



Inquiry into the impacts of invasive plants (weeds) and their control in Queensland

**Report No. 42, 56th Parliament
State Development, Natural Resources and
Agricultural Industry Development Committee
December 2019**

State Development, Natural Resources and Agricultural Industry Development Committee

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Abbreviations

| | |
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| AEC | Agriculture and Environment Committee |
| AEC inquiry | Inquiry into the impacts of invasive plants (weeds) and their control in Queensland by the former Agriculture and Environment Committee during the 55 th Parliament |
| AgForce | AgForce Queensland Farmers Ltd |
| Biosecurity Act | <i>Biosecurity Act 2014</i> |
| DAF | Department of Agriculture and Fisheries |
| DES | Department of Environment and Science |
| DNRM | Department of Natural Resources and Mines |
| DNRME | Department of Natural Resources, Mines and Energy |
| EIC | Environment and Invasives Committee |
| EPDNS | established pests and diseases of national significance |
| GBO | General Biosecurity Obligation |
| GRT | Giant rat's tail grass |
| IGAB | Intergovernmental Agreement on Biosecurity |
| IPAC | Invasive Plants and Animals Committee |
| ISC | Invasive Species Council |
| LGAQ | Local Government Association of Queensland |
| NBC | National Biosecurity Committee |
| NRM | Natural resource management |
| NSW | New South Wales |
| POQA | <i>Parliament of Queensland Act 2001</i> |
| QPWS | Queensland Parks and Wildlife Services |
| SLPMC | State Land Pest Management Committee |
| TMR | Department of Transport and Main Roads |
| WoNS | Weeds of National Significance |
| WoWW | War on Western Weeds |

Chair's foreword

This report presents a summary of the Agriculture and Environment Committee (AEC) and the State Development, Natural Resources and Agricultural Industry Development Committee inquiry into the impacts of invasive plants (weeds) and their control in Queensland.

During the 55th Parliament the AEC undertook an inquiry into the impacts of invasive plants (weeds) and their control in Queensland. As it was not possible to examine government programs for all weeds, the AEC resolved to examine the impact of three invasive plant species and their control as case studies for the inquiry:

- prickly acacia (*Vachellia nilotica*)
- giant rat's tail grass (GRT) (*Sporobolus pyramidalis* and *Sporobolus natalensis*), and
- fireweed (*Senecio madagascariensis*).

The AEC received 60 public submissions on the inquiry and held six public hearings across Queensland. The AEC were not able to finalise its report on the inquiry before the 55th Parliament was dissolved for the 2017 Queensland state election.

In the 56th Parliament the portfolio area of Agriculture is overseen by the State Development, Natural Resources and Agricultural Industry Development Committee (committee). In accordance with s 92(d) of the *Parliament of Queensland Act 2001*, the committee resolved to finalise the inquiry of the former AEC and report to Parliament on the impacts of invasive plants (weeds) and their control in Queensland.

There was a high level of interest in the inquiry, especially from the agricultural industry sector, and public hearings were well attended. The committee appreciated the engagement and commitment displayed by submitters and attendees.

This inquiry was constrained in scope and ambition. It was to examine the impact of just three weeds as case studies; one of these weeds has been present in Queensland since the 19th century. Working within these constraints of these three case studies, I believe we found that local government are meeting their responsibilities, and control programs for weeds on Crown land are effective. Queensland biosecurity programs are also effective and financed appropriately. Some submitters suggested better co-ordination and education would improve the situation, and the federal government has a responsibility to effectively lead national efforts on biosecurity.

It is clear LNP Members were not constrained in their expectations of this inquiry. They expected a report that could be used as a lever to change government policy, despite the state government not initiating this inquiry.

Some LNP Members have also been unconstrained in their comments on this inquiry. I have been disturbed that there have been suggestions from the Member for Gympie that the report of the committee was deliberately delayed. These comments are incorrect and misleading. This inquiry was not referred to the committee by the Parliament, as it was self-referred. No reporting date was ever set. The decisions on progress of this inquiry and publication of the report are made by the committee, and not the government.

As the Chair I will reflect on my options to take this matter further.

On behalf of the committee, I thank those individuals and organisations who made written submissions on the Bill. Thank you to our secretariat staff, the Queensland Parliamentary Service, and the

Department of Agriculture and Fisheries, the Department of Environment and Science, the Department of Natural Resources, Mines and Energy, and the Department of Transport and Main Roads.

I commend this report to the House.

A handwritten signature in black ink, reading "C. Whiting". The signature is written in a cursive style with a large, looped initial "C".

Chris Whiting MP
Chair

Recommendations

Recommendation 1

3

The committee recommends that the Legislative Assembly notes this report.

1 Introduction

1.1 The former Agriculture and Environment Committee inquiry

The former Agriculture and Environment Committee (AEC) was a portfolio committee of the Legislative Assembly in the 55th Parliament which commenced on 27 March 2015 under the *Parliament of Queensland Act 2001* (POQA) and the Standing Rules and Orders of the Legislative Assembly.¹

The AEC's primary areas of responsibility were:

- Agriculture, Fisheries and Rural Economic Development
- Environment, Heritage Protection, and
- National Parks and the Great Barrier Reef.

On 3 November 2016, the AEC resolved to investigate and report to Parliament on the impacts of invasive plants (weeds) and their control in Queensland. The committee did not agree on a reporting date.

For the inquiry, the AEC resolved to report specifically on whether:

- the responsibilities of local governments in relation to the control of prohibited, restricted and invasive plants imposed under s 48 of the *Biosecurity Act 2014* (Biosecurity Act) are reasonable, and local governments are meeting those obligations
- programs for the control of weeds on Crown land administered by the Department of Natural Resources and Mines (DNRM) are effective
- Biosecurity Queensland's weed programs, including biological controls and new technologies, are adequately funded and effective at controlling weeds
- environmental programs administered by Department of Environment and Heritage Protection impact favourably on weed control programs administered by the Department of Agriculture and Fisheries (DAF) and local governments, and
- federal, state and local government weed programs are coordinated to maximise their achievements and to have a whole of government approach.

As it was not possible to examine government programs for all weeds, the AEC examined the impact of three invasive plant species and their control as case studies for the inquiry. These were:

- prickly acacia (*Vachellia nilotica*)
- giant rat's tail grass (GRT) (*Sporobolus pyramidalis* and *Sporobolus natalensis*), and
- fireweed (*Senecio madagascariensis*).

