GAMBA GRASS
ANNUAL REPORT

21



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Acronyms	Full form			
DEPWS	Department of Environment, Parks and Water Security			
GAP	Gamba Action Program			
WAC	Gamba Grass Weed Advisory Committee			
WMB	Weed Management Branch			

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1. Executive Summary

This Gamba Grass Annual Report 2021 provides progress against the first six months of implementation of the Weed Management Plan for Gamba Grass 2020 – 2030 (the plan) from December 2020 to June 2021.

In summary, progress against the plan is on track.

Since implementation of the plan, key actions completed include:

- The development of a mapping and monitoring program for the Class A (eradication) zone to better understand the distribution of gamba grass and track its eradication. The mapping and monitoring program will be made publicly available.
- A baseline assessment of the area affected by gamba grass in the Class B (control) zone. The Class B area is approximately 40,000km². An area of 4656km² (approximately 12%) is estimated as being affected by gamba grass.
- Compliance inspections and enforcement action across the Class B zone as follows:
 - In the Darwin rural area:
 - 1695 compliance inspections for 1346 properties
 - 12% of these properties were issued authorised officer orders and of these 4% progressed to a penalty infringement notice.
 - Across Darwin City and Palmerston City:
 - 36 private properties were inspected with 22% of these properties issued authorised officer orders for non-compliance.
 - Around Katherine:
 - 28 properties within the Class B zone have active control programs for gamba grass management in place. Two of these properties have now been verified as locally eradicated and one property has moved into a monitoring phase.
- Key environmental and cultural values are currently included in Weed Management Branch regional strategies. Priority landscape areas at threat from gamba grass include areas such as Sites of Conservation Significance, water courses, and key sites of community value such as Arnhem Land and the Darwin rural area.
- A list of key environmental and cultural assets at risk of impact from gamba grass is required by December 2022, with stakeholder input. This list will be developed and made publicly available by January 2023 (with the exception of certain sacred sites and other sensitive areas if necessary). Environmental and cultural assets will be defined through consultation with available registers and consultation with key stakeholders.
- A gamba grass communications plan has been developed to raise awareness of gamba grass management requirements and available support. The Gamba Grass Weed Advisory Committee (WAC) will support implementation of the communications plan. This plan will guide communications in relation to gamba grass.
- An increase in coordinated management effort can be demonstrated through the Gamba Management Framework, developed by DEPWS. Stakeholder-led collaborative projects are also acknowledged, e.g. the Casuarina Coastal Reserve Landcare Group volunteers who mapped gamba grass in the Casuarina Coastal Reserve in 2021 in collaboration with the NT Parks and Wildlife and Weed Management Branch.
- An online 'Check Your Gamba Risk Tool' has been developed. Landholders can answer a series of questions about their gamba and will be provided a risk rating and advice on what they should do to manage their risk.
- The WAC has been retained to oversee implementation of the plan. Five new members have also been appointed to the WAC to better represent groups or organisations that are concerned with the management of gamba grass.

2. Purpose

This Gamba Grass Annual Report has been prepared to fulfil the requirements of the Weed Management Plan for Gamba Grass 2020 – 2030 (the plan). The plan requires that all performance indicators and measures will be reported on annually to assess performance and to determine whether the stipulated actions are contributing towards the identified outcomes at a Territory level.

The reporting period covers six months from commencement of the plan in December 2020 to 30 June 2021.

Note: The plan (objective 5b) stipulates that regular monitoring and reporting be undertaken collaboratively with key stakeholders. This document does not fully meet this objective; rather, it reports on activities undertaken primarily by the Weed Management Branch (WMB) with partner organisations. A process for collaborating with key stakeholders has been developed and is included in the gamba grass communications plan, prepared to fulfil objective 4a of the plan. It includes a later release date to allow more time for this collaborative monitoring and reporting to occur.

3. How to interpret this document

This report documents progress made against each performance indicator in the plan. An extract from the plan is also included in Appendix 1 that presents Tables 7 to 11 showing all goals, objectives, strategic actions, performance indicators and performance measures.

Each performance indicator in Appendix 1 has been colour-coded to present progress made against the plan. The colours in Appendix 1 indicate the following progress made:

- white: yet to be started
- grey: to be evaluated
- green: on track
- orange: progress but some concerns
- red: significant concerns with progress.

4. Introduction

Gamba grass (Andropogon gayanus) is a declared weed under section 7 of the Weeds Management Act 2001 and a new Weed Management Plan for Gamba Grass 2020 – 2030 (the plan) was finalised and approved by the Minister in December 2020. The plan was drafted by a statutory Gamba Grass Weed Advisory Committee (WAC), appointed by the Minister in April 2020, which will stay on to oversee its implementation.

Gamba grass has a split declaration based on its known distribution and density. Class A - to be eradicated in all areas of the NT except where it is classified as Class B - growth and spread to be controlled. As such, different goals and objectives apply to these zones to limit the impacts of gamba grass on the natural environment, life, property and infrastructure.

4.1. Gamba Management Framework

The WAC is one plank of the Gamba Management Framework (see Appendix 2) which shows the collaborative projects that the Department of Environment, Parks and Water Security (DEPWS) is involved in to help manage the impacts of gamba grass. Since the development of the Framework, the Parks and Wildlife Division has joined DEPWS and the work of rangers to control and limit the spread of gamba on park is also acknowledged.

Goal 1 - Eradicate gamba grass from the Class A Zone

Objective:

1a: Understand the distribution of gamba grass in the Class A zone.

Performance indicator: "By July 2022, the extent of gamba grass has been assessed for land parcels identified in the monitoring and mapping program."

