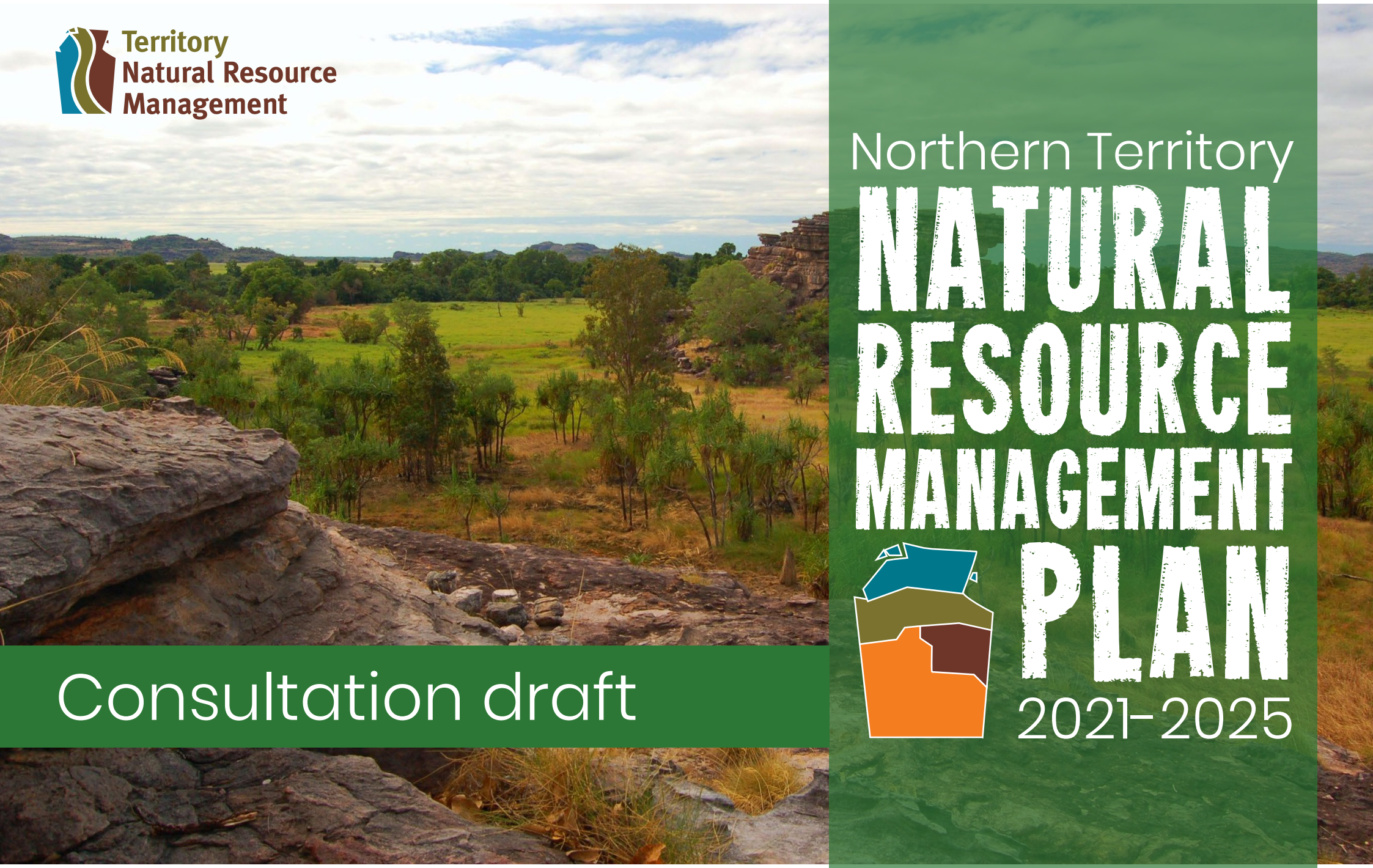
Territory Natural Resource Management



Northern Territory

NATURAL RESOURCE MANAGEMENT PLAN

2021–2025

Consultation draft

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 2016-2020 Review 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

Contents

4 What is the Northern Territory NRM Plan?

5 The structure of the NRM plan

8 Northern Territory Profile

10 The 2021-2025 planning process

17 Emerging issues

28 Plan Implementation and Partnerships

30 Guidelines for Feedback on this Consultation Draft

Regional Plans

31 Top End Region

62 Gulf Savanna Region

92 Tablelands Region

115 Arid Lands Region

What is the Northern Territory NRM Plan?

The Northern Territory Natural Resource Management (NRM) plan sets out the overarching directions, priorities and goals for the region's natural resources. It provides a framework for maintaining the health and productivity of land, water, soils, habitats and biodiversity across the Territory. While Territory NRM acts as custodian of the Northern Territory NRM plan, the plan belongs to, and encompasses the interests of, all Territory stakeholders.

In order to achieve these things, the plan must integrate the natural resource management priorities and aspirations of the whole Territory community with the best available scientific evidence. It also draws from the lessons learned and progress made during previous planning cycles.

Essentially, the Northern Territory NRM plan serves several key purposes

Functions of the plan

- It enables the Territory community to set its own NRM priorities and agenda, rather than have these directed by outsiders.
- It provides a high level 'road map' for action, integrating the priorities of diverse sectors, stakeholders and interests across the Territory
- It identifies partnership opportunities between different stakeholders and highlights investment opportunities
- It provides a mechanism to systematically monitor, evaluate and adaptively manage NRM activities across the Territory

The background to NRM planning

The Northern Territory NRM plan has been regularly updated through repeated five year planning cycles. The 2021-2025 plan will be the fourth iteration of the Northern Territory NRM plan. The first plan was developed in 2005, with subsequent planning exercises undertaken in 2011 and 2016.

These first three Northern Territory NRM plans utilized very different planning approaches and were structurally quite different. However, each of these plans improved upon its predecessor. Nevertheless, by the third planning process it was recognized that there needed to be greater consistency in setting targets and tracking impact if the gains made during one planning cycle were to be clearly carried forward into successive iterations of the plan.

For this reason, planning in 2016 applied 'The Open Standards for the Practice of Conservation', an internationally recognized planning framework with a strong focus upon adaptive management. Application of these 'Open Standards' introduced leading practices for participatory planning and a process for the ongoing monitoring, review and updating of the plan by stakeholders. This was an important distinction from earlier plans which were essentially 'static' and designed to be replaced once their implementation period ended.

The first stakeholder review of the 2016 plan was conducted in 2018, engaged over 200 individual contributors and resulted in some minor changes in the plan. The second stakeholder review of the 2016 plan was completed in 2020 at the conclusion of the initial implementation period.

Planning for the period 2021-2025 is now underway,

2005–2010

5 Assets

29 Programs

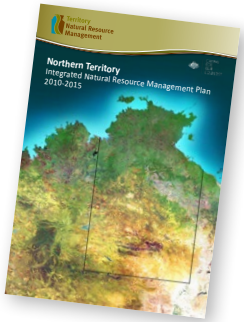
59 Management actions

2010–2015

4 Themes

14 Programs

90 Management actions



2016–2020

9 Assets

9 Programs

171 Strategies

738 Activities

The structure of the NRM plan

The structure of the 2016 plan developed through application of the 'Open Standards' enjoyed widespread community approval and so will be carried forward into the revised 2021-2025 plan. This planning approach focuses upon the identified assets of the region and the pressures which 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.

Assets

The 2016 planning process defined 9 categories of assets integral to natural resource management the Northern Territory. These included both natural and cultural assets. Collectively, these assets provide Territorians with resources for their daily lives and also underpin key industries such as a 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.

Pressures

The 2016 planning process identified 10 categories of pressures. These include pressures which arise directly from human activity (such as unsustainable development, intense forms of resource extraction and pollution) but also pressures that are not a direct result of human activity (such as climate change and severe weather , inappropriate fire regimes and feral animals)

Strategies

The 2016 planning process developed a portfolio of complementary strategies to direct NRM activity. These strategies were set out as logical pathways to achieve defined objectives and comprise four primary elements.

