Arid Lands Environment Centre

Office: 90 Gap Road, Alice Springs NT
9 October 2026 Mparntwe Alice Springs

South Australia Buffel Grass Inquiry



Introduction

The Arid Lands Environment Centre (**ALEC**) is Central Australia's community environmental organisation that has been advocating for the protection of nature and healthy communities in the arid lands since 1980. ALEC is committed to confronting key threats to nature, water and climate which impact the ecological health of the arid and semi-arid lands and its communities. ALEC is based in Mparntwe Alice Springs and brings environmental justice lenses to environmental issues in the region.

ALEC welcomes the opportunity to provide a submission to the South Australian Government on the *South Australia Buffel Grass Inquiry*. This is an urgent issue and a key moment. Buffel grass (*Cenchrus ciliaris* and *Cenchrus pennisetiformis* and other varieties) is one of the world's most impactful environmental weeds, changing fire regimes, and through hotter, more frequent and more continuous fires is bulldozing landscapes across South Australia, whilst putting lives at risk.

ALEC congratulates the South Australian Government for being a national leader in the buffel grass space for the past 11 years since weed declaration in 2015. However, we implore the Government to expand efforts to contain the buffel grass threat. The foot cannot be taken off the pedal. There is a unique opportunity for national recognition, coordination, research and funding, and it requires strong jurisdictional buy-in from states such as South Australia, where a wealth of knowledge and expertise already exists. South Australia can be a key voice nationally and internationally on best-practice buffel grass management, keeping people safe, preventing extinctions and keeping First Nations cultures strong.

ALEC notes that the buffel grass catastrophe has a disproportionate impact on the Anangu Pitjantjatjara Yankunytjatjara (APY) Lands, but that the risks of buffel grass impacts is a South Australia-wide issue, from Coober Pedy, the Flinders Rangers, Kati-Thanda Lake Eyre, the Great Victoria Desert, Ceduna and perhaps even Adelaide one day. Climate change is fuelling the march of buffel grass invasion south into vast areas currently without buffel grass. This requires proactive, strategic and coordinated management of buffel grass.

Image Credit: ©Mike Gillam, near Pukatja



Recommendations

ALEC proposes nine recommendations for the South Australian Government to more effectively and holistically combat the buffel grass threat in SA. These include recommendations around coordination, on-ground management, strategic planning, research and public safety, including:

1. Allocate $16 million to the state buffel grass coordinator to enable coordination, management, compliance, research and on-ground action. This role must be enabled with the scope and funding to coordinate cross-agency surveillance and control. The role should prioritise vectors of spread like road and rail corridors and high-risk areas like remote communities and sites of cultural and environmental significance
2. Appoint regional buffel grass coordinators
3. Invest in monitoring and control tools for more efficient on-ground management
4. Fund First Nations Rangers and on-ground buffel grass management
5. Call for a national buffel grass mapping program
6. Renew, fund and fully implement the now expired Buffel Grass Strategic Plan
7. Improve firefighting capacity and fire prevention for remote communities, including a remote community fire risk assessment to prioritise communities most vulnerable.
8. Assess priority places for buffel grass management such as:
    a. Places where buffel grass where there are isolated patches of buffel grass that can be removed before it becomes widespread
    b. Ecologically important areas and habitat for at risk species
    c. Important cultural sites which hold history, knowledge for future generations, and support cultural practices
9. Prioritise and fund research gaps such as:
    a. Fire behaviour and management in light of buffel-fuelled changing fire patterns
    b. Biodiversity impacts and mitigation strategies
    c. Mapping buffel grass spread and prioritising areas for buffel control and prevention
    d. Buffel grass control strategies including biological controls

Image Credit: Mike Gillam, near Kalka



Buffel Grass Impacts

Buffel grass is a silent, flammable, environmental catastrophe marching across South Australia. It thrives in arid and semi-arid environments, which make up 70% of Australia, presenting a threat to both the natural and human environments where we live.

Vegetation along inland rivers and creeks, mulga woodlands and native grasslands are disappearing under a tide of buffel grass, a monoculture. Stands of 500-year old river red gums have burnt to blackened posts, biodiversity erased, landscapes transformed and dozens of threatened species are at risk of extinction. Buffel grass is a threat to public safety. It is extremely flammable and is fuelling more frequent, more intense and more continuous landscape-scale fires. Burns that are made even worse in the context of climate change.

First Nations people living across buffel infested areas grieve the loss and damage to their Country. This damage has significant impacts on health, culture and intergenerational knowledge. As the Umuwa Statement on buffel grass says, “Older people mourn for the Country that used to be.”

The highly invasive and flammable nature of buffel grass means that it has wide-ranging impacts on nature and communities.

Biodiversity

Buffel grass is transforming landscapes by outcompeting native vegetation at scale, dramatically reducing biodiversity in both plants and animals, turning landscapes into buffel grass monocultures. A study published in 2026 (Ryan-Colton et al., 2026) showed that buffel grass affects entire animal groups, such as ants, reptiles, and birds, across a range of habitats. Animals that can only eat certain things - those with specialised diets - are impacted the most because when buffel grass takes over their food source, they can’t eat anything else. One example of a fussy eater is the dusky grasswren. The researchers looked for grasswrens in buffel grass invaded and buffel grass free areas. They found grasswrens in buffel grass free areas; where there was buffel grass, there were no grasswrens.

Buffel grass threatens significant places which can still be protected from the worst impacts, including Kati Thanda-Lake Eyre, Flinders Ranges, Coober Pedy, the Gawler Ranges and Great Victoria Desert.

First Nations Cultures

Buffel grass impedes ongoing connection to Country, risking the continuation of First Nations cultural practices. It significantly limits access to bush foods, covers cultural sites, and prevents the transmission of cultural knowledge to new generations. Waterholes and waterways are choked and disappearing under a sea of buffel grass, access to Country is impeded, time spent on Country is impacted and bush communities are at major risk of catastrophic fires.

The Umuwa Statement on Buffel Grass was unanimously endorsed by the 375 delegates from over 40 desert ranger teams at the Indigenous Desert Alliance conference in 2022. The statement describes the impact of buffel grass on the deeply intertwined relationship between healthy First Nations cultures, communities and healthy Country. First Nations communities have been advocating for the protection of their Country for decades, including from the threats posed by buffel grass invasion.

Buffel has a huge impact on traditional lands, bush foods and medicines, while making the landscape inaccessible for cultural practices such as hunting or looking after sacred sites.

We expand on these points below, please see page 10.

Fire and Public Safety

Buffel grass presents an extreme fire risk which threatens public safety, infrastructure, and transport routes. Remote communities are especially vulnerable due to isolation and lack of fire risk mitigation capacity. Buffel grass produces between two to five times more fuel load than native grasses, with potentially deadly outcomes across the arid lands. This additional combustible material produces more fuel for more frequent and hotter fires. A buffel grass fire can reach 7.5 metres in height, with fire temperatures being recorded at nearly 900°C. With climate change driving more frequent periods of extreme heat, as well as changes to rainfall patterns, natural fire patterns across Australia are changing, and buffel grass threatens to add further fuel to inland Australia firebombs. Climate change and buffel grass compound to create conditions for unpredictable, extra hot, frequent fires. Large catastrophic fires can occur any time of year in buffel invaded areas and are no longer restricted to periods after above average rainfall.

Buffel grass is a risk to human safety and health. Buffel grows fast and dense, covering roads and tracks, which makes them dangerous to walk and drive on. It obscures holes, rocks, snakes, and creates a risk of getting lost. This is a risk for emergency services, rangers, land managers, children and people trying to access cultural sites.

Buffel grass also creates a public health hazard due to allergies and smoke inhalation.

Tourism

Buffel grass impacts tourism and outdoor activity industries. Buffel grass changes scenic amenity, stripping places of the natural beauty and biodiversity which attracts people to them. The extreme risk of fire in buffel infested areas also creates risks to tourism operators and tourists. In Central Australia, the unmitigated spread of buffel grass has affected the tourism industry by causing the closure of the Tjoritja/West MacDonnell Ranges National Park, the Larapinta Trail and Watarrka National Park, causing the cancellation of tours during buffel-fuelled fire events, and affecting visitor experience by the presence of scorched sites or emergency evacuations. In addition, every years volunteers and Parks have to spend weeks of time, energy, money and labour re-opening the track as it becomes overgrown and dangerous.

Economic Costs

Buffel grass will have significant ongoing economic costs without urgent action. An analysis in the Northern Territory found that the costs of ongoing spread of buffel grass were 60 times greater than the benefits of its use in the pastoral industry. Noting that buffel grass planting and seed are already banned in South Australia, the NT economic analysis still provides crucial insight into the immense cost of inaction and the need for high investment now to save in the future.

Warnings from the Northern Territory and Hawaii

Hawaii fires

A sombre warning from across the Pacific

The world watched on in horror when a deadly grassfire spread across Maui in 2023. After the smoke had cleared and an investigation had begun into its cause, it was discovered that this fire was fuelled by invasive grasses, including buffel grass, and resulted in the death of at least 102 people.[26] Similar to Australia, fire-promoting buffel grass has invaded large parts of Hawaii, with researchers noting that growth is occurring rapidly after rain, creating a highly flammable fuel load and risk.

This fire was devastating. It took lives and property, and extensively damaged animal habitats. Buffel grass has one of the highest fire risk ratings of all invasive plants in Hawaii. This tragic event is a warning to Australia on the impact of buffel grass to human life and natural habitats.



After the fire at Lahaina on Maui, Hawaii, that resulted in over 100 fatalities.

Image credit: Deanne Fitzmaurice for NPR

Buffel grass is a threat to human lives

Buffel Grass is a huge fire risk for people, homes and infrastructure.

In March 2023 a home and several dwellings were destroyed in buffel grass fires in Mparntwe Alice Springs. This fire is sadly a snapshot of the realities remote and regional communities face if the buffel grass threat is not managed and resourced. Many communities across Central Australia are surrounded by dense infestations of buffel. The larger and hotter wildfires are a risk to human life.

Across impacted areas, residents, local governments, rangers and local fire authorities already conduct a huge amount of work to protect people and property from the threat of buffel fires.

The public safety risks do not stop at fire. Buffel grass severely reduces accessibility and visibility compounding risks such as snakes and missing persons - particularly when considering elderly people and children.



Buffel Basics: Key facts about buffel grass

Buffel Basics demonstrates the holistic nature of the threat, demonstrating the need for a whole of Government approach to buffel grass invasion. The buffel grass catastrophe is an issue for the economy, local government, tourism, public health, arts, environments and First Nations cultures.

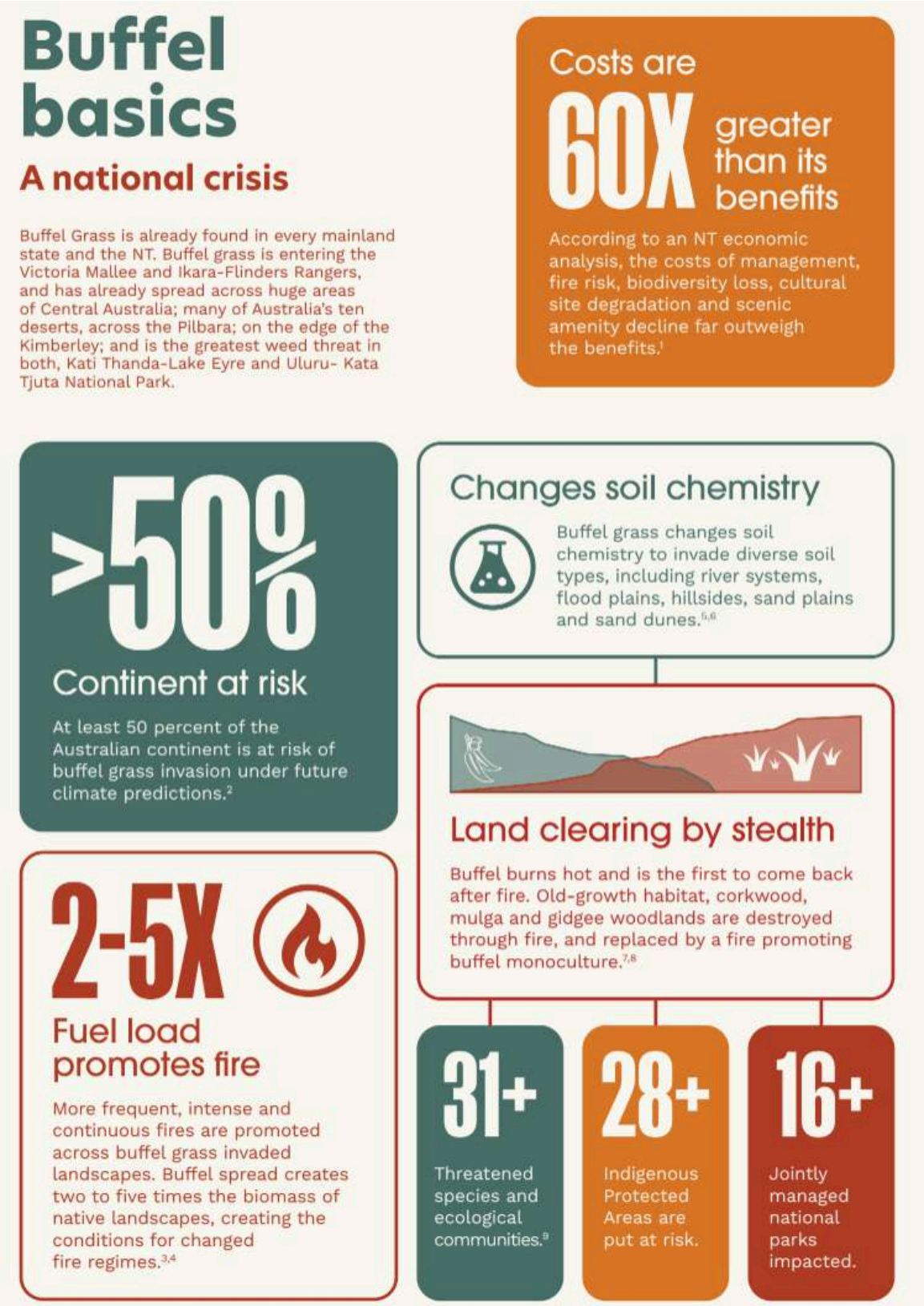


Figure 1. Buffel Basics Part 1 from ALEC's National Buffel Report: Buffel Bulldozer. Please see Appendix 1 for the full 52-page report.

