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29 April, 2025

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To whom it may concern,

Submission on Buffel Grass Management - Initial submission

Thank you for the opportunity to make a submission.

Managing buffel in the Northern Territory is a huge and vital task. This management plan is a key step. I strongly support the plan's preparation provided it is sufficiently strong and does not simply lock in and legitimise problematic past practices, causing further buffel spread and ecosystem decline.

I have identified the following considerations which need to inform or be addressed in the Buffel Weed Management Plan. These are not all the considerations I wish to raise. I request a meeting to discuss the development of this plan. I would be pleased to supply further information on these and other matters after that meeting.

CONSIDERATIONS FOR DEVELOPING THE PLAN (Refer discussion for details)

1. **A full economic evaluation of costs and benefits is needed to inform the plan and the plan must be commensurate to the scale of the issue/risk**
2. **Funding models need to be explored**
3. **Complex ethical considerations**
4. **Greater consideration of fauna, soil and ecosystem health (i.e. not only flora)**
5. **Stopping further spread within pastoral leases and managing its impacts in these areas**
6. **Evidence based, especially in terms of fire management and fuel reduction and includes a goal for coordinated research that can be applied to management**
7. **Draw upon existing Federal Buffel Threat Abatement Advice**
8. **Buffel fire modelling**, **research and data gathering**
9. **Health impacts**
10. **Justice for Aboriginal People whose lives, culture and country are being devastated**
11. **Inclusive consultation and inclusion in committees using established engagement principles, with proactive engagement with the First Nations people most impacted**
12. **Grazing is an unsuitable, ineffective and dangerous management idea in conservation areas**
13. **Effective buffel management needs better intra-agency coordination and consistency of approach and culture across NT government agencies**

CONTEXT

I have had the opportunity to learn about buffel and understand stakeholder perspectives and management approaches in roles as an administrator for the Buffel Information and Action Group, Alice Springs Landcare site coordinator and in my former role as CEO of Arid Lands Environment Centre.

From this I have learned that the vast majority of the central Australian community is deeply upset and worried about buffel. This management plan needs to include the whole community and reflect a forward looking vision.

Buffel grass invasion, along with climate change is definitional to whether we will have healthy, arid lands and what goes along with them.

At stake is no less than the ecological and cultural integrity of these lands. Ecological communities like river redgum and coolibah woodlands are under siege, we are facing increased risks to many EPBC Act listed species and placing new species under threat. The western-central arid zones and Georgina gidgee woodland ecosystems are defined as already collapsing[1] and buffel benchmarks as the greatest invasive species threat[2].

Environmental impacts are just one aspect. There are increasingly well documented social, health and safety impacts which are unequally borne by Aboriginal people in remote areas. This is made clear in the Umuwa Statement[3].

DISCUSSION

1. **A full economic evaluation of costs and benefits needs to inform the plan and the plan must be commensurate to the scale of the issue/risk**

For the public to have confidence that the plan is commensurate to the scale of the problem and appropriately targeted, we need an economic analysis that takes in the whole picture, including impacts on other industries, non-monetary costs (e.g. environment, health, culture) and equity in who benefits and who pays[4]. (Refer ALEC Technical Working Group submission for commentary on the costs of buffel invasion and urgency to stop its spread.[5])

At present it appears the range of costs are still not fully accounted for and many industries that are adversely impacted are not included in management planning. It is concerning that the only industry represented on the committee is a (at least in the short-term) beneficiary of buffel. The Northern Territory Cattlemen's Association has three representatives (two ex-officio positions and lifetime member Roy Chisholm).

Furthermore the benefits of this industry to the Territory are small. All forms of agriculture forestry and fishing contribute just 2.3% to the central Australian

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[1] https://onlinelibrary.wiley.com/doi/10.1111/gcb.15539
[2] https://pmc.ncbi.nlm.nih.gov/articles/PMC7713970/
[3] https://www.indigenousdesertalliance.com/publications/umuwa-statement-on-buffel-grass
[4]
[5] https://assets.nationbuilder.com/aridlands/pages/57/attachments/original/1699948865/ALEC_Buffel_TWG_letter_-_Meeting_5.docx_%281%29.pdf?1699948865

economy[6] [7]. These interests must not be given primacy over all other considerations.

While the committee's composition is skewed away from industries impacted by buffel e.g. bushfoods and medicines and tourist destinations that are managing buffel like Angkerle Atwatye (Standley Chasm), it will have a hard job convincing the public that it represents us all.

