

WEEDS OF NATIONAL SIGNIFICANCE

2012–17 addendum to the Weeds of National Significance mimosa (*Mimosa pigra* L.) strategic plan

This publication is produced as part of the Weeds of National Significance initiative, a joint initiative between the Commonwealth of Australia and each of the Australian states and territories.

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An unpublished draft of the revised strategic plan has guided national coordination of this Weed of National Significance for the past two years. Before publishing the revised plan, the Australian Weeds Committee altered it because some actions had been completed, and then agreed to include a uniform monitoring, evaluation, reporting and improvement (MERI) template for all phase-3 Weeds of National Significance.

Supporting information about the Australian Weeds Strategy, Weeds of National Significance and progress to date may be found at www.weeds.org.au, where links and downloads provide contact details for all species and copies of the strategy. Comments and constructive criticism are welcome as an aid to improving the process and future revisions of this strategy.

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1 Introduction

The National Mimosa Management Committee (NMMC) has developed this document in consultation with key stakeholders throughout Australia. It builds on the Weeds of National Significance (WoNS) Mimosa (*Mimosa pigra*) Strategic Plan produced in 2001, and is an addendum replacing Sections 2 and 3.

The 2001 strategic plan was developed to enable a coordinated approach to the management of *Mimosa pigra* throughout Australia. The strategy outlined a number of actions designed to prevent further infestations and to minimise the impact that current infestations have on the environment and industry.

During the decade since 2001, the benefits of a nationally coordinated program have been seen with many of the actions undertaken. As a result there has been improved stakeholder understanding, involvement and commitment to long-term surveillance and management of mimosa in Australia. A substantial biocontrol program is nearing completion, and has had significant success in reducing the impact of mimosa within the Northern Territory as part of an integrated weed management approach. The only three known infestations outside the Northern Territory—at the Peter Faust Dam in Queensland, north-west of Kununurra and on the eastern shore of lake Argyle in Western Australia—are targeted for eradication. At these sites, all known plants are controlled and regular monitoring and follow up occur in accordance with the management plan developed for each site.

However, continuing to prevent the spread of this weed of national significance and reduce its impact requires long-term capacity and a willingness to manage it. Consequently, a revised action plan has been produced to direct activity over the next five years to 2017.

Background information on mimosa, the 2001 national strategy and details of achievements in managing mimosa over the last decade are available at www.weeds.org.au/WoNS/mimosa.

Strategic goals and objectives have been identified in this revised strategic plan that, together with the identified national actions and tasks, aim to maintain ongoing strategic programs and address critical management and research needs for the next five years. Listed actions and tasks are not only the responsibility of the National Mimosa Coordinator and the NMMC. They cover activities for all jurisdictions and stakeholders where this weed of national significance is present or where it has the potential to spread.

Three complementary goals are included in the revised Mimosa (*Mimosa pigra*) Strategic Plan 2012–17. Underlying the actions and performance indicators to achieve these goals is the principle that an integrated approach will be the most effective. Many of the actions therefore relate to more than one goal and to each other.

2 Strategic goals

Revised actions to protect Australia from the adverse impacts of *Mimosa pigra* and to restore infested land and water are described in Sections 2.1–2.3.

2.1 Goal 1: Prevent new infestations from establishing

The objectives and strategic actions to achieve goal 1 of the strategic plan, and the action level and responsible partners for each action, are shown in Table 1.

Table 1 Objectives and strategic actions to achieve goal 1 of the Mimosa Strategic Plan 2012–17