For its inquiry, the AEC:

- published information papers to assist stakeholders
- wrote to groups and individuals considered likely to have an interest in the inquiry, inviting written submissions
- received oral and written briefings from DAF
- held public meetings and public hearings in Gladstone, Gatton, Hughenden and Barcaldine, and
- held further public briefings and hearings in Brisbane.

¹ *Parliament of Queensland Act 2001*, s 88 and Standing Order 194.

On 29 October 2017, the Acting Governor dissolved, by Proclamation, the 55th Parliament of Queensland. The AEC of the 55th Parliament was also dissolved on this date and therefore this inquiry lapsed.

1.2 Role of the committee

The State Development, Natural Resources and Agricultural Industry Development Committee (committee) is a portfolio committee of the Legislative Assembly in the 56th Parliament which commenced on 15 February 2018 under the POQA and the Standing Rules and Orders of the Legislative Assembly.²

The committee's areas of portfolio responsibility are:

- State Development, Manufacturing, Infrastructure and Planning
- Natural Resources, Mines and Energy, and
- Agricultural Industry Development and Fisheries.

On 1 April 2019, the committee resolved to finalise the AEC inquiry into invasive plants (weeds) and their control in Queensland.

1.3 Inquiry process

The AEC travelled extensively during its inquiry, holding public meetings and hearings in Gladstone, Gatton, Hughenden and Barcaldine as well as public hearings and briefings in Brisbane. A list of witnesses who attended the AEC inquiry public briefings and hearings is at Appendix A.

The AEC inquiry also received 60 written submissions, these are listed at Appendix B.

Given the thoroughness with which the AEC conducted its inquiry and the fact that the committee resolved to finalise the AEC inquiry, the committee did not seek further evidence by way of submissions or hearings.

On 10 June 2019, the committee received a public briefing from the following departments:

- Department of Environment and Science (DES)
- Department of Natural Resources, Mines and Energy (DNRME)
- DAF, and
- Department of Transport and Main Roads (TMR).

A list of officials who attended the public briefing is at Appendix C. The committee also received written advice in response to questions taken on notice at the public briefing. The correspondence and transcripts of the public briefing are available on the committee's webpage.³

The committee used the evidence received by the AEC in drafting its report. This included submissions, departmental responses to submissions, documents tabled at briefings and hearings and the transcripts of public briefings and hearings. This evidence is available from the AEC inquiry page on the Queensland Parliament website.⁴

² *Parliament of Queensland Act 2001*, s 88 and Standing Order 194.

³ <https://www.parliament.qld.gov.au/work-of-committees/committees/SDNRAIDC/inquiries/current-inquiries/Weeds2019>

⁴ <https://www.parliament.qld.gov.au/work-of-committees/former-committees/AEC/inquiries/past-inquiries/14-Weeds>

1.4 Recommendation

The committee's examination of the impact of invasive plants (weeds) and their control in Queensland is documented in this report. The committee recommends that the Legislative Assembly notes this report.

Recommendation 1

The committee recommends that the Legislative Assembly notes this report.

2 Invasive plants (weeds) and their impact in Queensland

2.1 About weeds

The Australian Weeds Strategy 2017 to 2027, which outlines the principles for weed management in Australia, defines a weed as ‘a plant that requires some form of action to reduce its negative effects on the economy, the environment and human health or amenity’.⁵ A weed can be an exotic species or a native species that has established in an area in which it did not previously exist.

For the purposes of the inquiry, the committee defined weeds more narrowly as the species of invasive plants set out in Schedule 1 and Schedule 2 of the Biosecurity Act. These species are listed in Appendix D.

Weeds pose a significant and costly challenge to government, industry and the community. Considerable time and money is spent in managing weed problems and protecting ecosystems and primary production.

Weeds are a global problem. A 2016 study identified 4,979 invasive vascular plant species around the world.⁶ Worldwide, the cost of invasive species has been estimated at nearly five per cent of the world economy.⁷ A 2004 study estimated that, annually, weeds cost Australian farmers around \$2.5 billion in lost agricultural production and a further \$1.5 billion in weed control activities. This was double the estimated annual cost of \$2 billion in 1981–82.⁸ The estimate of combined costs to farmers of \$4 billion in 2004 equates to \$5.4 billion in 2016.⁹

The 2004 study also noted that weeds have a higher impact at the farm gate than salinity, sodicity and acidity. The most conservative estimate of the *net* impact of weeds (\$3,442 million) is an order of magnitude higher than the *gross* estimates at the farm gate for salinity (\$187 million), sodicity (\$1,035 million) and acidity (\$1,585 million).¹⁰

2.2 Weed spread pathways

A pathway is any means or mechanism by which weed plants or propagules may be dispersed.

Weeds may be introduced into Australia deliberately or inadvertently. A number of introduced species that were historically valued for their economic benefits (agricultural and livestock production, and horticulture) and aesthetic appeal (ornamental plant trade) are now declared weeds. New weeds have also entered Australia as contaminants through trade, travel and illegal activities.¹¹

According to the *Australian Weeds Strategy 2017 to 2027*, most of the significant weeds in Australia have been introduced. Of the 3,207 introduced plant species that have naturalised in Australia, around 500 are now regarded as a major problem.¹²

⁵ Australian Government, Department of Agriculture and Water Resources, *The Australian Weeds Strategy 2017 to 2027*, 2017, p 6.

⁶ Royal Botanic Gardens, *State of the World's Plants*, 2016, p 48.

⁷ David Pimentel, S McNair, J Janecka, J Wightman, C Simmonds, C O'Connell, E Wong, L Russel, J Zern, T Aquino and T Tsomondo, 'Economic and environmental threats of alien plant, animal, and microbe invasions', *Agriculture, Ecosystems & Environment*, 84(1), p 14.

⁸ Jack Sinden, Randall Jones, Susie Hester, Doreen Odom, Cheryl Kalisch, Rosemary James and Oscar Cacho, *The economic impact of weeds in Australia*, CRC for Australian Weed Management, 2004, p 39.

⁹ Based on an average inflation rate of 2.5 per cent over 12 years.

