Territory Natural Resource Management

Northern Territory NATURAL RESOURCE MANAGEMENT PLAN 2021-2025

Tablelands Region

VISION Territorians working together to manage our environment's natural, cultural and economic values for the benefit of all.

For more information

This publication is available on request through contacting info@territorynrm.org.au

Acknowledgements

The NT NRM Plan 2021-2025 was supported through funding from the Australian Government's National Landcare Program. However, the opinions expressed within are those of the NT NRM community.

Layout and design by Hodge Environmental

All photography by TNRM unless acknowledged in document.

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Territory Natural Resource Management

Australian Government | National Landcare Program

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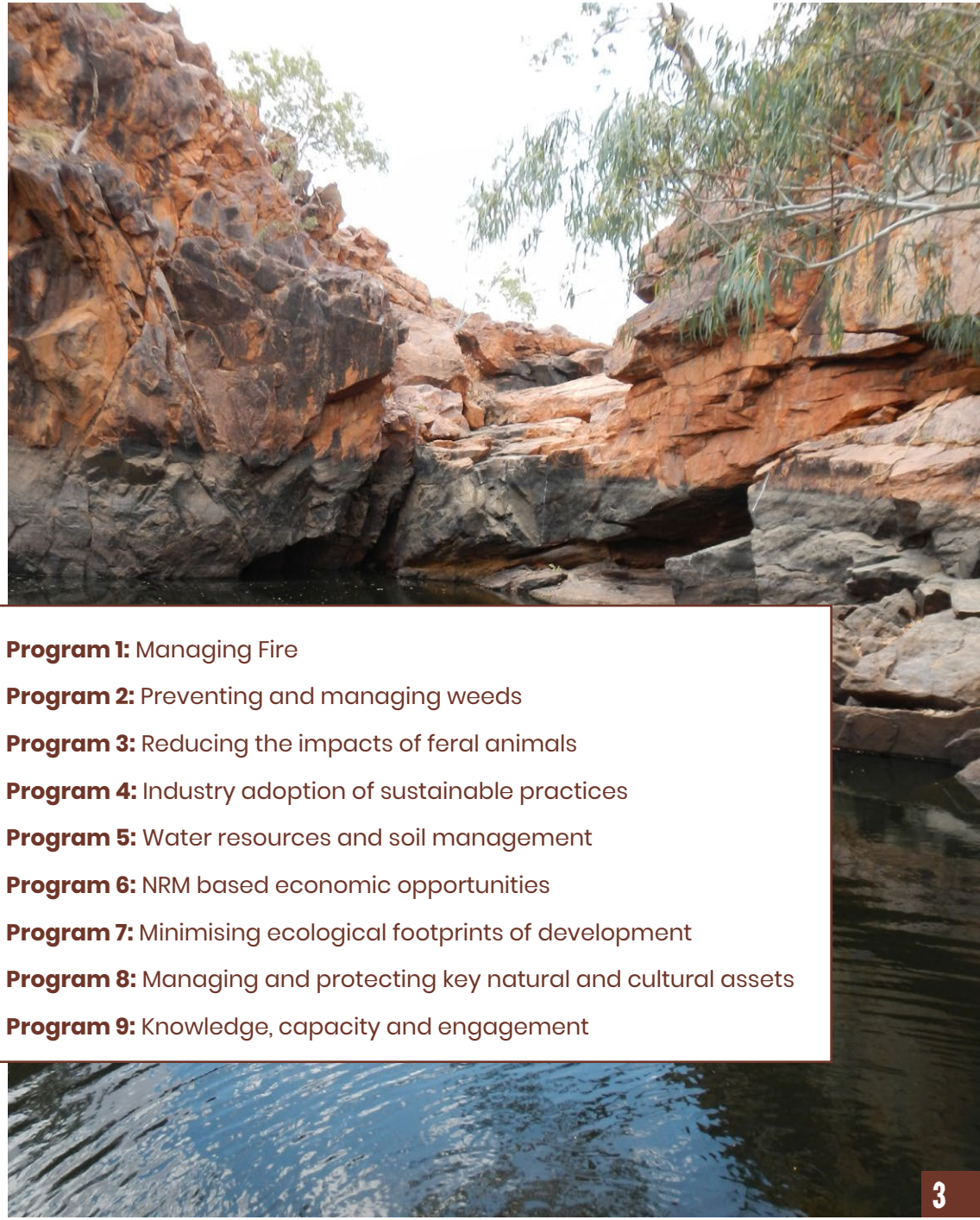


Foreword

The Northern Territory NRM plan provides an overarching five year strategy for maintaining and enhancing the condition of our land and water resources, the productivity of our soils and the health of our natural habitats and biodiversity. It has been drafted following extensive consultation to capture community priorities across the Territory and is underpinned by the latest science.

By structuring the plan into four regions we reflect the diversity of the Territory landscapes and give a stronger voice to our regional stakeholders. This is a plan for all Territorians.

The plan builds on upon the legacy of previous Northern Territory NRM plans and the lessons learned from their implementation. It learns from the past but also looks to the future, recognising the newly emerging challenges and opportunities that this new decade brings. As the Territory enters an exciting period of growth and investment, this plan provides an effective framework for engaging new partners into NRM, coordinating action and tracking and adaptively managing our progress towards high level objectives.

With this new plan, Territory NRM aims to strengthen regional leadership and coordination in plan implementation. We will bring together and facilitate diverse regional stakeholders to adaptively manage implementation and find the approaches that work best for them.

As Chair I look forward to playing my part in supporting in this collaborative effort. Working together, we aim to ensure that the health of the Territory's natural resources will underpin its future prosperity and the social and economic wellbeing of all Territorians.

Alastair Shields
Chair of Territory Natural Resource Management

Introduction

The *Northern Territory Natural Resource Management Plan (2021-2025) Tablelands Region* (the Tablelands regional plan) provides a framework for maintaining and enhancing the health and productivity of land, water, soils and biodiversity across the region. While preparation of this plan was coordinated by Territory Natural Resource Management, it is not a plan for Territory Natural Resource Management, it is a plan for the whole Barkly Tablelands NRM community.

This plan has been developed drawing upon the latest available scientific evidence and expert technical knowledge of the natural, social and cultural assets of the region. It further integrates the interests, priorities and goals of a diversity of stakeholders and interest groups from across the Tablelands, including governments, industry groups, Aboriginal landowners, communities, researchers and conservationists. The plan therefore highlights opportunities for strategic collaboration and partnerships between stakeholders working towards shared goals. By identifying regional NRM priorities and formulating strategies for achieving these, the Tablelands regional NRM plan also constitutes a prospectus for investment.

This Tablelands regional plan is one of four regional plans that make up the Northern Territory NRM plan. It builds directly upon the structure, outcomes and the lessons learned from implementation of the previous plan, the *Natural Resource Management Plan (2016-2020) Tablelands Region*, and the legacy of NRM planning for the Tablelands since 2005. Each successive plan has refined strategies to best address changing biophysical conditions, a changing policy environment and evolving community expectations across the Tablelands. Accordingly, in 2021, this Tablelands regional plan supports and carries forward the good work that NRM stakeholders have been conducting over many years.

In a fast-changing world, this plan also looks to the future and program strategies have been developed anticipating NRM opportunities and challenges that may emerge across the Tablelands during the period 2021-2025.

Our Vision

Territorians working together to manage our environment's natural, cultural and economic values for the benefit of all

The Tablelands Region

The Tablelands region (otherwise known as the Barkly region) is the most sparsely populated NRM region in the Territory. It covers 15% of the Territory's land area, but contains only around 3% of the population (approx. 7500 people). Many of these people live in the main town of Tennant Creek.

The region has a diverse economy including mining, pastoralism and regional service delivery. Pastoralism is the dominant land-use with nearly three quarters of the area under pastoral lease. The region also includes most of the Mitchell Grass Downs and Davenport Murchison Ranges bioregions, all of the NT section of the Mount Isa Inlier and parts of Tanami, Gulf Fall and Uplands and Sturt Plateau bioregions.

Average rainfall in this inland area is low (approx. 400-450mm pa) and subject to extreme seasonal fluctuations with rains occurring mostly from November to March during the hot summer.

Black soil plains cover much of the Tablelands and support some of the best cattle grazing country in Australia. Some of the vast cattle stations located in the Tablelands include Alexandria Station, Brunette Downs, Newcastle Waters and Lake Nash Station. Australia's largest pastoral companies dominate ownership of the cattle stations in the area with The Australian Agricultural Company, the Northern Australian Pastoral Company and S. Kidman and Co. Ltd managing many of the pastoral stations in the region.

The natural resources of the region support people, jobs, economies, as well as internationally significant biodiversity. It is an area of iconic semi-arid savanna of Mitchell Grass and internationally important wetlands and lake systems. The Tablelands have seven Sites of Conservation Significance with four of these being recognised as nationally significant under the Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act). They are Lake Woods, Tarrabool Lake, Lake Sylvester and Eva Downs Swamp. Many of these areas are important refuge and breeding sites for waterbird colonies. The Davenport and Murchison Ranges site is also an important conservation area with a network of sheltered gorges and rare and endemic fauna.

There are many Aboriginal communities in the Tablelands region including Traditional Owners of the Warumungu, Walpiri, Kaiditch and Alyawarr people. Approximately 17% of the Tablelands region is Aboriginal freehold land and there are numerous sacred sites listed under the Northern Territory Aboriginal Sacred Sites Act, as well as culturally significant places in the landscape. Indigenous languages remain the primary languages of many Aboriginal people and a vast body of in-depth traditional ecological and cultural knowledge drives ceremonial and cultural practices that continue today.

The natural and cultural values that underpin the livelihoods of pastoralists and Aboriginal people are coming under increasing pressure from threats. These include introduced plants such as rubber bush and parkinsonia, climate change and potentially more intensive land use and mining activity. There are 16 nationally listed threatened species and 21 species listed as threatened in the Territory. There are seven Weeds of National Significance and 24 NT declared weeds. Ten listed exotic mammal species, one exotic reptile, two exotic birds and the cane toad, have established feral animal populations in the region.

Tablelands Regional Profile

Land

15%
of NT's land mass
203,000 km²

4 major lake systems
Lake Woods
Lake Sylvester
Tarraboool Lake
Eva Downs Swamp

1.4%
of land is protected areas

17%
Aboriginal land

People

7,453 approximately
3%
of the NT's population

Tennant Creek
2,991

Covered by
Barkley Regional Council LGA

visitors 2020
36,000

Economy

$382 million
Gross Regional Product
1.5% of NTs Gross State Product

pastoralism

mining

regional service delivery

public administration

Natural resources

7 Sites of Conservation Significance

0
Nationally listed threatened plant species

2 NT listed threatened plant species

16
Nationally listed threatened animal species

21 NT listed threatened animal species

7
Weeds of National Significance

Social and economic status

The Tablelands region has unique social, economic and environmental characteristics that raise particular challenges in creating sustainable livelihoods and delivering NRM activities. There is a clear link between social and ecological resilience, particularly in social groups or communities on the Tablelands that are dependent on ecological and environmental resources for their livelihoods.

The economy of the region is sustained by pastoralism and mining, underpinned by government funding for service delivery. The Tablelands contributes an estimated 1.5% ($382 million) of the Territory Gross State Product. With climate change and other pressures on local livelihoods, it is important to build community and industry resilience in the area. Resilience is the ability of social and ecological systems (such as cattle producers and rangelands that are mutually dependent on each other) to cope and adapt to change.

The Tablelands has one of the lowest population densities within Australia at just one person for every three square kilometres. The whole region is classified as "very remote" according to the Australian Bureau of Statistics (ABS) because of the vast distances needed to travel to access essential services and infrastructure. These factors have significant implications for the costs of extension services needed to deliver NRM activities, as well as the social resilience of Aboriginal people to cope with the impacts of disadvantage. This impacts on their ability to undertake NRM. Likewise, pastoralists need further investment and support to enable them to better cope and adapt to climate change impacts and sustain the land upon which they live. Landholder resilience can be supported through NRM programs that enable them to more effectively recognize environmental degradation. These programs include techniques for improving land condition monitoring and strengthening regional land management networks.

Social indicators

The participatory planning process adopted in 2016 highlighted the role of 'people' in natural resource management and specifically the capacity of individuals and groups to implement activities and to coordinate and work together with other individuals and groups.

The 2021-2025 Tablelands regional plan retains 'Community Knowledge' and 'People on Country' as key NRM assets. Without motivated and capable people, the programs and strategies set out in this plan could not be achieved. Accordingly, the plan places heavy emphasis upon building and supporting social capacity in natural resource management. Through implementing successive NRM plans, there is now an improved understanding of the elements that enable social capacity for natural resource management in the Tablelands:

- Opportunities to learn new skills and share knowledge
- The recognition, generational transfer and appropriate use of traditional ecological knowledge
- Capacity for 'two-way learning' and working productively across cultures
- Meaningful participation and a sense of ownership in NRM planning
- Strong working relationships and active networks across the region
- Ability to plan and coordinate strategically, and manage adaptively
- Effective communication to reach all audiences
- Overcoming resource, logistical and economic barriers to participation.

Each of these elements are recurrent themes throughout the programs of this plan and will contribute to how success in implementation is measured.

Land tenure

The Tablelands are dominated by two main types of land tenure: pastoral lease and Aboriginal land. There are also a few small Protected Areas.