Objectives	Strategic actions	Action level ^a	Responsibility
1.1 Protect clean areas and promote early detection of new infestations	Define 'clean areas' in relation to scale and prioritisation	3	Regional bodies
	Update location and extent of clean areas as survey information becomes available	3	Qld, WA and NT weed agencies; regional bodies
	Continue multimedia mimosa identification and awareness activities by maintaining and implementing the (NMCP)	3	Qld, WA and NT weed agencies
	Encourage landholders and other members of the community to report and control sightings of mimosa	2	Qld, WA and NT weed agencies, NRM regional bodies, landcare groups
	Implement an invasion response plan in the event of a new outbreak, including tracing the origin of the outbreak	2	Qld, WA and NT weed agencies, landholders
1.2 Prevent spread	Promote the importance of livestock, produce and equipment hygiene	2	Qld, WA and NT weed agencies
	Continue to implement hygiene and control protocols to prevent the spread of mimosa from existing infestations, including:	2	DAFWA, NRETAS, DEEDI, NLC, Tiwi Land Council, landholders, grazing industry, recreational users
	• implementing hygiene of vehicles, livestock, products and people moving from infested areas	2	Industry, landholders, recreational users
	• strategically controlling feral animals in high-risk infested areas	3	Land holders and managers
	• maintaining quarantine checks at the WA–NT border	2	DAFWA

Objectives	Strategic actions	Action level ^a	Responsibility
1.3 Eradicate isolated and scattered infestations	Continue a surveillance and control program that aims to eradicate outlier populations in accordance with an agreed national eradication protocol at: <ul style="list-style-type: none"> Peter Faust Dam, Qld Kununurra, WA Croker Island, NT Melville Island, NT Parts of Arnhem Land, NT Legune Station, Victoria River, NT Phelp–Roper River area, NT local eradication in parts of the upper catchments of the Adelaide, Mary, Finnis, Daly and East Alligator rivers 	2 2 2 2 2 2 2 2	Queensland <i>Mimosa pigra</i> Stakeholder Group DAFWA NRETAS, NLC, Garngi Aboriginal Ranger Group NRETAS, Tiwi Land Council, Tiwi Aboriginal Ranger Group NRETAS, NLC, Ranger Groups NRETAS NRETAS, NLC NRETAS, NLC, PWSNT
1.4 Implement land management strategies that decrease the susceptibility of land to mimosa invasion	Continue to develop and encourage integrated weed management strategies to prevent mimosa invasion, such as maintenance of vegetation cover, fire and feral animal management and stocking rates	3	CSIRO, DoRNT, landholders

CSIRO = Commonwealth Scientific and Industrial Research Organisation; DAFWA = Department of Agriculture and Food Western Australia; DEEDI = Department of Employment, Economic Development and Innovation; DoRNT = Northern Territory Department of Resources; NLC = Northern Land Council; NMCP = National Mimosa Communication Plan; NRETAS = Natural Resources, Environment, The Arts and Sport (NT); NT = Northern Territory; PWSNT = Parks and Wildlife Service of the Northern Territory; Queensland = Queensland; WA = Western Australia

a The Australian Weeds Committee (AWC) applied three action levels that reflect jurisdictional commitment to implementing actions:

Level 1 = Highly beneficial as a national action that is critical to success of the WoNS revised strategic plan and all relevant AWC jurisdictions have committed resources to implementing this action.

OR

Highly beneficial to a particular jurisdiction and the responsible party/ies have committed resources to implement this action.

Level 2 = Highly beneficial at national and/or jurisdictional level, but implementation will be subject to resource availability and investment priorities.

Level 3 = Desirable and still beneficial to improving uptake and efficiency of on-ground action, but not critical to success.

2.2 Goal 2: Reduce the impact of established infestations

The objectives and strategic actions to achieve goal 2 of the strategic plan, and the action level and responsible partners for each action, are shown in Table 2.

Table 2 Objectives and strategic to achieve goal 2 of the Mimosa Strategic Plan 2012–17