A mapping and monitoring program has been developed for the Class A (eradication) zone. The mapping and monitoring program will be made available to the public at nt.gov.au/gamba, excluding the Appendices that include individual property details.

The objectives of this program aim to determine the extent of gamba grass across the Class A zone on properties already known to have gamba grass and to track the progress towards eradication in this zone. The currently known distribution of gamba grass across the Class A and B zones is shown in Figure 1.

A map is also being developed for areas with no recorded gamba grass across the Class A zone that shows the confidence in gamba grass absence. This map will be useful for planning purposes to inform areas that may require follow up. When finalised, this map will be made publicly available at nt.gov.au/gamba.

The mapping and monitoring program underpins the evaluation of gamba grass control activities. With the methodology at hand, we aim to meet this performance indicator by July 2022. Furthermore, future reports will provide an update on the progress towards eradication of gamba grass in the Class A zone.

Objectives:

1b: By July 2023, all gamba grass in the Class A zone is under an active eradication program and all gamba grass plants have been destroyed (unless under permit).

1c: By July 2026, all gamba grass in the Class A zone is eradicated (unless under permit).

Performance indicator: "By July 2023, all known land parcels with gamba grass in the Class A zone are classified as b) active management."

A mapping and monitoring program and eradication register for the gamba grass Class A zone has been established to track progress towards eradication.

In the Katherine Regional Weed Management Area, in the Class A eradication zone there are already five private properties under active management and two properties also verified as locally eradicated gamba grass. Public land users including roads, rail and vacant Crown land have undertaken control with a significant reduction in the number of plants. Nitmiluk National Park have undertaken an aerial survey around the Park boundary for gamba grass with no plants found. One new infestation was reported at Ngukurr where plants have been destroyed and an inspection by the WMB will occur.

Performance indicator: "By July 2025, all known land parcels with gamba grass in the Class A zone are classified as c) monitoring phase."

This performance indicator will be assessed through the implementation of the mapping and monitoring program and tracking the eradication of gamba grass in the Class A zone using the eradication register.

Performance indicator: "By July 2026, all known land parcels with gamba grass in the Class A zone are classified as d) eradicated."

This performance indicator will be assessed through the implementation of the mapping and monitoring program and tracking the eradication of gamba grass in the Class A zone using the eradication register.

Objective:

1d: By July 2026, a review of the permit system pertaining to gamba grass is completed.

Performance indicator: "Review of permit system is completed as it pertains to gamba grass."

The July 2026 review is to be completed and will be reported on at the time of completion.

There are currently two gamba grass permits in the Class A zone that authorise the grazing of already existing gamba grass. These permits were issued in the past as a way of working with landowners after gamba grass was declared in 2008.

Permit conditions require that the gamba is strictly monitored to ensure there is no spread. The permit holders are audited annually, to ensure that permit conditions are being complied with. Audits of the permit holders were conducted last year in July 2020. Both permit holders were found to be in compliance with their permit conditions at the time of the audit. This year, both current permit holders submitted their required annual report by 31 May 2021. This year's annual audit inspections have been completed for one permit holder. This permit holder was found to be in compliance with all conditions. The compliance inspection for the other permit holder has been completed in the following reporting period.

Permits for grazing gamba grass are no longer being issued by the WMB in the Class A zone.

Objective:

1e: "Review the Class A and B zone boundaries to improve the protection of areas in the Class B management zone that are free of gamba grass"

Performance indicator: "By July 2026, revised Class A and B zones are declared if recommended by the review process"

A review is yet to be undertaken.

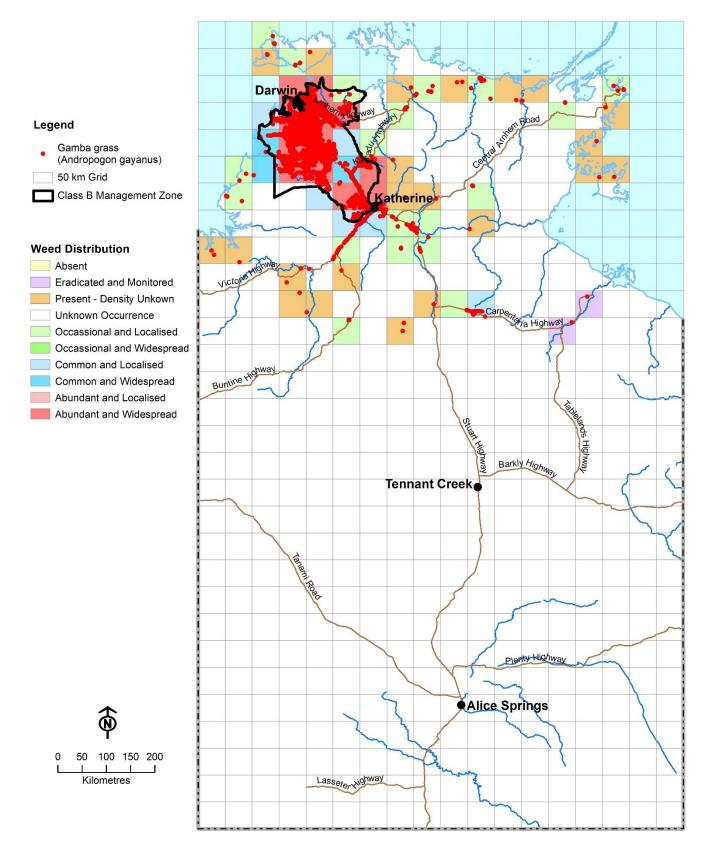


Figure 1. Recorded gamba grass data points as of 2021 in the Northern Territory (based on data ranging from 1960 to 2021) (WMB 2021).