¹⁰ Jack Sinden, Randall Jones, Susie Hester, Doreen Odom, Cheryl Kalisch, Rosemary James and Oscar Cacho, *The economic impact of weeds in Australia*, CRC for Australian Weed Management, 2004, p 39.

¹¹ Australian Government, Department of Agriculture and Water Resources, *The Australian Weeds Strategy 2017 to 2027*, 2017, p 7.

¹² Australian Government, Department of Agriculture and Water Resources, *The Australian Weeds Strategy 2017 to 2027*, 2017, p 6.

Once established within Australia, there are multiple pathways for the spread of weeds. Many weeds have physical characteristics that enable their seeds and other reproductive parts to be easily transported over long distances. A CSIRO study in 2005 found that around 70 per cent of weed species in Australia (1,800 weed species at the time) may have escaped from private or botanic gardens and nurseries.¹³

2.3 Weeds in Queensland

In Queensland, there are known to be around 1,400 species of weeds, with new species being established yearly.¹⁴ The Biosecurity Act lists some of these species as either prohibited or restricted invasive plants (see Appendix D).

Prohibited invasive plants (Schedule 1) are not present in Queensland and would seriously threaten Queensland's primary industries, natural environment, livestock, human health and people's livelihoods.¹⁵ All prohibited matter must be reported within 24 hours of being sighted to Biosecurity Queensland.

Restricted invasive plants (Schedule 2) are established in Queensland and seriously threaten Queensland's primary industries, natural environment, livestock, human health and people's livelihoods.¹⁶ There are around 80 species that have been listed as restricted invasive plants, including prickly acacia, GRT and fireweed.¹⁷ There are a number of categories of restricted invasive plants, each with different restrictions placed upon them:

- Category 2: a person must report the invasive plant within 24 hours to Biosecurity Queensland
- Category 3: a person must not distribute the invasive plant either by sale or gift, or distribute into the environment
- Category 4: a person must not move the invasive plant
- Category 5: a person must not keep the invasive plant.¹⁸

Offences related to restricted invasive plants range from 200 penalty units for failure to report Category 2 plants to Biosecurity Queensland within 24 hours, to 500 penalty units for keeping Category 5 plants.¹⁹

DAF advised that no court proceedings have been brought by DAF since the commencement of the Biosecurity Act for offences relating to weeds. However DAF stated:

Biosecurity Queensland has issued 45 Biosecurity Orders in the three years since the commencement of the Act for a person failing to discharge a general biosecurity obligation. Of these, the Invasive Plants and Animals program has given sixteen biosecurity orders to individuals in relation to regulated cacti, European rabbits, water mimosa, soap pod, cha-om, assassin snails, carp, Limnocharis and redwood. One warning letter was sent in regard to a breach of a general biosecurity obligation (GBO) for electric ants.

In north Queensland, there have been more than 20 cases of voluntary surrender or seizure of regulated biosecurity matter, these were predominantly regulated cacti or cha-om. In southeast

¹³ Richard Groves, Robert Boden and W Lonsdale, *Jumping the garden fence: invasive garden plants in Australia and their environmental and agricultural impacts*, CSIRO, 2005.

¹⁴ P Bostock and A Holland (eds), *Introduction to the census of the Queensland Flora 2016*, Queensland Department of Science, Information Technology and Innovation, 2016.

¹⁵ *Biosecurity Act 2014*, s 20.

¹⁶ *Biosecurity Act 2014*, s 22.

¹⁷ For the full list and further information about restricted invasive plants, see Biosecurity Queensland, *Restricted invasive plants of Queensland*, 2016.

¹⁸ *Biosecurity Act 2014*, ss 42-45.

¹⁹ *Biosecurity Act 2014*, ss 42 and 45.

Queensland, more than 150 individual persons (2016 – 1, 2017 – 34, 2018 – 104, 2019 – 11) have surrendered or have had seized as evidence of an offence, regulated cacti (673 specimens), cha-om (200 specimens) and small numbers of other restricted matter. Seized regulated matter is forfeited and destroyed.²⁰

2.4 Weed distribution

Critical to the management of weeds is timely and accurate information on weed distribution. Every two years, Biosecurity Queensland produces a series of pest distribution maps that show the location of over 100 weeds and pest animal species which occur in Queensland.²¹ Information for the maps are gathered through regional workshops and the DAF pest distribution survey.

TMR updated the committee on the use of DAF pest distribution maps and developments in technology to control weeds noting that:

We essentially use a lot of the data developed by DAF, but we also have our own app that we use so we can give that out to local government or any other independent contractor to collect that data on their phone. That then goes back into a database and we put that on a GIS layer back in our office where it is available to other contractors who work in that particular space. The geofencing application is being trialled at the moment in the Darling Downs office. We found that it has been quite successful, so we are looking at using that elsewhere. Essentially, it links those GPS coordinates from that mapping to the contractor doing the slashing or what have you in that particular area so they know where to stop so they do not go into an area for which they might need wash down where they do not have a wash down facility.

...The advantage of the way we do that is that we have all the mapping layers provided by our colleagues in other departments. The app provides a bottoms up approach so that if people on the ground see something they can report it straight away, put it straight into their phone and it is captured in our mapping layer.²²

2.5 Committee comment

Weeds pose a significant and growing problem for Queensland in terms of the number of weeds and their spread. Given the financial costs and effort required to tackle invasive weeds once established, it is clear that greater emphasis needs to be placed on preventing weeds becoming established and the early containment and eradication of weeds. The committee notes that weeds can be identified and reported on the Biosecurity Queensland website and that TMR have developed an App to report and map the location of weeds.

The committee also notes the critical role undertaken by the federal government in addressing the introduction of weed species into Australia, which is addressed later in this report.

The committee considers that developments in technology, such as the Weed Spotter App²³ or the TMR geofencing App, will greatly assist in the mapping and monitoring of weeds. The committee therefore encourages the on-going development of the geofencing App. The committee also encourages TMR to distribute the App more widely to stakeholders to support the comprehensive mapping of weeds in the state.

²⁰ Department of Agriculture and Fisheries, correspondence dated 17 June 2019.

²¹ Department of Agriculture and Fisheries, <https://www.daf.qld.gov.au/business-priorities/biosecurity/invasive-plants-animals/pest-mapping/pdf-maps>.