Value added by industry sector

reset export

Central Australia	2022/23			2017/18			Change
Industry	$m	%	Northern Territory	$m	%	Northern Territory	2017/18 - 2022/23
Agriculture, Forestry and Fishing	76.0	2.3	2.9	85.8	2.8	3.7	-9.8
Mining	699.3	21.4	31.1	814.8	26.1	20.8	-115.4
Manufacturing	121.4	3.7	3.9	62.9	2.0	4.6	+58.5
Electricity, Gas, Water and Waste Services	43.1	1.3	1.7	34.6	1.1	1.7	+8.5
Construction	122.5	3.7	6.7	183.7	5.9	13.9	-61.2
Wholesale Trade	123.8	3.8	3.3	76.8	2.5	3.5	+46.9
Retail Trade	115.2	3.5	3.0	118.7	3.8	3.3	-3.4
Accommodation and Food Services	164.7	5.0	2.6	124.4	4.0	2.8	+40.3
Transport, Postal and Warehousing	137.7	4.2	4.5	131.3	4.2	4.6	+6.4
Information Media and Telecommunications	23.5	0.7	0.5	17.3	0.6	0.5	+6.2
Financial and Insurance Services	59.4	1.8	2.5	44.6	1.4	2.4	+14.9
Rental, Hiring and Real Estate Services	45.5	1.4	1.7	49.8	1.6	1.7	-4.3
Professional, Scientific and Technical Services	140.7	4.3	3.2	154.4	5.0	5.5	-13.7
Administrative and Support Services	64.8	2.0	2.1	76.0	2.4	2.0	-11.2
Public Administration and Safety	422.2	12.9	12.0	356.8	11.4	12.5	+65.4
Education and Training	182.3	5.6	5.5	207.4	6.7	5.5	-25.1
Health Care and Social Assistance	593.6	18.1	9.5	451.0	14.5	8.0	+142.7
Arts and Recreation Services	48.7	1.5	1.3	49.5	1.6	1.3	-0.8
Other Services	89.3	2.7	2.0	78.8	2.5	2.0	+10.5
Total industries	3,273.8	100.0	100.0	3,118.5	100.0	100.0	+155.3

Source: National Institute of Economic and Industry Research (NIEIR) ©2023. Compiled and presented in economy.id by .id (informed decisions). NIEIR-ID data are adjusted

2. Funding models need to be explored

Buffel grass invasion has tragic impacts that are epic in scale. The scale warrants major investment to protect the public interest and our future.

I am supportive of major public investment being made to implement this plan. To supplement this other funding models should be considered and their suitability evaluated with public input. I support a partial **impactor pays model**[8] as a way of bringing justice to all and ensuring the beneficiaries are not doing so at the expense of country and other people.

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6 https://economy.id.com.au/rda-northern-territory/value-add-by-industry?WebID=310&fbclid=IwY2xjawJ6lCxleHRuA2FlbQIxMABicmlkETA4TVRPQm4yWjlEUGo2UFFnAR45qxHAH9jVzve0BSJefCXJRsElRI0768UDu1rR8ZmWHrQbkQ6qI2dfjoENMA_aem_q6PYedJt6W7WNgkbv7m9Jg

7 https://industry.nt.gov.au/__data/assets/pdf_file/0006/1078854/economic-overview-2019-2020.pdf

8 https://invasives.org.au/wp-content/uploads/2023/05/2023-05-02-Assessment-of-biodiversity-funding-mechanisms.pdf (refer page 14-15)

3. **Complex ethical considerations**

Buffel grass invasion involves irreversible impacts, puts lives at risk, unequally impacts already severely disadvantaged people and concentrates any benefits in a very small number of people at the expense of opportunities for others.

As a result, management settings cannot be resolved by a utilitarian calculus of benefits or a political solution whereby the wealthiest and most influential beneficiaries rule the day.

Rather, the plan needs to acknowledge that buffel grass's worst impacts are simply unacceptable and a rules, duties and principles based (deontological) approach to ethics is needed for just decision making. It is simply unacceptable to put sacred sites at risk, cause more species and ecological communities to be at risk of extinction, shift wealth from the poorest communities, damage individuals' health, destroy culture and language and deny future generations the same opportunities as earlier generations.

4. **Greater consideration of fauna, soil and ecosystem health (not only flora)**

I have observed that the environmental issues and expertise in the technical working groups on buffel are frequently flora experts. My experience in talking with the custodians and entomologists and from working at our landcare site all highlight immense concern about the fate of insects, bird habitat and soil microbiomes. These concerns are frequently echoed by Aboriginal elders.

We need greater inclusion of fauna expertise (including Aboriginal knowledge holders) especially in consideration of buffel's ecological impacts and management approaches, including fire management and approaches to pesticide use.