Goal 2 – Contain and control gamba grass by actively managing infestations across the Class B zone and preventing spread into new areas

Objective:

2a: Reduce seed production.

2b: Implement weed hygiene measures to reduce gamba grass seed spread.

2c: Reduce gamba grass outliers at a land parcel and landscape scale.

2d: Prevent gamba grass spreading into clean areas.

2e: Reduce gamba grass abundance and density in the Class B zone.

2f: Reduce gamba grass presence around landholder infrastructure.

Performance indicator: "An increase each year in the number of assessed land parcels that have implemented management requirements and percentile of properties assessed that are compliant e.g. 80% compliant."

In the Class B (control) zone, there is the potential for gamba grass to be present on many thousands of land parcels. In 2016 aerial gamba survey data was processed through a prioritisation key, utilising eight key variables in order to rank gamba on the likelihood and consequence of impact. The DEPWS has committed to inspecting 1,100 properties per annum through the gamba compliance program in the Darwin rural area, in high-risk clusters known as 'hotspots'. Inspections are undertaken at the start and end of the wet season, allowing landholders an opportunity to voluntarily meet their management requirements after being informed of non-compliance.

During the 2020 – 2021 wet season, 1695 compliance inspections were undertaken for 1346 properties around the Darwin rural area. It is noted that not all properties required follow up inspections, such as properties already compliant at the time of inspection. Inspections were undertaken in areas of prioritised gamba risk, with the following summary results:

Percentage	Compliance result
11%	Properties scored well. These were either already compliant at the time of initial assessment, or showed significant progress towards achieving compliance. These properties received a letter of acknowledgement, designed to encourage and maintain voluntary effort throughout the season.
77%	Properties showed a reasonable level of ongoing land management, and were monitored for change throughout the season, with no intervention.
12%	Property inspections scored highly enough to result in authorised officer orders being issued, requiring the landholder to rectify non-compliance.

In total 267 orders were issued during 2020-21. Of these:

Percentage	Compliance result
96%	Met their management requirements after being informed of non-compliance, or showed significant progress towards compliance.
4%	Landholders ordered, failed to make a reasonable effort to meet management requirements and have / will be notified of an intended infringement.

In addition, compliance activities were instigated for 36 private properties across Darwin City and Palmerston City.

Of these:

Percentage	Compliance Result
6%	Compliant at the time of initial assessment and no follow up action was required
17%	Voluntarily met management requirements after being informed of non-compliance
22%	Compliance action taken due to non-compliance – orders issued
33%	Compliance action not warranted, further inspections to be undertaken
22%	Actioned not commenced

In 2021 around Katherine, 28 properties within the Class B zone have undertaken active control programs for gamba grass management. Two of these properties have now been verified as locally eradicated and one property has moved into a monitoring phase.

Performance indicator: "By July 2024 and annually afterwards there is an improvement in gamba grass management as evidenced by an improvement in parcel compliance score."

The gamba compliance program across the Darwin rural area includes a widespread property inspection regime. Parcel-based risk scores are collected to inform targeted enforcement and the comprehensive data set is also used to measure the broader change in parcel risk scores over time. The scores collected during the 2020-21 compliance season inform trends in risk over time, and can be used to indicate the effectiveness of awareness and enforcement approaches on influencing landholder behaviours.

During the 2020-21 season, the overall compliance risk scores for the Darwin rural area improved by 25% on average. The following trends have been measured as a result of enforcement action:

Total percentage	Compliance result
77%	Land showed an improved parcel compliance score, indicating improved gamba management.
8%	Parcel compliance scores remained unchanged.
15%	Compliance scores worsened, indicating an increase in gamba hazard.

The majority of properties around the Katherine regional weed management area (see Figure 2) with gamba grass have small infestations. There are also less properties with gamba grass than, for example, around the Darwin rural area.

Rather than a parcel compliance score to prioritise properties, the Katherine compliance program is comprehensive with all properties a priority for follow up. All affected properties are included in the program and properties scored with regard to progress towards eradication.

Improvements in gamba management in Katherine will be assessed as:

- properties requiring no compliance;
- unmanaged;
- under active management;
- under monitoring or;
- properties that have locally eradicated their gamba grass.

Under the current Katherine compliance program, one third of all known properties with gamba grass are followed up each year.

Performance indicator: "Reduction in area affected by gamba grass."

There has been a baseline assessment of the area affected by gamba grass. The Class B area is approximately 40,000km². An area of 4656km² (approximately 12%) is estimated as being affected by gamba in the Class B zone (see Figure 3).

Note: this area has been calculated based on a measurement unit of 1km² meaning that if one gamba plant was located in a 1km² measurement unit, the unit is considered 'affected'. This estimate is based on gamba grass records in the WMB spatial database which date back to 1960. Control effort has occurred over time, plus not all occurrences have been recorded, so these figures represent a best available estimate. It is likely that as more data becomes available there will be an increase in area recorded as affected; however, a goal of this plan is to contain and control gamba grass in the Class B zone. There are extensive areas of the Class B zone which are currently gamba free and it is very important these areas remain free of gamba grass.

Future reports will be able to be evaluated against the baseline above.

