

North Coast Regional Strategic Weed Management Plan 2017-2022



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Developed in partnership with the North Coast Regional Weed Committee

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Disclaimer: The information contained in this publication is based on knowledge and understanding at the time of writing on 30 June 2017. However, because of advances in knowledge, users are reminded of the need to ensure that information upon which they rely is up to date and to check currency of the information with the appropriate officer of Local Land Services or the user's independent adviser.

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Acknowledgement of Country

North Coast Local Land Services acknowledges and recognises the traditional owners and custodians of Country in the North Coast Region, including Bundjalung (Richmond, Tweed and Northern Clarence valleys), Githabul (Upper Clarence Valley), Yaegl (Lower Clarence Valley), Gumbaynggir (Nambucca, Bellinger and southern Clarence Valleys), Dunghutti (Macleay Valley) and Biripi (Hastings Valley).

We acknowledge the rich diversity in Aboriginal communities including individuals and groups who share a responsibility to care for Country and culture, both now and into the future.

We pay our respects to Elders, both past and present.

Acknowledgement of Contributors

This plan was developed by the North Coast Regional Weed Committee on behalf of the North Coast Local Land Services Board for endorsement by the Board.

The North Coast Local Land Services Board wishes to acknowledge the work of the Regional Weed Committee, the Committee's Regional Data Task Group and efforts of regional support staff in developing this plan. The contribution, expertise, and cooperation of the Regional Data Task Group, particularly their tireless work identifying regional weed priorities, has been crucial to plan development.

The Board would also like to thank the Technical Subcommittee of the State Weeds Committee for their support in weed risk prioritisation, and the State Weeds Committee, Office of Environment and Heritage, and Department of Primary Industries for their guidance in the development of this plan.

The Regional Weed Committee would like to acknowledge stakeholders and community for their input into the development of this plan. The breadth and depth of their contributions has been significant, and is a reflection of the passion, expertise and knowledge that exists across the North Coast Region.

We also wish to acknowledge that some text within this plan was drawn from a range of NSW Department of Primary Industries publications, including the draft NSW Invasive Species Plan 2015-22, NSW Biosecurity Strategy 2013-2021 and the *Biosecurity Act 2015* Discussion Paper: Weeds.

Development of this plan was supported through the North Coast allocation from the NSW Government's Weeds Action Program funding.

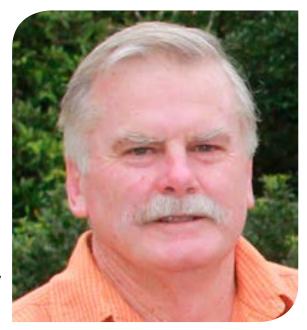
North Coast Local Land Services Board Chair's Foreword

Mr Robert Smith
Chair North Coast Local Land Services

Local Land Services is a state-wide organisation with responsibilities in the areas of agricultural advisory services, biosecurity, emergency management and natural resource management.

Following the review conducted by the Natural Resources Commission on behalf of the State Government, Local Land Services is now also responsible for implementing changes to weed management across the state. The first of these was the formation of Regional Weed Committees under each of the eleven Local Land Service regions. These committees and regional Local Land Services staff then developed a Strategic Weed Management Plan for each region.

These plans guide the implementation of the new NSW *Biosecurity Act 2015*, which replaces the Noxious Weeds Act 1993. A central concept in the new legislation is the General Biosecurity Duty.



This places an onus on all land managers, public and private, and individuals who deal with a biosecurity matter (such as weeds) to manage potential biosecurity risk, as far as is reasonably practicable.

This North Coast Regional Strategic Weed Management Plan identifies both state and regional priority weeds. It also identifies a further group of important weeds that pose a biosecurity risk on a local scale. The plan communicates statutory and other responses required to discharge the General Biosecurity Duty and achieve weed management outcomes for the region.

The North Coast region is the most biodiverse region in the State and supports a wide range of natural environments, agricultural industries and lifestyles. The protection of these very significant assets from weed invasion presents a huge challenge to weed authorities, all land managers, and the wider community. This plan is an important document in guiding our collective response to that challenge.

As Chair I would like to acknowledge those that contributed to the development of this plan. The members of the Regional Weed Committee brought vast experience and varying perspectives to the table and worked cooperatively and productively throughout. The members of the North Coast Regional Weed Data Task Group contributed a huge amount of expertise and energy to the prioritisation of hundreds of weeds. The high level of contribution and cooperation by these partners is a positive sign for the plan's implementation.

To the stakeholders, land managers and investors in the North Coast Local Land Services, I commend this North Coast Regional Strategic Weed Management Plan.

North Coast Regional Weed Committee Chair's Foreword

Ms Robyn Hordern Chair North Coast Regional Weed Committee

The North Coast Regional Weed Committee was formed in late 2015 as part of the NSW Natural Resources Commission's weed management reforms. This North Coast Regional Strategic Weed Management Plan represents the completion of the first significant milestone for the Committee.

I congratulate all 20 members of the committee on the experience, passion and level of cooperation that they bought to this task. I also acknowledge that we have benefitted enormously from the many members who have been involved in strategic weed management planning and implementation in the region for many years. That continuity of local knowledge and expertise is invaluable and will help achieve solid outcomes on the ground.



This new plan and the Biosecurity legislation that supports it provide a great opportunity to broaden the responsibility for, and awareness of, weed management, leading to consistent weed management outcomes across all land tenures.

We live in a most beautiful part of the state and enjoy a fantastic climate and lifestyle. The region is the most biodiverse area in NSW and includes the greatest number of threatened plant and animal species. The region has several major population centres and a diverse range of land uses within proximity of these centres. This combination of factors means we have high value natural and rural assets which are extremely vulnerable to weed invasion and spread.

Weed management needs to be strategic and effective in order to achieve our objectives of preventing invasion, containing and eradicating priority weeds, and managing the impacts of many other significant weeds. We must continue to fund and resource our dedicated communities and authorities to support them in managing this threat. Rising costs and the uncertainty that comes with changing climate only add to the challenge.

The committee is aware that we represent a large and capable community active in sustainably managing our resources. We hope this plan provides valuable guidance and priorities for continuing weed management. I look forward to working with the committee and all weed partners to implement, and continue to improve, regional weed management.

Executive summary

Our vision

Biosecurity protects the economy, environment and community from the negative impacts of pests, diseases and weeds. As such, it is vital for the health, wellbeing and prosperity of the state. The North Coast Regional Strategic Weed Management Plan focuses on managing weeds to improve the region's biosecurity. Our vision is to protect the North Coast's environment, landscape, livelihood, cultural and lifestyle values from weeds by strengthening the sustainability of the natural environment, primary industries, and local communities in the region.

In line with new Commonwealth biosecurity measures, NSW has reformed its weed, pest and disease legislation. Together, the NSW Biosecurity Strategy 2013-2021 and NSW Biosecurity Act 2015 (which repeals the Noxious Weeds Act 1993) provide a streamlined, clear framework for safeguarding primary industries, natural environments and communities from a range of pests, diseases and weeds. Community-wide shared responsibility for biosecurity and a tenure-neutral approach are crucial to realising the vision of a sustainable and prosperous future.

The North Coast Regional Strategic Weed Management Plan is a direct response to this strategic and legislative reform. It was prepared by the North Coast Regional Weed Committee on behalf of the North Coast Local Land Services Board, with guidance from the State Weeds Committee and Local Land Services staff.

Working together

The plan outlines how government, industry and the community will share responsibility and work together to identify, minimise, respond to, and manage weeds. It relates to all lands and waters (excluding marine) in the North Coast Local Land Services region of NSW, including Lord Howe Island. It focuses on managing weeds that impact:

- animal and plant industries, including agriculture, horticulture, forestry, aquaculture, recreational and commercial fishing
- ecological communities and biodiversity, including natural urban and peri-urban environments
- human health, livelihood, lifestyle, cultural values, recreation and landscape amenity
- infrastructure and service industries, including energy, transport and water supplies.

The plan sets the vision and goals for weed management on the North Coast, and outlines strategies and actions to achieve outcomes based on principles of shared responsibility, sustainable landscapes, collaborative leadership and innovation.

Vision:

Government, industry and the people of the North Coast region working together to protect the environment, economy and community from the negative impacts of weeds.

Goal 1: Responsibility for weed biosecurity is shared by the North Coast community

Actions focus on a whole of community approach to weed management, with an emphasis on:

- building community capacity
- building stronger partnerships
- fostering a shared responsibility
- promoting behavioural change.

Goal 2: Weed biosecurity supports profitable, productive and sustainable primary industries

and

Goal 3: Weed biosecurity supports healthy, diverse and connected natural environments

Actions focus on weed biosecurity to protect the environment and foster sustainable economic growth. The emphasis is on:

- preventing new weeds from entering the region
- eradicating or containing the spread of new weeds that do establish
- managing widespread weeds on priority sites.

Goal 4: Weed biosecurity is supported by coordinated, collaborative and innovative leadership

Actions focus on a consistent approach to implementing this plan, with emphasis on:

- providing good governance and leadership to support a collaborative approach
- supporting and delivering the weed biosecurity reforms for NSW
- implementing risk based systems across all tenures in a co-ordinated manner
- using information and mapping systems, current research and adaptive management to improve effectiveness of weed control.

Sharing responsibility

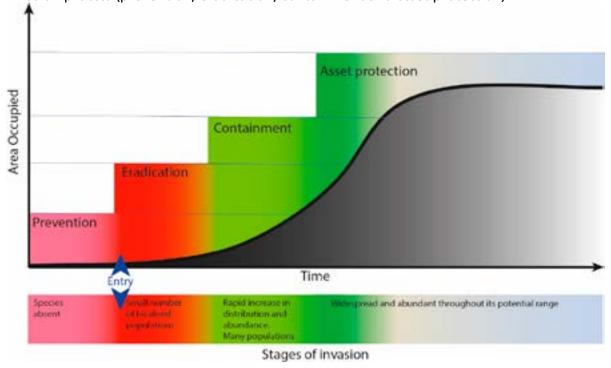
The plan provides a sound basis for a co-operative and co-ordinated approach to managing weeds in the North Coast region. It defines what "shared responsibility" means for the region's communities and stakeholders, and how they might work together to identify, minimise, respond to and manage high risk weeds at a landscape scale, both now and into the future.

The *Biosecurity Act 2015* is tenure neutral, as it applies equally to all land in the region, whether public or private. The Act contains a range of new regulatory tools and a General Biosecurity Duty that support this tenure neutral approach to managing weed biosecurity risk. These tools include Prohibited Matter, Biosecurity Zones, Mandatory Measures and Control Orders and the plan outlines how they might be applied.

The plan outlines how land managers might meet requirements under the General Biosecurity Duty: the responsibility of any person who has any dealing with weeds (biosecurity matter), whether they have an infestation on their land, are selling a potentially invasive species, dumping garden rubbish, or supplying contaminated fodder or the like must prevent, minimise or eliminate the biosecurity risk (as far as is reasonably practicable).

Weed Priorities

An expert panel used best available knowledge and an internationally-recognised risk-assessment process to identify the North Coast's high-priority weed species. Weed prioritisation is guided by the principle that *managing weeds earlier rather than later is more cost effective*. The North Coast's weed management objectives support this principle and prioritises outcomes according to the stages of the invasion process (prevention, eradication, containment and asset protection).



The plan identifies regional priority weeds, including management objectives and "outcomes to demonstrate compliance with the General Biosecurity Duty", which for those weeds clearly define community expectations for land managers to meet their General Biosecurity Duty. The plan also identifies state level and other priority weeds to provide further focus to weed management in the region.

Building on the past

The North Coast Regional Weed Committee (RWC) was established as a local community advisory group under the *Local Land services Act 2013*. Development of this plan was its initial focus. The role of the committee will now shift to overseeing the plan's implementation.

The Committee provides strategic planning and co-ordination of weed management activity at a regional level. It works closely with the State Weeds Committee (SWC), whose charter is to ensure a consistent, coordinated and strategic approach to weed management across the state of NSW.

A range of stakeholders have played an important role in weed management planning in the region over many years. This plan builds on past efforts and has gained immeasurably from the accumulated experience and expert local knowledge of committee members and their networks. The North Coast regional weed committee includes representatives from Local Government and County Councils, NSW Department of Primary Industries, State government agencies with authority over state owned lands (Office of Environment and Heritage, National Parks and Wildlife Service, Forestry Corporation of NSW, Roads and Maritime Services and Department of Industry – Lands), John Holland (County Regional Rail Network), NSW Farmers, Landcare, Aboriginal land managers, environmental interests, rural landholders and North Coast Local Land Services.

Implementation

The plan will guide investment in weed management across the region and provide a consistent basis for regional weed planning and implementation. The regional weed committee will play an important role in overseeing and coordinating implementation of the plan. Stakeholders will implement the plan's objectives within a framework of:

- shared responsibility for weed management
- consistent tenure neutral and prioritised weed management planning, investment and control across the region
- strategic communication, capacity building and engaging partners, stakeholders and the broader community
- coordinated and integrated information management guiding adaptive management and research
- performance measurement that focuses on shared responsibility, sustainable landscapes and collaborative leadership and innovation
- robust monitoring, reporting, evaluation and improvement.

Identifying local stakeholder roles, responsibilities and partnerships is integral to developing these measures efficiently and effectively.

1. Intent of plan

1.1 Introduction

This North Coast Regional Strategic Weed Management Plan provides a framework for regional weed management. The plan supports regional implementation of the NSW *Biosecurity Act 2015* by articulating community expectations in relation to effective weed management and facilitating a coordinated approach to weed management in the region. The plan (and the legislation that underpins it) is based on the premise that biosecurity is everyone's responsibility. It supports development of this culture, guiding the community in effective and coordinated management of weeds and meeting relevant statutory obligations.

The plan relates to all lands and waters (excluding marine) in the North Coast Local Land Services region of NSW, including Lord Howe Island (Figure 1.1).

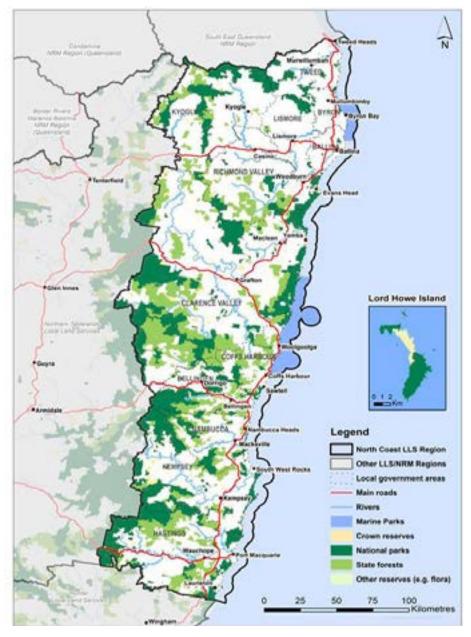


Figure 1.1: North Coast Local Land Services region.

This plan has built on past planning efforts, and has gained immeasurably from the accumulated experience and expert local knowledge of regional weed committee members and their networks. It will guide resource allocation and investment in the region and provide a consistent basis for regional planning and delivery.

The North Coast Regional Strategic Weed Management Plan implements the NSW weed reforms, Biosecurity Strategy and Invasive Species Plan in relation to weeds for the North Coast region. It was prepared by the North Coast Regional Weed Committee on behalf of the North Coast Local Land Services Board, and covers weed risks that impact:

- animal and plant industries, including agriculture, horticulture, forestry, aquaculture, recreational and commercial fishing
- biodiversity of natural, urban and peri-urban environments (terrestrial and aquatic)
- human health, livelihood, lifestyle, recreation and landscape amenity
- infrastructure and service industries, including energy, transport and water supplies.

This plan sets the vision, goals and objectives for weed management on the North Coast for the next five years and outlines the strategies and actions through which these goals will be achieved.

1.2 Vision, Goals and Objectives

This plan provides a sound basis for a co-operative and co-ordinated approach to weed management. The Vision for this plan is:

Government, industry and the people of the North Coast region working together to protect the environment, economy and community from the negative impacts of weeds.

The goals, objectives and outcomes for this plan align with those of the NSW Biosecurity Strategy 2013-2021 and the North Coast Local Land Services Local Strategic Plan 2016-2021, which provide the overarching policy framework. Our Goals are:

- 1. Responsibility for regional weed biosecurity is shared by the North Coast community
- 2. Weed biosecurity supports profitable, productive and sustainable primary industries
- 3. Weed biosecurity supports healthy, diverse and connected natural environments
- 4. Weed biosecurity is supported by coordinated, collaborative and innovative leadership.

The objectives of this plan, outcomes we expect to see, and the strategies to achieve them, are shown in Table 1.1.

Table 1.1: Vision, Goals, Outcomes, Objectives and Strategies of the plan.

Vision	Government, industry and	Government, industry and the people of the North Coast region working together to protect the environment, economy and community from the negative impacts of weeds.	er to protect the environment, economy weeds.
	Shared Responsibility	Sustainable Landscapes	Collaborative Leadership and Innovation
Goals	1. Responsibility for weed biosecurity is shared by the North Coast community	2. Weed biosecurity supports profitable, productive and sustainable primary industries	4. Weed biosecurity is supported by coordinated, collaborative and innovative leadership
	`	3. Weed biosecurity supports healthy, diverse and connected natural environments	
	 Community, industry and government are sharing 	 Weed management is integrated and co-ordinated across all tenures. 	 Engagement, collaboration and involvement of local people in decision
	responsibility for weed management and have	 Weeds are monitored at landscape and industry 	making are co-ordinated.
	a clear understanding of their roles and	scales and developing problems are proactively managed.	 Relevant and timely information supports decision making by the North
	obligations.	 Weed management is supporting landscape health 	Coast Regional Weed Committee and the State Weeds Committee.
	 People have the skills, 	and key assets important to biodiversity.	
	knowledge, capacity and capability to deliver	 Primary industries are using leading weed 	 Information, monitoring, performance evaluation and reporting systems,
	weed management activities.	management practices that contribute to increases in productivity, sustainability and market access	provide for benchmarking, continuous improvement, stakeholder feedback and
Outcomes		with minimal impacts on natural resources.	innovation.
	 Strong supportive partnerships have 	• Sensitive Aboriginal cultural heritage areas are	A strong evidence and knowledge
	improved weed management for all	protected.	base is supporting innovation and strengthening research.
	partners.	 Weed biosecurity threats are continually identified, assessed and prioritised across North Coast region 	• Changes in weed behaviour under a
	 Awareness of weed 		changing climate are being understood
	management in the region has improved, with communication and	 Weed biosecurity emergencies and high risk pathways are well managed. 	and monitored.
	engagement, proactive and inclusive.	 Impacts on high priority assets have been minimised through risk based weed management programs. 	

Vision	Government, industry and	Government, industry and the people of the North Coast region working together to protect the environment, economy and community from the negative impacts of weeds.	er to protect the environment, economy veeds.
	 Communicate a clear strategic vision and build support for a strong and 	effectiveness in prevention and response weed incursions.	 Provide a framework for more detailed planning, monitoring and reporting of weed management programs.
	system for the region.	 Prevent, eradicate, control and manage the impacts of weeds. Tradestand and have regard for the impacts of a 	Provide guidance for weed management prioritisation, decision
Objectives	frowide the foundation for all customers and stakeholders to work together, and to fully utilise knowledge and		 • Support consistent and coordinated regional weed management planning and local delivery.
	expertise across all groups. • Foster accountability for weed management in the rection at all levels.		 Support leading practice in weed management through ongoing creation and sharing of knowledge and spatial information.
	1.1 Promote weed management and behavioural change in	cing	 4.1 Provide governance and leadership that supports collaborative, effective and efficient weed management.
	the community.1.2 Build stronger partnerships that support weed management	 2-3.2 Improve prevention, preparedness and response to weed emergencies. 2-3.3 Eradicate or prevent the spread of new weeds. 	 4.2 Adopt adaptive, contemporary planning and processes. 4.3 Develop a regional weed knowledge
Strategies	 1.3 Enhance community-wide capacity in sharing 	 2-3.4 Contain and manage impacts of widespread weeds. 	base and information system that supports state standards.
	responsibility for weed management.	 2-3.5 Support and utilise developments in weed science and technology. 	4.4 Develop consistent systems for monitoring, evaluating and reporting
		 2-3.6 Use results of research [for example, Weed Futures, Bioclim, ANUClim] to assess and respond to changing risks under a changing climate. 	management.

1.3 A more strategic approach to weed management

1.3.1 Drivers

Weeds are a major threat to Australia's natural environment. The impact of weeds on Australian agriculture alone, are estimated to be \$2.5 billion in lost production and \$1.8 billion in control activities every year (NSW DPI, 2015). Impacts on biodiversity and natural environments are harder to quantify, but equally significant.