For the 2021-2025 plan we propose to amend the order of these strategies based upon stakeholder request.

Objective	Strategy	Priority Activities	Interim Target
A statement of the desired outcome of the strategy, intended to reduce pressure and improve asset condition. The success of the strategy will be evaluated against this objective	The management approach to achieved the defined objective	Priority activities that, if implemented, should advance and deliver the strategy.	Interim milestones expected to be achieved within two years as the strategy is progressed towards its final objective

Key assets

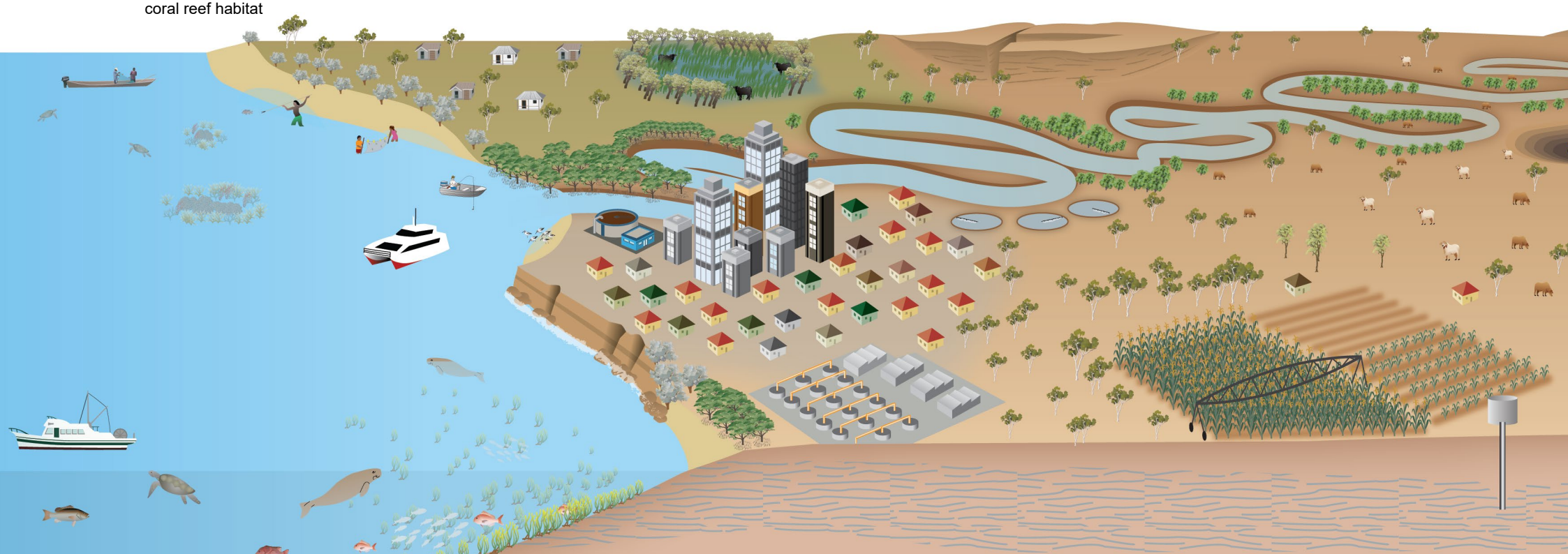
Coastal and Marine
Includes mangroves, estuaries, coastal floodplains, intertidal areas, seagrass and coral reef habitat

Freshwater Systems
Includes tropical rivers, wetlands, lakes, swamps, aquifers and aquatic refugia

Healthy Soils
Includes soil fertility, structure, health and productivity

Community Knowledge
Includes Indigenous and non-Indigenous knowledge and skills and scientific knowledge

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



Pressures/uses

Pollution
Mining effluent, urban waste water, agriculture (nutrients), garbage and solid waste, atmospheric pollution, and toxic and hazardous substances

Climate Change and Severe Weather
Drought, cyclones/ storms, flooding, temperature extremes and long-term climatic changes causing habitat shifting and alteration

Harvesting of Natural Resources
Includes non-sustainable fishing and harvesting of aquatic resources, inappropriate hunting, collecting plants and harvesting timber

Residential and Commercial Development
Urban areas, suburbs, towns, commercial and industrial areas, tourism and recreation sites

Primary Industries
Includes effects of inappropriate pastoralism, horticulture, agriculture, forestry and freshwater and marine aquaculture, and their expansion and intensification when non-sustainable

Key assets

Ranges
For example, West MacDonnell Ranges, West Arnhem Plateau, Davenport and Murchison Ranges

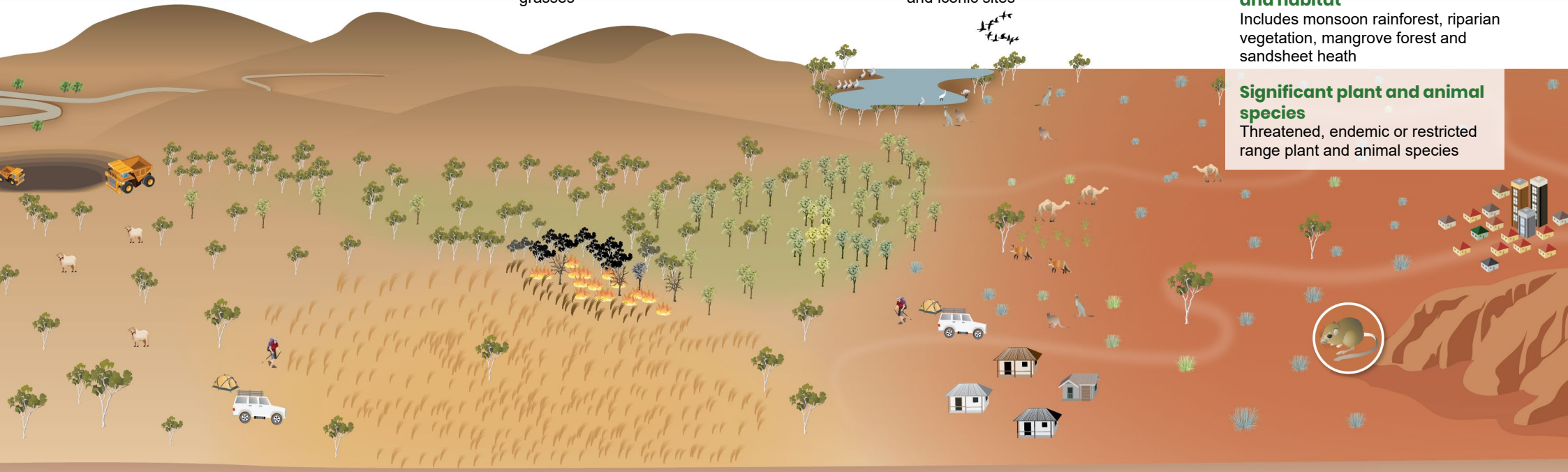
Grasslands/Rangelands
Includes tropical savanna grasslands, tussock grasses, spinifex grasslands and introduced pasture grasses

Important Sites
Includes Aboriginal sacred sites, heritage places, Sites of Conservation Significance and iconic sites

Biodiversity and Conservation Sites

Key ecosystems, landscapes and habitat
Includes monsoon rainforest, riparian vegetation, mangrove forest and sandsheet heath

Significant plant and animal species
Threatened, endemic or restricted range plant and animal species



Pressures/uses

Mining and Energy Production
Includes impacts of oil and gas drilling, mining exploration, quarries, seabed mining, energy production infrastructure, legacy mines and mining operations

Inappropriate Fire
Inappropriate fire management, suppression of or increase in fire frequency

Recreation and Other Activities
Impacts of people in natural environments, including four-wheel driving, camping and other recreation. Includes military training activities

Feral Animals
Includes introduced pest animals such as pigs, Cane Toads, cats, buffaloes, camels, etc

Invasive Plants
Includes weeds and introduced genetic material. Can include over abundant native species

Loss of Knowledge and access
Impacts relating to Aboriginal people not being able to access traditional lands (due to lack of resources and support) as well as loss of technical knowledge in NRM

