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Lands
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Draft National Established Weeds Priorities Framework submission

1. Introduction

The Arid Lands Environment Centre (ALEC) is Central Australia's peak community environmental organisation that has been advocating for the protection of nature and growing sustainable communities in the arid lands since 1980. ALEC actively contributes to the development of weeds policy regulatory reform, written submissions, community education and advocacy.

ALEC welcomes the opportunity to contribute to Draft National Established Weeds Priorities (Draft NEWP). Our submission first outlines a case study on Central Australia, and how the current weeds framework is failing the arid lands. Then we provide comment on the Draft NEWP, highlight welcome progress, whilst also critiquing issues with the Draft NEWP

2. Buffel grass case study: weed management failure in Central Australia

Buffel grass (*Cenchrus ciliaris*) is a useful case study in understanding the limitations around the existing Federal Government policies around weed management. Despite its significant risk to environment, culture, infrastructure and human life, how buffel grass is governed and managed is deeply deficient.

The problem

Buffel grass is the greatest invasive species threat to environment and culture across Central Australia¹. Buffel outcompetes native grasses, destroys shrubs and large trees, has a positive fire-invasion feedback and monocrops entire landscapes²³. It is a transformer of habitats and landscapes with severe and widespread impacts upon local flora and fauna⁴⁵. It is its promotion of fire that is dramatically altering desert ecology.

¹ Read, J, Firn, J, Grice, A, Murphy, R, Ryan-Colton, E, and Schlesinger, C, 2020. Ranking buffel: Comparative risk and mitigation costs of key environmental and socio-cultural threats in central Australia. *Ecology and Evolution*, 10(23), pp.12745-12763.

² Schlesinger, C., White, S. and Muldoon, S., 2013. Spatial pattern and severity of fire in areas with and without buffel grass (*Cenchrus ciliaris*) and effects on native vegetation in central Australia. *Austral Ecology*, 38(7), pp.831-840.

³ Miller, G, Friedel, M, Adam, P, Chewings, V, 2010, p.26. Ecological impacts of buffel grass (*Cenchrus ciliaris* L.) invasion in central Australia—does field evidence support a fire-invasion feedback?. *The Rangeland Journal*, 32(4), pp.353-365.

⁴ Schlesinger, C.A. and Westerhuis, E.L., 2021. Impacts of a single fire event on large, old trees in a grass-invaded arid river system. *Fire Ecology*, 17(1), pp.1-13.

⁵ Schlesinger, C.A, Kaestli, M, Christian, K.A. and Muldoon, S, 2020. Response of reptiles to weed-control and native plant restoration in an arid, grass-invaded landscape. *Global Ecology and Conservation*, 24, p.e01325.

The presence of buffel grass substantially exacerbates the threat and impact of fire across Central Australia. Buffel grass fires can be as tall as 7.5 metres, and have been directly and indirectly recorded to hit temperatures of 871°C and 900°C respectively⁶⁷. Buffel has a fuel load substantially greater than native grasses⁸⁹. Its ability to alter the fire regime ensures that it is a significant and direct threat to areas of high conservation and cultural value¹⁰. As its expansion is enhanced by fire, the threat and risk increases after buffel-promoted wildfires¹¹.

While the risk has been known and growing for decades in Australia and abroad¹²¹³¹⁴¹⁵, buffel grass management continues to be uncoordinated, unstrategic and most commonly non-existent (outside of South Australia). This is despite buffel being found in every mainland state and the Northern Territory, with nearly 70% of the continent suitable for its growth¹⁶.

In the Northern Territory, buffel is still not a declared weed meaning there are no restrictions of its use or generally any obligations for management. Subsequently, the buffel invasion continues to expand. Targeted and strategic funding, basic mapping of its distribution, educational resources outlining the risks posed by buffel and containment in areas of high-priority management have all not occurred. Even in the Commonwealth managed Uluru-Kata Tjuta National Park, the buffel grass invasion continues to expand, let alone National Parks such as Watarrka, Finke Gorge and the Tjoritja/ West MacDonnell Ranges which are overrun with buffel grass. In addition, the buffel grass invasion in and around Alice Springs, also brings with it the real potential to endanger human life and sacred sites, such as those along the Lhere Mparntwe (Todd River).

The Federal Government position

Buffel grass is recognised as a key threatening process through the general category ‘novel biota and their impact on biodiversity’ under the *Environment Protection and Biodiversity Conservation Act* 1999. Despite its significant risk, buffel grass was not listed as a separate taxa specific key threatening

⁶ **National Park Service, 2022.** ‘How bad are buffelgrass fires?’. Saguaro: National Park Arizona.
<https://www.nps.gov/sagu/learn/nature/how-bad-are-buffelgrass-fires.htm>

⁷ **Palin, M, 2014.** ‘Gamba grass spreads throughout the Northern Territory’. NT News.