²² Public briefing transcript, Brisbane, 10 June 2019, p 17.

²³ Weed Spotter App available at: <https://www.qld.gov.au/environment/plants-animals/plants/herbarium/weeds/weed-spotters-app>

3 Australian Government weed strategies and programs

While the ongoing management of weeds is primarily the responsibility of state and territory governments, local governments and land managers, the Australian Government makes strategic investments in the management of weeds that are of national significance and in the national interest. Investments in the areas of research and development, capacity building and skills development, are currently being made through Agricultural Competitiveness White Paper measures, National Landcare Programme grants and regional funding, Rural Research and Development Corporations, and other research organisations.²⁴ Recent investments include:

- the allocation of \$10.5 million over the three years to 2018/19 to projects funded under the Control Tools and Technologies for Established Pest Animals and Weeds Programme
- the 2016 National Project Agreement for managing established pest animals and weeds, which funds projects determined by each state and territory government based on the priorities and impacts on agricultural competitiveness in each jurisdiction
- commitment to support the Centre for Invasive Species Solutions' future investment in weeds research, development and extension²⁵
- support for research on weeds through the Rural Research and Development for Profit program, and
- support for natural resource management (NRM) organisations, including the National Landcare Program.²⁶

3.1 Intergovernmental Agreement on Biosecurity

The Commonwealth and all state and territory governments, except Tasmania, have signed the Intergovernmental Agreement on Biosecurity (IGAB) which came into effect in January 2012. The IGAB aims to:

- strengthen the working partnership between governments
- improve the national biosecurity system, and
- minimise the impact of pests and disease on Australia's economy, environment and the community.

The IGAB implemented the *National Environmental Biosecurity Response Agreement (NEBRA)* which sets out emergency response and cost-sharing arrangements for responding to biosecurity incidents that primarily impact the environment and/or social amenity and where the response is for the public good. The Commonwealth and all states and territories are signatories to the NEBRA.

The National Biosecurity Committee (NBC) is the governing body tasked with identifying and implementing collaborative projects to meet the national priorities identified in the IGAB.²⁷

The National Biosecurity Statement, which outlines the roles and responsibilities of participants in Australia's biosecurity system, was developed in 2018 in response to a recommendation of the 2017

²⁴ Australian Government, Department of Agriculture and Water Resources, submission 57, p 2.

²⁵ Centre for Invasive Species Solutions, 2017, https://invasives.com.au/wp-content/uploads/2018/10/180511_doc_PortfolioOneprojectlist_distribution.pdf. The Centre for Invasive Species Solutions is developing a 10 year investment plan for future research, development and extension to improve weed management in Australia.

²⁶ Australian Government, Department of Agriculture and Water Resources, submission 57, pp 2-3.

²⁷ Australian Government, Department of Agriculture and Water Resources, *Intergovernmental Agreement on Biosecurity*, 2017.

review of the IGAB and the national biosecurity system.²⁸ The National Biosecurity Statement recognises that Australia’s biosecurity system relies on partnerships between the Australian Government, state and territory governments, local governments, industry, environmental bodies, land managers and the broader community.²⁹

3.2 Australian Weeds Strategy 2017 to 2027

The *Australian Weeds Strategy 2017 to 2027* provides national guidance on best practice weed management. The strategy aims to:

...guide coordination of effort across jurisdictions and affected stakeholders and to inform plans and actions by state and territory governments, local governments, regional natural resource management (NRM) agencies, as well as by industry, landholders and the wider community.³⁰

and:

...be consistent with current biosecurity policy, in particular the Intergovernmental Agreement on Biosecurity (IGAB) and is also guided by a range of other national strategies and action plans, including both the Australian Biodiversity Conservation Strategy and threat abatement plans under the Environment Protection and Biodiversity Conservation Act 1999.³¹

The *Australian Weeds Strategy 2017 to 2027* was adopted in 2017 following an evaluation of the previous strategy in 2013. This evaluation concluded that the strategy was widely identified as providing an important strategic framework for weed management in Australia, but was widely perceived as ‘not being a driver of weed management action’.³² The evaluation report noted:

...many who participated in this evaluation identify a lack of effective connection between the Strategy and on-ground weed management.

The extent and persistence of weed problems in itself presents challenges to sustaining effort, a situation exacerbated by the absence of suitable measures of current trends.³³

The three goals and 11 priorities of the *Australian Weeds Strategy 2017 to 2027* are shown in Figure 1.

Figure 1: Goals and priorities of the *Australian Weeds Strategy 2017 to 2027*

| | |
|--|---|
| Goal 1 Prevention, detection and early intervention | |
| Priority 1.1 | Commit to and continuously strengthen effective risk-based approaches to pre-border and border activities |
| Priority 1.2 | Adopt consistent risk management and prioritisation approaches within Australia |
| Priority 1.3 | Develop and implement early detection, diagnostics and monitoring systems for priority weed species |
| Goal 2 Minimise the impact of established weeds | |
| Priority 2.1 | Develop and improve nationally coordinated approaches to manage the impacts of weeds on values and assets |

²⁸ Australian Government, Department of Agriculture, ‘National Biosecurity Statement’, <http://www.agriculture.gov.au/biosecurity/partnerships/national-biosecurity-statement>.

²⁹ Australian Government, Department of Agriculture, *National Biosecurity Statement*, 2018.

³⁰ Australian Government, Department of Agriculture and Water Resources, *The Australian Weeds Strategy 2017 to 2027*, 2017, p 2.

³¹ Australian Government, Department of Agriculture and Water Resources, *The Australian Weeds Strategy 2017 to 2027*, 2017, p 9.

³² Judy Lambert, Vicki Woodburn and Michael Clarke, *Australian Weeds Strategy Evaluation: Final Report*, 20 April 2017, p ii.