Northern Territory Profile

Land

17.5% of Australia's land mass **1,349,129km²**

approximately **50%** Aboriginal land

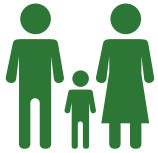
25% of land is protected areas **335,051km²**

more than **10,000km** **of coastline**

85% of coastline is **ABORIGINAL LAND**

People

246,500 approximately **1%** of the Australia's population



30% of NT people are **INDIGENOUS**

more than **100** **Aboriginal languages** spoken in NT

- **Darwin** 147,231
- **Katherine** 20,905
- **Tennant Creek** 3,302
- **Alice Springs** 39,391

2,001,000 visitors per year

1,000,000 holiday visitors

Economy

$26 billion Gross State Product

1.3% to Australia's GDP

mining

pastoralism

oil and gas

tourism

defense

Aboriginal customary economy

horticulture

construction

government/public administration

Natural resources

67 Sites of Conservation Significance

25 on Aboriginal land

24 on pastoral land

115 threatened animal species

78 threatened plant species

7 feral animals

17 Weeds of National Significance

The structure of the NRM plan

Programs

NRM plan strategies have been structured into 9 thematic programs. These programs were defined through planning workshops in 2016, and have met with general approval as providing a logical and practical framework for integrated NRM planning. These programs are:

1. **Managing fire**
2. **Preventing and managing weeds**
3. **Reducing the impacts of feral animals**
4. **Industry adoption of sustainable practices**
5. **Water resources and soil management**
6. **NRM based economic opportunities**
7. **Minimising the ecological footprints of development**
8. **Managing and protecting key natural and cultural assets**
9. **Knowledge capacity and engagement**

NRM planning regions

Recognising the scale of the Northern Territory and the diversity of biophysical and socio-economic conditions as well as the principle of local decision-making, four distinct planning regions are utilized for regional planning.

The 2021-2025 planning process

It is essential that the NRM plan remains relevant to the evolving needs and priorities of the Territory Community and to changing conditions in both our natural resources and in the policy/program environment that influences their management. This is why plans have been regularly updated.

In developing a 2021-2025 NRM plan we have taken several steps to arrive at this Consultation Draft, which will be the basis for wider community consultation.

The Consultation Draft

This document is the Consultation Draft for the 2021-2025 Northern Territory NRM plan. It is not the final NRM plan, but an interim document that has been collated to present to the Northern Territory community to elicit comment and feedback. The Consultation Draft gives stakeholders an overview of the proposed directions for the 2021-2025 plan. These directions have emerged from the first three stages of the planning process, namely the review of the 2016-2020 plan, the update of knowledge about assets and pressures and the regional technical planning sessions and emerging issues. The following sections of this document outline the findings of these three stages and so provide the justification for the structure and strategies proposed in this Consultation Draft.

Review of the 2016-2020 plan	Institutional consultations, regional stakeholder workshops and an online community survey engaged over 200 contributions: This provided a comprehensive overview of the status of NRM across the Territory in 2020, and highlighted lessons learned
Evidence update	A review of 265 scientific publications, research and policy documents produced during the period 2016-2020, to update the descriptions of assets and pressures produced in 2016.
Technical working groups	Regional working group meetings and supporting consultations engaged input from key NRM stakeholders. Over 50 experts helped identify future NRM priorities and emerging issues to reflect the challenges and opportunities of 2021.
Consultation Draft	This document has been developed as a basis for widespread community consultation and comment, highlighting the key evidence and issues which will be fundamental to our NRM response in coming years
Community consultation	The Consultation Draft will be taken 'on the road' for regional consultation workshops across the Territory and will be opened for public comment to finalise the 2021-2025 NRM plan.

The 2021-2025 planning process

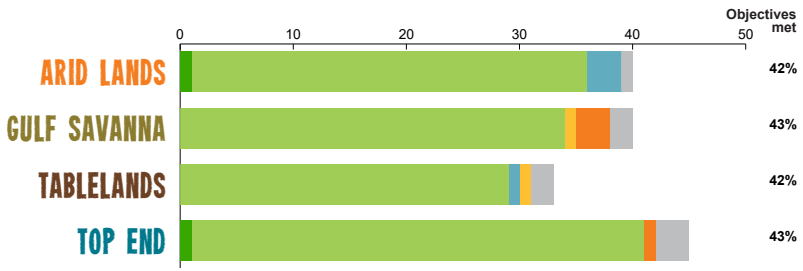
NRM outcomes 2016–2020

The review of the 2016-2020 NRM plan was conducted through a multi-stakeholder, multi-stage process that engaged inputs from more than 200 individual and institutional stakeholders from across all four regions of the Territory. It was undertaken during the second half of 2020 and the final report was produced in April 2021.

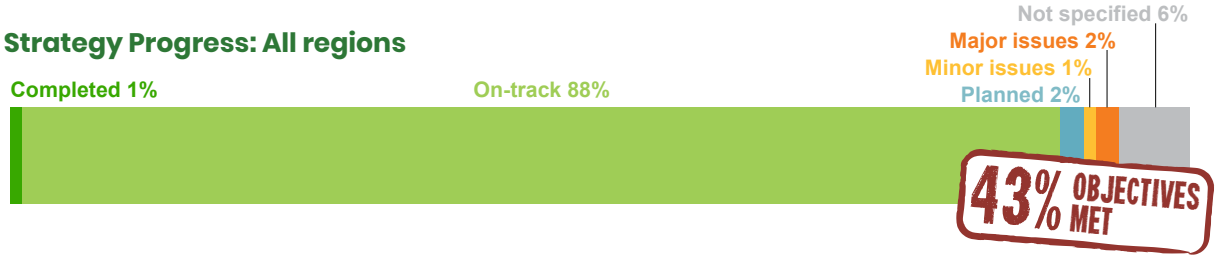
Our review determined that by the end of the implementation period, across all programs and all regions, close to 90% of planned strategies were underway and 'On Track'. However, it was determined that just 43% of planned objectives had been achieved.

The review found that implementation of the 9 planned programs across all regions had not progressed at the same rate. Similarly, the proportion of objectives achieved under different programs ranged from 77% in Program 9 to just 12% in Program 7. These findings indicate that the relationship between progress made on strategies and achievement of objectives is complex. For example, we found that where programs hinged on change in the policy or regulatory environment, (such as Program 7) achievement of program objectives had not matched the progress achieved in implementing strategies.

In contrast, the review revealed no significant differences in the progress of implementation of the 2016-2020 NRM plan between regions. Furthermore, the proportion of planned objectives achieved was almost exactly the same.