⁸ Ibid

⁹ **Beaumont, T, Keily, T, Kennedy, Simon, 2018.** ‘Counting the cost: Economic impacts of gamba grass in the Northern Territory’.

¹⁰ **Schlesinger, C, White, S, Muldoon, S, 2013.** Spatial pattern and severity of fire in areas with and without buffel grass (*Cenchrus ciliaris*) and effects on native vegetation in central Australia. *Austral Ecology*, 38(7), pp.831-840.

¹¹ **Miller, G, Friedel, M, Adam, P, Chewings, V, 2010, p.26.** Ecological impacts of buffel grass (*Cenchrus ciliaris* L.) invasion in central Australia—does field evidence support a fire-invasion feedback?. *The Rangeland Journal*, 32(4), pp.353-365.

¹² **Jackson, J, 2004.** *Impacts and management of Cenchrus ciliaris (buffel grass) as an invasive species in northern Queensland* (Doctoral dissertation, James Cook University).

¹³ **Friedel, M, Puckey, H, O’Malley, C, Waycott, M, Smyth, A and Miller, G 2006.** Buffel grass: both friend and foe. An evaluation of the advantages and disadvantages of buffel grass use and recommendations for future research, Desert Knowledge Cooperative Research Centre, Alice Springs

¹⁴ **Burquez-Montijo, A, Miller, M, Martinez-Yrizar, A, 2002.** ‘Mexican Grasslands, Thornscrub, and the Transformation of the Sonoran Desert by *Invasive Exotic Species in the Sonoran Region*’. *Invasive Species in the Sonoran Region*.

¹⁵ **Read, J, Firn, J, Grice, A, Murphy, R, Ryan-Colton, E, and Schlesinger, C, 2020.** Ranking buffel: Comparative risk and mitigation costs of key environmental and socio-cultural threats in central Australia. *Ecology and Evolution*, 10(23), pp.12745-12763.

¹⁶ **Lawson, B.E., Bryant, M.J. and Franks, A.J., 2004.** Assessing the potential distribution of buffel grass (*Cenchrus ciliaris* L.) in Australia using a climate-soil model. *Plant Protection Quarterly*, 19(4), pp.155-163.

process in 2012 and 2013 when attempts were made to have it listed¹⁷. In October 2014, the Federal Government issued its Threat Abatement Advice ‘for 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*)’¹⁸.

The Threat Abatement Advice issued for buffel grass is comprehensive and robust. However, buffel grass was not listed as a Weed of National Significance, a Threat Abatement Plan was never developed and the Threat Abatement Advice was never implemented. Beyond this advice, it appears that the Federal Government has not made any progress or commitments around buffel grass management.

The Federal Government has failed to implement its own advice where it has a role to:

- Prevent the further introductions of buffel grass
 - ‘Establish, maintain and participate in a national buffel grass taskforce to coordinate management at a national level’;
 - ‘Work with the Invasive Plants and Animals Committee to encourage state and territory weed declarations for *Cenchrus ciliaris*, *C. pennisetiformis* and any new varieties or strains of buffel grass’;
 - ‘Seek national restriction of the development, introduction, release, sale, movement and propagation of *Cenchrus ciliaris*, *C. pennisetiformis* and any new varieties or strains of buffel grass’;
 - ‘Investigate harmonisation of legislation, strategies and procedures for monitoring and surveillance of inter/intra-jurisdictional invasion pathways and management of outbreaks’;
 - ‘Prevent the introduction and development of new genetic material (including closely related species that may hybridise with buffel grass) which would increase the invasive potential of existing buffel grass populations.’
- Guide and support relevant buffel grass research
 - ‘Improve knowledge of national buffel grass distribution and potential future distribution using a standardised mapping methodology’;
 - ‘Increase understanding of the extent and impact of buffel grass infestations’.
- Identify and prioritise key assets and areas for strategic management
 - Identify and prioritise geographic areas requiring protection, based on the presence of biodiversity and Indigenous cultural assets and the current level of threat from buffel grass in combination with other threats.
- Support and facilitate coordinated on-ground management in high-priority areas
 - ‘Implement relevant actions in national and state/territory recovery plans’;
 - ‘Implement relevant actions in conservation advices for ecological communities listed under the Environment Protection and Biodiversity Conservation Act 1999’;
 - ‘Conduct ex-situ protection of threatened flora and fauna species through the National Seed Bank, Australian Seed Bank Partnership, zoos and wildlife sanctuaries’;

¹⁷ Department of Environment, 2015. THREAT ABATEMENT ADVICE FOR 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*). Australian Government.

