushfires. The Ngadju First Nations people have used fire skillfully as a management tool over millennia, developing their own fire management regimes (lighting mosaic burns in cool season, and rapidly responding to bushfires) to preserve their cultural heritage and mature gimlet woodlands.⁸²



Ngadju Country | Image: Dave Curtis

Malleefowl (*Leipoa ocellata*)

The malleefowl (*Leipoa ocellata*) are a large ground dwelling-bird, who build their large mounds in eucalypt woodlands. Due to the fact they only nest in habitat which has been unburnt for 40-60 years, they are an indicator of ecosystem health and function.⁸³ The dual threats of fire and habitat destruction—through mining exploration—make this species likely to become extinct in the wild.⁸⁴ It is estimated by ecologists that over the last 20 years, one million hectares of malleefowl habitat was cleared without complying with federal laws like the EPBC Act.⁸⁵

Boorloo (Perth) & Swan Coastal Plain

The Boorloo (Perth) and Peel region, known as Whadjuk boodjar by Noongar First Nations people, is home to some of the most rare and threatened ecosystems found anywhere on Earth. Threats include accelerated development of the city of Perth, and its 150km of coastline and urban sprawl.⁸⁶

A place of ancient interconnected wetlands systems, with incredible species diversity of wildflowers, has been cleared and inbuilt to a point where the dominant ecosystems in the region have been added to national threatened species lists. The Banksia Woodland of the Swan Coastal Plain has been listed as an endangered Threatened Ecological Community. As of June 2019, the Tuart (*Eucalyptus gomphocephala*) woodlands and forests of the Swan Coastal Plain has been listed as a 'critically endangered' Threatened Ecological Community under the EPBC Act.

With less than 10% of the original native vegetation left, predominantly in urban forests—where the majority of Western Australians work, live and play. These remnant ecosystems are in dire need of protection and long term restoration.

Approval of further clearing of these intact Threatened Ecological Communities is wilfully sending these ecosystems towards extinction. The situation is a prime example of national environment laws failing to protect globally unique biodiversity assets, as highlighted by Professor Graeme Samuel's recent review of the EPBC Act.⁸⁷

The opportunities in this region are clear:

- protect what we have left of these Threatened Ecological Communities through expanding the *Plan for our Parks* to urban bushland and review of the Perth Peel regional assessment, which has been delayed since it was announced in 2015.
- empower decision-makers and local governments to better protect threatened species habitat, and increase restoration of native vegetation for threatened species locally. For example, urban forest planning such as the Fremantle Urban Forest Plan.
- Yareject clearing proposals for Threatened Ecological Communities and fund the restoration of critically endangered communities.

Boorloo (Perth) &
Swan Coastal Plain

South West
Forests



Spotlight species



Pindjarup Noongar Country | Image: Jenita Enevoldsen

Tuart trees (*Eucalyptus gomphocephala*)

Tuart trees (*Eucalyptus gomphocephala*) have stood tall and proud for centuries on the Swan Coastal Plain. They provide key habitat as nesting hollows for endangered black cockatoos. Due to the ever expanding urban sprawl of Boorloo (Perth) on 28 June 2019 the federal Minister for the Environment added the Tuart woodlands and forests of the Swan Coastal Plain onto the Critically Endangered list of Threatened Ecological Communities under the EPBC Act.⁸⁸ They are culturally significant to the Pinjarup Noongar First Nations people and were once used as birthing sites. These culturally and ecologically significant trees were found along the Peel inlet, just north of Island Point Reserve in Herron, but now are threatened by urban development beyond safe ecological limits.⁸⁹

Threatened species recommendation

Boundaries need to be created to both protect and halt the clearing of the remaining Carnaby's black cockatoo habitat. Particularly the critically endangered Tuart woodlands to ensure their populations can reverse the trend towards extinction.



Whadjuk Noongar Country | Image: Keith Lightbody

Carnaby's black cockatoo (*Calyptorhynchus latirostris*)

Carnaby's black cockatoo (*Calyptorhynchus latirostris*) is an iconic bird with a striking white tail and distinctive call. They are found only in south west WA. This species can live up to 50 years in the wild.⁹⁰ These charismatic birds are endangered due to their food sources being depleted and the number of nesting hollows—which take over 100 years to develop in native eucalypts—reduced to dire levels on the Swan Coastal Plain. Some Carnaby's black cockatoo populations—such as the ones located in the pine plantations near Gnangara—have demonstrated an adaptability to find other food sources and habitat as a response to deforestation, land clearing and bushfires.⁹¹ However the precarious future for these softwood plantations in the face of harvest plans highlight the ramifications of losing so much native vegetation across the Swan Coastal Plain, as well as the desperate need to revegetate and restore these degraded landscapes.

WA's South West Forests

In the south west of the state, mighty native hardwood forests dominate the landscape including the karri (*Eucalyptus diversicolor*), jarrah (*Eucalyptus marginata*) & marri (*Corymbia calophylla*). These forests are also globally unique, and home to several threatened species like the state's emblem—the numbat (*Myrmecobius fasciatus*). It is estimated that there are just 1,000 numbats left in the wild.⁹²

The south west of WA has also been experiencing a long-term climate shift since the 1970s.⁹³ These ancient native forests act as an immense store for carbon that is sequestered from the atmosphere, and protecting them is essential if we hope to keep our climate from warming further than 1.5 degrees. The loss of native forests, either from logging or climate induced impacts such as bushfires, further exacerbates the ability to keep carbon emissions from entering the atmosphere.