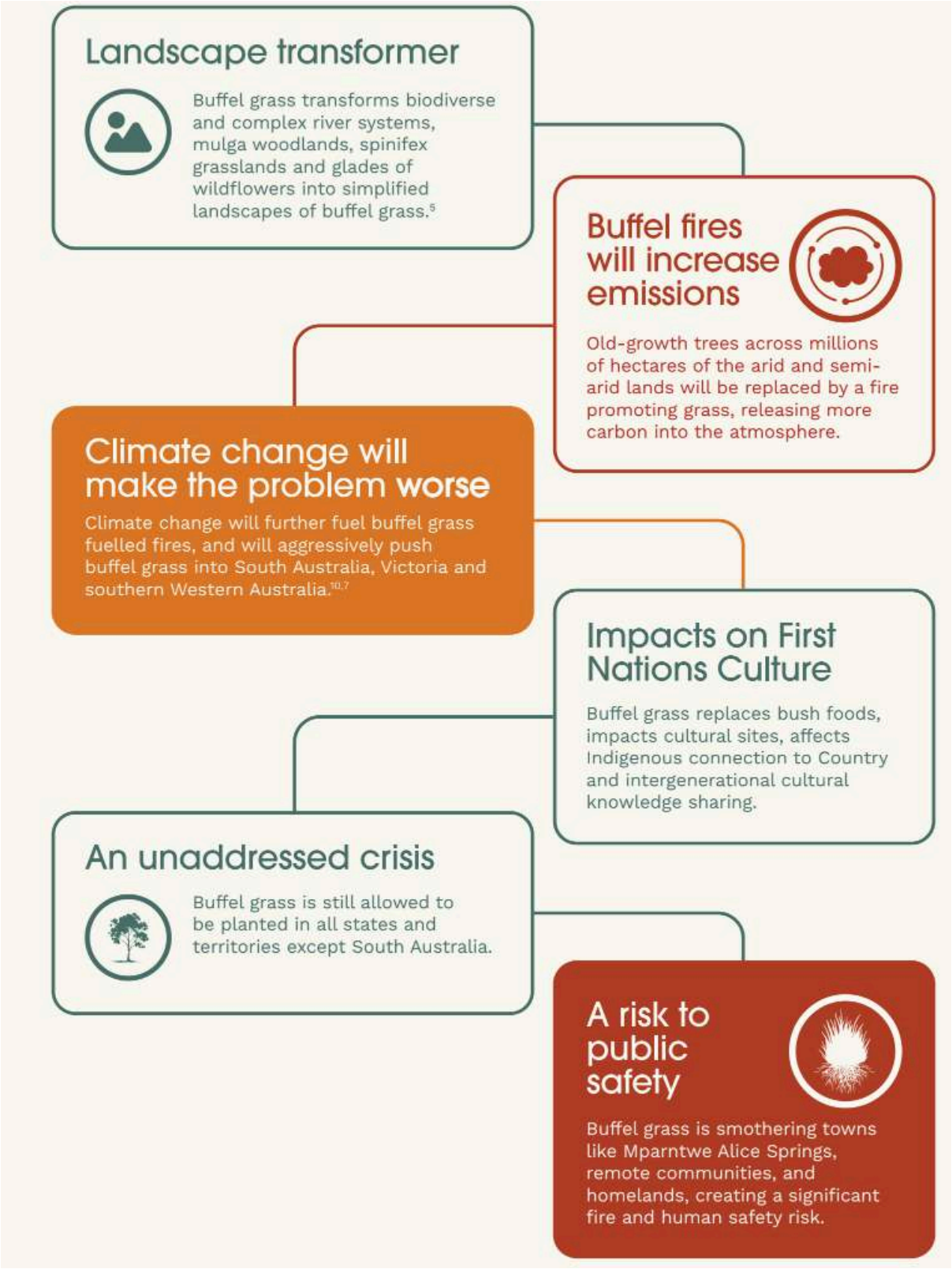


Figure 2. Buffel Basics Part 2 from ALEC's National Buffel Report: Buffel Bulldozer. Please see Appendix 1 for the full 52-page report.





Buffel Grass Invasion near Amata

Perspectives from Community Consultation in Anangu Pitjantjatjara Yankunytjatjara Lands

The Arid Lands Environment Centre recently visited two communities, Amata and Pukatja in the APY Lands. The purpose of the trip was to consult with community members on perceptions and impacts of buffel grass. The following is what ALEC learned from community members, artists, senior knowledge holders, and rangers about how buffel grass is shaping their lives.

Health of Country

Life and colours are being lost. The impacts of buffel grass in several instances were communicated through loss of colour, including hills that used to be purple, areas that used to be yellow, pink and white. This is a story of biodiversity and cultural loss. Basically all the plants are gone, the grasses, the groundcover, spinifex, shrubs and other mid-story plants. Cork woods and mulga are gone because of the repetitive fires that have burnt them away. We were also told of animals that can no longer be found, including mammals, reptiles and birds. People shared memories of seeing or hunting these animals when they were younger, but now they are gone.

The holistic nature of buffel grass impacts healthy Country. The transformation of lands means that the impacts are often existential. The health of Country sustains critical cultural and social determinants of health, intergenerational knowledge transmission, as well as connection to Country. ALEC heard how the general impact to healthy Country had lots of downstream consequences to people in the APY Lands, as a health, food insecurity issue, public safety issue, impacting life as a custodian, community life, cultural roles and responsibilities and so on.

Further, there was a general yearning for their Country that has been drastically transformed since the 1990's and early 2000's in particular, when Country was still colourful and full of life.

Bushfood and bush medicines

Bush foods and medicines are impacted. Many plants and animals that are no longer found or are difficult to find around the communities visited are used as bush food and medicine. People reported going to the shop, where the food is more expensive and unhealthy, because they can no longer find bush food. Community members said they can't find the tracks of animals anymore. The animals they could hunt are either no longer found or very difficult to track and find underneath a sea of buffel grass. Some examples of bush foods that are hard to find now are:

- Kampurarpa (Solanum centrale/Bush tomato)
- Kulypurpa (Solanum ellipticum/Bush tomato)
- Itunypa (Solanum coactiliferum/Bush tomato)
- Wiriny-wirinypa (Solanum clesitogamum/Bush tomato)
- Wayanu (Santalum acuminatum/Quandong)
- Ngintaka (Perentie) - almost impossible to find tracks in buffel infested areas

- Tinka (Sand goanna) - as above

In addition we heard how kangaroos, emus and bush turkey are no longer present. Hunting is far more difficult, and if people are able to hunt they have to travel further and further away, and depends how hungry people are. We also heard how bush onion and bush potato are no longer around and available which used to be important food plants.

Impacts to cultural sites

Cultural sites and knowledge are being lost. Sacred sites, sites where cultural business takes place, important waterholes, and areas with healthy Country where children can be taught have been completely changed, covered and obstructed by buffel grass, according to community members we spoke to.

Public Safety Risk

Buffel grass is a public safety risk. Buffel grass fires burn hotter and more frequently than native vegetation. These remote communities, which are entirely covered with buffel grass and in hot, dry areas, face an extremely high fire risk. The need for significantly more firefighting and mitigation capacity was clear. Isolation and lack of capacity, combined with the inundation of highly flammable buffel grass, make the risks to these communities unacceptable. A number of community members spoke to a fire in 2018 around Amata. This fire was much more intense than other fires that they had seen over their lifetime in the community. They cited buffel grass as the cause of the unusually tall flames and were fearful about future fires.

In addition, community members mentioned that bush roads and tracks have become more dangerous, as they are now all overgrown and it can be difficult to see the road, creeks coming up, rabbit warrens or potholes.

Rangers

Rangers are under-resourced. Protecting Country from buffel grass is an immense task. Priority areas of ecological and cultural importance can be regenerated if rangers have the appropriate resourcing and equipment. Buffel grass cannot be eradicated across these vast landscapes, but significantly more can be done to contain its spread and mitigate its impacts.

Accessing Country

Community members also told the Arid Lands Environment Centre about dangers when traversing Country covered in buffel grass. Tracks get covered quickly, covering ditches and rocks, making it dangerous for community members and rangers to drive on. Difficult to see potholes, rabbit warrens and creeks. People were worried about kids playing in buffel-infested areas because of lack of visibility and the danger of snakes.

We heard how people have left their homeland due to the overwhelming nature of buffel grass invasion destroying the healthy country around their homeland, and that there was no support to manage buffel grass around the homeland. We heard that there were no services to help homelands manage buffel grass adequately.

Waterholes and waterways

We heard from a number of people about how waterholes and waterways which are rare in many parts of the arid and semi-arid lands, including the APY Lands have been totally transformed. Permanent and semi-permanent waterholes no longer hold water, are totally covered in silt or are suffocating in buffel grass.

It appears that buffel grass has changed that movement of sediment in river channels, significantly impacting waterholes and waterways. Waterholes have always been critically important social and cultural places, including as well as biodiversity hotspots. The impacts to waterholes significantly impacts community life. This is shared issue across impacted areas.

Reflections on impacts to the Anangu Pitjantjatjara Yankunytjatjara Lands

Across large parts of the APY Lands, buffel grass has transformed landscapes, turning once biodiverse cultural landscapes into buffel grass monocultures. In the region, bush communities with little firefighting capacity are surrounded by highly flammable grass. Bushfoods and medicines have disappeared or are very difficult to find. Cultural sites are inundated, and passing on cultural knowledge to new generations is impeded.

Many people we spoke to in the communities visited expressed sadness, grief, and fear at the loss of Country, which holds memories, cultural knowledge and supports their way of life.

Whilst these communities are inundated, plenty can still be done to mitigate the impacts. The many impacts faced by communities such as those in the APY Lands should also serve as a warning to the South Australian Government - act fast, invest now, and prevent further cultural and ecological destruction in places where buffel grass has not yet reached, or is in early stages of infestation.

Carrying Hope

Community members and rangers were very generous in their time with us as they talked about how buffel grass had destroyed landscapes they cared for deeply. What was often consistent was the desire to find a solution to this terrible problem. Even though it was at times overwhelming, buffel grass as far as the eye can see. In short, community members out bush yearned for a solution, for healthy Country, and for important social and cultural places that have been suffocated by buffel grass to return to their prior healthy state. People out bush are obviously constantly talking about an issue that causes impacts everyday. Old people even talked about this “shit” tjanpi which is ruining their Country and lives.

Many people told us that they want to get rid of this buffel grass, but that they did not know how. They have tried so many things to get rid of it, but it is still here and getting worse.

People out bush are continuing to fight for their Country and communities, Governments need to do the same, as well as conserve areas that are currently buffel free!

Opportunities and Solutions

There are many opportunities and solutions to be explored, funded and researched. Places where buffel grass is removed can regenerate, case studies from rangers and landcare groups (see Buffel Bulldozer pg 35, 37) show native vegetation bouncing back. The impacts of buffel grass can and must be mitigated. At-risk species and places can be protected, fire risk can be reduced and on-ground workers can be resourced. Places where buffel grass is not widely established can remove isolated infestations and prevent it from becoming more widespread.

Coordination

Allocate $16 million to the state buffel grass coordinator to enable coordination, management, compliance, research and on-ground action. This role must be enabled with the scope and funding to coordinate cross-agency surveillance and control, prioritising vectors of spread like road and rail corridors and high-risk areas like remote communities and sites of cultural and environmental significance. Cross-agency coordination is key to management success, ensuring a holistic approach addressing both key points of spread and management. Education across agencies can improve identification, reporting of new infestations and buffel grass seed hygiene in key places like roads, railways, infrastructure, conservation areas, etc.

Additionally, appointing regional buffel grass coordinators will boost the capacity of on-ground management. Localised coordinators will bring together local knowledge, stakeholders and feed into the state coordinator.

Invest in on-ground management

Invest in monitoring and control tools for more efficient on-ground management. Early intervention is key to buffel grass management. Monitoring resources enable removal of small infestations before they become costly and widespread. Investment in equipment for on-ground land managers to efficiently manage buffel grass in sometimes very remote areas is an investment in the future of healthy landscapes and communities in South Australia.

Fund First Nations Rangers, who are the frontline for buffel impacts and risk, often in very remote areas. First Nations rangers face an immense task in protecting their Country from buffel grass. Increased capacity for rangers to face this task is crucial and should include buffel management equipment and resources, best-practice buffel grass management strategies and education, and remote community fire risk mitigation support.

Strategic Plan

Renew, fund and fully implement the now expired Buffel Grass Strategic Plan. The South Australian Government’s strategic plan expired in 2024. The strategic plan must be renewed with weaknesses addressed, be fully funded and fully implemented.

Mitigate impacts and risk

There is opportunity to improve fire risk assessment, firefighting capacity and fire risk mitigation for remote communities before dangerous buffel-fuelled fires threaten lives and communities. For example:

- Identifying which communities are at most risk
- Increased firefighting equipment and emergency response capability
- Fire prevention and mitigation strategies such as fire breaks around at-risk communities, houses and infrastructure

Important places and species can be sheltered from the worst of the buffel grass impacts. Whilst landscape-scale eradication is not possible, significant places at risk can be identified for management, for example:

- Places where buffel grass where there are isolated patches of buffel grass that can be removed before it becomes widespread
- Ecologically important areas and habitat for at risk species
- Important cultural sites which hold history, knowledge for future generations, and support cultural practices.

Research and mapping

Research into solutions and knowledge gaps can better inform land managers, fire management, help identify priority places and Prioritise and fund research gaps such as:

- Fire behaviour and management in light of buffel-fuelled changing fire patterns
- Biodiversity impacts and mitigation strategies
- Mapping buffel grass spread and prioritising areas for buffel control and prevention
- Buffel grass control strategies including biological controls

Mapping where buffel grass will help identify priority places for fire risk management, prevention of spread, at-risk species and biodiversity impacts. Methodology is available to achieve this, as a leader in buffel grass management in Australia, the South Australian government should call for a national mapping program.

Appendix 1: Buffel Bulldozer: the invasive grass burning through Australia's landscapes and putting lives at risk

BUFFEL BULLDOZER

The invasive grass burning through Australia's landscapes and putting lives at risk



Arid Lands Environment Centre

Acknowledgement of Country

The Arid Lands Environment Centre acknowledges whose country we are on, here in Alice Springs, Mparntwe, Undoolya and Ilpeme.

We are a place-based organisation, embedded in our community and are a lead advocate for environmental justice across the arid lands. Our advocacy work speaks up for the central desert region inclusive of many different countries and language groups, not only in the Northern Territory, but also across state borders.

We acknowledge the ongoing, relentless and courageous leadership shown by First Nations people in the fight to keep their Country healthy. Buffel invasion is an environmental injustice and it is First Nations communities that are disproportionately impacted, affecting connection to Country, cultural practices, intergenerational knowledge sharing and the public safety of remote communities. Further, it is often First Nations ranger groups that are left to deal with a problem they did not create whilst balancing other land management priorities and custodial responsibilities.

We pay our respects to all those who are grieving the losses and changes to their Country, and those that are still fighting for justice. The resistance to colonisation here comes in many forms. This always was and always will be Aboriginal land. Sovereignty has never been ceded.

Thank you to the Central Desert community

Buffel grass is an unwanted obsession across Central Australia as it has disrupted the balance, colour and sounds of the desert. We would like to recognise the community of Mparntwe Alice Springs as well as countless communities across the central deserts, who have relentlessly pushed for action on buffel grass for decades. A special thank you to all the passionate Alice Springs Landcarers, ranger groups, gardeners, volunteers and many others who have diligently and tirelessly voluntarily, removed buffel grass, bringing delight in the returning wildflower blooms and supporting river red gums to continue to stand tall. This commitment has provided enduring hope for others and the next generation to continue to learn about and care for the amazing arid lands.

We acknowledge all corners of the community, from traditional custodians, artists, researchers and rangers to tourism operators, birdwatchers and runners, impacted by and raising the alarm on buffel grass.

