

Dense gamba grass infestation (light green) in Litchfield National Park.

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**Northern Australia
Environmental
Resources
Hub**

National Environmental Science Programme

The gamba grass threat to Litchfield National Park assets

Wrap-up factsheet

Outcomes of this project

This research project has shown:

- Gamba grass has rapidly expanded in the park over the past seven years, with infestations now covering ~30,000 ha.
- This is the largest gamba grass infestation in a national park in Australia.
- Without intensive weed control, we predict gamba grass will cover more than 42,000 ha within a decade.
- We describe two options for managers to protect highly valued environmental and tourism assets:
 1. eradicating 594 ha of gamba grass from the existing eradication zone on Tabletop Range, predicted to cost \$825,000 over five years
 2. eradicating 801 ha of gamba grass in a much larger eradication zone, to better protect park assets, predicted to cost \$6.6 million over five years.
- Significant investment in intensive gamba grass control and monitoring is needed to protect assets in the park.

Gamba grass in Litchfield National Park

Litchfield National Park is a large conservation area in the Northern Territory (NT) that is home to a range of native species of high conservation significance. It also contains world-class visitor attractions that draw the highest numbers of visitors of any NT-managed park. However, Litchfield National Park is increasingly threatened by gamba grass, which is a Weed of National Significance, a major threat to biodiversity and a major fire risk.

Gamba grass spreads rapidly, replacing native grasses with dense monocultures of grass up to four metres tall that burn at up to eight times the intensity of the native grasses. While gamba grass was identified as an extreme risk to Litchfield National Park from our 2014 gamba grass survey, there has been no landscape-scale gamba mapping since. New mapping was urgently needed to allow managers to re-assess the scale of the problem, identify the important assets most at risk, and then prioritise gamba grass management to protect these assets.



Patch Clapp

Litchfield's natural environment is highly valued by visitors.

What are the threats to assets in the park?

Gamba grass was not present in the park when it was established in 1991. The first systematic mapping of gamba in Litchfield National Park was undertaken via a helicopter-based survey in 2008–09, a second survey in 2014, and a third in 2021–22. These surveys have shown:

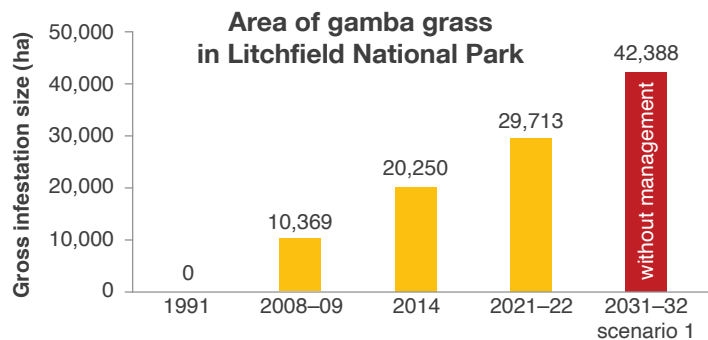
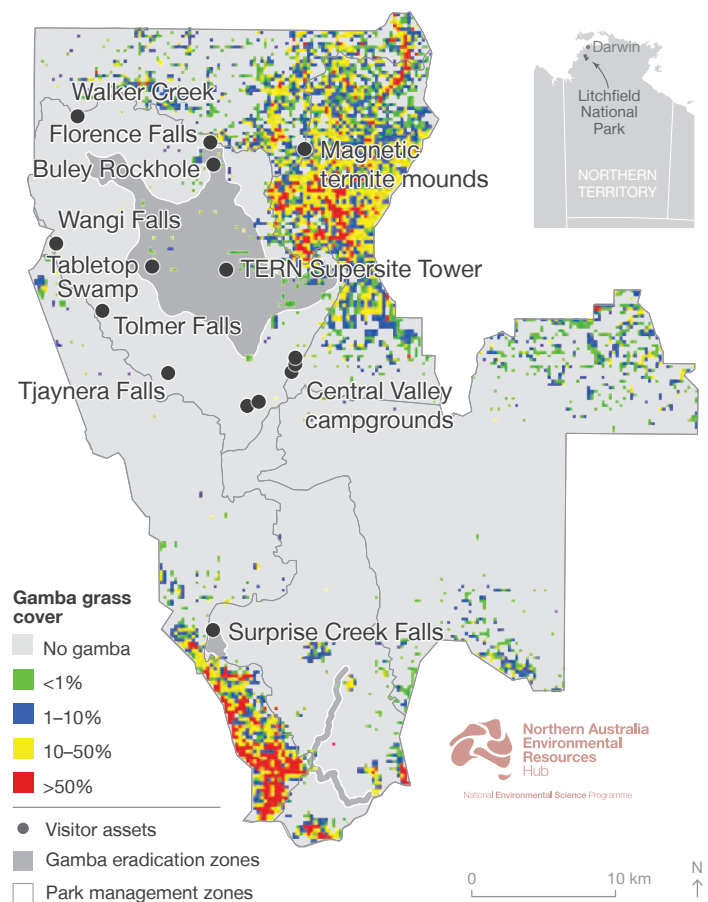
- Gamba grass infestations now cover ~30,000 ha of the park, and large areas are >50% gamba grass cover (see map).
- High-density gamba grass is what drives increased fire risk, and also increases the potential for future losses of biodiversity and tourism assets.
- Gamba grass has invaded habitats which are potentially home to endangered and vulnerable species (e.g. black-footed tree-rat, partridge pigeon).
- Gamba grass is also close to many popular visitor sites (e.g. Florence Falls, Buley Rockhole and the Central Valley Campgrounds).
- Without investment in intensive weed control, we predict gamba grass will cover more than 42,000 ha within a decade (see graph).

This research demonstrates the importance of regular systematic mapping to inform the prioritisation of gamba grass management and the long-term protection of valued assets in the park.



Park ranger spraying gamba grass.

Distribution of gamba grass in Litchfield National Park in 2021–22



Further information

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This factsheet and papers are available from neslandscapes.edu.au/projects/nesp/fire-weeds-top-end. A synthesis of gamba grass research can be found at gamba-uwa.hub.arcgis.com.



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