



NEWP

NATIONAL
ESTABLISHED
WEED
PRIORITIES

FRAMEWORK

Version 1 – 16 June 2023

Endorsed by the Environment and Invasives Committee

Acknowledgements

The National Established Weed Priorities Framework was initiated through the Weeds Working Group of the Environment and Invasives Committee.

Funding support for its development was provided by the Australian Government Department of Agriculture, Fisheries and Forestry.

The Framework was developed through workshops, meetings and written feedback with and by persons and organisations involved in established weed management across Australia. These contributions set the tone and intent for this Framework to be implemented as a long-term partnership between industry, government and community.

Foreword

Weeds are one of the most frequently occurring, diverse and challenging land management issues in Australia. Whether you are growing a crop, restoring a natural landscape, running livestock, seeking bush tucker, maintaining a park or managing a waterway, weeds are likely to be a prominent issue requiring ongoing control and preventative actions. This is a substantial burden on people's time, budgets, productivity, aspirations and legacy.

The Australian landscape and its native plants and animals are under ever increasing pressures as weeds invade new places, spurred on by major disturbances such as fire, flood and drought and a changing climate. Weeds are resilient and adapt to frequently used controls, as evidenced through the rise of herbicide resistance. Knowledge on how to manage weeds and motivation to control them, varies considerably amongst members of the community. Resources for weed control can be limited, particularly for impacts on conservation, Aboriginal and Torres Strait Islander and pastoral lands.

Despite the scale and magnitude of these challenges, Australia has made substantial gains in weed management. Biosecurity legislation recognises weed management as a shared responsibility. Targeted research has led to new and integrated ways to control weeds including biological control, more efficient use of herbicides and better detection methods. Australia is internationally recognised for the Weeds of National Significance (WoNS) initiative, which declared twenty national priority weeds in 1999, and a

further twelve in 2012. The WoNS initiative spurred collaborations and co-investments across Australia in new control tools, best practice management, research, strategic regional planning and coordinated community-led weed programs.

The National Established Weed Priorities (NEWP) Framework is reinvigorating the WoNS concept; introducing a broader approach to tackling priority established weed issues (Weed Issues of National Significance - WINS); and outlines a process to consolidate and achieve short-term, high benefit weed management actions (National Established Weed Action List - NEWAL). A national information and communications portal (Virtual Weed Information Hub) will maintain and support information, resources and networks.

The philosophy of the NEWP Framework is collaboration and co-leadership among stakeholders in industry, community and government. The Framework describes and guides the development of a long-term, national program for established weeds that is shaped by and developed for land managers of established weeds. It establishes governance and support to work together to determine and act upon Australia's established weed priorities.

The NEWP Framework is the mechanism to bring Australians together to achieve significant gains in protecting our economy, environments and community from the impacts of weeds.

Vision

Australians are enabled and supported to collaborate on national established weed priorities to protect the environment, economy and communities

Guiding Principles

Priorities are shared and inclusive	All threats are considered	Sustained resourcing is required
Decisions are evidence-based	Effective technology and innovation supports control efforts	Leadership guides investment and collaboration

Medium-term outcomes

Industry, community and government are connected, collaborating and co-investing to find and implement solutions to established weed problems.	The importance of established weed management is understood, valued and integrated with broader land management issues.	Land manager capability is built through national coordination and access to tools, best practice information and expertise.
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NEWP delivery streams

<p>1</p>  <p>WoNS WEEDS OF NATIONAL SIGNIFICANCE</p> <p>Facilitating action on priority established weeds</p>	<p>2</p>  <p>WINS WEED ISSUES OF NATIONAL SIGNIFICANCE</p> <p>Developing collective solutions to priority established weed issues</p>	<p>3</p>  <p>NEWAL NATIONAL ESTABLISHED WEED ACTION LIST</p> <p>Coordinating discrete priority actions with national benefit</p>
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Introduction

The National Established Weed Priorities (NEWP) Framework is long-term initiative to determine and address shared weed priorities through strategic, nationally coordinated actions. Building on the proven model of Weeds of National Significance (WoNS), the Framework seeks to reduce the economic, environmental and social impacts of weeds through:

- New WoNS
- Weed Issues of National Significance (WINS)
- A National Established Weed Action List (NEWAL)
- A Virtual Weed Information Hub.

The NEWP Framework will be implemented through strategic plans developed with stakeholders for WoNS, WINS and the NEWAL. These plans will include activities relating to research, development and

extension (RD&E), best-practice information and training, prevention, monitoring and supporting networks and partnerships for coordinated weed control programs.

The NEWP Framework will provide the building blocks of ‘how’ to manage established weeds, and contribute to the enablers, which will build the capacity and capability to address national established weed priorities (Figure 1). It is intended to be a catalyst for action, and when combined with the outcomes of other policies, initiatives and further investment, will lead to the reduction of impacts of established weeds (refer to long term outcomes in program logic, page 22).

The Framework is a strategic mechanism to leverage funds and resources for collaborations and co-investment between government, industry and community stakeholders.

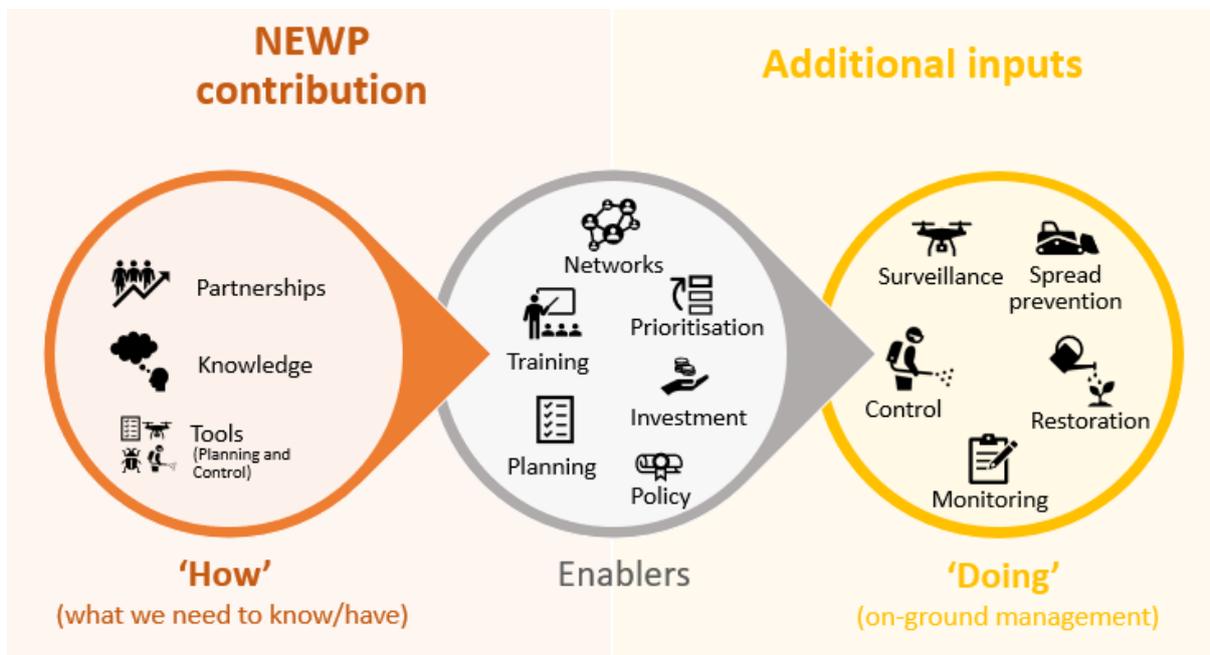


Figure 1 – The NEWP Framework provides a strategic foundation to support community, industry and government contributions that together will reduce the spread and impacts of established weeds across Australia.

