5 September 2021
Jacqueline Arnold
PO Box 9124
ALICE SPRINGS, NT 0870

Alan Roe
Program Manager
Territory Natural Resource Management
Via e-mail

Dear Alan,

Comments – NT NRM Plan 2021 – 2025

Thank you for the opportunity to comment on the TNRM Plan Consultation Draft. The comments below are focused on the arid lands region, but many would also apply to the tablelands region.

I am the administrator for the group *Letters for the Environment Central Australia (LECA)* which seeks to examine the literature and make this available to the public for informed debate. LECA has surveyed the literature on many of the issues addressed in the TNRM strategy. The comments on particular strategy are based on and consistent with the positions LECA has taken in its campaigns. I have linked the LECA case cards as background to my comments. These cite the evidence for my comments.

I am also an administrator for the Facebook group "Buffel Grass Information and Action Group".

General

The consultation document shows a substantial amount of work has been undertaken to implement the current strategy. Most programs are showing substantial progress in terms of activity outputs. This highlights the effort made by the Territory NRM team.

However, the "trend assessment" for most asset categories shows they are generally in decline.

I commend TNRM for frankly reporting these declines and agree with the assessment (p11-13). These declines seem to be consistent with my perceptions. I have lived in the Arid Zone for 44 years (some of this on and off). I can see the landscape is reeling under the weight of climate change, buffel-grass invasion, stock, feral animals and unprecedented development pressures, most notably for diversification and intensification of pastoral leases. At the same time key legislation and regulation is being relaxed (e.g. land clearing, water licensing).

I believe I am not the only community member who worries and objects but feels disempowered and excluded from decision making processes.

The arid zone has also been described as being under imminent threat (https://theconversation.com/existential-threat-to-our-survival-see-the-19-australian-ecosystems-already-collapsing-154077).

I recommend a **in depth evaluation** of why the plan is failing rather than to keep doing the same thing. **Failure is not an option**.

It is in the context of this unsatisfactory level of outcome, despite strong and dedicated effort, I make the following comments.

General comments or relevant to green cover report (pages 1- 30)

1. (Pages 12-13) Substantial effort has clearly gone into outcome reporting (as opposed to output / activity). However, the performance targets are unclear and reporting appears to be largely post hoc via review of published papers which are heavily skewed towards the biodiversity asset category. I suggest an agreement with the NT government (NTg) is needed which establishes a set of spatially diverse, outcome-based metrics and targets which are measured and publicly reported via a state of the environment report or similar.

   These should be agreed by all parties, and programs more directly geared towards the achievement of these targets.

2. (Not addressed) There are a few cross-program stressors happening at a scale which dwarves all other stressors. For example: the spread of buffel grass will fundamentally decide whether managing fire, weeds, biodiversity, and water resources outcomes are met in the Arid Zone region. Similarly, climate change fuelled extreme heat and drought is changing the landscape and requires a doubling down on protection of ecosystem refugia. These stressors need to be singled out, and relevant strategies adopted in each program, prioritised and progress reported. Otherwise all other activities will be window dressing while environmental decline continues.

3. (Not addressed) TNRM comprises some uneasy bedfellows whose motivations are different from each other, and some (e.g. industry bodies) have vastly different negotiating powers. To avoid this power imbalance, the TNRM plan needs to be much more prescriptive about the performance standard and outcomes of each strategy and ensure all activities have technical merit (for example dingoes are allowed to be killed on pastoral lands despite this being poor environmental practice with no credible evidence that it benefits pastoral activity).

   I recommend:

- That an independent panel of experts, free from the influence of pressure groups, should decide the evidence and set the performance standards for projects, based upon what is needed to meet the desired outcomes.

- TNRM partners should have a shared commitment to achieving the outcome targets and stated purpose of the plan.

  Without these safeguards in place, the function of the plan that (p4) "enables the Territory community to set its own priorities and agenda, rather than have these set by outsiders" is an extremely dangerous one. For example - the NTG not implementing the Federal Buffel Grass Threat Abatement Advice.