³³ Judy Lambert, Vicki Woodburn and Michael Clarke, *Australian Weeds Strategy Evaluation: Final Report*, 20 April 2017, p ii.

| | |
|--|---|
| Priority 2.2 | Increase participation in coordinated management approaches across all land tenures |
| Priority 2.3 | Improve national approach, capacity and commitment to weed containment |
| Priority 2.4 | Enhance weed control techniques and integrate management options |
| Goal 3 Enhance Australia’s capacity and commitment to weed management | |
| Priority 3.1 | Develop the knowledge, capacity and commitment of key stakeholders to play an active and constructive role in weed management |
| Priority 3.2 | Maintain and enhance long-term research, development and extension capacity and capability |
| Priority 3.3 | Develop and apply national data, information and knowledge infrastructure to support effective weed management |
| Priority 3.4 | Improve institutional arrangements and decision support resources to increase effectiveness of weed management |

Source: Australian Government, Department of Agriculture and Water Resources, 2017.

The *Australian Weeds Strategy 2017 to 2027* discusses the four stages of weed management (prevention, eradication, containment and asset protection). While governments invest in all stages of weed control, preventative programs delivered when plant populations are low generally show the greatest returns. The ratio of benefits to costs then decreases as invasions progress and populations rise.³⁴

The Invasive Plants and Animals Committee (IPAC)³⁵ was responsible for developing and maintaining the *Australian Weeds Strategy 2017 to 2027*.³⁶ In February 2018, the cross-jurisdictional NBC established the Environment and Invasives Committee (EIC). The EIC replaced the IPAC.³⁷

The EIC is progressing work under the 2019 revised Intergovernmental Agreement on Biosecurity, as well as NBC priorities by providing national policy leadership in the identification, prevention and management of invasive plants and animals.³⁸

3.3 National framework for the management of established pests and diseases of national significance

In July 2016, the NBC endorsed the *National framework for the management of established pests and diseases of national significance*. The stated purpose of this framework is to provide a strategic, consistent, scientific and risk-based approach to managing the impacts of established pests and diseases of national significance (EPDNS). The framework notes:

the tensions faced by governments at all levels between the funding and effort put into established pests and diseases and a recognition that, given limited resources, there is a need to

³⁴ Rohan Jayasuriya, Randall Jones and Remy van de Ven, *An economic decision tool for responding to new weed incursion risks in the Australian grains industry*, CRC for Australian Weed Management Technical Series No. 11, 2008.

³⁵ The Invasive Plants and Animals Committee (IPAC) was a cross-jurisdictional sectoral sub-committee of the National Biosecurity Committee, with responsibility for implementing the Intergovernmental Agreement on Biosecurity and providing policy and technical advice to the National Biosecurity Committee on national weed, vertebrate pest and freshwater invertebrate pest issues. The Environment and Invasives Committee replaced IPAC and assumed its responsibilities.

³⁶ Australian Government, Department of Agriculture and Water Resources, *The Australian Weeds Strategy 2017 to 2027*, 2017, p 32.

³⁷ Australian Government, Department of Agriculture, *‘Environment and Invasives Committee’*, www.agriculture.gov.au/pests-diseases-weeds/pest-animals-and-weeds/eic.

³⁸ Australian Government, Department of Agriculture, *‘Environment and Invasives Committee’*, www.agriculture.gov.au/pests-diseases-weeds/pest-animals-and-weeds/eic.

*focus efforts on the “front end” of the biosecurity continuum, where the potential for return on investment for government is maximised.*³⁹

Figure 2 lists the framework’s seven principles to guide the management of EPDNS.

The framework also prescribes the NBC’s process and criteria for assessing whether weed species are nationally significant based on impact, the feasibility of managing intervention, and benefits from national coordination.

Figure 2: National framework principles for the management of established pests and diseases of national significance

| | |
|----|--|
| 1. | Established pests and diseases of national significance are a particular part of the biosecurity continuum. |
| 2. | The management of EPDNS is a shared responsibility between landholders, community, industry and government. |
| 3. | To achieve asset-based protection, government will give priority to supporting industry/community leadership and actions. |
| 4. | Government will work with stakeholders to support research and development for more effective pest and disease management. |
| 5. | Enforcement intervention should be kept to the minimum necessary to achieve the desired outcome. |
| 6. | Established pests and diseases assessed as nationally significant will have an associated national management plan or strategy. |
| 7. | The list of established pests and diseases that are deemed nationally significant must be regularly reviewed against the assessment criteria and principles. |

Source: National Biosecurity Committee, 2016.

3.4 Weeds of National Significance

There are 32 weeds which Australian governments have agreed to list as ‘Weeds of National Significance’ (WoNS) (Figure 3). The WoNS have been selected based on an assessment process that prioritised these weeds based on their invasiveness, potential for spread, and environmental, social and economic impacts. These weeds require coordination among all levels of government, organisations and individuals with weed management responsibilities.

Figure 3: Weeds of National Significance

| | | |
|---------------------|----------------------|-----------------------|
| African boxthorn | Chilean needle grass | parthenium weed |
| alligator weed | fireweed | pond apple |
| asparagus weeds | gamba grass | prickly acacia |
| athel pine | gorse | rubber vine |
| bellyache bush | hymenachne | sagittaria |
| bitou bush/boneseed | Lantana | salvinia |
| blackberry | madeira vine | serrated tussock |
| bridal creeper | mesquite | silverleaf nightshade |
| brooms | mimosa | water hyacinth |
| cabomba | opuntoid cacti | willows |
| cat’s claw creeper | Parkinsonia | |

Source: Weeds Australia, 2017.

All WoNS have individual national strategic management plans.⁴⁰ These plans present lists of desirable actions to address each of the WoNS over a five-year period, though do not identify when specific actions are to be undertaken.

³⁹ National Biosecurity Committee, *National framework for the management of established pests and diseases of national significance*, 2016, p 2.

⁴⁰ Weeds of National Significance strategies and other resources are available at <http://weeds.ala.org.au/WoNS/>.

In 2009, the NRM Ministerial Council endorsed a three-phased approach to the national management of WoNS.⁴¹ In phases one and two, each WoNS had a Management Coordinator and a National Management Group/Steering Committee to oversee implementation of the goals and actions of the WoNS strategic plans and to develop and coordinate priority actions. In phase three, state and territory governments take responsibility for national coordination within their jurisdictions. From July 2013, the currently listed WoNS are in phase three.⁴²

3.5 Coordination between Commonwealth and Queensland Governments

Coordination between Australian Government and Queensland Government agencies occurs through:

- intergovernmental committees such as the NBC and the EIC
- intergovernmental agreements such as IGAB and the *National framework for the management of established pests and diseases of national significance*
- alignment of state strategies and plans with national strategies such as the *Australian Weeds Strategy 2017 to 2027* and the various WoNS national plans, and
- collaboration on joint actions in relation to these strategies.