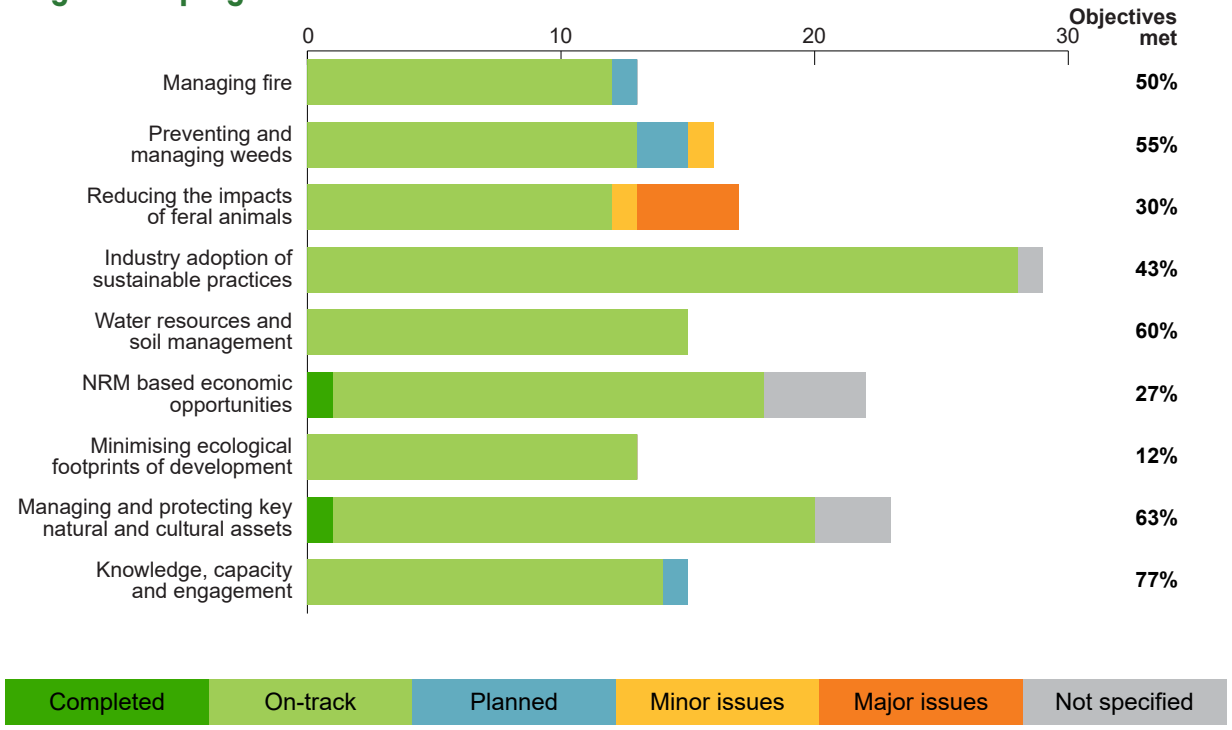


Strategy Progress: All regions



Activity Progress: All regions

Progress: All programs



The 2021-2025 planning process

Implications for planning

Review of the 2016-2020 NRM plan reveals that the plan achieved considerable traction among stakeholders, with good progress being made on a high proportion of strategies. Furthermore, progress on plan implementation has been very even across regions, suggesting that no regionally specific barriers to implementation exist.

However, highly differentiated progress across programs and limited achievement of program objectives highlights the need to review and re-examine underperforming strategies in future planning.

Overall, the review suggests that that the scope and structure of the 2016-2020 plan remains relevant to the needs of the NRM community. But despite the progress made on implementation, with less than 50% of objectives being achieved during the 5 year timeframe, it is possible that this initial timeframe may have been highly ambitious.

Future planning should carefully re-examine underperforming programs. It should also consider whether carrying forward for another five years those strategies that have not yet achieved their objectives, might constitute a more realistic timeframe.

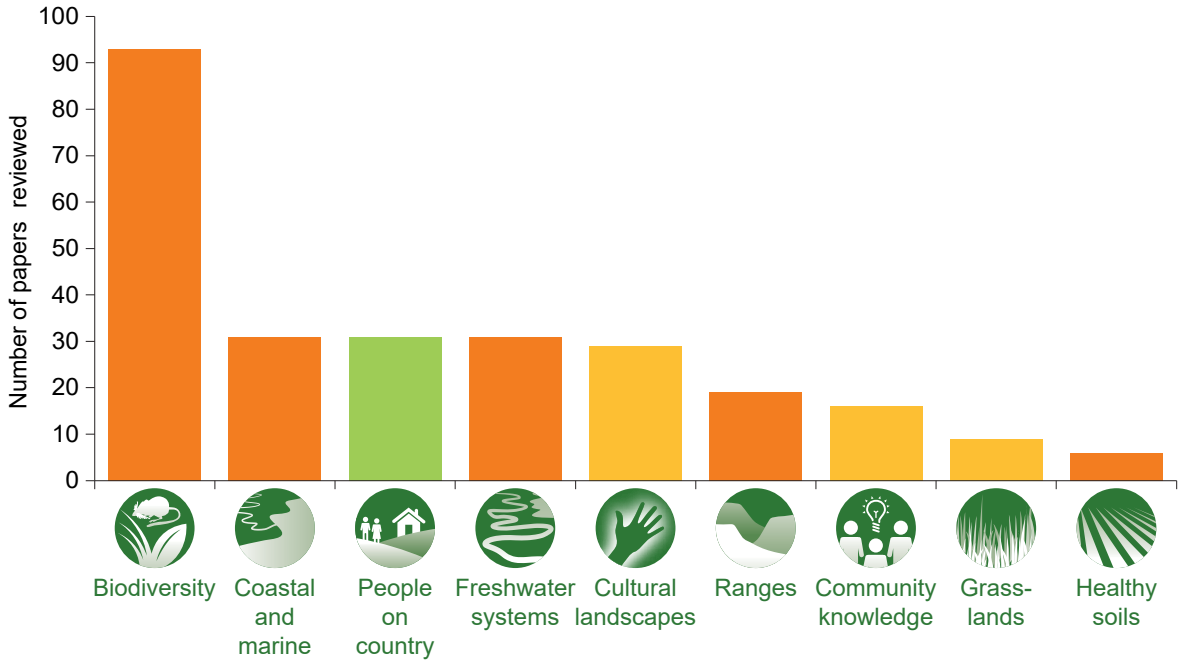
Updating the evidence base

The development of the last Northern Territory NRM plan in 2016 was underpinned by scientific evidence that informed our baseline of knowledge on both asset condition and trends in condition. As we plan for the period 2021-2025, it has been necessary to reassess and update this basis of evidence for the next five years.

This has been undertaken through a comprehensive review of the latest published research, data and research findings as well as relevant policy documents which relate to the Northern Territory .

In total, 265 papers and documents published during the period 2016-2021 were reviewed. The largest number of reviews for any one asset category (93) related 'Biodiversity and Conservation Sites', which accounted for the highest portion of publications.

A summary overview of key points arising from the evidence update are described below



The 2021-2025 planning process

Asset	Documents Reviewed	Key issues	Our trend assessment
Biodiversity and conservation sites	93	• Fire regimes starting to change, but fire is still primary pressure on biodiversity, especially in combination with land clearing, weeds and ferals (e.g. cats which have accelerated mammal decline) • Growing climate change threat, exacerbating fire and weeds, saltwater intrusion • Biodiversity in a loss trajectory - precipitous declines in some species with tropical savanna and western arid zone 'at point of collapse'. • Development, mining and agriculture intensifying threats to wetlands and high priority habitats • Significance and vulnerability of aquatic refugia particularly In Arid Lands • Not all habitats represented in conservation estate • Need for intensified conservation efforts • Diminishing research funding	
Coastal and marine	31	• Climate change -Mangrove dieback - future loss of floodplains to saltwater intrusion • Declining turtle breeding sites and other habitats • Declining conditions of corals • Increased marine debris • Some fisheries remain unsustainable • Boat wash- riverbank erosion • Feral animal impacts on floodplains • Pollutants and contaminants continue • Increase in migratory bird populations	

The 2021-2025 planning process

Asset	Documents Reviewed	Key issues	Our trend assessment
Freshwater systems	31	• Net loss of mangroves following 2015-2016 dieback event • Spread of weeds across floodplains • Saltwater intrusion, threats and occurrences • Projected loss of freshwater habitats and species • Feral animal impacts intensifying • Pest fish species established • River bank erosion from boats • No major change in overall water quality in the Daly • Chemical and industrial pollutants accumulating • Several water allocation plans established	
Healthy soils	6	• Coastal areas still have high potential for acid sulphate soils • Agriculture contributing to erosion down the Daly • High risk of wind and water erosion across the whole Territory • Reduced extension capacity • Limited opportunity to capture carbon in Territory soils	
Grasslands/ rangelands	9	• Reduction in late dry season fires • Rangelands in reasonable condition compared to rangelands elsewhere • Some specific sites where rangelands being degraded	
Ranges	19	• Changing fire regimes - particularly for Arnhem sandstone heath, but declining rainforest vegetation and mammals in sandstone • Threatened species decline in West Mac s and fire driving spread of buffel • Birdlife of central rockholes vulnerable to climate change	

The 2021-2025 planning process

Asset	Documents Reviewed	Key issues	Our trend assessment
People on country	31	• The carbon economy and savanna fire has improved people on country • New IPAs and ranger groups have been established • Increasing ag. and forestry development has increased people on country • Demographic data shows decline in Darwin population and relative growth in regional NT	
Community Knowledge	16	• Decrease in funding for Landcare, Land for Wildlife • 'Landcare' doesnt fit into modern agri-environmental management systems • Increase in recognition and application of TEK • Increased funding for ranger groups and IPAs • New networks (e,g. Outback Alliance, Ten Deserts initiative) • Lots of knowledge but struggling to transfer knowledge to practice • Increase in forums and networking events	
Cultural landscapes and sites	29	• Growing recognition of the importance of cultural sites and differing approaches to their management • Need to engage indigenous people into their management • Closing of Uluru and sites in Kakadu reflects disconnect between western and local management approaches • On-ground practice has accelerated ahead of legal frameworks	
Total	**265**		

The 2021-2025 planning process

Implications for future planning

Our 2021 update of the evidence base for NRM planning highlights a number of relevant key findings.