5. **Stopping further spread within pastoral leases and managing its impacts in these areas**

There is clear evidence a buffel monoculture is undesirable, unstable and incompatible with sustainability for any land use.

Within the pastoral estate:

- listed species and sacred sites must be protected;
- ecosystems like riparian areas are vital providing hollows for listed species like grey falcon and also are vital to the integrity of desert rivers must be preserved and improved;
- Native Title holders' existing rights must not be diminished, nor should sacred sites or cultural values associated with the land be diminished;
- pastoral leases' propagule pressure on neighbouring land needs to be reduced not increased.

We must try to stop buffel's expansion on all land tenures. The goal on any pastoral lands where buffel infestations have not already been mapped **therefore must be for eradication,** with measures in place to stop its spread within stations and beyond stations.

This plan must also ensure the management objectives to mitigate buffel's impacts within its existing footprint on pastoral lands are sufficiently strong to protect the bulleted values above including Native Title Holders rights *(GIVEN I AM RAISING NATIVE TITLE RIGHTS ARE AT ODDS WITH PASTORAL LEASE HOLDERS' INTERESTS REGARDING BUFFEL AND THE HISTORY OF PASTORAL LEASES AND NATIVE TITLE RIGHTS, NTCA MEMBERS AND LEASE HOLDERS ON THE COMMITTEE SHOULD ABSENT THEMSELVES FROM CONSIDERING THIS ISSUE.)*

6. **Evidence based, especially in terms of fire management and fuel reduction and includes a goal for coordinated research that can be applied to management**

Current fuel reduction burning approaches are self-evidently accelerating landscape transformation and exacerbating buffel fire feedback loops. This is clear to anyone driving on the highways emanating from Alice Springs (e.g. along Larapinta Drive). Repeated fuel reduction burns are benefitting buffel.

It is concerning that Bushfires NT's communications suggest it does not to take into account buffel's ability to spring back quickly even without rain when conducting fuel reduction burns, does not have an articulated strategy to protect local plants and animals and does not follow up with herbicide treatment when it burns firebreaks[9].

More generally I am concerned that when it comes to buffel, Bushfires NT is not a learning organisation. It appears reluctant to mention buffel in its communications (using euphemistic terms like "changing fuel loads")[10] and declines to talk to the public (e.g turned down an invitation to attend the recent Buffel Information and Action Night with no reason being offered). It is unable to provide an articulated or evidence based approach to managing buffel fire risks, let alone one that is compatible with other land and ecosystem values.

7. **Draw upon existing Federal Buffel Threat Abatement Advice**

To align with existing best practice and maximise access to Federal support I strongly support wherever possible the management approaches in this management plan aligning with the existing Federal Threat Abatement Advice - *Ecosystem degradation, habitat loss and species decline in arid and semi-arid Australia due to the invasion of buffel grass (Cenchrus ciliaris and C. pennisetiformis)*[11]

8. **Buffel fire modelling, research and data gathering**

Given the extent and risks buffel poses and questions around management we should have the best buffel fire modelling in the World. It is clear understanding of buffel fire behaviour and modelling capability remains in its infancy.

For example: fire modelling is not informed by buffel mapping and we have not looked at the explanatory variables which predict the likelihood of a buffel fire or the variables which predict severity of a buffel fire beyond course measures of biomass.

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[9] https://www.facebook.com/share/p/16MucYHAjw/

[10] https://www.facebook.com/share/p/16MucYHAjw/

[11] https://www.dcceew.gov.au/environment/biodiversity/threatened/threat-abatement-advices/buffel-grass-introduction

We should have an understanding all the variables influencing flammability [12] [13] and have capacity to model buffel's flammability across its lifecycle and be able to apply models to answer questions like does buffel's flammability reduce in senescent stages when buffel is less upright and some fuel may be decomposing to optimise fire mitigation approaches.

Given the severe risk to life, property and threatened species, and double edged sword of fuel reduction we urgently need state of the art modelling capability to inform management. There is an opportunity to align data gathering and research with model input requirements to ensure research and monitoring efforts are well targeted.

9. **Health impacts**

Buffel grass's health impacts have not been sufficiently recognised and need to be considered in the economic evaluation and management plan.

During recent fires Near Alice Springs the hospital presentations related to poor air quality and patients proactively taking strategies manage the impact on their health[14].

Buffel is acknowledged as killing culture, a foundational determinant of health outcomes. It also reduces availability and access to local foods.

To ensure the weed management is sufficiently strong and in the public interest, these impacts need to be properly assessed and included in the economic evaluation of buffel's impacts. The WAC should also be drawing upon specialist public health expertise during the development of the plan.