Aboriginal land

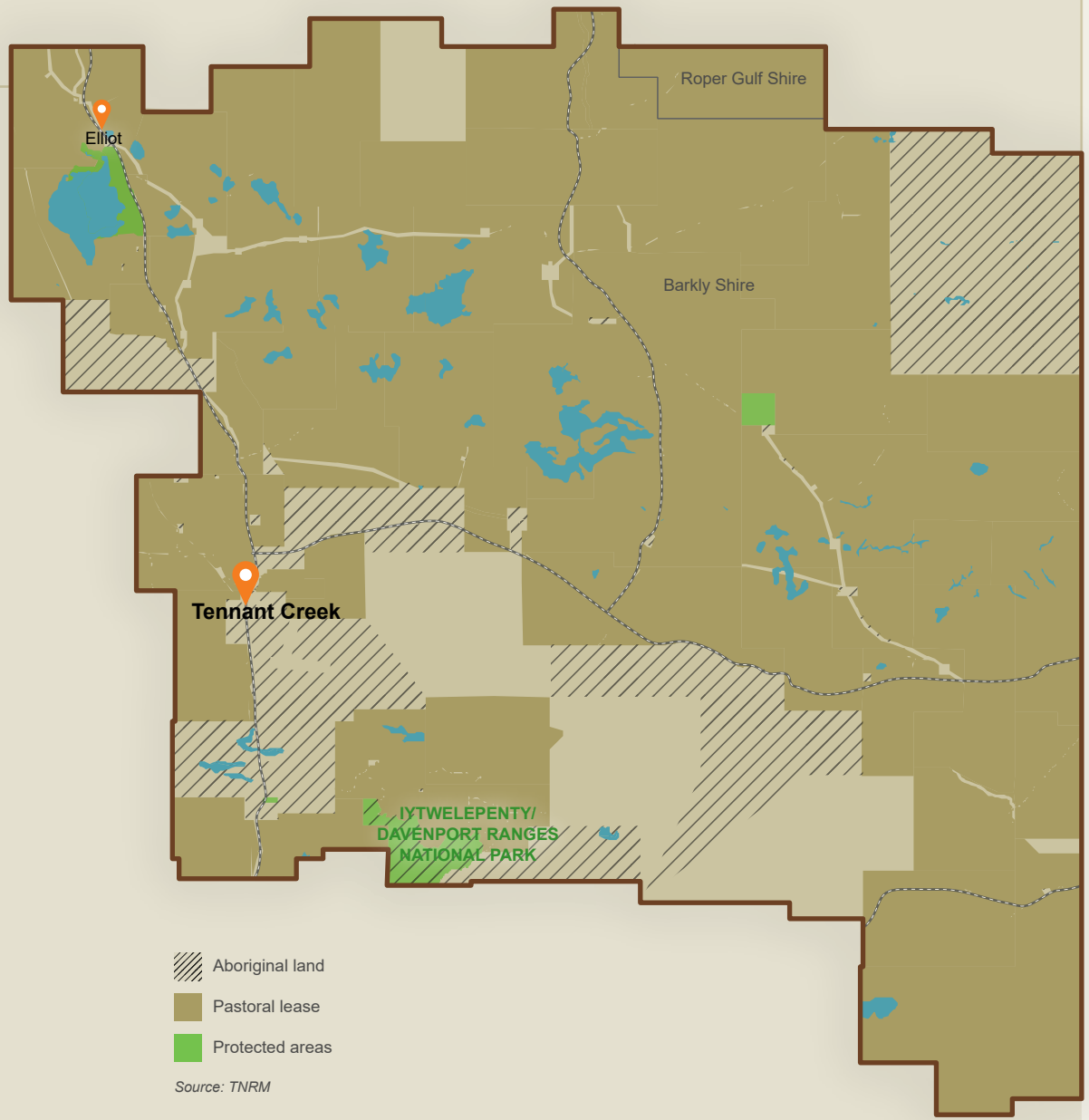
Approximately 17% of the Tablelands is under Aboriginal freehold title, held by Aboriginal Land Trusts and administered by the Central Land Council and Northern Land Council. Exclusive native title is also recognised over sections of Aboriginal freehold title under the Native Title Act 1993. In some areas where freehold title does not exist, Aboriginal people have been granted non-exclusive native title rights or have come to agreements with pastoralists under Indigenous Land Use Agreements.

Pastoral land

There are around 28 pastoral leases that extend across approximately 75% of the Tablelands. The average size of pastoral stations is about 5400 km^2. Australia's largest pastoral companies dominate ownership of these cattle stations with The Australian Agricultural Company, the Northern Australian Pastoral Company and S. Kidman and Co. Ltd managing many of them.

Conservation land

Only 1.4 % of the Tablelands is classified as Protected Area. The main conservation areas are the Longreach Waterhole (where there is a conservation covenant), Connells Lagoon Conservation Reserve, Ganalanga Mindibirrina Indigenous IPA and parts of the jointly managed Iytwelepenty / Davenport Ranges National Park, and the Karlu Karlu/ Devil's Marbles Conservation Reserve.



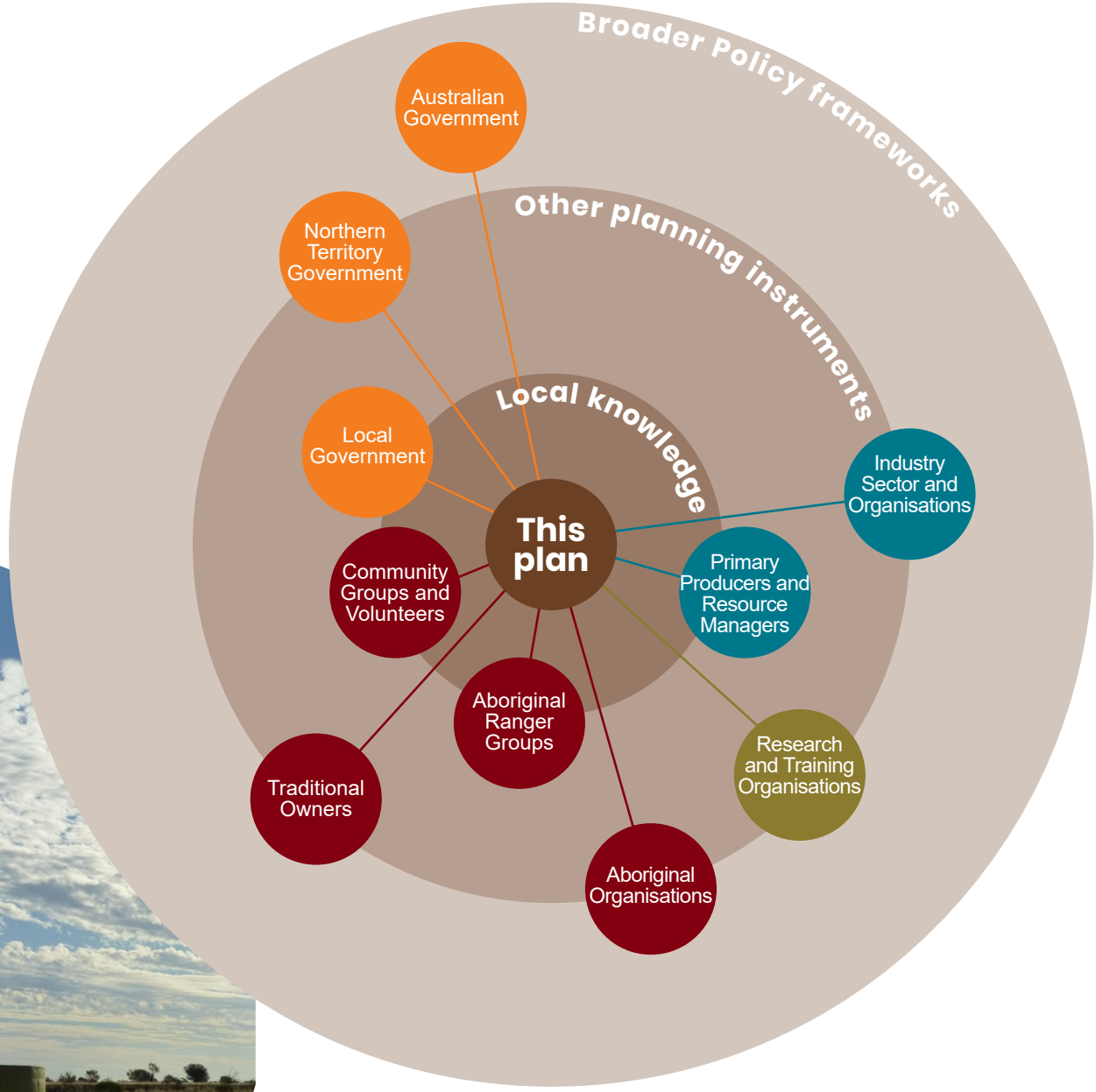
Source: TNRM

Where does the Tablelands regional plan fit in?

The Tablelands regional NRM plan is one of four plans that combine to form the broader *Northern Territory Natural Resource Management Plan (2021-2025)*. It is a non-statutory plan, but it has been developed with reference to broader policy frameworks, Australian Government, Northern Territory Government and local planning initiatives, and local knowledge. The plan aims to provide an overarching framework that integrates this diversity of approaches and instruments into a single coherent agenda for action.

This integrated approach provides a platform to both strengthen existing partnerships and highlight potential new partnerships to underpin NRM collaborations. It recognises that to strategically manage the water, land, soils and biodiversity of the Tablelands, planning and management action must be inclusive of all stakeholders. The planning process during 2020 and 2021 went through multiple stages to most effectively capture the current and future priorities of all stakeholders.

The Tablelands regional plan is not a plan for the Territory Natural Resource Management organisation, rather it is a plan for the whole Tablelands natural resource management community.



How did we develop the Tablelands regional plan?

In 2015 and 2016 the 'Open Standards for the Practice of Conservation' were adopted as a basis for NRM planning. The 'Open Standards' are an internationally recognised planning framework and represent leading practice in participatory planning and adaptive management. Planning for the Tablelands in 2016 established a framework for ongoing monitoring, review and updating of the plan by stakeholders and transformed the plan into a 'live' document. Reviewing and revising the Tablelands regional plan in 2018 and again in 2020, most stakeholders reported that the structure of the 2016-2020 plan remained relevant to their needs.

Consequently, in 2021 we are carrying the structure and logical framework established by the 2016 planning process forward. We are updating, reviewing and refining this to meet the evolving NRM environment of the 2020s. This not only ensures continuity and consistency in programming, but also enables us to review and track progress made towards strategic objectives beyond the life of a single planning period.

The development of this plan involved multiple steps, planning workshops, collation and review of relevant data and documentary evidence, community consultation and the receipt of written submissions.

The planning approach focuses upon the identified assets of the region and the pressures that act upon them. The 'Theory of Change' (planning logic) suggests that improved management of the pressures acting on assets will promote more sustainable, natural social and economic systems.

The natural, social and cultural assets referenced in this plan were identified by the NRM stakeholders of the Tablelands through a series of workshops and planning sessions undertaken during the development of the 2016-2020 plan. Tablelands stakeholders indicated that this asset structure still remains relevant in 2020.

Collectively, the eight assets identified through the planning process provide Tablelands stakeholders with resources for their daily lives (such as the air they breathe and the water they drink), and underpin key industries such as pastoralism, crop agriculture and tourism. Natural and cultural assets also support the important customary economy that sustains Aboriginal people and provides for their cultural and spiritual wellbeing.

1 Review of the 2016-2020 plan

Tablelands stakeholder groups were individually consulted to assess progress made towards plan implementation, and then attended a technical review session in Tennant Creek where progress towards implementation and achievement of objectives was assessed.

2 Literature and data review

An extensive review of published and grey data, publications, research reports and policy documents produced since 2016 was conducted to update asset and pressures descriptions and highlight trends of change.

3 Technical working-group planning

Key technical stakeholders were brought together in a planning meeting to discuss and identify current and emerging Tablelands NRM priorities and the strategies required to address them.

4 Individual expert consultations

Following up on the planning meeting select thematic experts were consulted individually for more detailed input to develop the program of strategies, activities and interim targets.

5 Consultation Draft

A Tablelands Consultation Draft document was prepared and posted for public comment and submissions. Community presentations and consultations occurred at Tennant Creek.

6 Final Draft

Community feedback and stakeholder submissions on the Tablelands Consultation Draft and planning priorities were collated and drawn upon to produce the final draft of the Tablelands regional plan.

The strategies and major objectives identified for the Tablelands NRM Plan 2016-2020 were organised into nine programs. These were:

- Managing fire
- Preventing and managing weeds
- Reducing the impacts of feral animals
- Industry adoption of sustainable practices
- Water resources and soil management
- NRM based economic opportunities
- Minimising the ecological footprints of development
- Managing and protecting key natural and cultural assets
- Knowledge capacity and engagement

In developing the 2021-2025 Tablelands regional plan, this structure has been carried forward.

