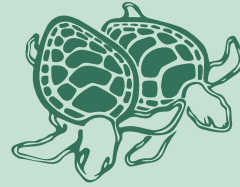


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Our Nature: Our Future

The case for next-generation biodiversity conservation laws for the Northern Territory

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*Savanna Woodland with
Livistonia palms - Glenn Walker.*

INTRODUCTION: THE TERRITORY'S NATURE IS WORTH PROTECTING

We live in a special place. The Northern Territory's nature is exceptional on a local, national and international scale, from its vast savanna woodlands, to its free-flowing rivers and wetlands, to its spectacular escarpments and iconic desert landscapes. Our nature is intrinsic to our life, our economy, our society and our culture. The rich biodiversity of the NT sustains human and all other life, with our existence dependent on healthy, functioning and resilient ecosystems. It also underpins our economy and social and cultural life through the creation of jobs and livelihoods via nature-based tourism, land and sea management, and providing opportunities for camping, bushwalking, cruises, tours and engagement with Indigenous culture. Nature is an indivisible part of life, and therefore all Territorians have a responsibility for its conservation, now and for future generations.

Yet the unique nature of the NT is under threat on multiple fronts. While many of us have long assumed our remoteness and largely undeveloped landscapes have offered protection, multiple threatening processes such as weeds, pests and changed fire regimes are causing serious impacts on our wildlife and ecosystems. Mammal populations are in sharp decline, with many at risk of extinction.¹ Climate change is projected to have significant impacts on the biodiversity of the Northern Territory by as early as 2030, and extreme impacts by 2070, including increased droughts, changed fire regimes, erratic rainfall and extreme temperatures.² In 2021, research revealed that three of the Northern Territory's ecosystems – the tropical savanna, the arid zone and its coastal mangroves – in fact meet the criteria of “collapsing”.³

Land clearing is increasing in the NT. Land clearing is currently the greatest threat to biodiversity in Australia.⁴ Clearing native vegetation destroys habitat for native animals, fragments the wider ecosystem and can contribute to the spread of invasive weeds and feral animals, exacerbating the impacts of other threatening processes. There are significant development pressures in the Northern Territory which could entail unprecedented levels

of native vegetation clearance, including the development of the onshore shale gas (“fracking”) industry, the replacement of native vegetation with exotic pastures to supply the beef industry, plans for up to 200,000 hectares of large-scale broadacre cropping (primarily cotton) and a projected increase in large-scale solar projects. The primary focal point for this development pressure is the pastoral estate, which makes up approximately 45% of the Northern Territory's landmass, and is (largely) subject to co-existing native title rights and interests.

The Northern Territory's biodiversity and conservation laws are not adequate to respond to the above threats and challenges. Existing protected areas (including national parks, reserves and Indigenous protected areas) provide little protection from the development pressures listed above. Unfortunately, the NT has arguably the weakest regulation for land clearing of all jurisdictions in Australia. Indeed, we are the only jurisdiction in Australia without native vegetation legislation, or a Territory-wide biodiversity conservation strategy. Unfortunately, the Northern Territory has witnessed a fourfold increase in land clearing approvals in the last four years alone, with few legal mechanisms and policy frameworks available for a strategic or integrated approach to landscape management.

While the loss and degradation of native vegetation is an ongoing threat to biodiversity and the resilience of ecosystems, the NT's relatively intact ecosystems are a significant asset. There is an unparalleled opportunity for the NT to retain and build healthy landscapes through the proper management and appropriate protection of native vegetation, and to derive significant benefits from these ecosystems and the services they provide, including from critical industries such as tourism and agriculture.

The Northern Territory Government has previously committed to including reform of land clearing laws. Plans in 2011-2012 to enact a *Native Vegetation Management Act* did not proceed, despite being introduced to Parliament and undergoing extensive community and stakeholder consultation. More recently, the Northern Territory Government indicated it would reform land clearing laws in its environmental regulatory reform program. However, this commitment appears to have been abandoned, with the exception of some amendments to the *Pastoral Land Act* described below. In this context, the purpose of this paper is to:

- a. articulate some of the key values associated with the Territory's nature;
- b. provide a synthesis of the state of the science regarding the Territory's nature (with a particular focus on the impacts of land clearing on our tropical savannas);
- c. review the existing regulatory framework for biodiversity protection and native vegetation clearing in the NT, including identifying key issues with how the framework operates;
- d. identify and propose options for reform to inform stakeholder, government and public discussion.

These reform options will be further developed (with stakeholder input) into a briefing paper for the preferred reform option based on stakeholder and public feedback, to be provided to the Northern Territory Government with the aim of achieving a commitment to regulatory reform.

While all Territory ecosystems will benefit from legislative reform that delivers enduring protection for biodiversity, the primary scientific focus of this discussion paper is on the state of our tropical savannas. Research consistently ranks our tropical savannas as the most at-risk ecosystem in the NT⁵, with our savannas under increased pressure, yet afforded little legal protection (particularly on the pastoral estate).

WHAT MAKES THE NORTHERN TERRITORY'S NATURE SO SPECIAL?


There are many factors - cultural, social, environmental and economic - that together make the Territory's nature iconic.

Indigenous care and custodianship of Country is the very foundation of the place we call the Northern Territory. The NT is unprecedented in Australia due to the proportion of land subject to Indigenous property rights and interests. Approximately 50% of the NT is owned as Aboriginal freehold under the *Aboriginal Land Rights (Northern Territory) Act 1976* ("Land Rights Act"), with much of the remainder (predominantly the vast pastoral estate) subject to co-existing native title rights and interests recognised under the *Native Title Act 1993*.⁶ However, every inch of the Territory has always been known, named and cared for by First Nations People. For First Nations people, the biocultural landscapes across the NT are known to be alive — "Country" is a living entity that people have strong enduring kinship relationships with and a commitment to care for and protect.⁷ According to First Nations conceptions of the world, our rivers, savannas, and the animals and plants that live in them are interconnected, and indivisible from human life⁸. Indigenous ranger groups, and the governance of Country through Indigenous Protected Areas, have had a demonstrated impact in improving biodiversity outcomes in the NT, from cultural burning, to weeds management, to feral animal control. It is now widely recognised that First Nations' governance and knowledge systems hold the key to defending Australia's biodiversity and climate from further degradation. First Nations people must be centred in any response to the climate and biodiversity crisis, including through any proposed reform of our nature laws.

For most people who live in and love the NT, our nature is a matter of personal pride and identity. It is the cornerstone of the Territory lifestyle that we cherish – fishing, camping, bushwalking, and the love of being outdoors. Territorians are strongly connected to and appreciative of the natural beauty surrounding us. In the Top End, we have pandanus-lined freshwater swimming holes, expansive floodplains, rugged, spectacular escarpment country rising from grassy woodlands, and world-class birding spots right on our doorstep. The Territory's nature plays a significant part in keeping people in the Territory – 65% of people surveyed by the Environment Centre NT rated nature as one of the main reasons why they stay here, and 81% of respondents rated healthy biological diversity and native wildlife as the natural values most important to them.⁹

The NT's vast landscapes of outstanding natural beauty are globally significant. The Territory has some of the most extensive and intact ecological systems, including some of the last free flowing tropical river systems, in the developed world.¹⁰ In particular, the expansive savanna woodlands stretching from Cape York to the Kimberley form the largest remaining intact savanna biome on earth.¹¹ Savanna country is characterised by eucalypt woodlands and open forests with a predominantly grassy understory. A typical savanna vista in the early dry season might include the grey Darwin Stringybark trunks towering tall and straight among the vibrantly green growth of the ground layer. Termites, ants, granivorous birds and seed eating mammals adore the protein rich seed of the early seeding cockatoo grass, a keystone species right across the top end. Bandy giant spear grass rises up above the dense grassy understory, with small shrubs like sand palms, cycads, kurrajong, grevilleas and acacia creating a gentle interspersed mid story.