4. (Page 8) The economic description and graphic is misleading. It implies industries which lean most heavily upon and impact the natural landscape and are well represented on TNRM (most notably pastoralism) are the largest economic contributors to the Territory economy by placing them at the top of the list. However much larger GDP contributing sectors are tourism, education, art and culture, and service industries; their claims are diminished by being low or not shown on the list. These sectors have a lighter footprint but still depend or prosper from a healthy landscape and should be considered in setting the values for each region.

   As a community member it is important for me to understand the true economic contribution of each industry so I can take this into account in my evaluation of them.

   To avoid bias and better inform, I recommend the economic data and reporting categories used by Regional Development NT should be adopted and the actual total contributions to the NT economy across all industries are reported.

5. (Not addressed) Equity on pastoral lands. I am concerned that the aspirations of Traditional Owners, as generally recognised through their non-exclusive Native Title rights over most of pastoral leases, do not seem to be given sufficient weight. I suggest this should be addressed via a new program; or at a minimum a "Very High" importance strategy with an effect based measure of achievement within Program 4.

6. (Not addressed – comment) I am very concerned that the TNRM plan in its current form is not a force for sustainability as it legitimises and reinforces historic land uses despite circumstances changing. There is a strong argument that the TNRM plan has been captured by those industries having the worst impact on the landscape, notably pastoralism. I do not see this industry's contribution to the TNRM plan as proportionate to its impact.

   My concern is specifically that existing pastoral land uses and the strong influence of this group is fundamentally preventing the TNRM from achieving its stated aims. The plan appears to be having the perverse outcome of reinforcing this land use's historic claims at cost to alternative land uses e.g. carbon farming, harvesting traditional plants, recognition of biodiversity values in themselves, tourism and the opportunity to brand

the Territory for its wilderness and culture, and aspirations of non-exclusive Native Title holders'.

It has been my experience with *Letters for the Environment Central Australia* that most of the environmental issues in the Arid Zone have in large part derived from problems to do with the management of pastoral lands. Please refer to attached case cards on:

- Fortune Agribusiness ground water licence
- Buffel Grass
- Land Clearing
- Running Waters
- Dingo protection

While cattle are allowed unchecked in waterholes, waterways and sacred sites, poisoning dingoes is considered a acceptable and buffel seed is allowed to be dispersed I cannot accept that the pastoral industry is a genuine citizen of the NRM community.

I also note that public interest during the stakeholder consultation sessions was primarily to do with enhancing conservation values, not the use of the arid lands for pastoral activities.

7. To follow from the previous point (6) - the plan must respond to the rapid situational changes such as:
   - Changing technologies and economics in the renewable energy sector
   - The urgency of climate change
   - The failure to address Aboriginal economic disadvantage
   - Global scale environmental declines, population increase and melding of cultures which accentuate the global significance of the region for its biodiversity richness and its Aboriginal knowledge systems with so much to offer.

   The TNRM plan should facilitate opportunities to do things differently and where needed support the equitable transition to more sustainable ways of living that account for all externalised costs. This should include allowing proponents for alternatives to existing land uses to put forward a value proposition.

   <u>This could be facilitated by a program to develop a vision for 2050 and/or an independent actuary report on different land use scenarios which are genuinely sustainable and inclusive in the sharing of profits.</u>

8. (Suggested addition) Given the scale of the challenge, investment needs to be targeted. The <u>plan should map (prospectus) of the priority areas for investment</u> through covenants, Indigenous Protected Areas, and crown land and the plan strategies.

9. (Not addressed – suggestion) The <u>review of NT Parks</u> is underway. I suggest <u>that Territory NRM plan could be given effect through this</u> (for example, acquisition of lands which have high biodiversity value, provide linkages between areas, acquisition and protection of areas which offer climate change resilience and refugia (e.g. Running Waters, groundwater dependent ecosystems on Singleton Station). This can go two

way e.g. areas with identified as offering iconic wilderness areas e.g. Peterman Ranges, Davenport Ranges and Karlu and Karlu could be a focus for redoubling conservation efforts.