Key assets

People on Country
Includes remote livelihoods of Aboriginal people, pastoralists and others living throughout the region

Community Knowledge
Includes land management knowledge and skills, including traditional, scientific and practical skills and knowledge

Freshwater Systems
Includes important wetlands areas, drainage channels, groundwater, waterholes, rock holes and small permanent spring-fed streams and aquifers

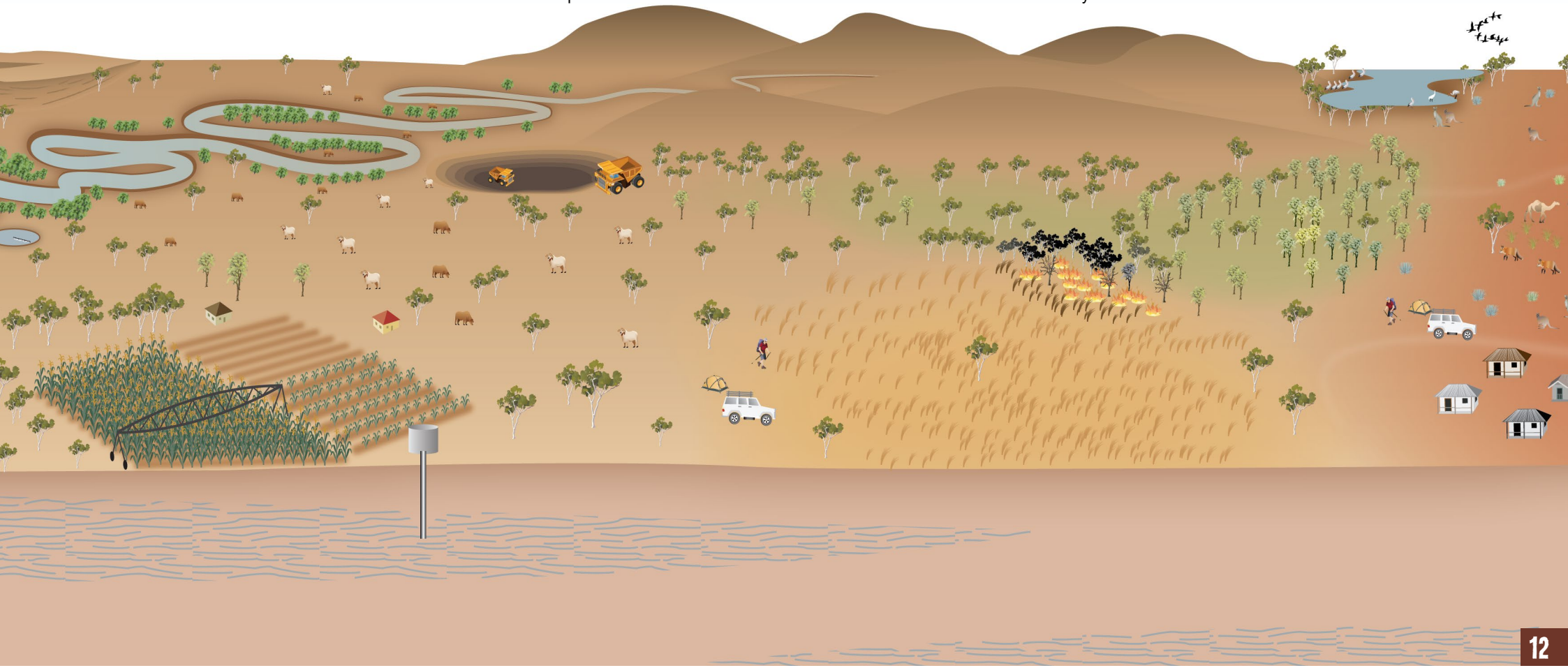
Healthy Soils
Includes soil fertility, structure, health and productivity

Grasslands/Rangelands
Includes Mitchell Grass plains, spinifex grasslands and open woodland rangeland areas

Cultural Landscapes and Sites
Includes Aboriginal sacred sites, heritage places and cultural landscapes

Biodiversity and Conservation Sites
Includes threatened species, Sites of Conservation Significance, key conservation sites and healthy habitat

Ranges
Includes Wollogorang and China Wall sandstone ranges and the Davenport and Murchinson Ranges



Assets and pressures descriptions

In describing assets and the pressures that act upon them, we use two qualitative assessments for trends in condition over the last five years (2016-2021).

Community opinion

This is a subjective collective assessment elicited at community consultation meetings and based upon personal observations or other evidence. As a measure it reflects the community's perception about what is happening to natural assets and the success of NRM.

Review of secondary data

We reviewed available academic papers, data sets, technical reports and policy documents published over the last five years and pertaining to the respective asset in the region, noting implications for asset condition. As a caveat, due to delays in publication, some reviewed documents are based upon data collected prior to 2016.

Over past five years (2016-2021)

Overall, positive trend of change in asset condition ↑

No clear trends of change in asset condition –

Overall, negative trend of change in asset condition ↓

Insufficient evidence

Freshwater systems

Goal: By 2030 the health of wetland systems on the Tablelands is in good condition with natural values maintained or improved based on current conditions

	2016		2021 trend	
	Condition	Trend	Literature/ data review	Community perception
Freshwater systems	Good	—	↓	↓

Indicators for condition

- Abundance and diversity of birds using wetlands for nesting and breeding
- Ground and surface water quality
- Presence of aquatic indicator species
- Distribution and density of weeds in wetlands
- Water table depth and groundwater recharge

There are six catchment areas within the Tablelands region. The combined Barkly Lakes (Eva Downs Swamp, Lake Woods, Lake Sylvester and Tarabool Lake) are listed as Nationally Important Wetlands under the Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act). They provide important bird refugia - particularly for migratory species. Frew River swamp is listed as a Site of Conservation Significance by the Territory Government. All these wetlands are on pastoral leases, and are a valuable asset, providing water and green feed.

These wetlands and associated drainage channels provide key habitat for migratory shorebirds and waterbirds as well as refugia for a range of species in dry periods. At its full extent, Tarabool Lake is potentially the largest basin form freshwater wetland and largest wooded swamp in tropical Australia. During periods of extensive inundation, it is known to support over 200,000 waterbirds including globally significant numbers of at least three species.

Groundwater is also a valuable asset that supports the pastoral industry of the region. Much of the region is within the Georgina basin which has moderate to high yields of groundwater potential and is highly significant for the possible future expansion of the pastoral industry.

Freshwater systems

Pressures and uses

Weeds

Riparian areas and wetlands on the Tablelands are threatened by invasive weeds. Parkinsonia is a major threat to Tablelands' water courses and wetlands, although mesquite and prickly acacia also establishes along seasonal water courses.

Climate change and severe weather

Protracted drought will break seasonal cycles of surface water accumulation and flow, and so degrade aquatic ecological systems. Likewise, drought can result in depletion of groundwater and locally declining water tables. Severe flooding can damage watercourses through erosion.

Inappropriate fire

Fires can disturb and degrade sensitive riparian vegetation habitats by increasing erosion and the flow of sediments when followed by intense rainfall. Many wetlands plants are fire sensitive and fire can lead to the establishment of weeds.

Primary industries

Wetlands are sensitive to surface and groundwater extraction for agricultural use. Stock accessing surface water cause erosion, can add nutrients to water and spread weeds.

Mining and energy production

In addition to water extraction and the discharge of contaminants, extractive industries may include hydraulic fracturing in the Beetaloo, which has raised concerns about groundwater contamination. Legacy mines are also sources of contaminants polluting rainfall and runoff.

Recreation and other activities

Boating and recreational visitors to major waterholes and wetlands in the Tablelands can disturb waterbird populations, spread weeds and leave waste and pollutants. Off road driving can degrade wetlands and lead to erosion following rains.

Grasslands/ Rangelands

Goal: By 2030 the production values of the grasslands for both pastoral production and biodiversity are maintained

	2016		2021 trend	
	Condition	Trend	Literature/ data review	Community perception
Grasslands/ Rangelands	Good	—	↓	—

Indicators for condition

- Condition of native pastures, notably perennial grass cover
- Presence/ absence and density of weed species
- Biodiversity status of grasslands and rangelands

The dominant habitat in the Tablelands region is semiarid savanna of Mitchell grass. Vegetation is mostly open woodland and grassland with smaller areas of spinifex grassland. The Tablelands are known for their rolling native Mitchell grass plains that cover about 15% of the region and make up some of the most important cattle grazing areas in the Territory. These grazing lands are known as 'rangelands'. The region also contains Coolibah, Gidgee woodlands and Bluebush swamps. Importantly, the grasslands of Barkly Tablelands contain distinctive biota which are generally subject to less pressure than Mitchell grasslands in other parts of Australia.

Pressures and uses

Climate change and severe weather

The drought of 2018-2020 had a very profound impact on both the productivity and the biodiversity of the Tablelands and led to heavy destocking.

Weeds

While priority weeds do not pose and imminent threat to production and biodiversity, if left to establish unchecked, they have greater impact on key natural assets and be much harder and costlier to control.

Feral animals

While not as significant as in other regions donkeys and horses are having increasing impact on some parts of the Tablelands.

Mining and Energy Production

There has been a long history of mining on the Tablelands, but with the fracking exploration now underway in the Beetaloo Basin and the prospect for further resources projects developing in the region, there an increased risks of degrading of natural values.

Ranges

Goal: By 2030 the condition of the high-value ranges in the region is stabilised with no further decline of small mammals and birds.

	2016		2021 trend	
	Condition	Trend	Literature/ data review	Community perception
Ranges	Good			

Indicators for condition

- Presence/absence of threatened species
- Presence/absence of weeds
- Fire frequency and intensity

The Tablelands NRM region includes the Davenport and Murchison Ranges areas that are recognised as being of national significance. Five of the seven threatened species in this region are mammals, including the black-footed rock-wallaby and the bilby. Long-lasting waterholes within the ranges support diverse terrestrial and aquatic fauna species, including a relatively high diversity of fish. Sheltered gorges provide refuges for at least 11 plant species endemic to the Territory. The predominant land use of the ranges site is pastoral operations. Aboriginal Land Trust is also an important land use and there are also significant conservation reserves. The jointly managed Iytwelepenty / Davenport Ranges National Park and Karlu Karlu/Devil's Marbles National Park receive a number of visitors to the area.

Pressures and uses

Inappropriate fire

Changed fire regimes in the ranges from small mosaic fires to more frequent and widespread wildfires can alter the age distribution and composition of vegetation species and kill fire-sensitive species.

Feral animals

Feral animals, mainly donkeys and horses, affect native species through degrading habitats, fouling waterholes while cats impact on native mammals and birds in the ranges.

Weeds

Buffel grass encroaching into the ranges from high visitation areas has the potential to seriously impact on biodiversity values.

Recreation and other activities

Campsites in national parks in the ranges are subject to high visitation which can introduce weeds, cause soil erosion and increase disturbance.

Lack of access and resources

Many important sites in the ranges are difficult to access, making the protection of culturally significant sites challenging.

Healthy soils

Goal: By 2030 soil erosion issues are decreased and soil fertility maintained through the use of improved practices

	2016		2021 trend	
	Condition	Trend	Literature/ data review	Community perception
Healthy soils	Good			

Indicators for condition

- Adoption of best practices in agricultural industries
- Sediment load in watercourses
- Ground cover % and soil stability
- Productivity and health of soil properties

Healthy soils refers to the fertility, structure, health and productivity of soils for maintaining biodiversity, key habitats and ecosystems, and for commercial uses such as horticulture and pastoralism. The Barkly Tablelands is the most productive area for pastoral production in the Territory, with high quality, largely treeless native pastures dominated by Mitchell grass species. The region contains mostly vertisols - clay soils exhibiting strong cracking tendencies when dry and which are common on alluvial plains. These types of soils support rich grazing lands.

Pressures and uses

Primary industries

Overstocking with cattle and lack of adequate rotation between and within paddocks can lead to loss of ground cover, erosion and compaction of soil. Fences and roads and vehicle movements can accentuate this.

Feral animals

Donkeys, horses and, in some areas, pigs can impact on the soils of the Tablelands region, especially around water courses.

Recreation and other activities

Off road driving can contribute to soil loss and erosion in some areas.

Mining and energy production

Opening of the Beetaloo Basin to fracking and other resources sector projects in the region may lead to disturbance of soil through excavation, building roads and movement of goods and equipment. These impacts will require careful rehabilitation.

Biodiversity and conservation sites

Goal: By 2030 diverse populations of threatened species are maintained and environmentally significant sites are being managed cooperatively based on knowledge of values, threats and best management options

	2016		2021 trend	
	Condition	Trend	Literature/ data review	Community perception
Biodiversity and conservation sites	Fair	—		↓

Indicators for condition

- Conservation status of threatened species
- Number of priority sites being managed for their conservation values
- Presence of key indicator species
- Number of native flora and fauna species

The biodiversity of the Tablelands is a broad reaching asset class that focuses mainly on vegetation condition, threatened and susceptible species and landscape function. The Tablelands has 8 Sites of Conservation Significance and two vegetation communities in the Tablelands region are recognised as sensitive and in need of protection by the Territory Government. The Tablelands has 14 nationally listed threatened species and 23 species listed as threatened in the Territory. Of the four Territory regions, the Tablelands has the smallest area of protected land with just the Ganalanga-Mindibirrina Indigenous Protected Area, Connells Lagoon, Karlu Karlu, Longreach Waterhole and part of the Itywelepenty/Davenport Ranges as the main protected areas in the region.

Pressures and uses

Weeds

Parkinsonia, prickly acacia, rubber bush and mesquite are considered priority weed threats to natural values on the Tablelands, where they threaten to displace native vegetation in key habitats and contribute to land degradation.

Inappropriate fire

While fire is not a major problem for much of the Tablelands, there are areas in the north and west of the regions where inappropriate fire regimes.

Feral animals

While larger feral animals like horses, donkeys and, in the north, pigs disrupt habitats and cats pray upon small native animals.

Climate change and severe weather

The Tablelands region, its productivity and biodiversity was badly impacted by drought during 2018-2020 and is still in recovery. Further droughts an extreme weather could compound these impacts.

Community knowledge

Goal: By 2030 Aboriginal knowledge of country and pastoral knowledge is maintained and passed on to younger generations and access to, sharing of and use of TEK, local landholder knowledge, data and scientific information has improved to make informed NRM decisions

	2016		2021 trend	
	Condition	Trend	Literature/ data review	Community perception
Community knowledge	Fair	↓		↓

Indicators for condition

- Knowledge recording and archiving projects
- New techniques and technologies adopted
- Number of multi-generational trips on country (Aboriginal knowledge sharing)
- Number of participants on, and beneficiaries of training courses
- Number of knowledge sharing events and forums
- Number of collaborative ventures bringing together different types of knowledge

The corporate sector of the pastoral industry has a regular progression and turnover of staff that can result in an associated loss of local knowledge. Staff who remain in the region and other support roles such as agency officers, researchers and technical staff may build up a wealth of knowledge critical to carrying out NRM work. Natural resource management on the Tablelands has depended upon the combined efforts of many individuals both within and without the pastoral industry, with the Barkly Landcare and Conservation Association (BLCA) taking a leading role. First established in 1995, BLCA re-activated in 2021 after a short period of transition and inactivity. It is made up of a community who are dedicated to improving land and environmental management practices in the region.