North Australia represents the largest continuous extent of intact savanna habitat left in the world.¹² The NT has a responsibility to ensure these uniquely north Australian, continental-scale landscape connections persist. In fact, landscape-scale connectivity is an essential component of savanna ecology. Many of the ecological processes that maintain the savanna ecosystem must operate over very extensive landscape scales, and some species have home ranges that span across thousands of square kilometres.¹³ Extensive intact vegetation and ecological connectivity at such scales is required for the essential, long-term ecological processes necessary to sustain savanna ecosystems and allow for evolutionary adaptation¹⁴ – particularly under climate change.¹⁵

The natural and cultural values of the NT are not only deeply cherished by Territorians, but also viewed with awe by the rest of Australia and indeed the world. Tremendous economic value from tourism is gained not just through visitor spending, but also as an important source of job creation. In 2020–21, total tourism in Katherine/ Daly was worth \$119 million and directly supported 13% of the region’s total employment. Litchfield/Kakadu/Arnhem regional tourism was worth \$128 million, supporting 18% of the region’s total employment. These two regions alone, incorporating some of the NT’s most visited and iconic natural and cultural wonders, provide around \$250 million per year to the NT economy.¹⁶ Furthermore, our economy is more dependent on nature than almost any other jurisdiction in Australia (bar Western Australia), with 55% of our economy having a moderate to very high direct dependence on nature.¹⁷

Many of these places visited by tourists have their exceptional ecological and cultural values protected through inclusion in the protected areas estate. However, these special places are not divorced from the surrounding landscape. Essential ecological processes like water cycling, soil renewal, carbon sequestration, genetic exchange, pollination, and seed dispersal often operate at scales far beyond gazetted boundaries. The future of these sites of exceptional beauty, biodiversity, cultural significance, and tourism value are entirely dependent upon the continuing connectivity of landscape-wide ecological processes.

Furthermore, the protected area network (even if it is significantly increased) will never be enough to protect our nature from growing threats. It is clear that “we can’t keep sectioning off more and more poorly-funded areas for nature while ignoring the drivers of biodiversity loss, such as land clearing, resource extraction, mismanagement and the dispossession of Indigenous lands”.¹⁸ Current and projected development pressures in the NT – bringing with them increased land clearing – are generally occurring outside protected areas, including on the pastoral estate and privately owned freehold land. Protecting the NT’s nature will only be achieved through greater levels of protection for habitat and native vegetation across all land tenures.

AN ECOSYSTEM IN CRISIS

Flying or driving long distances around the Territory may invoke a sense of being in an endless ‘sea of savanna’. But does structurally intact savanna equal healthy savanna? How have the multitude of threatening processes and their cumulative impacts affected this ecosystem? To comprehend the biodiversity crisis happening now within the NT’s savannas, it is necessary to understand the basic ecology of the savanna ecosystem and the impacts from threatening processes.

(i) FIRE AND TROPICAL SAVANNAS

The tropical monsoonal climate is the main influence on savanna ecology. The cyclical wet season (from November – April) brings about 90% of annual precipitation resulting in a huge surge of growth across the grassy dominated understory.¹⁹ As the ground layer dries out and cures over the prolonged dry season, heavy fuel loads develop. For this reason, savannas are the most fire prone biome on the planet²⁰ and will burn, whether managed by humans or not.²¹

After climate (including soil moisture and nutrient availability), fire is recognised as the most influential driver impacting savannas.²² First Nations people have expertly managed fire to care for country for tens of thousands of years²³, with intricate knowledge

of how local weather, time of day and vegetation would affect fire characteristics; and the impacts fire would have on native species.²⁴ Through fine scale patch burning as different areas of country dried out, First Nations people created a diverse mosaic of habitats across the landscape that supported biodiversity and reduced damaging late season wildfire.²⁵ Without this careful fire management to care for country, food and habitat resources for native species are impacted and destructive wildfire in the hottest months of the year from August to November becomes far more common.²⁶

In the absence of effective early cool burns, late dry season wildfire can be so intense even the most resilient savanna vegetation faces high mortality.²⁷ Invasive gamba grass and other introduced weeds have intensified these wildfires, fuelling larger, destructive fires that burn up to 12 times hotter and seven metres higher. Invasive weeds make even the previously cool early burns more intense with the resulting smoke greatly affecting air quality.²⁸ These weeds, introduced as ‘improved pasture’, have much greater biomass than native grasses and fuel flames that ladder into the canopy,²⁹ top-killing mature eucalypts, decimating wildlife and scorching soils causing erosion across expansive areas. The decline of savanna-dependant fauna has been linked to changed fire regimes through direct mortality and the resulting loss of fine-scale heterogeneity, or ‘patchiness’ of habitat mosaics. The landscape-wide impacts of grazing by domestic and feral herbivores further compound habitat loss and modification.³⁰

*A gamba grass fuelled wildfire.
Photo by Samantha Setterfield*



Small mammals have been ‘stripped’ from the savannas, a symptom of ecosystem collapse. These species of small mammals have been identified as being some of the most imperilled and headed for extinction by 2040. All live in the Northern Territory’s savannas.

L – R Brush-tailed Rabbit-Rat - Kym Brennan, Carpentarian Rock – Jacinda Brown, Black Footed Tree Rat – Kym Brennan, Nabarlek – Stewart Macdonald, Northern brush-tailed phascogale, Northern Hopping Mouse, Rebecca Diets

(ii) CUMULATIVE IMPACTS RESULT IN PERVASIVE BIODIVERSITY LOSS – THE NEXUS OF FIRE, WEEDS, FERALS AND GRAZING

The Northern Territory’s savannas have suffered from habitat fragmentation and a steep decline in biodiversity due to late season wildfires and now, too much burning overall.³¹ In addition to the threat of fire; weeds, feral animals, and overgrazing all exert constant pressure on native species, habitats and ecosystems. Introduced weeds invade, dominate and transform native vegetation communities altering entire ecosystems and fuelling intense fires. Feral animals including buffalo, pigs, toads, cats, foxes, goats and deer prey on native flora and fauna, competing for food and habitat resources and degrading habitats.³² Extensive pressure is also exerted through pastoralism,³³ where grazing has completely altered grass composition, productivity, and seed availability.³⁴

The nexus of fire, weeds, ferals and grazing pressure have modified the savannas to a point where the savanna ecosystem meets criteria as ‘collapsing’.³⁵ A clear symptom of this degradation is when important ecosystem components are lost, such as the loss

of species or even a whole taxonomic groups.³⁶ Tragically, this has been most evident in the tropical savannas with the loss of critical weight range (small) mammals.³⁷ This entire suite of taxa has been ‘stripped’ from savanna country across north Australia, including the NT.

The interdecadal Kakadu monitoring program recorded a precipitous drop in small mammal presence and abundance across the majority of monitoring sites.³⁸ Many species are now completely absent from some sites altogether.³⁹ The NT is home to Australia’s most imperilled mammals – eight out of the 20 mammals most likely to go extinct within the next 20 years live in the NT’s savannas.⁴⁰ The landmark 2010 report ‘Into Oblivion – the disappearing native mammals of northern Australia’ presents further evidence that native mammal abundance is in decline across all land tenures – even in the most well-resourced and well-managed conservation reserves.⁴¹ Increasingly, this problem of biodiversity loss across North Australia is being recognised as a critical issue for the nation. There is strong scientific consensus that urgent action is needed to halt the continuing decline of wildlife populations, with small mammals, granivorous birds and fire sensitive plants three taxa of particular concern for the Territory.