In addition, we thank everyone that provided case studies, as well as Purryburry Trust for supporting the funding of this report.

Suggested citation

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Buffel basics

A national crisis

Buffel Grass is already found in every mainland state and the NT. Buffel grass is entering the Victoria Mallee and Ikara-Flinders Rangers, and has already spread across huge areas of Central Australia; many of Australia's ten deserts, across the Pilbara; on the edge of the Kimberley; and is the greatest weed threat in both, Kati Thanda-Lake Eyre and Uluru- Kata Tjuta National Park.

Costs are 60X greater than its benefits

According to an NT economic analysis, the costs of management, fire risk, biodiversity loss, cultural site degradation and scenic amenity decline far outweigh the benefits.[1]

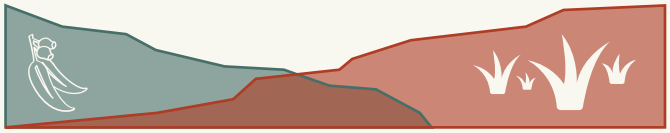
>50%

Continent at risk

At least 50 percent of the Australian continent is at risk of buffel grass invasion under future climate predictions.[2]

Changes soil chemistry

Buffel grass changes soil chemistry to invade diverse soil types, including river systems, flood plains, hillsides, sand plains and sand dunes.[5,6]



Land clearing by stealth

Buffel burns hot and is the first to come back after fire. Old-growth habitat, corkwood, mulga and gidgee woodlands are destroyed through fire, and replaced by a fire promoting buffel monoculture.[7,8]

2-5X

Fuel load promotes fire

More frequent, intense and continuous fires are promoted across buffel grass invaded landscapes. Buffel spread creates two to five times the biomass of native landscapes, creating the conditions for changed fire regimes.[3,4]

31+

Threatened species and ecological communities.[9]

28+

Indigenous Protected Areas are put at risk.

16+

Jointly managed national parks impacted.

Landscape transformer

Buffel grass transforms biodiverse and complex river systems, mulga woodlands, spinifex grasslands and glades of wildflowers into simplified landscapes of buffel grass.[5]

Buffel fires will increase emissions

Old-growth trees across millions of hectares of the arid and semi-arid lands will be replaced by a fire promoting grass, releasing more carbon into the atmosphere.

Climate change will make the problem worse

Climate change will further fuel buffel grass fuelled fires, and will aggressively push buffel grass into South Australia, Victoria and southern Western Australia.[10,7]

Impacts on First Nations Culture

Buffel grass replaces bush foods, impacts cultural sites, affects Indigenous connection to Country and intergenerational cultural knowledge sharing.

An unaddressed crisis

Buffel grass is still allowed to be planted in all states and territories except South Australia.

A risk to public safety

Buffel grass is smothering towns like Mparntwe Alice Springs, remote communities, and homelands, creating a significant fire and human safety risk.

Recommendations

The following 16 recommendations are a starting point to taking urgent and proportionate action to address the buffel grass catastrophe across this continent. It includes policy, research, coordination and on-ground management opportunities.



Image credit: Alex Vaughan

Strategy & Governance



Declarations & bans

- Declare buffel grass as a weed of national significance.
- List as a standalone Key Threatening Process under national environmental laws.
- Ban planting, importing, buying or selling seed.
- Declare buffel grass a weed in all impacted jurisdictions.



Coordination

- Appoint state and territory buffel grass coordinators.
- Align environment, fire, roads, and crown land agencies.
- Develop a national buffel grass strategic plan.
- Appoint national buffel grass coordinators.

Research & Policy Reform



Research & fire safety

- Research into buffel grass fuelled fires, changing fire patterns, risk mitigation, and public safety.
- Prioritise and fund biological control research (including in home range and local agents).
- Fund a Threat Abatement Plan for threatened species conservation and ongoing research.



Biosecurity reform

- National Biosecurity Reform to ensure that decisions are evidence-based and made in the public interest. Including addressing buffel grass as a health, economic, environmental and cultural issue and not just as an agricultural consideration.

Implementation & Delivery



Mapping & guidelines

- Deliver a national mapping program.
- Publish best-practice weed and fire management guides.



Land management

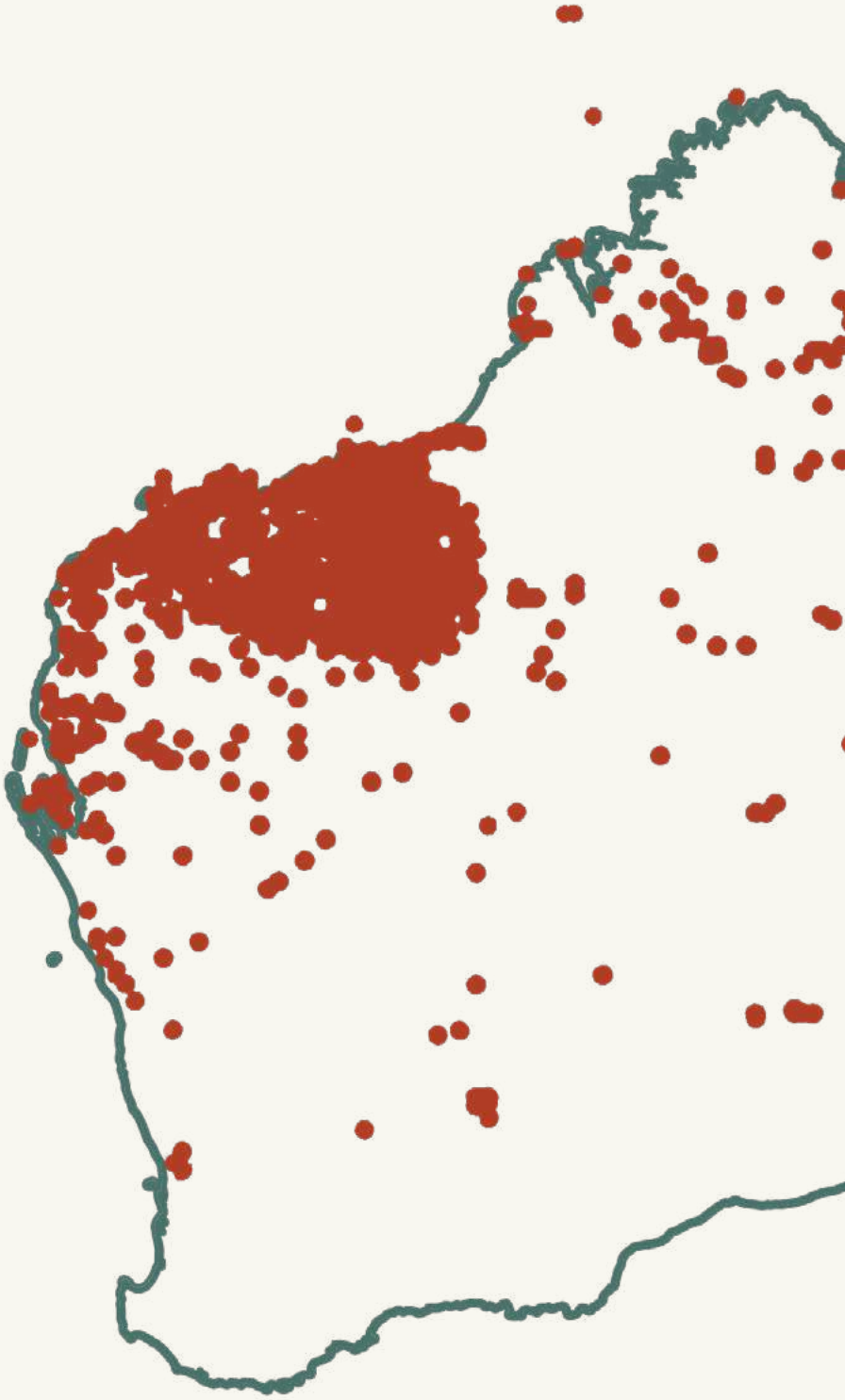
- Fund First Nations rangers for frontline control.
- Adequately fund and support on ground buffel grass management.

- Commonwealth recommendations
- State and territory recommendations

A national crisis

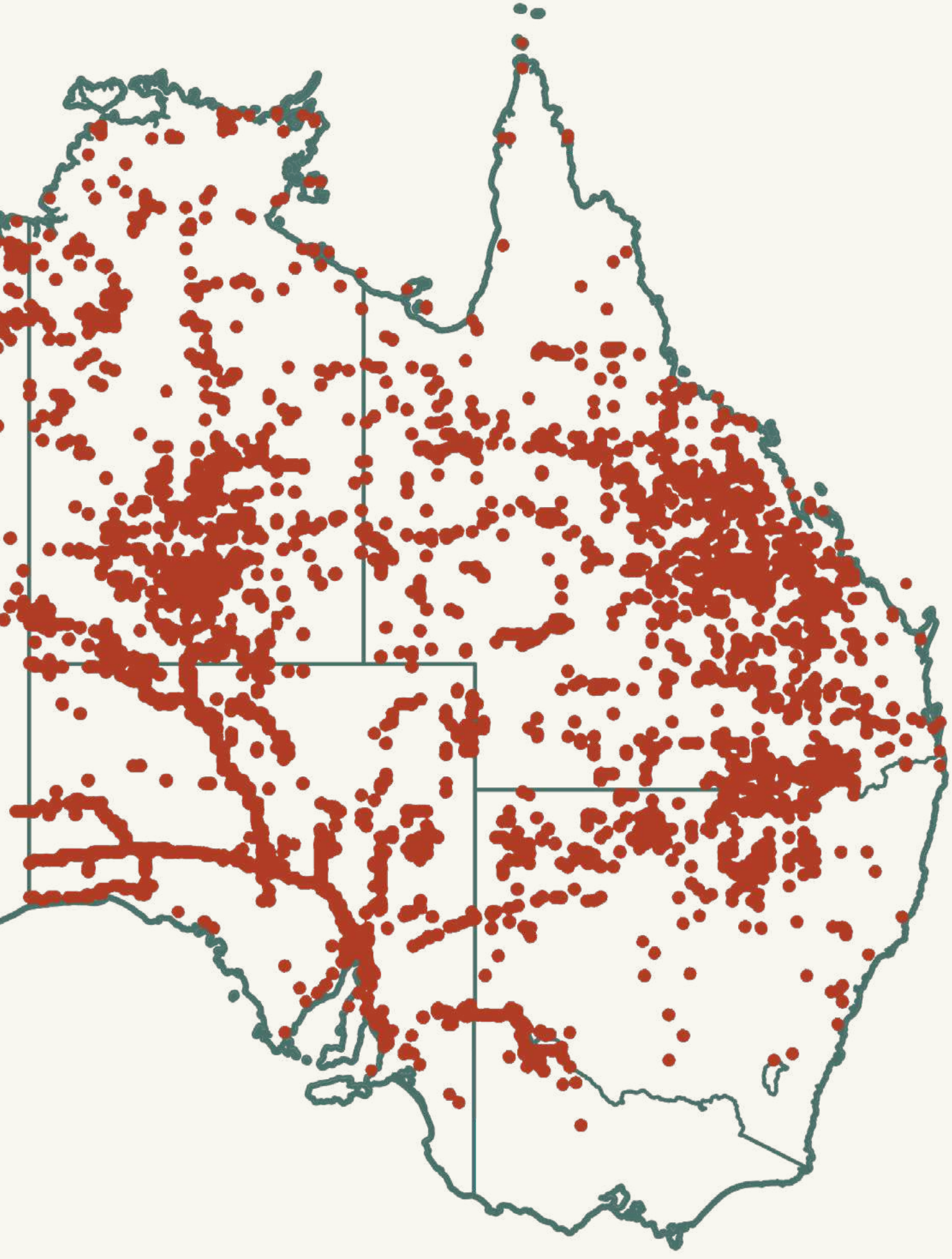
Buffel grass is a catastrophe across the Australian continent, because the Australian Government, state and territory governments, the CSIRO and pastoralists, intentionally spread and planted buffel grass at scale across inland Australia. Planting at scale has been promoted for many decades. In 2026, all mainland states (except South Australia) still allow buffel grass to be spread and planted, continuing to make the problem worse.

The intentional spread of buffel grass is rooted in colonial logics which viewed healthy, cultural landscapes across this continent as empty and in need of “improvement” to be made “productive”. This spread of buffel grass at scale, drastically altered and transformed vast arid and tropical semi-arid environments across inland Australia and there have been significant economic, environmental and cultural impacts as a result.



Each red dot represents a sighting of buffel grass via government surveys or citizen science. A national mapping program for buffel grass has never been funded, so we do not yet know the true spread of buffel grass. It is likely far wider than is depicted in this map.

Image credit: Atlas of Living of Australia, 2026



Introducing Australia's Hidden Environmental Catastrophe

Buffel grass is one of the world's worst environmental weeds and a growing national crisis impacting huge parts of inland Australia.



Buffel fire with kites

Image Credit: ©Mike Gillam

Buffel grass is a silent, flammable, environmental catastrophe marching across Australia. It thrives in arid and semi-arid environments, which make up 70% of Australia, presenting a threat to both the natural and human environments where we live.[11]

Vegetation along inland rivers and creeks, mulga woodlands and native grasslands are disappearing under a tide of buffel grass, a monoculture. Stands of 500-year old river red gums have burnt to blackened posts, biodiversity erased, landscapes transformed and dozens of threatened species are at risk of extinction.

Buffel grass is a threat to public safety. It is extremely flammable and is fuelling more frequent, more intense and more continuous landscape-scale fires. Burns that are made even worse in the context of climate change.



First Nations people living across buffel infested areas grieve the loss and damage to their Country. This damage has significant impacts on health, culture and intergenerational knowledge. As the Umuwa Statement on buffel grass says “Older people mourn for the Country that used to be.”[12]

Dealing with buffel grass is back breaking work. Mowing, fire breaks, hand-pulling, preserving tracks; this is work that land managers, businesses, conservationists, national parks, First Nations people, local councils and tour operators are all doing. In ground zero for buffel grass, Mparntwe Alice Springs, where the Arid Land’s Environment Centre is based, people – many volunteers – work hard to beat back buffel because they are proud of Central Australia’s natural beauty. Other regions in Australia still have time to avoid these challenges.

The books don’t stack up. Buffel grass costs the Northern Territory 60 times compared to perceived benefits. As a recent Northern Territory Government commissioned Economic Report on buffel grass states: “Pastoral benefits accrue almost entirely to private operators, while fire, biodiversity, cultural, and scenic amenity costs are borne predominantly by public agencies, Traditional Owners, conservation bodies, and the broader community”.[1]

We all lose as buffel grass continues to be spread by Governments and pastoralists across this continent. We are talking about the risk of fatalities, extinctions and the loss of long standing cultural practices. Buffel grass invasion is an existential threat. We need to work together to forge a new path and a positive vision for inland Australia that isn’t just a sacrifice to fire and fodder. This is a line in the sand to stop pouring further fuel on the buffel grass fire.

Now it is time for Governments across this continent to work with land managers, rangers, conservation groups, health advocates, tourism and affected communities to chart a new national course for the landscapes and communities across inland Australia. Buffel grass solutions are within our grasp.