The body of traditional ecological knowledge (TEK) and associated management practices held by Traditional Owners have shaped the Territory's environments for thousands of years and are of high value to younger generations as well as western science. The diminishment of this knowledge has led to a degradation of other assets described in this NRM plan.

It is imperative that this knowledge is captured, valued and shared, so practices and decisions are informed by these knowledge systems. Also, innovation and improved practices are supported by improved sharing and utilisation of information across all NRM stakeholders.

Pressures and uses

Loss of knowledge and lack of access

Loss of knowledge is acute in the Tablelands owing to a high turnover of institutional and station staff. Without established mechanisms for sharing, recording and utilising knowledge, and ongoing programs for training and extension, this problem is accentuated. Likewise, physical lack of access to Country can threaten the application, maintenance and inter-generational transfer of valuable traditional knowledge.

People on Country

Goal: By 2030 the number of people living in the Tablelands region has been maintained or increased with well-established remote communities gaining livelihoods through the sustainable use of natural resources

	2016		2021 trend	
	Condition	Trend	Literature/ data review	Community perception
People on country	Fair			

Indicators for condition

- Number of people living across the Tablelands
- Economic status of the pastoral industry in the region
- Number of Aboriginal ranger groups engaged in cultural and natural resource management
- Number of young people entering agriculture or NRM related industries
- Number of NRM enterprises developed in the region

People on country refers to the livelihoods of Aboriginal landowners, pastoralists and others in the broader NRM support network. The Tablelands has a population of around 7500 people spread around regional centres, Aboriginal communities and pastoral properties. These people are integral to the viability and success of NRM programs and many of our actions target improvements to this asset. This goal is broad and encompasses strategies throughout the NRM plan aiming to strengthen local and regional support networks, government policies and community engagement. It will promote a healthy, thriving, remote population that is well supported by and engaged in economic activities in the Tablelands.

Pressures and uses

Loss of knowledge and lack of access

Rangelands economics and policies, together with the tyranny of distance, isolation and declining service delivery can put pressure on peoples across the remote Tablelands. Lack of physical infrastructure and communications, and lack of economic opportunity can lead to a decline in people on country. It is important for Aboriginal people to have regular access to their ancestral country to undertake cultural obligations and land management.

Climate change and severe weather

Extreme weather and climate change will put additional pressure on communities living and working remotely. Increasing ambient temperatures, drought and water insecurity, increasing fire intensities and flooding can threaten remote livelihoods.

Cultural landscapes and sites

Goal: By 2030 culturally significant sites are being managed cooperatively, based on knowledge of values threats and best management options

	2016		2021 trend	
	Condition	Trend	Literature/ data review	Community perception
Cultural landscapes and sites	Fair	↓		↓

Indicators for condition

- Condition of cultural sites.
- Number of cultural sites being visited annually
- Access and logistical support for TOs to visit and live on country
- Strength and use of Aboriginal languages
- Statutory protection and management of cultural sites
- Programs supporting the recording and intergenerational transfer of cultural knowledge
- Strength of Aboriginal languages

The region is highly significant to Aboriginal people who have strong cultural connections to the Tablelands landscape and sites within it. These include sacred sites, rock art sites, areas that are important for food resources and traditional medicines, burial sites and other sites of historical significance. Aboriginal sacred sites are places within the landscape that have a special meaning or significance under Aboriginal tradition. They link cultural values and spiritual and kin-based relationships to the land. Custodians of sacred sites have responsibilities to protect and maintain them.

Sacred sites are recognised and protected as part of the Territory's and Australia's cultural heritage through the Northern Territory Aboriginal Sacred Sites Act.

There are a wide variety of Aboriginal languages actively used in the region. Many Aboriginal people speak several indigenous languages with English frequently being a third or even fourth language. Some of the language groups in the Barkly region include Warumungu, Warlmanpa, Warlpiri, Jingili, Garawa, Mudburra, Kaytetye, Alyawarr, Anmatyerre and Wambaya

Pressures and uses

Loss of knowledge and lack of access

Restoration of cultural landscapes and protection of cultural sites requires custodians are sufficiently resourced to do so. Access to custodial land and sites can be difficult in remote areas, when roads are cut off by weather conditions and when land is under different ownership.

Recreation and other activities

Sites are threatened by human disturbance by tourism and other recreational activities. Unrestricted access to some sites breaches customary law and can result in the sites being degraded.

Feral animals

Feral animals such as donkeys and horses can degrade springs and waterholes and sacred sites. However, some introduced animals have become culturally significant to Aboriginal people and so it is important to consider this in their management.

Mining and energy production

Mining activities and oil and gas developments can directly impact on sites of cultural significance, especially with the laying of pipelines and building of roads across long distances.

Overview of asset condition and trends

Available data suggests that there has been little overall improvement in NRM asset conditions on the Tablelands since 2016, and some key areas of decline.

The impacts of the 2018-2019 drought were severe across large areas of the Tablelands, disrupting many seasonal aquatic systems and reducing recharge just as new extractive industries development increases groundwater demand. Although there were significant fires across the Tablelands in 2017, there is insufficient monitoring data to reveal trends of change in biodiversity assets condition. However, it seems unlikely that there has been any improvement. In 2020, some areas of rangelands including native vegetation and habitats were still in recovery from the impact of drought.

There is little secondary evidence for change in community capacity: While the Barkly Landcare group went through a period of reduced activity, this has to some extent been offset by increasing engagement of indigenous land managers and TOs into regional NRM activities, including efforts to capture knowledge. The Tablelands region has undergone a small decrease in the number of people working in agriculture.

With a paucity of reliable monitoring data from the Tablelands, regional community perspectives on trends of change are important, but there is also a clear need for more systematic monitoring of relevant indicators.

	2016		2021 trend	
	Condition	Trend	Literature/ data review	Community perception
Freshwater systems	Good	—	↓	↓
Grasslands/ Rangelands	Good	—	↓	—
Ranges	Good	—	—	—
Healthy soils	Good	—	—	—
Biodiversity and conservation sites	Fair	—		↓
Community knowledge	Fair	↓		↓
People on country	Fair	—	—	—
Cultural landscapes and sites	Fair	↓		↓

Emerging issues for the Tablelands region

The *Northern Territory Natural Resource Management Plan (2021-2025) Tablelands Region* (the Tablelands regional plan) has been updated with respect to the prevailing resource conditions, trends and priorities that were identified within the region in 2021, but planning must also anticipate any issues (challenges or opportunities) looking likely to emerge during the implementation period.

For this reason, stakeholders at Tablelands regional planning workshops were invited to define and discuss major issues that seemed possible to emerge and impact upon the natural resources management agenda during the following five years. In the following section, these potential emerging priorities are listed along with how they have been addressed in the plan.

Climate change impacts

Tablelands communities have already been touched by the impacts of climate change and weather extremes during the last five years. Record temperatures and drought, seasonal water shortages. There is an expectation that these impacts will further intensify in coming years.

Strategy	2025 Objective
4.6	Climate adaptation planning by businesses and industries improve risk-management of climatic variability and related dynamic threats
5.2	An enhanced-knowledge base and empirical data support science based planning and increased water use efficiency and sustainability across major industries and uses
8.3	The management of Tablelands ecosystems is informed by knowledge of climate change processes and impacts

Water demand

Poor wet seasons and semi-drought conditions prevailed over some parts of the Tablelands during 2018-2020, leading to a reduction in surface water and depletion of some groundwater resources. Many believe planned expansion of water intensive mining and resources projects such as LNG fracking in the Beetalo Basin, together with applications for water allocations for pastoral diversification and horticulture may exceed sustainable use and threaten natural values and livelihoods in years to come.

Strategy	2025 Objective
5.1	Ground and surface water resources are managed with input from all stakeholders through catchment water allocation plans which include monitoring and ensures that cultural, environmental and production values are respected
5.2	An enhanced-knowledge base and empirical data support science based planning and increased water use efficiency and sustainability across major industries and uses

Development pressures

A number of large-scale development projects are in planning or early implementation for the Tablelands region. These include a number of mining and resources sector developments including Bootu Creek, Edna Beryl, Black Snake, Mount Peake, Warrego Gold and the Eldorado pit. Further north the exploration of the Beetaloo Basin for LNG will soon commence. The Sun Cable development south of Elliot will be the largest solar farm in the world. Large scale horticultural developments planned for the Western Davenports has received the largest water allocation licence ever granted in the Territory. There is community concern that implementation of these projects, if insufficiently regulated, could negatively impact on the natural and cultural values of the Tablelands.

Strategy	2025 Objective
4.1	Development policies for the Tablelands are informed by best available science and knowledge to ensure the protection of cultural and natural assets
4.4	Minerals and resources industries on the Tablelands are contributing to the delivery of land management services to protect prioritised habitats and sites of conservation value
5.2	An enhanced-knowledge base and empirical data support science based planning and increased water use efficiency and sustainability across major industries and uses
7.2	A transparent Territory offsets framework is directing offsets to achieving prioritised NRM strategies on the Tablelands

Emerging issues for the Tablelands region

Sustainability of production

Pastoral production underpins the ongoing management of much of the Tablelands region. However, following the 2018-2020 drought, many pastoral businesses are still in transition back to pre-drought operations and this transition period is anticipated to take several years. Some businesses report that they will struggle to achieve sustainability with current resource conditions and will require significant change in practices if they are to further develop their businesses.

Strategy	2025 Objective
4.3	Sustainable grazing practices are implemented through the increased knowledge and skills of land managers
4.5	Climate adaptation planning by businesses and industries improve risk-management of climatic variability and related dynamic threats
5.2	An enhanced-knowledge base and empirical data support science based planning and increased water use efficiency and sustainability across major industries and uses
6.4	New employment opportunities are created through diverse primary industries and on different tenures across the Tablelands
8.4	More producers have the capacity to make grazing land management decisions based upon the accurate and timely monitoring data and employing leading practices in sustainable forage budgeting

Conserving and retaining community knowledge

Tablelands industries and agencies have a very high levels of staff turnover. In recent years the BLCA fell inactive and has only been reactivated in 2021 to offer increased regional continuity in knowledge and planning. Aboriginal communities also face loss of knowledge owing to problems accessing their ancestral lands, and limited resources to support recording and intergenerational transfer of traditional ecological knowledge.

Strategy	2025 Objective
8.5	The increased involvement of Traditional Owners and Aboriginal land managers in documenting and managing culturally significant sites on the Tablelands has enhanced their protection
9.1	There is an increase in resources that enable collaborative and long-term approaches to NRM on the Tablelands
9.2	Natural resource managers on the Tablelands are incorporating the best available knowledge, information and data into their management including TEK and community knowledge
9.3	Training in the Tablelands is more accessible and better targeted to relevant natural resource management skills

How to read the plan

Overview

The program overview provides a brief summary of the overall purpose of the program and the issues and challenges in delivering it. It also describes how the program relates to other programs in the plan.

2025 Objective

This is a statement of the desired outcome of the strategy, intended to reduce pressures and improve asset condition. The success of the strategy will be evaluated against these objectives.

Strategy

This is the management approach to the defined objective.

Priority Activities

These activities should, if implemented, advance and deliver the strategy.

Interim Target

This is an interim milestone expected to be achieved within two years as the strategy is progressed towards its final objective.

Assets Improved

These are the assets that will be positively impacted or improved through each strategy. Most strategies will positively impact multiple assets. Each identified asset has a goal and delivering this plan also works towards achievement of asset goals.

Program 5: Water resources and soil management

In 2021, after experiencing two years of drought-like conditions, many on the Tablelands now have an increased awareness of the limitations of water and soil resources. This awareness has come just as an ambitious development agenda opens the way to new mining and resources sector projects. Water resources allocation planning has further highlighted the diverse interests and aspirations within the community, including recent concerns over the potential impact of large-scale irrigated horticulture on regional water resources.

Many are also aware of the increasing pressures upon fragile soil resources on the Tablelands arising from unsustainable farming practices, grazing pressure and wildfires.

The objective of this program is to increase sustainability in soil and water management through improving the understanding of resource limitations and opportunities to increase water use efficiency. It supports extension learning to raise understanding of leading practices in resource management that help buffer primary industries against future periods of drought and climatic extremes. The program also encourages the NRM community to collaborate in water resource management and build stakeholder capacity through effective communications and extension. The program also promotes robust land capacity studies and assessments to better understand land capability prior to future agricultural developments.

2025 Objective	Strategy	Key activities	2023 Interim target	Assets improved
Ground and surface water resources are managed with input from all stakeholders through catchment water allocation plans that include monitoring and ensures that cultural, environmental and production values are respected	HIGH PRIORITY 5.1 Water resource planning and management is undertaken in consultation with multiple stakeholders and underpinned by the best available scientific information	5.1.1 Involve multiple stakeholders and users representing a range of interests in water allocation planning in the region 5.1.2 Where appropriate, support community water stewardship thorough the introduction of new water monitoring technologies supported by effective communications	The principle of community participation In water resources planning and allocation is well established	

Key Measures of Achievement

These are the things measured to indicate whether strategies are being successfully implemented within the program. They indicate activity and actions as well as impact and outcome.

Key Collaborators

This is a listing of the key groups and organisations who will be involved in implementing the program strategies.

Priority Locations

These are the main geographic areas within the region identified as foci for action. In some cases justifications for the selection are given in brackets.

Relevant Territory Plans/ Strategies

These are relevant regional plans and strategy documents that align with some aspects of the program. In many cases they have been used to inform the development of the program and may provide greater detail regarding targets and activities.