A number of stakeholders made comments regarding the importance of cross-jurisdictional coordination and action. The Local Government Association of Queensland (LGAQ) recommended that Biosecurity Queensland be actively involved in federal actions to address coordination and stated that whole of government coordination had decreased with the ‘demise’ of the federal WoNS program:⁴³

*The Weeds of National Significance (WONS) program made great gains in achieving whole of government coordination to the management of WONS species, which had a flow on effect to other species. The demise of the program and subsequent loss of dedicated WONS Coordinators has seen much of the coordination dissolve.*⁴⁴

The Far North Queensland Regional Organisation of Councils considered that the displacement of national weed initiatives continued to hinder whole of government coordination:

*There is a decade-long legacy of defunding core national weed initiatives as exemplified by the disbanding or cuts to the National WoNS Program, Caring For Our Country, Biodiversity Fund, Landcare and the Weeds CRC. ... The retraction of external State and Commonwealth resources is one of the key drivers for the reduction in local government management capacity in this region. To our knowledge the actual impacts on national coordination of the cessation of initiatives such as WoNS (coordinators and committees) and the Weeds CRC have never been formally evaluated.*⁴⁵

AgForce also commented on how the WoNS program provided a level of national coordination:

We saw the federal government move away from Weeds of National Significance. Fireweed is one of those. That was a great program. Since then we have seen no updates on the fireweed strategic plan or to the best practice manual. Most landholders know about Weeds of National Significance and can relate to that. It is just a real shame that we have moved away from that.

⁴¹ Australian Government, Department of Agriculture and Water Resources, *The Australian Weeds Strategy 2017 to 2027*, 2017, p 33.

⁴² Australian Government, Department of the Environment and Energy, <http://www.environment.gov.au/biodiversity/invasive/weeds/weeds/lists/wons.html>

⁴³ The Department of Agriculture and Fisheries advised that the Australian Government’s decision to move the 20 original WoNS to phase three (ie. not requiring national coordinators) was to release resources for the remaining 12 WoNS, Department of Agriculture and Fisheries, correspondence dated 28 August 2017.

⁴⁴ Submission 27, pp 6-7.

⁴⁵ Submission 36, p 4.

*That also brought a level of national coordination that fed down into regional and local coordination.*⁴⁶

3.6 Committee comment

The committee notes that Commonwealth government leadership is critical to drive action on national weeds programs. The WoNS national plans for 32 weeds, is an example where the national government provided effective guidance to local governments, NRM bodies and other stakeholders as to the actions required to successfully control and eradicate the target weeds. Evidence to this inquiry noted the loss of capacity due to the cessation of targeted national management. The committee recognises the value in Commonwealth Government coordination and management of weed initiatives to drive national outcomes.

⁴⁶ Public hearing transcript, Gatton, 4 May 2017, p 14.

4 Queensland Government weed strategies and programs

4.1 Queensland Biosecurity Capability Review

An independent review into Queensland's biosecurity capability was commissioned by the Queensland Government in March 2015. The review found that Queensland is facing increased biosecurity risks from the increased global movement of livestock, products and people, and changes in climate and land use. The report made 32 recommendations, the majority of which address the systems of Biosecurity Queensland.⁴⁷

In response to the Queensland Biosecurity Capability Review, funding of \$10.8 million, over four years was provided to implement the recommendations of the review and strengthen Queensland's biosecurity capability and capacity.

Seven priority projects were designed under the Biosecurity Capability Implementation Program and commenced in 2016 and most will continue until 30 June 2020:

- Implementing collaboratively developed five year Strategy and Action Plans (the Queensland Biosecurity Strategy 2018-2023) which articulates the direction and priorities for biosecurity in Queensland
- Developing a risk-based investment allocation model that will help decision makers to prioritise resources to manage risks and ensure an optimal return on future investment
- Enhancing biosecurity preparedness and response (including external expertise) to ensure Queensland is prepared for biosecurity emergencies and that responses are consistently and effectively managed
- Improvement of Queensland's marine pest biosecurity capability through prevention and preparedness
- Piloting two collaboratively developed regional biosecurity plans to use as models for the rest of the state
- Upgrading plant pest and disease diagnostic processes in Queensland to gain National Association of Testing Authorities (NATA) accreditation
- Increasing core organisational capability within Biosecurity Queensland through skills auditing, training and upskilling.⁴⁸

The committee heard that as a result of the review, Biosecurity Queensland will provide funding to support NRM bodies to plan at a regional level for their highest priorities:

...in 2016, as a result of an independent capability review program that the government commissioned, an additional \$10.8 million was provided to Biosecurity Queensland and we also redirected \$20 million of funding towards capability building in Queensland. A key element of that was a new program to provide support to natural resource management bodies to enable them to plan at a regional level for what were their highest priorities. We have given a grant to two regional areas, the dry tropics area and the Wide Bay Burnett area, and they are of the order of \$350,000—not insignificant—to enable them to prioritise their invasive species, their weeds, and to plan at a regional wide level in order to manage the biosecurity risks.⁴⁹

⁴⁷ Renetta Brooks, Ron Glanville and Tom Kompas, *Queensland Biosecurity Capability Review: Final Report*, 2015.

⁴⁸ Department of Agriculture and Fisheries website, accessed 19 August 2019, <https://www.daf.qld.gov.au/business-priorities/biosecurity/enhancing-capability-capacity>

⁴⁹ Public briefing transcript, Brisbane, 10 June 2019, p 14. The grants have been made under the Better Partnerships Project (see section 7.5 of this report).

4.2 Queensland Biosecurity Strategy 2018-2023

A key recommendation of Queensland's Biosecurity Capability Review was to develop a biosecurity strategy to build the framework for Queensland's biosecurity system.⁵⁰ The *Queensland Biosecurity Strategy 2018-2023*⁵¹, developed in consultation with a range of stakeholder groups, seeks to:

- prevent exotic pests and diseases from entering, spreading or becoming established in Queensland
- ensure significant pests and diseases already in Queensland are contained, suppressed or managed
- contribute to the maintenance of Queensland's favourable reputation for safe and high quality trade
- protect Queensland's ecosystems and our way of life, and
- prepare for and deal effectively with new pest and disease incursions.