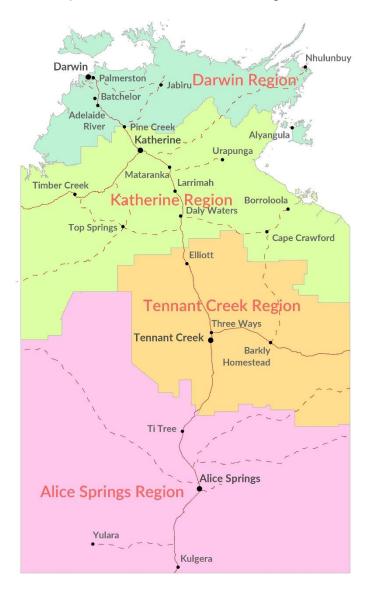


Figure 2. Weed Management Regions of the Northern Territory (WMB 2021).

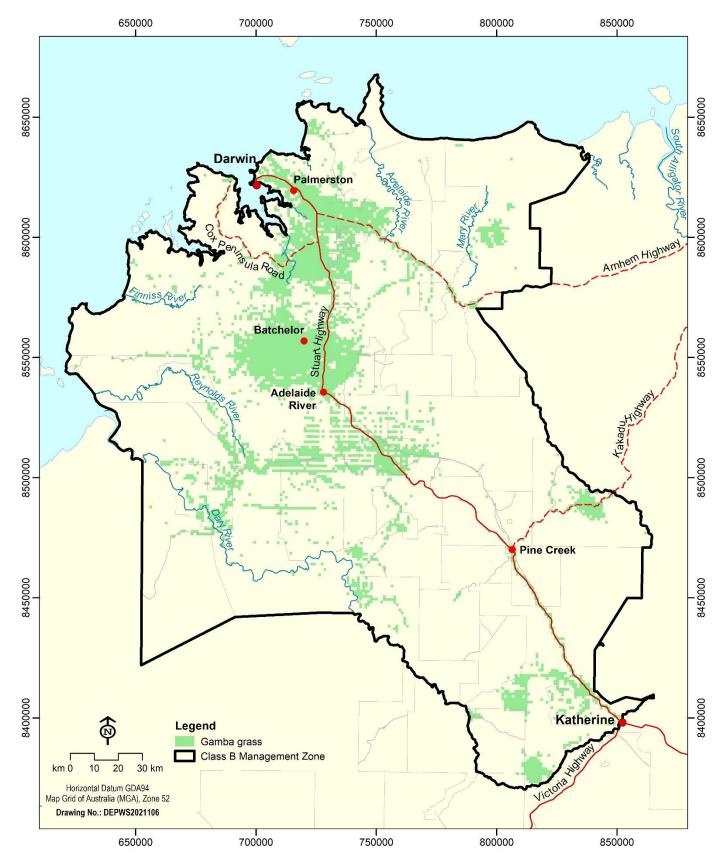


Figure 3. Estimated area affected by gamba grass in the Class B zone as of 2021 (based on data ranging from 1960 to 2021) (WMB 2021).

Goal 3 – Protect priority environmental and cultural assets from the impacts of gamba grass

Objective:

3a: Identify key environmental and cultural assets at risk of being impacted by gamba grass and incorporate into relevant Weed Management Branch, stakeholder and land manager regional plans, strategies and compliance programs.

Performance indicator: "By December 2022 a list has been developed of key environmental and cultural assets."

Key environmental and cultural values are currently included in regional WMB strategies. For gamba, key environmental and cultural values include areas such as Sites of Conservation Significance, watercourses, and key sites of community value such as Arnhem Land and the Darwin rural area.

The list required to fulfil this goal will be developed and made publicly available by January 2023 (with the exception of certain sacred sites and other sensitive areas if necessary). Environmental and cultural assets will be defined through examination of available registers and consultation with key stakeholders.

Performance indicator: "Key environmental and cultural assets are prioritised in WMB regional plans, WMB compliance planning and stakeholder weed plans aimed at managing gamba grass."

Key environmental and cultural assets remain a priority in regional WMB strategies and compliance plans.

The list of key assets to be developed will also be incorporated into WMB regional strategies and compliance programs once it has been completed.

Gamba compliance program:

The gamba compliance program for the Darwin rural area uses seven individual criteria to assign a parcel-based risk score out of 20. The individual criteria can then be assessed to identify particular risks of interest. During the 2020-21 compliance season, a range of specific risks have been measured and mapped:

Percentage	Risks measured and mapped
52%	Properties assessed had gamba within 15m of their boundaries, presenting a risk of spread to neighbouring land.
29%	Properties assessed had gamba within 15m of roads and tracks, presenting a risk of vehicle-assisted spread off the property.
15%	Properties assessed had gamba growing within 15m of houses and infrastructure, presenting an increased bushfire risk to life and property.

Life and property are the highest priority assets identified through the gamba compliance program for the Darwin rural area. In 2021, 56 land parcels threatened by imminent bushfire risk to life and property were referred to the relevant fire authority (i.e. Bushfires NT and NT Fire and Rescue Service).



Goal 4 – Increase community capacity and willingness to participate in gamba grass management

Objective:

4a: "Engage with the community and obtain a high level of public support for gamba grass management action."

Performance indicator: "Public knowledge of gamba grass impacts and management requirements has increased."

A new gamba grass communications plan has been developed to raise awareness of gamba grass management requirements and available support. This plan, prepared in consultation with the WAC, will guide communications in relation to gamba grass; it is not intended as a public document.

Performance indicator: "Better understand community perceptions, needs and barriers regarding gamba grass management."

There is no doubt that the community are concerned with the management of gamba grass. The forming of the 'Gamba Grass Roots' group attests to this. However, a study to better understand community perceptions, needs and barriers regarding gamba grass management was identified as a strategic action needed in conjunction with the WAC during development of the plan. A social marketing study (subject to funding) is proposed by July 2023 to identify community perceptions, needs and barriers regarding gamba grass management. This has not yet commenced.