The vision for the NEWP Framework is that:

Australians are enabled and supported to collaborate on national established weed priorities to protect the environment, economy and communities.

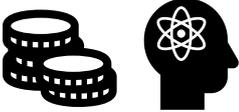
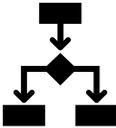
Accordingly, the NEWP Framework is a long-term initiative, which aims to:

- deliver information, tools and training to support and enhance on-ground management of established weeds
- enhance knowledge sharing and networks
- provide a conduit to user-driven research and development
- identify and document priority areas for investment through strategic plans
- strengthen collaboration through national coordination, and
- draw on the above to provide a strategic base to leverage funds, either through grants, in-kind contributions or other investment from government, industry and the community.

The NEWP Framework is **not** intended to:

- provide a funding source for on-ground control actions
- be a prescriptive approach to managing weeds/issues
- override local, regional and state/territory plans and strategies
- continue national coordination for weeds or issues indefinitely
- provide a regulatory mechanism for established weed control – WoNS/WINS does not confer a national legal status in its own right but state and territory jurisdictions can elect to declare species under their own legislation
- eradicate established weeds from all of Australia (by definition, established weeds cannot feasibly be eradicated), or
- address prevention of new weeds entering Australia or the eradication of national weed incursions.

Guiding principles

 <p>Priorities are shared and inclusive</p> <p>The Framework will develop and implement plans to address national weed priorities. These plans will consider and seek to align with jurisdictional, regional and local weed management priorities, plans and strategies where possible.</p> <p>Established weed management will benefit from local to national partnerships and participation.</p> <p>All weed-affected sectors within industry, community and government can equitably participate and benefit from the Framework.</p>	 <p>All threats are considered</p> <p>Within a landscape of increasing risks, protecting assets often requires integrated management of multiple weeds and other threats (e.g. impacts of climate change).</p> <p>All threats are assessed based on evidence, including those that may be considered beneficial to one sector and detrimental to another. As such the use of a plant does not preclude consideration of its impacts elsewhere in determining a weed priority.</p>	 <p>Sustained resources are required</p> <p>Long-term, sustained resourcing is required to successfully reduce the impacts of established weeds.</p> <p>This includes ongoing opportunities to fund NEWP identified contributions as well as those ‘additional inputs’ needed to realise the vision of the Framework (see Figure 1)</p> <p>It also includes knowledge and skills retention and transfer to future generations of weed practitioners and land managers.</p>
 <p>Decisions are evidence based</p> <p>Innovation, science and best practice underpin the NEWP Framework.</p> <p>Established weed priorities change over time and are subject to regular review.</p>	 <p>Effective technology and innovation supports control efforts</p> <p>Cost-effective, practical, and fit for purpose control tools increase land manager participation and success in weed management.</p> <p>Framework actions are outcome focused. Research is informed by end user needs.</p>	 <p>Leadership guides investment and collaboration</p> <p>Governance requires a nationally strategic outlook, guided by a balance of government, industry and community views.</p> <p>National coordination provides the support and motivation to enable stakeholder participation in weed management from the local to the national level.</p>

The NEWP Framework also aligns to and complements the principles outlined in the [Australian Weeds Strategy 2017 – 2027](#)¹ and the [National Framework for the Management of Established Pests and Diseases of National Significance](#)².

National Drivers

Every land use in every region of Australia is impacted by established weeds. Hundreds of different weed species (also termed ‘invasive plants’) are impacting on farming and other industries, First Nations peoples caring for their country, the conservation of Australia’s unique native plants and animals, public health, amenity and infrastructure. The NEWP framework has been designed in response to key drivers described below. It will generate multiple national benefits in addressing priority weed problems.



Reduce the costs of weeds

The economic cost of weed impacts and management to Australia has been estimated at nearly \$5 billion annually³ and represents a greater economic burden than other types of invasive species⁴. In 2019 farming enterprises (on average) spent approximately \$10,500 on weed management⁵.



Protect Australia’s biodiversity from plant invasions

Weeds are the most frequently occurring threat to threatened species and ecological communities in Australia⁶. Globally, invasive plants are threatening the uniqueness of regional plant communities by causing them to become more similar⁷. Control of weeds to protect and enhance local biodiversity values remains a primary motivation and activity of community groups.



Reduce the social, cultural and amenity impacts of weeds

Weed impacts on Australians are diverse and substantial. Weeds can disrupt First Nations peoples’ physical and cultural connections to country, including access to bush tucker, sacred and special places and impacts on ecosystems and native species, including totems⁸. Some weeds, such as flammable, high biomass weeds⁹, pose dangers to people and infrastructure. Weed control can be both physically, mentally and financially taxing on people and are often one of many competing demands. Attempts to manage weeds across boundaries and land tenure can also result in tension between land managers. Weeds can also reduce access to and enjoyment of public spaces such as waterways and parks and reserves.



Achieve greater efficiencies through coordinated effort

Operating in silos within sectors or jurisdictions risks duplication of effort and inconsistent approaches to managing weeds. National coordination is needed to facilitate co-investment from multiple funding streams and build collaborative networks and partnerships to tackle shared weed problems. Similarly, at local and regional levels, land manager coordination, collaboration and support are needed to achieve strategic, ‘tenure-neutral’, on-ground control of priority weeds^{10, 11}.



Build land manager skills, competency and capability for weed management

Ready access to information, tools and training opportunities for controlling weeds is fundamental¹². Education and awareness are critical in response to ongoing demographic and generational changes in rural property ownership, population shifts to regional Australia and high staff turnover in land management organisations. A national approach to build participation in coordinated weed control programs will help address inequities between regions and sectors.



Manage weeds within broader land management and natural disaster contexts

Weeds are often only one of multiple threats that need to be managed on production, conservation and First Nations lands and in peri-urban environments. Weed problems may be exacerbated by other global drivers of landscape change, especially the effects of climate change on agricultural and natural ecosystem health and major disturbance events (e.g. drought, fire, flood). Synergies can be gained from tackling approaches that address multiple weed species and multiple threats, and that integrate other natural resource management and production issues.