Protecting WA's South West Forests from logging has the potential to prevent 40–60 million tonnes of CO₂ from being emitted over a decade.⁹⁴ That's equivalent to taking 1.2 million cars off the road.

Currently the state government is clearing 10 football fields per day of WA's native forests.⁹⁵ These forests have been logged and cleared since the mid-1800s, principally for their unique hardwood and to allow for agricultural development. Yet they are worth so much more to the community if they are left intact for future generations.

Federal government data from 2017–2018 shows that hardwood plantations account for more than 90% of the product that the state produces (3.3 million cubic meters) and only 10% of the state's wood comes from native forests (366 thousand cubic metres).⁹⁶ It is essential that a transition to a plantation-based timber and woodchip industry is undertaken as a matter of urgency, for biodiversity and climate.

Eighty-five per cent of all the WA's native forest wood is sold for paper, firewood, charcoal and mill-waste. There is just 10% of old growth native forest left.⁹⁷ To make informed decisions about the future of these ecosystems and the threatened species that rely on them, there needs to be publicly available transparent data on what is left.

The state government's Forest Products Commission, a taxpayer funded agency, is in control of logging WA's publicly-owned native forests, which are logged under Regional Forest Agreements (RFAs). These bilateral agreements provide the

logging industry a rolling exemption from environmental assessments undertaken through the EPBC Act. **The logging industry is the only industry to enjoy such an exemption on a rolling basis, which is a regulatory loophole from a bygone era.**

The upcoming renegotiation of the WA Forest Management Plan 2014–2023 is an opportunity to ensure forestry is transitioned to sustainable plantation and farmed sources. If High Conservation Value native forest logging continues, it must be certified only to the Full Forest Management standard, and not the lower threshold and more contentious Controlled Wood certificate.

The Forest Products Commission was created when native forests were thought of as a renewable resource. Even if this notion was ever correct, it is now the case that healthy and resilient old growth forests are rapidly disappearing due to native forest logging, climate impacts such as fire and the rapid spread of disease like dieback.^{98, 99, 100}

Boorloo [Perth] &
Swan Coastal Plain

South West
Forests



Spotlight species



First Nations Country unknown | Image: Aly B

Jarrah (*Eucalyptus marginata*)

The jarrah (*Eucalyptus marginata*) forests cover the ecosystems of the Perth hills, Darling Scarp, the south west, and east towards Esperance. They are some of the most iconic forests in Australia.¹⁰¹ These giant trees were commonly called King jarrahs, rising up to 40 metres in height and providing food and shelter for many other native species such as the endangered Carnaby's Black Cockatoo (*Calyptorhynchus latirostris*) and the near threatened chuditch, or western quoll (*Dasyurus geoffroii*). Significant portions of the Northern Jarrah Forest remain threatened by bauxite mining from Alcoa expansion plans¹⁰² near Dwellingup and preceding logging by the Forest Products Commission.



First Nations Country unknown | Image: Rasmus Worsøe Havmøller

Numbat (*Myrmecobius fasciatus*)

The numbat (*Myrmecobius fasciatus*), known by their original Noongar name, have lost so much critical habitat that there are only estimated to be 1,000 mature adult individuals left.¹⁰³ As the faunal emblem of the state, it would be a national and global embarrassment if they became extinct. Protecting the numbat's critical habitat is a matter of urgency, and the system that allowed them to slip towards the brink of extinction must be transformed.

Systemic failure: Cumulative impacts spotlight case study

Alcoa has been mining bauxite in the Northern Jarrah Forests since the 1960s, under a *State Agreement Act* with the WA government. In 2020, Alcoa referred its expansion of mining operations in two large areas in the Northern Jarrah Forest to state and federal environmental regulators. This new expansion covers 8,700 hectares and will require a contemporary assessment by the EPA.

The long-term, sustained and significant cumulative impacts of clearing, drilling and mining over a wide expanse of the Northern Jarrah Forests are critical to understand. Recreation clubs, local communities and nonprofit organisations are collaborating to call on the government to complete a cumulative impact assessment and rethink this additional expansion into the Northern Jarrah Forests. An understanding of these impacts is critical for mitigating the impacts of climate change and preserving biodiversity in this bioregion.¹⁰⁴

WA's old growth forests are not just threatened by physical challenges, but also by legal definition. In March 2017, the definition was narrowed to exclude ancient karri forests that contained a single stump from a felled tree in a 2 hectare area.¹⁰⁵ This change of policy and definition has meant that some forests are overlooked being granted the status of 'old growth' and subsequent protections from logging.¹⁰⁶

The business of logging native forests results in millions of dollars in losses to WA taxpayers each year, with a \$2.6 million loss recorded by the Forest Products Commission in 2019–2020.¹⁰⁷

Protecting High Conservation Value native forests will safeguard a significant carbon sink and reduce emissions.¹⁰⁸ And transitioning the logging industry towards plantations will bring tremendous environmental, social and economic benefits to the region and the whole of WA.¹⁰⁹ It would also financially benefit every Western Australian, as the state government would no longer choose to subsidise a declining native forest logging sector.