Performance indicator: "Public reporting to WMB on gamba infestations."

The Northern Territory Government has developed the NT WeedMate App for reporting weed data points. Currently there are approximately 200 registered users of NT WeedMate. To find out more about NT WeedMate go to:

https://depws.nt.gov.au/rangelands/publications2/weed-management-publications/contribute-weed-data/weed-data-collection/nt-weedmate-app

There have been 2274¹ gamba grass reports via NT WeedMate since its development. Reports received include:

- 1858¹ records for 2020 / 2021 financial year;
- 416 records for 2019 / 2020 financial year (noting NT WeedMate commenced in the 19/20 financial year).

Further consideration will be given to how the WMB can better promote weed data reporting to the WMB.

Another aspect of public reporting to the WMB on gamba infestations is complaints reported by the public about gamba infested properties. The WMB received approximately 100 gamba complaints in the 2020/2021 financial year consisting of 71 complaints about the Darwin rural area and approximately 30 complaints about Darwin (outside rural area). No complaints were received about gamba grass in the Katherine Region. All complaints received are triaged and followed up by WMB authorised officers. Follow up action may include undertaking an inspection of the property, follow up letters and the issuing of penalty infringement notices if the matter is not resolved.

Performance indicator: "An increase in coordinated management effort."

A Gamba Management Framework has been developed that includes a number of collaborative partnerships to improve gamba grass management (see Appendix 2).

Gamba Framework programs that involve a coordinated management effort include:

The Fire and Weed Working Group has been established and will continue to co-ordinate the management of
weeds and fire management on government land, including gamba grass and any updated management
recommendations that relate to gamba grass.

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- Mapping and planning of gamba grass in Litchfield National Park conducted by the Charles Darwin University
 / National Environmental Science Program (NESP) researchers in conjunction with the WMB who undertook
 aerial survey of the Litchfield National Park in April 2021. Aerial survey was conducted to determine the
 current extent of gamba grass across the Litchfield National Park which is being used to develop costed
 management scenarios for gamba grass in the Litchfield National Park.
- The Gamba Army was established in late 2020 to help tackle gamba grass in prioritised public land spaces and government land areas. Co-ordinated by Territory Natural Resource Management (TNRM), the Gamba Army sprayed approximately 760 hectares across 50 land parcels over the 2020/21 control season, including:
 - Litchfield National Park
 - Charles Darwin National Park
 - Casuarina Coastal Reserve
 - Numerous vacant Crown land blocks.
- The Gamba Action Program (GAP) is another element of the Gamba Management Framework. During the 2020/2021 GAP season 2352 participants utilised this program. The GAP program aims to provide one, 5L or 10L container of herbicide per property accessing the program so herbicide assistance can be provided to as many people as possible. Where people have more than one block, the WMB at its discretion will allow a person to access a second container of herbicide.

In addition, there are a number of co-ordinated stakeholder projects that aim to tackle gamba grass. Some of these projects that have been recently completed include:

- Territory Natural Resource Management conducted aerial surveys of Kakadu and the Kakadu border which can inform areas at risk from gamba grass.
- Casuarina Coastal Reserve Landcare Group volunteers mapped gamba in Casuarina Coastal Reserve in 2021
 in collaboration with the NT Parks and Wildlife. Further information on this project can be viewed here:
 https://landcarent.org.au/news/tracking-gamba-at-casuarina-coastal-reserve-casuarina-coastal-reserve-landcare-group/

More work will be done to promote the coordinated management effort that is taking place to control gamba grass.

Objective:

4b: "Ensure adequate information and knowledge of gamba grass management is available."

Performance indicators: "Documentation of knowledge gaps."

Currently, key gamba grass knowledge gaps include:

- Accurately detect and monitor gamba grass i.e. accurate gamba grass distribution records in both the Class A and B zones. A framework for methodology to accurately capture control effort in order to report on the eradication status of gamba grass in the Class A zone has previously been reported as a knowledge gap. A methodology has been developed to address this knowledge gap in the gamba grass mapping and monitoring program for the Class A zone.
- How to motivate more people to manage their gamba grass using a balance of encouragement and enforcement.
- Integrated gamba grass management regime, e.g. understanding the ideal integrated control regime combining chemical and burning techniques, understanding effective alternatives to glyphosate for chemical control.

Performance indicator: "Community awareness"

An annual 'gamba grass research and development community forum' is required under the plan. The research forum is to have a focus on celebrating gamba grass successes and identifying issues to inform future research activities. It is anticipated that this forum will take place later this year.

The WMB will update its gamba management guide if required to reflect new recommendations in gamba management so this information can be shared with all stakeholders.

The WMB will also deliver important updates on resolved knowledge gaps in gamba communications.

The Gamba Army and other framework elements have combined to raise community awareness.

Performance indicator: "Adaption of control programs to incorporate updated management recommendations."

As above, the research forum required under the plan will allow for the discussion of gamba successes with control programs and any updated management recommendations.

The WMB will update its gamba management guide if required to reflect new recommendations in gamba management so this information can be shared with all stakeholders.

Performance indicator: "By December 2022 a pathway is identified to produce National Gamba Grass Best Practice Manual."

The Australian Government has recently funded a project to assist with the delivery of best practice tools, information and research for nationally significant weeds. The WMB will liaise with the project co-ordinator about a pathway to produce a National Gamba Grass Best Practice Manual. This action will be reported on further in the next annual report.