Stakeholders

Stakeholders in established weeds management are diverse (Box 1). The NEWP Framework seeks to provide a mechanism by which they can come together to collaborate and collectively address shared weed problems.

Government, industry and community are terms often used as “shorthand” in strategies and plans to broadly categorise stakeholders affected by weeds, both at the organisational and individual level:

- ‘Government’ is taken to include the Commonwealth, state/territory, regional

and local governments, agencies and authorities

- ‘Industry’ covers agriculture and forestry, but also the resources, tourism/recreation, utilities and transport sectors
- ‘Community’ is an umbrella term for the First Nations, environment and natural resources management sectors, non-government organisations, community volunteer groups, universities and individual citizens.

These categories are simplified: Individuals and organisations may be in more than one category (e.g. scientific organisations).

Box 1 – Stakeholders in established weed management from local to national scales.

<p>Local scale</p> <p>Coordinated control of established weeds requires a tenure-neutral approach. Farmers, managers of government lands, Aboriginal and Torres Strait Islander lands, private conservation, forestry, tourism, resource extraction, utilities (e.g. rail, water supply) and lifestyle residential properties are all affected. The local scale also includes community volunteers, such as landcare, coastcare, bushcare and friends groups. In addition, local government being a land owner and manager, they also act as weed regulators in some states. Weed control contractors also play an important role in local weed management programs.</p>	<p>Regional scale</p> <p>Natural resource management bodies (e.g. landscape boards, catchment management authorities, local land services) are key stakeholders in strategic weed management, with some also being weed regulators in certain states. Aboriginal and Torres Strait Islander land councils have critical roles in weed management as custodians of vast areas of land. Pastoral leases and conservation reserves can be regional in extent and influence. Regional environmental organisations provide leadership on issues of community concern. Regional development organisations facilitate economic activities that may have weed management implications. Regional water supply and irrigation systems can be impacted by aquatic weeds.</p>
<p>State and Territory scale</p> <p>Governments at this scale lead on setting the biosecurity regulatory environment for declared weeds, with associated jurisdictional-level policy, technical advice, strategic planning, research and monitoring roles. Such governments also provide the regulatory environment for broader land management and conservation, in addition to being land managers themselves (e.g. national parks, transport corridors). Other State/Territory-level organisations with a stake in established weed management include industry peak bodies, weed management societies, conservation peak bodies, non-government organisations and local government and NRM associations.</p>	<p>National scale</p> <p>The Australian Government is the primary stakeholder in national-scale established weed management, particularly for national policy and programs regarding biosecurity, primary industries, national landcare programs, environmental management and Aboriginal and Torres Strait Islander Lands. There are also national industry, non-government and conservation peak bodies. The university sector, CSIRO and research and development corporations (RDCs) also have various research and educational interests in improving weed management.</p>

Policy context

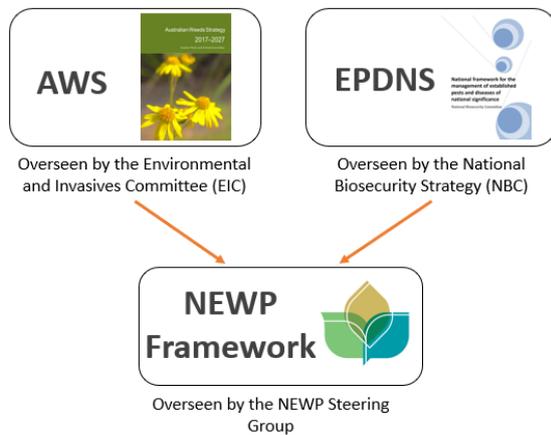
The NEWP Framework is a key mechanism for implementing Goal 2 (minimising the impact of established weeds) and Goal 3 (enhancing Australia’s capacity and commitment to weed management) of the [Australian Weeds Strategy 2017 – 2027](#).

The Framework is also a mechanism to achieve action under the [National Framework for the Management of Established Pests and Diseases of National Significance](#) (EPDNS).

Developed by the intergovernmental National Biosecurity Committee, the EPDNS gives direction on what constitutes a national established weed priority (see below). Broadly, the EPDNS aims for collaboration between the industry, community and government sectors in determining and managing national priority pests and diseases that threaten economic, environmental and social assets.

Implementation of the NEWP Framework should seek to align to and/or complement existing systems and frameworks, including:

- national biosecurity policy and legislation
- state and territory weed regulation, policies and programs, including delivery through regional and local government authorities
- regional and local natural resources management planning
- Aboriginal and Torres Strait Islander land management programs
- government and non-government biodiversity conservation programs, initiatives, plans and strategies
- industry biosecurity plans and strategies, including research programs
- national management of other intersecting issues, such as natural disaster recovery, industry development and climate change.



The NEWP Framework aligns with Australia’s international obligations to control priority invasive species under the Convention on Biological Diversity and the UN Sustainable Development Goals.

What is an established weed?

For the purposes of the NEWP Framework, an established weed is an exotic, naturalised plant^a whose spread and persistence has made it technically unfeasible to be eradicated from Australia.

Localised eradication (also called 'extirpation') may still be possible where an established weed is new to an area outside its core distribution, or the local infestation is small and low in density. Such activities are within scope in the NEWP Framework.

Many established weeds are now widely distributed across multiple states and territories. Some are only present in one state/territory or even just one region.

There are many established weeds in Australia. Over 3200 exotic plants are recorded as naturalised in Australia¹, with more introduced plant species than native plant species present in Australia¹⁴.

With so many established weeds there is a need to prioritise what to focus on, from local to national levels.

What about invasive native plants?

The EPDNS excludes Australian native plants from the definition of established weeds. As the NEWP Framework aligns with the EPDNS native species are excluded for listing as WoNS, WINS or on the NEWAL. The Framework acknowledges that native plants can become invasive and have impacts outside their indigenous range. Other national policy mechanisms that address this issue are the [National Environment and Community Biosecurity Research, Development and Extension Strategy](#) and the [EPBC Act's](#)^b [Key Threatening Process relating to escaped garden plants](#).

^a Non-native vascular plants of terrestrial and non-marine aquatic environments. Excludes Australian plants, and algae and fungi. Any exotic aquatic

plant invading a marine ecosystem is managed as a marine pest.

^b Commonwealth *Environment Protection and Biodiversity Conservation Act 1999*

Determining national weed priorities

The EPDNS framework specifies three overarching criteria in determining national priorities; impact, feasibility of management intervention and need for national coordination (Table 1). For any established weed or weed issue to become a national

priority it must meet these criteria. This includes the current need for control actions in more than one state or territory and consideration of the potential for future impacts across Australia.

Table 1 – EPDNS criteria for determining national significance, interpreted for the NEWP Framework.