As well as increasing costs of weed control, a range of developments are increasing the need to manage weeds more strategically and efficiently:

- NSW weed management reform, identified in a *Review of Weeds Management in NSW* (Natural Resources Commission in 2014). This followed reform of Commonwealth biosecurity measures in 2012, alignment of state legislation, and measures for better cross-jurisdictional biosecurity management around the country.
- Globalisation is integrating the world economy with rapid growth in trade, tourism, passenger and cargo movements. This is increasing the risk of pest, disease and weed incursions.
- The global climate is more variable and less predictable, with more extreme weather events, increasing average temperatures and other changes expected. These changes are likely to favour the establishment, spread or shift of some weeds and limit the distribution and impact of others.
- The demand for food is continually increasing, with modelling indicating global food
 production will have to double between now and 2050 to keep up with that demand. We
 need to do everything we can to protect our capacity to produce food, with weeds being
 a major impact on productivity.
- Herbicide resistance is a growing problem, particularly with the development of resistant crops. There is also a trend towards growing organic produce in western countries, and concern about the impact of pesticides on health.
- Pressure to maintain profitability and increase efficiency are ongoing in government, industry, and business sectors with an ageing population and an increasingly global economy. It is crucial that limited resources for weed biosecurity are used wisely, with constructive partnerships and clear decision-making processes established.

Technological developments are creating opportunities to improve the cost effectiveness of weed control and improve capacity to work more strategically at a landscape scale. Planning for weed management must consider the effectiveness and efficiency of control measures so that the cost is commensurate with the benefit.

The NSW Biosecurity Strategy 2013-2021 outlined the measures needed to align NSW with Commonwealth and other state biosecurity policies. This lead to the development of the NSW *Biosecurity Act 2015*, which replaces 14 other pieces of legislation and establishes a clear framework for safeguarding primary industries, natural environments and communities from biosecurity threats.

The emphasis in the NSW Invasive Species Plan and biosecurity legislation is on prevention of invasive species and early intervention in the incursion process (Figure 4.1). Early and strategic investment to prevent and eradicate invasive species provides more cost-effective and successful weed control outcomes.

1.3.2 Weed committees and development of this plan

The NSW weed reforms recommended that Local Land Services assume responsibility for forming a weed committee in each region to act as a Community Advisory Group and provide appropriate support for weed management and planning. The North Coast committee includes representatives from North Coast Local Land Services, NSW Department of Primary Industries (DPI), state government agencies managing state owned lands (Office of Environment and Heritage (OEH), Forestry Corporation, Roads and Maritime Services and Department of Industry – Lands), local government and county councils, John Holland Rail, NSW Farmers, Landcare, Aboriginal land managers, environmental interests and rural landholders. Through this representation, the committee provides tenure neutral strategic planning and co-ordination of weed management activities at a regional level and also provides a forum for community and stakeholders to raise issues and find solutions.

The State Weeds Committee (SWC) was established to provide a state-wide perspective in overseeing implementation of the weed management reforms: auditing, evaluating weed declarations, and providing state-level perspectives and governance. Their role includes developing service delivery standards for weed compliance, and commissioning audits. The regional weed committee refers weed policy issues to the State Weeds Committee and will support the State Weeds Committee in the development and implementation of performance standards.

This plan represents a partnership between the regional weed committee and its representative organisations, including state government agencies, local government, stakeholders, the community and Local Land Services. Working together, the committee developed this plan for the North Coast Local Land Services Board.

The relationship between Local Land Services, the Regional Weed Committee, the State Weeds Committee and other customers and stakeholders is shown in Figure 1.2. Government, industry, industry associations, research providers, universities, non-government organisations, individuals and the community as a whole all have a role to play in the management of weed biosecurity risks. Local Control Authorities play a particularly important role in weed management including enforcing the *Biosecurity Act 2015* with respect to weeds.

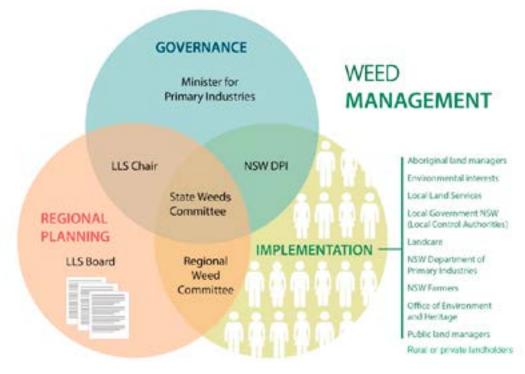


Figure 1.2: Roles in weed management.

Figure 1.3 shows the relationship between the regional weed committee, the North Coast Local Land Services Board and other Community Advisory Groups. North Coast Local Land Services provides executive support to the committee.



Figure 1.3: Regional Weed Committee relationship to North Coast Local Land Services Board.

2. Policy framework

2.1 Overview of key plans and strategies

The Regional Weed Committee considered a range of relevant plans and strategies in development of this plan, at national, state and local levels. These are shown in Figure 2.1.

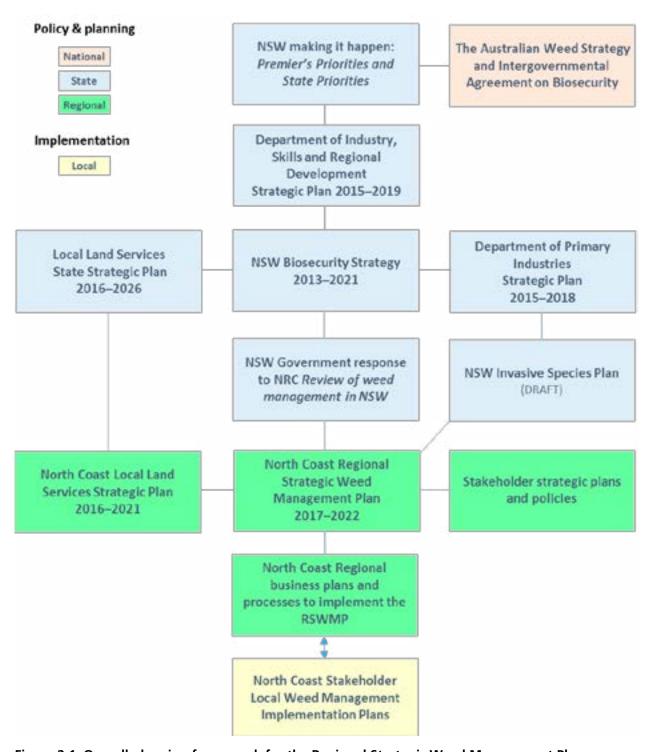


Figure 2.1: Overall planning framework for the Regional Strategic Weed Management Plan.

2.2 Guiding legislation

The NSW *Biosecurity Act 2015*, *Local Land Services Act 2013* and *Local Government Act 1993* are the key legislation directing implementation of this plan. The *Biosecurity Act 2015* takes effect with publication of the regulations in the NSW Government Gazette. This Act is administered by NSW Department of Primary Industries.

A range of other relevant state and national legislation will also influence how the plan is implemented. Key NSW legislation relevant to weed management that will continue to operate in tandem with the NSW Biosecurity Act 2015 are the:

- Local Government Act 1993
- Local Land Services Act 2013
- National Parks and Wildlife Act 1974
- Biodiversity Conservation Act 2016
- Forestry and National Park Estate Act 1998

The Crown Lands Management Bill 2016 has passed the NSW Parliament and the new act is likely to repeal the *Crown Lands Act 1989* and certain other legislation early in 2018. Information about the new act is available from the Department of Industry - Lands website.

Biodiversity management in NSW is also being reformed, with the NSW government implementing recommendations from the Independent Biodiversity Legislation Review Panel. This includes the new *Biodiversity Conservation Act 2016*, and Saving our Species (which will address the range of weeds in Schedule 4 of the *Biodiversity Conservation Act 2016* listed as Key Threatening Processes). The State Weeds Committee will liaise with regional weed committees on the effect of any changes flowing from these reforms.

2.3 Biosecurity Act

The *Biosecurity Act 2015* has repealed the *Noxious Weeds Act 1993*, which has provided regulatory controls and powers to manage noxious weeds in NSW. The *Biosecurity Act 2015* streamlines and modernises the way weeds are managed in NSW as it:

- embeds the principle of shared responsibility for biosecurity risks (including weeds) across government, community and industry
- applies equally to all land in the state, regardless of whether it is publically or privately owned
- is premised on the concept of risk, so that weed management investment and response is appropriate to the risk
- supports regional planning and management for weeds, as recommended by the Review of Weeds Management in NSW.

In keeping with its premise that biosecurity is a shared community responsibility, the Act introduces the legally enforceable concept of a General Biosecurity Duty.

2.3.1 General Biosecurity Duty

For weeds, the General Biosecurity Duty means that any person dealing with plant matter must take measures to prevent eliminate or minimise the biosecurity risk (as far as is reasonably practicable).

"Dealing" has a broad definition in the Act and includes (but is not limited to) activities such as grazing, cropping, fodder production, horticulture, weed control, seed and other plant production, as well as carrying, sale and distribution of these products. In general if you deal with or carry plant matter as part of a commercial, professional, volunteer or recreational activity or lifestyle, it would be considered that you would know, or ought to know, the risks. Plant matter includes plants, parts of plants and seeds. Weeds are not limited to plants listed in the Appendices of this plan or to schedules in the Regulations of the *Biosecurity Act 2015*: any species that poses a biosecurity risk is subject to the GBD. This provides the Act with more flexibility to deal with both agricultural and environmental weeds, plants that may pose risks in particular contexts, and invasive species which are not as yet present, but pose a risk.

2.3.2 Regulatory tools of the Act

The *Biosecurity Act 2015* includes a number of mechanisms (regulatory tools) that can be used to manage weeds in NSW. These are outlined in Table 2.1 below. The *Biosecurity Act 2015* and Regulations provide specific legal requirements for high risk activities and state level priority weeds. The State level priority weeds and associated legal requirements relevant to the region are included in Appendix 1 together with the high risk priority weeds from the regional prioritisation process.

Table 2.1: Regulatory tools of the *Biosecurity Act 2015*.

Regulatory tools

Prohibited Matter: biosecurity matter listed in Schedule 2, Part 1 of the *NSW Biosecurity Act 2015* for the purpose of preventing entry of that matter into NSW or a part of NSW. Prohibited matter relevant to the region is listed in Appendix A1.1 of this plan. Prohibited matter includes weeds nationally targeted for eradication and presently not in NSW.

Biosecurity Control Order: establishes one or more control zones and related measures to prevent, eliminate, minimise or manage a biosecurity risk or impact. Control orders are for managing weeds under approved eradication programs and last for five years (or can be renewed for longer-term eradication programs). Weed Control Order 2017 (Part 6 Division 1) under the NSW *Biosecurity Act 2015* will include weeds that are subject to a Control Order for the purpose of eradication. Further Control Orders will be proposed as needed to address subsequent eradication campaigns.

Biosecurity Zone: aims at containment of a species and provides for ongoing strategic management in a defined area of the state. A Biosecurity Zone specifies the measures that must be taken in the defined area to manage the weed. Outcomes to demonstrate compliance with the GBD may also apply to the species either within the zone or outside it.

Mandatory Measures: requires parties to take specific actions with respect to weeds or carriers of weeds. Mandatory Measures are defined in the regulations and include prohibition on certain dealings - including Weeds of National Significance (WoNS) (Division 8 Clause 33), Parthenium weed carriers - machinery and equipment (Division 8 Clause 35), and duty to notify of importation of plants into the state (Division 8 Clause 34). Mandatory measures relevant to the region are listed in Appendix 1.

General Biosecurity Duty (GBD): the purpose of the GBD is to manage the spread and/ or impact of all weeds that pose a biosecurity risk (2.3.1 above provides more detail). The GBD is in addition to any requirements included in a control order, biosecurity zone or other instrument made under the *Biosecurity Act 2015*. For priority weeds, outcomes to demonstrate compliance with the GBD are detailed in Appendix 1 of this plan.

Biosecurity Direction: an Authorised Officer may issue a Biosecurity Direction to a person or class of persons, if the officer reasonably believes it is necessary for any of the following:

- to prevent, eliminate or minimise a biosecurity risk
- to prevent, manage or control a biosecurity impact
- to enforce any instrument under the *Biosecurity Act 2015*.

Biosecurity Undertaking: is a written undertaking by a person, accepted by an authorised officer. It must specify the measures a person has agreed to implement to remedy a contravention, likely contravention, or suspected contravention of the Act and when those measures must be implemented by. It is not an admission of guilt.

Emergency Order: may be issued to respond to a current or imminent biosecurity risk that may have a significant impact.

2.3.3 Enforcing the Biosecurity Act

NSW Department of Primary Industries (DPI) administer the *Biosecurity Act 2015* and determine the weed species covered by regulatory tools such as Prohibited Matter, Control Orders and Biosecurity Zones.

Local Control Authorities (Local Councils and County Councils) are responsible for enforcing weed legislation.

This includes such activities as:

- conducting weed inspections on public and private property
- inspecting and controlling weeds in high risk pathways and sites
- providing education, training and resources for both the public and staff in relation to weed management
- administering and ensuring compliance with any of the above regulatory tools
- responding to breaches of the Act, and
 - notifying and reporting on weed activities to the Biosecurity Information System (BIS).

Authorised officers under the *Biosecurity Act 2015* are able to exercise all the functions specified in the Act to enforce the Act and its regulations, including the regulatory tools covered in Table 2.1. Authorised officers are appointed by the Secretary of the Department of Industry or their delegate. Local Control Authority Weed Officers will be appointed as Authorised Officers under the *Biosecurity Act 2015* by their Local Control Authority. That appointment will allow the officers to exercise the functions of an authorised officer for weeds within the area of operation of their Local Control Authority.

The primary focus of this plan is to encourage and work with the community and landholders to achieve agreed weed management objectives and outcomes (see Box 2.1). Education, extension and use of biosecurity undertakings reinforce the concept of the General Biosecurity Duty and establish a cooperative approach to local and regional weed management.

Monitoring and compliance for weed management in the region will focus primarily on weeds listed in Appendix 1 to this plan. For these high risk weeds, prompt and responsible action is essential to avoid significant impacts on other landholders, industry and the environment.

Box 2.1: Agreed standards for weed management.

In terms of regulation the Regional Strategic Weed Management Plan plays an important role in articulating the shared responsibility principle of the *Biosecurity Act 2015* (the Act) and communicating weed control obligations. Although the plan is not a regulatory document in the traditional sense, it provides information to enable people to effectively discharge their obligations under the Act, including their general biosecurity duty.

The General Biosecurity Duty requires that all land managers and users ensure: as far as is reasonably practicable, that the biosecurity risk is prevented, eliminated or minimised. It does not prescribe how these outcomes are achieved. For this reason the plan does not include prescriptive measures for landholders and users to discharge their general biosecurity duty. The plan focuses on the outcomes to be achieved, allowing for different measures to achieve the same outcome.

While not technically a Regulation, the plan links the key elements of *Knowledge*, *Risk*, *Practicality* and *Outcomes* for discharging the GBD.

3. Weed management in the region

3.1 Overview

3.1.1 Description of the region

The North Coast Local Land Services Region is located in north-eastern NSW, includes Lord Howe Island, and covers an area of 32,051 km² (Figure 3.1). The North Coast Region supports a diverse and distinct mixture of landscape, livelihood and lifestyle values (NCLLS 2016a).

Landscape values

A diversity of natural landscapes and a typically sub-tropical climate provide for nationally recognised biodiversity, wilderness and wetland areas; combined with complex and diverse soil systems. The escarpment ranges and midland hills to the west support the headwaters of the nine large river systems that drain onto extensive coastal alluvial floodplains, which have strong connections to headland, beach, estuarine and marine environments. The Region includes 568 km of coastline.

The North Coast Region includes one of Australia's 15 biodiversity hotspots. It is considered the most biodiverse area in NSW, supports the greatest number of native plant and animal species of any area in NSW, and includes the greatest number of threatened species (NRC 2014a). The region also includes the World Heritage Area listed Lord Howe Island located 585 km east of Port Macquarie. The main island is 1,455 ha in area with outstanding natural landscapes and rich biodiversity (LHIB 2016).

Regional land management and tenure data includes National Parks and reserved State Forest 6,590 km² (or 21% of the region), and unreserved State Forest 4,036 km² (or 15%), Crown Land, urban and other private land 20,505 km² (or 64%) (NCLLS 2016a).

While a significant proportion of the Region is within terrestrial and marine protected areas, there are many threatened species and ecological communities that occur on private land.

Cultural Values

The North Coast Region is the traditional home to six Aboriginal nations (NCLLS 2016b). Throughout the landscape there are cultural sites, special places and physical evidence of traditional land use. Continued use of wild foods and medicines is an important activity highly valued by Aboriginal people.

There are currently approximately 21,000 Aboriginal people in the Region. This is 10% of the NSW's Aboriginal population (NCLLS 2016b). There are 23 Local Aboriginal Land Councils in the region, reflecting the diversity of the region and the community.

Four Indigenous Protected Areas containing biodiversity and cultural resource values are in the Region. Almost 6% of the Region is subject to determined (non-exclusive) Native Title and a further 15% is currently under registered claim (OEH 2016a).

Livelihood Values

The Region has a diverse economy that reflects the provision of services to an ageing population, and the popularity of the North Coast as a tourist destination.

The diverse landscapes, including coastal, riparian, floodplain, hinterland, escarpments and ranges, provide a range of soil types, many highly fertile and desirable for agriculture.

The North Coast supports a range of natural resource-based industries which underpin the prosperity of the Region. These include the beef, dairy, blueberry, macadamia, intensive horticulture; fishing and aquaculture, timber production and tourism industries (see Figure 3.1).

The Region has a large and capable natural resources management community and industry base that is actively engaged in the sustainable management of the Region's natural resources (NRCMA 2013). While agriculture, forestry and fishing make a significant contribution to employment across the region, there has been a decline in the contribution of this sector to the regional economy in recent years (EcoLogical Australia 2015).



Figure 3.1 Land use in the North Coast region.

Lifestyle Values

Approximately 506,000 people reside on the North Coast. The North Coast has many vibrant towns, villages and communities that support diverse coastal and hinterland lifestyles. An iconic and densely populated coastline provides a focus for recreational pursuits and much sought after sea change lifestyles. The major population centres are located on or near the coast and are connected primarily by coastal transport routes — they include Tweed Heads, Lismore, Murwillumbah, Grafton, Coffs Harbour, Nambucca, Kempsey and Port Macquarie (see Figure 1.1).

This plan recognises the North Coast's Southern, Central and Northern "sub-regions" (also known as Socio-Ecological Landscapes or SELs) (Figure 3.1) which have their own suite of unique social, economic and environmental characteristics (NRCMA 2013).

There are twelve Local Government areas in the Region. They are Tweed, Byron, Lismore, Ballina, Kyogle, Richmond Valley (comprising the Northern sub-region), Clarence Valley, Coffs Harbour, Bellingen (the Central sub-region), Nambucca, Kempsey and Port Macquarie-Hastings (the Southern sub-region). The Lord Howe Island Board's area is also within the Southern sub-region region.

These SELs, and local government areas, are two of the scales used in applying weed management planning and implementation to certain weed species, which allow us to meet the values and needs of local communities.

3.1.2 Key impacts and risks of weeds

Directly or indirectly, all Australians are affected by weeds. They reduce the quantity and quality of agricultural, horticultural and forestry products which impacts both the industries and consumers. The estimated cost to the Australian economy of the agricultural impact of weeds in 2005 was estimated at \$4 billion per annum (Sinden et al 2005).

The economic impact of weeds on nature conservation, tourism and landscape amenity is thought to be of a similar magnitude (Oakwood 2009). Weeds affect the structure and function of terrestrial and aquatic ecosystems, impact negatively on flora and fauna, and pose a threat to the integrity of nationally and globally significant sites, including natural and cultural heritage sites. They also impact Aboriginal connection to country and the ability to undertake cultural activities.

Many weeds also affect human and animal health causing allergies, dermatitis, asthma and poisoning. Weeds can also be detrimental to the aesthetic value and the community enjoyment of natural areas (Oakwood 2009).

Extent of weed impacts on the North Coast

The unique combination of climate, landscape, land-use and socio-economic factors that the North Coast experiences means that the Region has both high value assets (natural and rural) vulnerable to the impact of invasive plant species, and characteristics conducive to their establishment and rapid spread (FNCW 2015).

These same factors result in exposure to a large number of high risks to the spread of weeds. Transport corridors into and within the Region, movement of stock and fodder, population centres, dispersed rural-residential developments, waterways and floodways, gardens, some ornamental plant industries, and high use of natural areas for recreational pursuits such as bushwalking and camping all contribute to increased risk of weed spread. Numerous private and public land manager and service organisations, some with authority to enter, move between properties and can create a risk for spread of weeds and pathogens if effective procedures are not implemented.

Proximity to south-east Queensland population centres and national and international transport hubs further increases the potential risk of new incursions.

The North Coast recorded by far the highest number of introduced species per region over a four year period to September 2013, with 51 new weed species detected (RBG&DT 2013, NRC 2014a). This was considered to be due to a combination of effective monitoring and detection effort, habitat suitability, diverse micro-climates and incursions from Queensland.

The North Coast Region also has one of the highest rates of "notifiable" weed reports in the state, with Councils reporting approximately 250 new detections in the five years to 2015 (Ensbey 2016). Notifiable weeds are noxious weeds under the Noxious Weeds Act. They are not present, or are present to a limited extent, require eradication and notification, and there are restrictions on their sale and movement.

