



# National lantana threat abatement plan:

national priorities for lantana management  
to conserve native species & ecological  
communities

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NSW National Parks  
and Wildlife Service



Department of  
**Primary  
Industries  
and Fisheries**  
Queensland Government



National *Lantana*  
Management Group



**Queensland Government**  
Environmental Protection Agency  
Queensland Parks and Wildlife Service



An Australian Government Initiative

**DEFEATING  
THE WEED MENACE**

Department of **Environment & Climate Change** NSW



- A TAP for lantana
- Identifying and prioritising native biodiversity at risk and determining sites for control regardless of land tenure
- Management at high priority sites
- Monitoring native species recovery
- Summary



Girringun National Park



# Threat Abatement Plan (TAP)

- The NSW Department of Environment and Climate Change and Biosecurity Queensland are jointly developing a national plan for managing lantana for biodiversity conservation.
- Like any TAP, the goal of this plan is to minimise the threat by:
  - ↳ protecting listed threatened native species and ecological communities and
  - ↳ preventing further species and ecological communities from becoming listed as threatened.



# Protecting biodiversity at risk

## Step:

1. identify the biodiversity at risk from lantana and rank the threat
  2. identify the invaded sites and prioritise them based on the level of threat and the likelihood of reducing the threat of lantana at each site.
- This two-step process is essential for targeting weed control to areas where the benefits to biodiversity are the greatest.



# Identifying and prioritising native biodiversity at risk



Photo: Simon Thompson QPWS



# Identifying and prioritising species at risk

Weed Impacts to Native Species (WINS) assessment process:

- Stage 1:** literature + research review
- Stage 2:** 20 workshops involving 199 people working with lantana or native species (across lantana's range)
- Stage 3:** draft list of species circulated and reviewed and complemented with field surveys (Gooden et al. 2007)
- Stage 4:** ranking the final list of species and communities

**HIGH**

**MEDIUM**

**LOW**



# Selecting sites for control



Photo: Simon Thompson QPWS



# Prioritising sites for control

Control focused to areas where the outcomes will have the greatest likelihood of control and recovery of the native biodiversity.

- ↪ effectiveness of control at site  
(is control possible and effective)
  
- ↪ degree impact  
(degree of impact posed to native species)
  
- ↪ condition
  - 1 condition of the native species
  - 2 site importance to the overall native species survival
  - 3 other threats present





# Site model - priority matrix



Probability of protecting biodiversity at specific sites


Level of threat to biodiversity

	High	Medium	Low
High	<b>1</b> - Alien plant management is critical, immediate, targeted and long-term	<b>2</b> - Management action needs to occur promptly and long-term	<b>5</b> - Broader management beyond weed control needed
Medium	<b>3</b>	<b>4</b>	<b>6</b>
Low	<b>7</b>	<b>8</b>	<b>9</b>



# 5 year site management plans

Address  <http://www.environment.nsw.gov.au/pestsweeds/LantanaThreatToBiodiversity1.htm> 

 **New South Wales Government**  
Department of  
**Environment and Climate Change**

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**Environmental issues**

**Pests and weeds**

- + Pest and weed management in NSW national parks
- + Pest animals
- Weeds
  - NSW weeds
    - + Bitou bush
      - Blackberry
    - + Introduced grasses
    - Lantana
      - Lantana fact sheet
      - Managing the impact of lantana on biodiversity
      - Distribution of lantana in NSW and Queensland
      - Standard categories for mapping lantana distribution and density
      - Determining the

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## Implementation

Following the development of this [national management plan](#), it will be implemented in a similar manner to the [Bitou Bush Threat Abatement Plan](#). As part of the [Defeating the Weed Menace Programme](#) grant for this project, some of the priority sites will receive initial funding to help with implementation. Details will be announced when they become available.

[Site-specific Management Plans](#) [MSword 1 MB] will need to be completed for each of the selected priority sites to account for specific site variations as well as to help land managers to establish a five year management strategy for their site. Site-plans are to be completed before control is initiated. An [example plan](#) [PDF 782KB] has been prepared for your assistance. If you need more help preparing your site management plan, contact the [lantana plan coordinator](#).

### A staged approach to lantana control

At many sites the density and area infested by lantana is such that it cannot be controlled in a single control event/action. Thus, the control of lantana at these sites needs to occur in stages.

The **first stage** is the removal of lantana and other weed species from the immediate vicinity of the species, population or ecological community at risk. This will reduce the direct threat in the short term.

The **second stage** is the expansion of stage one to cover a larger area of the lantana infestation at the site. In this stage, the removal of lantana should be prioritised to areas containing suitable habitat for the priority species, populations and ecological communities to expand into in the future and decrease the threat by providing a bigger buffer zone between lantana and the threatened entity. Stage two involves the follow-up control of lantana seedlings that germinate within all previously controlled areas (including stage one areas).