<p style="text-align: center;">1</p> <p style="text-align: center;">Impact</p>	<p>A risk assessment indicates there are strong national economic, social and/or environmental impacts of the established weed (or group of weeds) or issue.</p> <p>Nationally significant impacts include where a weed/issue poses a substantial threat to international trade, industry profitability, public health, natural ecosystems, infrastructure, public amenity, cultural practices, and/or threatened species and ecological communities and heritage places listed under the EPBC Act ^b.</p> <p>These impacts affect more than one state/territory, currently or potentially in the future (arising from further weed spread).</p>
<p style="text-align: center;">2</p> <p style="text-align: center;">Feasibility of management intervention</p>	<p>There are feasible, practical and broadly supported ways to manage the weed/issue that would address their nationally significant impacts.</p> <p>This includes an assessment of the technical feasibility of implementing a suggested management approach (including research), the potential role of any government regulatory mechanisms, and the overall cost-effectiveness of the proposed approach.</p> <p>A further consideration is the level of socio-political support for addressing the impacts of the weed/issue through the proposed approach.</p>
<p style="text-align: center;">3</p> <p style="text-align: center;">Benefits from national coordination</p>	<p>There would be a clear public benefit from a nationally coordinated approach to managing the established weed/issue and/or their impacts.</p> <p>This would mean establishing that there is both a need and support from multiple stakeholders to develop a national strategic plan (for a WoNS, WINS or a NEWAL action). Actions in the plan should require collaborations between government, industry and/or community stakeholders, and are likely to require implementation across more than one state or territory.</p> <p>For Commonwealth, state and territory governments to co-invest in implementing a plan, tangible public benefits at the national scale would need to be evident. That is, it is in the national interest to act together.</p>

Governance and coordination

There are six key components of governance and coordination for the NEWP Framework.

A **NEWP Steering Group**, consisting of representatives of all stakeholder sectors in weed management, leads the overall implementation of the NEWP Framework. The Steering Group establishes and oversees the processes to determine WoNS, WINS and the NEWAL and to develop and implement their respective strategic plans. The Steering Group monitors and steers the performance of the Framework, including high level communications, prioritisation and partnerships.

The intergovernmental **Environment and Invasives Committee** (EIC) is proposed as the sponsor of the NEWP Framework. EIC would approve the NEWP Steering Group's Terms of Reference and its recommendations for new WoNS and WINS. Box 2 gives guidance to inform the Steering Group's terms of reference.

Taskforces are established to lead the implementation of each WoNS' and WINS' strategic plan and the NEWAL strategic plan. Their terms of reference are approved by the NEWP Steering Group.

A **national established weed management facilitator** (National Facilitator) will support the NEWP Steering Group. This role will provide day-to-day management of the Framework's national implementation, provide guidance and direction to WoNS/WINS/NEWAL coordinators, and foster communication, collaboration and monitoring across all levels.

The taskforces are supported by **National Coordinators** for WoNS, WINS and NEWAL. These roles coordinate the development and implementation of the strategic plans, with a large focus on achieving collaborations at

national, state/territory and regional levels to resource and implement actions in the plans.

National **strategic plans** will be developed for each WINS and WoNS, and the NEWAL, to provide direction on priority actions and focus the efforts of all stakeholders towards mitigating the impacts of established weeds. Strategic plans will be regularly reviewed to identify when national coordination of individual WoNS, WINS and actions on the NEWAL can be reduced, to allow for new priority weeds and weed issues to be added to the Framework.

Each of these components need strong linkages with industry, community and government organisations from local to national levels. Partnerships between a diversity of stakeholders are critical to achieving implementation of the NEWP Framework. Successful implementation of the Framework will require a 'landscape of coordination', whereby the National Facilitator and National Coordinators work with other local/regional groups or coordinators with shared established weed priorities. This may include supporting and developing weed management leadership skills at the local/regional level. In addition to the development of this Framework, opportunities for stakeholders to inform and influence established weed management will include involvement in:

- Nomination of WoNS and WINS
- Assessment of WoNS and WINS
- NEWP Steering Group
- National taskforces
- Implementation of strategic plans
- Evaluation of strategic plans.

Box 2 – Guidance for the establishment and functioning of the NEWP Steering Group.

Note: Reference made below to the EIC is a proposal only and EIC involvement in the Framework will be subject to its and National Biosecurity Committee's endorsement.

- As sponsor, EIC will approve NEWP Steering Group's initial Terms of Reference to foster its establishment.
- The Steering Group will provide strategic leadership for the implementation of the NEWP Framework, including monitoring performance and fostering communications and partnerships.
- The Steering Group will have an independent chair.
- Membership of the Steering Group will include balanced, national representation from government (Australian, State/Territory and Local), community (First Nations, biodiversity conservation, natural resources management, community volunteer groups, riparian and aquatic ecosystem managers), industry (agriculture, forestry, extractive industries, tourism and recreation) and science sectors.
- Members will have a solid understanding of weed management across Australia and the challenges posed by established weeds.
- Members should be drawn from across Australia.
- The Steering Group will use existing stakeholder forums and may establish other stakeholder consultative mechanisms, as required, to inform implementation of the NEWP Framework.
- The Steering Group shall liaise with EIC through the EIC Weeds Working Group.
- EIC shall approve major decisions under the NEWP Framework proposed by the Steering Group, such as the determination of new WoNS and WINS.
- The Steering Group shall abide by principles of transparency, equity, diversity and accountability.
- In taking a national, strategic view, the Steering Group will be mindful of regional, land use, cultural, social and ecological diversity and differing needs across Australia.

NEWP delivery streams

The NEWP Framework combines three delivery streams: Weeds of National Significance (WoNS), Weed Issues of National Significance (WINS) and the National Established Weed Action List (NEWAL).

WoNS demonstrated the many benefits of collaborative research, planning, policy and strategic management on single species (or groups of similar species)¹⁶. The Framework recognises that by enhancing WoNS to embrace a multi-species, landscape scale, issues-focused approach to established weed management (WINS) even more far-reaching actions can be achieved.

The WINS and WoNS streams are supported by a rolling action list (NEWAL), that will initially accommodate remaining actions from the original 32 WoNS strategic plans and discrete non-WoNS/WINS actions that will produce national benefits.

The number of WoNS, WINS and actions on the NEWAL being actively coordinated at any one time will primarily depend on total resources available for implementation of their respective strategic plans.

Over time, any priority outstanding strategic plan actions from new WoNS or WINS will transfer to the NEWAL. This will free up national coordination resources to enable further WoNS and WINS.

Access to NEWP information will be via a national online portal (Virtual Weed Information Hub). The Hub will be a national repository for best practice established weed management tools and information.

Phased coordination

National coordination is foundational to NEWP Framework implementation, as it provides a key support mechanism for stakeholders impacted by established weeds and issues. The coordinator leads the implementation of a strategic plan for a WINS

or WoNS. Providing national coordination support for a finite period will result in outcomes that increase national management capability long term. Once capability across Australia is increased, national coordination efforts can be redirected to new weeds and issues, thus expanding the reach and benefit of the Framework.

The phasing of national coordination effort provides a mechanism for progressing species and issues through the WoNS and WINS streams (see Figure 2).