What is buffel grass?

Buffel grass (Cenchrus ciliaris, C. pennisetiformis and any new varieties or strains) is perennial tussock grass, native to tropical and subtropical arid areas of Africa, Western Asia and Indonesia. Buffel has a rapid growth rate, is drought, fire and grazing tolerant and spreads via seed dispersal and germination of seedlings after even small amounts of rainfall in the arid and semi-arid zone.[5] It is a very hardy and resilient plant. Unlike most other species, with sufficient moisture, buffel grass germinants can grow and set seed in 3-6 weeks ensuring its spread and growth is rapid.[13] Germination may also occur after wildfires, while even minor soil disturbance, such as stock movement, can also prompt germination.[13] Buffel seed typically spreads via waterways, roads, railways, stock or human intervention.[13] Spread really accelerates after high rainfall booms in the desert, which are becoming more common with climate change.[14] Once established, buffel dominates light and space and threatens to totally cover and "monocrop" entire landscapes.[15] Buffel has seriously deep roots that help it persist year to year.[16] The qualities that make it so resilient and hardy, are the same qualities that ensure it is a problematic environmental weed capable of catastrophic landscape transformation.



Image Credit. Alex Vaughan



Kalka buffel roadside invasion

Image Credit: ©Mike Gillam

Why is buffel grass here?

Buffel grass is a crisis across the Australian continent, because the Australian Government, state and territory governments, the CSIRO and pastoralists, intentionally spread and planted buffel grass at scale across inland Australia for decades. The intentional spread of buffel grass is rooted in colonial logics which viewed healthy, cultural landscapes across this continent as empty and in need of "improvement" to be made "productive". This spread of buffel grass at scale, drastically altered and transformed vast arid and sub-tropical environments across inland Australia.



The characteristics that make buffel grass desirable as a pasture grass; high growth rates and tolerance to environmental stress, also make it highly invasive. Buffel's highly invasive characteristics were likely known to those who introduced it, as 91% of species developed by agribusinesses are listed as weeds.[17] The spread of pasture plants beyond trial plots was viewed as an indicator of their value as pasture grasses.[18] The deliberate spread and planting of buffel grass is part of the story of the colonisation of northern Australia and century-long motivations to 'develop the north'. Buffel is described as one of the 'four B's' that allowed pastoralists to transform arid and semi-arid regions into areas suitable for pastoral activity, alongside 'barbed wire, bladeploughs and Brahmans'.[19]

For the past 50 to 100 years buffel grass has been deliberately planted by pastoralists and government agencies across Australia.[20,5]

The Commonwealth Scientific and Industrial Research Organisation (CSIRO), government departments, pastoralists and soil scientists played a role in the landscape scale introductions of buffel grass by planting it for pasture grass trials and dust suppression.[21,5] For example, the Northern Territory government planted buffel grass across southern NT pastoral stations from the early 1960's as a hardy and drought resistant plant.[22] There were 31 pastoral stations between Tennant Creek and the NT/SA border that participated in these trials between 1961-1971.

Buffel grass was also intentionally planted in Western Australia to 'restore' soil stability at mining sites ultimately having the opposite effect by transforming them into fire fuelling buffel grasslands.[5]

The key threats



Charles Creek in Mparntwe Alice springs in 2011
Image Credit: ©Mike Gillam

Firestorm

Buffel grass fuels fire

Hotter, larger and more frequent landscape-scale fires are one of the most serious impacts of buffel grass invasion. Buffel grass is changing fire regimes across the arid and semi-arid lands transforming unique, colourful and biodiverse landscapes into fire promoting buffel grasslands.

Changing fire patterns is an existential threat to native plants (and subsequently animals) which have not evolved to withstand the frequency and intensity of buffel grass fires. A 2021 study showed that one fire event in Tjoritja West MacDonnell Ranges destroyed 54% of large river red gums, with the remainder losing 79% of their canopy.[7] This is significant as river red gums (*Eucalyptus camaldulensis)* are some of the best hollow bearing trees in Central Australia. This iconic eucalypt species can live for centuries, are drought, natural fire and flood tolerant, but they are not resistant to buffel grass fuelled fires.





Buffel fuelled fires on the edge of Mparntwe Alice Springs in 2023.

Image credit: Alice Springs Volunteer Fire Brigade.

Buffel grass recovery and rapid growth after a fire event gives it a competitive advantage as it regenerates faster than native grasses. A fast growth rate gives buffel grass a head start over native plants and trees, allowing the weed to compete and win nutrients and water when native plants and trees are young and susceptible to competition. Also, recently burnt ground is perfect for buffel seeds in the area to germinate, so fires can open up new areas, into which buffel grass expands.

Native plants and healthy soils are the basis for thriving deserts that we know and love across inland Australia. This includes spinifex hummocks, native grasslands and mulga and gidgee woodlands for insects, reptiles, birds and mammals, and hollow bearing trees for birds. Spinifex is being replaced by buffel grass, and river red gums are being destroyed by hot and frequent buffel grass fuelled fires. The critically endangered night parrot, the rarest and most elusive parrot in Australia, relies on old growth spinifex for shelter and nesting.[23] The Australian government acknowledges that buffel grass invasion puts the night parrot's habitat at risk and could lead to its extinction.[24]

In short, after fire, where there once was native grasses, wildflowers, mulga trees and eucalyptus seedlings, there is rapid buffel grass growth which suffocates the arid lands of Australia. This post-fire buffel grass invasion increases biodiversity loss and creates a monoculture of buffel grass.

In the last 5 years, national highways have been shut due to buffel grass fires, housing structures have been destroyed in Mparntwe Alice Springs, the iconic Larapinta Trail has been closed, and major buffel grass fires have occurred. During the 2023 winter in Central Australia, when temperatures could have been sub-zero, Alice Springs was surrounded by fire and ash was falling from the sky.[25]

Catastrophic fires have occurred at significant places and international tourist destinations – Watarrka National Park (Kings Canyon area) in 2021 and Tjoritja/West MacDonnell Ranges National Park in 2019, 2023 and 2025. Both of these national parks are inundated by buffel grass. Tjoritja/West Macdonnell Ranges National Park experienced its worst fire event in 2023 when approximately 50% of the entire park was burned.[25]

Hawaii fires

A sombre warning from across the Pacific

The world watched on in horror when a deadly grassfire spread across Maui in 2023. After the smoke had cleared and an investigation had begun into its cause, it was discovered that this fire was fuelled by invasive grasses, including buffel grass, and resulted in the death of at least 102 people.[26] Similar to Australia, fire-promoting buffel grass has invaded large parts of Hawaii, with researchers noting that growth is occurring rapidly after rain, creating a highly flammable fuel load and risk.

This fire was devastating. It took lives and property, and extensively damaged animal habitats. Buffel grass has one of the highest fire risk ratings of all invasive plants in Hawaii. This tragic event is a warning to Australia on the impact of buffel grass to human life and natural habitats.



After the fire at Lahaina on Maui, Hawaii, that resulted in over 100 fatalities.

Image credit: Deanne Fitzmaurice for NPR

Buffel grass is a threat to human lives

Buffel Grass is a huge fire risk for people, homes and infrastructure.

In March 2023 a home and several dwellings were destroyed in buffel grass fires in Mparntwe Alice Springs. This fire is sadly a snapshot of the realities remote and regional communities face if the buffel grass threat is not managed and resourced. Many communities across Central Australia are surrounded by dense infestations of buffel. The larger and hotter wildfires are a risk to human life.

Across impacted areas, residents, local governments, rangers and local fire authorities already conduct a huge amount of work to protect people and property from the threat of buffel fires.

The public safety risks do not stop at fire. Buffel grass severely reduces accessibility and visibility compounding risks such as snakes and missing persons - particularly when considering elderly people and children.



Buffel Grass Fires in Mparntwe Alice Springs in March 2023.

How does buffel grass fuel fires?

Massive fuel loads and quick regrowth causes intense, hot, and frequent fires in buffel grass dominated landscapes.

Buffel grass produces between two to five times more fuel load than native grasses, with potentially deadly outcomes across the arid lands. This additional combustible material produces more fuel for more frequent and hotter fires. A buffel grass fire can reach 7.5 metres in height, with fire temperatures being recorded at nearly 900°C.[27,3]

River beds formerly acted as natural fire breaks, but are now filled with highly flammable buffel grass. This is transforming creeklines and floodplains into channels for a buffel grass fire to move through, instead of forming a natural fire break to protect the landscape. This is contributing to larger and more impactful fires across the landscape.

With climate change driving more frequent periods of extreme heat, as well as changes to rainfall patterns, natural fire patterns across Australia are changing, and buffel grass threatens to add further fuel to inland Australia firebombs. Climate change and buffel grass compound to create conditions for unpredictable, extra hot, frequent fires. Large catastrophic fires can occur any time of year in buffel invaded areas and are no longer restricted to periods after above average rainfall.

The following table shows how frequently native vegetation burns in normal fire cycles, in comparison to buffel grass could burn unpredictably and outside of normal fire seasons depending on rainfall. For example, there have been three major fires in the West Macdonnell ranges in the past seven years, significantly more than what is expected to the plant communities in the area.

Vegetation Type	Fire Frequency
Spinifex grasslands	5 to 30 years (longer in the south)
Tussock grasslands	15 to 40 years
Acacia shrublands	20 to 50 years (much longer in the south)
Arid woodlands and shrublands	20 to 100 years (much longer in the south)
Saltbush shrublands	More than 50 years

Table 1. Typical fire frequency for different vegetation types across the arid and semi-arid lands.[28]

Buffel grass is a fire bomb that will keep getting worse if we do not address this problem head-on. Buffel grass invasion not only presents a risk to nature but to human life, housing and livelihoods. Comprehensive and proportionate action must be taken to prevent a fire disaster like what occurred in Hawaii in 2023.



Buffel Grass creates a monoculture and huge fuel loads.
Repetitive fires clear the landscape.

Image credit: ©Mike Gillam



Several river red gums destroyed from one buffel grass fire, all the green shoots resprouting post fire is buffel grass.

Image credit:Alex Vaughan

The perfect invader

How buffel grass suffocates inland Australia

Buffel grass is perfectly evolved to invade. It is hardy, resilient and quick growing, these characteristics help it succeed in its home range, but in the home range there are large animals and insects and other plants that keep it in check. But without any natural enemies, it is a ruthless invader in places it doesn't belong, like Australia.

Buffel grass is allelopathic – it releases chemicals into the soil to suppress the growth of other plants, as well as actively alter the soil chemistry to suit its own growth. Buffel grass reduces the amount of nitrogen in the soil and the minerals available, inhibiting the growth of native plants.[8]

It can germinate within 10 days after rain and set seed within 3-6 weeks.[12] This is a much faster rate than native plants and grasses, which by the time of germination, are suffocating under a mass of buffel growth.

This rapid growth cycle means that it can quickly dominate the competition for space and nutrients and water. Grasses, groundcovers, shrubs are cut off from the essentials and die. Not only are groundcover plants overcrowded but seedlings of large trees like river red gums don't get the chance to grow to adulthood.

At a landscape scale, as is being witnessed in Central and South Australia, it is driving ecosystem collapse.

Buffel Grass the Bulldozer

Driven by fire and its highly invasive characteristics, buffel grass is land clearing by stealth. It is destroying flourishing, diverse and healthy environments turning them into almost nothing but buffel grass wastelands.

- Kills ancient trees and fire resilient plants through extra hot and frequent fires
- Burns then replaces native vegetation and scale
- Outcompetes and crowds out native plants
- Grows back faster than native plants after disturbance, not even giving them a chance
- Chokes riverbeds and floodplains which are normally biodiversity hotspots



The buffel grass in green is the first plant to resprout post fire.

Image credit: Alex Vaughan

The real costs of buffel grass

Buffel grass impacts many sectors and pillars of the community. Through fire, smoke, overgrowth, the labour required to remove it, and damage to ecosystems, buffel grass affects the economy in multiple ways. These sectors bear an economic burden caused by the ongoing spread of buffel grass, largely without recognition of the impacts or support.

Economics	Buffel grass is major economic cost. A recent Northern Territory Government commissioned Economic Report highlighted that buffel grass has a cost of 60 times compared to its pastoral benefits.[1]
Environment	Resources for conservation efforts by national parks, rangers, local councils, traditional custodians, landcare groups and private land owners.
First Nations culture	Access to bush foods/medicines and associated economies and ranger resources.
Health services	Buffel grass impacts the cultural determinants of health for First Nations communities, as well as social and wellbeing impacts for all communities. Buffel grass also promotes allergies from pollen and smoke, and is an additional drainage on health resources due to fire and smoke impacts.
Tourism	Businesses and tourist destinations are impacted through fire risk, smothered sites and disappearing hiking trails.
Public safety	Buffel grass in towns and around remote communities presents an extreme fire risk.
Infrastructure and supply chains	Buffel grass surrounds communities and lines transport corridors presenting a fire risk to important supply chain routes such as the Sturt Highway.
Local governments	Resourcing and labor for buffel grass management to mitigate fire, public safety and environmental risks.
Emerging economies	Buffel grass suppresses and chokes the land, inhibiting opportunities in carbon, conservation and bushfoods.

Buffel grass is disproportionately a major economic cost for communities, governments and industries in impacted regions. The Northern Territory Government's commissioned Economic Report states that: "Pastoral benefits accrue almost entirely to private operators, while fire, biodiversity, cultural, and scenic amenity costs are borne predominantly by public agencies, Traditional Owners, conservation bodies, and the broader community".[1]

The value of healthy country and the flow on impacts to economies, wellbeing and the public good outweigh any economic benefit brought by its use in the cattle industry. Addressing the holistic impacts of buffel grass and the widespread cost is key!

In 2026, it must be reckoned that inland Australia is not a sacrificial zone for cattle. We must listen and learn, taking comprehensive and coordinated action on buffel is an important step to address this historical harm.

Colour and life of the desert at risk

Australia is home to unique animals and plants that aren't found anywhere else on earth. Buffel grass is listed as a threat to at least 31 species under federal environmental legislation and at least 28 Indigenous Protected Areas are at risk.[9] These lists will only grow if urgent, strong and strategic action isn't taken to mitigate buffel grass impacts and slow its spread.

The arid lands of Australia should be noisy, breathing, diverse and colourful, not left to become a buffel wasteland. The arid or semi-arid regions of Australia - where buffel grass could thrive - makes up 70% of Australia.[11] This encompasses inland Australia, reaching from Western Australia to the eastern states. Buffel grass is already found in all mainland states and territories and has the capability to take over in all of these regions, turning these refuges of biodiversity into buffel grass monocultures.

Buffel grass is listed globally as one of the main invasive species impacting nature in deserts and arid shrublands, temperate grasslands and cultivated areas.[29]

Governments in Australia have long been aware of the lurking threat of buffel grass. Pastoral industry lobbying and flawed biosecurity policies which prioritise agriculture over healthy ecosystems have led to a stalled policy response.

How does buffel grass threaten native species?

The invasive and fire-fuelling characteristics of buffel grass threaten the survival of the unique plants and animals found in the arid regions of Australia. Birds of prey can no longer hunt because the buffel grass is too dense. Mammals that rely on the open space between shrubs to see their food can no longer find it. Trees that have hollows in which birds nest die from fires, or don't get the chance to grow long enough, typically over 100 years, to develop a hollow.