(iii) AN ECOSYSTEM “COLLAPSING”

In 2021, seminal research found that Northern Australia’s tropical savannas are one of 19 ecosystems in Australia that meet the criteria of being under collapse.⁴² ‘Ecosystem collapse’ is defined as irreversible change to ecosystem structure, composition and function. The key threats identified in the paper include the usual suspects: fire, weeds, overgrazing, land clearing, resource extraction, extreme weather events and climate change. These threats individually, and the way they interact cumulatively result in a cascade of destructive impacts. As habitats become increasingly fragmented, populations become more vulnerable to other threatening processes, such as climate change, changes to streamflow regimes, predation by invasive species and destructive fires, and they lose the ability to recolonise suitable habitat. The tropical savannas have been described as an ecosystem being ‘stripped’ of key taxa and undergoing severe regime change across parts of its geographical range.⁴³ There is clear evidence the ecosystem is reaching its ‘tipping point’ – or outer limits of ecological thresholds. Urgent action is required.

(iv) GAPS IN OUR KNOWLEDGE

While much of the science on the threats is clear, regrettably, there is a lack of baseline data and long-term ecological monitoring in the NT to inform robust decision-making. Patchy baseline data means that we are limited in evaluating species and ecosystem responses to changes in land use.⁴⁴ Monitoring and evaluating patterns of change in biodiversity are essential to inform land managers, policy-makers and planners.⁴⁵ While there is useful long-term monitoring occurring across the Parks estate, ECNT is not aware of any formalised biodiversity monitoring program occurring on the pastoral estate, where the majority of development and other threats are occurring.⁴⁶ In combination with the failure of government decision-makers to require developers to undertake biodiversity monitoring in nearly all land clearing applications (see further below), this means that more often than not the public does not know what we are losing, and what has already been lost. This lack of a baseline of information from which to measure changes in biodiversity and ecosystem health makes the application of precaution more imperative.

Current information gaps include:

- ◆ The 2016 Australia State of the Environment Report specifically highlighted the fact that there is no standard methodology for assessing vegetation condition in the Northern Territory, and very limited systematic assessment and monitoring of vegetation extent and condition across bioregions. ECNT has not seen evidence this lack of systematic monitoring has improved over the last 6 years.
- ◆ While there are biodiversity monitoring programs in place (including in national parks and on Aboriginal land), there is no long-term biodiversity monitoring program in place across the pastoral estate, approximately 45% of the NT’s landmass.
- ◆ The NT rangelands monitoring program focuses on basic pastoral land condition (generally grass cover vs. bare ground cover) broadly across vegetation types on pastoral lands, primarily for the purposes of understanding the productivity of the land for pastoral purposes⁴⁷. However, these coarse assessments do not correlate with assessments of the condition of the land with respect to biodiversity.⁴⁸
- ◆ There is a lack of information about trends and condition of different ecosystem types across the broad vegetation groups of the NT. Territory legislation does not provide for listing ecological communities as threatened – and we lack the detailed mapping of regional ecosystems to adequately assess their extent – let alone understand the health or condition of most ecosystems.
- ◆ There is a lack of fine scale vegetation mapping. The only presently available NT wide standardised vegetation mapping is derived from the 1:1 million scale vegetation map.⁴⁹ Apart from a few specialised communities, the vast majority of NT vegetation communities still remain mapped at a broad scale. This scale is inappropriate for regional or catchment level planning, especially considering the increased development and modification pressures affecting the NT environment.⁵⁰
- ◆ The NT does not have an agreed set of biodiversity indicators or metrics used to underpin a publicly available reporting system on the condition and trends of the NT’s biodiversity, such as through State of the Environment Reporting.⁵¹

A NEW THREAT: BROADSCALE TREE- CLEARING OF THE SAVANNAS

The previous section details the recent major drivers of biodiversity decline in the NT, and how these different threatening processes combine cumulatively to further degrade collapsing ecosystems. These threats modify and degrade habitat components within structurally intact savanna landscapes, resulting in significant biodiversity loss. What, then, is the effect of broadscale tree clearing, against this backdrop?

(i) WHAT HAPPENS WHEN SAVANNA IS CLEARED?

The severe, extensive, and irreversible negative impacts of broadscale tree clearing on Australian biodiversity is unquestionable.⁵² Vegetation clearance transforms the environment more than any other threatening process, and has especially drastic impacts upon terrestrial environments. The direct immediate impact is that plants and animals are killed. The impacts on the physical environment are extensive and severe, including loss of topsoil, erosion run-off, introduced weeds and increased fire regimes all contributing to 'edge effects' that further degrade fragmented vegetation.⁵³

Broadscale land clearing can be a pathway to extinction. Population declines from the immediate mortality of individuals from tree clearing lead to reduced local and regional populations.⁵⁴ Large-scale killing of savanna-dependent native animals through destruction of their habitats, whether they are common species or not, will always have serious detrimental consequences. These include disrupting natural food chains, ecosystems' services and bringing species and ecosystems closer to depletion, dysfunction or extinction.⁵⁵ A Queensland-based scientific review estimated that clearing one square

kilometre of savanna (100 hectares) results in the deaths of about 3,000 individual birds, 20,000 reptiles and 45,000 trees.⁵⁶

However, the impacts of clearing extend beyond cleared areas. The few animals that do manage to escape are displaced into surrounding fragmented habitat and often die soon after from predation, stress, or starvation. Populations that survive must subsist in the surrounding (often fragmented) vegetation, which may experience further ongoing degradation due to increased edge effects. When habitat is removed and fragmented, the outside perimeter of a habitat increases, creating new exposed borders. These habitat 'edges' are more susceptible to threats, particularly weed and fire incursions and further degradation and increased predation from feral pests. Increasing edge effects are dominant drivers of change in many fragmented landscapes and a direct result of land clearing activities. Edge effects have serious impacts on species diversity and composition, community dynamics, and ecosystem functioning.⁵⁷ If the cycle occurs repeatedly within a region the impacts of reduced local and regional populations, fragmented habitat and edge effects promoting further habitat modification can drive entire species to extinction.

NT Government research found that land clearing and subsequent use can significantly increase surface runoff, and increase the conversion of rainfall to runoff by up to 25%.⁵⁸ Soil erosion in the Daly River Basin followed cropping in the late 1960s. Removal of native vegetation also has impacts on river health, including by altering soil hydrology, amplifying flood events and accelerating soil erosion and sedimentation in waterways.⁵⁹

Finally, broadscale land clearing is a major contributor to the emission of greenhouse gases. Charles Darwin University research⁶⁰ shows that clearing shifts savanna from being a carbon sink to a source of CO₂. Once the cleared timber is burnt, as is usual practice after broad scale clearing, significant carbon dioxide emissions are released to the atmosphere.⁶¹



Every hollow is a home. Broadscale clearing of savanna woodlands results in the deaths of hundreds of thousands of native plants and animals every year in the NT. Photo: Stuart Blanch.

(ii) LAND CLEARING IS INCREASING IN THE NT

Land clearing has significantly increased in the Northern Territory in recent years. Approvals for land clearing on pastoral properties have surged more than 10-fold in the past decade, rising from an average of about 1000 ha/year in 2010 to 2015, to more than 20,000 ha/year in the past 6 years.⁶² In the last 4 years (between 2018 and 2021), the amount of land subject to land clearing approvals increased by 300% in the Northern Territory. If the applications currently being considered by the Pastoral Land Board are approved in this calendar year (18,717.05 hectares have already been approved as at September 2022), this would result in approximately 31,000 hectares of land being approved for clearing in 2022, representing more than a 5-fold increase in the last 5 years.

Year	Pastoral land	Freehold/Unzoned
2022	18717.05	0
2021	13748.94	3467.1
2020	12897.71	292.95
2019	9974.21	1573.75
2018	1499	4211.91
2017	4224	3715.77
2016	37807.5	5195.47
2015	5195.55	3044.8
2014	724	2739.98
2013	18979	919.63
2012	599	5554.4
2011	13119.6	2729.6
Total	137,485.56	33,447.36
Total approved 2011-2022	170,932.92 hectares (1709.32km²)	

It is noted that individual land clearing permits issued in the NT (particularly on pastoral land) are typically for very large areas, frequently up to 3,000 to 5,000 ha per permit or “clearing event”. Clearing land at this scale, notwithstanding the retention of “buffers” or “biodiversity corridors” can have very significant impacts on biodiversity on a landscape or regional scale (see further below). Impacts are also being felt on a bioregional scale. Already, some bioregions in the NT are under considerable pressure from land clearing. Clearing in the Daly Basin bioregion has nearly trebled in the last decade, with approximately 13% of the bioregion already cleared. The Sturt Plateau bioregion has also seen significant rise in land clearing applications and approvals in recent years.