Phase 1 – WINS and WoNS

Primary level of national coordination, lasting approximately 3-5 years.

Phase 2 – NEWAL

Secondary coordination of discrete actions, lasting approximately 1-2 years.

Phase 3 – Maintenance

Sustained maintenance phase that supports on ground action through virtual information, advice and networks.

These are indicative times with progression through phases based on a review of the relevant strategic plan. When a review recommends sufficient actions have been addressed national coordination winds down to maintaining availability of best practice management information (Phase 3).

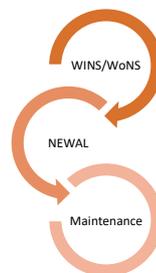


Figure 2 – Phasing of national coordination effort over time. Knowledge & information generated through Phases 1 and 2 is maintained through the Virtual Weed Information Hub.

Weeds of National Significance (WoNS)

What are WoNS?

An internationally recognised initiative, Weeds of National Significance (WoNS) has delivered strategic and collaborative established weed management since 1999.

WoNS aligns with the NEWP Framework vision to minimise the impact and further spread of priority established weeds through strategic and collaborative actions.

The WoNS initiative coordinates national effort towards protecting Australia's natural and productive landscapes and social and cultural wellbeing from some of Australia's worst weeds.

WoNS encompass many weeds, including those impacting on grazing, forestry and cropping industries; aquatic and rangeland environments; threatened species and ecological communities; and areas of social and cultural importance.

Applying the WoNS delivery model to the management of priority established weeds results in:

- Improved understanding of weeds and their impacts
- New and more efficient control tools
- Knowledge sharing through networks and partnerships
- Strategic on-ground control at the local, regional and national level.

WoNS can be characterised as priority non-native invasive plants that:

- pose a high impact to Australia's environmental, economic and/or social and cultural values
- affect multiple land managers with potential to affect many more and are considered a priority weed by many

- are naturalised to the point that eradication is unfeasible, yet further spread is still possible
- have feasible means to improve their management
- their management will benefit from national coordination
- elicit support, willingness and motivation amongst community and industry stakeholders to act.

There are currently 32 WoNS. Further information can be found at weeds.org.au/weeds-profiles/.

Maintaining the outcomes associated with the current WoNS will be supported through the Virtual Weed Information Hub.

Determining new WoNS

Figure 3 outlines steps in the nomination and assessment process for WoNS. The selection of new WoNS is guided by the EPDNS framework and scientific best practice in pest risk prioritisation. An evolution of the 2012 weed risk ranking approach¹⁷ will take better account of:

- the effects of climate change
- weeds' current and potential impacts on economic, environmental and social assets across Australia
- stakeholder values and views
- regional differences and uniqueness.

Stakeholders will be able to nominate weeds to be considered as WoNS. Groups of closely related weeds can also be nominated as a WoNS under the banner of a single species, where they are similar in life-form and management requirements.

Weed risk models are used to assess **impact**. Scoring individual weeds in the model will consider high quality published information

and the expert opinions of a panel of scientists and weed control practitioners. Uncertainty is considered using a structured elicitation process that ranks impacts whilst also recording levels of confidence in scoring.

The expert panel would also consider **feasibility of management intervention**. For WoNS, such interventions could include on-ground control or containment programs, new control techniques, research, extension, regulation, coordination and/or spread prevention. The intent is to determine whether substantial progress could potentially

be made to better manage the impacts of a WoNS candidate.

Thirdly, the case needs to be made that a **nationally coordinated approach** to managing the weed is needed and will bring broad public benefits nationally.

Table 2 outlines key participants' involvement at various stages of the WoNS (and WINS) selection process. The process would be led by the National Facilitator, with specific technical tasks undertaken by an independent scientific organisation.

Table 2 – Key participants' involvement in the process to determine new WoNS and WINS.

	EIC	NEWP Steering Group	National Facilitator	Independent scientific organisation	Stakeholder organisations	Experts
Develop assessment models	✓	✓	✓	✓	✓	✓
Seek WoNS and WINS nominations			✓	✓	✓	✓
Review of nominations for progression to assessment		✓	✓	✓		
Further scoping to inform assessments		✓	✓	✓	✓	✓
Assess impacts, feasibility of management intervention and need for national coordination			✓	✓	✓	✓
Selection of WoNS/WINS	✓	✓	✓	✓		

WoNS/WINS nomination and assessment

The selection process for WoNS and WINS must be transparent, inclusive of all stakeholder sectors, fair, logical, defensible and systematic. These requirements will be met through a multi-stage nomination and assessment process as outlined below. The process must handle uncertainty and identify and manage any potential conflicts of interest. This includes involving different people in the design and implementation of the assessment methodology to those wanting to nominate weed issues or species.

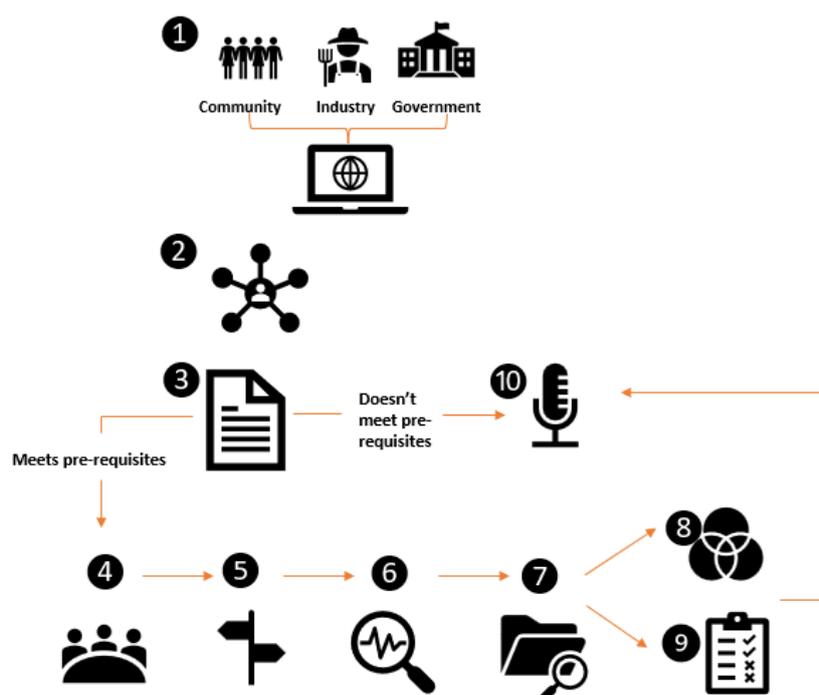


Figure 3 – Steps in the nomination and assessment process for WoNS and WINS.