First, research published in the years since 2016 indicates that many natural values across the Northern Territory continue to degrade due to ongoing or intensifying pressures. This means continuing trajectories towards habitat and biodiversity loss. There are some localised good news stories where this trend has been arrested, but the evidence highlights the critical importance for natural resource management to remain focused on critical threats at the landscape scale, notably those arising from destructive fire, the spread of weeds and the impacts of feral animals.

The research also highlights our growing understanding of the emergence of new threats and how different types of threats are closely interconnected (e.g. links between climate change and destructive fires, or between fire and the spread of weeds). Our approaches to address these landscape scale threats should become more integrated.

But the evidence also points to isolated successes, and the opportunities to learn the lessons of these and apply them elsewhere.

We now have evidence that in recent years fire regimes have begun slowly changing and the spread of some invasive weeds are being more effectively controlled. We are seeing the uptake of more sustainable practices in some primary industries and improved coordination between land managers across landscapes.

Future planning should recognise these foundations of success and ensure that support and investment continues.

Strengthening Land Management

Territory land managers (and particularly indigenous land managers who manage over 50% of Territory landscapes) are increasingly active, engaged and empowered to undertake their land management responsibilities. Progress is being made in building human capacity which will be pivotal in mitigating threats at a landscape scale, and where this is not possible, identifying prioritizing and protecting key natural vales.

Emerging issues

‘Emerging issues’ are issues raised and highlighted during the technical consultations and planning workshops which fed into the development of this Consultation Draft. They encompass both challenges and opportunities for natural resource management that stakeholders believe will significantly alter (or have already altered), the NRM landscape.

These emerging issues help frame how natural resource management priorities have evolved in the years since the 2016 plan, and how they are likely to continue evolving. They therefore provide further context for the development of the 2021-2025 NRM plan. The following sections provide an outline of these emerging issues and highlight strategies included the plan that are intended to address them.

Emerging issues

Biosecurity

Since the last Northern Territory NRM plan was drafted in 2016, the issue of biosecurity has grown in importance on Commonwealth and Territory government agendas. Recent studies have estimated the value of maintaining Australia's biosecurity as $314 Billion over the next 50 years. However, an increasingly globalised economy and long-term shifts in climate patterns exacerbate the biosecurity risks for Australia.

The Northern Territory is recognized as a critical frontline jurisdiction in efforts to maintain biosecurity and is a key partner in delivering the Northern Australian Quarantine Strategy (NAQS).

Both Commonwealth and Territory biosecurity strategies place emphasis upon community awareness and engagement in biosecurity surveillance, and recognize the potential to draw Indigenous Rangers into formal biosecurity surveillance roles (for example Anindilyakwa Land and Sea Ranger training in aquatic biosecurity 2020).

Looking forward, we believe that maintaining biosecurity will assume an increasingly important theme in natural resource management, particularly in the north -but also other regions of the Territory.

Accordingly, we will:

Key Biosecurity Challenges

- African Swine Fever in Asia: By 2020 ASF was spreading across provinces in Papua New Guinea prompting heightened surveillance across Northern Australia
- Citrus Canker established in Asia: 2018 Darwin outbreak detection and successful eradication following a national response
- Banana Freckle detection and eradication in 2019
- Ships and boats arrivals bringing invasive molluscs into Territory waters or cargos carrying pest invertebrates
- Regular internal and interstate transport of livestock, fodder and agricultural products with potential to spread disease and weeds

Top End	**3.5** Strengthen the coordination and delivery of biosecurity surveillance and risk-based responses to potential pest animals, insects and marine pests **4.2** Ensure resources are increased for biosecurity support services in line with increased agricultural development
Gulf Savanna	**3.5** Strengthen the coordination and delivery of biosecurity surveillance and response to potential pest animals, insects and marine pests **4.2** Ensure resources are increased for biosecurity support services in line with increased agricultural development
Tablelands	**4.2** Ensure resources are increased for biosecurity support services in line with agricultural development
Arid Lands	**4.2** Ensure resources are increased for biosecurity support services in line with increased agricultural development

Emerging issues

Carbon

When the 2016-2020 NRM plan was being prepared, interest in developing in carbon projects in the Northern Territory was growing on the back of the first Savanna Fire management projects in Arnhem Land (WALFA). Today almost a third of Northern Territory savannas are now under fire management projects. Indigenous fire management in Northern Australia today sets a global benchmark -and annually generate millions of dollars benefit for local communities.

Some groups (such as the Ten Deserts initiative) are now seeking to develop methodologies to demonstrate emissions reductions through fire management in the lower rainfall areas. At the same time, there has been a renewed interest in carbon project opportunities from among Territory pastoral producers, not least because of the increasing trend for brokered emissions reduction projects to aggregate across multiple properties, spreading establishment costs and so delivering improved economies of scale.

With corporate interests and market demand now outpacing policy, many primary producers and industries are now looking to manage carbon not to earn carbon credits but instead to reduce their carbon footprint and so build social license. Increasing numbers of certification and accreditation schemes now require producers to demonstrate reduced carbon footprints, and with growing concern about climate change, this trend seems likely to grow.

Looking forward, we believe interest in carbon projects will continue to rise among Territory producers and land managers, particularly in areas outside of those currently implementing savanna fire projects.

Carbon Industry Development

- Since 2016 12 new Northern Territory savanna burning projects have been registered with the ERF
- Since 2016 3 new Northern Territory beef herd management projects have been registered with the ERF
- The Indigenous Carbon Industry Network (ICIN) was established in Darwin In 2018

Accordingly, we will:

Top End	**1.4** Promote policies and market forces that support collaborative fire management providing social/cultural benefit in the Top End **6.3** Support projects and research to develop and increase participation in national, NT and regional carbon market programs **6.5** Investigate and support development opportunities from new environmental technologies and renewables
Gulf Savanna	**1.4** Promote policies and market forces that support collaborative fire management approaches providing social/cultural benefit in the Gulf Savanna **6.3** Support projects and research to further increase participation in national, NT and regional carbon market initiatives **6.6** Investigate and support development opportunities from new environmental technologies and renewables
Tablelands	**6.3** Support projects and research to develop and participate in national, NT and regional initiatives to develop carbon market programs
Arid Lands	**1.4** Promote policies and market forces that support collaborative fire management approaches that provide social/cultural benefit in Arid Lands **6.3** Support projects and research to develop and participate in national, NT and regional initiatives to develop carbon market programs **6.5** Investigate and support development opportunities from new environmental technologies and renewables

Emerging issues

Northern Development and Industries

In 2016 as the last NRM plan was being finalised, the 'Developing the North' agenda had just been conceptualized in a Commonwealth white paper: Over the last five years this concept of northern development has gained critical mass and today presents Northern Territory natural resource managers with both opportunities and challenges. In 2021, emerging institutions like the Northern Australia Development Office and the CRC for Northern Australian Development now support the initiative and a new 'Our North, Our Future' investment plan has just been launched. However, in some respects events have accelerated beyond policy.