Relevant National Plans/ Strategies

These are high level Australian Government strategies that have provided strategic direction and can provide national context to regional planning initiatives.

Program 1: Managing Fire

Much of the Tablelands region is black soil country and managed for grazing. This means that fire is not as prevalent as in other areas of the Territory, but wildfires can still pose problems at certain periods on mitchell grass plains and in the northern and southwestern parts of the region. Fire entering the Tablelands from outside the region can also lead to production losses.

The overall objective of this program is to build the capacity of land managers to manage fire more strategically, drawing upon the best available knowledge and tools. The program recognises that, on the Tablelands, grazing can be an effective fire management tool.

To better manage fire at the landscape scale, continued engagement among diverse stakeholders through sub regional cross-tenure collaborative planning and action is required to ensure responses to wildfires are rapid, coordinated and effective.

2025 Objective	Strategy	Key activities	2023 Interim target	Assets improved
Enhanced cross-tenure coordination and stakeholder capacity strengthens fire mitigation and response, leading to a reduction in area burnt by wildfires	HIGH PRIORITY **1.1** Improve the coordination of and capacity for cross-tenure fire management approaches that promote pastoral production, and cultural and biodiversity values	**1.1.1** Continue to maintain and strengthen multi-stakeholder planning and coordination groups which effectively manage fire across all tenures. **1.1.2** Recognise the diversity of fire risks across different Tablelands landscapes and through time, and ensure effective management around the boundaries of the Tablelands to prevent wildfires entering the region. **1.1.3** Retain and build knowledge of regional fire management through regular meetings, such as with the Warlu Committee, and appropriate training to offset staff turnover **1.1.4** Maintain and increase stakeholder sensitivity to different fuel load conditions and options to manage through fire, grazing or other appropriate techniques **1.1.5** Continue extension and training to support application of North Australian Fire Information remote sensing and other leading technologies to develop strategic fire management plans and responses in the Tablelands	Fire management planning and implementation is more strategic and better informed than in 2020	 

> When there are wildfires around the Barkly we have to work together and get onto it quickly to minimise the loss to pasture

Key Measures of Achievement

- Number of wildfires entering the Tablelands area
- Trends in fire extent and severity
- Number of people and organisations involved in collaborative fire management

Key Collaborators

- DEPWS (Bushfires NT)
- Central Land Council
- Northern Land Council
- Muru-Warinyi-Ankkul rangers
- Barkly Landcare and Conservation Association
- Researchers
- Territory NRM
- DEPWS

Priority Locations

- North and west boundaries of the Tablelands (prevent spread of fires into region)
- Tennant Creek region (population and infrastructure and cultural sites)
- Davenport Ranges (biodiversity and cultural values)
- Lake Woods (biodiversity and cultural values)

Relevant Territory Plans/ Strategies

- A coordinated bushfire management strategy for the Tennant Creek region (CLC 2018)
- Alice Springs Bushfires Management Plan (Bushfires NT 2018)

Relevant National Plans/ Strategies

- National Bushfires policy statement for Forests and Rangelands

Program 2: Preventing and managing weeds

The program for managing the impacts of weeds across the Tablelands aligns with the Tennant Creek Regional Weeds Strategy 2021-2026. It recognises the importance of controlling the spread of weeds across grazing properties and the threat that uncontrolled spread would pose to productivity.

The program builds capacity for collaborative action to strategically manage the spread of defined priority weeds at the landscape scale. It also strengthens surveillance and capacity to respond to new and 'alert' weeds which threaten to enter the region. Support for continuing monitoring of and research into weeds, aims to strengthen adaptive management and improve weed management performance.

The program also prioritises raising public awareness about the threat posed by weeds through community education and outreach.

2025 Objective	Strategy	Key activities	2023 Interim target	Assets improved
All reported 'alert' weeds are responded to effectively and progress has continued towards the eradication of identified 'priority' weeds	**VERY HIGH PRIORITY** **2.1** Prevent the establishment of new and 'alert' weeds and control the spread of 'priority' weeds across the Tablelands	**2.1.1** Implement strategic approaches to monitor and control the spread of weeds along priority pathways, as set out in the Tennant Creek Regional Weeds Strategy 2021-2025 **2.1.2** Maintain surveillance for rubber vine along the QLD border and rapidly eradicate any infestations **2.1.3** Prioritise rapid response to detected outbreaks of 'alert' Weeds **2.1.4** Target isolated outbreaks of 'priority' weeds and work on high density areas	Mechanisms are in place to reduce the spread of weeds into and across the region	
Land managers and other stakeholders have adopted a 'working together' approach that underpins collaboration on regional weeds management	**HIGH PRIORITY** **2.2** Adopt collaborative approaches to manage 'priority' weeds in the Tablelands Region	**2.2.1** Build and strengthen the regional weeds management reference group to facilitate partnerships between industries and stakeholders **2.2.2** Improve the exchange of knowledge, lessons learned and data between stakeholders **2.2.3** Develop and implement long-term strategically aligned property weed management plans and foster a 'working together' approach **2.2.4** Engage with the minerals and resources industry to strengthen weeds awareness and management on legacy mines	The Tablelands weeds reference group is active and stakeholders are regularly meeting together to coordinate weeds action	
Land managers and other stakeholders have adopted a 'working together' approach that underpins collaboration on regional weeds management	**HIGH PRIORITY** **2.3** Improve adaptive weed management through monitoring, research, utilising data, training and capacity building	**2.3.1** Improve data collection, utilisation and management **2.3.2** Identify knowledge gaps and prioritise future research and link to improving the capacity of weed management stakeholders **2.3.3** Trial new weed control methods and communicate results with land managers **2.3.4** Increase the effort and resources put into measuring management effectiveness of weed control and utilise information to continually improve weed management practices	Knowledge of weed control priorities and the best techniques to achieve these has been improved	

Program 2: Preventing and managing weeds

2025 Objective	Strategy	Key activities	2023 Interim target	Assets improved
An improved common understanding of weed threats, impacts and management options drives collaborations to manage the impact of weeds from local to landscape scales	MEDIUM PRIORITY **2.4** Increase the region's awareness of weed priorities and capacity to manage the impacts of weeds	**2.4.1** Conduct field days, webinars and other engagement activities to help boost community-based land management in the region with a focus on weeds **2.4.2** Implement education and awareness programs on weed ID and control for land managers, contractors and community members in the region **2.4.3** Communicate weed management success stories to the wider community to encourage support and further activity **2.4.4** Raise awareness of 'alert' weeds and the potential consequences should be become established **2.4.5** Provide training to land managers in effective control methods and strategic weed management approaches	An overarching weeds communication strategy has been developed for the Tablelands region	

Key Measures of Achievement

- Number of priority weeds being strategically managed at catchment scale
- Number of groups and individuals actively involved in weeds management
- Effectiveness of monitoring to identify new weed incursions
- Area treated for control of priority weeds
- Progress made towards implementation of the Tennant Creek Regional Weeds Strategy 2021-2026
- Uptake of training or new weed control technologies and techniques
- Effectiveness of the regional weeds reference group

Key Collaborators

- DEPWS (Weeds Branch)
- Pastoralists
- Central Land Council
- Barkly Shire
- Researchers
- Muru-Warinyi-Ankkul rangers
- Barkly Landcare and Conservation Association
- Territory NRM

Priority Locations

- Lake Woods (parkinsonia, prickly acacia, rubber bush)
- Tarabool Lake (parkinsonia, prickly acacia, rubber bush)
- Duck Wood Swamp (parkinsonia, prickly acacia, rubber bush)
- Frew River Catchment (parkinsonia, prickly acacia, rubber bush)
- Elkendra River (parkinsonia, prickly acacia, rubber bush, mesquite)
- Lake Sylvester (parkinsonia, prickly acacia, rubber bush, mesquite)
- Georgina River catchment (parkinsonia, mesquite, prickly acacia)
- Elliot (gamba grass)
- Mitchell Grass Downs (prickly acacia)

Relevant Territory Plans/Strategies

- Tennant Creek Regional Weeds Strategy 2021-2026 (DEPWS 2021)
- Northern Gas Pipeline Weed Management Plan (Jemena 2016)

Relevant National Plans/Strategies

- Australian Weeds Strategy 2017-2027 (DAWE 2017)

> Weeds are probably our greatest threat to our environment. We've had some small wins but need to remain vigilant to stay on top of them

Program 3: Reducing the impacts of feral animals

Feral animals on the Tablelands contribute to the degradation of pastures and reduce grazing land productivity. The degradation is found predominately on wetlands, riparian corridors and sites of ecological value. The impact of this can exacerbate the effects of drought by degrading freshwater systems and spreading weeds. Some areas have high densities of horses and donkeys, while feral pigs can also move into areas of the northern Tablelands when seasonal conditions are favourable.

Cats are predators of small mammals throughout the region.

Consequently, the primary objective for this program is to develop an effective Tablelands feral animal strategy to coordinate action to reduce the impact of feral animals at a landscape scale. The program also aims to raise awareness about feral animal damage and support the development of leading practices for their control and management. This includes the promotion of coordinated approaches to feral animal management through collaborative planning and the sharing of knowledge and data.

2025 Objective	Strategy	Key activities	2023 Interim target	Assets improved
Feral animal control programs are prioritised and targeted through risk-based approaches set out in a regional feral animal strategy that establishes an agreed understanding of the problem, and shared recognition of key values that require protection.	HIGH PRIORITY **3.1** Strengthen feral animal management through collaborative development of a comprehensive regional strategy	**3.1.1** Develop a Tablelands feral animal strategy that establishes a risk-based approach to the prioritisation and management of feral animal impacts	A regional feral animal strategy is in development	
		3.1.2 Establish a working group to support implementation of landscape scale feral animal management approaches		
		3.1.3 Undertake regional meetings with key stakeholders leading effective collaboration between fire, weed and feral animal programs		
Feral animal impacts are managed around key natural and cultural sites on the Tablelands.	MEDIUM PRIORITY **3.2** Build community understanding of the impacts of feral animals and support for their control through engagement	**3.2.1** Establish demonstration sites that exclue feral animals near key natural and cultural areas (including claypans) to highlight their impacts	Community consultations on feral animal management are underway	
		3.2.2 Build community understanding of the regional feral animal strategy through wide engagement and by developing targeted and culturally appropriate communication materials		

Program 3: Reducing the impacts of feral animals

Key Measures of Achievement

- Implementation of the regional feral animal strategy
- Trends in feral animal distribution and densities
- Number of individuals involved in feral animal management
- Effectiveness of the regional feral animal working group
- Amount of communications materials and levels of community awareness

Key Collaborators

- DEPWS (Fauna And Flora)
- DEPWS (Parks and Wildlife)
- Barkly Landcare and Conservation Association
- Muru-Warinyi-Ankkul rangers
- Pastoralists
- Central Land Council
- DAWE
- Territory NRM
- Researchers

Priority Locations

- Davenport ranges (donkeys and horses, camels and cats)
- Northern Tablelands (horses and pigs)
- Wetlands areas (cats, donkeys, horses)

Relevant National Plans/Strategies

- National Pest Animal Strategy 2017-2027 (DAWE 2017)
- National Feral Pig Management Plan 2021-2031 (draft)

The feral cat has had a devastating impact on Australian wildlife. It may never be removed from Australia, but will hopefully someday be controlled.

Program 4: Industry adoption of sustainable practices

With much of the Tablelands under pastoral leasehold, this regional program focuses predominantly upon supporting the adoption of improved grazing management practices. In 2021, strong Asian markets for beef has incentivised an intensification of production, even as some areas are still recovering from the effects of drought. This experience of drought demonstrated the vulnerability of the industry to climate extremes and highlighted the need for Tablelands producers to enhance their property and enterprise resilience. Encouragingly, recent technological advancements and innovations are available to producers that will assist in underpinning sustainability, even as the industry grows.

Mining and other resources sector industries make critical contributions to regional and remote economies by providing jobs and purchasing goods and services. With the Developing the North agenda now firmly on track, there is an opportunity to productively engage across these industry sectors to ensure that development follows a sustainable pathway and secures regional prosperity into the future.

The activities in this program are designed to build the sustainability and resilience of pastoral enterprises, while also engaging the minerals and resources sector as critical partners in maintaining the ecological health of the Tablelands into the future. The program also engages the wider community to strengthen biosecurity surveillance that will protect the pastoral industry.