As well as the biodiversity and other impacts listed in the above section, the greenhouse gas emissions associated with land clearing are also significant and contributing materially to climate change. The approvals between 2011 and 2022 have together authorised the generation of approximately 24 million tonnes of carbon dioxide in an 11 year period.⁶³ In 2021 alone, the generation of approximately 2.6 million tonnes of emissions were authorised. This is a very significant quantity, representing approximately 12% of the Northern Territory’s annual emissions (using greenhouse gas inventory figures from 2019). By comparison, the Indigenous carbon farming industry abates approximately 1.2 million tonnes of carbon emissions per annum across the whole of northern Australia.⁶⁴

Land clearing rates are likely to increase in the near future. There are significant, and unprecedented, development pressures currently occurring in the NT. The cotton industry revealed its plans for 168,000 hectares of irrigated and dryland cotton in 2020.⁶⁵ Construction of a cotton gin (a processing facility for cotton bales) is currently underway near Katherine which will likely spur the rapid expansion of this industry. Increased clearing of savanna is occurring to plant “improved pastures” to supply the cattle industry. The onshore gas (“fracking”) industry, if it reaches production, will involve significant amounts of clearing for well pads and connecting infrastructure (including roads and pipelines), contributing to habitat fragmentation. Finally, the proposed large-scale solar energy projects in the NT are likely to entail significant amounts of land clearing.⁶⁶



In the Northern Territory in 2021, the generation of approximately **2.6 million tonnes** of greenhouse gas emissions was approved due to broadscale land clearing of the savannas (**12% of the NT's total annual emissions**).

In November 2021, the floor price of 1 tonne carbon dioxide equivalents (CO₂-e) or 1 Australian Carbon Credit Unit (ACCU) was \$16.94 through the Australian Government Emissions Reduction Fund⁶⁷. This means that to offset the 2.6 million tonnes of emissions from broadscale land clearing in the NT in 2021 it would cost **\$44 million dollars**.

Who is responsible for offsetting the significant emissions from broadscale land clearing, when the impacts of these emissions are far-reaching and adversely affect everyone? The lease holder? The Pastoral Land Board? Or the public?

(iii) IS LAND CLEARING A THREAT TO BIODIVERSITY IN THE NT?

It has become common for some decision-makers (and industry) to assert that land clearing is not a threat to biodiversity in the NT, including because only a small proportion of the NT has been cleared overall compared with other jurisdictions (the figure of 1% is frequently quoted), or alternatively that the land cleared represents only a small proportion of a particular bioregion.

This reasoning is problematic in a number of respects.

First, the NT's savanna country is characterised by its seeming ecological uniformity – open savanna woodlands with a grassy understory – across thousands of square kilometres. Mistakenly, people assume that the loss of any local area is probably inconsequential regionally.⁶⁸ However, connected habitat at very extensive landscape scales is essential for widely dispersed savanna biota. Due to extreme climatic seasonality, food and habitat resources may vary markedly throughout the year – abundant in one place in one season, but then scarce for the remainder of the year. As a result, many savanna species have very large geographic ranges, and must disperse widely to meet their resource needs over different seasons.⁶⁹ This does not mean that one small patch will not make a difference – indeed it may make all the difference in affecting critical resource availability at any point in time for a particular species.

This is the management challenge of savanna ecology – very extensive, intact savanna landscapes underpin the ecological processes required for small-scale dynamic 'pulses' of resource availability.⁷⁰ These fine-scale resource pulses are critical for sustaining biodiversity within the wider landscape but they are dynamic – spatially and temporally – occurring due to factors like the timing and patchiness of the first wet season rains, the timing and patchiness of early burning and phenology.⁷¹ It is the whole functioning system across very extensive scales that provide the real value of savannas – the whole of the savannas are worth more than the sum of their parts.

Second, the claim that land clearing does not pose a threat to biodiversity is inconsistent with Northern Territory Government research and policy statements. Habitat loss and fragmentation (including due to land clearing) has long been recognised by the Northern Territory Government as a key threat to the Northern Territory's biodiversity. The Department of

Environment, Parks and Water Security's published guidance material on vegetation management makes clear that, while Northern Australia has the largest and most intact tropical savanna in system in the world, this value could be "readily compromised by excessive removal of native vegetation."⁷² This guidance makes clear that the highly seasonal environment of northern Australia means that it is more important to retain a higher proportion of native vegetation in the landscape than for a less seasonal environment. Recent research undertaken by the National Environmental Science Program's Northern Australian Environmental Resources Hub (NESP) also demonstrates that threatened species in significant parts of the Northern Territory (including the Daly Basin, and the Sturt Plateau) are at a very high risk from land clearing, particularly when considered cumulatively with other threatening processes.⁷³

Third, this kind of coarse analysis tends to ignore or minimise landscape and regional impacts on biodiversity, which can be significant. Research undertaken for the Department in 2009 showed significant impacts on biodiversity at a landscape scale (approximately 3000ha) if more than 50% of native vegetation is cleared. In particular, the research notes that clearing of this extent "may reduce the diversity of plants and animals to a point where some populations may fall to unsustainable levels".⁷⁴ Noting that land clearing permits (particularly on pastoral land) are often in excess of 1500 hectares (and frequently close to 5000ha), this means that in many areas of the NT pastoral estate, extirpation (local extinctions) may be occurring undetected.

Fourth, there are significant gaps in the knowledge base underpinning decision-making regarding land clearing. Some of these knowledge gaps are cited in the section above. Furthermore, the NT Government does not generally require biodiversity surveys to be undertaken for pastoral land clearing permits, meaning that it is not possible to understand the impacts of land clearing on biodiversity on a project-by-project basis. This conduct contradicts foundational principles and best practice environmental management, such as the application of precaution and obligations to undertake environmental assessments. See for example, the Rio Declaration, to which Australia is a signatory.⁷⁵

The ecology of the savannas necessitates that land clearing not be assessed on extent alone, and especially not in comparison to how much

savanna is left overall. Assessment of impacts must consider the significant mortality of individuals, the negative effects on local and regional populations, fragmentation of remaining habitat, edge effects, potential loss of regional ecosystem diversity and the destabilisation of ecosystem processes. If the current trajectory of broadscale land clearing continues, this will irreversibly alter the pattern of critical resource availability and habitat suitability to the detriment of savanna biota.⁷⁶ The preferred management response

is to secure extensive connectivity of the savannas, by retaining the majority of native vegetation across landscapes. Thereby large-scale, long-term ecological, cultural and evolutionary processes can be maintained to ensure healthy ecosystem function and biodiversity.⁷⁷ Luckily, the Northern Territory is still in a position where this is possible. We can still avoid the mistakes of extensive landscape change in southern Australia that has left a legacy of destroyed ecosystems and permanently depleted fauna.

*Katherine River, a major tributary of the Daly River.
Photo via Shutterstock.com*



POLICY AND LEGAL CONTEXT – WHY DO WE NEED NEW NATURE LAWS?

The Northern Territory arguably has the weakest land clearing and biodiversity laws of all the states and territories.⁷⁸ There is no legal framework of general application that regulates land clearing and biodiversity in the NT. Instead, a patchwork of laws exist, the application of which depends on land tenure and the clearing's purpose. At a high level, the shortcomings (which are further described below) are:

- ◆ Laws used to regulate land-clearing (e.g. the *Pastoral Land Act* and the *Planning Act*) are derivative of laws dominated by other purposes such as pastoralism, parks management or development; and
- ◆ Environment protection law (e.g. the *Environment Protection Act*) is arguably appropriate to the problem but it does not contain detailed and specific regulatory measures designed to confront the problem of habitat and biodiversity loss posed by land clearing.