A study published in 2026 showed that buffel grass affects entire animal groups, such as ants, reptiles, and birds, across a range of habitats.[30] Animals that can only eat certain things - those with specialised diets - are impacted the most because when buffel grass takes over their food source, they can't eat anything else. One example of a fussy eater is the dusky grasswren. The researchers looked for grasswrens in buffel grass invaded and buffel grass free areas. They found grasswrens in buffel grass free areas; where there was buffel grass, there were no grasswrens.

Buffel grass transforms landscapes, draining them of life and colour. Animals and plants across inland Australia are at risk, but there is hope, opportunities and solutions available.





Landscapes at Risk: sandplain Country with Desert Oaks and Parakeelya.
Image Credit: ©Mike Gillam

Case studies

Species at stake

Princess Parrot

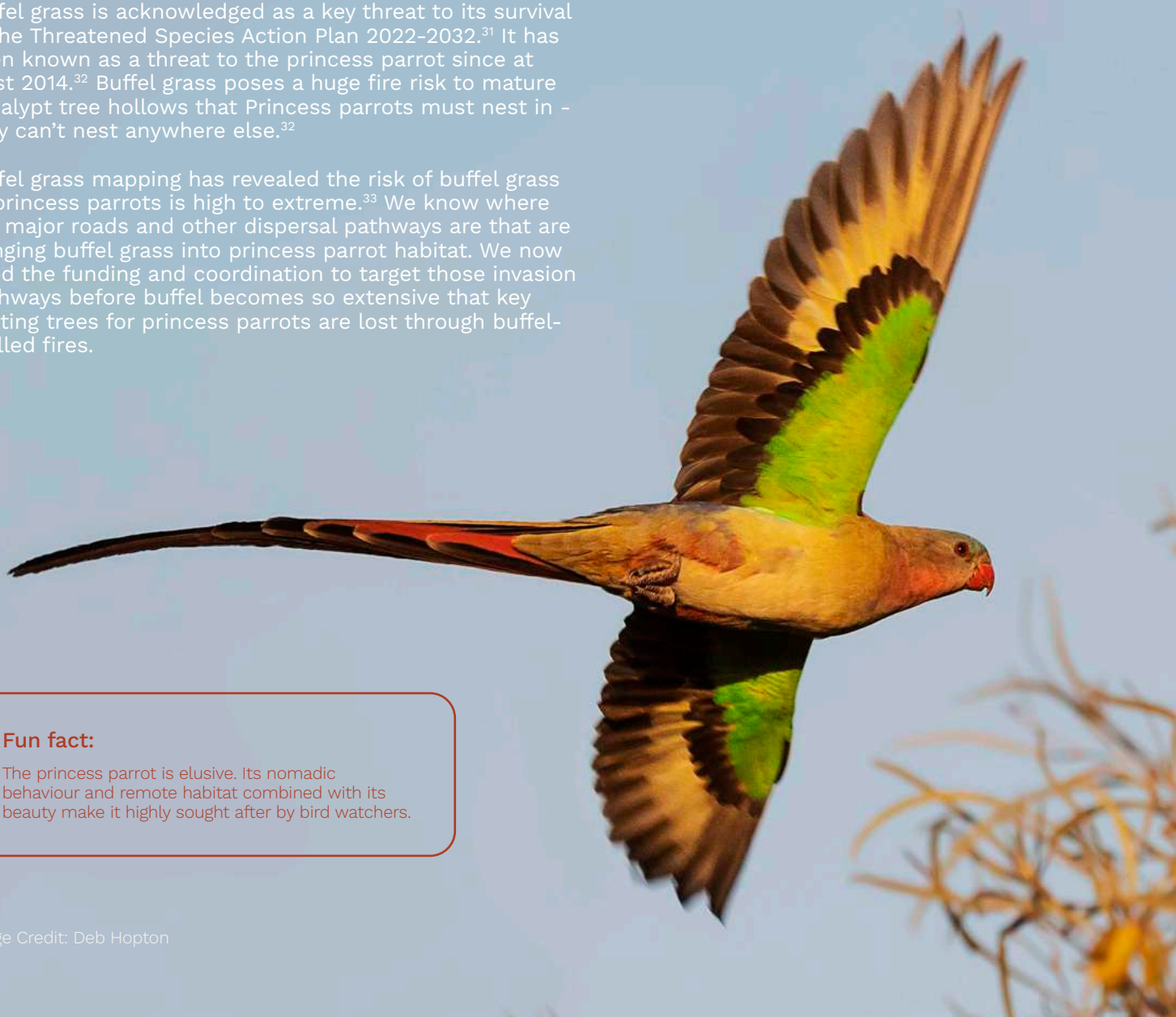
Polytelis alexandrae

One of Australia's prettiest parrots

The princess parrot is endemic to inland Australia meaning it can't be found anywhere else on earth. This desert parrot has had its habitat invaded by buffel grass in the arid lands of the Northern Territory, South Australia and Western Australia. This parrot is listed as a vulnerable species. While it is a popular household pet due to the male's beauty, the parrots future in the wild is gravely uncertain.

Buffel grass is acknowledged as a key threat to its survival in the Threatened Species Action Plan 2022-2032.[31] It has been known as a threat to the princess parrot since at least 2014.[32] Buffel grass poses a huge fire risk to mature eucalypt tree hollows that Princess parrots must nest in - they can't nest anywhere else.[32]

Buffel grass mapping has revealed the risk of buffel grass to princess parrots is high to extreme.[33] We know where the major roads and other dispersal pathways are that are bringing buffel grass into princess parrot habitat. We now need the funding and coordination to target those invasion pathways before buffel becomes so extensive that key nesting trees for princess parrots are lost through buffel-fuelled fires.



Fun fact:

The princess parrot is elusive. Its nomadic behaviour and remote habitat combined with its beauty make it highly sought after by bird watchers.

Image Credit: Deb Hopton

Plains wanderer

Pedionomus torquatus

The living fossil

The plains wanderer is one of Earth's most genetically unique birds.[34] Its closest living relative is the shorebird, the South American Seed Snipe, but the two are still genetically significantly different.[35] The plains wanderer is the only species within its genus, the end of its evolutionary line.[36] Its evolution traces back to when South America, Antarctica and Australia were attached, 60 million years ago.

The plains wanderer is listed as endangered by the Australian Government. Its remaining populations inhabit inland Victoria, New South Wales and Queensland. They are rare, less than 1000 are left in the wild.[37] The plains wanderer is fussy about its grassy home, it needs certain conditions to be able to eat and breed. It needs short, roomy grasslands, roughly 50% bare ground to easily move around and forage for seeds and insects.[38]

The plains wanderer is extremely vulnerable to disturbance to its grassland habitats and has already lost significant habitat to agriculture and pasture grasses. In Victoria and New South Wales buffel grass is already present in their habitat. Buffel grass grows densely and tall, a nightmare for the plains wanderer and their preference for short, sparse grasslands. If buffel grass is allowed to spread unmitigated into the plains wanderer habitat, it will be a disaster for the globally unique species.

The plains wanderer is just one example of how important it is to intervene before buffel grass spreads further.

Fun fact:

Unlike most birds, the female uses her colours and call to attract a mate. After she lays eggs, the female leaves them with the male to raise and wanders the plains to look for another mate. The male looks after the eggs and raises the young.[36]

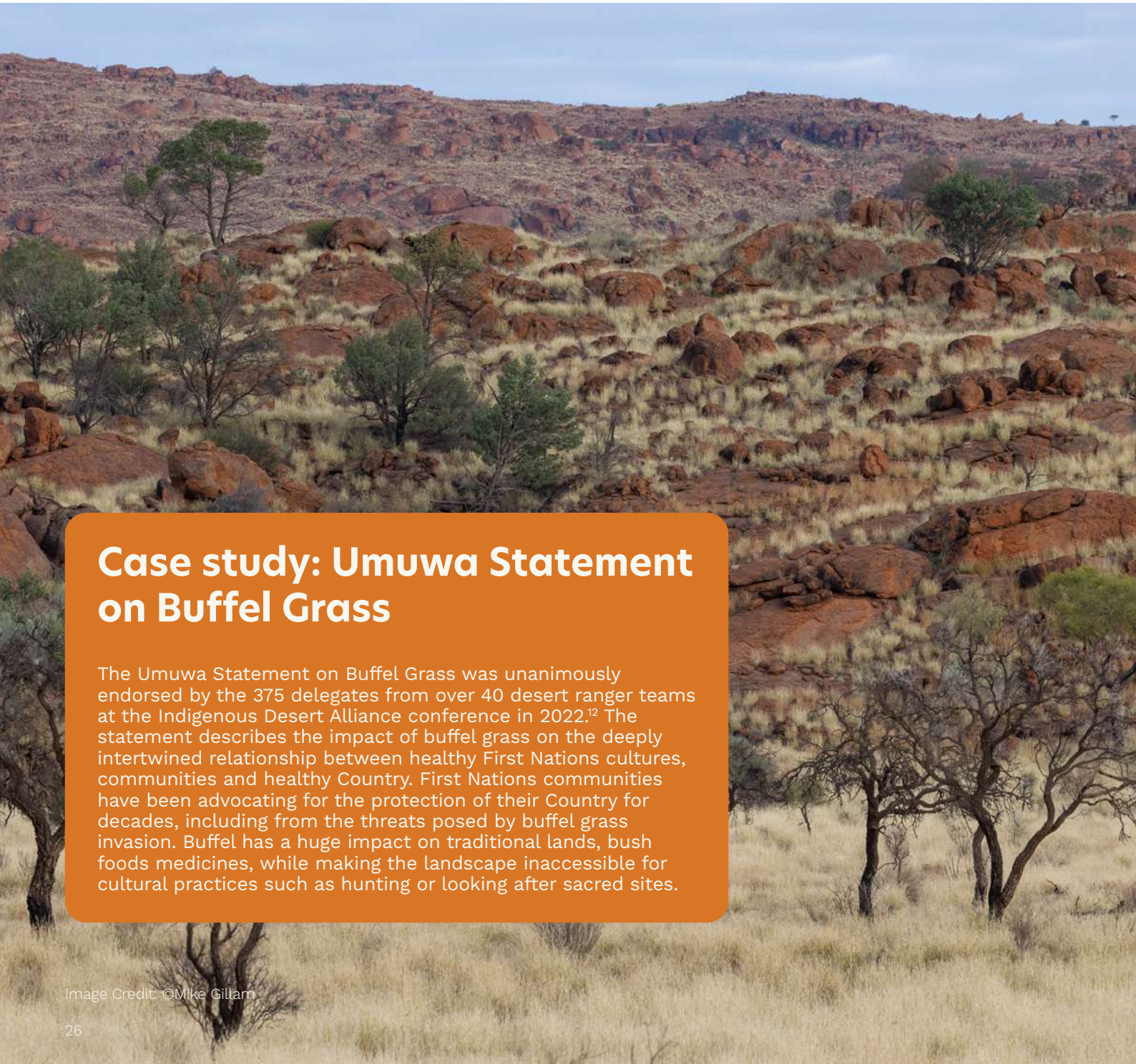


Image Credit: ©David McCorquodale

Devils grass

Buffel grass impacts on First Nations cultures

Buffel has been described as a mamu tjanpi or tjanpi kura (devil grass) in Pitjantjatjara, as a diabolical grass, like a disease, evil, makes people feel sick and something that must be killed.



Case study: Umuwa Statement on Buffel Grass

The Umuwa Statement on Buffel Grass was unanimously endorsed by the 375 delegates from over 40 desert ranger teams at the Indigenous Desert Alliance conference in 2022.[12] The statement describes the impact of buffel grass on the deeply intertwined relationship between healthy First Nations cultures, communities and healthy Country. First Nations communities have been advocating for the protection of their Country for decades, including from the threats posed by buffel grass invasion. Buffel has a huge impact on traditional lands, bush foods medicines, while making the landscape inaccessible for cultural practices such as hunting or looking after sacred sites.

Image Credit: ©Mike Gillam

Key points from the Umuwa Statement

"We can't get bushfoods where we used to. Honey Ant, Malu (Red Kangaroo) and our native plants are getting harder to find. Our wildflowers are disappearing. The Buffel grows too fast and burns too often for our Country."

"Older people mourn for the Country that used to be. The plants and animals, the special and sacred places are covered in Buffel where once many native plants grew."

"We call on federal, state and territory governments to recognise the threat of Buffel Grass to our Country, our culture and communities and do what is needed to stop the march of this weed across our Country."

"It grows right up to our houses, in our backyards and front yards and our kids' playgrounds. Kids can't run around like they used to. The Buffel hides snakes and makes it hard for our old people to get around safely. We can't escape it. We suffer health problems like asthma from the Buffel flowers and the smoke from the fires."

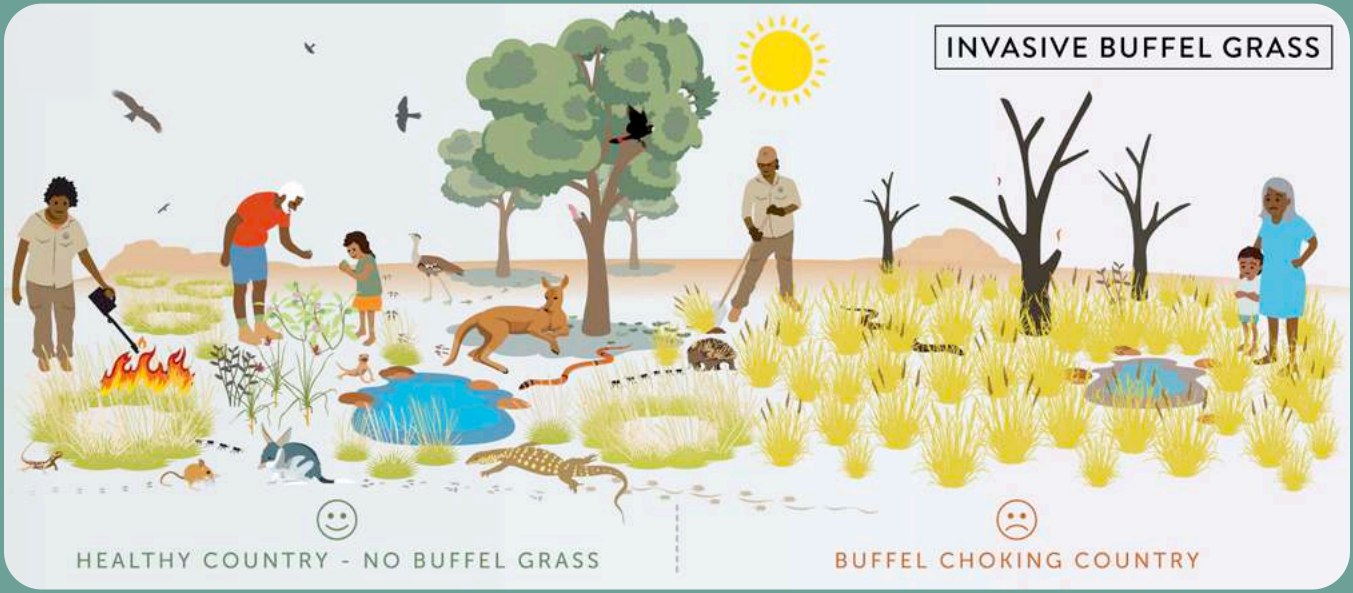


Image credit: Indigenous Desert Alliance

Bush foods

Buffel grass invasion can result in the permanent and irreversible disappearance of bush foods, bush medicines and plants that are culturally important to First Nations people. It hinders hunting because it grows so densely that it is hard to walk quietly through and obscures lines of sight. First Nations people rely on access to bush food to supplement their diet and bush medicine for treatment of colds, flus, skin conditions and other ailments. Bush food and medicine are cultural, the practice of them keeps alive the oldest continuous culture on earth.