2025 Objective	Strategy	Key activities	2023 Interim target	Assets improved
Development policies for the Tablelands are informed by best available science and knowledge to ensure the protection of cultural and natural assets	HIGH PRIORITY **4.1** Engage with industry to encourage sustainable approaches to Developing The North policies and programs	**4.1.1** Strengthen linkages between NRM managers, researchers and the government agencies and industry bodies responsible for future strategic economic development in Tablelands **4.1.2** Raise awareness of development projects and policies for the Tablelands and their potential impact on environmental and cultural values	Appropriate mechanisms and protocols for sharing data between NRM specialists, researchers and development decision makers have been identified and are in use.	
The biosecurity system is integrated and risk-based with strong community involvement and minimises the establishment of exotic pests weeds and diseases	HIGH PRIORITY **4.2** Ensure resources are increased for biosecurity support services in line with agricultural development	**4.2.1** Implement the 2015-2025 NT Biosecurity Strategy, particularly increasing the NRM community's involvement in biosecurity **4.2.2** Develop enhanced surveillance and effective capability to detect and respond to biosecurity emergencies **4.2.3** Strengthen community and industry capacity to risk-manage biosecurity threats by raising awareness and supporting the development of washdown facilities, where appropriate	NRM stakeholders have the capacity to play an increased role in delivering biosecurity outcomes	

Program 4: Industry adoption of sustainable practices

2025 Objective	Strategy	Key activities	2023 Interim target	Assets improved
Sustainable grazing practices are implemented through the increased knowledge and skills of land managers	**VERY HIGH PRIORITY** **4.3** Support best practice grazing management through delivery of regional monitoring programs and practices that promote both productivity and ecological outcomes	**4.3.1** Develop case studies and demonstration sites showcasing best practice grazing management for biodiversity conservation and production **4.3.2** Facilitate the adoption of new technology in rangelands management and sustainable grazing and encourage pastoralists to conduct their own monitoring to inform grazing practices **4.3.3** Explore the application of national rangeland condition assessment tools to the Tablelands and establish regional benchmarks for sustainability **4.3.4** Develop local management plans and landholder stewardship programs for high value conservation assets **4.3.5** Disseminate and promote information on leading practice for intensification of cattle production relevant to the Tablelands **4.3.6** Encourage diversification of income streams on pastoral land through alternative activities that support sustainable stocking rates on pastoral land	Improved access to new technologies, data and training to enhance land management has increased the number of producers adopting leading practices	
Minerals and resources industries on the Tablelands are contributing to the delivery of land management services to protect prioritised habitats and sites of conservation value	**HIGH PRIORITY** **4.4** Support and promote partnerships between the NRM community and the minerals and resources sector regarding mine rehabilitation and offset programs	**4.4.1** Establish a working group or advisory committee that includes key stakeholder organisations to engage with the resources industry to strengthen their links and involvement in NRM activity **4.4.2** Encourage the use of the environmental levy from mining companies to engage NRM stakeholders in legacy mine rehabilitation **4.4.3** Conduct research to improve the knowledge of aquifers, ground water systems and the potential impact on these from resources exploitation	The minerals and resources industries are communicating regularly with regional land managers through a working group	
Dingoes/wild dogs are strategically managed based on an understanding of their impact on both pastoral productivity and biodiversity	**MEDIUM PRIORITY** **4.5** Reconcile conflicting management objectives for wild dogs /dingoes	**4.5.1** Consolidate existing research on the impacts of wild dogs and dingoes on pastoral productivity and biodiversity **4.5.2** Engage stakeholders in evidence based management programs seeking to address both pastoral productivity and conservation values **4.5.3** Prioritise areas where wild dog predation is a priority issue and coordinate efforts in these areas **4.5.4** Identify properties on which dingo populations are being maintained and establish demonstration sites to help assess their impacts on productivity and biodiversity	Demonstration sites are identified to assess the impacts of dingos on productivity	

Program 4: Industry adoption of sustainable practices

2025 Objective	Strategy	Key activities	2023 Interim target	Assets improved
Climate adaptation planning by businesses and industries improve risk-management of climatic variability and related dynamic threats	MEDIUM PRIORITY **4.6** Carry out adaptation planning on the likely impacts of climate change with Aboriginal people, pastoralists and industry groups	**4.6.1** Consult with the community to develop strategies for industry and communities to adapt to likely impacts of climate change **4.6.2** Encourage governments and other stakeholders to develop strategies to adapt to climate change, especially in Developing the North planning **4.6.3** Deliver Commonwealth programs, such as the Future Drought Fund, to explore potential pathways to build resilience, including diversification, increased water security and production efficiencies	Industries and communities are supported to undertake climate adaption planning	

Key Measures of Achievement

- Number of industry driven extension programs for enhancing sustainability
- Level of input from environmental research and natural resource managers into major projects design and approvals
- Extent to which the community is engaged into supporting biosecurity surveillance and eradication
- Level of adoption of practices to increase pastoral sustainability
- Level of consideration of climate change and resilience in industry development planning

Key Collaborators

- DITT (Livestock Industries)
- Northern Territory Cattlemen's Association
- Barkly Landcare and Conservation Association
- DITT (Biosecurity)
- DEPWS (Rangelands)
- Territory NRM
- Resources sector
- DEPWS (Fauna and Flora)
- DAWE (Future Drought Fund)
- Minerals Council NT
- Resources sector

Priority Locations

- Tablelands properties (agricultural extension and practices, biosecurity surveillance, wild dog management and climate adaptation)
- Major roads and stockroutes, Tablelands properties (biosecurity surveillance)
- Powell Creek (Sun Cable project)
- Beetaloo Basin (LNG projects)
- Wonarah, Mount Peake, Ammaroo, Edna Beryl, Bootu Creek, Warrego (mining operations)

Relevant Territory Plans/Strategies

- International Engagement, Trade and Investment Strategic Plan 2018 to 2021 (DITT 2018)
- Northern Territory Critical Minerals Plan (DITT 2019)
- Developing Northern Australia (ONA 2021)
- Barkly Regional Deal (Barkly Regional Deal 2018)
- NT Biosecurity Strategy 2016-2026 (DPIR 2016)
- NT Minerals Industry Development Strategy (Minerals Council NT 2019)
- NT Plant Industries Workforce Development Plan (2020-2025)
- Draft Space Strategy 2021-2025
- Plant Industries Strategic Plan 2018-2028 (NT Farmers 2018)

Relevant National Plans/ Strategies

- Australian Beef Sustainability Framework (MLA 2016)
- National Wild Dog Action Plan (2017)
- Biosecurity 2030 (DAWE 2021)
- Delivering Ag 2030 (DAWE 2021)
- National Climate Resilience and Adaptation Strategy (DAWE 2021)
- Driving Development and Adoption of Drought Resilience Technologies and Practices (DAWE 2021)
- Developing Northern Australia (ONA 2021)

Program 5: Water resources and soil management

In 2021, after experiencing two years of drought-like conditions, many on the Tablelands now have an increased awareness of the limitations of water and soil resources. This awareness has come just as an ambitious development agenda opens the way to new mining and resources sector projects. Water resources allocation planning has further highlighted the diverse interests and aspirations within the community, including recent concerns over the potential impact of large-scale irrigated horticulture on regional water resources.

Many are also aware of the increasing pressures upon fragile soil resources on the Tablelands arising from unsustainable farming practices, grazing pressure and wildfires.

The objective of this program is to increase sustainability in soil and water management through improving the understanding of resource limitations and opportunities to increase water use efficiency. It supports extension learning to raise understanding of leading practices in resource management that help buffer primary industries against future periods of drought and climatic extremes. The program also encourages the NRM community to collaborate in water resource management and build stakeholder capacity through effective communications and extension. The program also promotes robust land capacity studies and assessments to better understand land capability prior to future agricultural developments.

2025 Objective	Strategy	Key activities	2023 Interim target	Assets improved
Ground and surface water resources are managed with input from all stakeholders through catchment water allocation plans that include monitoring and ensures that cultural, environmental and production values are respected	HIGH PRIORITY **5.1** Water resource planning and management is undertaken in consultation with multiple stakeholders and underpinned by the best available scientific information	**5.1.1** Involve multiple stakeholders and users representing a range of interests in water allocation planning in the region **5.1.2** Where appropriate, support community water stewardship thorough the introduction of new water monitoring technologies supported by effective communication	The principle of community participation In water resources planning and allocation is well established	

Program 5: Water resources and soil management

2025 Objective	Strategy	Key activities	2023 Interim target	Assets improved
An enhanced knowledge base that includes empirical data supports science-based planning and increased water use efficiency and sustainability across major industries and uses	HIGH PRIORITY **5.2** Increase the knowledge and resources available to understand and manage the impacts on ecosystems and groundwater from mining, pastoral, agricultural and domestic use, to ensure the best available science underpins water resource planning and management	**5.2.1** Continue to research and increase understanding of the impacts of water extraction by the mining, oil and gas, pastoral and agricultural industries on water resources **5.2.2** Implement more broad water use monitoring on both surface and groundwater (including bore meters) to accurately assess water use **5.2.3** Research and trial water efficiency techniques for pastoral and agricultural industries **5.2.4** Monitor water quality and aquatic ecosystem health to maximise early detection of pollution **5.2.5** Ensure that potential issues of water insecurity for remote communities and stations during periods of drought are identified and strategies to resolve them are identified	Systematic monitoring tracks water consumption in key industries	
Soil loss, soil function and land degradation are being prevented and, where necessary, addressed	MEDIUM PRIORITY **5.3** Support training and extension services on sustainable soil management	**5.3.1** Raise awareness of the significance of soil erosion, soil fertility, soil health and soil moisture for primary industries productivity **5.3.2** Collate existing soil information and develop communications materials targeting contractors promoting improved soil management practices for development **5.3.3** Utilise rangelands remote sensing tools to encourage improved grazing management and enhance production efficiency to minimise soil erosion issues **5.3.4** Continue the requirement for erosion and sediment control plans for all developments **5.3.5** Review and adapt land clearing guidelines with new information and to deal with potential increased development **5.3.6** Recognise the need to enable Tablelands soils to recover from the effects of drought and identify appropriate management	There is a regular program of capacity building and awareness raising events to improve soil management practices in the Tablelands	

Program 5: Water resources and soil management

Key Measures of Achievement

- Water allocation plans involving a diverse range of stakeholders
- Number of people and groups involved in water stewardship
- Adoption of techniques to increase water use efficiency and build industry resilience
- Adoption of practices that lead to improved soil conservation and health

Key Collaborators

- Barkly Landcare and Conservation Association
- Northern Territory Cattlemen's Association
- DEPWS (Water Resources)
- DEPWS (Rangelands)
- NT Farmers Association
- Central Land Council
- Researchers

Priority Locations

- Davenport Basin (water allocation plan, Singleton Horticulture Project)
- Beetaloo Basin (LNG exploration)
- Wonarah, Mount Peake, Ammaroo, Edna Beryl, Bootu Creek, Warrego (Mining operations)
- Lake Woods, Lake Nash, Frew River and seasonal wetlands (aquatic systems)
- Tablelands pastoral properties (water resources management, soil management)

Water Resources

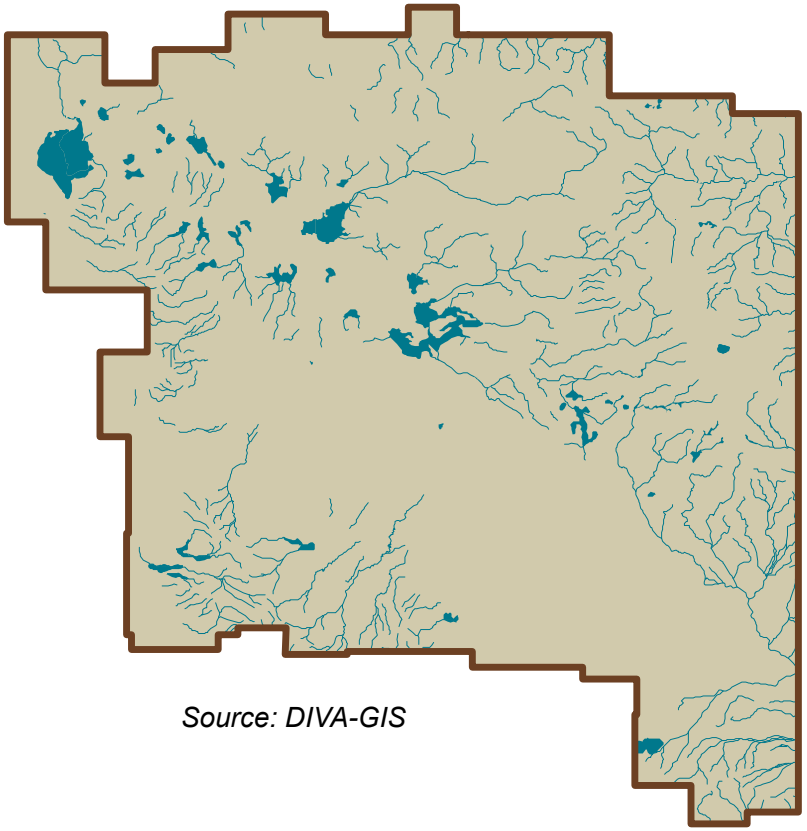
Water courses in the Tablelands.

Relevant Territory Plans/ Strategies

- Western Davenport Water Allocation Plan 2018-2021 (DENR 2018)
- Ti-Tree Water Allocation Plan 2020-2030 (DENR 2020)
- Northern Territory Strategic Water Plan; Directions Paper (DEPWS 2021)

Relevant National Plans/ Strategies

- Securing Australia's Soil for Profitable Industries and Healthy Landscapes (DAFF 2014)
- Charter: National Water Quality Management Strategy (WQA 2018)



Source: DIVA-GIS

> Farmers are natural resource managers. We manage natural resources for economic ends rather than conservation ends but one is no more or less important than the other – preservation is a critical NRM strategy but equally critical is the ongoing learning process around sustainable development.

Program 6: NRM based economic opportunities

This program is intended to help identify and support the development of new economic opportunities arising from the sustainable management of natural resources. Key among these on the Tablelands are opportunities for diversification on pastoral and Aboriginal lands. There has also been growth in the number of groups and communities benefiting from NRM related fee-for-service arrangements. These types of economic opportunities may become important pathways to self-determination for people who live on country throughout the region.

In recent years, some Tablelands producers have commenced carbon projects and there is growing interest in this.

The program focuses on building regional capacity to take up new opportunities including fostering business and technical skills, but also promotes the development of governance and policy to support these emerging industries.

2025 Objective	Strategy	Key activities	2023 Interim target	Assets improved
New employment and business opportunities are created based on sustainable harvest of native species on the Tablelands	MEDIUM PRIORITY **6.1** Developing NRM enterprises based on the sustainable harvest of native species	**6.1.1** Continue to identify markets and opportunities and support these with feasibility studies. **6.1.2** Provide institutional and business support for the development of NRM based economic activities. **6.1.3** Simplify systems for permits, monitoring and accreditation. **6.1.4** Strengthen ongoing support arrangements for groups/individuals involved in NRM based economic activities.	Potential native harvest products and their commercial feasibility is known	
Ranger groups and other local NRM enterprises remain strong and economically viable, supported by a diversity of funding sources and locally-based commercial opportunities	MEDIUM PRIORITY **6.2** Develop capacity for fee-for-service opportunities of Landcare groups, Aboriginal rangers and other NRM groups	**6.2.1** Develop and incorporate business skills into NRM activities **6.2.2** Develop linkages between local groups and business opportunities through websites and other networks. **6.2.3** Support Aboriginal enterprises and land managers to tender for potential contract and fee-for-service opportunities. **6.2.4** Promote utilisation of the mining environmental levy to create tender opportunities for Aboriginal enterprises to provide mine rehabilitation services. **6.2.5** Support successful Aboriginal enterprises to share their stories and to provide mentoring for new enterprises.	Aboriginal enterprises engaging in fee-for-service have received basic business training/ mentoring.	