# Sites funded

- Some of the high priority sites received initial funding (until 30/6/09) to help with the implementation of the plan
- 24 sites in total funded, protecting 92 high priority species/communities
- Further application for additional sites through Caring for Country



Threatened species  
from Maroota Ridge:

Photos: Alana Burley





Photos: Malcolm Wells



Including hand removal by a 4WD club

### Maroota Ridge SCA:

- *Olearia cordata*
- *Zieria involuocrata*

- Vulnerable under EPBC & TSC Acts
- Vulnerable under EPBC Act and Endangered under TSC Act





Photos: Pete Turner



## Forty Mile Scrub NP:

- RE 9.8.3 Semi evergreen vine thicket – Of Concern Qld VM Act
- Regional refuge for a large number of plant and animal species.





Photos: Pete Turner



Forty Mile Scrub NP – with help from this TAP and 25 EPA staff:

- 212,000 lantana plants hand pulled
- ~110,000 chemically treated
- Scrub turkeys reducing fire risk





Photos: Mark Hamilton

## Weitalaba National Park:

- *Rhodamnia angustifolia* – Endangered under NC Act (19 ind.)
- *Oldenlandia gibsonii* – Endangered under NC Act (+ 2 other rare species)





Photos: Mark Hamilton



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- *Rhodamnia angustifolia* – Endangered under NC Act (19 ind.)
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# Monitoring native species recovery



Photo: Simon Thompson QPWS



## Native species response to control



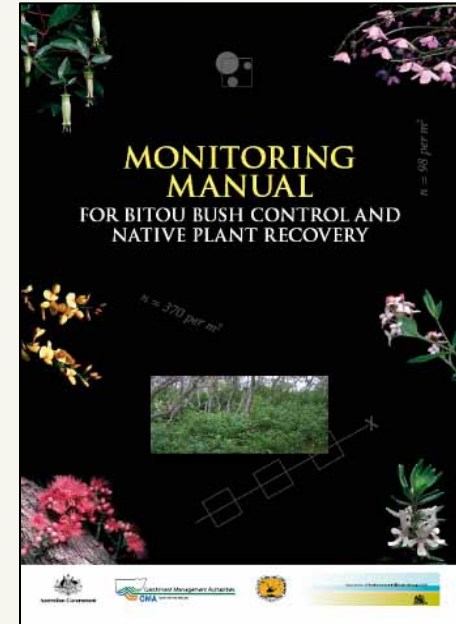
*Rhodamnia angustifolia*



*Oldenlandia gibsonii*

### Threatened species from Weitalaba NP:

Photos: Mark Hamilton

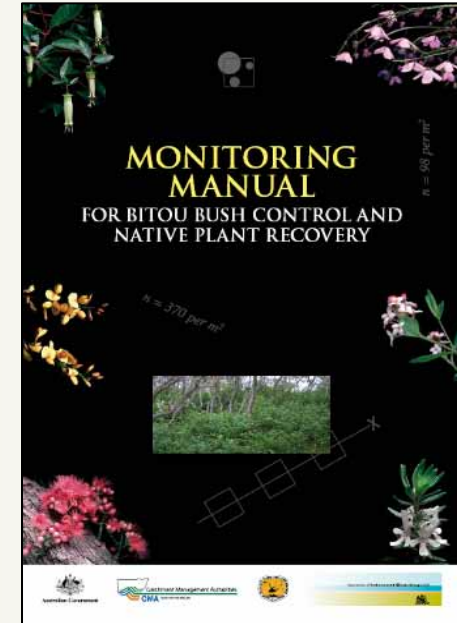


- Five 50 m transects established in the area of *R. angustifolia* and the cover of native and exotic species recorded prior to treatments and at 6 monthly intervals

# Monitoring assistance available



Site visits



Photos: Pete Turner

Long term study site investigating population dynamics of lantana



# Summary



Photo: Simon Thompson QPWS



This TAP has identified the threats of lantana to biodiversity and has used a national approach to prioritise biological assets for conservation.

It highlights the need for immediate action to protect rare and threatened species at risk from lantana.

This process also breaks up the lantana problem into manageable pieces.



## Acknowledgements:

Thanks to all who have helped with the development of the national lantana threat abatement plan to date (including workshop attendees and the site steering committee)

Marion Winkler, Andrew Leys, Ruth Armstrong, Tegan Burton, John Hodgson, Kym Johnson, Stephanie Lymburner and Bill McDonald

Site managers implementing the TAP on the ground

[www.environment.nsw.gov.au/pestsweeds/LantanaThreatToBiodiversity.htm](http://www.environment.nsw.gov.au/pestsweeds/LantanaThreatToBiodiversity.htm)