Invasive Species are acknowledged as the second greatest cause of biodiversity decline, after habitat loss. Weeds impact on 419 (or 45% of) listed threatened species in NSW (Coutts-Smith and Downey (2006). Furthermore, the North Coast region was found to be the highest ranking of all regions in the state for the number of native plants and animals present (biodiversity), the number of native plants and animals impacted by threats, and the number of threatened species.

Risks due to resourcing levels

Despite increasingly coordinated, strategic and innovative approaches to weed management by Local Control Authorities, National Parks and Wildlife Service and other pro-active public and private land managers, the number and extent of priority weed species in the region continues to grow. Over 500 candidate invasive species were assessed and considered for inclusion within this plan.

Historically, available resources have not been adequate to eradicate the number of new incursions reported. The protection of the Region's agricultural, biodiversity, cultural and environmental assets, often under threat from more widespread invasive weeds, also requires a higher level of resourcing.

Many of the Region's weed infestations, natural assets and high risk pathways are on public land and weed management is not always a high priority as some of the public land managers face competing demands for their limited resources.

Given the extremely high value of our environmental and economic assets there is a clear need for increased investment in weed management in this region.

3.1.3 Regional influences

There are many factors that influence how we deliver weed biosecurity in the North Coast Region. This plan has little direct influence over them, but needs to be mindful of:

- · changing climate and extreme climatic events
- changing population size, growth rate, density and distribution
- farm aggregation brought about by the purchase of land by corporations
- · land-use change, diversification and intensification
- market forces and the impact of new technologies
- resource use change and the adequate supply and security of natural resources (e.g. water)
- community values and expectations
- changes in government policies
- competing priorities for resources and funding across both the public and private sectors.
- natural disasters (e.g. floods, wildfire).

Changing climate

Climate change and increasing variability in climatic events is a particularly important consideration for weed management. Adaptation is likely to be required within the lifetime of this plan to maintain efficient and effective management strategies.

The main drivers for climate change impacts on weeds include increased temperatures, changed rainfall, increased carbon dioxide levels, more extreme weather, and changed phenology (seasonal timing of plant growth and reproduction) (Scott et al 2014). The actual climate-related implications for weed management are complex because they will impact at a species and ecosystem level, will affect invasive and native species, and will be a result of a suite of inter-related processes (for example changing climate, land-use, and fire regimes).

Some considerations for the North Coast Region include:

- species' range will generally shift south and may increase in altitude so monitoring arrivals
 from south-east Queensland will be more critical. The suite of regional priority weeds is
 expected to change
- extreme climatic events such as wild fires, cyclones and flood provide a greater opportunity for certain weeds to spread due to landscape disturbance and seed dispersal
- currently benign species (both native and non-native) may become more invasive and 'sleeper weeds' may become more active
- while enhancing landscape connectivity can facilitate the adaptation of natural environments to changing climate, it may also present opportunities for increased weed invasion (Scott et al 2014) and options for managing species movement
- herbicide effectiveness may vary due to warmer temperatures and changed rainfall.

3.2 Recent strategic weed management

3.2.1 Regional weed planning

Weed Advisory Committees

Prior to the implementation of the NSW weed reforms and the formation of the North Coast Regional Weed Committee, there were two peak regional weed bodies that operated within the footprint of the North Coast Local Land Services area: the North Coast Weed Advisory Committee (covering the Tweed, Byron, Lismore, Ballina, Kyogle, Richmond Valley, Clarence Valley, Coffs Harbour, Bellingen and Nambucca Local Government areas) and the Mid North Coast Weed Coordinating Committee (covering the Kempsey, Port Macquarie – Hastings, Lord Howe Island Board area, Greater Taree, Gloucester and Great Lakes Local Government areas). Both ceased operations in early 2016, having been a fundamental part of regional weed management for over twenty years.

This plan builds on the significant achievements of these Committees. Both Committees were very productive and highly regarded, laying the foundations for weed management on the North Coast, with a focus on:

- inclusive core memberships of the Local Control Authorities, Department of Primary Industries, state natural resource authorities and agencies, public land managers, private land managers and farming organisations, Landcare, environmental and other interest groups
- implementation of capacity building, prevention, eradication and containment activities
- provision of advice on weed policy development, noxious weed declarations and control
- promotion of regional priorities, coordinated responses, and awareness raising initiatives
- development of excellent weed related information resources, management programs and management plans
- provision of a forum for information exchange on weed matters
- attracting significant external funding to support weed management.

The North Coast and Mid North Coast Weed Advisory Committees developed Regional Weed Strategies for their areas that provided guidelines for effective and coordinated weed management and prioritised weed species lists. Both Committees also developed many regional weed management plans for priority noxious weed species.

Other weed planning initiatives

Regional Pest Management Strategies National Parks and Wildlife Service prepare and implement regional pest management strategies to manage weeds and pest animals in national parks and reserves across NSW. These provide a strategic approach to pest management on lands managed by the National Parks and Wildlife Service under the National Parks and Wildlife Act 1974.

The strategies aim to minimise the adverse impacts of pests on biodiversity, protected areas and the community. Programs are developed and often carried out in collaboration with neighbours and other stakeholders. The Pest Management Strategies for the NPWS Regions were revised in 2011 and are due to be updated in 2017.

Biodiversity Priorities for Widespread Weeds Many weeds that threaten biodiversity are widespread and usually beyond the scope of prevention and eradication programs developed to deal with new and emerging weed threats.

The Biodiversity Priorities for Widespread Weeds Project was a joint initiative between NSW Department of Primary Industries, NSW Office of Environment and Heritage and the former Catchment Management Authorities. This project used an adapted Threat Abatement Plan (site-led) approach to identify and prioritise widespread weeds impacting on biological assets and sites for weed control within each former Catchment Management region in New South Wales.

Northern Rivers Invasive Plant Action Strategy The North Coast Weed Advisory Committee prepared the Northern Rivers Invasive Plants Action Strategy (Oakwood 2009). The aim of the Strategy was to provide a regional framework for the entire Northern Rivers Catchment Management Authority area, to reduce the economic, environmental and social impact of weeds. The Strategy prioritised weeds within seven landscapes types and management actions were set out under six broad goals.

The Northern Rivers Invasive Plants Action Strategy had a clear emphasis on the importance of preventing new weeds from establishing and the need to respond quickly to incursions as these are the most costeffective techniques for managing weeds.

3.2.2 Current situation

Regionally, the Northern Rivers Invasive Plants Action Strategy was intended to guide weed management decision-making by public and private land managers. It provided weed priorities for each landscape in each Local Government Area. In the southern part of the Region it is updated by the Mid North Coast Weed Coordinating Committee Regional Weed Strategy 2012-2015. These strategies focus on prevention, new and emerging weeds and capacity building and have been used as a guide for activity and funding by Local Control Authorities and regional natural resource management bodies.

The Biodiversity Priorities for Widespread Weeds Project continues to provide a complementary decision-making option for widespread weeds through the Saving our Species Program where they are impacting on environmental assets.

National Parks and Wildlife Service is a pro-active and strategic public land manager of weeds, guided by their Regional Pest Management Strategies. The Biodiversity Priorities for Widespread Weeds also provides detailed site and species priorities as many sites occur on the National Park estate.

Species specific weed management plans for priority weeds are also guiding regional action. The Tropical Soda Apple Management Plan is a prime example. This species has been a priority for Local Control Authorities in recent years with coordinated control programs, stakeholder engagement and awareness, and efforts to secure external funds.

North Coast Local Control Authorities continue with their role to enforce weed legislation in local government areas. Additionally, they implement and report on their activities aligned to the NSW Invasive Species Plan, co-funded by regional allocations from NSW Department of Primary Industries' Weeds Action Program and contributions from Local Government. These activities are mainly concerned with weed prevention, eradication and containment, surveillance and control along high risk sites and pathways, prioritising sites for asset protection, and raising community awareness and capacity. They are underpinned by a suite of mandatory regional operational plans. The Weeds Action Program commenced in 2010 based on Weeds Advisory Committee boundaries and was updated in 2015 with new regional funding arrangements based on Local Land Service regions.

3.2.3 Community involvement

This plan provides strategies to continue to build community awareness and capacity in weed management on the North Coast. Like all weed strategies it recognises that weed biosecurity is most effective if all stakeholders share responsibility and support coordinated effort.

The community sectors involved in weed management on the North Coast include individual landholders, community groups such as Landcare, rural industry and farmer groups, the Aboriginal community, non-government organisations, environmental businesses, and conservation interests. These sectors are represented on the North Coast Regional Weed Committee, and the members are tasked with engaging with their own networks regarding the role of the committee.

The region is fortunate to have a range of community sectors involved in weed management-related activities. North Coast Landcare is a very large and motivated network with a track record for building community capacity to manage weeds. Several local councils in the region support bush regeneration teams and/ or run an environment levy program that support weed management and environmental projects. This is in addition to the council's weed control responsibilities. There is also a strong natural resource industry in the region comprising non-government organisations, weed control operators, bush regeneration contractors and environmental consultants.

North Coast Local Land Services has involved the Aboriginal community in plan development through the Aboriginal Community Advisory Group and direct contact with key land managers and other representatives.

The General Biosecurity Duty that underpins the NSW Biosecurity regulations and this plan should encourage greater action by private landholders, public land managers and community members within the region.

4. Weed risk assessment and prioritisation

4.1 Weed management prioritisation

To ensure limited resources are used to best effect, and that management of weeds is commensurate with the risk posed by each species, an objective and repeatable risk assessment was undertaken across the region. This section outlines the principles and assessment processes used to prioritise weed management.

The generalised Weed Invasion Curve (Figure 4.1) illustrates the invasion process for weeds from arrival to widespread establishment (after Chippendale (1991); Hobbs and Humphries (1995); and Environmental Weeds Working Group (2007)) and shows that the effort and resources required to control a weed rise with time and area occupied. *Managing weeds earlier rather than later* is more effective, and this principle is a foundation of the process used to develop the regional weed priority list in this plan (Appendix 1.1). The asset protection phase shown in Figure 4.1 illustrates an important shift in the focus from controlling a weed species, to limiting the impact it may have on important assets.

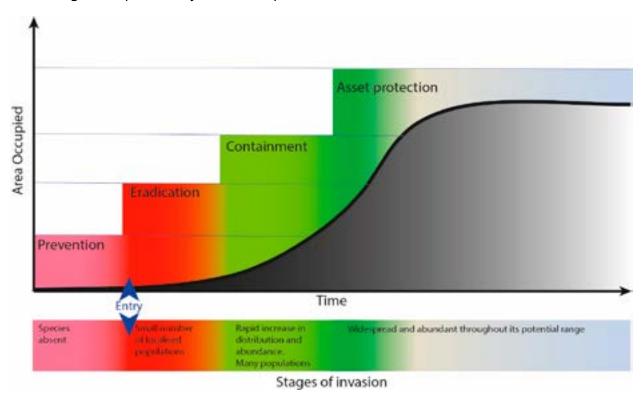


Figure 4.1: Weed invasion curve illustrating area infested and resources required for control over time, and the basis of management objectives.

4.1.2 NSW Weed Risk Management system

The NSW Weed Risk Management (WRM) system provides a standard, nationally accepted and transparent process to help make decisions about prioritising weed species and determining appropriate management responses. The WRM system considers two components for prioritising weeds for management action:

- 1. a weed risk assessment
- 2. an assessment of the feasibility of coordinated control.

Weed risk is determined through scoring a series of parameters (invasiveness, impacts, potential distribution) and likewise for feasibility of co-ordinated control (control costs, persistence, and current distribution). An assessment of these components provides a management objective that reflects the principles of effective weed management, and links with the objectives of the *Biosecurity Act 2015*.

4.2 Regional prioritisation process

A regional weed prioritisation process was undertaken using the NSW WRM system. This was carried out using an expert regional panel on behalf of the North Coast Regional Weed Committee. The panel brought together practitioners with long term on-ground experience with high priority species, including some local experts previously involved in the weed advisory committees.

Weed Risk Management system assessments were undertaken at the regional scale to ensure the outcomes reflected regional conditions. Where there was significant variation in weed risk or weed distribution in the region, the assessments were conducted at a sub-regional level, to determine containment zones or any other sub-regional response.

Quality assurance was undertaken by the Technical Subcommittee of the State Weeds Committee. The Technical Subcommittee reviewed the weed risk management assessments, management categorisation and objectives, and the outcomes to demonstrate compliance with the General Biosecurity Duty developed for the region. This ensured consistency and alignment with the WRM system and the *Biosecurity Act 2015*. The Technical Subcommittee also provided guidance to regional weed committees on appropriate outcomes to demonstrate compliance with the General Biosecurity Duty. The management categories used in the assessment are summarised in Table 4.1.

A full account of the steps, information and approaches used in our regional assessment can be found in the North Coast Regional Strategic Weed Management Plan Weed Prioritisation Technical Report (NCLLS 2017).

Table 4.1: Regional weed management categories.

Category	Objective	Characteristics of weeds in this category
Prevention	To prevent the weed species arriving and establishing in the Region.	These species are not known to be present in the region.
	the Region.	They have a high to very high weed risk (highly invasive and high threat) and have a high likelihood of arriving in the region due to potential distribution and/ or an existing high risk pathway.
Eradication	To permanently remove the species and its propagules from the Region.	These species are present in the region to a limited extent only and the risk of re-invasion is either minimal or can be easily managed.
	OR to destroy infestations to reduce the extent of the weed in the region with the aim of local eradication.	They have a high to very high weed risk and high feasibility of coordinated control.
Containment	To prevent the ongoing spread of the species in all or part of the Region.	These species have a limited distribution in the region. Regional containment strategies aim to prevent spread of the weed from an invaded part of the region (core infestation), and/or exclude the weed from an uninvaded part of the region (exclusion zone).
Asset Protection	To prevent the spread of weeds to key sites/ assets of high economic, environmental and social value, or to reduce their impact on these sites if spread has already occurred.	These weed species are widespread and unlikely to be eradicated or contained within the wider regional context. Effort is focussed on reducing weed threats to protect priority high value assets.

4.2.1 Priority weed list for the region

The regional prioritisation process culminated in the identification of the priority high risk weeds and the development of the regional priority weed list for the region - Appendix 1 (A1.2) of this plan. This identifies outcomes to demonstrate compliance with the General Biosecurity Duty for listed species. State level priorities (Appendix 1 (A1.1)) were determined by the Department of Primary Industry. Management requirements for weeds, whether that be specific regulatory measures (state level priorities) or outcomes to demonstrate compliance with the General Biosecurity Duty (regional priority weeds), are also detailed in Appendix 1.

The outcomes applied to a particular weed will depend on factors such as the biology and ecology of the weed, the land use(s) in which it occurs, the size of the infestation, potential pathways for infestation and others. These factors have been taken into account in determining the suite of outcomes to demonstrate compliance with the General Biosecurity Duty and strategic responses. As with all components of this plan, these obligations apply to all private and public landholders in the region. Monitoring and compliance for weed management in the region will focus primarily on weeds listed in Appendix 1.

4.2.2 Additional regional weed lists

The community is also interested in management of widespread weeds because of their extent and impact in sub-regional locations. Appendix 2 outlines other priority weeds identified by the committee in consultation with the community. These are species for which a consistent and/ or collaborative approach to management will provide the best outcome across the region. Weeds identified within Appendix 2 are also subject to the General Biosecurity Duty and may be a focus for local management plans and coordinated campaigns by the community and other stakeholders in the region.

Both the regional priority weed list (Appendix 1) and the additional regional weed lists (Appendix 2) may be amended as necessary in accordance with state-level reviews and the regional review process.

Appendix 3 provides a table of all species in the plan, listed by their common name in alphabetical order, and the management category under which they are listed.

4.2.3 Lord Howe Island

The Lord Howe Island Board has recently developed the Lord Howe Island Weed Management Strategy 2016-2025 (Lord Howe Island Board 2016). This strategy was developed in consultation with the Lord Howe Island community, and meets their expectations and needs.

While the strategy aligns with the NSW Biosecurity Strategy 2013-2021 targets and considers risk and feasibility, its priorities were developed prior to the new weed management prioritisation approaches and obligations that support the *Biosecurity Act 2015* (as detailed in this plan).

Weed species identified in the Strategy are targeted primarily for eradication, continuing with species priorities identified in the Noxious Weeds (Weed Control) 2014 (Noxious Weeds Act 1993), with the aim to protect the World Heritage values of the Lord Howe Island Group and the investment in progressing eradication over the past decade.

Department of Primary Industries and North Coast LLS will liaise with the Lord Howe Island Board about updating their strategy and its weed priorities consistent with the requirements on the *Biosecurity Act 2015*. The strategy and its weed management priorities can be found at http://www.lhib.nsw.gov.au/board/publications/plans.

5. Actions

5.1 Overview

This section covers actions required to achieve our goals. In essence, Goal 1 addresses community capacity to discharge the General Biosecurity Duty; Goals 2 and 3 are focussed on weed management outcomes, while Goal 4 focuses on coordinating successful regional weed management.

Strategies, actions and associated regional measures of performance (see 5.3) are based on the best available information and science relevant to weed biosecurity. Strategies and actions for each goal are presented in Table 5.1 below.

Table 5.1: Goals, strategies and actions of the plan.

Goal 1: Responsibility for weed biosecurity is shared by the North Coast community		
Strategies	Actions	
1.1 Promote weed management and behavioural change in the community 1.2. Build stronger partnerships that support weed management	1.1.1 Develop and implement a strategic marketing and communication plan that promotes delivery of weed management on the North Coast.	
	1.1.2 Develop products promoting behavioural change and the profile of weed management on the North Coast, including promotional campaigns and events, sponsorship, media releases, social media, web sites, e-newsletters, brochures and other publications.	
	1.2.1 Develop partnerships that support tenure neutral weed management.	
	1.2.2 Foster networks, alliances and Aboriginal engagement that support communities and stakeholders in weed management activities.	
	1.2.3 Develop and implement mechanisms to protect biodiversity and support management of weeds on non-productive land.	
1.3 Enhance community-wide capacity in sharing responsibility for weed management	1.3.1 Develop, promote and assist with interpretation of information outlining stakeholder roles, obligations and implications in weed management.	
	1.3.2 Enhance existing communication networks to increase effective dissemination of information and understanding of shared responsibility and a whole of community approach to weed management.	
	1.3.3 Provide greater opportunities for education, training and community based programs that support behavioural change and increase community capacity to manage priority weeds.	

Table 5.1: Goals, Strategies and Actions of the plan continued.

Goal 2: Weed biosecurity supports profitable, productive and sustainable primary industries and

Goal 3: Weed biosecurity supports healthy, diverse and connected natural environments	
Strategies	Actions
2-3.1 Improve surveillance, reporting and tracing systems for weeds	2-3.1.1 Improve surveillance, reporting and tracing for weeds:
	Widen implementation of early detection by encouraging partners to become involved in the High Risk Pathways and Sites inspection program and report via the DPI Biosecurity Information System
	 Develop tools, systems and services (e.g. drones) to allow for efficient weed mapping
	Build community capacity to assist with surveillance and reporting
	Undertake coordinated surveillance activities for high risk species.
	2-3.1.2 Support state-wide processes in development of more efficient ways of demonstrating proof of freedom from weeds.
2-3.2 Improve prevention,	2-3.2.1 Improve cross-jurisdictional collaboration on consistent and effective approaches to preventing establishment of new weed species.
preparedness and response to weed emergencies	2-3.2.2 Manage high risk pathways, using strategic intentional surveillance, region-wide and consistent industry codes, education and enforcement mechanisms.
	2-3.2.3 Improve prevention and response to weed biosecurity emergencies through improved identification processes, improved communication and reporting networks, and rapid responses to management of new high priority weeds.
2-3.3 Eradicate	2-3.3.1 Develop standardised and consistent planning for:
or prevent the spread of new weeds	Weeds listed in Appendix 1 of this plan
	 New weed incursions, including rapid response plans and associated cost sharing arrangements.
	2-3.3.2 Work with other jurisdictions to standardise weed biosecurity arrangements across regional and state borders.
	2-3.3.3 Ensure management occurs for high priority weeds in alignment with relevant State, Regional or Sub-regional objectives.
2-3.4 Contain and manage impacts of widespread weeds	2-3.4.1 Develop and promote integrated land management practices and best practice weed management to minimise the spread and reduce the impacts of established weeds.
	2-3.4.2 Support the ongoing development and coordination of new and existing cooperative programs for reducing or controlling the current extent of widespread weeds in priority sites.
	2-3.4.3 Actively manage high priority and widespread weeds which threaten key sites/assets in alignment with State, Regional or Sub-regional objectives.
	2-3.4.4 Continue to contribute to new and existing state and national arrangements for managing established weeds.