The Northern Territory is the only jurisdiction in Australia without native vegetation laws, which are the primary legal tool by which land clearing is regulated in other states and territories. The Northern Territory has no overarching biodiversity conservation strategy, nor State of the Environment reporting against which conservation efforts can be measured.

The principal laws regulating land clearing in the Northern Territory are the *Planning Act 1999* (NT), and the *Pastoral Land Act 1992* (NT), with both containing serious limitations. Key issues include:

- Inadequate safeguards and standards to protect the environment, including no enforceable mechanisms to address land clearing in relation to critical issues such as climate change, biodiversity and water, and to manage the cumulative impacts of clearing across the landscape;
- Weak governance mechanisms, including considerable discretion on the part of decision-makers, which undermines accountable and transparent decision-making;
- Ineffective mechanisms to protect high conservation values in the landscape and consider the holistic and integrated conservation of biodiversity on landscape/bioregional/catchment scales;
- Poor access to information, heavily constrained public participation and access to justice provisions, undermining the public's ability to properly engage in decision-making and ensure the law is upheld; and
- Weak compliance and enforcement powers.

The Northern Territory's only legal framework for biodiversity conservation, the *Territory Parks and Wildlife Conservation Act 1976* (NT) (TPWC Act), has limited provisions to ensure the conservation of biodiversity in the Northern Territory, beyond the establishment of parks and reserves. Furthermore, the TPWC Act does not set a strategic vision for NT-wide conservation policy, and it does not encourage nor incentivise conservation action on private land, including the pastoral estate. Its mechanisms are largely unused or only weakly connected with regulatory approval processes, significantly undermining their utility.

The new *Environment Protection Act 2019* (NT) has not yet proved to be an effective safeguard, including as a tool to ensure rigorous assessment of the environmental impacts of land clearing activities. For example, ECNT is not aware of any pastoral land clearing proposals undergoing environmental impact assessment in the NT's history (under the old or new environmental assessment legislation), despite significant and increasing broadscale land clearing applications, particularly in recent years.⁷⁹

ECNT is unaware of any pastoral land clearing application ever having been referred for assessment under the *Environment Protection and Biodiversity Conservation Act 1999* (Cth). This is also problematic, and points to a flaw in the application of the EPBC Act to the NT.

The NT should be expected to contribute to and act consistently with (as other states and territories are) foundational norms and rules of environmental governance, including as expressed in international law or Australian national policy. These include for example, principles of ecologically sustainable development (ESD), provisions of key treaties such as the Biodiversity Convention, Rio Declaration, and national Principles on Rangelands Management.⁸⁰ Basic principles such as precaution, intergenerational equity, maintenance of ecological integrity and environmental assessment should inform regulation of native vegetation clearance in the NT. And while some of these principles potentially already inform environmental law in the NT via the *Environment Protection Act*, specific native vegetation laws would be intended to implement and operationalise those matters in an area of acute need. By way of comparison, Victoria's native vegetation clearing controls (which operate under planning laws) are framed expressly as operationalising the precautionary principle.

LAND CLEARING LAWS IN THE NT

(i) Freehold land

On freehold land (that is, land owned in perpetuity, including Aboriginal land and Crown land) is regulated by the *Planning Act*. Proposed clearing of freehold land that is zoned under the *Planning Act* (generally zoning being to ensure common use purposes such as housing and schools) requires a development consent from the Development Consent Authority (DCA), while proposed clearing on freehold land that is unzoned requires approval from the Minister for Planning.

An application to clear on freehold land must contain a number of things specified in the *Planning Act*, the NT *Planning Scheme* and the NT *Land Clearing Guidelines*.

Section 46(3) of the *Planning Act* lists mandatory items to be included in a clearing application, such as an assessment that shows how the proposed clearing will comply with the NT *Planning Scheme*. For the application to comply with the NT *Planning Scheme*, it must demonstrate consideration of the performance criteria in cl 10.3(2) of the *Scheme*, which includes consideration of the NT *Land Clearing Guidelines*. The *Land Clearing Guidelines* outline various environmental considerations such as land resource management, biodiversity, water and cultural heritage.

Section 1 of the *Planning Act* requires a consent authority to take into account the NT *Planning Scheme* when considering a development application (among other things), while clause 10.3 of the NT *Planning Scheme* requires the consideration of, amongst other matters, the NT *Land Clearing Guidelines*. The *Land Clearing Guidelines* states that the consent authority must take into consideration clause 10.2 of the *Scheme*, as well as the intent of the *Scheme*.

(ii) Pastoral land

Clearing on pastoral land is regulated by the *Pastoral Land Act*. Proposed clearing of native vegetation on pastoral land requires a clearing application to be lodged with the Pastoral Land Board.

Applications are assessed under the *Pastoral Land Act* and are required, amongst other things, to demonstrate consideration of the NT *Pastoral Land Clearing Guidelines* (*Pastoral Clearing Guidelines*) which themselves refer to consideration of the NT *Land Clearing Guidelines* (made under the *Planning Act*).

In March 2021, the Northern Territory Government announced it would “streamline” approval times for pastoral land clearing applications on “simplified” land clearing proposals of up to 1000 hectares. The duration of the assessment process for simplified applications is reduced to 6 weeks (compared with 6 months), including with a truncated public exhibition period.

In March 2022, the Minister gazetted a wide range of exemptions from the requirement to obtain a permit on pastoral land. These include:

- ◆ Clearing that is for a pastoral purpose and caused by grazing stock;
- ◆ Clearing that is bailing of native vegetation for hay for a pastoral purpose;
- ◆ Clearing for a pastoral purpose that is reasonably necessary for construction and maintenance of buildings, vehicle tracks, airstrips, helipads, yards, fenced laneways, holding paddocks, water storages;
- ◆ Clearing of up to 10m wide for fences;
- ◆ Clearing for firebreaks up to 20m wide;
- ◆ Clearing necessary for fire hazard reduction burning;
- ◆ Clearing that occurred before 1992 and has been consistently and regularly maintained on pastoral land;
- ◆ Clearing that is reasonably necessary for the construction, operation maintenance, repair or alteration of a dam or other water storage or dam (as long as the dam is not in a waterway).

The vast majority of pastoral land in the Northern Territory is subject to co-existing native title rights and interests. However, weaknesses in the *Native Title Act* mean that there is no requirement to obtain the free, prior and informed consent of Traditional Owners to land clearing applications (nor applications for non-pastoral use permits).

(iii) No conservation mechanisms to protect high value vegetation and habitat

Generally, there are no robust conservation mechanisms to, amongst other things, identify or protect high value habitat and essential ecological processes. Nor are there mechanisms to identify the impacts of clearing on threatened species and ecological communities.

The *Territory Parks and Wildlife Conservation Act* (TPWC Act) enables the declaration of 'areas of essential habitat', which protects wildlife, but this is not linked to the land clearing processes in any

meaningful way. To date, there have been no areas declared as essential habitat. While the Northern Territory Government has undertaken considerable research to declare "sites of conservation significance", these are not integrated into the reserve system and have no regulatory effect.

While the TPWC Act enables the listing of threatened species, there are no regulatory mechanisms, beyond the NT Land Clearing Guidelines (which are unenforceable), to ensure the proper assessment of the impacts of clearing applications on high conservation value habitat, ecological communities and species.