10. **Justice for Aboriginal people whose lives, culture and country is being devastated**

Buffel's human cost is devastating and unequally borne by Aboriginal people. Described as killing culture buffel's impacts are well described in the Umuwa Statement[15]. The plan must acknowledge these impacts are unacceptable and support decisive action determined following deep engagement.

These impacts occur on all land tenures including pastoral leases. Extremely senior Aboriginal people, whose country is under pastoral lease have on numerous occasions highlighted to me their despair at buffel's impacts and that they want their country and sites to be protected.

In these areas Aboriginal people have rights often as native title holders but also sacred sites protections and the reasonable expectation that existing laws and environmental standards apply equally everywhere. The plan must not inadvertently ignore or diminish these rights by privileging pastoral lessees in these areas.

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[12] (PDF) Grass Species Flammability, Not Biomass, Drives Changes in Fire Behavior at Tropical Forest-Savanna Transitions
https://besjournals.onlinelibrary.wiley.com/doi/full/10.1111/1365-2745.12503

[13] https://besjournals.onlinelibrary.wiley.com/doi/full/10.1111/1365-2745.12503

[14] https://www.abc.net.au/listen/programs/worldtoday/should-the-highly-flammable-buffel-grass-be-declared-a-weed/103201028

[15] https://www.indigenousdesertalliance.com/publications/umuwa-statement-on-buffel-grass

11. **Inclusive consultation and inclusion in committees using established engagement principles, with proactive engagement with the First Nations people most impacted**

Consultation needs to effectively include people in very remote areas, and provide sufficient information on the risks and management opportunities. So far it seems that consultation favours English speaking people already engaged in weeds management and that the department is relying on other parties to engage with First Nations people in remote areas without resourcing them to do so.

As well as needing to engage directly with people remote from Alice Springs an Aboriginal reference group on buffel could help ensure this plan is balanced.

12. **Grazing is an unsuitable, ineffective and dangerous management idea in conservation areas**

Grazing is an ineffective and unsuitable biological control for managing buffel. It has many negative environmental impacts, involves logistical complexity and is also a best practice for reinvigorating buffel pasture. Grazing has no place in conservation areas, especially when the Northern Territory Government has not sought to investigate other biological controls. I attach a presentation I prepared on this subject.

13. **Effective buffel management needs better intra-agency coordination and consistency of approach and culture across NT government agencies**

It was highlighted by South Australian State Buffel coordinator Troy Bowman at the recent Buffel Information and Action Night[16] that effective buffel management relies on all arms of government working together whether it is roads construction and maintenance contract, protection of conservation areas or industry tourism and trade.

It is concerning to me that messaging on buffel is inconsistent and there appear to be cultural differences between different departments. For example an AgNote for Buffel Grass that is not updated with Buffel's weed status is still on the NTG Department of Agriculture and Fisheries website[17]

I recommend the committee and management plan establish mechanisms for all departments to coordinate together.

14. **Significantly focus on awareness raising and education**

Buffel's impacts are multifaceted. Bespoke management approaches are needed because of its positive response to fire and the danger buffel fires pose to ecosystems. We also have a significant churn in populations in central Australia meaning newcomers . For many years many people have been under the misapprehension that "green is good" when our rivers, plains and hills are smothered in grass. This has been turned around not by information from the NTG but grassroots awareness raising.

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[16] https://www.facebook.com/share/p/169xVeuFzP/
[17] https://daf.nt.gov.au/__data/assets/pdf_file/0016/233323/283.pdf

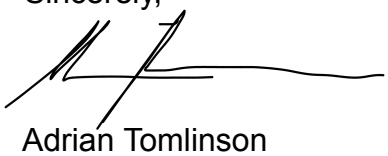
At the Buffel Information and Action Night and in countless discussions it has been raised that rangers and others are struggling with what to do with buffel as traditional cultural burning practices are redundant. They are often not aware of the need for follow up treatment after fires and that burning buffel is counterproductive. My own experience in putting out fires members of the public (and sometimes firefighters) will call out things like “Let it burn - it's good for it”. There is clearly immense confusion in our community and this is having dangerous consequences to ecosystems.

The NTG needs to do much more to raise awareness about buffel and its impacts. This needs a dedicated program designed by experts in the area. Elements will include signage and information and engagement in different languages. Particular information and training is needed about best practice in managing fire risk and the dangers of burning buffel.

CONCLUSION.

Thank you for considering this submission. I look forward to the opportunity to meet to discuss.

Sincerely,



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Attachment

Presentation - Review of grazing in protected areas as a proposition to manage buffel