The key opportunities to protect the most important South West Forest ecosystems include:

- committing to protecting all High Conservation Value native forests in WA;
- using the next Forest Management Plan 2024–2033 as an opportunity to enshrine the transition away from High Conservation Value native forest logging towards a plantation-based sector in WA.
- investing in a sustainable monitoring program to better determine exactly how much old growth jarrah and karri forests remain standing and require protection, alongside re-assessing the definition of 'old growth' native forest.



Hikers exploring Warren National Park, Bibbulmun Country, below colossal Karri trees growing up to 90m high, making them the tallest trees in Western Australia and one of the tallest in the world | Image: Jenita Enevoldsen

Recommendations and solutions

1. EXPAND OUR CONSERVATION ESTATE— protect the most important forests, bushland and outback across the state



The expansion of the existing *Plan for our Parks* initiative across WA should be undertaken through the prioritisation of areas that contain rich biodiversity and are currently under-represented by the comprehensive, adequate and representative approach. This approach is based on a methodology which requires an overhaul, as it is evident that the importance of intact and contiguous landscapes are far greater than originally assumed. The greater granularity of IBRA bioregions and subregions are not sufficiently accounted for and the reserve areas are not being managed to genuinely protect species and biodiversity.¹¹⁰

Current legislative instruments can accelerate the provision of joint vesting and management opportunities with First Nations people, providing employment across WA's regions and requiring and supporting greater use of Traditional Ecological Knowledge in conservation and management activities.

The commitment demonstrated by the McGowan Government to expand WA's conservation estate by a further 5 million hectares¹¹¹ is welcomed, along with the engagement with First Nations people to progress opportunities such as the Fitzroy River National Park and the Helena and Aurora Range National Park.

Opportunities to extend the *Plan for our Parks* initiative should be realised, including: the Kimberley's intact savannah, the vast interior rangelands, the Great Western Woodlands and WA's remaining High Conservation Value forests of the south west.

2. INVEST IN USEFUL AND ACCURATE DATA—adopt a long-term and sustainable \$10 million Biodiversity Monitoring Program



The key strategic direction of WA Labor's visionary draft 100-year Biodiversity Strategy¹¹² is to build biodiversity knowledge and improve information management. It's even more relevant today than it was when this strategy was drafted 15 years ago.

There is broad consensus that WA retains a critical gap in terms of monitoring data for the extent and condition of statewide native vegetation. This is acknowledged by peak bodies representing mining, agricultural, pastoral and conservation interests in EPA round table discussions, and has been recently highlighted by DWER's *Native Vegetation Issues Paper*.¹¹³

Critical data gaps exist in regions earmarked for future development—High Conservation Value forests, bushlands and outback ecosystems need to be prioritised for monitoring. **As far as is practicable, all data, mapping, monitoring and enforcement should be governed by a sole government agency.**

We need to know what biodiversity we have and what it requires to survive, to ensure its conservation.

Monitoring of the extent and condition of native vegetation and biodiversity across WA is desperately required. For a stocktake to be completed of our most valuable natural assets, we must utilise an array of data sourced from satellite technology, surveys and ground-truthing studies from the field.

As outlined above in various sections of this report, **the WA government currently lacks any comprehensive monitoring programs for the state and condition of native vegetation and biodiversity.**

Likewise, no complete data set exists for the cumulative impacts of illegal destruction of our forests, clearing of bushlands or degradation of our outback Rangelands. And recommendations from the Auditor General's report of 2007 to make data of illegal clearing publicly available have not been acted upon.

The majority of data collected around the state of WA is done on a project basis and until recently much of this data has not been released publicly. Initiatives led by the McGowan Government through the Western Australian Biodiversity and Science Institute, such as the Index of Biodiversity Surveys for Assessments¹¹⁴ and the Biodiversity Information Office, are welcome commitments. These initiatives aim to collate and publicise data from biological surveys, mostly collected by project proponents.

The planned digital assessment tool 'Environment Online'—a platform for streamlining environmental assessments—will need robust decision-makers to ensure that streamlining efforts can and do also result in a 'quick refusal' of projects which are clearly inappropriate, so not every project is approved.

The final report of the EPBC Act Review highlighted the significant shortfalls in environmental monitoring, evaluation and reporting. This report cited an alarming shortfall in the sophistication and capacity of these capabilities, "monitoring and reporting that is done lacks coordination and often focuses on bare minimum administrative reporting... a lack of long-term monitoring makes it difficult to establish a baseline against which to evaluate performance."¹¹⁵ WA is not immune from this finding, especially given the size and remoteness of most parts of the state.

Where critical data gaps exist, high conservation value native vegetation should be prioritised for monitoring, in line with existing Department of Biodiversity, Conservation and Attractions standards and protocols.¹¹⁶ Analysis should be produced annually of the results and publicly released through the planned Biodiversity Information Office to highlight the current status and intended outcomes for native vegetation, biodiversity and threatened species habitat.