(iv) Key legal issues

A large degree of discretion attends land clearing approvals on freehold and pastoral land. There are no mandatory decision-making criteria to guide permitting decisions around land clearing and there are multiple government authorities with decision-making power with respect to land clearing permits. As noted above, laws relating to land-clearing (e.g. the *Pastoral Land Act* and the *Planning Act*) are derivative of laws dominated by other purposes such as pastoralism, parks management or development. This means that protection of biodiversity is not prioritised and only cursory consideration of the impacts on particular aspects of biodiversity (threatened species) from land clearing is expected in the non-statutory guidelines. There are no specific legislative objects to ensure healthy intact landscapes, with sufficiently high levels of native vegetation retained to maintain landscape-scale ecosystem processes over the very long-term, along with the protection of important habitats from land clearing activities. There is no legislation to ensure riparian zones, the areas adjacent to watercourses that have extreme ecological importance and support disproportionately high levels of biodiversity, are protected with adequate buffer zones from land clearing. Furthermore, the current laws are not underpinned by foundational norms of environmental law such as those articulated in the Biodiversity Convention, Rio Declaration and National Rangeland Management Policy.

Discretionary decision-making

Under the *Pastoral Land Act*, the Pastoral Land Board is required to act consistently with and further the objects of the *Pastoral Land Act*. The Pastoral Land Board must consider any public submissions received and any relevant guidelines issued by the Board in deciding whether or not to grant a permit. Following amendments passed in 2021, it is now a strict liability offence (meaning that there does not have to be an intention to break the law for the conduct to attract a penalty) to clear on pastoral land without a permit.⁸¹

Under the *Planning Act*, the consent authority must consider various regulatory aspects when assessing an application. However, there is no guidance as to how all the elements of an application should be synthesised in the decision-making process and how competing factors should be weighed.

While the NT Land Clearing Guidelines do contain measures to protect biodiversity (such as wildlife corridors and buffers to protect ecologically significant vegetation), they are merely “recommendations” and are not strictly enforceable. Further, they are also primarily oriented towards land capability rather than protection of biodiversity, ecological integrity and water. They do not translate into practical, tested or effective methods that can be readily applied by landholders and assessed by approval authorities, and are likely to result in a loss of biodiversity and significant environmental degradation.

The Pastoral Land Clearing Guidelines are similarly discretionary, and only loosely refer to broader environmental considerations. The Pastoral Land Clearing Guidelines also facilitate land clearing applications that lack a clear evidence base for informed decision-making, including because:

- ◆ Assessments of biodiversity are generally only undertaken on a desktop basis;
- ◆ Proponents are not required to undertake biodiversity surveys to ascertain impacts on threatened species;
- ◆ Vegetation/habitat data is generally scant;
- ◆ The basis upon which buffers and wildlife corridors are established lacks an evidentiary basis.

Make-up of the Pastoral Land Board

Further, in the case of the Pastoral Land Board (PLB), there are significant governance issues in the potential conflicts of interest that arise among consent authority members. Most members of the PLB are pastoralists, and there are no membership requirements which specifically require ecological expertise or community accountability. This poses risks in relation to the assessment process, and determination of granting consent to land clearing applications. This issue demonstrates the need for an independent authority to assess applications.

There is no mechanism within the *Pastoral Land Act* or the *Planning Act* to address the cumulative impacts of land clearing at a landscape scale. It would be possible for an environmental impact assessment to require consideration of cumulative impacts, however in the absence of a broader conservation or landscape planning (eg at a bioregional scale) this would remain relatively ineffective. Further, the Northern Territory does not have a broader biodiversity conservation strategy, or a strategy to respond to the threat of land clearing, which, if it existed, would go some way to filling this legislative gap.

Merits and third-party appeal rights

There are effectively no merits or third-party appeal rights, nor any provisions for open standing for judicial review in the *Pastoral Land Act* and *Planning Act*. This has a significant impact on accountable and evidence-based decision-making and reduces the ability for anyone to hold decision-makers accountable in the public interest. A decision by the Pastoral Land Board to grant a permit to clear native vegetation on pastoral land can only be challenged by the pastoral lessee.

Impacts on the rights and interests of Native Title Holders

Finally, serious concerns are held by Native Title Holders and their representative organisations about land clearing (and water licencing) across the pastoral estate. Native Title legally recognises First Nation People's continuing connection to their land and sea. It affords Traditional Owners the right to access their country as well as limited rights to notification, commentary and negotiation on acts that may alter their continued connection with their country (also known as 'future acts')⁸².

45% of land in the Northern Territory is held under just 224 pastoral leases. Importantly, pastoral leases comprise a very limited form of tenure (effectively a right to graze cattle and ancillary purposes) and are subject to co-existing native title rights and interests as recognised under the *Native Title Act 1993* (Cth).

Under sections 24GC and 24HA of the *Native Title Act*, primary production and water extraction (e.g. agriculture) are considered future acts that will validly affect native title.⁸³ However, at most, Traditional Owners have notification rights and rights to comment in response to proposed water extraction and primary production on their land. Concerningly however, in the NT even these most basic provisions are often unmet.

These serious shortcomings in the Northern Territory's laws have been acknowledged for at least a decade. However, land clearing regulations and biodiversity protections seem to have regressed, if anything, in recent years.

(v) Land clearing and biodiversity policy in the Northern Territory: moving backwards, not forwards

Despite the growing awareness of the precarious state of the Northern Territory's nature, the impacts of climate change, and increasing development threats, if anything Northern Territory land clearing and biodiversity policy has regressed in recent years.

In the early 2000s, the then Martin Government imposed a moratorium on clearing in the Daly catchment due to widespread concern in the electorate about the impacts of land clearing on ecological processes in that region. A ban on genetically modified cotton was also implemented, and the Daly River Management Advisory Committee (a form of integrated catchment management authority) was convened to oversee a program of research in the Daly catchment.

In 2010, the NT Land Clearing Guidelines were introduced, which, among other matters:

- ◆ Imposed a 20% cap on clearing in the Daly catchment;
- ◆ Required the referral of any land clearing proposal of more than 200 hectares to the NTEPA; and
- ◆ Required a riparian corridor/buffer of 1km from the Daly River.

Between 2010 and 2012, considerable efforts were expended by the Northern Territory Government to develop a Territory-wide Biodiversity Conservation Strategy, part of which entailed the proposed enactment of native vegetation laws in the NT. Extensive consultations were held on the draft Native Vegetation Management Bill, but this legislation was never enacted, nor was the final Biodiversity Conservation Strategy released.

In 2012, the incoming CLP Government removed the cap on clearing in the Daly catchment, removed the ban on genetically modified cotton, and disbanded the Daly River Management Advisory Committee.

In 2020, new Land Clearing Guidelines were released, which removed the cap on clearing in the Daly catchment, removed the requirement for referral of land clearing proposals of more than 200 hectares to the NTEPA, and removed the requirement for a riparian corridor/buffer of 1km from the Daly River.

In 2021, the Northern Territory Government announced it would "streamline" approval times for certain land clearing applications on pastoral land (see above).

In 2022, the Northern Territory Government gazetted wide ranging exemptions from the requirement to obtain land clearing permits on pastoral land (see above).

In 2022, the Northern Territory Government released a policy which set a threshold of 500,000 tonnes of greenhouse gas emissions for the requirement to refer land clearing applications to the NTEPA for environmental impact assessment (compared with 100,000 tonnes for other industrial emitters).

Unsurprisingly, the area subject to land clearing permits has increased significantly in recent years (by 300% in 4 years). Clearing in the Daly Basin has nearly tripled in a little over a decade (from 5% of the catchment cleared, to 13% of the catchment cleared). There is a clear and demonstrated need for urgent reform of the NT's land clearing and biodiversity laws.



Recently cleared land adjacent to the Daly River, 2022. Previously a buffer zone of 1km was recommended to protect sensitive and ecologically important riparian vegetation, which acts as the interface between aquatic and terrestrial habitats supporting healthy ecosystem function. The 1km buffer zone recommendation was removed in 2020, and there are currently no legislated protections for these critical riparian habitats in the NT. Photo by Jessica Black.