2-3.5. Support weed research and implement developments in weed science and technology	2-3.5.1 Document invasive weed species research priorities in collaboration with government, industry, research providers, the Aboriginal community, and the wider community and report these to the State Weeds Committee. 2-3.5.2 Strengthen research partnerships and actively participate in the development of new technologies and innovative approaches to weed management.
2-3.6 Assess and respond to changing weed	2-3.6.1 Identify the likely weed species and the environmental, social and economic values that will be vulnerable to invasive weeds under a changing climate.
risks associated with climate change	2-3.6.2 Implement actions that promote resilience and minimise the risk of high risk invasive weeds under a changing climate.

change	
Goal 4: Weed bio	security is supported by coordinated, collaborative and innovative
Strategies	Actions
4.1 Provide governance	4.1.1 Work in a collaborative partnership with all stakeholders to implement this plan.
and leadership that supports collaborative,	4.1.2 Support the functions and business needs of the State Weeds Committee.
effective and efficient weed management	4.1.3 Support a coordinated regional approach to strategic and investment planning; monitoring, performance evaluation and reporting; weed risk assessment review; and weed emergency management preparation, response and recovery processes.
4.2 Adopt adaptive,	4.2.1 Develop the components of the Regional Business Planning Framework that underpins the implementation of this plan.
effective and collaborative planning and processes	4.2.2 Work with stakeholders to develop and update local implementation plans using best available standards, local knowledge, research and technology, as required.
Processor	4.2.3 Review and update existing Regional and Sub-regional weed risk assessments where and when required.
	4.2.4 Share information with other jurisdictions and regions on approach, progress and innovation with weed management.
4.3 Develop a regional invasive weed	4.3.1 Support the continuing development of standardised regional data (including weed mapping) capture, storage, record keeping and retrieval processes.
knowledge base and information system that supports state	4.3.2 Encourage wider use of the Biosecurity Information System to improve weed distribution and impacts data and management information.
standards	4.3.3 Ensure that weed information and research data are readily available to stakeholders for use in weed management and planning.
4.4 Develop consistent	4.4.1 Develop and implement indicators that assess the performance of this plan and progress towards achieving strategic outcomes.
systems for monitoring, evaluating and	4.4.2 Develop and implement standard local monitoring and reporting protocols that support region and state-wide needs.
reporting on the effectiveness of weed management	4.4.3 Use the information collected from research, local MERI programs and the Biosecurity Information System to inform an adaptive management approach to North Coast weed management projects, plans, programs, policies and reforms.

6. Implementation

This chapter covers how the plan will be implemented, including governance. It includes guiding principles for weed management planning and implementation, as well as identifying roles and responsibilities for stakeholders and customers in implementing this plan.

6.1 Regional Weed Committee

Collaboration and building capacity of land managers is central to the successful implementation of this plan. By working collaboratively and engaging with all sectors – public, private, non-profit, individuals and community groups – effective and lasting solutions to shared problems can go beyond what any sector can achieve on its own. The North Coast Regional Weed Committee and its member organisations will facilitate implementation of this plan with executive support from North Coast Local Land Services and overarching guidance from the local board.

In implementing the plan the committee will work with Local Land Services to:

- advise the State Weeds Committee on weed priorities and other strategic matters in the region and seek their advice relating to weed listings, cross jurisdictional and other matters
- liaise with neighbouring regional weed committees, especially with respect to any significant incursions and potential movement of priority weeds from one region to another
- promote weed policy, risk assessments, declarations, best practice and control outcomes to member organisations and the community
- oversee the implementation of the plan on a region-wide perspective, using committee expertise and best available knowledge, research and technology
- facilitate regional communication, education, training and awareness programs that promote plan outcomes
- promote effective co-ordination of weed management across agencies and tenure, including appropriate resource and information sharing between member organisations
- identify synergies from collaboration and opportunities for funding and priority project delivery
- identify information and research needs and appropriate collaborative actions
- oversee measurement and evaluation of weed control activities in the region to inform management actions and planning
- monitor, evaluate and report on outcomes of collaborative planning and delivery processes.

6.2 Guiding principles for implementation

The following principles will be used to guide weed management planning and implementation and are consistent with the weed reforms and leading practice:

- Effective stakeholder collaboration and shared responsibility are essential to effective weed management.
- Behavioural change and increasing community capacity are important to effective weed management.

- Prevention and early intervention are the most effective weed management tools.
- Causes of weed invasion and spread are managed wherever possible, not just the symptoms.
- The biology and ecological requirements of weeds, including mechanisms and pathways for spread are considered in weed management.
- Innovation in weed control and management is encouraged.
- Regular monitoring, evaluation and improvement are incorporated in weed management programs.
- Weed management is an integral part of land management. Land management practices and their timing are critical to the prevention and reduction in the spread and impact of weeds.
- Weeds are managed in a strategic and co-ordinated manner across the landscape.
 Assessing and managing weed risk at a landscape and multi species scale (where appropriate) can lead to significant efficiencies in use of resources and achievement of strategic outcomes.
- The best available science, expertise and tools are utilised in weed management decision making.

6.3 Processes supporting implementation

A range of plans and processes will support implementation of this plan as outlined in Box 6.1. North Coast Local Land Services will work with the committee in the development of these processes in the region.

A key element of this plan is collaborative and coordinated weed management across tenures. This will require policies, processes and procedures for collaborative planning and action to enable member organisations and key stakeholders to translate this plan into local area priorities, actions, collaboration and partnerships that integrate weed management across both tenures and stakeholders.

Box 6.1 Business plans and processes that support delivery of the plan.

- North Coast Regional Weed Committee coordination to ensure clear stakeholder roles and responsibilities and good governance. May also cover delivery of business planning components, including the review and update of weed risk assessments as required.
- Local implementation roles and responsibilities to ensure clear roles and responsibilities and consistency in the delivery of local weed management.
- Processes for integrating regional delivery and projects to ensure efficient and effective delivery.
- Compliance planning to support an integrated and consistent approach to meeting regulatory obligations across the region.
- High risk weed incursion planning to address surveillance and identification of new weed incursions and coordination of regional responses.
- Rapid response planning to address procedures, responsibilities and actions for response to a new incursion.
- Local Control Authority planning to ensure that compliance strategies, standards and service agreements are consistent with this plan and to provide a consistent policy and procedural framework for inspections and enforcement under the *Biosecurity Act 2015*.
- State Guidelines and best practice codes to support consistency in approach and the capacity to inform state-wide reporting.
- Communication and marketing to develop a strategic approach to communicating key messages and engaging partners, stakeholders and the broader community.
- Key performance indicator development to support assessment of this plan's performance measures.
- Monitoring, evaluation, reporting and improvement coordination to support consistent approaches that allow for reporting at local, regional and state scales.
- Research and development collaboration to support a collaborative approach to addressing research needs in the region.
- Investment planning to support an integrated approach to investment in priorities for weed management in the region.
- Procedures for review of weed listings in the plan. Responsibility for amendments to state determined priorities rest with NSW DPI and the State Weeds Committee. The committee will raise any identified issues with changes to listings for state determined priorities via the State Weeds Committee to ensure consistency and alignment.

Many of these plans and processes are already underway, but require regional weed committee endorsement or further collaboration between partners.

6.4 Delivery partners

Delivery partners have an interest in delivery of priority actions. This interest spans from being involved in refining priority actions, to further developing processes to address actions, through to participating in the delivery and enforcement of the plan. Broad roles and responsibilities are determined, and responsibilities for specific actions will be agreed upon. As implementation progresses and opportunities for new partnerships emerge, new partners may also become involved.

Resourcing of weed management is unpredictable and will fluctuate, and partners also differ in their capacity to deliver weed management resources. Commitments from partners improve community confidence in action implementation. It is recognised that commitments and capacity may be contingent upon availability of resources at a given point in time.

6.4.1 Lead organisations

Lead organisations will take responsibility for the delivery of actions and performance measures within this plan and will manage and coordinate implementation of components of the plan and associated programs. This will ensure clear responsibilities for plan implementation and will be agreed upon in the development of relevant business plans and policies. Partners will take primary responsibility within their respective areas in the delivery of actions and performance measures. Other government agencies, industry and community will also play a role in implementing this plan to varying degrees.

6.4.2 Roles and responsibilities

A wide range of stakeholders and customers are involved in weed management in the region. This plan recognises the roles of all levels of government, industry, community and community organisations. This plan aims to consolidate these efforts through better coordination and communication between organisations and individuals in the region.

Commonwealth government

The Commonwealth government has a role in preventing new weed incursions at national borders (quarantine); in education, research and development; in funding, and national legislation. National agreements outline the roles and responsibilities of government and industry in responding to emergency plant, pest and disease incidents, and detail how those responses will be funded. These agreements include the Intergovernmental Agreement on Biosecurity, Emergency Plant Pest Response Deed and the National Environmental Biosecurity Response Agreement.

State government

The NSW State government leads the development of policies, strategies and legislation that promote a comprehensive and responsive weed biosecurity system across NSW. The Department of Primary Industries (DPI) is the lead agency for weed management within the NSW Government, with support from the Office of Environment and Heritage (OEH) in relation to environmental weed management.

Key roles and responsibilities for these two agencies include:

- administration of key legislation relating to priority weeds (*Biosecurity Act 2015* DPI, and *Biodiversity Conservation Act 2016* OEH)
- increasing awareness of weeds in industry, key stakeholders and the community
- leading and coordinating prevention, preparedness, response and recovery for weed emergencies
- developing non-regulatory approaches and incentives to underpin weed management
- coordinating diagnostic, surveillance, tracing and monitoring systems for priority species
- conducting weed research in priority areas and collaborating with universities and research providers on priority research initiatives and pest and weed identification
- coordinating the delivery of leading practice solutions for weed managers across the state.

NSW Department of Primary Industries

DPI leads and coordinates the prevention, preparedness, response and recovery for weed emergencies. This agency also develops and maintains regulatory mechanisms that support weed programs.

Office of Environment and Heritage and National Parks and Wildlife Service

The Office of Environment and Heritage is responsible for managing more than 850 national parks and reserves (see further below). OEH also leads state-wide initiatives to reduce the impacts of invasive species on biodiversity. The Saving our Species program provides for the conservation of threatened taxa across all land tenures under the *Biodiversity Conservation Act* 2016.

The National Parks and Wildlife Service (NPWS – part of OEH) is responsible for managing over 7 million hectares of land in NSW. As a public land manager, NPWS works with a range of stakeholders to proactively and strategically manage weeds. NPWS is guided by Regional Pest Management Strategies that identify weed management priorities and programs for implementation on all lands managed by NPWS. The strategies aim to minimise the adverse impacts of pests and weeds on biodiversity, protected areas and the community by identifying the highest priority programs and delivering measurable outcomes. The strategies also demonstrate NPWS's responsibilities in delivering the NSW Biosecurity Strategy 2013-2021.

Department of Industry - Lands

The Department of Industry - Lands is a business unit of the NSW Department of Industry and administers and manages Crown land, which makes up approximately half the state. It develops funds and implements invasive species management strategies on land under its direct control and supports activities undertaken by community groups, reserve trusts, lessees and others that manage land on its behalf, including Councils.

Department of Industry - Lands incorporates a multi-pronged risk-based approach to managing invasive species on Crown land, including education, extension, project implementation, audit and compliance activities. Department of Industry - Lands is always keen to work in partnership with other stakeholders and agencies to ensure optimal outcomes in the management of invasive species on Crown land.

Local government

Local government plays a significant role in biosecurity, particularly in weed management. It has an important role to play in engaging local communities, managing public lands and assisting with emergency management. Local government also makes a significant investment in local and regional weed management. Weed control functions of local government are undertaken by Local Control Authorities, including local government and county councils (formed by adjoining councils to pool resources for weed control or other specified functions). Local Control Authorities have a major role and responsibility for the implementation of this plan and for priority weed control including:

- enforcing legislated weed management obligations on private and public land
- delivering components of the NSW Weeds Action Program throughout their area
- conducting weed inspections on private and public land
- controlling weeds on lands managed by local government
- reporting and mapping weed incidence across the state
- input into weed strategy and policy
- providing education, training and resources for both the public and for staff.

Other managers of state owned land and linear reserves

A number of organisations and government agencies manage state owned land allocated for specific purposes. These include land under the care and control of Council and public roads vested in Council (Local Government), travelling stock reserves (TSRs, managed by Local Land Services), state forest (Forestry Corporation of NSW, a state owned corporation), state infrastructure such as freeways (Roads and Maritime Services), rail corridors (John Holland Rail Pty Ltd), corridors for energy infrastructure and Water NSW. All land managers have an important role in the management of weeds in the region, including the development and implementation of management strategies and the education of the community and other stakeholders.

Aboriginal land managers (Local Aboriginal Land Councils)

Local Aboriginal communities have a similar role to other community organisations in managing weeds on their land, but have additional cultural factors which influence land management. Aboriginal traditional owners have obligations under traditional law and custom to care for Country. This may result in Aboriginal people having priorities for weed management to address threats to cultural sites, indigenous plants and animals or other important cultural resources (OEH, 2016).

Throughout the region there are a number of different types of land ownership and management by Aboriginal people. Indigenous Land Use Agreements help clarify obligations of public land managers where Native Title is recognised over the land they manage (OEH, 2016).

Industry

Industry roles in weed management include:

- implementing and developing industry standards, guidelines and codes of practice
- contributing to research programs in priority areas
- participation in biosecurity response agreements and cost-sharing arrangements
- managing weeds on land and water used for production
- managing risks when trading in potential or known weed species used for, or held by, nurseries, pet shops and aquaria (water weeds), collectors, agriculture, horticulture, aquaculture and biofuels etc.
- preventing the establishment of weeds, through movement of goods, produce and equipment.

Community groups, volunteers and individuals

Community groups and volunteers play an important role in the management of weeds in the region by enlisting support and providing on-ground weed control. This includes non-government organisations such as Landcare, Conservation Volunteers, Greening Australia and Bushcare. Activities undertaken by these groups include weed removal and monitoring activities, bush regeneration, biodiversity conservation projects and rehabilitation of aquatic habitats on private and public lands. Building on this foundation is essential in sharing responsibility for weed management.

The contribution made by these groups is significant. As an example, the Landcare network in the region includes 11 local Landcare networks, 275 community groups and 5,000 individual members, all actively involved in weed management on private and public land.

Individual community members also have an important role to play in helping to minimise the impacts of weeds in the region. The community provides much needed "eyes and ears" to detect and report new incursions and support eradication. Community participation also provides crucial support to the actions of responsible authorities, land managers and external funding programs. Private land owners and occupiers play an important role in the ongoing management of established weeds on their own land and in collaboration with their neighbours and the surrounding community.

6.5 Investment

The development of the business planning components identified in section 6.3 should ultimately ensure that investment in North Coast weed management is effective, efficient and delivers desired outcomes. This plan supports investment planning that provides both short and long term outcomes that reflect achievement of our goals - shared responsibility, sustainable landscapes and coordinated and innovative delivery.

Stakeholders will no doubt continue to deliver their programs according to investor preferences. This plan will support the transitioning of existing investment in local weed management to achieve this plan's goals.

The Regional Weed Committee will play a critical role in sourcing investment, brokering partnerships, and facilitating coordination of stakeholder investment to ensure that the region's weed biosecurity needs are met. The committee will provide advice on options for tailoring both new and existing stream of investment so that they best fit the region's new management approaches.

The committee will also facilitate exploration of opportunities for integrating the existing efforts of stakeholders, along with options for stakeholders to work in collaboration on new initiatives. This will be fundamental to implementing this plan's tenure neutral approach, and to meeting the region's General Biosecurity Duty. The proactive development of flexible, integrated and effective projects that meet the region's priorities will ensure that the region is "investment ready".

Clear definition of partner roles and responsibilities will be critical to ensuring that stakeholders can continue to satisfy their individual investors, whilst also delivering results that complement and value add to a greater set of outcomes (e.g. coordinated Local Control Authority compliance, high risk incursion and rapid response planning will contribute to broader regional weed biosecurity). The committee has a critical role in this regard.

The committee will work with stakeholders to keep a watching brief on national, state and regional potential investment schemes and opportunities for collaboration and cross regional approaches. Cross regional networking will be critical to facilitating the leveraging of funding from other sectors.

6.6 Community engagement

This plan supports the development of long term approaches to maintaining and improving community capacity to share responsibility for local weed management. Significant effort will be put into letting all land managers know about the plan, how weed management in the region has changed under the new biosecurity legislation, and the implications for how they manage weeds.

Stakeholders will continue to engage and work with communities on their weed management programs. Stakeholder approaches to engaging community will need to accommodate the changes in weed management approach outlined in this plan.

The Regional Weed Committee will drive an inclusive approach to community engagement. A communication and marketing strategy will be developed to identify community and stakeholder engagement needs, their sphere of influence, their roles in weed management, and the best ways to approach and involve them in weed management. Clear and concise information products will be developed for specific sectors of the community (e.g. rural landholders, alternate life stylers) and at local and sub-regional scales to assist community understand their obligations. These information products will be developed after the plan is approved.

The plan supports targeted capacity building programs that focus on priority species. Communities differ in their capacity to be involved in weed management, and so programs will be tailored to meet local knowledge, skills, networks and resourcing needs. The Regional Weed Committee will also assist with the identification of need for and coordination of capacity building programs in priority areas.

The Regional Weed Committee will support stakeholder networks to understand and promote changes in weed management including the requirements of the General Biosecurity Duty, the tenure neutral approach, and the implications for their customers.

7. Measuring success and continuous improvement

Measuring and reporting on progress against key performance indicators is particularly important, as are practices that promote reflection and learning to inform decision making. This section covers how we intend to address and document to what extent goals have been achieved, as well as evaluating performance, and reviewing our activity and focus.

7.1 Measuring performance

In common with other agencies and businesses, North Coast Local Land Services has a responsibility to demonstrate to its customers, investors and stakeholders that its strategies are sound and effective. Underpinning all strategies, programs and systems will be a requirement to monitor, evaluate and report on performance.

The committee will work with North Coast Local Land Services to establish a monitoring, reporting, evaluation and improvement process (MERI) that is consistent with the North Coast Local Land Services and Natural Resources Commission standards. This MERI framework will facilitate the review of results against planned immediate, intermediate and long-term outcomes. It will also enable a systematic and objective assessment of the effectiveness and efficiency of actions, policies, projects and programs.

This plan depends on collaboration and sound partnerships for strategic weed planning, implementation and reporting. The development of measures to track the establishment of a workable collaborative approach is important to support tenure neutral implementation. The committee will also track resources secured and aligned for implementing the plan.

7.1.1 Performance indicators and reporting

Standardised MERI systems will be used to compile and report on the efforts and achievements of stakeholders in contributing to this plan. Achieving consistency will require the use of:

- key performance indicators
- standard local monitoring and reporting protocols that support region and state-wide needs
- evaluation by partners and the committee to guide improvement in weed management projects, programs and policies.

Performance indicators will be developed to enable tracking of the progressive impacts of interventions and investment in priorities and will relate to the goals for this plan as outlined below.

Shared responsibility (Goal 1)

- Adoption of leading practice (by sector)
- Awareness and education programs delivered with uptake indicated by community involvement in weed control
- Community capacity and capability to undertake weed biosecurity (knowledge, skills, barriers addressed, networks, resources) increased.

Sustainable landscapes (Goals 2 and 3)

- · New incursions of high priority weeds avoided
- New incursions of high priority weeds eradicated or destroyed
- · Spread of high priority weeds prevented
- Impacts of widespread weeds on high priority assets reduced
- Sources of weed invasion identified and managed
- Weed impacts on natural ecosystems reduced or avoided.
- Weed risks or impacts to production / industries reduced.

Collaborative leadership and innovation (Goal 4)

• Percentage of supporting plans and processes completed (see section 6.3).

Available metrics can be used in the short term based on existing knowledge, while we refine metrics to provide more accurate measures of progress. A wide range of metrics are in use by committee member organisations, stakeholders and through the Weeds Action Program 2015-2020 and other programs. These will take time to collate and assess. Agreed metrics will be considered by the committee in consultation with the State Weeds Committee.

Review and reporting on performance against this plan will occur annually. A component of this review will be an evaluation of our regional contribution to the new biosecurity reforms and their influence on weed management on the North Coast.

The approach to MERI must meet the needs of customers, investors and stakeholders and facilitate reporting on investment outcomes at a range of scales – local, sub-regional, and regional. Standardised reporting should support:

- individual stakeholder needs for local level reporting
- state level reporting and reporting to investors
- annual reporting on implementation and progress of this plan and progress.

7.1.2 Information management

Data collection and management is crucial to the adoption of standardised approaches for the region, and for the implementation of MERI procedures.

The committee will work with Local Land Services to oversee the coordinated development of systems for:

- adopting standard regional data (including weed mapping) capture, storage, record keeping and retrieval protocols
- collecting, synthesising and storing data in a form useful for multiple stakeholders
- contributing weed data and management information to the Biosecurity Information System
- contributing to local, regional and state-wide weed information and knowledge platforms that support research capacity and capability
- ensuring that weed information and data are readily available to stakeholders for use in research, updating management plans and reporting.

The data and information collected will be integrated into state-wide data sets and be accessible through open government wherever possible. It will contribute to whole-of-NSW reporting on the state and trend of asset conditions including the State of the Environment report and reporting against objectives for the Invasive Species Plan.

7.1.3 Strengthening science and research capacity

Research plays an important role in evaluating and informing practice, supporting innovation and informing future directions. Engaging proactively with the research community is fundamental to improving the region's weed management planning and practice. Through links with the SWC, the regional committee will contribute to and facilitate:

- engagement with weed science researchers, community, the Aboriginal community, government, and industry to identify current knowledge gaps and to document weed species research priorities
- stronger partnerships and active participation in industry, government and university collaboration for weeds research
- new and updated regional and sub-regional weed risk assessments
- development of new technologies and innovative approaches to the management of weed risks
- investigation of biological control programs for priority weeds
- a better understanding in the region of the impacts of a changing climate on weed behaviour and the interplay between natural systems and weeds
- incorporation of research findings into weed management decision-making (this is part of adaptive management).