Currently, several different departments are tasked with the monitoring and mapping of WA's native vegetation, creating a piecemeal system by default. The ramifications of this were highlighted in a 2017 Auditor-General report into pastoral lands:

***"Since 2009 the scale of pastoral lease monitoring declined from 15% of all leases inspected each year to less than 3%, at that rate it would take 20 years to inspect each pastoral station once."*¹⁷**

There is no question that improvements to the timeliness, quality and public accessibility of data are needed for more efficient and transparent environmental assessments. These improvements and increasing community rights would benefit all stakeholders involved in these processes.

In addition to these data improvements, there is a need for the WA government to fund biodiversity research to suitably assess cumulative impacts and better manage bioregional strategies to enhance our biodiversity—for natural, cultural and economic outcomes.



The Martuwarra (Fitzroy River), Gooniyandi Country |
Image: Damian Kelly Photography

Transparent monitoring of WA's High Conservation Value ecosystems is in the public's interest.

Why a \$10 million investment? The WA government currently invests \$10 million annually in an Exploration Incentive Scheme.¹¹⁸ As part of this scheme, the WA government co-funds exploration of new mineral and fossil fuel discoveries in regions—underexplored biologically as well as geologically. This program results in thousands of hectares of bushland being bulldozed annually. Much of it could be important habitat for threatened species in regions with healthier intact ecosystems. Yet without a system of comprehensive data collection and assessment of cumulative impacts to these regions, biodiversity will continue to decline and extinctions of critically endangered species occur.

Thus, if the WA government is committed to genuinely improving biodiversity outcomes, there is a live opportunity to match the above \$10 million invested annually into a long-term Biodiversity Monitoring Program. This investment would begin to fill critical gaps in scientific knowledge of biodiversity across the state, and achieve the outcomes flagged in WA Labor's visionary draft A 100-year Biodiversity Strategy.¹¹⁹

Once the Biodiversity Monitoring Program fund is created, a co-funding opportunity with businesses will emerge as the planned Biodiversity Information Office begins to publish all biodiversity data available in a region. Further investment could be funneled into the program from savings that business will make from not having an overlap of assessments. A panel of scientific experts could then assess where these funds could best be spent (based on comprehensive biodiversity and conservation regional strategies) to fill critical gaps in our knowledge, to inform better decision-making, and to identify opportunities for land restoration before more habitat and threatened species are lost.

The creation and long-term funding of a \$10 million annual Biodiversity Monitoring Program will:

1. Increase the understanding of high conservation value ecosystems and how to best manage and restore them into the future.
2. Provide opportunities to discover species new to science across the state.
3. Enable the tracking and growth of the carbon farming industry and biodiversity co-benefits.
4. Shine a spotlight on the cumulative impacts affecting our highly biodiverse regions.
5. Support the creation of monitoring jobs for First Nations people and regional communities.
6. Provide the data to drive the delivery of a final Biodiversity Conservation Strategy for WA.
7. Create the opportunity for businesses to invest in co-funding this long-term program.

As evidenced from prior efforts to improve the understanding of biodiversity values, it is likely that a renewed biodiversity monitoring effort could result in the discovery of previously unknown species— in 2017, 120 new species of snails found on remote Kimberley islands.¹²⁰ Monitoring will also increase the knowledge of species biodiversity and inform conservation efforts.¹²¹

The above mentioned policy and regulation reform will play a key role in the digitisation of data, which in turn can lead to the ability to take advantage of future technological improvements. Future innovations in drone technology and remote sensing monitoring will have huge potential in the coming decade to be coupled with artificial intelligence and machine learning in order to drive advances in the understanding of extent and condition reporting for remote areas.¹²² In order for these opportunities to be realised, an investment in a long term monitoring program is essential.

3. SECURE A NET GAIN GOAL—adopt a whole-of-government reform towards net gain of WA's native vegetation



Act.¹²⁶ This new piece of legislation could indeed help to prioritise the protection of our most valuable natural assets and increase the transparency of data, improve government accountability and create opportunities for land restoration for carbon and biodiversity outcomes.

It is critical that a clearly stated target of net gain for native vegetation is made, so that a whole-of-government approach can be adopted to ensure this target can be met. The impacts of ongoing development, bushfires and climate change create a need to rapidly reset the way in which native vegetation is protected and restored.

The use of offsets needs to be considered carefully given the final report of the Independent Review of the EPBC Act and the patchy evidence that they are suitably applied, "avoid, minimise and only then offset" is not being applied—offsets are too often used as a default measure not as a last resort."¹²³

The policy position of securing a net gain could be implemented through a range of mechanisms, including:

- the retention, protection, restoration and management of High Conservation Value forests, bushland and outback ecosystems across WA in the conservation reserve system.
- avoiding the continued rates of clearing of unique, biodiverse and carbon-rich ecosystems, that are currently under threat from offsets regimes.
- funding greater levels of land restoration which would deliver co-benefits for regional communities and First Nations people.
- delivering comprehensive biodiversity and conservation strategies for the regions across WA, inline with WA Labor's *draft* 100-year Biodiversity Strategy.¹²⁴
- evoking protective boundaries for the clearing of Threatened Ecological Communities and endangered species critical habitat—consistent with the international Convention of Biological Diversity—to reverse the biodiversity and extinction crises.