- 1 **Expression of interest (Eoi) submissions** - Nominees will lodge a confidential Eoi, providing high level information on why they seek to nominate a particular weed or issue.
- 2 **Facilitation of joint nominations** – Where similar Eois are lodged, joint nominations will be encouraged. Support will be provided to connect nominees.
- 3 **Formal nomination process** – Nominees must complete a template, including WoNS or WINS screening questions and a literature review, to support their nomination.
- 4 **Review of nominations** – Determine eligibility to progress to formal assessment.
- 5 **Scoping** – Further information compiled for formal assessments. For weeds, map current and potential distributions. For issues, run scoping workshops to identify underlying root causes that need to be addressed and potential solutions.
- 6 **Expert assessment** – A technical assessment process involving a national expert panel of scientists and practitioners to elicit further information, score and rank weed species or issues. Assessment addresses the three EPDNS criteria.
- 7 **Independent review of assessments** – An independent probity review of the process.
- 8 **Selection of WoNS/WINS** – Assessment results of weed species/issues and available resources considered in determining the identity and number of new WoNS and WINS.
- 9 **Consideration for NEWAL** – Unsuccessful assessed weeds and issues considered for discrete actions for inclusion on the NEWAL
- 10 **Transparent reporting** – Assessment outcomes and reasons made publicly available.

Weed Issues of National Significance (WINS)

What are WINS?

Weed Issues of National Significance (WINS) frames established weeds within the broader natural resource management context. WINS takes a multi-species, landscape scale approach to addressing priority issues that influence, or are influenced by, established weed impacts and spread. WINS seeks to:

- better integrate established weed management with managing and responding to other key threats and significant changes in landscapes (e.g. natural disasters, climate change, other invasive species)
- promote holistic management of established weeds alongside the

management of land, water, soils, ecosystem functions, biodiversity and productivity in natural and production systems

- address the underlying causes of weed invasion and difficulties in their control, which could include biological, spatial or social dimensions.

To aid in defining an issue for the purposes of nomination, broad themes are described in Table 3. There may be national issues that fall outside these themes, or other themes that have not been identified, and therefore Table 3 is provided as a guide only.

Table 3 – Weed Issues of National Significance: suggested themes and example issue areas.

	<p>Technological barriers</p> <p>May include technical issues that impede management of established weeds, that if addressed in a coordinated manner, could be applied to multiple weeds to better inform management decisions, reduce impact or influence spread. For example^c, surveillance capabilities; herbicide resistance; remote detection; multi-species invasion dynamics.</p>
	<p>Social, economic and/or institutional issues</p> <p>May include challenging environmental, economic, social or cultural issues, that whilst complex in nature, present opportunities to work across differing values, purposes or capacities to reduce weed impacts and spread. For example³, species that may impact on one sector, despite offering benefits to another; capacity or knowledge constraints in social and/or cultural contexts; managing weeds and their spread across multiple tenures, land uses and jurisdictions.</p>
	<p>Landscape management</p> <p>May include:</p> <ul style="list-style-type: none"> • an integrated approach to addressing established weeds together with other issues to achieve broader natural resource management outcomes, and • protecting economic, environmental and social assets – where key ecosystems, industries, co-existing and neighbouring land users and/or communities across Australia need better ways to manage similar threats posed by established weeds. <p>For example³, weeds and disaster recovery (fire, flood, drought); implications of climate change on established weed management; weeds as hosts of crop pests and diseases; prioritising natural and cultural assets for protection and recovery.</p>

^c These are examples only and do not pre-empt the selection of WINS.

Determining WINS

Weed issues are akin to risks. They pose economic, environmental and/or social impacts to varying degrees and with varying urgency. They can be broken down into constituent problems and there may be multiple ways to tackle these to address and reduce the risk.

As with WoNS a risk management approach¹⁸ will be taken, involving a comparative assessment of **impacts, feasibility of management intervention and expected benefits from national coordination** to address an issue.

The nomination and assessment approach is outlined in Figure 3. To inform sound nominations, WINS can be characterised as priority issues that:

- apply to multiple established weed species
- are not adequately addressed through existing strategies or processes
- result in significant impacts to Australia's environmental, economic and/or social and cultural values, now and in the future, directly from or indirectly caused by established weeds
- affect multiple land managers across Australia, with potential to affect many more, and are considered a priority issue by many

- have good potential for effective and feasible ways to reduce their impacts and/or improve management
- will benefit from national coordination
- elicit support, willingness and motivation amongst community and industry stakeholders to act.

Weed issues are complex, nuanced and their perceived importance and understanding is often influenced by personal, community and stakeholder values. Detailed scoping of issues are needed to inform formal assessments:

- What are the impacts that are occurring now and into the future?
- What are the underlying causes (problems) that are leading to these impacts?
- Could feasible, cost-effective solutions be developed to address these causes and reduce future impacts? Types of solutions could be operational, technical, educational, behavioural, coordination and/or procedural.
- Where are the gaps where national coordination would be needed? How would national coordination help progress solutions to the issue?

Table 2 outlined key participants' involvement in the various stages of the WINS (and WoNS) selection process.

National Established Weed Action List (NEWAL)

What is NEWAL?

The National Established Weed Action List (NEWAL) brings together discrete, impactful priority actions of national benefit, consolidated into a strategic plan for coordinated action.

Principally the NEWAL enables WoNS and WINS to transition from primary national coordination (phase 1) through to a maintenance phase (phase 3). This allows national coordination effort to be applied to new WoNS/WINS.

Actions can be listed through the following pathways:

1 Primary pathway - Existing WoNS/WINS

Priority actions for WoNS and WINS are captured in strategic plans. Over time, national coordination results in the completion of many of these actions and the need for national coordination is reduced.

Following the five year review of the implementation of each WONS/WINS strategic plan, a decision may be made to reduce national coordination of the species/issue.

Any remaining actions still requiring national coordination for their completion can be compiled and completed via the NEWAL.

2 Secondary pathways

a) Review of existing WoNS and WINS tools

WoNS and WINS in Phase 3 will have developed important tools, accessible via the virtual weed information hub, for example, WoNS' best practice management manuals. These tools will provide lasting benefits, supporting land managers into the future. A standing action of NEWAL will be a five-yearly

review of WoNS and WINS tools and materials in the hub. The review determines whether tools and information need revising to maintain their currency. This process will be led by the NEWAL Coordinator.

b) Discrete actions with national benefit

Some nominated weed species and issues may not be put forward for formal WINS/WoNS endorsement. These nominations may be further assessed for any discrete actions that:

- would improve management of an established weed or weed issue
- address a significant knowledge gap in the understanding of an established weed or weed issue, where addressing this may unlock opportunities for improved management.

Any such actions identified will be placed on the NEWAL. The NEWAL Coordinator will develop a prospectus of potential projects, together with costing and timeframes, and promote these throughout networks and to potential funders for future investment.

Determining actions

The NEWAL will comprise stand-alone actions with a definitive end point for completion. As with WINS and WoNS, NEWAL actions must satisfy the three EPDNS criteria. This includes an assessment of **impacts, feasibility of management intervention** (in the case of NEWAL generally within a relatively short time frame of 1 -2 years) and **expected benefits from national coordination**.