Alongside new development initiatives the Territory's agribusiness has remained strong with high growth potential despite the compound impacts of drought and COVID 19. Between 2017-2018, the value of agricultural lands spiraled to historic heights and as the pastoral industry emerges from two years of disruptive drought, steers ex Darwin are now achieving record prices. It is expected that high prices will continue into 2022, and that agricultural growth will play a key role in economic development of the North.

With many new developments planned across Territory landscapes, we believe sustainability considerations will be of growing Interest to NRM stakeholders.

Key Development Initiatives

- Lifted moratorium on fracking in 2018 opens the way to new exploration and development of gas resources in the Beetaloo and elsewhere.
- Multiple mine development approvals granted
- Australia ASEAN Power Link project to establish the world's largest solar farm near Elliot
- Commonwealth expansion/development of defence infrastructure in the Northern Territory
- Territory Government release of a further 100,000ha of agricultural land for development, most significantly in the Keep Plains precinct.

Emerging issues

Accordingly we will:

Top End

4.1 Engage with industry and other relevant stakeholders to encourage sustainable approaches to developing the north policies and programs

5.2 Increase our knowledge and resources available to understand and manage the impacts from all consumptive uses, (including mining, pastoral, agricultural and domestic use) on surface and groundwater resources

6.5 Investigate and support development opportunities from new environmental technologies and renewables

7.2 Determine and establish acceptable standards for industrial and domestic contaminants, pollutants and agricultural discharge and regulate for these across the Top End

Gulf Savanna

4.1 Engage with industry and other relevant stakeholders to encourage sustainable approaches to developing the north policies and programs

5.2 Increase our knowledge and resources available to understand and manage the impacts on ecosystems and groundwater from mining, pastoral, agricultural and domestic use

6.4 Investigate, progress and communicate emerging primary industry and diversification economic opportunities on Aboriginal and Pastoral lands including horticulture, aquaculture and tourism

6.6 Investigate and support development opportunities from new environmental technologies and renewables

Tablelands

4.1 Engage with industry to encourage sustainable approaches to developing the north policies and programs

5.2 Increase our 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

6.5 Highlight new and emerging opportunities for innovative collaboration between industries, corporations and NRM stakeholders on the Tablelands

Arid Lands

4.1 Engage with industry and community to encourage sustainable approaches to developing the north policies and programs

5.2 Increase knowledge and resources available to understand and manage the impacts of mining, pastoral, agricultural and domestic use of water on ecosystems and groundwater

6.5 Investigate and support development opportunities from new environmental technologies and renewables

Emerging issues

Offsets

While offsets were referenced in the 2016-2020 NRM plan, the absence of an established mechanism to facilitate them in the Northern Territory under Territory legislation limited their uptake. However, the commencement of the Northern Territory *Environment Protection Act 2019* (EP Act) and subsequent release of the Northern Territory Offsets Principles in 2020 represented an important step towards delivering a comprehensive Northern Territory Offsets Framework (the NT Offsets Framework).

Offsets are measures designed to compensate for the residual impacts of development on the environment where these impacts cannot otherwise be avoided or mitigated. The NT Offsets Framework will encompass two distinct types of offsets; biodiversity offsets and greenhouse gas emissions offsets, reflecting the different types of residual impacts that might arise from planned development actions.

In the Northern Territory, landscapes remain relatively intact and tenure arrangements complicate securing conventional offsets. Consequently, the NT Offsets Framework will support a 'target-based implementation' model which will deliver improved environmental outcomes at landscape or regional scales, and allow offset design to target the most serious environmental threats, or habitats and biodiversity at greatest risk. Policies and guidelines under the NT Offsets Framework will establish clear and transparent processes for applying, designing and delivering offsets that appropriately compensate for residual impacts.

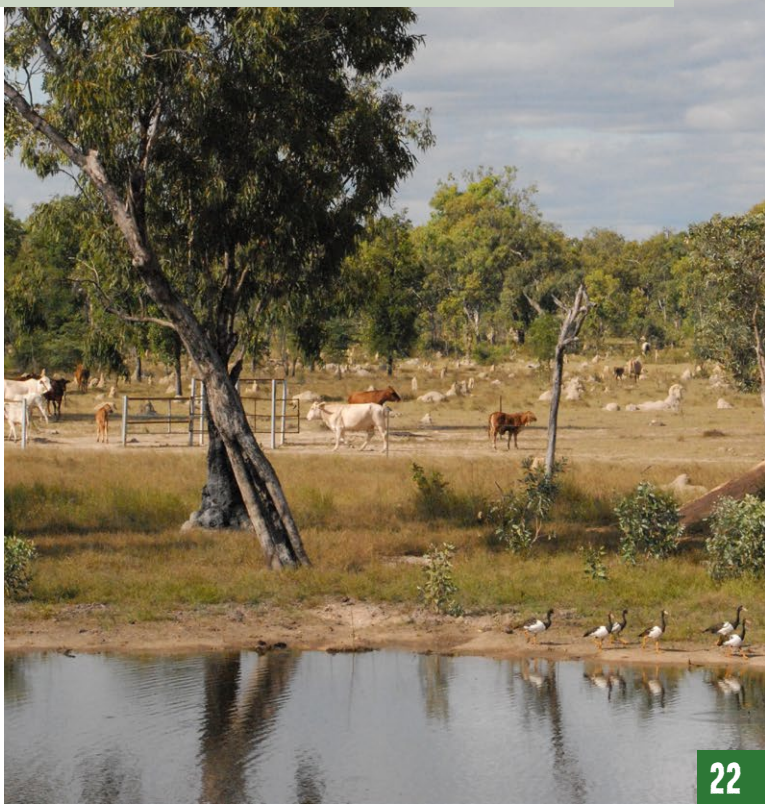
Under the NT Offsets Framework, offsets may be required for certain projects regulated by the EP Act. This can occur at the discretion of the Minister responsible for the EP Act (the Minister). The Minister may apply requirements to deliver offsets as a condition on an environmental approval under the EP Act, following recommendations made by the Northern Territory Environment Protection Authority (NT EPA) based on an Environmental Impact Assessment. The NT Offsets Framework can also be applied to statutory approval processes under other Territory legislation prescribed under the Environment Protection Regulations 2020. While the NT Offsets Framework does not regulate voluntary offsets where corporations choose to compensate for the impacts of development as part of their corporate responsibilities, it can be used to help guide voluntary offsets if appropriate.

To ensure transparency and visibility, a Northern Territory Offsets Register will be established and maintained by the Territory Government to hold relevant information about offset obligations, commitments and delivery, as well as other relevant details.

Establishment of the NT Offsets Framework holds great potential to direct additional resources to address our priority environmental challenges and protect key natural assets In the Territory. As such, it may become tremendously important in advancing the Territory's natural resource management agenda. We recognize this through relevant strategies in regional NRM plans.

Northern Territory Offsets Principles

- Offsets must contribute to relevant Territory targets
- Offsets must be designed to deliver maximum benefit to the Territory
- The benefits of offsets must be additional and secured
- Offsets must be knowledge based and design must be responsive
- Stakeholder engagement, disclosure and transparency is required
- Duplication of offsets must be avoided



Emerging issues

Top End

1.4 Promote policies and market forces that support collaborative fire management providing social/cultural benefit in the Top End

4.6 Support and promote partnerships between the NRM community and the minerals and resources industries regarding mine rehabilitation and offset programs

6.2 Develop capacity for Fee For Service opportunities in local NRM groups

6.6 Link new and emerging opportunities to NRM stakeholders in the Top End

7.3 Strengthen and consolidate environmental offset arrangements in application of the Territory Offsets Framework

9.1 Strengthen networks and partnerships between NRM stakeholders and support the development of new partnerships with industry that promote community and industry responsibility on NRM issues

Gulf Savanna

4.7 Support and promote partnerships between the NRM community and the resources sector regarding mine rehabilitation and offset programs

7.3 Strengthen and consolidate environmental offset arrangements to direct offsets where they are likely to be most effective

9.1 Strengthen the effectiveness of NRM stakeholder networks, including building new relationships with Industry, philanthropic organisations and strengthening coordination of on-ground land management

Tablelands

4.4 Support and promote partnerships between the NRM community and the minerals and resources sector, regarding mine rehabilitation and offset programs

6.5 Highlight new and emerging opportunities for innovative collaboration between industries, corporations and NRM stakholders on the Tablelands

7.2 Utilise the Northern Territory Offsets Framework as a basis for guiding offseting across the Tablelands

Arid Lands

4.6 Support and promote partnerships between the NRM community and the mining industry regarding mine rehabilitation and offset programs

6.6 Link NRM stakeholders to new and emerging opportunities in the Arid Lands

7.2 Strengthen and consolidate environmental offset arrangements to direct offsets where they are likely to be most effective for NRM in the Arid Lands

Emerging issues

Community capacity, engagement and indigenous NRM

Since the 2016-2020 NRM plan was drafted there has been significant evolution in the way that individuals and communities participate and engage with natural resource management. This has both reflected change in NRM funding arrangements and the way that individuals, groups and communities now increasingly engage, organise and interact with each other.