The Environmental Defenders Office have recommended¹²⁵ that the most efficient and effective opportunity to transform the broken system of native vegetation management is to adopt a suite of government policy and legislative reform, including a dedicated *Native Vegetation*

4. RETHINK FIRE MANAGEMENT—review rapid response and prescribed burns



It is time to rethink fire management rapid response mechanisms and outdated prescribed burning fire regimes across WA, and focus on enacting the recommendations from the recent national bushfire Royal Commission.¹²⁷

The Wooroloo bushfires of February 2021 burnt through a staggering 11,000 hectares¹²⁸ of forest and bushland, razed 86 homes over six days, tragically impacting hundreds of people and thousands of animals. The fires also coincided with the COVID-19 pandemic and overlapped with a lockdown period. This was a tragic event, and the full impacts on the community and wildlife are yet to be fully realised. It also highlights the need to rethink rapid response mechanisms.

Each year in the South West Forest region, there is a prescribed burning target of 200,000 hectares, with an aim to reduce out of control bushfires. However, the loss of ancient peat ecosystems in the Walpole Wilderness Area following prescribed burn highlighted by the Leeuwin Group of Concerned Scientists,¹²⁹ demonstrates the urgent opportunity to rethink our fire management regime.

The latest bushfire science has revealed that prescribed burning is most effective when very close (<1km) to dwellings; and then only for around five years.¹³⁰ Instead, the current prescribed burning regime aims to burn the whole region every six years. If we are aiming to protect property and loss of life, whilst protecting our ancient South Forest biodiversity, there is an urgent and present opportunity to rethink our fire regimes.

Bushfires and fire regimes across the country have been placed under intense scrutiny since the *Royal Commission into National Natural Disaster Arrangements* was established on 20 February 2020 in response to Australia's 2019–2020 bushfires.

Key recommendations from the Royal Commission's final report¹³¹ include:

- preparing for rapid response locally to put fires out before they become dangerous
- taking primary responsibility as the state government

for fire management regimes. Rethinking assessment and approval processes for hazard reduction—whether prescribed burns or mechanical slashing to clear land.

- engaging with First Nations people in regards to cultural burning practices, to inform future prescribe burning regimes.

The Royal Commission heard from leading bushfire scientists that, "in extreme bushfires, fuel loads do not appear to have a material impact on fire behaviour."¹³²

Despite a more contemporary understanding of the interplay of climate change and a drying climate, the WA government still adheres to a blunt mechanism of prescribed burns—reaching a target of 200,000 hectares annually. This policy is almost two decades old and requires urgent reconsideration given the known impacts of fire on vulnerable species throughout the state.

One key example of how Traditional Ecological Knowledge of cultural burning regimes are being integrated into fire and land management comes from the Ngadju First Nations people from Norseman, in the Great Western Woodlands. They have been managing their land for millennia by doing cool fire mosaic burns, and simply putting out bushfires before they increase in size and burn out of control. A recent study has shown that a species of eucalypt—the gimlet tree (*Eucalyptus salubris*)—doesn't need fire to germinate. In fact fire kills these trees. Yet if their landscape is managed well they can live beyond 400 years old.¹³³

In the Kimberley, by contrast, early dry season burning if done in line with Traditional Ecological Knowledge and good practice, helps to clear some fast growing acacia species and prevent large scale bushfires, which can burn hotter and out of control threatening life, ecosystems and property.

The Royal Commission also recommended that governments engage further with First Nations people to learn more about the relationship between their land and fire management and natural disaster resilience, and how it can help in the future.

The use of fire management zones can be an effective tool for the protection of life, property, environment and heritage. Fire management should prioritise:

- in zones adjacent to houses and infrastructure, the protection of life and property, whilst remaining sensitive to the needs of the environment and cultural values.
- in remote areas, the protection of natural and cultural values. In this zone, fire operations such as prescribed burns should be specifically for First Nations cultural or ecological purposes and may have incidental fuel reduction benefits.

In response to the increase in bushfires around the country, a collaboration of bushfire scientists from The Australian University and Griffith University has resulted in *The Bushfire Recovery Project*. It aims to clearly summarise the latest bushfire science for decision-makers looking to protect and restore forest ecosystems; more information can be found at [Bushfirefacts.org](https://bushfirefacts.org).¹³⁴

The Wilderness Society supports fire management for the protection of life, property, the environment and cultural heritage. We support land and fuel management approaches within a risk reduction framework that is integrated across a range of actions including early fire detection, rapid response when fires start, land and fuel management, working with First Nations people, clear emergency warnings, community preparedness, planning and building regulation, and community shelters.



Six months after the 2019-2020 bushfires at Mount Hassell, Koikyennuruff (Stirling Ranges)| Image: Brett and Sue Coulstock

5. EXPAND LAND RESTORATION—increase funding of land restoration program to \$100 million



To retain quality habitat and improve degraded land across WA, the state government should incentivise genuinely restorative and regenerative land management practices.