FUTURE DIRECTIONS

The Environment Centre NT is deeply concerned by the rate of increase in land clearing applications and approvals in the Northern Territory, driven by a strong push for industrial and agricultural expansion. History has shown that unsustainable, inappropriate development delivers only a long legacy of environmental degradation. Land clearing is the leading driver of biodiversity loss in Australia, and a source of considerable greenhouse gas emissions. The Northern Territory has some of the weakest regulations for land clearing. Historically, this has led to an increase in land clearing permits and a destruction of native habitats. The Northern Territory's *Pastoral Land Act* is not fit for purpose to protect the pastoral estate from habitat fragmentation and damage on the vast scale that is underway and proposed. The *Territory Parks and Wildlife Conservation Act* is over 40 years old and in need of extensive modernising, and is unlikely to be an effective legislative tool to regulate land clearing and manage biodiversity. The Northern Territory is completely unprepared to respond to the environmental threats posed by the proposed large-scale agricultural development in a wider context of ecological and climate collapse.

The unique biodiversity of the Northern Territory, combined with First Nations justice issues and the rate of biodiversity decline in the Territory, necessitates the development of bespoke, best-practice law and policy that promotes First Nations justice and is designed to genuinely protect and restore the Territory's ecosystems.

Urgent regulatory reform is needed so that landscape scale integrated protection and management of the Northern Territory's unique savannas and freshwater systems can occur (via 'strategic regional conservation planning'). Biodiversity conservation legislative reform is an opportunity for the NTG to develop policy reflective of the values of Territorians. A self-selecting survey conducted by ECNT of over 600 people from the Northern Territory, found that 88% of respondents were seriously concerned about broadscale tree clearing in the Territory. The majority believed that current levels of protection for the Northern Territory's nature is inadequate and new nature laws were strongly supported to increase protections for ecosystems and biodiversity.⁸⁴

Key principles of best-practice biodiversity laws for the Northern Territory should include the following:

1.

THE LEGISLATION MUST HAVE CLEARLY DEFINED PRINCIPLES AND OBJECTIVES.

Legislation must contain clearly defined principles and objectives. Failure of lawmakers and policy developers to clearly articulate principles and objectives risk the law being confusing, and its implementation difficult to achieve. Best-practice biodiversity protection laws must contain clear objectives, including time-based objectives, for decision-making, consultation, and outcomes such as ensuring healthy ecosystem function, zero native species extinctions and climate resilience over the long-term. The principles of the law must achieve protection and be more ambitious in nature than the principles of ecological sustainable development (which, frankly, have done very little in the Australian context to achieve positive results for biodiversity).

These legislative objects must be developed into measurable biodiversity policy goals with an implementation strategy and annual, public reporting. The implementation strategy (such as a whole-of-government Biodiversity Strategy) would outline specific, measurable and timebound steps to achieve the objects of the Act. The strategy would guide development of plans of action across key areas, such as improving the trajectory of threatened species, reducing key threats, filling knowledge gaps and achieving greater biodiversity conservation outcomes on the pastoral estate.

2.

THE LEGISLATION MUST INCLUDE KEY REGULATORY FEATURES THAT ARE TYPICAL TO NATIVE VEGETATION CLEARING LAWS.

The legislation should provide thresholds and pathways for application of the law, including an overarching safeguard of native vegetation to be retained across landscapes and regions. There should be trigger points at which clearing regulation applies, as well as prescribed exemptions. The legislation should impose prescriptive rules concerning assessment of applications or proposals based on relevant technical and scientific information. A key objective would be to ensure that requirements for long-term, large-scale ecological, cultural and evolutionary processes be protected through native vegetation retention levels for each region.⁸⁵ The legislation should include transparent rules that must be applied when deciding whether to grant or refuse a permit. The decision-making framework should be proportionate to the biodiversity or habitat values represented by the vegetation. For example, threatened species or communities that exist there, and/or specific ecosystem processes should be taken into account.

The legislation should include detailed compensatory mechanisms (often described as offsets) in circumstances where clearing is permitted or approved.

Limits should be identified whereby clearing is prohibited in certain circumstances. For example where impacts are unacceptable, irreversible or compromising to fundamental ecosystem components, processes or functions. The limits could be identified through principles or hierarchies.

There should be an overarching legal test, even if high level, that guides decision making. All decisions should consider net community benefit and the views of local communities, whether free, prior and informed consent has been obtained from Native Title holders, and that land use decisions contribute overall to long-term ecological sustainability.



Magpie Geese by Athena Rob

3.

THE LEGISLATION MUST STATE HOW IT INTENDS TO INTERACT WITH OTHER RELEVANT LAWS.

The legislation should include statements in relation to how it is intended to interact with other relevant laws, including *Pastoral Land Act*, the *Planning Act*, *Territory Parks and Wildlife Conservation Act* and the *Environment Protection Act*. Clear rules concerning interaction of statutes, key provisions and rules will contribute to effectiveness.

The legislation should specifically address how land clearing is a notifiable ‘future act’ under the *Native Title Act 1993 (Cth)*. Extensive broadscale clearing of native vegetation may be inconsistent with the exercise of native title rights and interests; including staying on country, hunting, using water, having meetings, undertaking ceremony and to protect and maintain cultural sites. The legislation should specify how the procedural rights of native title holders will be met any time a land clearing permit is sought.

4.

THE LEGISLATION PROVIDES FOR A PROCESS OF PARTICIPATORY, PLACE-BASED STRATEGIC PLANNING AT THE MOST APPROPRIATE SCALE; WITH STRONG LOCAL AND INDIGENOUS GOVERNANCE ARRANGEMENTS EMBEDDED IN THE LAW.

The strategic planning framework can be developed specifically for the Territory context. The planning process must be place-based, values-driven, inclusive, and founded on protocols of respect for First Nations people.

The knowledge and expertise of local communities must be acknowledged, respected and valued as being central to the planning process and the knowledge, expertise, rights and interests of Traditional Owners respected and valued as being central to the planning process.

Each regional strategic plan would still need to meet the overarching objects of the Act – via adhering to native vegetation retention safeguards to protect intact landscapes.

5.

THE LEGISLATION PROVIDES FOR FIRST NATIONS JUSTICE.

The legal framework must embed First Nations justice. Key features that embed First Nations justice may include provisions that imposes enforceable obligations on government, landowners and the public to demonstrate values, honour and respect First Nations law, lore, culture and science in the protection and restoration of biodiversity in the NT.

The legislation should appropriately link caring for Country with cultural rights so that cultural rights referred to in other laws includes the right to care for Country in the exercise of those rights. The strategic planning process must be flexible enough to ensure that a First Nations approach is facilitated; and, contain mechanisms that prevent appropriation of First Nations knowledge.



Glenn Walker

6.

THE LEGISLATION APPLIES BEST AVAILABLE SCIENCE, INCLUDING CLIMATE ADAPTATION STRATEGIES.

Legislation, regulations and subordinate instruments must be informed by, and responsive to, science and evidence. Incorporation of a combination of customary, traditional knowledge and Western scientific tools and knowledge must form the scientific approach to best-practice biodiversity laws.

Legal instruments and mechanisms must be responsive to science and evidence that articulates threats and presents solutions to restoration and best-practice land management. Where there is a lack of full scientific certainty, and there are threats of serious or irreversible environmental harm, the precautionary principle must be applied.

The best available science should inform climate adaptation strategies for biodiversity and ecosystems function and be incorporated explicitly into the legislation. This would necessitate the identification, mapping, and protection of climate refugia across the NT as being of critical importance.⁸⁶ Where this knowledge is lacking a research plan would be developed to address these gaps.

The protection of species habitat should be expanded to include current and “likely habitat”, as species distributions shift in response to changing environmental conditions due to a heating climate.

7.

DEVELOPMENT OF A SET OF TERRITORY SPECIFIC, MEANINGFUL BIODIVERSITY INDICATORS THAT CAN BE MONITORED ACROSS PUBLIC LANDS AND REPORTED ON ANNUALLY AS A LEGISLATIVE REQUIREMENT.