Program 6: NRM based economic opportunities

2025 Objective	Strategy	Key activities	2023 Interim target	Assets improved
NRM stakeholders on the Tablelands have increased their participation in carbon market programs	MEDIUM PRIORITY **6.3** Support projects and research to develop and participate in national, NT and regional initiatives to develop carbon market programs	**6.3.1** Continue communicating information on evolving carbon market opportunities to the Tablelands community **6.3.2** Clarify ownership and governance arrangements around carbon stocks. **6.3.3** Support the development of methodologies for fire, soil and grazing carbon abatement suitable for (> 600mm rainfall) rangeland areas **6.3.4** Establish a pilot carbon farming project and replicate successful models throughout the region.	Carbon market opportunities relevant to the Tablelands have been clearly communicated to stakeholders	
New employment opportunities are created through diverse primary industries and on different tenures across the Tablelands	HIGH PRIORITY **6.4** Investigate, progress and communicate emerging primary industry and diversification economic opportunities on Aboriginal and pastoral lands including horticulture, aquaculture and tourism	**6.4.1** Support the research and development of horticultural projects that enable commercial opportunities on Aboriginal and pastoral land. **6.4.2** Support projects that increase participation of Aboriginal land owners in remote horticultural and tourism projects. **6.4.3** Support emerging and innovative sustainable primary industry activities on pastoral land allowed by the Pastoral Land Legislation Amendment Bill 2017 (NT).	Opportunities for economic diversification on pastoral and Aboriginal lands have increased.	
New opportunities and new partnerships between the private sector and NRM stakeholders have been developed	MEDIUM PRIORITY **6.5** Highlight new and emerging opportunities for innovative collaboration between industries, corporations and NRM stakeholders on the Tablelands	**6.5.1** Create new links between industry, corporate bodies and NRM stakeholders to deliver new and innovative approaches to NRM. **6.5.2** Facilitate opportunities between governments and industry and link to the delivery of priorities in this NRM plan.	An investment portfolio describing partnership opportunities supporting Top End NRM is developed	

Program 6: NRM based economic opportunities

Key Measures of Achievement

- Value of social, economic and cultural benefits from wild harvest businesses
- Value of fee-for-service contracts carried out by local NRM groups
- Number of new nature-based enterprises on Aboriginal and pastoral land
- Number of people employed in primary industries and nature-based enterprises
- Value of participation in carbon markets
- Number of new industry and corporate partnerships to support NRM

Key Collaborators

- DITT (Business Innovation)
- Barkly Regional Deal
- Central Land Council
- Northern Land Council
- Julalikari Council Aboriginal Corporation
- NT Farmers Association
- Northern Territory Cattlemen's Association
- DEPWS (Plant Industries)
- Muru-Warinyi-Ankkul rangers
- Batchelor Institute
- Resources Industry
- Minerals Council NT
- DEPWS (Flora and Fauna)
- Barkly Shire
- Territory NRM

> It's very important to look after this country, cause you know we look after country and country look after us. If that country healthy then we know we are healthy. We wanna live on country cause it's our country, it's our home, our people, our great great grandfather live here for a long time.

Priority Locations

- Tennant Creek Region (Jullaikari garden, fee-for-service, tourism, Barkly Council)
- Tablelands pastoral properties (fee-for-services, diversification, tourism)
- Davenport basin (water allocation plan, Singleton development)
- Powell Creek (Sun Cable project)
- Resources sector sites (fee-for-services)
- Elliot (ppp, fee-for-service)

Relevant Territory Plans/Strategies

- Northern Territory Business Innovation Strategy (DTBI 2018)
- Barkly Regional Deal (Barkly Regional Deal 2018)
- NT Offsets Framework (DEPWS 2019)
- Aboriginal Land and Sea Action Plan (DCM 2019)
- Northern Territory Tourism Industry Strategy 2030 (Tourism NT)
- Destination Management Plan, Barkly Region 2020 (TCA 2020)
- Northern Territory Renewable Energy Implementation Plan 2018-2020 (NTG 2019)
- Northern Territory Renewable Hydrogen Strategy (DTBI 2020)

Relevant National Plans/Strategies

- National Indigenous Land and Sea Strategy (ILSC 2019)
- Indigenous Business Sector Strategy 2018-2028 (NIAA 2018)
- Australian Renewable Energy Funding and Investment Plan 2021-2024 (ARENA 2021)

Program 7: Minimising ecological footprints of development

Australia's National Strategy for Ecologically Sustainable Development (ESD) defines ESD as '*using, conserving and enhancing the community's resources so that ecological processes, on which life depends, are maintained, and the total quality of life, now and in the future, can be increased*'.

The Tablelands is region that is home to just 3% of the Territory population and so the greatest pressure on the regions natural resources is from industrial development. However, because of the sparse population, some Tablelands communities still lack capacity to sustainably manage waste and have poor energy infrastructure, which risks both natural values and community wellbeing.

This program supports the introduction of leading practices in design, planning and construction of infrastructure for future residential and industrial developments. In includes activities to raise community awareness about Ecologically Sustainable Development and promote evidence-based management of toxic waste, pollutants and other contaminants that are at risk of discharge into the environment.

The program also aims to harness the potential of Offsets from planned industrial developments across the Tablelands. This could both protect regional natural assets and create economic opportunities and partnerships within a new conservation economy.

2025 Objective	Strategy	Key activities	2023 Interim target	Assets improved
The development and management of urban and regional centres in the Tablelands adheres to the principles of Ecological Sustainable Development	MEDIUM PRIORITY **7.1** Minimise the environmental footprint of main population centres in the Tablelands	**7.1.1** Support sustainability initiatives that promote water and energy efficiency. **7.1.2** Investigate opportunities for improved waste management in remote towns and communities of the region **7.1.3** Increase available resources (e.g. bring industry professionals to Tennant Creek) to raise awareness about leading environmental practices relevant to the Tablelands	The application of Ecologically Sustainable Development to the Tablelands is understood by development planners and regulators	
A transparent Northern Territory Offsets Framework is directing Offsets to achieving prioritised NRM strategies on the Tablelands	HIGH PRIORITY **7.2** Utilise the NT Offsets Framework as a basis for guiding offsetting across the Tablelands	**7.2.1** Develop a clear direction for Offsets and 'voluntary' offset activities that encourages more investment into defined NRM priorities **7.2.2** Demonstrate partnerships between the private sector, governments and NRM stakeholders that enable the use of offsets to achieve meaningful and measurable NRM outcomes **7.2.3** Explore 'voluntary' offsets as potential opportunity to build capacity and invest in Aboriginal and other forms of land management	The NT Offsets Framework is finalised and has been communicated to all stakeholders	

Program 7: Minimising ecological footprints of development

Key Measures of Achievement

- Trends in per capita power and water consumption
- Value of investment in NRM activities from Offsets
- Proportion of energy from renewable sources
- Public awareness of sustainability issues and adoption of improved practices
- Efficiency of waste management across the region

Key Collaborators

- Barkly Shire
- DEPWS (Flora and Fauna)
- Power Water Corporation
- DEPWS (Water resources)
- Julalikari Council Aboriginal Corporation
- Environmental Protection Authority
- Arid Lands Environment Centre
- Researchers
- Barkly Regional Deal

Priority Locations

- Tennant Creek Region (Renewable energy, waste management, water use efficiency)
- Elliot (waste management)
- Remote communities (water security, renewable energy and waste management, sewage management)
- Peko, Wonarah, Mount Peake, Ammaroo, Edna Beryl, Bootu Creek, Warrego (mining operations)
- Powell Creek (Sun Cable project)

Relevant Territory Plans/Strategies

- Waste Management Strategy for the Northern Territory 2015-2022 (NTEPA 2015)
- Statement of Intent 2020-2022 (NTEPA 2020)
- Ecologically Sustainable Development in the NT (NTEPA 2010)
- Northern Territory Compact Urban Growth Policy (NTPS 2020)
- Waste Management and Resource Recovery Strategy (Barkly Regional Council 2016)
- NT Offsets Framework (DEPWS 2019)
- Barkly Regional Council - Environmental Management and Operational Plan (BRC 2018)

Relevant National Plans/Strategies

- National Waste Policy Action Plan (ALGA 2019)

> The demand for agriculture and beef has never been brighter with the Asian middle-class projected to go to billion people by 2030 pushing demand for our exported food on a rising trajectory for many years to come. The Develop the North endeavour has failed before, however this demand means it is more achievable now than ever before.

Program 8: Managing and protecting key natural and cultural assets

Only a small proportion of the Tablelands is set aside for conservation, but many land managers express interest in, and demonstrate responsibility for, maintaining the natural assets of the region. This includes Aboriginal people and other groups wanting to protect natural and cultural values and producers wishing to ensure their properties remain productive and their rangelands healthy.

The region encompasses seven Sites of Conservation Significance, 24 NT listed Threatened Species and 14 listed under the national EPBC. Many individual sites, together with the broader landscape they are situated within, carry deep cultural significance for the traditional custodians of the land. In 2021, plans and strategies for landscape management recognise the importance of this knowledge and explicitly work with Traditional Owners and local Aboriginal groups to lead the management and protection of natural and cultural assets across the region.

The objective of this program is to strengthen partnerships with landholders across all tenures to better maintain key natural and cultural assets. This is done by updating the collective knowledge of regional conservation priorities and informing land managers of leading management practices. In particular, land managers outside of the conservation estates are encouraged to enter into formal conservation/stewardship arrangements.

Another focus of the program is to reinvigorate threatened species conservation with evidence-based management to improve the understanding of the pressures and threats upon them and link to National Threatened Species initiatives. Recognising the potential impacts of climate change on landscapes across Tablelands, the program supports evidence-based planning to mitigate these impacts.

2025 Objective	Strategy	Key activities	2023 Interim target	Assets improved
Sites identified as priority conservation areas are subject to agreed collaborative management processes with regular review by key stakeholders	HIGH PRIORITY **8.1** Protect the conservation values of significant wetlands on the Barkly Tablelands through collaborative management and monitoring programs	**8.1.1** Establish biodiversity and land condition monitoring programs and explore trends in population health of native mammals and birds on the Tablelands **8.1.2** Identify priority areas/species for protection **8.1.3** Develop local management plans and landholder stewardship programs **8.1.4** Partner with land managers in priority areas and negotiate voluntary conservation agreements **8.1.5** Share good news stories and maintain ongoing partnership with land managers	Knowledge of high priority areas has been updated and sites requiring management programs have been identified	

Program 8: Managing and protecting key natural and cultural assets

2025 Objective	Strategy	Key activities	2023 Interim target	Assets improved
Threatened species management is integrated with strong links between research, monitoring and on-ground action showing progress against key indicators in Threatened Species Action Plans	HIGH PRIORITY **8.2** Implement Threatened Species Action Plans in the Territory linking on-ground action to the latest knowledge	**8.2.1** Communicate various threatened species action plans for managing priority species in the Tablelands (e.g the bilby) and support their implementation **8.2.2** Link threatened species action in the Tablelands to the National Threatened Species Strategy and implement key regional priorities	Foundational research and monitoring in support of priority species is underway.	
The management of Tablelands ecosystems is informed by knowledge of climate change processes and impacts	MEDIUM PRIORITY **8.3** Develop adaptation plans to address the impacts of climate change for vulnerable ecosystems in the region	**8.3.1** Undertake research on the likely impacts of climate change on threatened habitats and species in the Tablelands **8.3.2** Where appropriate, establish monitoring regimes at priority sites, including aquatic ecosystems and freshwater refugia on the Tablelands **8.3.3** Develop management strategies and prioritise actions for vulnerable environmental assets that will be affected by climate change	Appropriate monitoring approaches and techniques have been identified	
More producers have the capacity to make grazing land management decisions based upon the accurate and timely monitoring data and employing leading practices in sustainable forage budgeting	HIGH PRIORITY **8.4** Support ongoing mapping and monitoring of rangeland condition using remote sensing together with field based surveys	**8.4.1** Develop case studies and demonstration sites showcasing best practice grazing management for biodiversity conservation and production **8.4.2** Support development of relevant rangeland condition assessment tools and implement landholder training courses on their utilisation	New rangelands condition monitoring tools are available to Tablelands land managers	

Program 8: Managing and protecting key natural and cultural assets

2025 Objective	Strategy	Key activities	2023 Interim target	Assets improved
The increased involvement of Traditional Owners and Aboriginal land managers in documenting and managing culturally significant sites on the Tablelands has enhanced their protection	HIGH PRIORITY **8.5** Support best practice management of Aboriginal culturally significant sites and landscapes	**8.5.1** Support the mapping, documentation and management of culturally significant sites by Traditional Owners **8.5.2** Negotiate access to cultural sites on non-Aboriginal land tenure **8.5.3** Increase awareness of industry and government agencies about Aboriginal sacred sites and the processes and mechanisms for their protection in proposed development activities	Traditional Owners are adequately supported and resourced to continue the mapping and recording of culturally significant sites	

Key Measures of Achievement

- Number of site management strategies that apply risk management approaches to climate change impacts
- Number of cultural sites recorded and being managed at the direction of Traditional Owners across all tenures
- Number of people involved in collecting biodiversity data
- Progress made in implementing threatened species plans
- Area of private land under active conservation management
- Number of land managers utilising leading practices to manage grazing lands
- Area of land and number of sites being monitored

Key Collaborators

- DEPWS (Flora and Fauna)
- DEPWS (Parks and Wildlife)
- Barkly Landcare and Conservation Association
- DEPWS (Rangelands)
- Muru-Warinyi-Ankkul rangers
- Julalikari Council Aboriginal Corporation
- Central Land Council
- Northern Land Council
- Pastoralists
- Territory NRM
- Aboriginal Areas Protection Authority

Priority Locations

- Davenport Ranges (national park, biodiversity values)
- Lake Woods, Lake Nash, Frew River and seasonal wetlands (biodiversity and cultural values)
- Karlu Karlu and cultural sites across the region (cultural values)
- Pastoral properties (sites of biodiversity value, cultural sites, rangelands)

Relevant Territory Plans/Strategies

- Draft NT Parks Masterplan 2022-52
- Aboriginal Areas Protection Authority Strategic Plan 2017-2021
- Iytwelepenty / Davenport Ranges National Park Joint Management Plan (PWC 2016)
- Devil's Marbles (Karlu Karlu) Conservation Reserve Joint Management Plan (PWC 2009)

Relevant National Plans/Strategies

- Threatened Species Strategy 2021-2031
- Australia's Strategy for Nature 2019-2030

The Beetaloo project will gather scientific evidence of pastures (native grasses) and biodiversity condition, and any changes witnessed over that time. The aim is to measure the potential for sustainably and profitably intensifying production through grazing practices that give greater control of livestock distribution, grazing pressure and pasture utilisation.