Land restoration has become an area of public policy that is recognised as an interconnected solution to a range of pertinent environmental issues, including: climate change mitigation, emissions reduction, reforestation, regenerative agriculture, and native vegetation regeneration. In addition to public investment, bodies such as the UN Environment Program have recognised the potential benefits stemming from land restoration policies, attracting private investment contributions in order to meet international obligations and navigating a sustainable economic recovery following the COVID-19 pandemic.¹³⁵

It is in the public interest to restore degraded land.

It is noted that a number of Australian jurisdictions are beginning to actively respond to the impacts of climate change, land degradation and the loss of native vegetation. Notably, the Queensland government has recently commenced a formal investment round for its \$500 million Land Restoration Fund, following the initial \$5 million allocation to pilot projects in 2019. Alongside the environmental benefits, these projects are demonstrating employment and economic outcomes are critically important to Australia's regional areas.¹³⁶

Efforts have been made to expand the conservation estate across WA over multiple electoral cycles. However, it is recognised that a considerable amount of High Conservation Value forest and bushland exists outside of the conservation estate. The release of the *Western Australian Climate Change Policy* included references to a proposed Carbon Farming and Land Restoration Program, facilitated by the Department of Primary Industries and Regional Development.¹³⁷

In order to maximise the efficacy of a comprehensive land restoration program in WA, there are a number of important principles that should be considered alongside increased funding.

Substantial funding commitments. The success of other Australian jurisdictions, in navigating through pilot programmes for land restoration, highlights the increasing maturity of public policy settings in this space and effective controls over public finances. Public documentation in WA indicates the long term and systemic loss of native vegetation across the entire state. This trend will continue without the implementation of sufficient protections over existing native vegetation and a commitment to restore and regenerate degraded land. A material investment, beyond pilot programmes or 'seed capital', is required to accelerate the application of these practices in priority bioregions.

Expert advisory committee. The appointment of an expert advisory committee can guide the strategic intent of land restoration policies and funding priorities. A blended mix of capabilities and experience can be garnered from public policy, scientific, agricultural, academic and conservation sectors. The prioritisation of funded projects can be informed by the most contemporary science and practical experience.

Incentivisation. Projects that underwrite lowest-cost abatement (or compensatory) measures should be discouraged. This has occurred in a number of schemes in Australia where the methodologies have encouraged projects that have been counter-productive, including monoculture plantations, the introduction of non-endemic species or the funding of initiatives that provide no additionality to either carbon stores or biodiversity. It is critical that carbon and biodiversity additionality is pursued in tandem, preferably in combination.

Co-benefit calculations. Projects that can demonstrate concurrent and reinforcing benefits, along with long term permanency, should be prioritised through any future funding rounds. Co-benefits can address a range of positive outcomes through land restoration projects, including the protection of threatened species and communities, bioregion biodiversity, engagement of First Nations people, regional employment and climate change mitigation.

Given the significant areas of WA that are degraded and in need of restorative and regenerative practices, a substantial investment from the state government can stimulate a new approach to revegetation across the state—one that incentivises practices that enhance carbon stores and biodiversity outcomes.

Traditional Ecological Knowledge. First Nations people have developed a cumulative body of knowledge, belief, and practice, evolving by accumulation and handed down through generations. Through land restoration projects, there are opportunities to sustainably fund initiatives such as Indigenous Rangers Programs and review the joint-vesting and joint-management of all existing national parks and conservation reserves, through free prior and informed consent. This should be done via respectful engagement with native title groups and leading Indigenous organisations to further integrate Traditional Ecological Knowledge into on ground monitoring and management needs.



Nyikina Traditional Custodians connect with community ambassadors around an ancient Boab tree (*Adansonia gregorii*), on Nyikina Country. Some boab trees are more than 1,500 years old, making them among the oldest living organisms in Australia.
| Image Jenita Enevoldsen

6. EMBED COMMUNITY RIGHTS—enshrine basic universal community rights in legislation



The rights and interests of First Nations people in all aspects of land and water management as well as decision-making in regards to the management of native vegetation should be acknowledged. Engagement with free, prior and informed consent also needs to be prioritised.

There is a need for greater public participation in decision-making, transparent information access (including expanding access to information about biodiversity to use in decision-making processes) and the right to seek merit review of public decisions. The current levels of resourcing need to be boosted for robust community consultation and enforcement processes.

Government agencies need to be sufficiently resourced to conduct genuine community consultation and proper statewide compliance and enforcement that addresses the declining rates of native vegetation. The final report of the EPBC Act Review made it clear the need for increasing the levels of genuine community participation in decision-making was vital in order to restore trust in environmental legislation.

The community must also be able to access justice, in instances where the government has failed in its duty to make decisions lawfully or enforce the laws properly. The latter is particularly important, the Auditor General's findings from 2007 show a consistent failure of enforcement, compliance and government accountability—many of the issues which still exist today.

This requires clear and community accessible processes by which communities can not only make complaints to the government about potential instances of illegal native vegetation clearing, destruction and degradation, but also public transparency about how those complaints are actioned.

It is also recommended that third-party enforcement rights be enshrined in legislation to enable community members and those with a special interest in the protection of cultural heritage, and native vegetation to independently seek enforcement of relevant laws.