Objectives	Strategic actions	Action level ^a	Responsibility
2.1 Implement strategic control programs to protect key assets at national, jurisdictional and catchment level from the impacts of mimosa	Implement:		
	<ul style="list-style-type: none"> NT Weed Management Plan for Mimosa (<i>Mimosa pigra</i>), November 2010 	2	NRETAS, NLC, Tiwi Land Council, Aboriginal Ranger groups, NTCA, landholders
	<ul style="list-style-type: none"> Minimising the risk of spread of Mimosa pigra from Peter Faust Dam, Proserpine, 2006 	2	Queensland <i>Mimosa pigra</i> Stakeholder Group
	<ul style="list-style-type: none"> Management Plan for the control of Mimosa (<i>Mimosa pigra</i>) on Ivanhoe Station, WA, Nov 2009 	2	DAFWA, landholder
	Develop and implement mimosa catchment management plans for affected catchments within the NT, and establish priorities for control areas and activities in accordance with the NT Weed Management Plan for Mimosa	3	NRETAS in conjunction with stakeholder groups
2.2 Continue to investigate and disseminate effective control methods	Continue to provide a best-practice manual or control guide	1	DEEDI, NRETAS, DAFWA
	Continue to gather updated knowledge from researchers and landholders	1	DEEDI, NRETAS, DAFWA
	Continue to implement an extension plan for best-practice control methods	2	Communications subcommittee
2.3 Establish control agents widely across the range of mimosa	Continue to monitor, evaluate and redistribute existing biocontrol agents	1	NRETAS, Aboriginal Ranger groups
	Continue a mass-rearing and distribution program for the control agent <i>Nesaecrepida infusata</i>	1	NRETAS, Aboriginal Ranger groups, landholders

CMP = catchment management plan; DAFWA = Department of Agriculture and Food Western Australia; DEEDI = Department of Employment, Economic Development and Innovation; NLC = Northern Land Council; NRETAS = Natural Resources, Environment, The Arts and Sport (NT); NT = Northern Territory; NTCA = Northern Territory Cattleman's Association

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Level 2 = Highly beneficial at national and/or jurisdictional level, but implementation will be subject to resource availability and investment priorities.

Level 3 = Desirable and still beneficial to improving uptake and efficiency of on-ground action, but not critical

2.3 Goal 3: Increase the capability and willingness to manage mimosa

The objectives and strategic actions to achieve goal 3 of the strategic plan, and the action level and responsible partners for each action, are shown in Table 3.

Table 3 Objectives and strategic actions to achieve goal 3 of the Mimosa Strategic Plan 2012–17

Objectives	Strategic actions	Action level ^a	Responsibility
3.1 Further develop the knowledge base and integrated methods for effective and efficient management of mimosa	Complete seed bank depletion research to contribute to determination of eradication science for mimosa	2	DEEDI
	Complete DNA genetic studies to contribute to:		DEEDI, NRETAS
	• understanding of pathways and vectors of spread	3	
	• development of detection tests and reduction of future spread	3	
	Conduct relevant studies on the causes and potential assisted distribution of mimosa “dieback” in the NT	2	NRETAS, University of Queensland, Melaleuca Station NT
	Further investigate methods to overcome barriers to adoption of best practice management and integrated weed management for mimosa control	2	NMMC
	Investigate feasibility of use of current remote sensing surveillance technology for locating mimosa infestations	3	NMMC, Queensland <i>Mimosa pigra</i> Stakeholder Group
	Ensure the potential effect on distribution of mimosa is included in investigations of the impact of climate change	3	NRETAS
	Undertake monitoring of mimosa stands, including rate of spread and use of remote sensing where applicable	3	NRETAS, CSIRO

Objectives	Strategic actions	Action level ^a	Responsibility
3.2 Inform and educate stakeholders about mimosa, its adverse impacts and appropriate best-practice management strategies for its control	Implement and regularly evaluate the NMCP	2	DEEDI, NRETAS, DAFWA
	Complete information and education activities identified in the NMCP for target stakeholder groups:	2	
	<ul style="list-style-type: none"> landholders transport, mining, hunting and fishing companies and individuals Aboriginal Ranger groups general community 		
	Focus information and education activities and products in the NMCP on high-risk areas for new infestations, including:		DEEDI, NRETAS, DAFWA, regional NRM agencies, Queensland local government
	<ul style="list-style-type: none"> the Kimberley, Western Australia 	2	
	<ul style="list-style-type: none"> North Queensland upper NT catchments in the Top End 	2 2	
3.3 Recognise outstanding mimosa management achievers	Develop a process to identify and recognise outstanding mimosa management	3	NMMC
	Award and promote outstanding mimosa management achiever	3	
3.4 Monitor and evaluate implementation of the objectives of the strategic plan	Monitor and evaluate progress towards this strategic plan against a phase-3 MERI plan	1	
	Review implementation of the Mimosa (<i>Mimosa pigra</i>) Strategic Plan 2012–17	1	Australian Weeds Committee