7.2 Adaptive management and continuous improvement

The North Coast Regional Weed Committee will foster adaptive management and continual improvement in weed management. Adaptive management is used in changing environments, where optimal management procedures have not been determined. It is based on a continuous improvement cycle: "plan-do-learn". This is underpinned by monitoring, reporting and evaluation processes, and the subsequent improvement of planning and delivery based on lessons learned.

Local Land Services applies learning at the following scales to drive continuous improvement:

- project (where learning focuses on improving project design and practices)
- program (where learning focuses on improving strategies, targets and assumptions)
- organisational (where learning focuses on improving governance and systems).

This approach is outlined in the North Coast Local Land Services Local Strategic Plan and will provide the basis of MERI for this plan.

7.3 Plan review

A mid-term review of this plan will be undertaken at year 3 (2020) and a full review will be undertaken nearing the end of the five year term for this plan (2022). Weed risk assessments will be updated as needed from time to time and a particular focus at year 3 will be on evaluation and review of weed lists in this plan (Appendix 1, 2 and 3).

8. Abbreviations

BIS Biosecurity Information System

DPI NSW Department of Primary Industries

GBD General Biosecurity Duty

km kilometre

LCA Local Control Authority

LLS Local Land Services

MERI Monitoring, evaluation, reporting and

improvement

NPWS NSW National Parks and Wildlife Service

NRC Natural Resources Commission

OEH The NSW Office of Environment and Heritage
RSWMP Regional Strategic Weed Management Plan

RWC Regional Weed Committee

SWC State Weeds Committee

TSR Travelling stock reserve

WAP NSW Weeds Action Program

9. Glossary

Aboriginal cultural heritage: Aboriginal cultural heritage consists of places and items that are of significance to Aboriginal people because of their traditions, observances, lore, customs, beliefs and history. It provides evidence of the lives and existence of Aboriginal people before European settlement through to the present. Aboriginal cultural heritage is dynamic and may comprise physical (tangible) or non-physical (intangible) elements.

Adaptive management: A management approach based on the science of learning by doing. It involves testing the response of a system then applying this understanding to future decisions.

Asset protection: Preventing the spread of weed species to high value assets of economic, environmental and/or social value or reducing the impact on the high value asset for weeds already present.

Best practice: A technique or methodology that, through experience and research, has proven to reliably lead to a desired result. Also see leading practice.

Biodiversity: The variety of all life forms: the different species of plants, animals, fungi, bacteria and other micro- organisms, the genes they contain and the ecosystems (the variety of habitats, biotic communities and ecological processes) of which they form a part.

Biosecurity: Protecting the economy, environment and community from the negative impacts of pests, diseases and weeds.

Collaboration: Working together to develop an understanding of all issues and interests to work out alternatives and identify preferred solutions for joint decision making.

Containment: Preventing the spread of weed species beyond a predefined area and reducing the impact where it occurs.

Country: A term used by Aboriginal people to refer to the land to which they have a traditional attachment to.

Customer: Any land manager within the state or region, irrespective of whether they are private or public land managers, ratepayers or non-ratepayers.

Emergency Management: Management related to preparedness, response and recovery for actual or imminent animal pest and disease and plant pest and disease emergencies, natural disasters and other emergencies impacting on primary production or animal health and safety.

Eradication: To permanently remove a weed species and its propagules from an area such that there is little or no likelihood of re-invasion occurring.

Governance: The framework of rules, structures, interactions and practices by which the North Coast Local Land Services Board exercises power, responsibility and decision making to ensure accountability, fairness, and transparency in relationship to the North Coast region's customers, stakeholders and investors.

General Biosecurity Duty: Under the *Biosecurity Act 2015* a General Biosecurity Duty (GBD) applies to all weed species that present a biosecurity risk. For weeds, the General Biosecurity Duty means that any person dealing with plant matter who knows or ought reasonably to know the biosecurity risk posed by that dealing, must take measures to prevent, minimise or eliminate the biosecurity risk (as far as is reasonably practicable). 'Dealing' has a broad definition in the act. Plant matter includes plants, parts of plants and seeds.

Habitat: A place suitable for survival and/or reproduction of a particular plant or animal.

Investor: Organisations and individuals who invest in Local Land Services and leverage outcomes from this investment.

Landscape: Any section of land or coast and its natural features, including rivers and other water bodies. Represents the overlay of the variety and arrangement of physical landforms (e.g. rivers, escarpment, rocky reefs), communities of people (e.g. Aboriginal, rural) and land uses (e.g. urban, conservation, agricultural).

Leading practice: Currently accepted best practice.

Prevention: To prevent a weed species arriving and establishing in an area.

Stakeholder: Organisations that collaborate and partner with Local Land Services directly to support customer service delivery.

Travelling stock reserve:

- route or camping place reserved for travelling stock route or camping place under the Crown Lands Act 1989
- reserve for travelling stock, water reserve, reserve for access or crossing (where the
 reserve is for the purpose of providing travelling stock with access to or a crossing of
 water, whether expressly notified for that purpose or not), or
- stock watering place.

Weed: Plants (foreign to the Region) that are unwanted in a given situation and which usually have detectable negative economic, environmental or social impacts.

Weeds Action Program: NSW Government funding program supporting delivery of priority weed investment to local government, Local Land Services and local control authorities.

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Appendix 1: Priority weeds for North Coast Local Land Services Region

This appendix covers State level determined priority weed species (A1.1) as set by NSW DPI and regionally determined priorities (A1.2) as determined by the rigorous weed prioritisation and expert review process outlined in Section 4.2.

The *Biosecurity Act 2015* and regulations provide specific legal requirements for state level priority weeds (A1.1) and high risk activities. For each state level priority weed, the management objective, and specific requirements for its management (as stated in the *Biosecurity Act 2015* and regulations) is included. These specific requirements include Prohibited Matter, Biosecurity Zones, Biosecurity Control Orders and Mandatory Measures.

A1.2 identifies regionally prioritised weeds and outcomes to demonstrate compliance with the General Biosecurity Duty. Recommended measures for these weeds are provided in the NSW DPI web and mobile based application WeedWise, as practical advice on achieving these outcomes.

A1.1 State level determined priority weeds

State Priority Weed Objective – PREVENTION:	
The following weeds are currently not found in the	The following weeds are currently not found in the state, pose significant biosecurity risk and prevention is a reasonably practical objective.
Species	Biosecurity Act requirements & Strategic Response in the region
All species of vascular plant (Tracheophyta)	Mandatory Measure (Division 8, Clause 34) Duty to notify of importation of plants into the State: (1) A person must not import into the state a species of vascular plant (Tracheophyta) into the State if the species is not currently present in the State unless the person has, at least 20 working days before the plant is imported into the State, notified the species of plant and its proposed location within the State. (2) The notification is to be given to the Secretary and is to be given in accordance with Part 6 (3) A species of plant is taken not to be present in the State if the National Herbarium of New
	South Wales does not show it as being present in the State. Note see http://plantnet.rbgsyd.nsw.gov.au/ Regional Strategic Response: Increased priority placed on the identification and mapping of unrecorded weed species, including the collection and submission of specimens to the Plant Information Network System of the Royal Botanic Gardens.
Gamba grass - Andropogon gayanus	
Pond apple - <i>Annona glabra</i>	
Bridal veil creeper - Asparagus declinatus	
kochia - Bassia scoparia (excluding subsp. trichophylla)	
Spotted knapweed - Centaurea stoebe subsp. micranthos	
Black knapweed - Centaurea xmoncktonii	Prohibited Matter (Part 4, Biosecurity Act, 2015): A person who deals with any biosecurity
Siam weed - Chromolaena odorata	matter that is Prohibited Matter throughout the State is guilty of an offence.
Koster's curse - Clidemia hirta	Regional Strategic Response:
Rubber vine - Cryptostegia grandiflora	 Implement quarantine and/or hygiene protocols
Anchored water hyacinth - Eichhornia azurea	 Undertake high risk sites & pathways analysis to identify potential introduction areas and
Hawkweed - <i>Hieracium</i> spp (all species)	preventative options Laws a collaborative grain groups are tools
Hydrocotyl/water pennywort - <i>Hydrocotyle</i> ranunculoides	riave a collaborative rapid response protocol ili piace.
Lagarosiphon <i>- Lagarosiphon major</i>	
Frogbit / spongeplant - Limnobium spp. (all species)	
Yellow burrhead - Limnocharis flava	
Miconia - Miconia spp. (all species)	
Mikania vine - <i>Mikania micrantha</i>	

State Priority Weed Objective – PREVENTION:	
The following weeds are currently not found	The following weeds are currently not found in the state, pose significant biosecurity risk and prevention is a reasonably practical objective.
Species	Relevant Legislation & Strategic Response
Mimosa - <i>Mimosa pigra</i>	
Water milfoil - Myriophyllum spicatum	
Mexican feather grass - Nassella tenuissima (syn. Stipa tenuissima)	
Broomrape - <i>Orobanche</i> spp. (all species except the native <i>O. cernua</i> var. <i>australiana</i> and <i>O. minor</i>)	Prohibited Matter (Part 4, Biosecurity Act, 2015): A person who deals with any biosecurity matter that is Prohibited Matter throughout the State is guilty of an offence. Regional Strategic Response:
Water soldier - Stratiotes aloides	 Implement quarantine and/or hygiene protocols
Witchweed - Striga spp. (except the native S. parviflora)	• Undertake high risk sites & pathways analysis to identify potential introduction areas and preventative options
Water caltrop - Trapa spp. (all species)	• Have a collaborative rapid response protocol in place.
Karoo acacia - Vachellia karroo (syn. Acacia karroo)	
Prickly acacia - Vachellia nilotica (syn. Acacia nilotica)	
Parthenium weed - <i>Parthenium</i> hysterophorus	Prohibited Matter (Part 4, Biosecurity Act, 2015): A person who deals with any biosecurity matter that is Prohibited Matter throughout the State is guilty of an offence. Mandatory Measure (Division 8, Clause 35, Biosecurity Regulation, 2017) - Parthenium weed carriers - machinery and equipment (1) This clause applies to the following equipment: (a) grain harvesters (including the comb or front) (b) comb trailers (including the comb or front) (c) bins used for holding grain during harvest operations (d) augers or similar equipment used for moving grain (e) vehicles used for transporting grain harvesters (f) vehicles used as support vehicles with grain harvesters and that have been driven in paddocks during harvest operations (g) mineral exploration drilling rigs and vehicles used for transporting those rigs.
	applies.

Pursuant to section 62(1)(b) of the Act, a person who deals with a carrier of Parkinsonia in the Parkinsonia Control Zone, in circumstances where the person knows or ought reasonably to know of the presence of Parkinsonia on the land or in or on the (c) The person who deals with a carrier of Parkinsonia does not need to comply with (b) above if they know that notification of the infestation on the land has already been given to the local control authority for the area. (e) The owner or occupier does not need to comply with (a) above if they know that notification of the infestation on the land has already been given to the local control authority for the area. The following weeds are present in limited distribution and abundance in some parts of the state. Elimination of the biosecurity risk posed by these Mandatory Measure (Division 8, Clause 33, Biosecurity Regulation 2017): A person must not import into the State or sell. (a) notify the local control authority for the area if the Parkinsonia is part of a new infestation of Parkinsonia on the land: Pursuant to section 62(1)(b) of the Act, an owner or occupier of land in the Parkinsonia Control Zone on which there is (2) the location of the Parkinsonia, including the property identification code for the land (if this is known); and (2) the location of the Parkinsonia, including the property identification code for the land (if this is known); and (a) ensure that Parkinsonia (including any seed and propagules) is not moved from the land; and (3) any other information reasonably requested by the local control authority; and i) as soon as practicable after becoming aware of the presence of Parkinsonia; iv) any other information reasonably requested by the local control authority, i) as soon as practicable after becoming aware of the new infestation; (c) ensure that subsequent generations of Parkinsonia are destroyed; and Biosecurity Act requirements & Strategic Response in the region (b) immediately destroy all Parkinsonia on the land; and (1) the person's full name and contact number; (1) the person's full name and contact number; Control measures for owners and occupiers of land Control measures for persons dealing with carriers (b) immediately notify the local control authority: Biosecurity (Parkinsonia) Control Order 2017): (d) the land is kept free of Parkinsonia. iii) giving the following: iii) giving the following: ii) verbally or in writing; ii) verbally or in writing; State Priority Weed Objective – ERADICATION: weeds is a reasonably practical objective. Parkinsonia must: carrier, must: Parkinsonia aculeata **Parkinsonia**

	te. Elimination of the biosecurity risk posed by thes	
ERADICATION:	in limited distribution and abundance in some parts of the st	jective.
State Priority Weed Objective – ER	The following weeds are present in limited distril	weeds is a reasonably practical objective.
State Pr	The foll	weeds il

Biosecurity (Tropical Soda Apple) Control Order 2017.

Biosecurity Act requirements & Strategic Response in the region

Control measures for owners and occupiers of land

Pursuant to section 62(1)(b) of the Act, an owner or occupier of land in the Tropical Soda Apple Control Zone on which there is **Fropical Soda Apple must:**

(a) notify the local control authority for the area if the Tropical Soda Apple is part of a new infestation of Tropical Soda Apple on

- i) as soon as practicable after becoming aware of the new infestation;
 - ii) verbally or in writing;
- iii) giving the following:
- (1) the person's full name and contact number;

(2)the location of the Tropical Soda Apple, including the property identification code for the land (if this is known); and

(3)any other information reasonably requested by the local control authority; and

c)ensure that subsequent generations of Tropical Soda Apple are destroyed; and (b)destroy all Tropical Soda Apple on the land, including fruit; and

(d)that the land is kept free of Tropical Soda Apple.

(e)The owner or occupier does not need to comply with (a) above if they know that notification of the infestation on the land has already been given to the local control authority for the area.

Control measures for persons dealing with carriers

Tropical soda apple Solanum viarum

Pursuant to section 62(1)(b) of the Act, a person who deals with a carrier of Tropical Soda Apple in the Tropical Soda Apple Control Zone, in circumstances where the person knows or ought reasonably to know of the presence of Tropical Soda Apple on the land or in or on the carrier, must:

(a) ensure that Tropical Soda Apple (including any seed and propagules) is not moved from the land; and

(b) immediately notify the local control authority for the area:

) as soon as practicable after becoming aware of the presence of Tropical Soda Apple;

- ii) verbally or in writing; iii) giving the following:
- (1) the person's full name and contact number;
- (2) the location of the Tropical Soda Apple, including the property identification code for the land (if this is known); and
 - iv) any other information reasonably requested by the local control authority.

(c) The person who deals with a carrier of Tropical Soda Apple does not need to comply with (b) above if they know that notification of the infestation on the land has already been given to the local control authority for the area.

Regional Strategic Response:

- Develop a region-wide coordinated campaign for collaborative management
- High level analysis of pathways to identify potential introduction areas and preventative options Detailed surveillance and mapping to locate all infestations
- Implement quarantine and/or hygiene protocols

 - Monitor progress towards eradication.

State Priority Weed Objective – CONTAINMENT:

These weeds are widely distributed in some parts of the state. While broad scale elimination is not practicable, minimisation of the biosecurity risk bosed by these weeds is reasonably practicable.

Biosecurity Act requirements & Strategic Response in the region Land area where requirements apply

Alligator weed - Alternanthera philoxeroides

established for all land within the state the alligator weed biosecurity zone, is except land in the following regions: Biosecurity Zone, to be known as

(a) Greater Sydney,(b) Hunter (but only in respect of land in the local government area of City of Lake Macquarie, City of Maitland, City of Newcastle or Port Stephens).

Biosecurity Regulation 2017 - Part 5, Division 2 (Alligator weed biosecurity zone) An owner or occupier of land in the alligator weed biosecurity zone on which there

is the weed *Alternanthera philoxeroides* (Alligator Weed) must:

(a) if the weed is part of a new infestation of the weed on the land, notify the local (b) eradicate the weed or, if that is not practicable, destroy as much of the weed as control authority for the land as soon as practicable in accordance with Part 6, and is practicable and suppress the spread of any remaining weed.

Mandatory Measure (Division 8, Clause 33, Biosecurity Regulation 2017): A person must not move, import into the State or sell.

Regional Strategic Response:

- Develop a region-wide coordinated campaign for collaborative management
 - Detailed surveillance and mapping to locate all infestations
- High level analysis of pathways to identify potential introduction areas and preventative options
 - Implement quarantine and/or hygiene protocols
 Monitor progress towards eradication.

Bitou bush - Chrysanthemoides monilifera subsp. rotunda

into the State or sell. established for all land within the State except land within 10 kilometres of the mean high water mark of the Pacific north and Point Perpendicular in the A Biosecurity Zone, to be known as Ocean between Cape Byron in the the bitou bush biosecurity zone, is

Biosecurity Regulation 2017 - Part 5, Division 3 (Bitou bush biosecurity zone)

An owner or occupier of land in the bitou bush biosecurity zone on which there is the weed Chrysanthemoides monilifera subsp. rotunda (Bitou Bush) must:

(a) if the weed is part of a new infestation of the weed on the land, notify the local (b) eradicate the weed, or if that is not practicable, destroy as much of the weed as control authority for the land as soon as practicable in accordance with Part 6, and

Mandatory Measure (Division 8, Clause 33, Biosecurity Regulation 2017): A person must not move, import is practicable and suppress the spread of any remaining weed.

Regional Strategic Response:

Outside the Biosecurity Zone:

- Develop a region-wide coordinated campaign for collaborative management
 - Identification of key sites/assets in the geographic area
- Species managed in accordance with published weed management plans.

Within the Biosecurity Zone:

Detailed surveillance and mapping to locate all infestations

- High level pathways analysis to identify potential introduction areas and preventative options
 - Implement quarantine and/or hygiene protocols
 - Monitor progress towards eradication.

State Priority Weed Objective - CONTAINMENT:

These weeds are widely distributed in some parts of the state. While broad scale elimination is not practicable, minimisation of the biosecurity risk posed by these weeds is reasonably practicable.

Land area where requirements apply

Biosecurity Act requirements & Strategic Response in the region

Water hyacinth Eichhornia crassipes

established for all land within the State the water hyacinth biosecurity zone, is except land in the following regions: (a) Greater Sydney or North Coast, A Biosecurity Zone, to be known as

government area of Inverell, Moree Plains or Tenterfield), those regions that is in the local (b) North West or Northern Tablelands (but only land in

government area of City of Cessnock, City of Lake Macquarie, Mid-Coast, City of Maitland or Port Stephens), (c) Hunter (but only land in that region that is in the local

Shoalhaven or City of Wollongong) iama, City of Shellharbour, City of government area of Eurobodalla, Kiama, City of Shellharbour, City o (d) South East (but only land in that region that is in the local

Biosecurity Regulation 2017 - Part 5, Division 4 (Water hyacinth biosecurity zone)

An owner or occupier of land in the water hyacinth biosecurity zone on which there is the weed *Eichhornia crassipes* (water hyacinth) must:

(a) if the weed is part of a new infestation of the weed on the land, notify the local control authority for the land as soon as practicable in accordance with Part 6, and

(b) eradicate the weed, or if that is not practicable, destroy as much of the weed as is practicable and suppress the spread of any remaining weed.

Mandatory Measure (Division 8, Clause 33, Biosecurity Regulation 2017): A person must not move, import into the State or sell.

Regional Strategic Response:

- Develop a region-wide coordinated campaign for collaborative management
 - Identification of key sites/assets in the geographic area
- Species managed in accordance with published weed management plan.