An example of this community right action is the case study from the Kimberley major bioregion earlier in this report, where Nykina Mangala Indigenous Rangers found illegal destruction of their cultural heritage and native vegetation on Yakka Munga Station.¹³⁸ If this community right was adopted by the WA government, they would have the option of holding the perpetrators of that illegal destruction directly to account, through the judicial system.

If done appropriately, enshrining binding third-party rights in environmental legislation will promote public accountability and transparency from the state government and project proponents.

7. ADOPT ENHANCED NATIONAL STANDARDS—boost government accountability, compliance and enforcement



In the independent review of the *EPBC Act*,¹³⁹ Professor Graeme Samuel recently made several recommendations about enhanced national standards to ensure that Matters of National Environmental Significance (MNES) are protected in WA.

If state governments were to assume a large part of the responsibility for protecting, regulating and mitigating direct threats to MNES, it is critical that they transparently outline how they would be able to meet these enhanced national standards.

Increasing state government accountability would include legislative reform; investment in government compliance processes and systems for monitoring clearing permits; tightening exemptions and acting on illegal clearing through publishing data; and appropriate prosecutions of illegal perpetrators.

In alignment with the 2007 report by the Auditor General on native vegetation,¹⁴⁰ government compliance teams need to be sufficiently resourced to conduct proper statewide enforcement of permits through satellite mapping and on ground staffing, and ensure perpetrators of illegal destruction of our native vegetation are held to account.

A whole of WA government approach is needed to ensure agencies are sufficiently resourced to conduct robust statewide compliance and enforcement that addresses the declining rates of native vegetation.

Recent answers to Parliamentary Questions indicated the paucity of resources dedicated to enforcement and compliance of clearing permits across the entirety of WA. There are just 3.5 full-time equivalent staff members within the Department of Water and Environmental Regulation dedicated to the work of compliance of the majority of clearing permits across the state.¹⁴¹

A key mechanism of this system should be to ensure all native vegetation clearing permit breaches and cases

of illegal destruction are investigated thoroughly, and penalties are appropriate to deter offenders.

In addition, the enshrining of binding third party rights—the rights to access legal justice for public decisions in environmental legislation as discussed above—will assist in supporting the government with the enforcement of environmental regulation and laws.

Opportunities for key systemic reform:

1. Refresh and reform government accountability in managing WA's most valuable natural asset—native vegetation—as far as is practicable: all data, mapping, monitoring and enforcement should be governed by a sole government agency.
2. Require a formal 'notice of intent' and a public comment period for all current exemptions for native vegetation clearing to ensure that this category of clearing remains transparent and data can be tracked over time.
3. Invest in a long-term \$10 million monitoring program to measure the extent and condition of native vegetation and biodiversity across the state that is informed by regional biodiversity strategies and bound to the WA Biodiversity and Conservation Act.

These key solutions would allow for the collection and publishing of data on illegal clearing—a not yet implemented key recommendation of the 2007 report by the Auditor General on native vegetation¹⁴² and boost community rights to data transparency and access.

National Environmental Standards as a tool for reform

MNES such as nationally-listed threatened species, world and national heritage and Ramsar-listed wetlands in WA are required to be sufficiently protected through Australia's commitments under international conventions such as the Convention on Biological Diversity, the Convention on Climate Change and the Convention on Migratory Species.

Currently this occurs, or is meant to occur, via referral, assessment and decision-making by the Federal government over activities that may have a significant impact on MNES under the EPBC Act.

The final report on the EPBC Act Review¹⁴³ found that "the EPBC Act is ineffective. It is not fit to address current or future environmental challenges" and that "fundamental reform" of the Act and its implementation is required.

The EPBC Act Review notes that "the construct of Australia's federation means that the management of Australia's environment is a shared responsibility", but currently:

- "the Commonwealth and the states and territories do not manage their environmental and heritage responsibilities in concert" and
- "the Commonwealth, States and Territories need to work together, and in partnership with the community, to effectively manage Australia's environment and iconic places."

The EPBC Act Review recommends a suite of legally binding national environment standards¹⁴⁴ be implemented to ensure all decision-makers meet international obligations, environmental risks and community expectations. It also recommends that a full list of environment and process standards, including a standard to ensure meaningful community participation and access to key legal rights, be immediately developed and implemented.

The current Federal government has proposed devolving their assessment and decision-making powers over activities that may have a significant impact on MNES to state governments via accredited bilateral agreements. If state governments were to take on this role, they would assume a large part of the responsibility for protecting MNES, as they would be responsible for regulating and mitigating direct threats to MNES.

The Wilderness Society does not support devolution of Federal government responsibilities to state governments as state-based regulation is simply not equipped to assess, prevent and manage impacts across jurisdictional boundaries. Currently no state or territory meets all the core requirements of best practice threatened species legislation or even the standards of protection set by the EPBC Act.

However, in the event of bilateral responsibilities being administered by state governments across Australia, it will be critical for the WA government to transparently outline how it will meet the national environment standards. This includes any legislative reform, investment in government compliance processes and systems for checking clearing permits, tightening exemptions and acting on illegal clearing through more effective tracking and monitoring. The EPBC Act Review is very clear that if decision-makers do not adopt the reform recommended in the report, including adopting the national environment standards set out in the report, they are effectively "accept(ing) the continued decline of our iconic places and the extinction of our most threatened plants, animals and ecosystems."