Surveys of remote communities in the Northern Territory found that 90% of people ate bush foods every fortnight.[39] The same research also found that 40% of people relied on bush food when faced with financial hardship at or access to grocery stores.[39]

One example is bush onion (Yalka). The bush onion is an important food for First Nations people in Central Australia and has been for many thousands of years. Community members complain of not being able to find bush onion because of buffel grass. The buffel grass grows so densely that either bush onion cannot grow or cannot be seen.

Accessing Country

Buffel grass hinders First Nations people's ability to walk on, rely on, and learn from Country. Locating bush foods or medicine, reading tracks, hunting and learning about Dreaming and Songlines are impacted because buffel grass smothers, crowds and transforms the landscape. It grows so densely that it becomes difficult and dangerous to walk through. It can also smother, burn or crowd out significant places or species.

The "ability of people to visit, gain access to, and engage with their ancestral sites and landscapes is regarded as the most important aspect of healthy Country".[40]

Intergenerational knowledge sharing

Country is where intergenerational knowledge sharing takes place. Buffel invasion has "cascading negative effects on cultural transmission to younger generations and maintaining options for cultural practice".[15] As the authors of the Umuwa Statement on Buffel Grass make clear, "[t]he plants and animals, the special and sacred places are covered in Buffel where once many native plants grew. We can't take our kids out to learn culture, the hunting tracks are covered and the plants that sustained us for thousands of years are disappearing. Our kids are growing up seeing only Country with Buffel Grass and it's getting harder to teach our kids the stories for this Country".[12]

Cultural Burning

Buffel grass invasion is changing the fire regimes across inland Australia, making it much harder for First Nations land managers and custodians to care for Country via cultural burning. Right-way fire in Australia's spinifex deserts is small fires of varying intensity resulting in spinifex mosaics of varying maturity. Wrong way fire is extensive, high intensity fires which lack any mature and long unburnt vegetation.[41]

Right way fire maintains healthy and safe landscapes, preserving biodiversity and keeping fuel loads down. Buffel grass not only threatens this cultural practice but the positive benefits for people and the environment it offers.

Custodial responsibilities

Caring for Country is a responsibility in First Nation's cultures. The spread of buffel grass jeopardises First Nations conceptions of healthy Country which is an important feature of healthy communities and culture. Healthy Country involves "regularly visiting, cleansing, and looking after sacred sites, performing ceremonies and teaching young people traditional knowledge of Country, language, law and culture".[42]

While many First Nations land managers see their work as providing valuable opportunities to fulfil responsibilities to their traditional lands, they may also experience the work of managing invasive environmental weeds as culturally unfulfilling and detracting from other important tasks. Managing buffel grass on First Nations protected areas can take up time custodians also need for cultural practices and fulfilling traditional responsibilities of custodianship.



Image Credit: Ernabella Arts made the "Buffel grass kills kills Country" and "Buffel grass makes country sick" stickers, and Walkatjara Arts made the "Buffel Grass is Killing Culture" sticker



Camille Dobson

"We don't have a big mine in our backyard - we've got a silent killer. Buffel grass doesn't know fences. It's blown by the wind, washed by the rain, spread in people's cars. It's killing our country."

"Our rangers are a tiny team of underfunded people, expected to deal with a problem that's everywhere. It's an act of cultural genocide. We're losing language, because the animals, plants and insects that are part of our stories are disappearing."

Camille Dobson is an Eastern Arrernte (eastern Mparntwe/Alice Springs) woman who advocates for preserving her language, Country and culture. Camille has witnessed buffel grass take over significant sites and plants on her Country.



Anna Dakin, Art Tours of Australia

"Buffel grass is strangling Central Australia, and I'm embarrassed. People travel here for the beauty of the landscape and its unique ecosystems, and what they find is a landscape gasping for breath."

"Buffel grass increases the bushfire risk due to how the grass burns. Bushfires in remote areas pose a risk to life. This increased risk to life on tour has led me to change my itineraries and business operations."

Image: Buffel grass on the Larapinta Trail post-fire. The Larapinta Trail is one of Australia's best multi-day hikes, but buffel grass is invading vast sections of the trail, contributing to trail closures, evacuations and impacting visitor experience.

Tourism industry at risk

Central Australia's buffel grass invasion is a warning bell for the rest of the Country. In Central Australia, tour companies educate guests on the impacts of buffel grass as they take them to iconic sites like Uluru and Kata Tjuta. The life and colour of the deserts that people come from all over the world to see is disappearing.

Tourism makes up $1.2 billion of the NT economy.[43] In Central Australia, the unmitigated spread of buffel grass has affected the tourism industry by causing the closure of the Tjoritja/West MacDonnell Ranges National park, the Larapinta Trail and Watarrka National Park, causing the cancellation of tours during buffel-fuelled fire events, and affected visitor experience by the presence of scorched sites or emergency evacuations.

The world famous Larapinta Trail is frequently overgrown and massive efforts are undertaken to open it every year to keep walkers, runners and tourists safe. In recent years there have been delays in opening the Larapinta trail for the season because of the overgrown state of trails.

One of the most iconic images of Australia often features an invasive weed. What should be an example of the most pristine natural wonders in Australia is, in fact, surrounded by an invasive grass instead of the wildflowers, native grasses and desert bloodwoods which belong at the base of Uluru.



Stride Resources workers (pictured) at Uluru in the Northern Territory. Stride Resources have done phenomenal work across Central Australia, managing buffel grass across key sites, including Uluru, Watarrka, Palm Valley and Tjoritja.

Image Credit: ©Mike Gillam

Climate change creates a perfect storm for buffel grass invasion

The climate crisis threatens to not only accelerate the spread and invasion of buffel grass to more places across this continent, but also intensify the impacts to land and people.

Due to climate change, buffel grass is predicted to be suitable to spread across an extra 20 percent of the Australia Continent. In addition, climate change is predicted to speed up buffel grass spread to southern parts of the continent in Victoria, South Australia, Western Australia and New South Wales.[44] As a result, greater impacts are predicted to temperate woodlands and south-eastern forests, and more places within the National Reserve System are predicted to be impacted.

Buffel fires will increase emissions: old-growth trees across millions of hectares of the arid and semi-arid lands will be replaced by a fire promoting grass, releasing more carbon into the atmosphere. The scale of the problem across the continent, and the potential of buffel grass to invade more and more woodlands across this continent is an additional emissions challenge.

Buffel grass invasion also risks decarbonisation initiatives. The presence of buffel grass should inhibit the use of carbon offsets, as in areas with buffel grass present, offsets are not permanent or real.

More intense rainfall

Across central and southern Australia, climate change is predicted to increase more intense rainfall, leading to an increase in buffel growth.[45]

Increased fire weather

Buffel grass is predicted to adjust well to higher temperatures and maintain its fire-promoting and invasive characteristics, as fire burns and clears native species.[44]

Buffel grass takes over

Fire provides buffel grass with more space to grow and give it a chance to bounce back before native species.

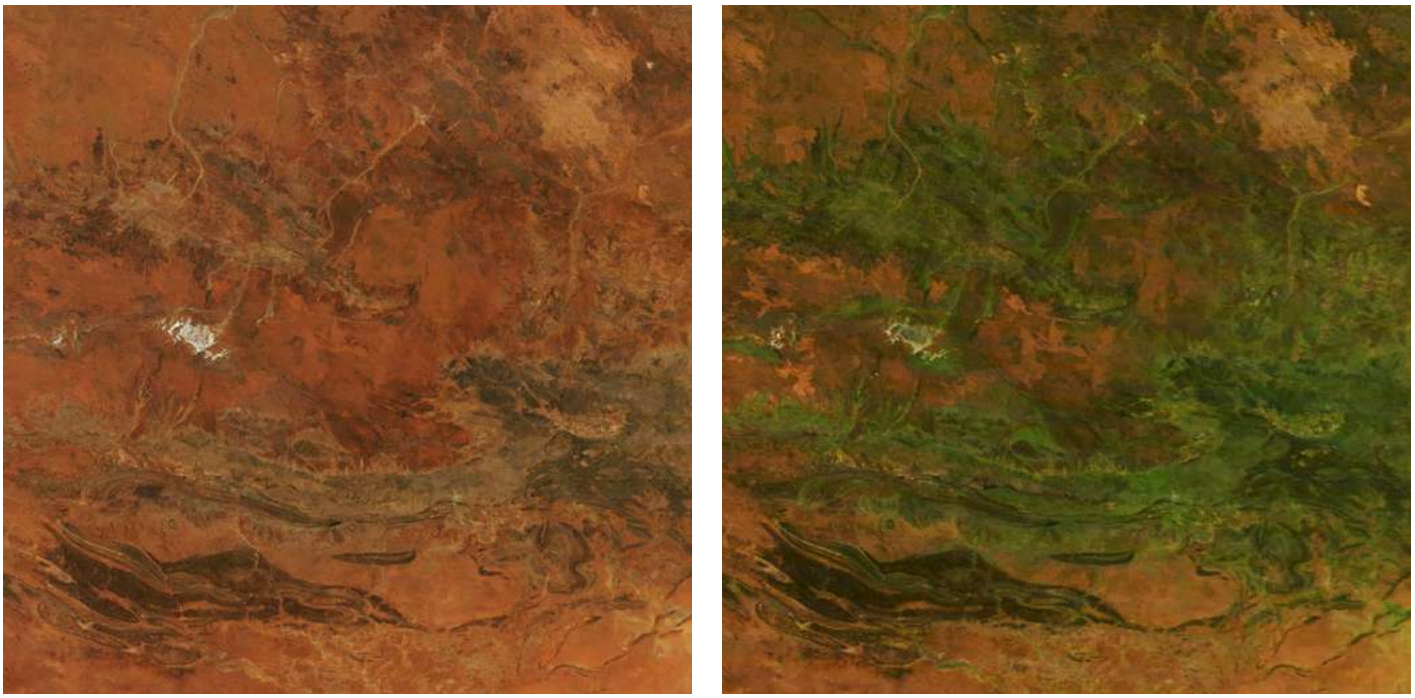
Cycle repeats

More intense rainfall, fire weather, and droughts further extend the reach of buffel grass invasion.[44]



Mythbusting buffel grass

Myth	Reality
Green is good	After rain, buffel grass turns from straw/beige to green. It grows rapidly, and dormant seeds germinate, turning the large areas it dominates bright green. This green explosion indicates sick ecosystems, not life.
Buffel grass is good for erosion and dust control	Buffel grass as a soil stabilisation land management practice is usually only necessary on damaged and mismanaged land, for example, if the native vegetation that holds the soil together is gone. Many types of plants can hold the soil together sufficiently through roots and leaf matter. Buffel grass can actually make erosion and dust worse because fire weakens the top soil and lack of biodiversity reduces soil stability. Buffel grass replaces native species with deep roots like river red gums, ghost gums and mulga woodlands.
It's too late!	It's true that buffel grass cannot be eradicated but that does not mean its impacts can't be mitigated. There are many special places buffel grass has not reached or is manageable, species which can be protected and cultural sites that can be preserved.
Recognising buffel as a problematic weed means it needs to be eradicated across the continent, including pastoral land	Buffel grass is so widespread that it cannot be eradicated. It is not possible to remove buffel grass from vast private land like pastoral properties but we can stop making the problem worse by not planting it anymore and managing the spread into new areas that are currently buffel free. Recognising buffel grass as a weed will mean we can better protect nature, communities and First Nations cultures from its impacts.



Buffel grass invasion is significant across vast areas of Central Australia.

Image credit: NASA.

Good news stories



Patch 4, Visit 3, 16/10/20: first chemical treatment after reducing buffel biomass with cool burns.



Patch 4, Visit 12, 8/11/22: a field of flowers and only 26 small buffel.



Patch 4, Visit 23 29/3/26: Still treating one or two buffel each visit. If we stopped today it would be back to buffel in no time.

The Buffel Grass Story in the Maralinga Tjarutja Lands, South Australia

This case study was provided by the Marlinga Tjarutja Land Management Team.

A small team, dedicated to Country, have been putting in a huge effort over the last 6 years to control buffel grass in the Great Victoria Desert, South Australia. The Maralinga Tjarutja Land Management team (MTLM) are the land managers for the Maralinga Tjarutja Lands, encompassing 10.6 million hectares of the Great Victoria Desert – that's 11% of South Australia. The scale, remoteness and beauty of this area is unparalleled, the cultural and biodiversity value world renowned. Yet, it is just one, small, dedicated team working on-ground that is saving this area from being taken over by buffel grass.

Buffel grass has been threatening to take over the MT Lands for nearly two decades and in the early years, infestations on roads and around the community were treated and kept within the bounds of manageability, but never conquered. Since 2020, with stable funding, tenacity and skill MTLM have taken this manageability and turbocharged it. With the aim of killing all buffel grass and preventing germination of new seedlings, every known buffel grass population within the MT Lands is now visited, managed and mapped multiple times over the warm season. In the cool season, low intensity burns are used to reduce the biomass of the buffel and ready it for follow-up spraying. Long, hot burns are also used to kill isolated plants and the surrounding seed bank. The team make good use of software on patrol to record their efforts when and where the work happens. This data is then analysed back in the office for decision making, reporting and ultimately, adaptive management.

Treating and monitoring the buffel sites with this consistency and with multiple follow-ups has been critical, but has taken a huge amount of resources. From July 2020 to June 2026 MTLM have conducted 401 patrols for 2,839 visits to known buffel patches –that's 115,000 km of driving on poor dirt tracks, nearly 3 trips around the Earth and over 4,000 hectares of initial and follow up management and monitoring!

Anangu commitment to Country is paramount to their motivation to keep this work going, but the employment of Coordinators with technical experience in chemical control of remote buffel grass is also critical. Spraying buffel grass effectively in an extremely remote and arid environment is far more technically difficult than most weed spraying jobs. The team needs to contend with remote and isolated conditions -1000kms of rough dirt roads, extreme and unpredictable weather, tough buffel plants, varying soil conditions and a long list of logistical constraints. In addition to these significant challenges is the constant threat that ineffective spray jobs over time can lead to herbicide resistance. It is both unfair and unsustainable to leave the task up to Indigenous ranger teams alone. In the face of these challenges, MTLM are seeing encouraging results for their work, inspiring others and leading the charge in remote buffel management in the Great Victoria Desert. At one of their favourite sites on the Anne Beadell Highway over 6 years, the team used a combination of burning and 3-part chemical spraying with follow up 25 times, to see an array of wildflowers and native grasses return in late 2022. Each year since then, the odd buffel plant or 2 can still be found in between the regenerating native vegetation. The visits and vigilance can never let up with buffel encroaching from all directions and tourists and companies working in the MT Lands spreading buffel in pursuit of their projects or travels.