CSIRO = Commonwealth Scientific and Industrial Research Organisation; DAFWA = Department of Agriculture and Food Western Australia; DEEDI = Department of Employment, Economic Development and Innovation; MERI = monitoring, evaluation, reporting and improvement; NMMC = National Mimosa Management Committee; NMCP = National Mimosa Communication Plan; NRETAS = Natural Resources, Environment, The Arts and Sport (Northern Territory)

a The Australian Weeds Committee (AWC) applied three action levels that reflect jurisdictional commitment to implementing actions:

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Level 3 = Desirable and still beneficial to improving uptake and efficiency of on-ground action, but not critical

3 Monitoring, evaluation, reporting and improvement framework

The Australian Weeds Strategy (NRMMC 2007) gives the Australian Weeds Committee (AWC) responsibility for monitoring and evaluating the management of national priority weeds, including WoNS. The AWC is therefore responsible for monitoring and reporting on progress under this strategic plan.

This strategic plan is subject to a five-year review; however, mechanisms must also be put in place to allow the goals and actions to be evaluated throughout this period. This enables ongoing assessment of progress towards intermediate and long-term outcomes, and, ultimately, helps to determine the effectiveness of individual actions. It also helps to identify program improvements, and provides evidence to stakeholders and funding bodies that they are getting value from their investment.

Individual jurisdictions and/or organisations responsible for weed management and conservation will need to develop their own monitoring strategies. They should, where possible, coordinate actions to implement this plan, and monitor and evaluate progress towards its goals in conjunction with existing state, regional or local plans. While individual actions should be monitored at the jurisdictional level, data or evidence collected as a part of state, regional and local activities or plans should be provided to the AWC and collated so that it can be assessed each year within the national context. This will help to build a comprehensive overview of the plan's delivery. Table 4 lists key evaluation questions that should be assessed by the AWC each year at the national level to ensure progress against strategy goals, and which should be used to provide the basis for an annual report to the AWC.

This monitoring, evaluation, reporting and improvement (MERI) framework lists the basic reporting information that should be collected for the life of the strategic plan—including during phase 3 delivery (see Appendix 1). This will ensure that sufficient data are collected to identify successes and failures, and provide the opportunity for improvement where outcomes are not being achieved. Annual MERI plans may be developed to follow activities in more detail.

Although performance indicators or other ways of measuring progress are not provided in this strategic plan, a scoring system could be appropriate.

Table 4 Suggested monitoring and evaluation questions to measure progress under the phase 3 WoNS Mimosa Strategic Plan 2012–17

WoNS:		Jurisdiction:	Date:
Goal	Key evaluation questions	Data or evidence required	Consider
1 Prevent new infestations from establishing	To what extent have new infestations been prevented from establishing?	1.1 National distribution data: Has the national distribution map been reviewed and/or updated? Has the Priority Management Action spreadsheet been updated?	<ul style="list-style-type: none">Are these documents publicly available?Have stakeholders been advised of any changes?Where is this data or information stored?Does this information capture national priorities?
		1.2 New infestations: Number of new infestations recorded Percentage of known infestations actively controlled	<ul style="list-style-type: none">Are any new infestations occurring in areas identified as a high priority in the national strategy?How were infestations detected (passive or active surveillance, community reporting etc.)?Have high-risk pathways been adequately identified?Have threats been minimised?
		1.3 Eradication and containment programs: Percentage of eradication and/or containment programs being maintained	<ul style="list-style-type: none">What percentage of programs identified in the national strategy are being actively managed?Is there a plan in place for ongoing management?How is progress being monitored and reported to stakeholders? <p>(Examples using case studies can be included)</p>
		1.4 Legislation: Legislation or policy changes for this species Legislative change has been identified by stakeholders	<ul style="list-style-type: none">What legislative changes have been made?Are minimum requirements being maintained (e.g. ban on sale, trade, movement)?Is control required throughout or in part of the jurisdiction?Is compliance actively enforced?
			Score:

Table 4 *continued*

WoNS:		Jurisdiction:	Date:
Goal	Key evaluation questions	Data or evidence required	Consider
2 Strategically manage existing infestations	To what extent is integrated weed management effectively managing core infestations?	2.1 Integrated weed management: Effectiveness of integrated weed management programs	<ul style="list-style-type: none"> Are existing tools providing adequate control of WoNS? Have new advances or technologies been developed and are they incorporated into best-practice management information? Are there barriers to adoption of best-practice management? Are research programs addressing any observed gaps (e.g. herbicide trials, biocontrol, restoration requirements post-control)?
	To what extent are assets being protected through strategic management?	2.2 Asset protection: Number of priority assets identified as 'at risk' from WoNS Percentage of priority assets being protected (e.g. assessed against relevant threat abatement plans) Percentage of state and regional invasive species plans that identify priority assets at risk from WoNS	<ul style="list-style-type: none"> Methods by which assets are being protected (e.g. targeted annual spray programs, high-risk pathway surveillance, strategic plans) Are long-term monitoring programs in place to detect change? To what extent is management leading to an improvement in asset condition? <p>(Response should include status report on progress towards asset-protection programs)</p>
			Score:
3 Increase capability and commitment to manage WoNS	To what extent has the capability and commitment to manage WoNS increased?	3.1 Community engagement and awareness: What is the status of best-practice information? Are partnerships being maintained to ensure collaboration on WoNS? Number and type of media activities	<ul style="list-style-type: none"> Is best-practice information up to date and readily available? Is this information and/or advice being targeted to priority regions? Is training being delivered to meet the needs of weed managers (including the community)? Are networks and groups being supported (e.g. through

Table 4 *continued*

WoNS:		Jurisdiction:	Date:
Goal	Key evaluation questions	Data or evidence required	Consider
			dissemination of research outcomes, funding opportunities, control options etc.)?
			<ul style="list-style-type: none"> Has awareness and engagement in WoNS management been raised effectively?
		3.2 Resourcing: From what sources are programs being funded?	<ul style="list-style-type: none"> Number of projects funded by Australian Government, jurisdictions, industry, etc.
		3.3 Policy and planning: Are the objectives of the strategy being integrated into Australian Government/state/regional plans, policies and programs? Has cross-border collaboration occurred?	<ul style="list-style-type: none"> How are priorities reflected in planning and policy approaches (e.g. weed risk assessments, invasive species plans, asset-protection plans, district plans, weed spread prevention activities, management programs, incentive programs, state working groups)? How are national priorities being maintained (e.g. containment lines, eradication targets, training and awareness raising, research projects)?
			Score:
Continuous improvement	Are there any unexpected outcomes that have been identified through implementation of strategy?	Barriers: <ul style="list-style-type: none"> Have any other management issues or impediments been identified? 	
WoNS = Weeds of National Significance Scoring: 1: Insufficient evidence to score 2: No progress has been made against this goal 3: Limited progress is being made against this goal 4: Reasonable progress is being made against this goal 5: Excellent progress is being made against this goal			

Appendix 1 The Weeds of National Significance initiative and its phases¹

In 2007, an independent review of the WoNS initiative concluded that the nationally strategic approach of WoNS was highly successful in leveraging consistent multijurisdictional activity on high-priority weed species. This initial review was followed by a detailed review of the inaugural WoNS species by the Australian Weeds Committee (AWC) in 2009–10. The AWC reviewed the implementation of the 20 WoNS national strategies and, in light of achievements for these 20 species, considered the capacity for national coordination of additional WoNS species.