Program 9: Knowledge, capacity and engagement

Effective natural resource management requires capable and knowledgeable land managers with access to the necessary tools and resources to achieve the required outcomes. This program is designed to support Tablelands managers and other stakeholders to most effectively implement regional NRM priorities and strategies.

Activities of the program include opportunities to foster new partnerships and build the potential for effective collective action.

In particular, the program encourages the NRM community to seek additional resources to support land management groups. This includes land managers and other stakeholders having access to the most relevant and up-to-date knowledge. This is achieved through the program by building build capacity for capturing, storing accessing and sharing information and data within the NRM community.

This program recognizes the need for formal training and skills development within the NRM community, and includes actions to identify and create opportunities for land managers to achieve skills development, including strengthening the governance of land management groups.

Critically, Territory Natural Resource Management will continue engaging across the whole NRM community to support delivery of activities within the Tablelands NRM plan, and ensure that their implementation is adaptively managed.

2025 Objective	Strategy	Key activities	2023 Interim target	Assets improved
There is an increase in resources that enables collaborative and long term approaches to NRM on the Tablelands	HIGH PRIORITY **9.1** Strengthen Landcare and NRM networks promoting community and industry responsibility for NRM issues	**9.1.1** Provide support for collaborative land management on the Tablelands through appropriate mechanisms, including an active Landcare group to coordinate activity **9.1.2** Build the capacity of Landcare organisers and volunteer members and provide opportunities for networking in the region **9.1.3** Develop more fee-for-service and a diversified funding base to ensure the long-term survival of Landcare groups **9.1.4** Support collaboration between key technical agencies to provide assistance to local Landcare and other NRM stakeholder groups **9.1.5** Explore opportunities for regional industries and developers to support operations of Landcare on the Tablelands	Collaborative Landcare activities are taking place on the Tablelands	
Natural resource managers on the Tablelands are incorporating the best available knowledge, information and data into their management strategies including traditional ecological knowledge (TEK) and community knowledge	MEDIUM PRIORITY **9.2** Support land managers to record, utilise and share TEK, scientific research and pastoral knowledge in NRM planning and activities	**9.2.1** Develop citizen science programs that facilitate community monitoring (e.g adding to NT species database) of key environmental assets in the Tablelands **9.2.2** Identify knowledge gaps and research priorities **9.2.3** Disseminate knowledge collected through NRM networks in appropriate ways for different stakeholders **9.2.4** Establish knowledge capture, storage and sharing projects by Traditional Owners and Aboriginal ranger groups (e.g.Wupujinta Anyul Mappu in Mukurtu cultural archives)	Regular forums and events communicate the latest technical knowledge between knowledgeholders and NRM stakeholders	

Program 9: Knowledge, capacity and engagement

2025 Objective	Strategy	Key activities	2023 Interim target	Assets improved
Training in the Tablelands is more easily available and better targeted to relevant natural resource management skills	MEDIUM PRIORITY **9.3** Support accredited and informal training in land management and sustainable industry practices on the Tablelands	**9.3.1** Assess training needs (non-accredited and accredited) for NRM stakeholders and support the delivery of appropriate training where needed, particularly supporting skills linked to employment **9.3.2** Assess the efficiency of training and improve where necessary **9.3.3** Support governance and leadership training of locally based NRM groups and establish clearer career pathways in NRM **9.3.4** Support local employment and mentoring to overcome issues of staff turnover and loss of skills and cultural knowledge	The number of available training courses and opportunities to build NRM skills has increased on the Tablelands.	
Multi-stakeholder review processes on the Tablelands inform adaptive management, improved practices and cooperation	HIGH PRIORITY **9.4** Continue to review NRM outcomes, facilitating adaptive management	**9.4.1** Facilitate multi-stakeholder annual reviews of progress against the NRM plan **9.4.2** Support a multi-stakeholder approach to adaptive management to help prioritise funding, resources and effort in areas of highest need	The first review of the 2021-2025 NRM plan is completed and the plan revised accordingly.	 

Key Measures of Achievement

- Number of accredited and non-accredited training opportunities available to land managers in the Tablelands
- Participation in and levels of activity within regional ranger and Landcare groups
- Amount of project funding supporting NRM activities in the region
- Number of workshops, forums and events that bring together land managers and facilitate exchange of knowledge
- Level of citizen science participation within the region
- Number of NRM Plan reviews and adaptive management processes

Key Collaborators

- Landcare NT
- Territory NRM
- Central Land Council
- Barkly Landcare and Conservation Association
- Muru-Warinyi-Ankkul rangers
- Julalikari Council Aboriginal Corporation
- Northern Territory Cattlemen's Association
- Batchelor Institute
- Researchers
- DEPWS (Flora and Fauna)
- DEPWS (Rangelands)

Priority Locations

- Tennant Creek region (Barkly Landcare Association, rangers, Julalikari corporation, community members)
- Remote commuities (land managers, community members)
- Pastoral properties (Barkly Landcare Association, property staff)
- Davernport ranges (park staff, land managers)
- Gas and resources industry sites (land management staff)

Relevant Territory Plans/Strategies

- Landcare NT Strategic Plan 2018-2021
- Northern Territory NRM Plan 2021-2025
- Julalikari Council Strategic Plan 2021-2024

Taking this Plan Forward

This plan was collaboratively developed to build upon the current momentum in collaborative NRM and address emerging natural resource management opportunities and challenges (2021-2025). The planning process has represented another stage in the ongoing collaboration between regional NRM partners.

Implementing this plan, reviewing progress and that then adaptively managing it will require regional coordination to continue and be further strengthened.

Plan

2021
Tablelands stakeholder groups were engaged in planning through successive workshops in Tennant Creek and elsewhere, leading to identification of regional priorities

Implement

2021–2025
Coordination and support the for implementation of priority actions and strategies in the plan. Monitoring and tracking activities and outcomes

Progress review

2022
Regional stakeholder meeting to assess coordination and progress in implementing the plan, highlighting any gaps or barriers to progress

Plan review

2023
Regional stakeholder consultation and workshops to assess progress towards plan objectives and adaptively manage implementation of the plan

Progress review

2024
Regional stakeholder meeting to assess coordination and progress in implementing the plan, highlighting any gaps or barriers to progress

Final Plan review

2025
Regional stakeholder consultation and workshops to assess overall progress, impact and outcomes achieved through the plan.

Threatened plant species of the Tablelands

Plant	Scientific name / Common name	EPBC Act Status	NT Conservation Status
Cucurbitaceae	*Austrobryonia argillicola*	-	VU
Poaceae	*Sporobolus latzii*	-	VU

CE - Critically endangered EN - Endangered VU - Vulnerable

Sources: www.nt.gov.au/environment/native-plants/threatened-plants
www.environment.gov.au/cgi-bin/sprat/public/sprat.pl

Threatened animal species of the Tablelands

Scientific name	Common name	EPBC Act Status	NT Conservation status
Birds			
Amytornis dorotheae	Carpentarian grasswren	EN	EN
Calidris ferruginea	Curlew sandpiper	CE	VU
Erythrura gouldiae	Gouldian finch	EN	VU
Falco hypoleucos	Grey falcon	VU	VU
Geophaps smithii	Partridge pidgeon	VU	VU
Grantiella picta	Painted honeyeater	VU	VU
Limosa lapponica	Bar-tailed godwit	-	VU
Polytelis alexandrae	Princess parrot	VU	VU
Rostratula australis	Australian painted snipe	EN	VU
Tyto novaehollandiae kimberli	Masked owl (mainland Top End)	VU	VU
Invertebrates			
Bothriembryon spenceri	Spencer's land snail	-	VU
Mammals			
Dasycercus blythi	Brush-tailed mulgara	-	VU
Dasycercus cristicauda	Crest-tailed mulgara	-	VU
Dasyuroides byrnei	Kowari	VU	Extinct
Dasyurus hallucatus	Northern quoll	EN	CE
Isoodon auratus	Golden-bandicoot	VU	EN
Macrotis lagotis	Greater bilby	VU	VU
Notomys cervinus	Fawn hopping-mouse	-	Extinct
Petrogale lateralis	Black-footed rock-wallaby	VU	-
Rattus tunneyi	Pale field-rat	-	VU
Trichosurus vulpecula vulpecula	Common brushtail possum	-	EN
Reptiles			
Acanthophis hawkei	Plains death adder	VU	VU
Elseya lavarackorum	Gulf snapping turtle	EN	-
Varanus mertensi	Merten's water monitor	-	VU
Varanus mitchelli	Mitchell's water monitor	-	VU

CE - Critically endangered EN - Endangered VU - Vulnerable

Sources: www.nt.gov.au/environment/animals/threatened-animals
www.environment.gov.au/cgi-bin/sprat/public/sprat.pl

Sites of conservation significance in the Tablelands

Site name	Significance	World heritage area	Ramsar	% Protected
Davenport and Murchison Ranges	National			11.9
Eva Downs Swamp	International			-
Frew River floodout swamps	National			-
Lake Sylvester system	International			-
Lake Woods	International			85.3
Tarrabool Lake	International			-
Wollogorang and China Wall sandstone ranges	National			-

Weeds of the Tablelands

Source: nt.gov.au/environment/weeds

Category 1 - Priority weeds for eradication - widely considered feasible to eradicate, very high risk with isolated/restricted distributions

Scientific Name	Common Name	Declared NT	WoNS
Andropogon gayanus	Gamba grass	A/B (zoned)	Yes
Austrocylindropuntia spp., Cylindropuntia spp.	Rope cactus	A	Yes
Jatropha gossypiifolia	Bellyache bush	A/B (zoned)	Yes
Opuntia spp.	Prickly pear	A	Yes
Prosopis spp.	Mesquite	A	Yes
Vachellia nilotica	Prickly acacia	A	Yes
Cryptostegia grandiflora	Rubber vine	A	Yes

Category 2 - Priority Weeds for strategic control - high impact on land managers, economic/environmental values - typically have statutory weed management plan

Scientific Name	Common Name	Declared NT	WoNS
Azadirachta indica	Neem	B	
Calotropis procera	Rubber bush	B (zoned)	
Parkinsonia aculeata	Parkinsonia	B	Yes
Tamarix aphylla	Athel pine	A/B	Yes

Category 3 - Weeds of concern - have been identified by stakeholders as posing a threat, but without Territory plans or strategies for control

Scientific Name	Common Name	Declared NT	WoNS
Cenchrus basedowii	Abestos grass	Not declared (native)	
Cenchrus ciliaris	Buffel grass	Not declared	
Cenchrus echinatus	Mossman River grass	B	
Vachellia farnesiana	Mimosa bush	Not declared (native)	
Xanthium strumarium	Noogoora burr	B	

Category 4 - Hygiene and biosecurity weeds - low risk, but have local impacts, so it is important for landowners to control these species

Scientific Name	Common Name	Declared NT	WoNS
Aerva javanica	Kapok	Not declared	
Argemone ochroleuca	Mexican poppy	B	
Cenchrus pedicellatus	Mission grass, annual	Not declared	
Senna obtusifolia	Sicklepod	B	
Senna occidentalis	Coffee senna	B	
Tribulus cistoides	Caltrop	B	

Category 5 - Alert weeds for eradication on detection - potential to have a high level of impact should they become established

Scientific Name	Common Name	Declared NT	WoNS
Chromolaena odorata	Siam weed	C	No
Parthenium hysterophorus	Parthenium weed	A	Yes
Sporobolus natensis and S. pyramidalis	Giant rats tail grass	Not declared	No
Themeda quadrivalvis	Grader grass	B	No

WONS - Weed of National Significance

Class A - Eradicate

Class B - Control

Class C - Prevent entry (Note: All Class A and Class B weeds are also considered to be Class C weeds.

Feral animals of the Tablelands

Category	Animal
Amphibians	Cane toads
Bird	House sparrow
	Rock Dove
Mammal	Brown rat
	Feral cat
	Feral cattle
	Feral donkey
	Feral fox
	Feral goat
	Feral pig
	Feral rabbit
	House mouse
Reptile	Asian House Gecko
	Flower-pot Blind Snake

Source: nt.gov.au/environment/animals/feral-animals

Territory
Natural Resource
Management