The strategy committed DAF to the following guiding principles:

- consistency, openness and honesty
- collaboration and a commitment to put the integrity of Queensland's biosecurity system's collective needs beyond any individual's needs, and
- fostering a culture of continuous learning and a commitment to making the biosecurity system even better.⁵²

4.3 Queensland Invasive plants and animal strategy 2019 -2024

The *Queensland invasive plants and animal strategy 2019 -2024*, released in November 2019, aims to 'establish a statewide strategic planning framework that will address the impacts of invasive plants and animals currently within Queensland and to reduce the incidence of new exotic species entering Queensland'.⁵³

The strategy complements other key biosecurity documents including:

- the *Queensland biosecurity strategy: our next five years 2018–2023*, which outlines six strategic themes for management within the Queensland biosecurity network
- the *Australian pest animal strategy 2017–2027*, which embodies eight principles that underpin effective pest animal management
- the *Australian weeds strategy 2017–2027*, which provides seven principles of effective weed management
- the Intergovernmental Agreement on Biosecurity (IGAB), which came into effect in 2012, plus the recommendations in the 2017 review endorsed by the Agriculture Ministers' Forum

⁵⁰ Department of Agriculture and Fisheries, *Draft Queensland Biosecurity Strategy 2017-2022: Our next five years*, 2017, p 7.

⁵¹ Department of Agriculture and Fisheries, *Queensland Biosecurity Strategy: Our next five years 2018-2023*, 2018.

⁵² Department of Agriculture and Fisheries, *Queensland Biosecurity Strategy: Our next five years 2018-2023*, 2018.

⁵³ Department of Agriculture and Fisheries, *Queensland Invasive plants and animal strategy 2019 -2024*, 2019, p 2.

- national legislation such as the *Environment Protection and Biodiversity Conservation Act 1999*.⁵⁴

The strategy highlights that management of invasive plants and animals is the shared responsibility of land managers, industry, the community and all levels of government.

4.4 Queensland Feral Pest Initiative

The Queensland Feral Pest Initiative is a joint Queensland and federal government funded project to support weed and pest animal management. Funding is provided to organisations such as regional NRM groups, industry organisations, local governments, or regional organisations of local governments or equivalent bodies. These organisations are required to develop regional projects through consultation with affected stakeholders, such as primary producers, local governments, regional NRM groups, Landcare groups, wild dog committees, and others, that identify an agreed project proponent or proponents. An oversight group of government and non-government representatives oversees the development and implementation of the initiative.⁵⁵

As part of Round 1, \$15 million funding was allocated. Desert Channels Queensland obtained funding to tackle prickly acacia through supporting key drought affected properties in the Desert Channels, Flinders and McKinlay areas with weed treatment and strategies. In Round 2, \$8.84 million was allocated from 2016, with an additional \$1.9 million over three years allocated under Round 2.2 to support industry and local government to improve their pest management activities. Successful projects included:

- Cape York NRM Ltd—priority feral pest and weed management
- Cassowary Coast Regional Council—Kosters Curse weed management
- Desert Channels Queensland—prickly acacia eradication
- Southern Gulf NRM—prickly acacia management
- Barcoo Shire Council—additional officer over three years to build capacity of Barcoo Shire landowners to meeting biosecurity obligation
- Winton Shire Council—additional officer over three years to build capacity of Winton Shire Council landowners to improve biosecurity obligations
- Barcaldine Regional Council—additional officer over three years to progress the Barcaldine Regional Council Good Neighbour Program
- Southern Downs Regional Council—additional officer to deliver a compliance and property level pest management planning function, and
- Bulloo Shire Council—employment of a part-time biosecurity liaison officer to build capacity amongst local landholders.⁵⁶

⁵⁴ Department of Agriculture and Fisheries, *Queensland Invasive plants and animal strategy 2019 -2024*, 2019, p 2.

⁵⁵ The Queensland Feral Pest Initiative Oversight Group includes representatives from AgForce, Queensland Farmers' Federation, Local Government Association of Queensland, NRM Regions Queensland, Queensland Conservation Council, Wildlife Preservation Society of Queensland, Centre for Invasive Species Solutions, Department of Agriculture and Fisheries, Department of Natural Resources, Mines and Energy, and Department of Environment and Science, <https://www.daf.qld.gov.au/business-priorities/biosecurity/invasive-plants-animals/animals/qld-feral-pest-initiative>.

⁵⁶ Department of Agriculture and Fisheries, <https://www.daf.qld.gov.au/plants/weeds-pest-animals-ants/queensland-feral-pest-initiative>.

Round 3 funding of \$7 million was allocated from 2019. Ten projects were funded including the Southern Gulf NRM Flinders River Catchment prickly acacia eradication program.⁵⁷

4.5 Biosecurity Queensland weed eradication programs and control methods

4.5.1 War on Western Weeds

The War on Western Weeds (WoWW) was a \$1.88 million project aimed at reducing the incidence and spread of prickly acacia and bellyache bush in western Queensland through improved weed management, research and training. WoWW was a five year initiative managed by DAF which operated until June 2018.

Activities undertaken as part of WoWW included:

- trialling scatter gun and weed sniper applications with graziers in the Julia Creek area
- completing and progressing Good Neighbour Program case studies in the Muttaborra and Richmond areas
- collaborating with Desert Channels Queensland and Southern Gulf NRM to improve the coordination and management of prickly acacia in western Queensland
- researching prickly acacia invasion, including pod maturity, seed longevity, germination, and movement during floods
- monitoring mechanical control sites to assess seedling regrowth, follow-up control requirements and pasture recovery
- developing a prickly acacia ecology and management fact sheet series, and
- investigating possible biological controls.⁵⁸

The Southern Gulf NRM noted that Biosecurity Queensland had shown ‘innovative leadership’ in the WoWW project and that the project has ‘done a good job in trialling and systematically evaluating a range of technologies, planning and engagement approaches, and control options’.⁵⁹

Similarly, AgForce stated that the project ‘must be commended for developing case studies outlining costs of control using different methods and strategies’.⁶⁰

4.6 National eradication programs managed by the Queensland Government

4.6.1 Four Tropical Weeds Eradication Program

Biosecurity Queensland manages the national Four Tropical Weeds Eradication Program, which targets weed species native to tropical America which have been introduced into north Queensland. The program coordinates activities, with the objective to eradicate the species from Australia. Funding for the program is shared nationally with contributions from the Australian, Queensland, New South Wales (NSW), Northern Territory and Western Australia governments.⁶¹

⁵⁷ Department of Agriculture and Fisheries, <https://www.daf.qld.gov.au/plants/weeds-pest-animals-ants/queensland-feral-pest-initiative>.