Objective:

4c: "Increase voluntary compliance with gamba grass management requirements."

Performance indicator: "Changes in active management and voluntary compliance levels."

A summary of trends in effort and compliance is provided against Goal 2. Further changes may be evident in future reports by looking at whether there is an increase in the number of properties already in compliance at the time of initial inspections or whether achieving compliance is more dependent on the active compliance programs.

Goal 5 – Implement transparent and accountable compliance, monitoring and reporting processes

Objective:

5a: "Deliver a transparent and risk-based compliance program."

Performance indicator: "Responsiveness to public enquiries."

All enquiries were responded to including enquiries about plant identification, the GAP, control options and enforcement action.

The WMB maintains a generic phone number (8999 4567) and email address (<u>weedinfo@nt.gov.au</u>) to receive public enquiries and reporting of all weeds. A dedicated team tracking sheet has been developed for reports specifically relating to gamba grass.

When complaints are made to the WMB about gamba grass they are recorded, triaged and followed up by authorised weeds officers. The WMB does not provide updates to every complainant about every complaint made, however that does not mean gamba complaints are not actioned. Complainants are welcome to follow up with the WMB on action that is being taken about a gamba grass complaint that has been made.

Performance indicator: "Public awareness of the parcel compliance rating system."

An online 'Check Your Gamba Risk Tool' has been developed. Landholders can answer a series of questions about their gamba and will be provided a risk rating and advice on what they should do to manage their risk.

This self-assessment score system aligns with a similar process used to assess landholder parcels for compliance.

The 'Check Your Gamba Risk Tool' went live on 1 April 2021. Since this date there have been 161 views (excluding views by the Northern Territory Government).

You can find the Check Your Gamba Risk score tool via link:

https://nt.gov.au/environment/weeds/weeds-in-the-nt/A-Z-list-of-weeds-in-the-NT/gamba-grass/gamba-grass-risk-check

Performance indicator: "Application of the parcel compliance rating system."

Application of the parcel compliance rating system has been discussed above under Goal 2.

Objective:

5b: "Collaborate with key stakeholders to undertake regular monitoring and reporting of performance against the Weed Management Plan for Gamba Grass 2020 – 2030."

Performance indicator: "Regular, transparent, and meaningful reporting that is effectively promoted to the public."

This annual gamba grass report is a key resource to fulfil this requirement.

The communications plan required by July 2021 includes the progress for collaborating with key stakeholders for future annual reports so that key stakeholder progress against the plan can also be reported to the community.

An annual online survey will be introduced prior to the next annual report to assist in fulfilling this requirement.

Performance indicator: "Community awareness."

A communications plan has been developed that documents the mechanisms for informing the community about gamba grass matters, including the promotion of this report and key outcomes from the report.

Objective:

5c. "Ensure ongoing independent oversight of delivery of the Weed Management Plan for Gamba Grass 2020 - 2030."

Performance indicator: "Retention of the WAC."

The WAC has been retained to oversee implementation of the plan. Since the plan was finalised in December 2020, five new members have been appointed to the WAC to better represent groups or organisations that are concerned with the management of gamba grass. The new members can be viewed online at:

https://depws.nt.gov.au/boards-and-committees/gamba-grass-weed-advisory-committee



Appendix 1 Goals, objectives, strategic actions, performance indicators and performance measures from the Weed Management Plan for Gamba Grass 2020 - 2030

Table 7. Goal 1 - Eradicate gam	Table 7. Goal 1 - Eradicate gamba grass from the Class A (eradication) zone						
Objectives	Strategic actions	Who	Performance indicators	Performance measures			
1a. Understand the distribution of gamba grass in the Class A zone.	By July 2021, design a mapping and monitoring program for the Class A zone.	Weed Management Branch (WMB)	By July 2022, the extent of gamba grass has been assessed for land parcels identified in the monitoring and mapping program.	A generalised map of distribution or gamba grass presence confidence is publicly available. Annual measurement of gamba grass in hectares using available			
	By July 2021, commence the mapping program in the Class A zone.	WMB / land owner / occupiers		spatial data and eradication status information.			
	By July 2022, complete the mapping program and continue monitoring in the Class A zone.	WMB/ land owner / occupiers					
1b. By July 2023, all gamba grass in the Class A zone is under an active eradication program and all gamba grass plants have been destroyed (unless under permit)	Individuals, land owners and occupiers implement required actions as per Section 4.	Land owners and occupiers	By July 2023, all known land parcels with gamba grass in the Class A zone are classified as b) active management. By July 2025, all known land parcels with gamba grass in the Class A zone are classified as c) monitoring phase. By July 2026, all known land parcels with gamba grass in the Class A zone are classified as d) eradicated ² .	A register is maintained by WMB of all known land parcels with gamba grass in the Class A zone according to their current eradication status: a) unmanaged b) active management c) monitoring phase			
1c. By July 2026, all gamba grass in the Class A zone is eradicated (unless under permit).	Assess eradication status for land parcels.	WMB		d) eradicated Summary data of a, b, c and d is produced. Annual summary data produced showing progress toward eradication.			
1d. By July 2026, a review of the permit system pertaining to gamba grass is completed.	Existing permits that allow grazing of gamba grass in the Class A zone are reassessed to ensure they are appropriate.	WMB Gamba Grass Weed Advisory Committee (WAC)	Review of permit system is completed as it pertains to gamba grass.	Annual reporting on gamba grass grazing permit conditions and compliance. Outcomes of the July 2026 review are made publicly available.			
1e. Review the Class A and B zone boundaries to improve the protection of areas in the Class B management zone that are free of gamba grass.	By July 2026, review the Class A and Class B zones to ensure the Class A zone captures areas that are free of gamba grass and where eradication is considered feasible.	WMB WAC	By July 2026, revised Class A and B zones are declared if recommended by the review process.	Gamba grass management zones review discussion paper is produced through consultation with relevant stakeholders, including the WAC. Updated Class A and B zone map is produced if zones are amended.			