10. (Not addressed) I am very concerned that the TNRM plan's chances of success and investments are being undermined by the decisions of government. Some examples are:
    - Recent relaxation of land clearing rules are completely counter to any sound principals of biodiversity protection or climate change resilience (please refer to attached case card),
    - The Pastoral Lands Board does not publish its minutes and is dominated by pastoral representatives despite the use heavily impacting on the environment.

    As inadequate regulation is an existential threat to the plan TNRM should not be a silent partner in allowing this to happen. The suggested technical panel should identify where investment in the plan is being threatened by poor regulation. TNRM should address these issues in bilateral negotiations with the NTG on implementing the plan.

11. I support recognition of the emerging issue "offset" and the opportunity for investment it brings. While the NT EPA will set guidelines for investment areas it is very concerning that some strategies in the plan are not working, contain a substantial degree of compromise or may not be evidence based (e.g. poisoning dingoes) and thus may not deliver a good environmental outcome could attract this investment. Where offsets could deliver resources to the plan, these strategies need to be flagged, and standards for how the activity is to be carried out and the level of environmental outcome prescribed.

Comments (Arid lands region p115 - 142)

Program	Strategy	Comment
1 Managing fire	General	Buffel grass and climate change are described in the overview, but the key activities do not appear to directly address these.
	1.4 (in particular 1.4.2) addresses	This should be a high not a medium as climate change is identified as a key emerging issue.
	Key measures of achievement	Effect measures only relate to condition and extent of fire regimes in areas with collaborative management. There should be a general measure about reducing condition extent.
2 Preventing and managing weeds	Preamble program 2	Buffel grass is the key issue and should be mentioned in the preamble to this section.
2 Preventing and managing weeds	2.2	I support the "very high" priority given to controlling priority weeds on the basis that this includes buffel grass. However, I am concerned that: 1. The current NT WRA for buffel grass is out of date (2010), has a poor evidence base and is not publicly available except on request. 2. The Alice Springs Weeds strategy is insufficient and lacks the innovation necessary to be effective in regard to buffel grass. 3. The NTG is ignoring its commonwealth obligation to implement the Federal threat abatement advice by not declaring Buffel grass a Class B weed – it is totally unacceptable that it is permissible for buffel grass to be deliberately introduced and cultivated as a pasture grass. 4. There is a lack of information in the public realm about the extent of buffel grass invasion, current options for management and available technologies. To address this TNRM should: 1. Review and update the current NT Buffel grass WRA

Program	Strategy	Comment
		2. Ensure the Alice Springs Weeds strategy is sufficient to meet the objectives of the strategy and is resourced in accordance with its high priority and using best practice and innovative technologies (e.g. annual programs based on remote sensing data on spread towards assets) and exploration of management options (included those which seem neglected to date e.g. the Mampava rhodoneura (buffel grass seed caterpillar) and buffel grass dieback. 3. Address the internal conflict within NTG as to whether buffel grass is a weed. Currently the Alice Springs weed strategy states "Buffel grass (Cenchrus ciliaris) is not a declared weed in the Northern Territory, however this strategy recognises that it does have both negative and positive attributes for different land managers. Whether or not it is considered a 'weed' can depend on the land management context — where it is growing, the type of land tenure, who is managing the land and for what purpose. The Department of industry Tourism and Trade website actively promotes buffel grass https://industry.nt.gov.au/__data/assets/pdf_file/0016/233323/283.pdf 4. Advocate that buffel to be declared a class B weed to ensure there is a management plan in place. It should prevail upon partner organisations to toe the line with respect to buffel grass promotion. Buffel grass may have modest pasture value but it is sabotaging any prospect of turning around the negative trends related to biodiversity, water and fire in the arid lands and the tablelands, and thus poses an existential threat to the viability of the TNRM. 5. Undertake a comprehensive independent evaluation (opportunity-cost / cost-benefit) of buffel grass.
	2.3	As noted I understand there is an opportunity to use a much more sophisticated analysis of satellite imagery to track the extent and spread of buffel grass which has not been taken up and the capacity not developed within DEPWS weeds branch. As a result debate about the extent and efficacy of buffel grass control boils down to opinion, such that control is not well targeted.