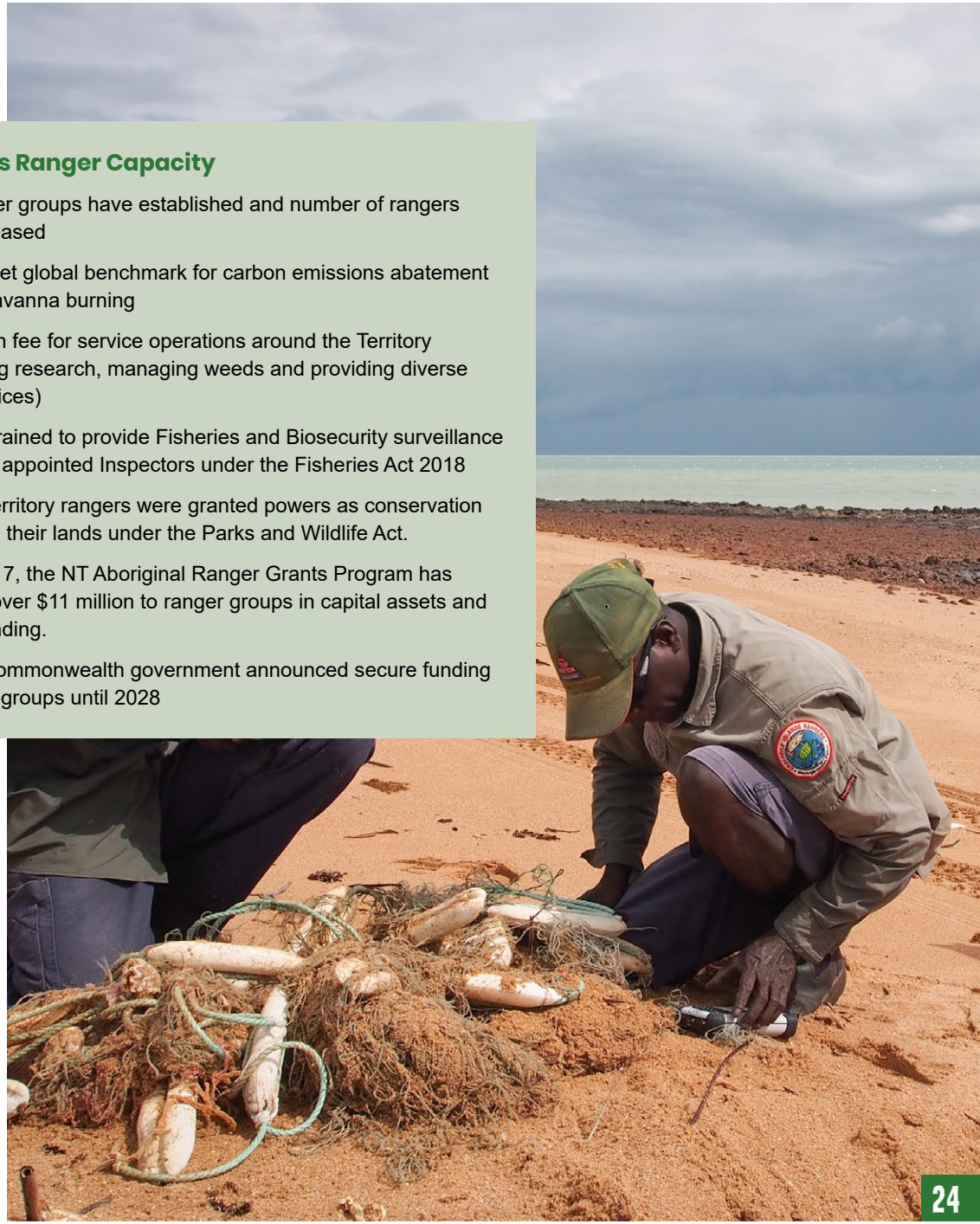
In 2021, many Landcare groups have transitioned to greater self-coordination with the primary impetus for action coming from group members themselves. Social media platforms and other technologies enable effective peer-to-peer coordination and social engagement. Some groups may now find it more cost-effective to engage a contractor to deliver on ground works rather than use volunteers.

Nevertheless, Landcare remains critical to engaging and educating stakeholders about natural resource management across the Northern Territory, even as the landscape of community participation has shifted. Today, social media-based citizen science has strengthened and engages increasing numbers of individuals. Community-based groups like 'Land for Wildlife' in Darwin and Alice Springs effectively connects individuals, both peer-to-peer and with their natural environment, particularly in urban and peri-urban locations.

Understanding emerging opportunities to better engage and develop community capacity for NRM, and the growing role of ranger groups in managing natural resources, we will:

Indigenous Ranger Capacity

- New ranger groups have established and number of rangers have increased
- Rangers set global benchmark for carbon emissions abatement through savanna burning
- Increase in fee for service operations around the Territory (supporting research, managing weeds and providing diverse other services)
- Rangers trained to provide Fisheries and Biosecurity surveillance and some appointed Inspectors under the Fisheries Act 2018
- In 2019 Territory rangers were granted powers as conservation officers on their lands under the Parks and Wildlife Act.
- Since 2017, the NT Aboriginal Ranger Grants Program has provided over $11 million to ranger groups in capital assets and project funding.
- In 2020 Commonwealth government announced secure funding for ranger groups until 2028



Emerging issues

Top End

6.2 Develop capacity for Fee For Service opportunities for local NRM groups

8.5 Support best practice management of culturally significant Aboriginal sites and landscapes

9.1 Strengthen networks and partnerships between NRM stakeholders including supporting the development of new partnerships with industry and promoting community and industry responsibility of NRM issues

9.2 Support land managers to record, utilise and share scientific research, TEK and pastoral knowledge in NRM planning and management activities

Gulf Savanna

6.2 Develop capacity for NRM groups to better target service delivery to pastoral and other Gulf Savanna rural industries

8.5 Support best practice management of culturally significant Aboriginal sites and landscapes

9.1 Strengthen the effectiveness of NRM stakeholder networks, including building new relationships with Industry, and strengthening coordination of on-ground land management

9.2 Support land managers to record, utilise and share scientific research, TEK and pastoral knowledge in NRM planning and management activities

Tablelands

6.2 Develop capacity for Fee For Service opportunities for Landcare groups, Aboriginal Rangers and other NRM groups

8.5 Support best practice management of indigenous culturally significant sites and landscapes

9.1 Strengthen Landcare and NRM networks promoting community and industry responsibility for NRM issues

9.2 Support land managers to record, utilise and share TEK, scientific research and pastoral knowledge in NRM planning and activities

Arid Lands

6.2 Develop capacity for Fee For Service opportunities of Landcare groups, Aboriginal Rangers and other NRM groups

8.5 Support best practice management of culturally significant Aboriginal sites and cultural landscapes

9.1 Support land managers to record and utilise TEK, scientific research and pastoral knowledge in NRM planning and activities.

9.2 Strengthen networks and partnerships between NRM stakeholders in the Arid Lands and support the development of new partnerships with industry and philanthropic organisations.