² For more information on active management, monitoring phase, and eradication status, see glossary of Weed Management Plan for Gamba Grass 2020 - 2030.

Objectives	Strategic actions	Who	Performance indicators	Performance measures
 2a. Reduce seed production. 2b. Implement weed hygiene measures to reduce gamba grass seed spread. 2c. Reduce gamba grass outliers at a land parcel and landscape scale. 2d. Prevent gamba grass spreading into clean areas. 2e. Reduce gamba grass abundance and density in the Class B zone. 	Land owners, occupiers and all users of land implement required actions as per Section 3 and 4.	Land owners, occupiers and all users of land	An increase each year in the number ³ of assessed land parcels that have implemented management requirements and percentile of properties assessed that are compliant e.g. 80% compliant.	Proportion of assessed land parcels that: a) Are already compliant at time of initial assessment and no follow up action is required b) Voluntarily meet management requirements after being informed of non-compliance. c) Had compliance action taken due to non-compliance. Annual summary of a, b and c produced including the total number and area of parcels assessed as a proportion of the area of the Class B management zone.
2f. Reduce gamba grass presence around landholder infrastructure.			By July 2024 and annually afterwards there is an improvement in gamba grass management as evidenced by an improvement in parcel compliance score.	Proportion of land parcels that have had multiple year compliance assessments and: a) Compliance score has improved indicating reduced gamba density. b) Compliance score is unchanged indicating no reduction in gamba density. c) Compliance score has worsened indicating increased gamba density. Annual summary of a, b, and c produced.
			Reduction in area affected by gamba grass.	Gamba grass presence measured annually (in ha and km²) using available spatial data and updated distribution maps produced.

³ In 2019 – 2020 the number of assessed land parcels was approximately 1500.

Objectives	Strategic actions	Who	Performance indicators	Performance measures
3a. Identify key environmental and cultural assets ⁴ at risk of being impacted by gamba grass and incorporate into relevant Weed Management Branch, stakeholder and land manager regional plans, strategies and	By December 2022, key environmental and cultural assets at risk of being impacted by gamba grass have been identified with stakeholder input.	WMB Non- Government Organisations Landholders and occupiers	By December 2022 a list has been developed of key environmental and cultural assets.	By January 2023, a list of priority assets identified is made publicly available (with exclusion of certain sacred sites if necessary).
compliance programs.	Identified key environmental and cultural assets have been prioritised in WMB and stakeholder planning processes.	WMB and landowners and occupiers with environmental and cultural assets	Key environmental and cultural assets are prioritised in WMB regional plans, WMB compliance planning and stakeholder weed plans aimed at managing gamba grass.	An annual assessment of regional plans and compliance programs is conducted to evaluate their success in managing the threat gamba grass poses to key environmental and cultural assets. An annual summary is produced to demonstrate progress towards protection of key environmental and cultural assets.

⁴ Environmental and cultural assets will be defined through consultation with available registers and consultation with key stakeholders.

Table 10. Goal 4 - In	Table 10. Goal 4 - Increase community capacity and willingness to participate in gamba grass management						
Objectives	Strategic Actions	Who	Performance indicators	Performance measures			
4a. Engage with the community and obtain a high level of public support for gamba grass	By July 2021, develop a communications plan to raise awareness of gamba grass management requirements and available support.	WMB	Public knowledge of gamba grass impacts and management requirements has increased.	Delivery of the communications plan, including participation in public events.			
	Engage with the community.	WMB		The number of people participating in the Gamba Action Program has increased.			
management action.	By July 2023, complete a social marketing study (subject to funding) to identify community	WAC lead in conjunction with Non-Government	Better understand community perceptions, needs and barriers regarding gamba grass management.	Development and completion of the social marketing study by 2023.			
	perceptions, needs and barriers regarding gamba grass management.	Organisations		Post study completion, and delivery of strategies that incorporate study outcomes to increase uptake of gamba grass management in the community.			
	Promote methods of reporting gamba grass distribution. ⁵	WMB	Public reporting to WMB on gamba infestations.	Uptake of NT WeedMate. Number of reports received (new locations).			
	Development of an efficient tool (subject to funding) to encourage public reporting of gamba grass sightings and management effort.	WAC lead in conjunction with Non-Government Organisations		Transcr of reports received (new locations).			
	Establish and support cross tenure working groups to ensure coordinated management of gamba grass across different land tenures.	WMB	An increase in coordinated management effort.	Promote active working groups achieving effective gamba grass management across tenures.			
4b. Ensure adequate information and knowledge on gamba grass management is available.	Identify and prioritise gamba grass knowledge gaps and advocate for research activity in these	WMB	Documentation of knowledge gaps.	Knowledge gaps identified in annual reporting.			
	areas.	Research partners					
	Promote research activities and updated management recommendations.	WMB and Research partners	Community awareness.	Integration of research outcomes into core business activities and relevant publications (e.g. improved remote sensing technologies used for distribution mapping).			
	Deliver an annual gamba grass research and development community forum with a focus on celebrating gamba grass successes and identifying barriers and issues to inform further research.	WAC in conjunction with relevant stakeholders	Adaption of control programs to incorporate updated management recommendations.				
	Collaborate with other jurisdictions to identify funding options for production of a National Best Practice Gamba Grass Manual by December 2022.	WMB	Pathway is identified to produce National Gamba Grass Best Practice Manual.	Progress is made towards development of National Gamba Grass Best Practice Manual.			
4c. Increase voluntary compliance with gamba grass management requirements.	Education and awareness activities are implemented to encourage compliant behaviours.	WMB	Changes in active management and voluntary compliance levels.	Annual summary data produced as per Goals 1 to 3.			