However, at the time of writing, the Federal government is proposing national environment standards that fall far short of what Professor Samuel has recommended.¹⁴⁵ These proposed standards replicate the current settings of the EPBC Act—the same settings that currently drive extinction and environmental decline.

Regardless of whether devolved decision-making under the EPBC Act is implemented, the WA government should:

1. advocate that the Federal government to adopt the full suite of national environment standards as recommended by Professor Samuel.
2. ensure that state laws and regulation meets the same standards that are proposed by Professor Samuel.

Conclusion

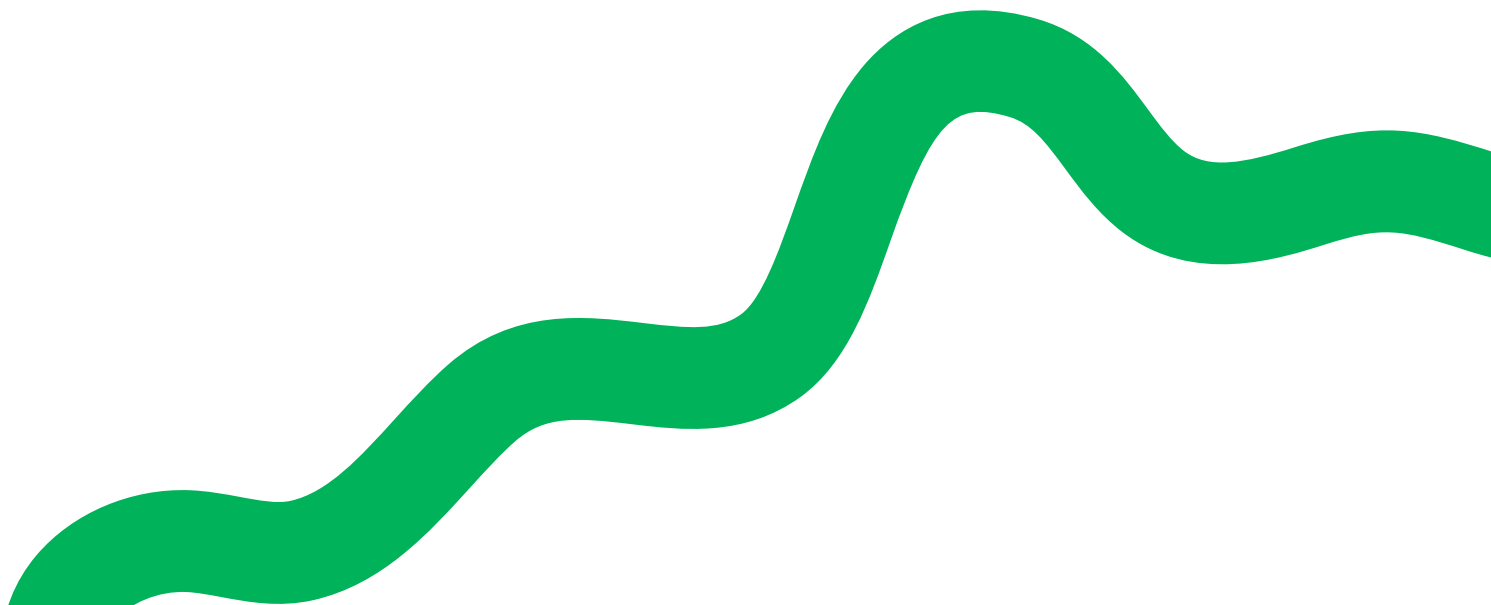
It is plain to see that Australia's threatened species and ecological communities are not being sufficiently protected and restored. This challenge is likely to be compounded by the long term and exacerbating impacts of climate change on bioregions throughout WA.

The Wilderness Society has produced this report to both highlight the systemic issues with the management of native vegetation and outline the potential improvements that can halt and reverse the impact of these shortfalls—with a holistic approach from a whole-of-government reform agenda.

WA's native vegetation management system requires substantial reform. The current rates of decline across the state's bioregions and fundamental flaws in monitoring and enforcement challenge the WA government to act swiftly and decisively.

If realised, a clearly stated requirement of 'net gain', alongside progressive restoration, protection and enforcement efforts, would place a significantly greater value on native vegetation and deliver a range of other cultural and economic co-benefits, particularly for regional WA.

This reform agenda will require leadership and transformation to a whole-of-government approach from the historical piecemeal system. The new approach must honor First Nations' people's Traditional Ecological Knowledge, protect our globally significant high conservation value native vegetation, boost community rights and invest in greater monitoring and compliance efforts so the opportunity to realise land restoration can be data driven.



Acknowledgements

The Wilderness Society acknowledges the First Nations people throughout Western Australia and recognises their continuing connection to land, waters and community. We pay our respects to their cultures and their elders past, present and emerging. We would like to acknowledge that native vegetation is part of First Nations people's cultural heritage. Australia always was and always will be Aboriginal land.

The background research for this report, including the formation of the recommendations were shaped through dialogue with scientists, advocates, land managers, policy makers and First Nations people across Western Australia, who have interest, knowledge and experience in relevant fields.

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