Program	Strategy	Comment
		I would like to see an analysis of remote sensing data for real time monitoring of extent, spread and targeting buffel grass management.
	2.2 Assets improved	Monitoring and control of buffel grass will also improve freshwater systems as buffel grass impacts stream hydrology, scouring and riparian vegetation. The freshwater systems icon be shown against this strategy.
	Measures of achievement	Given buffel grass' priority and its existential threat to the success of many of the TNRM plan's programs, a measure of achievement is needed which gauges the "effect" of measures taken to limit the extent of buffel grass' spread, the threat it poses to high biodiversity value, fire risk areas, and community mental health.
3 Reducing the impacts of feral animals	3.1	Particularly in relation to dingoes, I recommend an activity to maintain and/or reinstate keystone species/apex predators as a way to achieve ongoing control of feral animals (e.g) cats and stabilise native herbivore populations in a lasting way, and to communicate the efficacy of this approach. References: 1. T. Schroeder, M. M. Lewis, A. D. Kilpatrick, and K. E. Moseby (2015) DINGO INTERACTIONS WITH EXOTIC MESOPREDATORS: SPATIOTEMPORAL DYNAMICS IN AN AUSTRALIAN ARID-ZONE STUDY, *Wildlife Research* 42(6), 529-539, (9 November 2015). **https://doi.org/10.1071/WR15104** 2. Newsome, T. Greenville, A. Ćirović, D. *et al*. (2017) TOP PREDATORS CONSTRAIN MESOPREDATOR DISTRIBUTIONS. *Nature Communications* 8, 15469. **https://doi.org/10.1038/ncomms15469**
	Measures of achievement	Suggest a measure of achievement related to the reduction in threats posed to biodiversity, natural assets and production as a result of feral animal management programs, rather than these programs just occurring. This will ensure they are appropriately targeted.
4. Industry adoption of sustainable practice	4.3.6	This wording is highly inappropriate as it implies unsustainable stocking rates are sometimes acceptable. Economic pressures should never be an excuse for unsustainable stocking rates. This should be a minimum lease condition. The threat of malpractice should not be used as a bargaining chip to pressure Territorians into conceding exclusive opportunities to a small group who hold leases specifically to run cattle.

Program	Strategy	Comment
	4.5.1	I support the adoption of evidence based practice, however the evidence is overwhelming that lethal control of dingoes does not reduce cattle losses (e.g. Edwards et al 2021 and refer to LECA case card Dingo attached). This recommendation should be reframed in terms of translating existing research into policy and ceasing lethal control of dingoes. Edwards et al 2021 also recommends research is needed into non-lethal controls and animal husbandry improvements. This research should be encouraged and this communicated. Reference: 3. Edwards Glenn P., Eldridge Stephen R., Shakeshaft Bernie J., Nano Teresa (2021) LETHAL CONTROL REDUCES THE RELATIVE ABUNDANCE OF DINGOES BUT NOT CATTLE PRODUCTION IMPACTS. *Wildlife Research* https://doi.org/10.1071/WR20076
	4.5.2	Cairns et al 2021 has reported that away from human populations in the Northern Territory canids are essentially dingoes. While demonstration sites as a means of extension are supported, the activity should be reframed from the starting assumption that wild canid populations are dingoes and protected. It would be more appropriate to identify any sites where this is not the case and research effective forms of management in these. There is an opportunity to extend the work by Cairns et al 2021 to undertake more comprehensive DNA testing across the Territory to build a more comprehensive understanding of the Territory's dingo population. Reference 4. Cairns, Kylie & Crowther, Mathew & Nesbitt, Bradley & Letnic, Mike. (2021). THE MYTH OF WILD DOGS IN AUSTRALIA: ARE THERE ANY OUT THERE?. AUSTRALIAN MAMMALOGY. 10.1071/AM20055. https://www.publish.csiro.au/AM/AM20055