Such an NT biodiversity monitoring and reporting program must be seen as an essential, on-going Departmental responsibility and resourced as such.

The biodiversity and monitoring reporting program need not be an arduous ‘State of the Environment’ reporting program as in other jurisdictions. There could simply be a dedicated webpage through the Fauna and Flora division that provides the information through a dashboard and reports on annual trends.

A suite of biodiversity indicators across the Territory would be monitored through an appropriately resourced monitoring program and publicly reported regularly. This monitoring program would be developed with the specific intention of tracking progress (and regress) towards the objects of the legislation. Included as part of the monitoring and reporting program would be information on native vegetation extent and condition (including area burnt and land clearing rates). Clear targets could be developed around these biodiversity metrics, with land holders and the government held accountable for trends in environmental condition.

Best-practice laws must include provisions that ensure remote monitoring of landowners by an independent statutory authority to prevent unlawful activities such as removal of native vegetation without permit, and inappropriate burning (such as the SLATS program in Qld⁸⁷).



8.

THE LAW MUST HAVE ENFORCEMENT PROVISIONS; BUT CAN ALSO INCENTIVISE BIODIVERSITY CONSERVATION.

Enforcement provisions, including third-party enforcement provisions, must be included in best-practice biodiversity law. There could be a tiered approach to enforcement, starting from milder accountability measures such as warnings, fines and public declaration of wrongdoing, through to prosecution and imprisonment.

Both civil and criminal penalties must be available. Monetary fines must be prohibitive in nature to avoid fostering an attitude that failure to comply with the law is cheaper than abiding by the law in the first instance.

Where a landowner seeks to develop land that might adversely affect biodiversity, that landowner should be supported by the government to find a balance between achieving their goals, protecting biodiversity and ultimately to fulfil the legislative objects through their actions.

A payment for environmental services program for land holders to protect biodiversity should be explored, such as the Territory Conservation Agreements program.

Where critical habitat or significant cultural and natural values occur on the pastoral estate, the Department should consider excising these areas into the protected areas system, or as protected nature reserves off-limits to grazing, with landholders reimbursed for any loss of income.

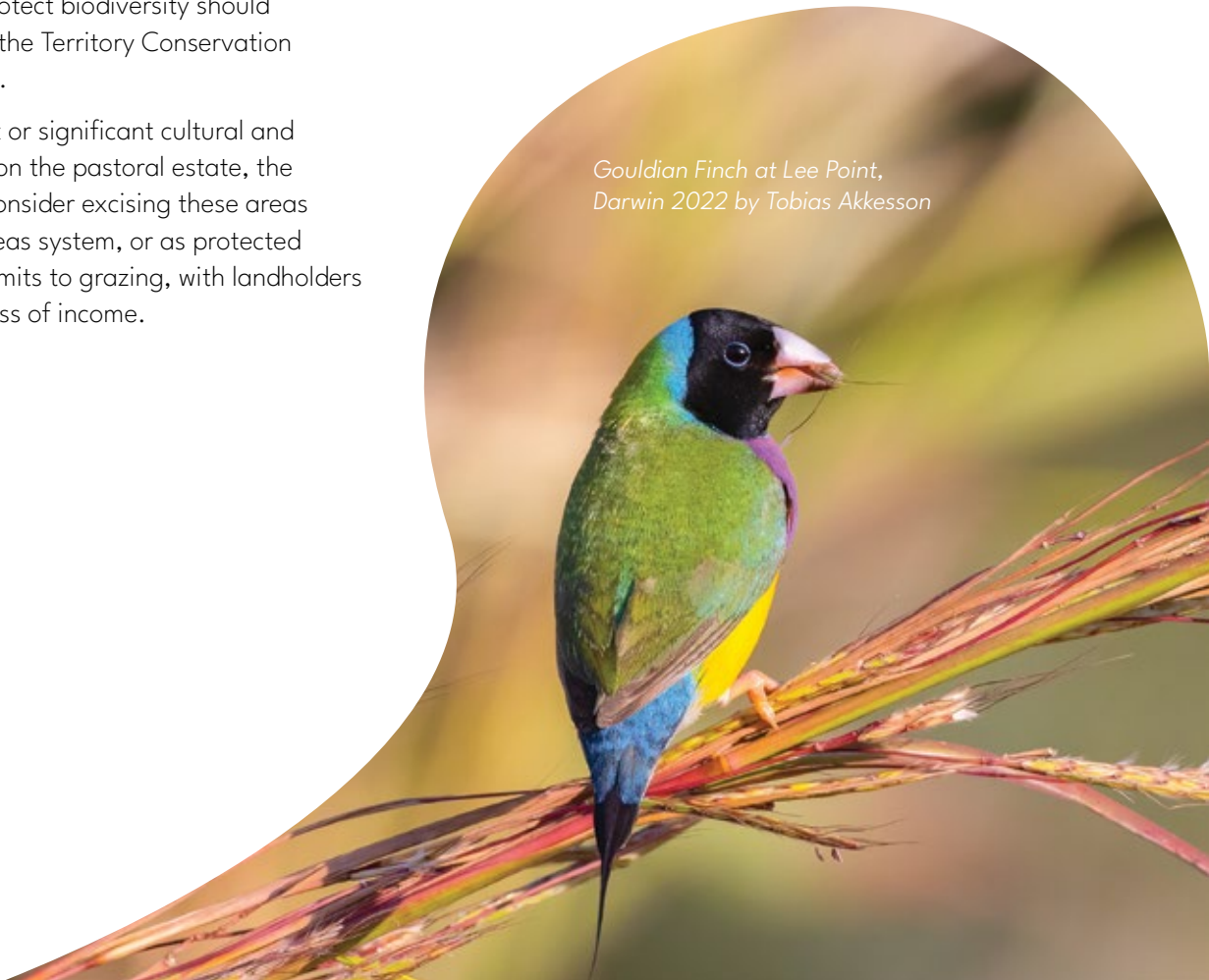
9.

BEST PRACTICE COMMUNITY ENGAGEMENT (PARTICIPATORY DEMOCRACY)

Land-use applications and decision-making frameworks must contain consultation provisions that accord with best-practice community and landowner engagement models. Public participation and engagement in environmental matters is fundamental to best-practice biodiversity law – and is particularly expressed through strategic planning provisions.

Such laws must contain consultation provisions that accord with both the United Nations Declaration on the Rights of Indigenous Peoples, and Aarhus Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters. Consultation and engagement must be meaningful, measurable, and foster comprehensive and honest community understanding of risks and benefits of a land-use application.

*Gouldian Finch at Lee Point,
Darwin 2022 by Tobias Akkesson*



10.

THE LEGISLATION UNDERGOES INDEPENDENT SCIENTIFIC REVIEW, HAS THIRD PARTY REVIEW RIGHTS, AND IS ADMINISTERED BY AN INDEPENDENT STATUTORY BODY

The legislation and its implementation will be subject to statutory, independent review on a periodic basis.

The law must be administered by an independent, appropriately resourced, statutory body. The NT has a significant problem with the perception of independence of office of public servants and bureaucrats, who often wear different hats in multiple departments and/or agencies. These administrative and bureaucratic arrangements do not foster public faith or reassurance that public servants and administrators exercise their duties and functions with proper independence and expertise. Best-practice laws require administration by an independent statutory body, whose members must not hold any other position within government, statutory authority, agency or department, including as consultants.

Members of an independent statutory body, including its Board, must be constituted by First Nations community members, independent scientists, government and industry. The independent statutory body must have the resources necessary to carry out its functions, including: for research and monitoring; implementation of the law; and enforcement of the law including prosecution.

Third parties must have review rights. Best-practice biodiversity protection laws must contain rights for third parties to seek review of decisions made under that law, and with respect to other laws that confer decision-making powers that may or will result in adverse consequences for biodiversity (merits review).



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The Territory's nature, it's worth protecting

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