Candidate actions for the NEWAL will be subject to expert review, with final endorsement for inclusion on the list made by the NEWP Steering Group.

Virtual Weed Information Hub

Whilst the foundational work delivered through the NEWP Framework (such as partnerships, best practice information, improved control options) is critical, so too is enabling continued on-ground management through extension and uptake of best practice tools and networks.

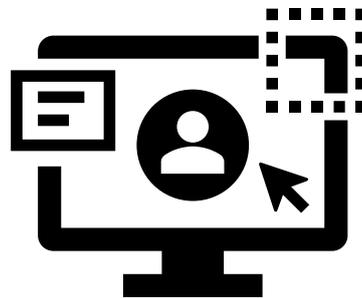
Established weeds and associated issues will require attention and management for many years to come and there is a need to maintain support for those undertaking this work.

The Framework will assist by ensuring the benefits of national coordination remain current, through developing and maintaining a national information hub for established weed information.

The hub is a “home” for all the knowledge, information and tools produced under the NEWP Framework for ongoing management of established weeds and associated issues. The Framework acknowledges there are many existing online sources of relevant information and does not seek to replicate or replace existing resources. Rather the intent is to act as a first port of call for established weed information and provide links to other sources.

The hub will require periodic updates and ongoing maintenance to reflect the achievements and outcomes of the NEWP Framework and continue to provide useful information to stakeholders.

The Hub will be hosted on the Weeds Australia website (www.weeds.org.au).



The virtual information hub can provide access to:

- Best practice management information
- WINS/WoNS strategic plans
- Regulatory information and links
- Communities of practice
- Networks for established weeds and related issues
- Contact information for community and industry groups and governments involved in the delivery of the Framework
- Training information and webinars
- Links to other websites and social media platforms
- Nomination portal for WINS and WoNS.

Implementation

The NEWP Framework will be supported by an implementation plan, overseen by the NEWP Steering Group. The plan will detail:

- Nomination and assessment processes and models
- Program governance, including draft Terms of Reference for the NEWP Steering Group and Taskforces
- Establishment of WoNS, WINS and NEWAL
- National Facilitator and National Coordination roles and arrangements

- Ways to strengthen and support local/regional established weed management for enduring success
- Monitoring, evaluation and review process for the Framework (see below)
- Communication and engagement
- Ways to foster shared resourcing and co-investment.

Measures of success

A program logic describes how the NEWP Framework will result in short and medium-term outcomes as a direct result of Framework activities, whilst also contributing to and facilitating long term on-ground outcomes.

The program logic will form the basis of a Monitoring and Evaluation (M&E) plan, which will provide the methodology for assessing and measuring achievements from the implementation of the NEWP Framework.

As indicated by the long-term outcomes in the program logic, verifying impact reduction and spread prevention is critically important and relies on direct measurement of on-ground control, spread prevention, and restoration activities. However, the NEWP Framework seeks to be realistic and transparent about what it specifically can deliver and to ensure evaluation metrics are aligned to outputs and outcomes within the scope of the Framework.

As on-ground control is not a direct outcome of the Framework's delivery streams it cannot be monitored, evaluated or reported on in a meaningful way against the Framework itself. The M&E plan will therefore focus on how the NEWP Framework delivery streams:

- (i) influence (e.g. increase, improve) on-ground weed management, and
- (ii) leverage funding for on-ground works or research and innovation that improves on-ground outcomes.

Understanding change in resource condition is fundamentally important. The NEWP Framework seeks to facilitate the evaluation of condition change by:

- Advocating for, developing or adopting protocols for condition monitoring to be applied to any new on-ground projects undertaken to address established weeds and issues
- Drawing on existing national monitoring programs for established weeds (e.g. the *ABARES distribution and impacts of established pest animals and weeds* project, National Landcare Program M&E)
- Inclusion of M&E activities in strategic plans that assist in establishing benchmarks for stakeholders (e.g. participation, capability and capacity) and weeds/issues (e.g. national management maps)
- Exploring how to aggregate condition data from the ground level up (e.g. through the National Facilitator).

Reporting

Monitoring and evaluation data will inform decision making and future planning for the NEWP Framework and individual delivery streams. Transparent and accessible reporting of NEWP Framework outcomes, strategic decisions and supporting evidence will ensure stakeholders remain engaged and supportive of the NEWP Framework's implementation.

Reporting will align with the monitoring and evaluation plan that will be developed to support the NEWP framework. Evaluation will comprise of both governance reporting and progress toward NEWP Framework outcomes, by aggregating data from individual WONS/WINS/NEWAL strategic plan reviews (Table 5). This will allow for reporting at the

individual level and delivery stream level through to the NEWP Framework level. Data will also inform evaluation of the EPDNS framework and the Australian Weeds Strategy (AWS).

Coordinators/taskforces and the National Facilitator/NEWP Steering Group will be responsible for reporting, noting that some reporting and evaluation will occur independently to maintain transparency and avoid bias.

Reporting obligations and frequency will be documented and linked to objectives within the M&E plan that will support the Framework.

Table 4 – Summary of the indicative reporting obligations and responsibilities.

	WoNS/WINS NEWAL-EVALUATION*	NEWP FRAMEWORK EVALUATION	EPDNS, AWS
What will be measured	<ul style="list-style-type: none"> - assessment of progression of actions within the WoNS, WINS and NEWAL strategic plans** - evaluation of governance arrangements (e.g. performance; effectiveness of taskforces/coordinators; evaluation of hosting arrangements) 	<ul style="list-style-type: none"> - assess progress towards NEWP Framework outputs/outcomes through aggregation of the element-level evaluation. - evaluation of governance arrangements (e.g. performance/effectiveness of NEWP Steering Group, national facilitator, national coordinators and taskforces; consistency/equity across and between delivery streams) 	<ul style="list-style-type: none"> - EPDNS: Contribution of the framework to evaluating the EPDNS. - AWS: Contribution of the Framework to Goal 2 and Goal 3 of the AWS.
Responsibility	WIN/WoNS and NEWAL coordination and the respective taskforces	National Facilitator and the NEWP Steering Group	EIC Weeds Working Group***

* Separate evaluation for each WoNS, WINS and the NEWAL

** This process also facilitates determining the need for ongoing national coordination for WoNS and WINS (see phasing).

*** Reference made to the EIC is a proposal only and EIC involvement in the Framework will be subject to its and National Biosecurity Committee's endorsement

Program Logic

Program Objective: Support and enhance on-ground control of established weeds through the delivery of information, tools and training; knowledge sharing and networks; identifying research and development needs and opportunities; and by identifying priority areas for investment.

Assumptions: Implementation of the NEWP Framework will result in short and medium-term outcomes by providing knowledge and tools and leveraging funding for ongoing investment. These will combine with additional enablers to achieve long-term condition and behavioural change. External enablers and on ground control will include the establishment of condition change monitoring to track progress to long-term outcomes.