State Priority Weed Objective – ASSET PROTECTION: These weeds are their spread should be minimised to protect priority assets.	ese weeds are widely distributed in some areas of the State. As Weeds of National Significance, ets.
Species	Biosecurity Act requirements & Strategic Response in the region
Madeira vine - Anredera cordifolia	
Asparagus weeds - Asparagus aethiopicus, A. africanus, A.asparagoides# including the Western Cape form, A. plumosus, A. scandens	
Cabomba - <i>Cabomba caroliniana</i> #	
Scotch broom - Cytisus scoparius subsp. scoparius#	
Cat's claw creeper - Dolichandra unguis-cati	
Cape broom – Genista monspessulana#	
Olive hymenachne – <i>Hymenachne amplexicaulis#</i>	
Bellyache bush - Jatropha gossypiifolia	
Lantana - <i>Lantana camara</i>	
African boxthorn - Lycium ferocissimum	Mandatory Measure (Division 8, Clause 33, Biosecurity Regulation 2017): A
Chilean needle grass - <i>Nassella neesiana</i>	Regional Strategic Response – where required:
Serrated tussock - Nassella trichotoma	• Develop region-wide coordinated campaigns for collaborative management
Opuntia - <i>Opuntia spp., Cylindropuntia spp., Austrocylindropuntia spp.</i> (Excludes <i>O. ficus- indica</i>) (opuntioid cacti)	 Identification of regional containment zones where required Identification of key sites/assets in the geographic area
Mesquite - Prosopis spp.	 Species managed in accordance with published weed management plan.
Blackberry - Rubus fruticosus agg. (Blackberry except the varietals Chester Thornless, Dirksen Thornless, Loch Ness, Silvan, Black Satin, Murrindindi, Smooth Stem, Thornfree and Chehalem)	
Sagittaria - Sa <i>gittaria platyphylla</i>	
Willows-Salix spp. # (excludes S.babylonica, S.X calodendron & S. x reichardtiji)	
Salvinia - S <i>alvinia molesta</i>	
Fireweed - Senecio madagascariensis	
Silver-leaf nightshade - Solanum elaeagnifolium	
Athel pine - Tamarix aphylla	
Gorse - Ulex europaeus	
#also in Appendix 1.2	

A1.2 North Coast LLS Regional priority weeds

Regional Priority Weed Objective – Preven ION:	
The following weeds are currently not found in the region, pose significant biosecurity risk and prevention of the biosecurity risk posed by these weeds is a reasonably practical objective.	curity risk and prevention of the biosecurity risk posed by these weeds
Pink pampas grass - Cortaderia jubata	
Kei apple <i>- Dovyalis kaffra</i>	
Sea spurge <i>- Euphorbia paralias</i>	
Ludwigia - <i>Ludwigia peruviana</i>	
Water mimosa - Neptunia oleracea and N. plena	
Skunk vine - Paederia foetida	
Chinese knotweed - Persicaria chinensis	
White trumpet vine - Pithecoctenium crucigerum	
American ratstail grass - Sporobolus jacquemontii	
Outcomes to demonstrate compliance with the GBD	Strategic response in the region
 The plant is eradicated from the land and the land is kept free of the plant Land managers mitigate the risk of the plant being introduced to their land The plant or parts of the plant are not traded, carried, grown or released into the environment Local Control Authority is notified if the plant is found on the land 	 Implement quarantine and/or hygiene protocols Undertake high risk sites & pathways analysis to identify potential introduction areas and preventative options Have a collaborative rapid response protocol in place

Regional Priority Weed Objective – ERADICATION: The following weeds are present in limited distribution and abundance in the North Coast region. Elimination of the biosecurity risk posed by these weeds is a reasonably practical objective.	sent in limited distribution and abundance in the North Coast region. I objective.
Outcomes to demonstrate compliance with the GBD	Strategic response in the region
Shoebutton ardisia - Ardisia elliptica	
 The plant is eradicated from the land and the land is kept free of the plant Land managers mitigate the risk of the plant being introduced to their land The plant or parts of the plant are not traded, carried, grown or released into the environment 	 Detailed surveillance and mapping to locate all infestations High level pathways analysis to identify potential introduction areas and preventative options Implement quarantine and/or hygiene protocols Monitor progress towards eradication
Sicklethorn - Asparagus falcatus	
 The plant is eradicated from the land and the land is kept free of the plant Land managers mitigate the risk of the plant being introduced to their land The plant or parts of the plant are not traded, carried, grown or released into the environment 	 Detailed surveillance and mapping to locate all infestations High level pathways analysis to identify potential introduction areas and preventative options Implement quarantine and/or hygiene protocols Monitor progress towards eradication
Ming/ Pompom asparagus fern - Asparagus macowanii var. zuluensis	
 The plant is eradicated from the land and the land is kept free of the plant Land managers mitigate the risk of the plant being introduced to their land The plant or parts of the plant are not traded, carried, grown or released into the environment 	 Detailed surveillance and mapping to locate all infestations High level pathways analysis to identify potential introduction areas and preventative options Implement quarantine and/or hygiene protocols Monitor progress towards eradication
Chinese violet - Asystasia gangetica ssp. micrantha	
 The plant is eradicated from the land and the land is kept free of the plant Land managers mitigate the risk of the plant being introduced to their land The plant or parts of the plant are not traded, carried, grown or released into the environment 	 Detailed surveillance and mapping to locate all infestations High level pathways analysis to identify potential introduction areas and preventative options Implement quarantine and/or hygiene protocols Monitor progress towards eradication
Mahonia / Chinese holly - Berberis Iomariifolia	
 The plant is eradicated from the land and the land is kept free of the plant Land managers mitigate the risk of the plant being introduced to their land The plant or parts of the plant are not traded, carried, grown or released into the environment 	 Detailed surveillance and mapping to locate all infestations High level pathways analysis to identify potential introduction areas and preventative options Implement quarantine and/or hygiene protocols Monitor progress towards eradication

Regional Priority Weed Objective – ERADICATION: The following weeds are present in limited distribution and abundance in the North Coast region. Elimination of the biosecurity risk posed by these weeds is a reasonably practical objective.	sent in limited distribution and abundance in the North Coast region.
Outcomes to demonstrate compliance with the GBD	Strategic response in the region
Paper mulberry - Broussonetia papyrifera	
 The plant is eradicated from the land and the land is kept free of the plant Land managers mitigate the risk of the plant being introduced to their land The plant or parts of the plant are not traded, carried, grown or released into the environment 	 Detailed surveillance and mapping to locate all infestations High level pathways analysis to identify potential introduction areas and preventative options Implement quarantine and/or hygiene protocols Monitor progress towards eradication
Mexican bean tree, trumpet tree - Cecropia spp.	
 The plant is eradicated from the land and the land is kept free of the plant Land managers mitigate the risk of the plant being introduced to their land The plant or parts of the plant are not traded, carried, grown or released into the environment 	 Detailed surveillance and mapping to locate all infestations. High level pathways analysis to identify potential introduction areas and preventative options Implement quarantine and/or hygiene protocols Monitor progress towards eradication
Pampas grass - Cortaderia selloana	
 The plant is eradicated from the land and the land is kept free of the plant Land managers mitigate the risk of the plant being introduced to their land The plant or parts of the plant are not traded, carried, grown or released into the environment 	 Detailed surveillance and mapping to locate all infestations High level pathways analysis to identify potential introduction areas and preventative options Implement quarantine and/or hygiene protocols Monitor progress towards eradication
Scotch broom, English broom - Cytisus scoparius subsp. scoparius	
The plant is eradicated from the land and the land is kept free of the plantLand managers mitigate the risk of the plant being introduced to their land	 Detailed surveillance and mapping to locate all infestations High level pathways analysis to identify potential introduction areas
The following legislative requirement applies: Mandatory Measure (Division 8, Clause 33, Biosecurity Regulation, 2017) A person must not move, import into the State or sell.	and preventative optionsImplement quarantine and/or hygiene protocolsMonitor progress towards eradication
Aleman grass - Echinochloa polystachya	
 The plant is eradicated from the land and the land is kept free of the plant Land managers mitigate the risk of the plant being introduced to their land The plant or parts of the plant are not traded, carried, grown or released into the environment 	 Detailed surveillance and mapping to locate all infestations High level pathways analysis to identify potential introduction areas and preventative options Implement quarantine and/or hygiene protocols Monitor progress towards eradication

Regional Priority Weed Objective – ERADICATION: The following weeds are present in limited distribution and abundance in the North Coast region. Elimination of the biosecurity risk posed by these weeds is a reasonably practical objective.	sent in limited distribution and abundance in the North Coast region. I objective.
Outcomes to demonstrate compliance with the GBD	Strategic response in the region
Tobacco weed - Elephantopus mollis	
 The plant is eradicated from the land and the land is kept free of the plant Land managers mitigate the risk of the plant being introduced to their land The plant or parts of the plant are not traded, carried, grown or released into the environment 	 Detailed surveillance and mapping to locate all infestations High level pathways analysis to identify potential introduction areas and preventative options Implement quarantine and/or hygiene protocols Monitor progress towards eradication
Horsetail - Equisetum spp.	
 The plant is eradicated from the land and the land is kept free of the plant Land managers mitigate the risk of the plant being introduced to their land The plant or parts of the plant are not traded, carried, grown or released into the environment 	 Detailed surveillance and mapping to locate all infestations High level pathways analysis to identify potential introduction areas and preventative options Implement quarantine and/or hygiene protocols Monitor progress towards eradication
Cape broom, Montpellier broom - Genista monspessulana	
The plant is eradicated from the land and the land is kept free of the plantLand managers mitigate the risk of the plant being introduced to their land	 Detailed surveillance and mapping to locate all infestations High level pathways analysis to identify potential introduction areas
The following legislative requirement applies: Mandatory Measure (Division 8, Clause 33, Biosecurity Regulation, 2017) A person must not move, import into the State or sell.	and preventative optionsImplement quarantine and/or hygiene protocolsMonitor progress towards eradication
Senegal tea plant, temple plant - Gymnocoronis spilanthoides	
The plant is eradicated from the land and the land is kept free of the plantLand managers mitigate the risk of the plant being introduced to their land	 Detailed surveillance and mapping to locate all infestations High level pathways analysis to identify potential introduction areas
The following legislative requirement applies: Mandatory Measure (Division 8, Clause 33, Biosecurity Regulation, 2017) A person must not move, import into the State or sell.	and preventative options Implement quarantine and/or hygiene protocols Monitor progress towards eradication
Heteranthera / kidneyleaf mud plantain - Heteranthera reniformis	
 The plant is eradicated from the land and the land is kept free of the plant Land managers mitigate the risk of the plant being introduced to their land The plant or parts of the plant are not traded, carried, grown or released into the environment 	 Detailed surveillance and mapping to locate all infestations High level pathways analysis to identify potential introduction areas and preventative options Implement quarantine and/or hygiene protocols Monitor progress towards eradication

Regional Priority Weed Objective – ERADICATION: The following weeds are present in limited distribution and abundance in the North Coast region. Elimination of the biosecurity risk posed by these weeds is a reasonably practical objective.	sent in limited distribution and abundance in the North Coast region. I objective.
Outcomes to demonstrate compliance with the GBD	Strategic response in the region
Water star grass - Heteranthera zosterifolia	
 The plant is eradicated from the land and the land is kept free of the plant Land managers mitigate the risk of the plant being introduced to their land The plant or parts of the plant are not traded, carried, grown or released into the environment 	 Detailed surveillance and mapping to locate all infestations High level pathways analysis to identify potential introduction areas and preventative options Implement quarantine and/or hygiene protocols Monitor progress towards eradication
Olive hymenachne - Hymenachne amplexicaulis	
 The plant is eradicated from the land and the land is kept free of the plant Land managers mitigate the risk of the plant being introduced to their land 	 Detailed surveillance and mapping to locate all infestations High level pathways analysis to identify potential introduction areas
The following legislative requirement applies: Mandatory Measure (Division 8, Clause 33, Biosecurity Regulation, 2017) A person must not move, import into the State or sell.	and preventative optionsImplement quarantine and/or hygiene protocolsMonitor progress towards eradication
Japanese walnut - <i>Juglans ailantifolia</i>	
 The plant is eradicated from the land and the land is kept free of the plant Land managers mitigate the risk of the plant being introduced to their land The plant or parts of the plant are not traded, carried, grown or released into the environment 	 Detailed surveillance and mapping to locate all infestations High level pathways analysis to identify potential introduction areas and preventative options Implement quarantine and/or hygiene protocols Monitor progress towards eradication
Seeded banana - Musa ornata or M. velutina	
 The plant is eradicated from the land and the land is kept free of the plant Land managers mitigate the risk of the plant being introduced to their land The plant or parts of the plant are not traded, carried, grown or released into the environment 	 Detailed surveillance and mapping to locate all infestations High level pathways analysis to identify potential introduction areas and preventative options Implement quarantine and/or hygiene protocols Monitor progress towards eradication
Leaf cactus - Pereskia aculeata	
 The plant is eradicated from the land and the land is kept free of the plant Land managers mitigate the risk of the plant being introduced to their land The plant or parts of the plant are not traded, carried, grown or released into the environment 	 Detailed surveillance and mapping to locate all infestations High level pathways analysis to identify potential introduction areas and preventative options Implement quarantine and/or hygiene protocols Monitor progress towards eradication

Regional Priority Weed Objective – ERADICATION: The following weeds are present in limited distribution and abundance in the North Coast region. Elimination of the biosecurity risk posed by these weeds is a reasonably practical objective.	sent in limited distribution and abundance in the North Coast region. I objective.
Outcomes to demonstrate compliance with the GBD	Strategic response in the region
Black locust - <i>Robinia pseudoacacia</i>	
 The plant is eradicated from the land and the land is kept free of the plant Land managers mitigate the risk of the plant being introduced to their land The plant or parts of the plant are not traded, carried, grown or released into the environment 	 Detailed surveillance and mapping to locate all infestations High level pathways analysis to identify potential introduction areas and preventative options Implement quarantine and/or hygiene protocols Monitor progress towards eradication
Mysore raspberry, White blackberry - Rubus niveus	
 The plant is eradicated from the land and the land is kept free of the plant Land managers mitigate the risk of the plant being introduced to their land The plant or parts of the plant are not traded, carried, grown or released into the environment 	 Detailed surveillance and mapping to locate all infestations High level pathways analysis to identify potential introduction areas and preventative options Implement quarantine and/or hygiene protocols Monitor progress towards eradication
Grey sallow - Salix cinerea	
 The plant is eradicated from the land and the land is kept free of the plant Land managers mitigate the risk of the plant being introduced to their land 	 Detailed surveillance and mapping to locate all infestations High level pathways analysis to identify potential introduction areas
The following legislative requirement also applies: Mandatory Measure (Division 8, Clause 33, Biosecurity Regulation, 2017) A person must not move, import into the State or sell.	and preventative optionsImplement quarantine and/or hygiene protocolsMonitor progress towards eradication
Gorse - <i>Ulex europaeus</i>	
The plant is eradicated from the land and the land is kept free of the plantLand managers mitigate the risk of the plant being introduced to their land	 Detailed surveillance and mapping to locate all infestations High level pathways analysis to identify potential introduction areas and preventative options
The following legislative requirement applies: Mandatory Measure (Division 8, Clause 33, Biosecurity Regulation, 2017) A person must not move, import into the State or sell.	 Implement quarantine and/or hygiene protocols Monitor progress towards eradication

Regional Priority Weeds objective practicable, minimisation of the b	Regional Priority Weeds objective – CONTAINMENT: These weeds are widely distributed in part: practicable, minimisation of the biosecurity risk posed by these weeds is reasonably practicable.	Regional Priority Weeds objective – CONTAINMENT: These weeds are widely distributed in parts of the region. While broad scale elimination is not practicable, minimisation of the biosecurity risk posed by these weeds is reasonably practicable.
Land area where requirements apply	Outcomes to demonstrate compliance with the GBD	Strategic response in the region
Giant reed - Arundo donax		
An exclusion zone is established for all lands in the region, except the core <i>infestation</i> area comprising the Clarence Valley Council	 Whole of region: The plant or parts of the plant are not traded, carried, grown or released into the environment Within Exclusion zone: The plant is eradicated from the land and the land is kept free of the plant Land managers mitigate the risk of the plant being introduced to their land Within Core infestation: Land managers reduce impacts from the plant on priority assets 	 Within Exclusion zone: Establish agreed quarantine and/or hygiene protocols Surveillance and mapping to locate all infested properties and maintain currency of exclusion zone and objectives Monitor change in current distribution to ensure containment of spread High level analysis of pathways to identify potential introduction areas and preventative options Within Core infestation: Identification of key sites/assets in the geographic area Identification of regional containment zones where required Develop region-wide coordinated campaigns for collaborative management Species managed in accordance with published weed management plans
Bridal creeper, bridal veil creeper, smilax - Asparagus asparagoides	smilax - Asparagus asparagoides	
A exclusion zone is established for all lands in the region, except the core infestation area comprising the: Nambucca Valley Council, Kempsey Shire Council, and Port Macquarie Hastings Council	 Within Exclusion zone: The plant is eradicated from the land and the land is kept free of the plant. Land managers mitigate the risk of the plant being introduced to their land Within Core infestation: Land managers reduce impacts from the plant on priority assets The following legislative requirement also applies: Mandatory Measure (Division 8, Clause 33, Biosecurity Regulation, 2017) A person must not move, import into the State or sell. 	 Within Exclusion zone: Establish agreed quarantine and/or hygiene protocols Surveillance and mapping to locate all infested properties and maintain currency of exclusion zone and objectives Monitor change in current distribution to ensure containment of spread High level analysis of pathways to identify potential introduction areas and preventative options Within Core infestation: Identification of key sites/assets in the geographic area Identification of regional containment zones where required Develop region-wide coordinated campaigns for collaborative management Species managed in accordance with published weed management plans

Regional Priority Weeds objective – CC practicable, minimisation of the biosec Land area where requirements apply Asparagus fern - Asparagus virgatus An exclusion zone is established for all lands in the region, except the comprising: • Nambucca Valley Council, or The pland and and and exchangesy Shire Council • Richmond Valley Council, or the pland of the bland of the bland of the council • Richmond Valley Council or the bland of the council • Richmond Valley Council or the bland of the council or the bland of the council or the bland of the council or the council or the council or the bland of the council or t	Regional Priority Weeds objective – CONTAINIMENT: These weeds are widely distributed in participable. Land area where requirements apply compliance with the GBD Asparagus surgatus Asparagus fern - Asparagus virgatus An exclusion zone is established for all lands in the region, except the conformation or in the region, except the conformation of the plant to the environment of the plant is endicated from the land surfacturin area renot traded, carried, grown or released into the environment of the plant is eradicated from the land is kept free of the plant is eradicated from the land and the land is kept free of the plant being introduced of the plant plant on priority assets Kyogle Council and managers reduce impacts of regions: Earablish agreed duarantic exclusion zone and apping of exclusion zone and object connections. Within Core infestation: Earl lands Within Exclusion zone: Surveillance and mapping of exclusion zone and object connections. The plant to parts of the plant of the environment of the plant is eradicated from the plant is eradicated from the plant of the plant on priority assets Whole of region: Whole of region: Whole of region:	Regional Priority Weeds objective - CONTAINMENT: These weeds are widely distributed in parts of the biosecurity risk posed by these weeds is reasonably practicable. Strategic response in the region Strategic response in the region Outcomes to demonstrate compliance with the GBD Strategic response in the region Strategic response in the region Outcomes to demonstrate compliance with the GBD Strategic response in the region Strategic response in the region Outcomes to demonstrate compliance with the GBD Strategic response in the region Strategic response in the region Outcomes to demonstrate compliance with the GBD Strategic response in the region Strategic response in the region Proposed in the region P
An exclusion zone is established for all waterways in the region, except the core infestation area which comprises: • Richmond Valley Council • Ballina Shire Council • Lismore Council • Kyogle Council • Kyogle Council • Tweed Shire Council	The plant or parts of the plant are not traded, carried, grown or released into the environment within Exclusion zone: • Land managers mitigate the risk of spread of the plant from their land • Land managers mitigate the risk of the plant establishing on their land Within Core infestation: Land managers reduce impacts from the plant on priority assets	 Reassess regional objective and containment zones to reflect the outcome of the report Within Exclusion zone: The plant is continually supressed and destroyed along identified spread pathways, including property boundaries Establish agreed quarantine and/or hygiene protocols Surveillance and mapping to locate all infested properties and maintain currency of exclusion zone and objectives Monitor change in current distribution to ensure containment of spread High level analysis of pathways to identify potential introduction areas and preventative options Within Core infestation: Identification of key sites/assets in the geographic area Identification of regional containment zones where required Develop region-wide coordinated campaigns for collaborative management Species managed in accordance with published weed management plans

Regional Priority Weeds objection of the practicable, minimisation of the	Regional Priority Weeds objective – CONTAINMENT: These weeds are widely distributed in part. practicable, minimisation of the biosecurity risk posed by these weeds is reasonably practicable.	Regional Priority Weeds objective – CONTAINMENT: These weeds are widely distributed in parts of the region. While broad scale elimination is not practicable, minimisation of the biosecurity risk posed by these weeds is reasonably practicable.
Land area where requirements apply	Outcomes to demonstrate compliance with the GBD	Strategic response in the region
Cabomba - Cabomba caroliniana	na	
An <i>exclusion zone</i> is established for all waterways in the region, except the <i>core infestation area</i> which comprises: • Richmond Valley Council • Ballina Shire Council • Kyogle Council • Kyogle Council • Byron Shire Council	 Within Exclusion zone: The plant is eradicated from the land and the land is kept free of the plant. Land managers mitigate the risk of the plant being introduced to their land Within Core infestation: Land managers reduce impacts from the plant on priority assets The following legislative requirement also applies: Mandatory Measure (Division 8, Clause 33, Biosecurity Regulation, 2016) A person must not move, import into the State or sell. 	 Within Exclusion zone: Establish agreed quarantine and/or hygiene protocols Surveillance and mapping to locate all infested properties and maintain currency of exclusion zone and objectives Monitor change in current distribution to ensure containment of spread High level analysis of pathways to identify potential introduction areas and preventative options Within Core infestation: Identification of key sites/assets in the geographic area Identification of regional containment zones where required Develop region-wide coordinated campaigns for collaborative management Species managed in accordance with published weed management plans
Chinese celtis - Celtis sinensis		
An exclusion zone is established for all lands in the region, except the core infestation area which comprises: • Richmond Valley Council • Ballina Shire Council • Lismore Council • Kyogle Council • Byron Shire Council	Whole of region: The plant or parts of the plant are not traded, carried, grown or released into the environment Within Exclusion zone: • The plant is eradicated from the land and the land is kept free of the plant • Land managers mitigate the risk of the plant being introduced to their land Within Core infestation: Land managers reduce impacts from the plant on priority assets	 Within Exclusion zone: Establish agreed quarantine and/or hygiene protocols Surveillance and mapping to locate all infested properties and maintain currency of exclusion zone and objectives Monitor change in current distribution to ensure containment of spread High level analysis of pathways to identify potential introduction areas and preventative options Within Core infestation: Identification of key sites/assets in the geographic area Identification of regional containment zones where required Develop region-wide coordinated campaigns for collaborative management Species managed in accordance with published weed management plans