¹⁸ Ibid.

- 'Conduct in-situ protection of threatened flora and fauna species through conservation agreements, bush regeneration and buffel grass control activities (integrated approach)';
- Raise awareness of the impacts of buffel grass
 - 'Promote awareness of the impacts of buffel grass to Traditional Owners, land managers (including the mining and petroleum sector, managers of transport corridors), community groups, tourists, industry stakeholders and the general public and encourage their advocacy of the issue. Do so in a way that is relevant to the community and the local context, i.e. using culturally appropriate language and materials';
 - 'Promote awareness within the pastoral industry of the risks and costs associated with the use of buffel grass, including risk to life, property and tree fodder, depletion of soil nutrients, decline in buffel grass nutritional value over the long term and transformation of pastoral land to a buffel grass monoculture';
 - 'Promote awareness to policy-makers, decision-makers and others of the impacts of buffel grass on Traditional Owners and on their cultural practices'.
- Build capability among stakeholders to abate the threat
 - 'Actively involve Traditional Owners, land managers and the community in buffel grass management';
 - 'Work collaboratively with stakeholders and Traditional Owners to expand and support positive actions in their progress to address the buffel grass threat'

As the Draft NEWP states, Federal Government coordination is essential. This is not currently occurring around buffel grass management. It is a dire result that is having majorly negative consequences across the arid lands.

3. Positive steps forward in the Draft NEWP

ALEC welcomes many of the approaches taken by the Draft NEWP, including:

- National drivers
- NEWP delivery steams. ALEC considers Weed Issues of National Significance (WINS) as a positive step forward, taking a holistic and issue-based approach to complement Weeds of National Significance (WoNS). In addition, National Established Weed Action List (NEWAL) provides new opportunities for improved weed management. The Virtual Weed Information Hub is also welcome, although we do have some critiques outlined below.
- All stakeholder being able to nominate WoNS and WINS.
- Task Force coordinators and national facilitator
- Clarity around process and stakeholder responsibilities (e.g. Table 2, Figure 3)

4. Issues with the Draft NEWP

There are opportunities to improve the Draft NEWP, namely around:

- The Virtual Weed Information Hub. It does not state who will control and manage the new online platform, which will be a home for all knowledge, information and tools produced under the NEWP Framework. The Federal Government should control and manage the new online platform.

- NEWP Steering Committee. Unclear how many members will be part of the NEWP Steering Group. The make-up of this group will be critical to how much progress is made.
- Reporting: There are no timeframes attached to the evaluation of the NEWP Framework or WoNS/ WINS, NEWAL - evaluation. Reporting obligations should be clear and time-bound to ensure progress.
- 'Elicit support, willingness and motivation amongst community and industry stakeholders to act'. This approach is problematic as it ensures that where there is no agreement, or a perception of difference, no progress will be made. Surely the nomination and promotion of WINS and WoNS should be focused on outcomes. The cost of inaction should also be considered. At times, there will be points of difference between stakeholders regarding weeds. However, the interests of industry are not equal to or above the public interest. Surely a role of national coordination is to support the position of stakeholders to shift over time where there are severe risks where weeds continue to be unmanaged. Progress on buffel grass management has been stymied by industry due to a perceived benefit that buffel grass provides to pastoral producers with limited consideration of other costs and risks. The Draft NEWP should be able to overcome blocks such as these in progressing weeds management.
- Nomination of WINS and WoNS: it appears that a cap exists on nomination of new WINS and WoNS. It would be hoped that the NEWP Framework would enable more capacity to address weed risks.
- 'Use-driven research': the NEWP framework states on page 3 that it is a long-term initiative to 'provide a conduit to use-driven research and development'. We take an issue with the narrowness of 'use-driven' research. Research innately should be questioning, overtime contributing to desired outcomes, not 'use'.
- The 'process lead' which is described as an independent organisation. This is really vague language. It should be an independent body within the Government, rather than a private stakeholder. The Federal Government needs to re-establish its expertise around weeds.
- Feasibility of management intervention: Where there are not feasible, practical and broadly supported ways should not be an end-point for established weed management. Where the risk is significant, pathways forward driven by research should be established to fill in gaps so that a feasible, practical and broadly supported pathway is identified.

Kind regards,



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