Program	Strategy	Comment
	4.5	The interim target should not be a research priority (there is enough existing research already except on means of non-lethal control and improved animal husbandry as recommended by Edwards et al). The targets should be that • The community, particularly pastoral land managers, are made aware that over 90% of "wild dogs" are usually dingoes, which are protected. • The NT Government stops permitting the poisoning of dingoes. • Calf attacks are reduced through non-lethal control and animal husbandry improvements.
	4.6	• Mineral extraction and fracking entail environmental risks, have lasting impacts and limited economic benefit to communities. There is a disconcerting lack of detail on how extractive industries will be engaged and contribute to the plan in a way that is commensurate with its impacts. • Specifically any carbon producing activity should be at least 100% offset to be considered compatible with the plan, with the offsetting activities taking place within the NRM plan area. • Water taken, pollution events and mining and fracking legacy issues are inevitable and the current and down the track costs (including inevitable unexpected pollution incidents) of these need to be accounted for in weighing up these industries' responsibility to support the plan and being welcomed as supporters.
5. Water resources and soil management	5.1	This needs to be supported by inclusive Water legislation which assures stakeholders' rights to participate. For example the recent review of massive Singleton water licence was done behind closed doors and individual stakeholders who did not have leases in the area were excluded from participating despite its regional implications.
5. Water resources and soil management	5.2	This strategy should not just increase knowledge but facilitate translation of knowledge to behaviour change in these sectors. Where best practice cannot achieve the desired TNRM plan outcomes TNRM should: • Seek legislation improvements to give the resources, pastoral and agricultural sectors the mandate to cease poor practices; or • Facilitate transitioning to genuinely sustainable use where these pose an existential threat to the effectiveness of the NRM plan.

Program	Strategy	Comment
		Three obvious instances of this are ongoing seeding of buffel grass, uncontrolled grazing of cattle in permanent and ephemeral waterways, and placement of stock bores and dams at sacred sites.
6. NRM based economic opportunities	6.1	This presents an opportunity for high value adding with a light footprint which is inclusive of local Aboriginal people. It should therefore be a high priority. Preserving opportunities for this down the track requires the current damages of pastoralism to be addressed, increasing principals of intergenerational equality and not causing a diminishment in the non-exclusive Native Title holders rights on pastoral leases.
	6.6	As discussed in relation to the first part of the plan I consider linking TNRM stakeholders to new and emerging opportunities is a core function of the plan. This should also seek to expand the stakeholder base and be equitable in consideration of local Aboriginal people and stakeholders who have an interest in the landscape but do not hold a lease over it. This is essential to maximising economic return from the land and securing investment in the plan sufficient to elimination of the existential threats propagated by the current narrow set of stakeholders. Failure to effectively do this means the plan is reifying as rights past practices which are no longer appropriate. This should therefore be a "very high" priority.
	Not included	I note the NT Government has announced a 30 year parks masterplan. There is the opportunity for the TNRM plan to closely align with this, and partner in identifying regional scale conservation areas and corridors, iconic massive scale nature parks of international significance, which could generate additional income, as other TNRM plan outcomes.
	7.1	Within the Alice Springs urban area there are significant ecosystems and related Aboriginal cultural values e.g. the Lhere Mparntwe (Todd River). In addition to water and waste, the plan should recognise the importance of protecting rivers and sacred sites and support strategies to protect these such as the Lhere Mparntwe Management Strategy (https://apo.org.au/sites/default/files/resource-files/2019-10/apo-nid265046.pdf) and the role of landcare within population centres.
	Missing	Equity on pastoral lands. I am concerned that the aspirations of Traditional Owners, as recognised through their non-exclusive Native Title rights over most of pastoral leases, do not seem to be given sufficient weight. I suggest this should be a program in itself or else a strategy with measures of achievement within Program 4.

Program	Strategy	Comment

In conclusion I would like to thank the staff at Territory NRM for the effort they are making.

I dearly want this plan to succeed. I am very concerned that the NRM committee should only occupy this collaborative space if it is willing to argue for a vision which is genuinely sustainable. I stand ready to assist Territory NRM in carrying out this important work.

Kind regards,

Jacqui