With MTLM's continued efforts, and future support from a multi-skilled network of operators and contractors, the MT Lands still have a good chance of staying ahead of buffel grass and protecting large areas before they become heavily invaded.





Kurrujung Landcare site, before and after buffel grass fire. The sites where buffel had been removed did not burn.

Image Credit: Fiona Walsh

Landcare Alice Springs

Diligent work delivers results

This case study was provided by Landcare Alice Springs.

Alice Springs Landcare has been working to help regenerate this Alice Springs site from buffel grass back to diverse desert vegetation for 24 years. This piece of bushland encapsulates the north eastern edge of our town, it is one of many of the natural attributes that make living in Mparntwe (Alice Springs) almost impossible to match. There are very few places where access to 21st-century living and spectacular ancient landscapes occur within walking distance.

The area is popular with runners, walkers and cyclists. It contains both Aboriginal and European cultural heritage sites.

A casual glance at an untreated patch of ground in Mparntwe (Alice Springs) does not reveal much diversity. Some trees are dead, many damaged by fire. Shrubs in a similar state of decline. Buffel grass everywhere.

The impetus for turning this around started with one woman, Valmai, thinking “if I want to have trees to look at and enjoy the shade of them I have to look after them” following destructive fires in the early 2000s. That thought has led to a sustained effort. Over the years, spending about one hour per day, Valmai has controlled buffel grass in an area of around 5ha. Native herbs and grasses dominate the ground layer. Winter rain now brings on a flush of wildflowers in stark contrast to the drab monoculture of buffel. Fires burn up to the edge and stop. Trees and shrubs are not scorched or killed. The site is visually appealing and hosts well over 100 species. Many of these would be absent or hard to find in buffel dominated areas.

In Mparntwe, with its heavy weed infestation, institutional land management techniques are struggling to cope with the altered landscape. Constant mowing or frequent fires promote buffel growth and a steady decline in biodiversity. Our position in the landscape downstream of a pastoral lease makes long-term control very hard to achieve under the current paradigm.

Alice Springs Landcare and other like-minded residents tilt against this by maintaining small areas of high-quality native vegetation on public and private land that act as living seed stores. Hopefully, this seed bank can be drawn upon to regenerate Mparntwe’s natural surroundings once landscape scale buffel grass control is achieved. These sites act as reminders of what we could have and what we’re letting slip away.

Northern Territory Weed Declaration

Weed declaration in July 2024 in the Northern Territory was a historic win for community organising and the arid lands.

Central Australian communities were told for years that it was not possible, that buffel grass would never be declared a weed because of its perceived benefits to cows.

However, communities across the Territory persisted by telling a positive story that centred on the amazing arid lands which were at risk, and the impacts that fire posed to everyone. Buffel grass fires impact public safety, tourism, firies, ranger groups, environments, First Nations cultures, human health as well as liveability and wellbeing.

Our community had cared about this issue for decades, and voices out bush advocated strongly for their country. Over 50 Central Australian organisations across culture, health, tourism, land management, unions and environment called on the Northern Territory Government to decare buffel grass a weed. Eventually, after working together we won!

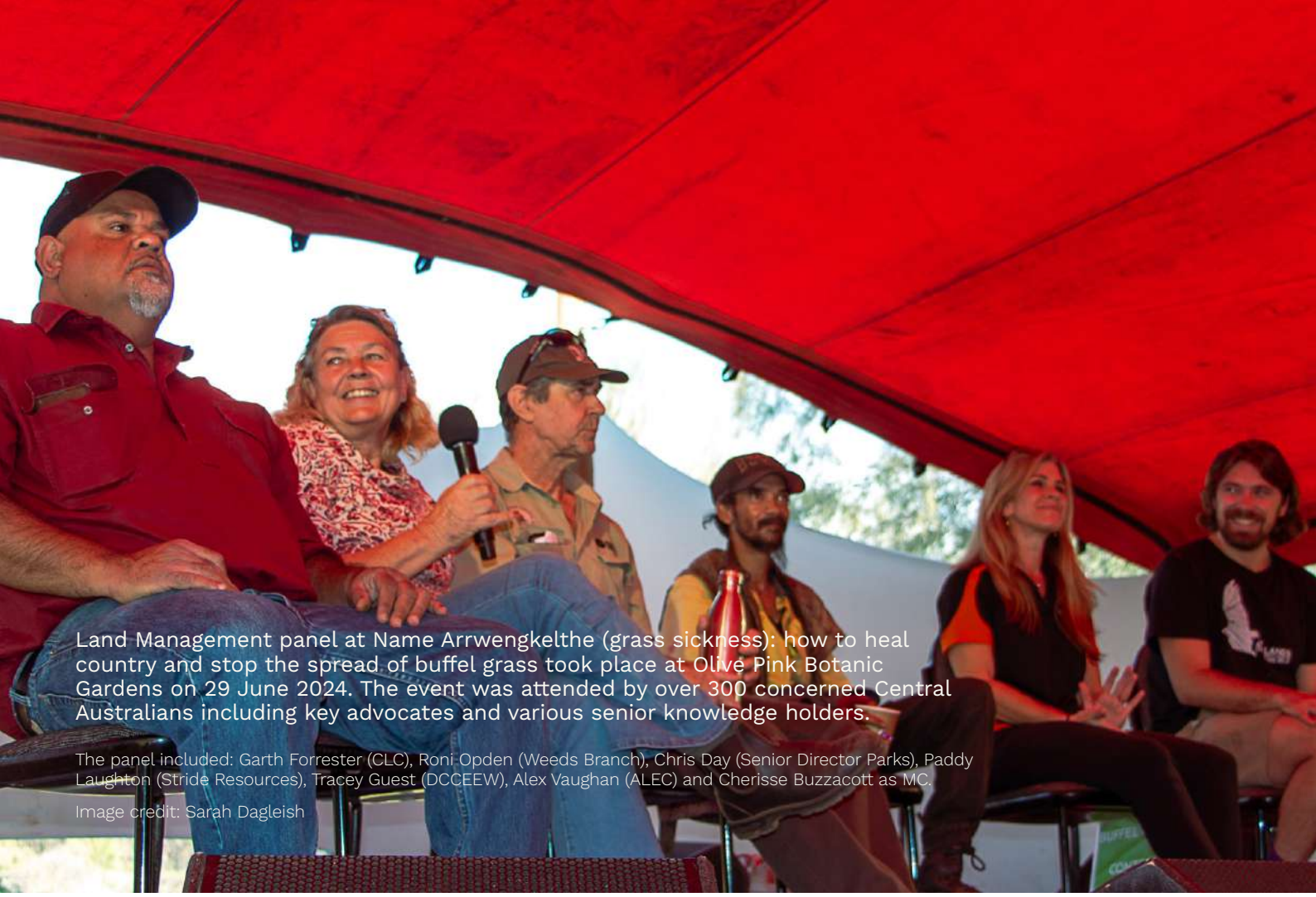
Buffel Grass Progress in the Northern Territory

There are some positives steps that have occurred post weed declaration, including that:

- Both major parties back sustained funding the the Buffel Grass Team within NT Weeds Branch;
- The NT Government is calling for Federal Government coordination and funding to better manage the issue;
- The Territory Government commissioned and released an economic report that found that the cost of buffel grass invasion is 60 times larger due to its negative impacts than the economic benefits it produces for pastoralism; and,
- The Department is working with stakeholders that want to get on with the job and care for places at risk of buffel grass invasion.
- The Alice Springs Town Council has unanimously passed a motion calling for buffel grass to be declared a Weed of National Significance and for funding from the Australian Government.
- There has been new research breakthrough such as mapping buffel grass in Tjoritja West MacDonnell National Park

It is not all a positive story though, the Country-Liberal Party Northern Territory Government has allowed pastoralists to continue to spread buffel grass in the Territory, making the problem worse.

Despite these obstacles, change is happening. Thanks to passionate and committed communities, buffel grass in the NT is increasingly recognised for its significant multi-sector impacts, its serious fire risk, and as an issue that can no longer be ignored. The changing culture in the NT is a statement to the rest of the country - keep persisting, raise the alarm, and progress on buffel grass management is possible across the continent.



Land Management panel at Name Arrwengkelthe (grass sickness): how to heal country and stop the spread of buffel grass took place at Olive Pink Botanic Gardens on 29 June 2024. The event was attended by over 300 concerned Central Australians including key advocates and various senior knowledge holders.

The panel included: Garth Forrester (CLC), Roni Opden (Weeds Branch), Chris Day (Senior Director Parks), Paddy Laughton (Stride Resources), Tracey Guest (DCCEEW), Alex Vaughan (ALEC) and Cherisse Buzzacott as MC.

Image credit: Sarah Dagleish



Iltja Ntjarra Many Hands Art Centre, Arid Lands Environment Centre and Invasive Species Council.

(James Johnston, Taigen Ryan, Dianne Inkamala, Carita Coulthard, Delray Inkamala, Dellina Inkamala, Richard Swain, Alex Vaughan, Kathleen Herbert)

Image credit: Sara Maiorino

Dear Northern Territory Minister for the Environment Kate Worden,

BUFFEL GRASS CLASS A/B WEED DECLARATION OPEN LETTER

We demand buffel grass be declared a Class A/B weed for all land tenure types across the Territory.
Buffel grass is the greatest invasive species threat to the environment and cultures across the arid lands.
Buffel-fuelled wildfires are an existential threat to public safety, tourism, the arts and the physical and mental health of Territorians. Climate change is compounding the impacts of buffel grass.
A Class A/B weed declaration is a key step towards better buffel grass management across the NT.
Sincerely,



Opportunities and solutions

There are opportunities across the continent to improve management of buffel grass, and step one for impacted states is declaring it a weed so it is recognised as a problem. Victoria, New South Wales, Western Australia and Queensland must declare buffel grass a weed without delay.



"In Victoria, buffel grass is still contained to small infestations on the roadsides, primarily on major transport routes. Buffel has not yet invaded our national parks and it is not a pastoral species in Victoria. So we have a fleeting but valuable opportunity to prevent buffel grass from becoming established. We can protect our natural places and communities from buffel fires and prevent another ecological disaster impacting our native plants and animals. And because we can we must."

Fiona Murdoch, Founder of Mallee Conservation

National recognition

The first step is admitting you have a problem

Australia is at step one in the buffel grass management journey - acknowledge it is a weed and a national environmental disaster. Governments in Australia have put their head in the sand when it comes to the buffel grass crisis. Concerns of communities, academics, land managers and First Nations people have been ignored.

Impacted communities and tourists that are familiar with buffel grass are shocked to hear that it is not already banned from being planted in all states and territories. Others have never heard of it before, including some decision makers. Recognition of buffel grass as a weed and an environmental catastrophe is key to unlocking solutions. Much more needs to be done!

State and Territory positions on buffel grass:*

Position	Jurisdiction
Declared weed under legislation with funding	South Australia 2015, Northern Territory 2024
Acknowledged as a threat to nature but not yet a declared a weed	New South Wales, 1995 Western Australia, 2007 Australian Government, 2014 Victoria, 2015
No position, resistant to buffel grass action due to its value as a pasture grass	Queensland

*Not currently applicable to the ACT and Tasmania as there is no current risk of buffel grass invasion

Australia's laws and policies are structurally flawed and inadequately address an environmental weed with widespread social, cultural and negative economic impacts.

National recognition is key to unlock national coordination, research solutions and boost on-ground effectiveness.

At the time of writing, buffel grass has been nominated as a Weed of National Significance (WoNS) pending a final decision. Listing buffel grass as a WoNS will be a critical step forward in acknowledging the scale and severity of buffel grass.

National Recognition listing is important because it:

- Emboldens land managers to manage and prevent the spread of buffel grass
- Can unlock funding
- Encourages research
- Brings stakeholders to the table
- It inspires proportionate policy solutions
- It educates the public
- It shifts the narrative - this is an environmental, cultural and public safety disaster that needs urgent action

Weeds of National Significance

The Weed of National Significance (WoNS) process is an internationally acclaimed process recognising some of Australia's worst weeds. A Weed of National Significance listing is a modest but urgent step in addressing the buffel grass crisis strategically, to enable national coordination, as well as critical research and land management prioritisation.

A nationally coordinated and facilitated process is the forum required to overcome longstanding barriers impacting strategic, effective and resourced buffel grass management across the continent.

A WoNS process would establish National Buffel Grass Coordinator who would act as a key contact point nationally. This Coordinator would support a National Buffel Grass Taskforce which would have broad membership across jurisdictions and sectors. The National Buffel Grass Taskforce would develop a National Buffel Grass Strategic Plan.



In early 2025 organisations from across the country signed on to the open letter calling for buffel grass to be declared a Weed of National Significance.

Key Threatening Process

Australia's national environmental laws recognise a "Key Threatening Process" as an action or process that significantly impacts threatened species and threatened ecological communities.[46] A Key Threatening Process listing results in the development of a national Threat Abatement Plan and can offer crucial coordination, guidance, on ground support and funding to care for threatened species.

A standalone Key Threatening Process listing for buffel is obvious and a National Buffel Grass Threat Abatement Plan with funding is essential. Buffel grass significantly impacts threatened species, and there are already at least 31 nationally recognised threatened species and ecological communities impacted by buffel grass invasion.[9]

We call on the Australian government to list buffel grass as a stand alone Key Threatening Process and develop an adequately funded Threat Abatement Plan.

National coordination

Buffel grass does not recognise borders, fence lines or land tenures. It spreads across jurisdiction, across Indigenous Protected Areas, national parks and private properties. To effectively manage buffel grass all these stakeholders need to collaborate and communicate. National mechanisms for coordination are key to achieving this.

National coordination would ensure that multiple agencies and jurisdictions have access to best-practice management strategies ensuring they are not starting from scratch. For example, best-practice planning tools, surveillance, monitoring and control techniques are currently available to be shared and improved but the Australian Government needs to facilitate and fund this process, including for National Buffel Grass Coordinators.

What does national coordination mean on the ground?

Coordination across borders and land tenures where different states all manage buffel grass differently. National leadership is required to support impacted states where the threat is so grave, there are a variety of stakeholders waiting to work together to better manage the problem, including across the National Reserve System and Indigenous Protected Areas.

There are many sites where buffel grass grows across borders. It is frustrating for someone on the ground managing buffel on their patch to look over the border and see unmanaged buffel grass, especially if it is a sacred site, conservation location or popular walking trail. Imagine if they could talk to each other and plan together.

Managing key vectors of spread such as roads and rail corridors and developing national best-practice guidelines.

Coordinating research to ensure the most important research is prioritised, and capacity and capability is boosted e.g. biological control, fire ecology, new tools for on-ground management.

National coordination can connect the research dots. What kind of buffel grass control strategies are working best? What cultural traditions are being lost? What animals are rangers no longer seeing? How is the landscape responding to buffel grass fuelled fire? How is buffel grass dieback progressing in Queensland? Where even is buffel grass and along which pathways is it moving into new areas? These are all questions that need to be answered and in order to do so the right people need to be talking to each other.