Regional Priority Weeds object practicable, minimisation of the	Regional Priority Weeds objective – CONTAINMENT: These weeds are widely distributed in parts practicable, minimisation of the biosecurity risk posed by these weeds is reasonably practicable.	Regional Priority Weeds objective – CONTAINMENT: These weeds are widely distributed in parts of the region. While broad scale elimination is not practicable, minimisation of the biosecurity risk posed by these weeds is reasonably practicable.
Land area where requirements apply	Outcomes to demonstrate compliance with the GBD	Strategic response in the region
Mysore thorn, thorny poinciana - Caesalpinia decapetala	na - Caesalpinia decapetala	
An exclusion zone is established for all lands in the region except the core infestation area which comprises: • Richmond Valley Council • Ballina Shire Council • Lismore Council • Kyogle Council • Kyogle Council	Whole of region: The plant or parts of the plant are not traded, carried, grown or released into the environment Within Exclusion zone: • The plant is eradicated from the land and the land is kept free of the plant • Land managers mitigate the risk of the plant being introduced to their land Within Core infestation: Land managers reduce impacts from the plant on priority assets	 Within Exclusion zone: Establish agreed quarantine and/or hygiene protocols Surveillance and mapping to locate all infested properties and maintain currency of exclusion zone and objectives Monitor change in current distribution to ensure containment of spread High level analysis of pathways to identify potential introduction areas and preventative options Within Core infestation: Identification of key sites/assets in the geographic area Identification of regional containment zones where required Develop region-wide coordinated campaigns for collaborative management Species managed in accordance with published weed management plans
Green cestrum, willow leaved jessamine - Cestrum parqui	jessamine - Cestrum parqui	
An exclusion zone is established for all lands in the region except the core infestation area which comprises: • Bellingen Shire Council • Richmond Valley Council • Ballina Shire Council • Lismore Council • Kyogle Council • Kyogle Council	Whole of region: The plant or parts of the plant are not traded, carried, grown or released into the environment Within Exclusion zone: • The plant is eradicated from the land and the land is kept free of the plant • Land managers mitigate the risk of the plant being introduced to their land Within Core infestation: Land managers reduce impacts from the plant on priority assets	 Within Exclusion zone: Establish agreed quarantine and/or hygiene protocols Surveillance and mapping to locate all infested properties and maintain currency of exclusion zone and objectives Monitor change in current distribution to ensure containment of spread High level analysis of pathways to identify potential introduction areas and preventative options Within Core infestation: Identification of key sites/assets in the geographic area Identification of regional containment zones where required Develop region-wide coordinated campaigns for collaborative management Species managed in accordance with published weed management plans

Regional Priority Weeds object practicable, minimisation of the	Regional Priority Weeds objective – CONTAINMENT: These weeds are widely distributed in part: practicable, minimisation of the biosecurity risk posed by these weeds is reasonably practicable.	Regional Priority Weeds objective – CONTAINMENT: These weeds are widely distributed in parts of the region. While broad scale elimination is not practicable, minimisation of the biosecurity risk posed by these weeds is reasonably practicable.
Land area where requirements apply	Outcomes to demonstrate compliance with the GBD	Strategic response in the region
Cockscomb coral tree - Erythrina crista-galli	na crista-galli	
An exclusion zone is established for all lands in the region, except the core infestation area which comprises: • Richmond Valley Council • Ballina Shire Council • Lismore Council • Kyogle Council • Kyogle Council • Tweed Shire Council	Whole of region: The plant or parts of the plant are not traded, carried, grown or released into the environment Within Exclusion zone: • The plant is eradicated from the land and the land is kept free of the plant • Land managers mitigate the risk of the plant being introduced to their land Within Core infestation: Land managers reduce impacts from the plant on priority assets	 Within Exclusion zone: Establish agreed quarantine and/or hygiene protocols Surveillance and mapping to locate all infested properties and maintain currency of exclusion zone and objectives Monitor change in current distribution to ensure containment of spread High level analysis of pathways to identify potential introduction areas and preventative options Within Core infestation: Identification of key sites/assets in the geographic area Identification of regional containment zones where required Develop region-wide coordinated campaigns for collaborative management Species managed in accordance with published weed management plans
Honey locust - Gleditsia triacanthos	ıthos	
An exclusion zone is established for all lands in the region, except the core infestation area which comprises: • Richmond Valley Council • Ballina Shire Council • Clarence Valley Council (Mann catchment) • Lismore Council • Kyogle Council • Kyogle Council	Whole of region: The plant or parts of the plant are not traded, carried, grown or released into the environment Within Exclusion zone: • The plant is eradicated from the land and the land is kept free of the plant • Land managers mitigate the risk of the plant being introduced to their land Within Core infestation: Land managers reduce impacts from the plant on priority assets	 Within Exclusion zone: Establish agreed quarantine and/or hygiene protocols Surveillance and mapping to locate all infested properties and maintain currency of exclusion zone and objectives Monitor change in current distribution to ensure containment of spread High level analysis of pathways to identify potential introduction areas and preventative options Within Core infestation: Identification of key sites/assets in the geographic area Identification of regional containment zones where required Develop region-wide coordinated campaigns for collaborative management Species managed in accordance with published weed management plans

Regional Priority Weeds object practicable, minimisation of the	Regional Priority Weeds objective – CONTAINMENT: These weeds are widely distributed in part. practicable, minimisation of the biosecurity risk posed by these weeds is reasonably practicable.	Regional Priority Weeds objective – CONTAINMENT: These weeds are widely distributed in parts of the region. While broad scale elimination is not practicable, minimisation of the biosecurity risk posed by these weeds is reasonably practicable.
Land area where requirements apply	Outcomes to demonstrate compliance with the GBD	Strategic response in the region
Glory lily, climbing lily - Gloriosa superba	ısa superba	
An exclusion zone is established for all lands in the region, except the core infestation area which comprises: • Kempsey Shire Council • Bellingen Shire Council • Coffs Harbour City Council • Clarence Valley Council • Richmond Valley Council • Lismore Council • Kyogle Council • Kyogle Council • Sallina Shire Council	Whole of region: The plant or parts of the plant are not traded, carried, grown or released into the environment within Exclusion zone: • The plant is eradicated from the land and the land is kept free of the plant • Land managers mitigate the risk of the plant being introduced to their land Within Core infestation: Land managers reduce impacts from the plant on priority assets	 Within Exclusion zone: Establish agreed quarantine and/or hygiene protocols Surveillance and mapping to locate all infested properties and maintain currency of exclusion zone and objectives Monitor change in current distribution to ensure containment of spread High level analysis of pathways to identify potential introduction areas and preventative options Within Core infestation: Identification of key sites/assets in the geographic area Identification of regional containment zones where required Develop region-wide coordinated campaigns for collaborative management Species managed in accordance with published weed management plans
Blue heliotrope - Heliotropium amplexicaule	n amplexicaule	
An exclusion zone is established for all lands in the region, except the core infestation areas comprising: • Clarence Valley Council, and and Council	Whole of region: The plant or parts of the plant are not traded, carried, grown or released into the environment within Exclusion zone: • The plant is eradicated from the land and the land is kept free of the plant • Land managers mitigate the risk of the plant being introduced to their land Within Core infestation: Land managers reduce impacts from the plant on priority assets	 Within Exclusion zone: Establish agreed quarantine and/or hygiene protocols Surveillance and mapping to locate all infested properties and maintain currency of exclusion zone and objectives Monitor change in current distribution to ensure containment of spread High level analysis of pathways to identify potential introduction areas and preventative options Within Core infestation: Identification of key sites/assets in the geographic area Identification of regional containment zones where required Develop region-wide coordinated campaigns for collaborative management Species managed in accordance with published weed management plans

Regional Priority Weeds objective – CONTAINMENT: The practicable, minimisation of the biosecurity risk posed	:tive – CONTAINMENT: These weeds are biosecurity risk posed by these we	nese weeds are widely distributed in parts of the region. While broad scale elimination is not by these weeds is reasonably practicable.
Land area where requirements apply	Outcomes to demonstrate compliance with the GBD	Strategic response in the region
Hygrophila, glush weed - Hygi	Hygrophila, glush weed - Hygrophila costata and H. polysperma	
An <i>exclusion zone</i> is established for all waters in the region, except the <i>core infestation area</i> which comprises: • Richmond Valley Council Ballina Shire Council • Lismore Council • Kyogle Council • Kyogle Council	Whole of region: The plant or parts of the plant are not traded, carried, grown or released into the environment Within Exclusion zone: • The plant is eradicated from the land and the land is kept free of the plant • Land managers mitigate the risk of the plant being introduced to their land Within Core infestation: Land managers reduce impacts from the plant on priority assets	 Within Exclusion zone: Establish agreed quarantine and/or hygiene protocols Surveillance and mapping to locate all infested properties and maintain currency of exclusion zone and objectives Monitor change in current distribution to ensure containment of spread High level analysis of pathways to identify potential introduction areas and preventative options Within Core infestation: Identification of key sites/assets in the geographic area Identification of regional containment zones where required Develop region-wide coordinated campaigns for collaborative management Species managed in accordance with published weed management
Moon flower - <i>Ipomoea alba</i>		
An exclusion zone is established for all lands in the region, except the core infestation areas comprising: • Clarence Valley Council, • Richmond Valley Council • Ballina Shire Council • Lismore Council • Kyogle Council	Whole of region: The plant or parts of the plant are not traded, carried, grown or released into the environment Within Exclusion zone: • The plant is eradicated from the land and the land is kept free of the plant • Land managers mitigate the risk of the plant being introduced to their land Within Core infestation: Land managers reduce impacts from the plant on priority assets	 Within Exclusion zone: Establish agreed quarantine and/or hygiene protocols Surveillance and mapping to locate all infested properties and maintain currency of exclusion zone and objectives Monitor change in current distribution to ensure containment of spread High level analysis of pathways to identify potential introduction areas and preventative options Within Core infestation: Identification of key sites/assets in the geographic area Identification of regional containment zones where required Develop region-wide coordinated campaigns for collaborative management Species managed in accordance with published weed management plans

Regional Priority Weeds objec	Regional Priority Weeds objective – CONTAINMENT: These weeds are widely distributed in part. practicable, minimisation of the biosecurity risk posed by these weeds is reasonably practicable.	Regional Priority Weeds objective – CONTAINMENT: These weeds are widely distributed in parts of the region. While broad scale elimination is not practicable, minimisation of the biosecurity risk posed by these weeds is reasonably practicable.
Land area where requirements apply	Outcomes to demonstrate compliance with the GBD	Strategic response in the region
Lead tree, coffee bush - Leucaena leucocephala	ena leucocephala	
An <i>exclusion zone</i> is established for all lands in the region, except the <i>core infestation</i> area comprising: • Richmond Valley Council • Ballina Shire Council • Lismore Council • Kyogle Council • Kyogle Council	Whole of region: The plant or parts of the plant are not traded, carried, grown or released into the environment Within Exclusion zone: The plant is eradicated from the land and the land is kept free of the plant Land managers mitigate the risk of the plant being introduced to their land Within Core infestation: Land managers reduce impacts from the plant on priority assets	 Within Exclusion zone: Establish agreed quarantine and/or hygiene protocols Surveillance and mapping to locate all infested properties and maintain currency of exclusion zone and objectives Monitor change in current distribution to ensure containment of spread High level analysis of pathways to identify potential introduction areas and preventative options Within Core infestation: Identification of key sites/assets in the geographic area Identification of regional containment zones where required Develop region-wide coordinated campaigns for collaborative management Species managed in accordance with published weed management plans
Long-leaf willow primrose - Ludwigia longifolia	ıdwigia longifolia	
An <i>exclusion zone</i> is established for all lands in the region, except the <i>core infestation</i> area comprising: Nambucca Shire Council Bellingen Shire Council Coffs Harbour City council Clarence Valley Council Richmond Valley Council Ballina Shire Council Lismore Council Kyogle Council Syron Shire Council Syron Shire Council	Whole of region: The plant or parts of the plant are not traded, carried, grown or released into the environment Within Exclusion zone: • The plant is eradicated from the land and the land is kept free of the plant • Land managers mitigate the risk of the plant being introduced to their land Within Core infestation Land managers reduce impacts from the plant on priority assets	 Within Exclusion zone: Establish agreed quarantine and/or hygiene protocols Surveillance and mapping to locate all infested properties and maintain currency of exclusion zone and objectives Monitor change in current distribution to ensure containment of spread High level analysis of pathways to identify potential introduction areas and preventative options Within Core infestation Identification of key sites/assets in the geographic area Identification of regional containment zones where required Develop region-wide coordinated campaigns for collaborative management Species managed in accordance with published weed management plans

Regional Priority Weeds object practicable, minimisation of the	Regional Priority Weeds objective – CONTAINMENT: These weeds are widely distributed in part. practicable, minimisation of the biosecurity risk posed by these weeds is reasonably practicable.	Regional Priority Weeds objective – CONTAINMENT: These weeds are widely distributed in parts of the region. While broad scale elimination is not practicable, minimisation of the biosecurity risk posed by these weeds is reasonably practicable.
Land area where requirements apply	Outcomes to demonstrate compliance with the GBD	Strategic response in the region
Water lettuce - Pistia stratiotes	Şı	
An exclusion zone is established for all lands in the region, except the core <i>infestation</i> area of Swan Bay on the Richmond River.	Whole of region: The plant or parts of the plant are not traded, carried, grown or released into the environment within Exclusion zone: • The plant is eradicated from the land and the land is kept free of the plant • Land managers mitigate the risk of the plant being introduced to their land Within Core infestation: Land managers reduce impacts from the plant on priority assets	 Within Exclusion zone: Establish agreed quarantine and/or hygiene protocols Surveillance and mapping to locate all infested properties and maintain currency of exclusion zone and objectives Monitor change in current distribution to ensure containment of spread High level analysis of pathways to identify potential introduction areas and preventative options Within Core infestation: Identification of key sites/assets in the geographic area Identification of regional containment zones where required Develop region-wide coordinated campaigns for collaborative management Species managed in accordance with published weed management plans
Kudzu - Pueraria lobata		
An <i>exclusion zone</i> is established for all lands in the region, except the <i>core infestation area</i> which comprises: • Richmond Valley Council • Ballina Shire Council • Bellingen Shire Council • Coffs Harbour City Council • Lismore Council • Kyogle Council • Kyogle Council	Whole of region: The plant or parts of the plant are not traded, carried, grown or released into the environment within Exclusion zone: • The plant is eradicated from the land and the land is kept free of the plant • Land managers mitigate the risk of the plant being introduced to their land Within Core infestation: Land managers reduce impacts from the plant on priority assets	 Within Exclusion zone: Establish agreed quarantine and/or hygiene protocols Surveillance and mapping to locate all infested properties and maintain currency of exclusion zone and objectives Monitor change in current distribution to ensure containment of spread High level analysis of pathways to identify potential introduction areas and preventative options Within Core infestation: Identification of key sites/assets in the geographic area Identification of regional containment zones where required Develop region-wide coordinated campaigns for collaborative management Species managed in accordance with published weed management plans

Regional Priority Weeds objective – CONTAINMENT: The practicable, minimisation of the biosecurity risk posed	ctive – CONTAINMENT: These weeds and the biosecurity risk posed by these we	Regional Priority Weeds objective – CONTAINMENT: These weeds are widely distributed in parts of the region. While broad scale elimination is not practicable, minimisation of the biosecurity risk posed by these weeds is reasonably practicable.
Land area where requirements apply	Outcomes to demonstrate compliance with the GBD	Strategic response in the region
Black willow - Salix nigra		
An exclusion zone is established for all lands in the region, except the core infestation area which comprises: • Clarence Valley Council • Nambucca Valley Shire Council	 Within Exclusion zone: The plant is eradicated from the land and the land is kept free of the plant. Land managers mitigate the risk of the plant being introduced to their land Within Core infestation: Land managers reduce impacts from the plant on priority assets The following legislative requirement also applies: Mandatory Measure (Division 8, Clause 33, Biosecurity Regulation, 2016) A person must not move, import into the State or sell. 	 Within Exclusion zone: Establish agreed quarantine and/or hygiene protocols Surveillance and mapping to locate all infested properties and maintain currency of exclusion zone and objectives Monitor change in current distribution to ensure containment of spread High level analysis of pathways to identify potential introduction areas and preventative options Within Core infestation: Identification of key sites/assets in the geographic area Identification of regional containment zones where required Develop region-wide coordinated campaigns for collaborative management Species managed in accordance with published weed management plans
Broad-leaf pepper tree - Schinus terebinthifolius	nus terebinthifolius	
An exclusion zone is established for all lands in the region, except the core infestation area which comprises: • Richmond Valley Council • Ballina Shire Council • Lismore Council • Kyogle Council • Byron Shire Council	Whole of region: The plant or parts of the plant are not traded, carried, grown or released into the environment within Exclusion zone: • The plant is eradicated from the land and the land is kept free of the plant • Land managers mitigate the risk of the plant being introduced to their land Within Core infestation: Land managers reduce impacts from the plant on priority assets	 Within Exclusion zone: Establish agreed quarantine and/or hygiene protocols Surveillance and mapping to locate all infested properties and maintain currency of exclusion zone and objectives Monitor change in current distribution to ensure containment of spread High level analysis of pathways to identify potential introduction areas and preventative options Within Core infestation: Identification of key sites/assets in the geographic area Identification of regional containment zones where required Develop region-wide coordinated campaigns for collaborative management Species managed in accordance with published weed management plans

Regional Priority Weeds objective – CONTAINMENT: 71 practicable, minimisation of the biosecurity risk posed	Regional Priority Weeds objective – CONTAINMENT: These weeds are widely distributed in part. oracticable, minimisation of the biosecurity risk posed by these weeds is reasonably practicable.	hese weeds are widely distributed in parts of the region. While broad scale elimination is not by these weeds is reasonably practicable.
Land area where requirements apply	Outcomes to demonstrate compliance with the GBD	Strategic response in the region
Giant devil's fig - Solanum chrysotrichum	ysotrichum	
An exclusion zone is established for all lands in the region, except the core infestation area which comprises: • Richmond Valley Council • Ballina Shire Council • Lismore Council • Kyogle Council • Byron Shire Council	Whole of region: The plant or parts of the plant are not traded, carried, grown or released into the environment Within Exclusion zone: • The plant is eradicated from the land and the land is kept free of the plant • Land managers mitigate the risk of the plant being introduced to their land Within Core infestation: Land managers reduce impacts from the plant on priority assets	 Within Exclusion zone: Establish agreed quarantine and/or hygiene protocols Surveillance and mapping to locate all infested properties and maintain currency of exclusion zone and objectives Monitor change in current distribution to ensure containment of spread High level analysis of pathways to identify potential introduction areas and preventative options Within Core infestation Identification of key sites/assets in the geographic area Identification of regional containment zones where required Develop region-wide coordinated campaigns for collaborative management Species managed in accordance with published weed management plans
Devil's fig - Solanum torvum		
An exclusion zone is established for all lands in the region, except the core infestation area which comprises: • Richmond Valley Council • Ballina Shire Council • Lismore Council • Kyogle Council • Kyogle Council • Kyogle Shire Council	Whole of region: The plant or parts of the plant are not traded, carried, grown or released into the environment Within Exclusion zone: • The plant is eradicated from the land and the land is kept free of the plant • Land managers mitigate the risk of the plant being introduced to their land Within Core infestation: Land managers reduce impacts from the plant on priority assets	 Within Exclusion zone: Establish agreed quarantine and/or hygiene protocols Surveillance and mapping to locate all infested properties and maintain currency of exclusion zone and objectives Monitor change in current distribution to ensure containment of spread High level analysis of pathways to identify potential introduction areas and preventative options Within Core infestation: Identification of key sites/assets in the geographic area Identification of regional containment zones where required Develop region-wide coordinated campaigns for collaborative management Species managed in accordance with published weed management plans

Regional Priority Weeds objective - CONTAINMENT: practicable, minimisation of the biosecurity risk pose Land area where requirements apply Tecoma, yellow bells - Tecoma stans Tecoma, yellow bells - Tecoma stans An exclusion zone is established for all lands in the region, except the comprises: Richmond Valley Council Ballina Shire Council Chinese tallow tree - Triadica sebifera An exclusion zone is established for all lands in the region, except the core infestation area which comprises: An exclusion zone is established for all lands in the region, except the core infestation area which comprises: Regional Priority risk pose to demons traded, carried are not traded, carried to a land sin the region, except the core infestation area which comprises: Regional An exclusion zone is established for all lands in the region, except the core infestation area which comprises: An exclusion zone is established for all lands in fereased into the envitated carried area of the plant or parts of are not traded, carried area of a land in the region infestation area which comprises: Ballina Shire Council the core infestation area which comprises: Ballina Shire Council the plant or parts of are not traded, carried area of a land in the land is released into the envitate of a land and the land is the plant is eradical land in the plant or parts of a land in the plant		These weeds are widely distributed in parts of the region. While broad scale elimination is not dby these weeds is reasonably practicable. Strategic response in the region d, grown or establish agreed quarantine and/or hygiene protocols of exclusion zone and objectives elef from the exclusion zone and objectives of exclusion zone and objectives of exclusion zone and objectives of exclusion of exclusion of key sites/assets in the geographic area or elentification of key sites/assets in the geographic area or elentification of key sites/assets in the geographic area or elentification of regional containment zones where required or bevelor regional containment and objectives of grown or establish agreed quarantine and/or hygiene protocols of exclusion zone and objectives of exclusion zone and objectives end free plant of exclusion zone and objectives end free of experimentative options. Within Exclusion zone and objectives of exclusion zone and objectives end mapping to locate all infested properties and maintain currency of exclusion zone and objectives end mapping to locate all infested properties and maintain currency of exclusion zone and objectives end mapping to locate all infested properties and maintain currency of exclusion zone and objectives end mapping to locate all infested properties and maintain currency of exclusion zone and objectives end mapping to locate all infested properties and maintain currency of exclusion zone and objectives end mapping to locate all infested properties and mapping to locate all infested properties end mapping to locate all infested properties and mapping to locate all infested properties end mapping to locate all infested properties and mapping to locate all infested properties end mapping to locate all infested properties and mapping to loc
Kyogle CouncilByron Shire Council, andTweed Shire Council	of the plant being introduced to their land Within Core infestation:	 Identification of key sites/assets in the geographic area Identification of regional containment zones where required Develop region-wide coordinated campaigns for collaborative management
	Land managers reduce impacts from the plant on priority assets	 Species managed in accordance with published weed management plans

Appendix 2: North Coast LLS - Other regional weed lists

A2.1 North Coast LLS weed watch list

These species have been identified as having a <u>potential</u> biosecurity risk to the region; however, they have not been subjected to a weed risk assessment due to a lack of appropriate information. Note that this list does not include every species that might present a risk to the region - species will be added to, or removed from, this list as more information becomes available.