Following the reviews, the Natural Resource Management Ministerial Council (Resolution 15.7, 21 May 2009) endorsed a three-phased approach to national management of WoNS species (Figure 1). This 'phased approach' aims to provide the most cost-effective use of limited 'national coordination' resources.

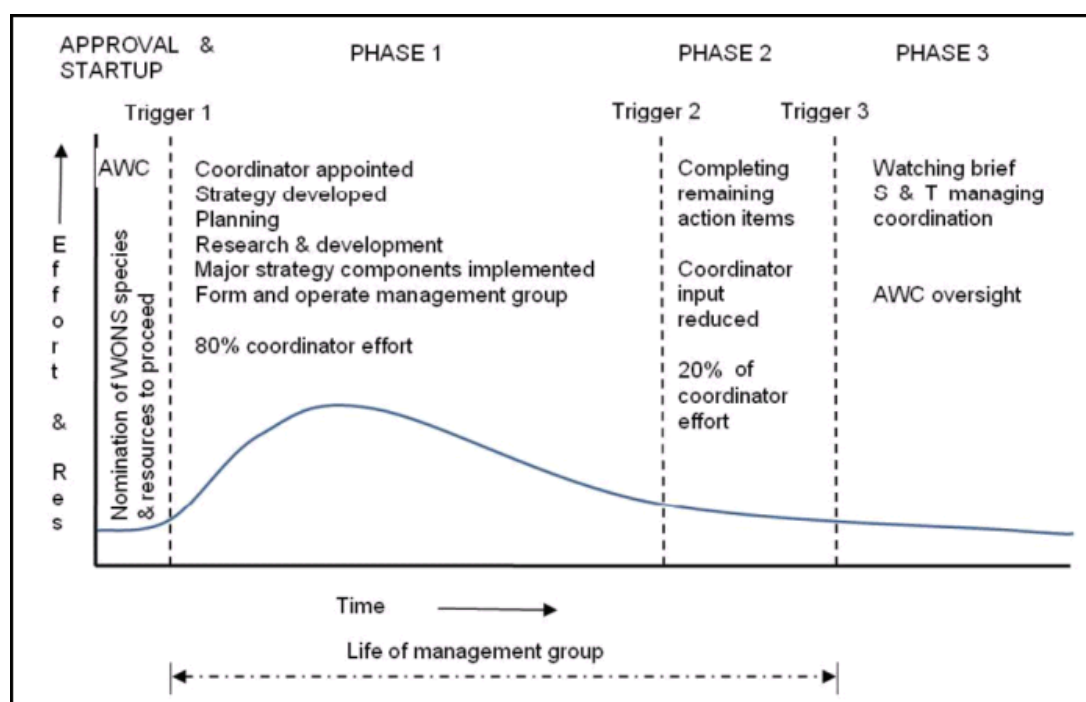


Figure 1 Australian Weed Committee diagrammatic representation of coordinator effort and resource use when implementing a Weeds of National Significance strategy

The phased approach recognises the need for reduced national coordination ('phasing down') of WoNS species that are under effective national management, and allows for further weed species to be nominated for consideration as additional WoNS. The AWC is implementing these reforms, and national coordination of the inaugural 20 WoNS species has already transitioned to phase 2 or 3, depending on the species. No species have yet been

¹

Adapted from Thorp 2012, *Additional list of Weeds of National Significance*, <www.org.au/WoNS>.

removed from the WoNS list. The AWC is developing a protocol to guide future decisions about when this should occur on a case-by-case basis.

In 2010, jurisdictions nominated additional candidate WoNS species. These species were independently assessed, and the AWC endorsed 12 additional 'species' to be listed as WoNS. The AWC Chairman, Dr Jim Thompson, announced these additional plant species as WoNS on 20 April 2012. Additional information on the selection of these species and the phased approach is available on www.weeds.org.au/WONS.

References

NRMMC (National Resource Management Ministerial Council) 2007, *Australian Weeds Strategy—a national strategy for weed management in Australia*, Australian Government Department of the Environment and Water Resources, Canberra.