“Wild Deserts” project

One example is the “Wild Deserts” project, an ecological restoration project in Sturt National Park in far north-west NSW.[47] This project is managing small buffel grass invasion sites, but buffel grass is still taking hold where seeds are transported via vehicles and equipment, spreading it along roadsides that lead to the Wild Deserts site from three states, SA, NSW and QLD. Only one of these jurisdictions (SA) have declared buffel grass a weed. National coordination can help prevent buffel grass spread through transport corridors to sites such as the Wild Deserts projects and other sensitive sites across Australia.

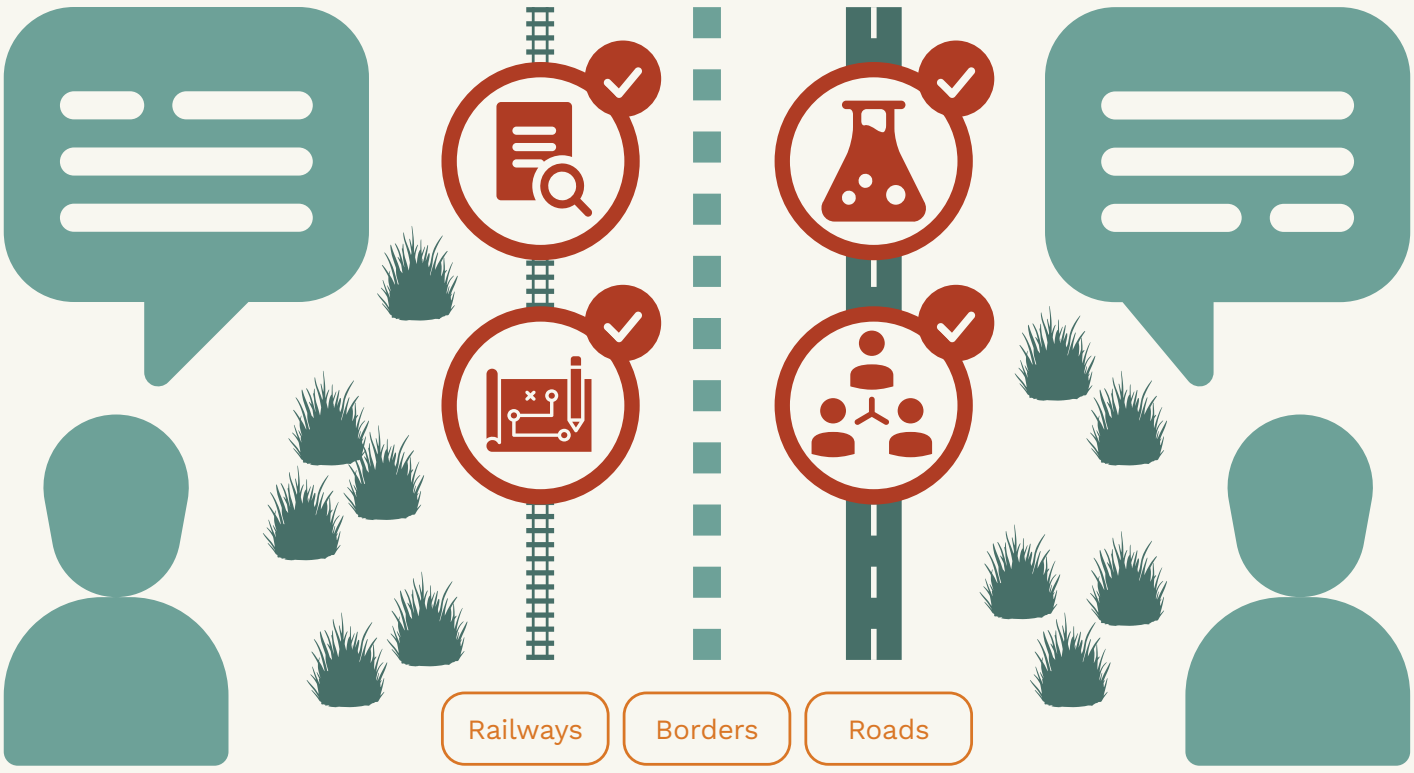




Image Credit: Alex Vaughan

Mapping buffel grass

A program to map the extent of buffel grass across Australia will protect species and places at risk. If land managers and policy makers know the extent of the problem and what's at risk they can respond appropriately.

Research from Central Australia published in 2026 demonstrates an accurate and cost-effective method for mapping buffel grass.[48] The method was able to:

- Model and map buffel grass occurrence at two sites in Central Australia using Sentinel-2 satellite imagery. Buffel grass could be mapped with at least 85% accuracy.
- The study areas were up to 2800 km², much larger than previous attempts to map buffel grass in both Australia and overseas with comparable accuracy.
- The method uses free, open-source software, making it more cost effective than drone or aerial surveys.
- In the Tjoritja/West MacDonnell National Park study area, buffel grass was predicted to occur in over 87% of alluvial floodplains landscapes.

This study shows that we have the tools to deliver a national mapping program right now. If we understand the scale of the problem, we can:

- Identify the pathways where buffel is moving into new areas
- Prioritise threatened and cultural species to protect
- Communicate the problem to those who can help fix it
- Prioritise sensitive places for buffel grass removal
- Coordinate management across different land tenures
- Aid land managers who are working on very large areas of land



A monoculture of buffel grass in Tjoritja West MacDonnell Ranges National Park, a priority place for threatened species protection nationally.

Image Credit: Alex Vaughan

Biological control

A landscape scale solution to a landscape scale problem

What is a biological control? “A biological control agent is an organism, such as an insect or plant disease, that is used to control a pest species.”[49]

There is no doubt that biological control is an integral part of invasive species management in Australia. Since 1930, the CSIRO has introduced 126 different agents for biological control for 34 weed species across Australia.[50] The CSIRO states ‘biological control is a demonstrably sustainable and a relatively cost-effective method for managing many of Australia’s most pressing agricultural and environmental weeds in the long-term’.[51] The benefits outweigh the costs by between 3:1 and 23:1.

For an issue such as buffel grass, the application of a biological control is necessary to combat the landscape scale impacts.[15] Biological controls can reduce the fitness and competitive advantage of a species, not necessarily eradicate it entirely, but give native plants a chance to compete, overall increasing biodiversity, resilience and reducing impacts in a landscape. A biological control could also suppress reproduction, reducing its spread from existing territory.

There is currently limited research investigating the positive use of biological control to effectively manage the threat posed by buffel grass, instead the focus has been to suppress biological controls due to the potential impacts to grazing.

Significantly, there are a number of biological control agents that already exist in Australia that may positively reduce buffel grass mass, spread and impacts, buffel-grass seed caterpillar, buffel grass blight (pyricularia leaf spot) and white ground pearl. Further research is required to better understand their impacts to buffel and native species.

These potential biological controls offer hope to an overwhelming problem. It offers a landscape scale solution to a landscape scale problem. To not optimise this opportunity by funding and prioritising biological control would be a tragedy. We need to start this process right now!

The biological control process takes many years and needs to be thoroughly researched with safeguards, which is why we need to start the process right now. We do not have time to waste!

Did you know that there is also extensive buffel grass dieback?

A pasture mealybug, which particularly thrives in buffel grass, is causing extensive buffel grass dieback in Queensland and New South Wales.[52] Monocultures of any species reflect sick, unhealthy landscapes making them vulnerable to pests and diseases such as this mealybug. This is why diversity is important.

Organisms will eventually find ways to make use of an available resource over time. The dieback occurring is a predictable result of poor, profit driven land management involving turning diverse and resilient landscapes into buffel grass monocultures. The pasture mealybug is a grave warning regarding efforts to continue to promote buffel monocultures across this continent.

National Biosecurity Reform

Our national biosecurity system privileges the agricultural industry above all other stakeholders and impacts. This is no accident, this is Australia's National Biosecurity system as it was meant to function; to serve and prioritise the interests of industry and big agriculture.

Buffel grass is the canary in the coal mine in a biosecurity system that is not fit for purpose, that is not serving the public interest, that is not making evidence based decisions. Where there are issues of conflict, agricultural industry interests are prioritised over environmental, cultural, social, public safety and other economic impacts despite the significant consequences. This is what has occurred when it comes to buffel grass.

It is time that we speak directly once again, to the Australian Government and the biosecurity establishment, that enough is enough: people may die, threatened species may go extinct, and catastrophic fire events will continue to happen while it is mused whether buffel grass (an invasive weed) is a national biosecurity issue.

Conclusion

This is a decades-long collective struggle to confront one of the greatest threats to the arid and semi-arid lands.

In 2014, Federal Buffel Grass Threat Abatement Advice was released, recommending weed-declaration across states and territories. In 2015, South Australia declared it a weed. In 2024, communities and organisations across culture, health, tourism, land management, unions and environment united in their concerns, leading to the historic decision to declare buffel grass a weed in the NT.

There are many beautiful places not yet invaded by buffel grass. A national weed listing and national coordination is urgently needed. More funding is required to protect nature, special places and keep people safe. Research solutions are yet to be investigated. It is far from too late to act as there are a myriad of opportunities to significantly advance the management of buffel grass across this continent.

Together, we carry hope that we can care for areas of the arid lands that are still buffel free as well as work towards landscape scale solutions in areas that are suffocating in buffel grass. We can make a difference so lives are not lost, sacred sites are not damaged, threatened species do not go extinct, and the colour and life of the arid lands is not lost under a sea of buffel grass.

From Kati Thanda (Lake Eyre), the Victorian Mallee and Uluru, to Australia's Ten Deserts, the Kimberley, Pilbara and Queensland's channel country, we must work together to find a solution to urgently and proportionately address Australia's buffel grass crisis.

Recommendations

Commonwealth

- Declare buffel grass a Weed of National Significance (at the time of writing buffel grass has been nominated and is pending a final decision).
- Appoint National buffel grass coordinators to coordinate strategic management across jurisdictions and land tenures (conservation, Indigenous Protected Areas, Aboriginal Land, Crown Lands, pastoral).
- Develop a national buffel grass strategic plan.
- List buffel grass as a standalone Key Threatening Process to threatened species under national environmental laws.
- Fund and deliver a national buffel grass mapping program.
- Development of best practice buffel grass management guidelines across land tenures, including weed and fire management.
- Adequately fund, resource and support First Nations rangers and other land managers to control buffel grass on the ground.
- Fund a Threat Abatement Plan for threatened species conservation and ongoing research.
- Prioritise and fund biological control research (including in home range and local agents).
- National biosecurity reform to ensure decisions are evidence-based and made in the public interest, including addressing buffel grass as a biosecurity issue.
- Research into appropriate ways to manage fire risk in heavily buffel grass invaded landscapes, and areas with nearby communities.

Mainland states and territories

- Declare buffel grass a weed.
- Appoint state and territory buffel grass Coordinators.
- Ban planting, importing, buying or selling buffel grass seed.
- Interagency coordination between environment, weeds, national parks, roads, fire and crown lands departments.
- Adequately fund and support on ground buffel grass management.



Landscapes at risk: Roadside buffel invasion, Amunurunga Range, north of Haasts Bluff.

Image Credit: ©Mike Gillam



Landscapes at risk: Goyder's Lagoon.

Image Credit: ©Mike Gillam

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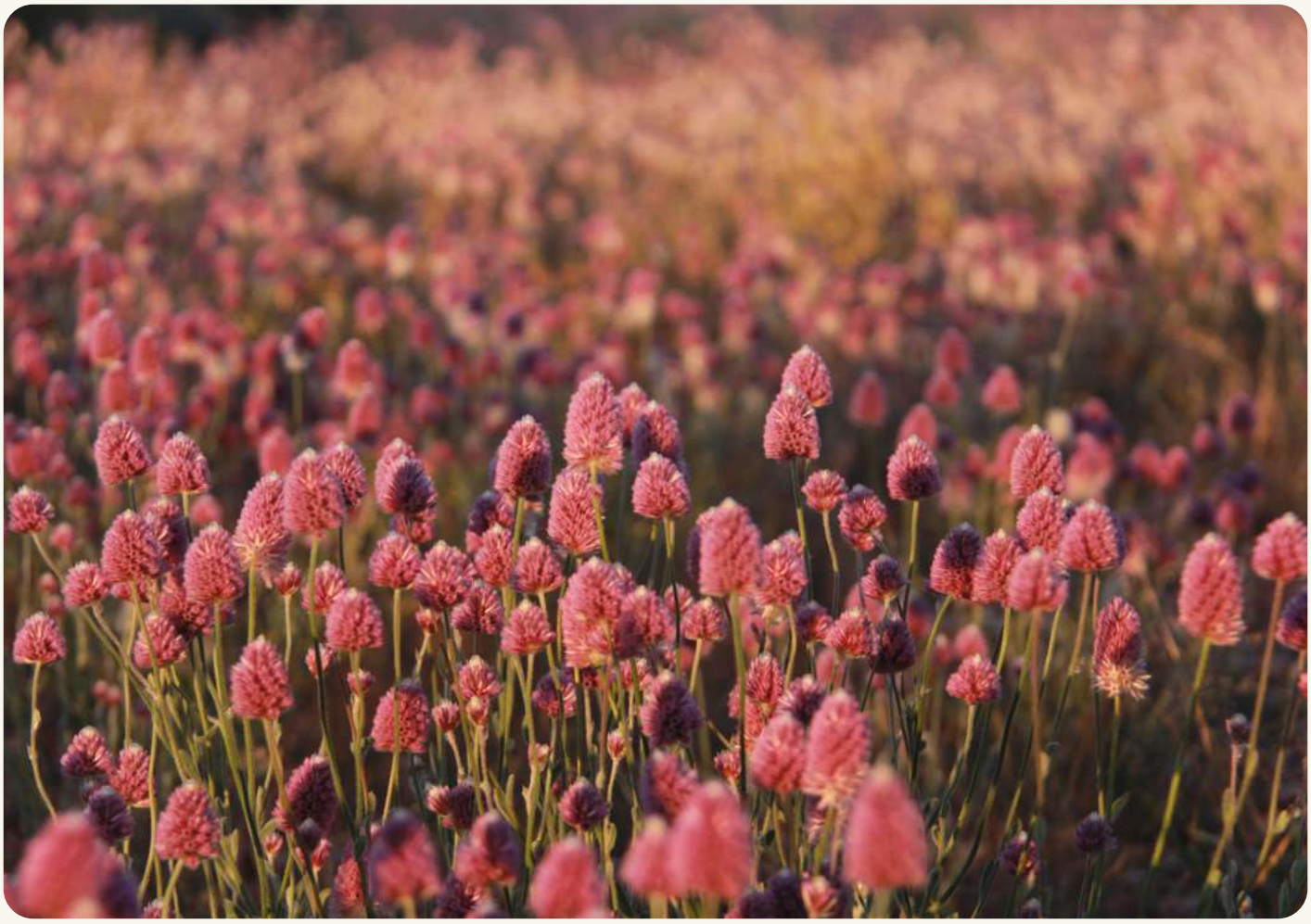
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