The following Regional Strategic Responses have been identified:

- Develop regional level Weed Risk Assessments
- Communicate with all Local Control Authorities to prioritise data collection and strategic treatment of these species
- Provide status updates on the distribution and pathways of these species
- Communicate weed risk information to stakeholders once defined.

Common name	Scientific name
Box-elder maple, Box elder, Ash-leaved maple	Acer negundo
Bushman's poison, Hottentot's-poison	Acokanthera oblongifolia
Agapanthus, African lily, Lily of the Nile	Agapanthus praecox subsp. orientalis
Blue stars	Aristea ecklonii
Barleria or Porcupine flower	Barleria prionitis
Coral berry	Barleria repens
Pink orchid tree	Bauhinia monandra
Oregon grape	Berberis aquifolium
Green shrimp plant	Blechum pyramidatum
Brillantaisia	Brillantaisia lamium
Bird-of-paradise shrub	Caesalpinia gilliesii
American sea-rocket	Cakile edentula
European hackberry	Celtis australis
Lady of the night	Cestrum nocturnum
African marigold	Cineraria lyratiformis
Cup & saucer vine	Cobaea scandens
Jute	Corchorus olitorius
Rubbervine	Cryptostegia madagascariensis
Coast button grass	Dactyloctenium aegyptium
Indian rosewood	Dalbergia sissoo
Sheda grass,	Dichanthium annulatum
Cape daisy	Dimorphotheca ecklonis
Dolichos pea	Dipogon lignosus
Queensland maple	Flindersia brayleyana

Common name	Scientific name
Himalaya ash	Fraxinus griffithii
Golden trumpet tree	Handroanthus chrysotrichus
Telegraph weed	Heterotheca grandiflora
Hiptage	Hiptage benghalensis
Water poppy	Hydrocleys nymphoides
Bellyache bush	Jatropha gossypiifolia
Lion's ear	Leonotis nepetifolia
Sicilian sea lavender	Limonium hyblaeum
Liriope	Liriope spp.
Creeping gloxinia	Lophospermum erubescens
Red ludwigia	Ludwigia repens
Bog moss	Mayaca fluviatilis
Convolvulus creeper	Merremia dissecta
Pongamia	Millettia pinnata
Giant false sensitive plant	Mimosa diplotricha
Velvet bean	Mucuna pruiens
Lobed needle grass	Nassella charruana
Cane needle grass	Nassella hyalina
Texas needle grass	Nassella leucotrica
Chilean needle grass	Nassella neesiana
Serrated tussock	Nassella trichotoma
Mexican water lily	Nymphaea mexicana
African olive	Olea europaea subsp. cuspidata
Red-flower prickly pear	Opuntia elatior
Indian fig, spineless cactus	Opuntia ficus-indica
Creeping pear	Opuntia humifusa
Tussock paspalum	Paspalum quadrifarium
Passionflower	Passiflora filamentosa
Stinking passionflower	Passiflora foetida
Garden geranium	Pelargonium alchemilloides
Senegal palm	Phoenix reclinata
New Zealand flax	Phormium tenax
Lippia	Phyla canescens
Patula pine, Mexican weeping pine	Pinus patula
Uruguayan rice grass	Piptochaetium montevidense
Pink trumpet vine	Podranea ricasoliana
Praxelis	Praxelis clematidia
Firethorn	Pyracantha angustifolia
Hawthorn	Rhapiolepis spp.
Pigeon berry, coral berry	Rivina humilis
German ivy, natal ivy, wax vine	Senecio macroglossus
Candle bush	Senna alata

Common name	Scientific name
Hairy sicklepod	Senna hirsuta
November shower	Senna multijuga
Japanese pagoda tree/Chinese scholar tree	Sophora japonica
African tulip tree	Spathodia campanulata
Spanish broom	Spartium junceum
Small dropseed	Sporobolus coromandelianus
Cayenne snakeweed	Stachytarpheta cayennensis
Giant bird of paradise	Strelitzia nicolai
Cape honeysuckle	Tecoma capensis
Laurel clock vine	Thunbergia laurifolia
Tipu tree, rosewood	Tipuana tipu
Cumbungi	Typha latifolia
Sweet viburnum	Viburnum odoratissimum var. awabuki
American cotton palm	Washingtonia filifera

A2.2 Additional Species of Concern in North Coast LLS Region

These species are a high priority for asset protection. Many are actively managed under a number of current programs, or are commercial species with a manageable biosecurity risk. It is not feasible to contain or eradicate these species, however minimising their impacts is reasonably practicable.

The following regional strategic responses have been identified:

- Work within existing widespread weed programs for strategic asset protection
- Prioritise the application of the GBD to assist with management of these species
- Work with industry to develop industry standards including restrictions on sale and trade.

Common name	Scientific name
Crofton weed	Ageratina adenophora
Tree-of-heaven	Ailanthus altissima
Madeira Vine, Lamb's Tail, Jalap, Potato vine	Anredera cordifolia
Moth plant/Moth Vine	Araujia sericifera
Coral berry	Ardisia crenata
Dutchman's pipe	Aristolochia elegans
Ground asparagus, asparagus 'fern'	Asparagus aethiopicus
Climbing asparagus	Asparagus africanus/A. plumosus/A. scandens
Red trumpet vine	Campsis radicans
Balloon vine	Cardiospermum grandiflorum
Camphor laurel	Cinnamomum camphora
Coffee	Coffea arabica/C. canephora
Cape ivy	Delaria odorata

Common name	Scientific name
Desmodium	Desmodium intortum/D. uncinatum
Cats claw creeper	Dolichandra unguis-cati
Duranta	Duranta erecta
Indian coral tree	Erythrina x sykesii
Chinese rain tree	Koelreuteria elegans
Lantana	Lantana camaral L. madagascariensis
Broad-leaf privet	Ligustrum lucidum
Narrow-leaf privet	Ligustrum sinense
Japanese honeysuckle	Lonicera japonica
Osage Orange, Bow-wood	Maclura pomifera
Orange jessamine, murraya	Murraya paniculata
Parrots feather, Brazilian water-milfoil	Myriophyllum aquaticum
Mickey mouse plant	Ochna serrulata
European olive	Olea europaea
Passionfruit	Passiflora spp.
Foxglove tree, empress tree	Paulownia tomentosa
Slash pine	Pinus elliottii
Radiata pine	Pinus radiata
Blackberry	Rubus fruticosus (spp. agg.)
Salvinia	Salvinia molesta
Umbrella tree	Schefflera actinophylla
Fireweed	Senecio madagascariensis
Climbing nightshade	Solanum seaforthianum
Giant Parramatta grass	Sporobolus fertilis
Giant ratstail grass	Sporobolus pyramidalis
Cocos palm	Syagrus romanzoffiana
Rhus tree	Toxicodendron succedaneaum

Appendix 3: North Coast LLS - Weed species listed by common name

The following covers all species listed in order of common name, including the management category under which the species is listed. "State" in the management category, indicates the species is a state listed species (A1.1). This demonstrates where species may have both State and Regional listings. Note that Asset Protection species occur in both Appendix 1.1 and 2.2. Watch species occur in Appendix 2.1.

Common Name	Management Category						
	PREVENT	ERADICATE	CONTAIN	Asset Protection	W ATCH		
African boxthorn - Lycium ferocissimum				State			
African marigold - Cineraria lyratiformis							
African olive - Olea europaea subsp. cuspidata							
African tulip tree - Spathodia campanulata							
Agapanthus - Agapanthus praecox subsp. orientalis							
Aleman grass - Echinochloa polystachya							
Alligator weed - Alternanthera philoxeroides			State				
American cotton palm - Washingtonia filifera							
American ratstail grass - Sporobolus jacquemontii							
American sea-rocket – Cakile edentula							
Anchored water hyacinth - Eichhornia azurea	State						
Asparagus fern - Asparagus virgatus							
Asparagus fern - Asparagus macowanii var. zuluensis							
Asparagus weeds - Asparagus spp.				State			
Athel pine - Tamarix aphylla				State			
Balloon vine - Cardiospermum grandiflorum							
Barleria, Porcupine flower - Barleria prionitis							
Bellyache bush - Jatropha gossypiifolia				State			
Bird-of-Paradise shrub - Caesalpinia gilliesii							
Bitou bush - Chrysanthemoides monilifera subsp. rotunda			State				
Black knapweed - Centaurea xmoncktonii	State						
Black locust - Robinia pseudoacacia							
Black willow - Salix nigra				State			
Blackberry - Rubus fruticosus agg.				State			
Blue heliotrope - Heliotropium amplexicaule							
Blue stars - Aristea ecklonii							
Bog moss - Mayaca fluviatilis							
Boneseed - Chrysanthemoides monilifera subsp. monilifera		State					

Common Name	Management Category				
	Prevent	Eradicate	Contain	Asset Protection	W ATCH
Box-elder maple - Acer negundo					
Bridal creeper - Asparagus asparagoides				State	
Bridal veil creeper - Asparagus declinatus	State				
Brillantaisia - Brillantaisia lamium					
Broad-leaf pepper tree - Schinus terebinthifolius					
Broad-leaf privet - Ligustrum lucidum					
Broomrape - Orobanche spp.(except O. cernua var. australiana and O. minor)	State				
Bushman's poison - Acokanthera oblongifolia					
Cabomba - Cabomba caroliniana				State	
Camphor laurel - Cinnamomum camphora					
Candle bush - Senna alata					
Cane needle grass - Nassella hyalina					
Cape broom - Genista monspessulana				State	
Cape daisy - Dimorphotheca ecklonis					
Cape honeysuckle - Tecoma capensis					
Cape ivy - Delaria odorata					
Cat's claw creeper - Dolichandra unguis-cati				State	
Cayenne snakeweed - Stachytarpheta cayennensis					
Chilean needle grass - Nassella neesiana				State	
Chinese celtis - Celtis sinensis					
Chinese knotweed - Persicaria chinensis					
Chinese rain tree - Koelreuteria elegans					
Chinese tallow tree - Triadica sebifera					
Chinese violet - Asystasia gangetica ssp. micrantha					
Climbing nightshade - Solanum seaforthianum					
Coast button grass - Dactyloctenium aegyptium					
Cockscomb coral tree - Erythrina crista-galli					
Cocos palm - Syagrus romanzoffiana					
Coffee - Coffea arabica, C. canephora					
Convolvulus creeper - Merremia dissecta					
Coral berry - Ardisia crenata					
Coral berry - Barleria repens					
Creeping gloxinia - Lophospermum erubescens					
Creeping pear - Opuntia humifusa					
Crofton weed - Ageratina adenophora					
Cumbungi - <i>Typha latifolia</i>					
Cup & saucer vine - Cobaea scandens					

Common Name	Management Category				
	Prevent	ERADICATE	Contain	Asset Protection	W ATCH
Desmodium - Desmodium intortum, D. uncinatum					
Devil's fig - Solanum torvum					
Dolichos pea - <i>Dipogon lignosus</i>					
Duranta - <i>Duranta erecta</i>					
Dutchman's pipe - Aristolochia elegans					
Eurasian water milfoil - Myriophyllum spicatum	State				
European hackberry - Celtis australis					
Firethorn - Pyracantha angustifolia					
Fireweed - Senecio madagascariensis				State	
Foxglove tree, Empress tree - Paulownia tomentosa					
Frogbit / Spongeplant - Limnobium spp.	State				
Gamba grass - Andropogon gayanus	State				
Garden geranium - Pelargonium alchemilloides					
German ivy, natal ivy, wax vine - Senecio macroglossus					
Giant bird-of-paradise - Strelitzia nicolai					
Giant devil's fig - Solanum chrysotrichum					
Giant false Sensitive Plant - Mimosa diplotricha					
Giant Parramatta grass - Sporobolus fertilis					
Giant ratstail grass - Sporobolus pyramidalis					
Giant reed - Arundo donax					
Glory lily, climbing lily - Gloriosa superba					
Golden trumpet tree - Handroanthus chrysotrichus					
Gorse - Ulex europaeus				State	
Green cestrum - Cestrum parqui					
Green shrimp plant - Blechum pyramidatum					
Grey sallow - Salix cinerea				State	
Ground asparagus, asparagus 'fern' - Asparagus aethiopicus					
Groundsel bush - Baccharis halimifolia					
Hairy sicklepod - Senna hirsuta					
Hawkweed - Hieracium spp.	State				
Hawthorn – <i>Rhapiolepis</i> spp.					
Himalaya ash - Fraxinus griffithii					
Hiptage - Hiptage benghalensis					
Honey locust - Gleditsia triacanthos					
Horsetail - Equisetum spp.					
Hydrocotyl - Hydrocotyle ranunculoides	State				

Common Name	Management Category					
	PREVENT	Eradicate	CONTAIN	Asset Protection	W ATCH	
Hygrophila - Hygrophila costata and H. polysperma						
Indian coral tree - Erythrina x sykesii						
Indian fig, spineless cactus - Opuntia ficus-indica						
Indian rosewood - Dalbergia sissoo						
Japanese honeysuckle - Lonicera japonica						
Japanese pagoda tree - Sophora japonica						
Japanese walnut - Juglans ailantifolia						
Jute - Corchorus olitorius						
Karoo acacia - Vachellia karroo	State					
Kei apple - Dovyalis kaffra						
Kidneyleaf mud plantain - Heteranthera reniformis						
Kochia - Bassia scoparia (excluding subsp. trichophylla)	State					
Koster's curse - Clidemia hirta	State					
Kudzu - <i>Pueraria lobata</i>						
Lady of the night - Cestrum nocturnum						
Lagarosiphon - Lagarosiphon major	State					
Lantana - Lantana camara, L madagascariensis				State		
Laurel clock vine - Thunbergia laurifolia						
Lead tree, coffee bush - Leucaena leucocephala						
Leaf cactus - Pereskia aculeata						
Lion's ear - Leonotis nepetifolia						
Lippia - Phyla canescens						
Liriope - <i>Liriope</i> spp.						
Lobed needle grass - Nassella charruana						
Long-leaf willow primrose - Ludwigia longifolia						
Ludwigia - <i>Ludwigia peruviana</i>						
Madeira vine - <i>Anredera cordifolia</i>				State		
Mahonia / Chinese holly - Berberis Iomariifolia						
Mesquite - <i>Prosopis</i> spp.				State		
Mexican bean tree, trumpet tree - <i>Cecropia</i> spp.						
Mexican feather grass - Nassella tenuissima	State					
Mexican water lily - Nymphaea mexicana						
Mickey mouse plant - Ochna serrulata						
Miconia - <i>Miconia</i> spp.	State					
Mikania vine - <i>Mikania micrantha</i>	State					
Mimosa - <i>Mimosa pigra</i>	State					
Moon flower - <i>Ipomoea alba</i>						
Moth vine - <i>Araujia sericifera</i>						

Common Name	Management Category				
	PREVENT	ERADICATE	CONTAIN	Asset Protection	W ATCH
Murraya - Murraya paniculata					
Mysore raspberry, White blackberry - <i>Rubus</i> niveus					
Mysore thorn - Caesalpinia decapetala					
Narrow-leaf privet - Ligustrum sinense					
New Zealand flax - Phormium tenax					
November shower - Senna multijuga					
Olive - Olea europaea					
Olive hymenachne - Hymenachne amplexicaulis				State	
Opuntia - Opuntia spp, Cylindropuntia spp., Austrocylindropuntia spp. (excludes O. ficus- indica)				State	
Oregon grape - Berberis aquifolium					
Osage orange, Bow-wood - Maclura pomifera					
Pampas grass - Cortaderia selloana					
Paper mulberry - Broussonetia papyrifera					
Parkinsonia - Parkinsonia aculeata		State			
Parrots feather - Myriophyllum aquaticum					
Parthenium weed - Parthenium hysterophorus	State				
Passionflower - Passiflora filamentosa					
Passionfruit - Passiflora spp.					
Patula pine - Pinus patula					
Pigeon berry, Coral berry - Rivina humilis					
Pink orchid tree - Bauhinia monandra					
Pink pampas grass - Cortaderia jubata					
Pink trumpet vine - Podranea ricasoliana					
Pond apple - Annona glabra	State				
Pongamia - <i>Millettia pinnata</i>					
Praxelis - Praxelis clematidia					
Prickly acacia - Vachellia nilotica	State				
Queensland maple - Flindersia brayleyana					
Radiata pine - <i>Pinus radiata</i>					
Red ludwigia - Ludwigia repens					
Red trumpet vine - Campsis radicans					
Red-flower prickly pear - Opuntia elatior					
Rhus tree - Toxicodendron succedaneaum					
Rubber vine - Cryptostegia grandiflora	State				
Rubbervine - Cryptostegia madagascariensis					
Sagittaria - Sagittaria platyphylla				State	
Salvinia - Salvinia molesta				State	

Common Name	Management Category				
	PREVENT	ERADICATE	CONTAIN	Asset Protection	W ATCH
Scotch broom - Cytisus scoparius subsp. scoparius				State	
Sea spurge - Euphorbia paralias					
Seeded banana - Musa ornata or M. velutina					
Senegal palm - Phoenix reclinata					
Senegal tea plant - Gymnocoronis spilanthoides					
Serrated tussock - Nassella trichotoma				State	
Sheda grass - Dichanthium annulatum					
Shoebutton ardisia - Ardisia elliptica					
Siam weed - Chromolaena odorata	State				
Sicilian sea lavender - Limonium hyblaeum					
Sicklethorn - Asparagus falcatus					
Silver-leaf nightshade - Solanum elaeagnifolium				State	
Skunk vine/Sewer vine - Paederia foetida					
Slash pine - Pinus elliottii					
Small dropseed - Sporobolus coromandelianus					
Spanish broom - Spartium junceum					
Spotted knapweed - Centaurea stoebe subsp. micranthos	State				
Stinking passionflower - Passiflora foetida					
Sweet viburnum - Viburnum odoratissimum var. awabuki					
Telegraph weed - Heterotheca grandiflora					
Texas needle grass - Nassella leucotrica					
Tipu tree, Rosewood - <i>Tipuana tipu</i>					
Tobacco weed - Elephantopus mollis					
Tree-of-heaven - Ailanthus altissima					
Tropical soda apple - Solanum viarum		State			
Tussock paspalum - Paspalum quadrifarium					
Umbrella tree - Schefflera actinophylla					
Uruguayan rice grass - Piptochaetium montevidense					
Velvet bean - Mucuna pruiens					
Water caltrop - <i>Trapa</i> spp.	State	<u> </u>			
Water hyacinth - Eichhornia crassipes			State		
Water lettuce - Pistia stratiotes					
Water mimosa - Neptunia oleracea and N plena					
Water poppy - Hydrocleys nymphoides					
Water soldier - Stratiotes aloides	State				
Water star grass - Heteranthera zosterifolia					
White trumpet vine - Pithecoctenium crucigerum					

Common Name	Management Category				
	Prevent	Eradicate	Contain	Asset Protection	W ATCH
Witchweed - Striga spp. (except the native S parviflora)	State				
Yellow bells - Tecoma stans					
Yellow burrhead - Limnocharis flava	State				

Regional Strategic Weed Management Plan 2017–2022