External Factors: Government policy, competing priorities, legislation, compliance, availability of external funding, state/territory/regional and local priorities, interest and capacity, climate change. Additional condition/ behavioural change monitoring and assessment.

Problem Statement	Inputs	Outputs:	Short-term outcomes 1-3 years	Medium-term outcomes 3-5 years	Long-term outcomes 5-20 years
<p>Established weeds impact on both production systems and natural environments and in some cases, human health.</p> <p>The management and response to established weeds must also consider other key threats, processes and significant changes in the landscape.</p> <p>Reducing the impact of established weeds and preventing their further spread will require long-term management intervention.</p> <p>Management intervention is reliant on knowledge of impacts and invasiveness and cost-effective management solutions. It is further enhanced through knowledge sharing and strategic planning.</p>	<p>EPDNS framework principles</p> <p>AWS principles</p> <p>NEWP Framework - WoNS - WINS - NEWAL</p> <p>Existing research</p> <p>Existing networks and expertise</p> <p>Partner organisations</p> <p>Funding</p>	<p>Engagement with established weed stakeholders (refer Box 1).</p> <p>Process and methodology for determining national priority established WoNS/WINS/NEWAL.</p> <p>RD&E knowledge gaps identified.</p> <p>Development of management planning and control tools (extension).</p> <p>Workshops, field days training.</p> <p>Establishment of the Virtual Weed Information Hub</p> <p>Network/ Community of Practice building.</p> <p>Business case and other investment opportunities.</p>	<p>Weed managers have access to tools and information that is allowing strategic, collaborative and cost-effective weed management.</p> <p>Increased participation in strategic planning and coordinated action for the management of established weeds.</p> <p>Increased networks, partnerships and collaborations.</p> <p>The Virtual Weed Information Hub is recognised and used as a primary source of information on established weed management.</p> <p>National strategic plans developed for WoNS/WINS/NEWAL.</p>	<p>Land manager capability and drive to undertake weed surveillance, control, monitoring and restoration is built through access to new tools, best practice management information and local expertise.</p> <p>The importance of established weed management is understood, valued and integrated with broader land management issues.</p> <p>Industry, community and government are connected, collaborating and co-investing to find and implement solutions to established weed problems.</p> <p>Strategic plan actions of WoNS/WINS/NEWAL are being achieved.</p> <p>Increased investment in on-ground management of established weeds.</p>	<p>Tools and knowledge are contributing to strategic, landscape-level spread prevention and impact reduction programs for established weeds.</p> <p>The entry, spread and impacts of priority established weeds outside core distributions are averted through ongoing prevention, outlier eradication and containment activities.</p> <p>Where priority established weeds are widespread, the economic, environmental, social and cultural impacts are substantially reduced</p>

Acronyms

ABARES	Australian Bureau of Agricultural Resource Economics and Sciences
AWS	Australian Weeds Strategy 2017 – 2027
EIC	Environment and Invasives Committee
Eoi	Expression of Interest
EPBC Act	<i>Environment Protection and Biodiversity Conservation Act 1999</i> (Commonwealth)
EPDNS	National Framework for the Management of Established Pests and Diseases of National Significance
IGAB	Intergovernmental Agreement on Biosecurity
M&E	Monitoring and Evaluation
MERI	Monitoring, evaluation, reporting and improvement
NEWAL	National Established Weed Action List
NEWP	National Established Weed Priorities
NRM	Natural Resources Management
RDCs	(rural) Research and Development Corporations
RD&E	research, development and extension
WINS	Weed Issue of National Significance
WoNS	Weed of National Significance
Weeds WG	Weeds Working Group (of EIC)

References

1. Invasive Plants and Animals Committee (2016) *Australian Weeds Strategy 2017 - 2027*. Australian Government Department of Agriculture and Water Resources: Canberra.
2. National Biosecurity Committee (2016) *National framework for the management of established pests and diseases of national significance*. Department of Agriculture and Water Resources: Canberra.
3. McLeod, R. (2018) *Annual Costs of Weeds in Australia*. eSYS Development Pty Ltd: Canberra. Published by the Centre for Invasive Species Solutions: Canberra.
4. Bradshaw, C.J.A. et al. (2021) 'Detailed assessment of the reported economic costs of invasive species in Australia', *NeoBiota*, 67, pp. 511–550.
5. Stenekes, N. and Kancans, R. (2021). *Pest Animal and Weed Management Survey 2016–19: National land manager survey results*. Australian Bureau of Agricultural and Resource Economics and Sciences: Canberra.
6. Ward, M. et al. (2021) 'A national-scale dataset for threats impacting Australia's imperiled flora and fauna', *Ecology and Evolution*, 11(17), pp. 11749–11761.
7. Yang, Q. et al. (2021) 'The global loss of floristic uniqueness', *Nature Communications*, 12(1) 7290.
8. Maclean K., Robinson, C., Bock, E. and Rist, P. (2022) 'Reconciling risk and responsibility on Indigenous country: bridging the boundaries to guide knowledge sharing for cross-cultural biosecurity risk management in northern Australia', *Journal of Cultural Geography*, 39(1), pp. 32-54.
9. Setterfield, S.A. et al. (2013) 'Adding Fuel to the Fire: The Impacts of Non-Native Grass Invasion on Fire Management at a Regional Scale', *PLoS ONE*. 8(5), pp. 1-10.
10. Martin, P. and Low Choy, D. (2016) *Recommendations for the reform of invasive species management institutions*. Invasive Animals Cooperative Research Centre: Canberra.
11. Graham, S. (2019) 'Coordinating invasive plant management among conservation and rural stakeholders', *Land Use Policy*, 81, pp. 247–255.
12. Coleman, M.J., Sindel, B.M. and Stayner, R.A. (2017) 'Effectiveness of best practice management guides for improving invasive species management: a review', *The Rangeland Journal*, 39(1), pp. 39–48.
13. Dodd, A.J., Burgman, M.A., McCarthy, M.A. and Ainsworth, N. (2015) 'The changing patterns of plant naturalization in Australia'. *Diversity and Distributions*, 21, pp. 1038–1050.
14. Australian Academy of Science (2012). Native plants outnumbered, accessed 1 May 2023. <https://www.science.org.au/news-and-events/news-and-media-releases/native-plants-outnumbered>.
15. Department of Agriculture, Water and the Environment (2021) *National Environment and Community Biosecurity Research, Development and Extension Strategy 2021-26*. Department of Agriculture, Water and the Environment: Canberra.
16. Raphael, B., Baker, J., Tennant, P., Sparkes, J. and McCowen S. (2010) *Stakeholder perceptions of the Weeds of National Significance program and progress against individual species plans*. Australian Government Bureau of Rural Sciences: Canberra
17. Hennecke, B.R. (2012) 'Assessing new Weeds of National Significance candidates', in *Proceedings of the 18th Australasian Weeds Conference*. Weed Society of Victoria Inc.: Melbourne, pp. 191–194.
18. International Organisation for Standardisation (2018) *ISO 31000:2018 Risk Management*