⁵ For example – promotion of NT WeedMate, development of a discussion paper regarding the feasibility and options for an 'amnesty' period to increase self-reporting of gamba grass.

Table 11. Goal 5 - Implement transparent and accountable compliance, monitoring and reporting processes				
Objectives	Strategic actions	Who	Performance indicators	Performance measures
5a. Deliver a transparent and riskbased compliance program.	A risk-based compliance program is developed. The compliance program is promoted to the community. The compliance program is implemented annually.	WMB	Responsiveness to public enquiries.	Proportion of public enquiries responded to regarding the compliance process.
			Public awareness of the parcel compliance rating system.	Number of online downloads of the parcel compliance rating system, annually.
			Application of the parcel compliance rating system.	Annual summary of outcomes as per Goal 1 - 3.
5b. Collaborate with key stakeholders to undertake regular monitoring and reporting of performance against the Weed Management Plan for Gamba Grass 2020 – 2030.	By 30 July each year, deliver an annual report which addresses all performance indicators.	WMB WAC	Regular, transparent, and meaningful reporting that is effectively promoted to the public.	Public release of an annual report reviewed by the WAC that addresses performance indicators and measures within this plan. Annual online feedback undertaken to inform annual report.
	Effectively communicate key outcomes of the annual report to the community.	WMB	Community awareness.	Number of mechanisms used to promote the key outcomes of the annual report.
5c. Ensure ongoing independent oversight of delivery of the Weed Management Plan for Gamba Grass 2020 – 2030.	Ongoing collaboration with the WAC regarding implementation of this plan.	WMB	Retention of the WAC.	WAC are communicating with their represented stakeholders on performance of the Weed Management Plan for Gamba Grass 2020 – 2030 and acting on feedback received from stakeholders.

Appendix 2 Gamba Management Framework

GAMBA MANAGEMENT FRAMEWORK

The Gamba Management Framework aligns the strategic and actionable items providing a holistic approach to gamba management and fire mitigation for fuel load reduction and infestation control. It is underpinned by the statutory 'Weed Management Plan for Gamba Grass 2020-2030', given force by the Weeds Management Act 2001.

WEED ADVISORY COMMITTEE

WEED AND FIRE WORKING GROUP GAMBA ARMY

MAPPING AND PLANNING GAMBA ACTION PROGRAM

GAMBA FIRE MITIGATION UNIT FIRE READY ASSISTANCE PACKAGE ABORIGINAL RANGER & ENVIRONMENT GRANTS

A statutory committee, formed under the Weeds Management Act 2001 to draft the new 'Weed Management Plan for Gamba Grass 2020-2030'.

Delivery of the new Weed Management Plan for Gamba Grass 2020-2030' in November 2020 and meeting annually thereafter (for a period of three years) to assess the effectiveness of its implementation. Collaboration of DIPL and DEPWS key stakeholders, delivering a strategic, coordinated approach to infestation and fuel loads.

Delivery and implementation of strategic regional weed and fire management plans, including the new Vacant Crown Land (VCL) Weed Strategy and Darwin Plan; led by the new Crown Lands Weeds Officer.

NT Weed Management Branch will provide oversight for Territory NRM to manage and deploy the Gamba Army for integral on the ground services.

Creation of up to 43 new local jobs to train and equip the Gamba Army to be strategically deployed for weed management activities; commencing operations in Casuarina Coastal Reserve and Charles Darwin National Park prior to Christmas

CDU will deliver a mapping study which will plan, prioritise and identify core infestations, highlighting high risk areas allowing targeted compliance and enforcement activities.

Delivery of strategic digital mapping, informing the priority action areas for the Gamba Army and assisting in monitoring and evaluation; also completing detailed gamba mapping of Tabletop Range in Litchfield National Park.

The popular and longrunning Gamba Action Program (GAP), providing assistance to landholders to manage and combat gamba grass on private land.

The GAP runs from 30 November until the end of April, providing assistance, free herbicide and equipment loans to over 2,000 landowners; operating out of Freds Pass Sport and Recreation Reserve and other distribution points around Darwin and Katherine.

The unit will combine compliance and risk mitigation services reducing the risks associated with unmanaged gamba grass.

Assessing 1500 properties per annum focussing on public safety; working closely with Bushfires NT and the Northern Territory Fire and Rescue Service to minimise the threat of dry season fires in the Darwin Rural Area. Assistance to rural landholders addressing land management and firebreaks, reducing fuel loads on private land.

Engage local small businesses to assist up to 50 rural landholders each year to address matters relating to firebreaks and gamba grass fuel loads on their property; targeting at-risk, physically impaired and elderly landholders.

Support through grant funding to Aboriginal ranger groups and local councils, among others, to control and eradicate weeds, including gamba grass on country.

Support through grant funding, training and technical support through the Aboriginal Ranger Grants and Environment NT Grants Program; approximately, \$850,000 made available to Aboriginal ranger groups for weed control in the Top End in 2018/19.

Department of ENVIRONMENT, PARKS AND WATER SECURITY