Emerging issues

Climate and climatic variability

In 2016 the last Northern Territory NRM plan highlighted the potential risks and impacts associated with a changing climate. The plan cited CSIRO and BOM data predicting the likelihood of intensifying weather events and climate impacts across both the monsoonal north and the rangelands.

In 2021, these predicted impacts of extreme climate are already part of the lived experience of most Territorians.

Most in the community have already been touched by climatic extremes, and so the issue of climate change adaptation has been propelled up the public agenda. In 2018 Alice Springs Council launched its Climate Action Plan, while in 2019 the City of Darwin declared a 'climate emergency' and the Northern Territory government prepared a Draft Climate Change Response document.

As part of the national response to the impact of climatic extremes, the Commonwealth Future Drought Fund in 2021 supported the establishment of a Northern Western Australia and Northern Territory Drought Resilience Adaptation and Innovation Hub.

To address community concerns about climate we will:

Climate Impacts 2016-2020

- Cyclone Marcus impacts Darwin (2018)
- Successive poor wet seasons (2018-2019)
- Barkly drought and pastoral destocking (2018-2020)
- Top End rural water table decline to critical levels (2019)
- Record high temperatures across Territory (2019)
- Severe West MacDonnell wildfire (2019)
- Record Top End bushfires seasons (2019-20)

Top End	**4.8** Carry out adaptation planning to build resilience to the likely impacts of climate change upon industry **5.1** Water resource planning and management is undertaken in collaboration with a diverse range of stakeholders based on an equitable and transparent process **6.5** Investigate and support development opportunities from new environmental technologies and renewables **8.6** Establish monitoring to inform adaptation planning for the impacts of climate change on vulnerable ecosystems in the Top End
Gulf Savanna	**4.9** Carry out adaptation planning with industry on the likely impacts of climate change **5.1** Water resource planning and management is undertaken in consultation with multiple stakeholders, and underpinned by the best available scientific information **6.6** Investigate and support development opportunities from new environmental technologies and renewables **8.4** Develop adaptation plans for the impacts of climate change for vulnerable ecosystems in the Gulf Savanna
Tablelands	**4.6** Carry out adaptation planning on the likely impacts of climate change with indigenous people, pastoralists and industry groups **8.3** Develop adaptation plans to address the impacts of climate change for vulnerable ecosystems in the region
Arid Lands	**1.1** Collaborative approaches to strategic fire management are extended across the Arid Lands region **4.7** Carry out adaptation planning on the likely impacts of climate change with indigenous people and pastoralists **5.1** Water resource planning and management is undertaken in consultation with multiple stakeholders, and underpinned by the best available scientific information **6.5** Investigate and support development opportunities from new environmental technologies and renewables **8.3** Develop and implement adaptation plans to address the impacts of climate change on vulnerable ecosystems in the region

Emerging issues

COVID 19

Since the start of the Global COVID 19 pandemic, parts of the Northern Territory have twice gone into lockdown, first during March-June 2020 and again briefly in May 2021. Both lockdowns were precipitated by the arrival of infected individuals into the Territory from interstate. In May 2021, the first instances of COVID 19 community transmission were recorded within the Northern Territory.

During these lockdowns, concerns about the potential impacts of COVID 19 within vulnerable populations have been paramount and led Land Councils and communities to withdraw permits and prohibit travel to remote communities.

During 2020 the Northern Territory Government established nine biosecurity areas across the Territory as internal quarantine boundaries, and again in 2021 prevented the movement of people out of designated lockdown areas. The prioritisation of community health in 2020 necessarily restricted the movement of labour, manpower and equipment and led to a virtual cessation of NRM activity in some parts of the Territory. Anecdotal evidence suggests that the operations of some land management groups, businesses and agencies were disrupted for up to six months during 2020.

Looking to the future, our natural resource managers will need to adapt to this 'new normal' in conducting operations. We will support them to build stronger, more agile networks, adopt new technologies and become more innovative in their response to NRM challenges.

COVID 19 Response Innovations

- Much planning, sharing of information and engagement has switched from face-to-face interactions to online platforms
- Increase in aerial land management to avoid breaching permit and restrictions
- New collaborative arrangements to make optimal use of helicopters still operating within restricted areas
- Increasing use of remote sensing technologies to support on ground assessments and reduce travel
- Vanuatu seasonal harvest labour arrangements

Top End	**1.2** Increase use of spatial fire management tools, knowledge systems, safe burning practices and equipment throughout the Top End **9.1** Strengthen networks between NRM stakeholders and support the development of new partnerships that promote community and industry responsibility in NRM issues
Gulf Savanna	**1.2** Increase use of spatial fire management tools, knowledge systems, safe burning practices and equipment throughout the Gulf Savanna **9.1** Strengthen the effectiveness of NRM stakeholder networks, including building new relationships with Industry, philanthropic organisations and strengthening coordination of on-ground land management
Tablelands	**1.2** Increase use of spatial fire management tools, knowledge systems, safe burning practices and equipment throughout the Tablelands **8.4** Support ongoing mapping and monitoring of rangeland condition using remote sensing together with field based surveys **9.1** Strengthen Landcare and NRM networks promoting community and industry responsibility for NRM issues

Plan Implementation and Partnerships

More than 50 different Northern Territory institutions undertook activities that contributed to progressing the 2016-2020 NRM plan. Implementation of the 2021-2025 plan will depend upon us maintaining, strengthening and expanding these partnerships.

The proposed program strategies set out in the Consultation Draft reference potential partners based upon our experience of implementing the 2016-2020 plan. However, we expect that through ongoing community consultations future partnerships will be identified with greater certainty.

To strengthen these partnerships, Territory NRM will continue to consult stakeholders and engage them in with monitoring, evaluation and adaptive management processes. It will also produce regular communications updating the NRM community with information on plan activities and progress.

Monitoring and Evaluation and Adaptive management

The Open Standards for the Practice of Conservation, which were applied in the development of the 2016-2020 NRM Plan still provide us the basic framework for monitoring and evaluation of within the context of plan implementation.

What we need to know	How we will find out
Are plan activities and strategies being implemented?	• Project reporting (if TNRM project) • Stakeholder consultations (if not TNRM project)
Are these activities and strategies having impact on the ground?	• Monitoring predefined indicators • Stakeholder consultations
Is the plan active and following good adaptive management processes?	• Regular stakeholder meetings for review and adaptive management

Plan Implementation and Partnerships

Continuing the pattern established during implementation of the 2016-2020 NRM plan, the 2021-2025 plan will follow a two year cycle of review and adaptive management.

Information on plan progress will be continuously captured, analyzed and communicated with stakeholders, but formal review consultations and adaptive management will be undertaken through regional stakeholder meetings.

Indicators

Two types of indicators will be employed to track plan implementation and will include both quantitative and qualitative measures.

- Activity reports which produce a record of what has been done.
- Ecological, social and cultural indicators which measure the impact of implemented activities

The proposed program strategies set out in this Consultation Draft reference a number of potential indicators for tracking impact against each program. We expect to further refine these indicators through our ongoing community consultations.

Review schedule

- 2021 Stakeholder Planning, Plan launch
- 2023 Regional stakeholder consultations, plan review and adaptive management
- 2025 Regional stakeholder consultations, final review

What happens next

This Consultation Draft document will be circulated and opened for public comment. There will then be a series of regional community workshops (‘a roadshow’) to present the Consultation Draft to the community, prompt discussion and elicit feedback.

Community submissions and feedback upon the consultation draft will then be reviewed and incorporated into regional plans.

The final NRM plan will be launched in October.

Guidelines for Feedback on this Consultation Draft

Please direct your feedback to the regional plan which most relates to your own community or stakeholder status

- Do proposed objectives and strategies encompass regional NRM priorities?
- Do proposed activities provide a logical pathways to achieve proposed objectives?
- Are interim targets clear and achievable and can we make them more explicit?
- What priority should each strategy receive in 2021?
- What indicators can we use to assess impact of strategies
- What roles will different institutions and actors play in implementing each strategy?
- What particular sites and locations should be focus for activities?
- What resources will be needed to implement strategies?