⁵⁸ Queensland Government, <https://www.business.qld.gov.au/industries/farms-fishing-forestry/agriculture/land-management/health-pests-weeds-diseases/weeds-diseases/woww>.

⁵⁹ Submission 12, p 5.

⁶⁰ Submission 33, p 2.

⁶¹ Department of Agriculture and Fisheries, Four tropical weeds eradication program, <https://www.daf.qld.gov.au/business-priorities/biosecurity/invasive-plants-animals/plants-weeds/weed-eradication/four-tropical-weeds>

4.6.2 Red Witchweed National Eradication Program

The Red Witchweed National Eradication Program targets eradication of red witchweed which has been introduced into North Queensland. The program is managed by Biosecurity Queensland and is jointly funded and supported by the federal government, as well as state government agencies in Queensland, NSW and the Northern Territory, and key industry peak bodies.

Biosecurity Queensland has established a surveillance program to determine spread of the weed, and implemented control measures to reduce the risk of further spread.⁶²

4.7 Research and biological control

Biosecurity Queensland undertakes biological weed control research. A 2006 study of biological controls by the former Cooperative Research Centre for Australian Weed Management found an overall benefit cost ratio of 23.1 (i.e. for every dollar spent on weed biological controls, a benefit of \$23.10 is generated). The study also found that around 75 per cent of projected future benefits of biological controls would flow to the agricultural sector.⁶³

The Invasive Plants and Animals Research group in Biosecurity Queensland, in collaboration with national and international partners, develops science-based tools and management practices for Queensland land managers. Achievements of the research program for 2015-16 included:

- new biological control agents assessed for control of prickly acacia, bellyache bush, Siam weed, mikania, lantana and several cacti
- projects supporting state and national eradication programs for numerous weeds, including red witchweed, miconia, mikania and limnocharis, with effective control options being sought and ecological data collected that will help determine the frequency and duration of control activities
- trials identifying effective herbicides, application rates and techniques for control of several priority weeds in Queensland, including prickly acacia, bellyache bush, Siam weed, lantana, rubber vine, and alligator weed, and
- ecological research to assist management (e.g. seed longevity, environmental requirements) being undertaken on numerous weeds.⁶⁴

Mr Martin Hannan-Jones, Senior Policy Officer, Invasive Plants and Animals, Biosecurity Queensland, Department of Agriculture and Fisheries noted:

Our focus is really on early introduction and preventing the establishment of new pests and diseases in Queensland... The research that Invasive Plants and Animals undertakes is based around three areas: biological control, searching for new agents, and releasing approved agents and monitoring the effects of those agents... We also are doing some basic research into weed management... This research is looking at improving the efficacy and efficiency of control measures used to target those weeds, particularly those at the heart of eradication programs.⁶⁵

⁶² Department of Agriculture and Fisheries, https://www.daf.qld.gov.au/__data/assets/pdf_file/0003/85683/pest-alert-red-witchweed.pdf.

⁶³ A Page and K Lacey, *Economic Impact Assessment of Australian Weed Biological Control Effort*, CRC for Australian Weed Management Technical Series No. 10, 2006, p 2.

⁶⁴ Department of Agriculture and Fisheries, Technical highlights: Invasive plant and animal research 2015-16.

⁶⁵ Public briefing transcript, Brisbane, 10 June 2019, pp 11-12.

Evidence to the inquiry identified the importance of biological control research and the need to provide long term funding for research.⁶⁶ The Invasive Species Council highlighted the importance of Biosecurity Queensland's research capacity:

*A critical mass of research capacity is needed to improve taxonomic and diagnostic ability and understanding of current and potential pest species, establish and improve effective management options, develop supporting technologies such as mapping and surveillance methods and to identify biological controls for established pests and diseases.*⁶⁷

CSIRO noted that '...at both a national and State level, the capabilities required to undertake multiple weed management programs based on biological control has until recently been under critical threat due to lack of resources'.⁶⁸

4.8 Education and extension activities

DAF has published fact sheets on weeds on its website.⁶⁹ The website also provides information about an awareness and action program called 'Weedbusters'. This program aims to protect Queensland from weeds by raising awareness about weeds and their impacts and involving the community in weed management. Landcare groups, state and local governments, schools and other community groups participate in Weedbusters by holding events such as weed clean-ups, field days, and displays at shopping centres and libraries.⁷⁰ A joint project between the Queensland Herbarium, Biosecurity Queensland, local governments and the community, Weed Spotters Network Queensland, contributes to the detection of new and emerging weed outbreaks through the use of the Weed Spotter App.⁷¹

A number of stakeholders stressed that there needed to be greater education and extension activities in relation to weeds.⁷²

The LGAQ considered that education about the general biosecurity obligation (GBO)⁷³ is critical. It recommended that Biosecurity Queensland deliver a state-wide campaign to generate awareness about the GBO and provide information about what the public can do and who to contact. The LGAQ also recommended that Biosecurity Queensland support and resource implementation of regular Pest Advisory Forums that provide information to the community about regionally significant weeds and the tools and strategies available to address them.⁷⁴ Additionally AgForce recommended that DAF

⁶⁶ Southern Gulf NRM, submission 12; Gympie Landcare Group, submission 32; Burnett Mary Regional Group for Natural Resource Management, submission 46.

⁶⁷ Invasive Species Council, Submission 37, p 6.

⁶⁸ Submission 48, p 3.

⁶⁹ Department of Agriculture and Fisheries, *Weed and pest animal fact sheets*.

⁷⁰ Department of Agriculture and Fisheries, <https://www.daf.qld.gov.au/business-priorities/biosecurity/invasive-plants-animals/education>

⁷¹ Queensland Government, <https://www.qld.gov.au/environment/plants-animals/plants/herbarium/weeds/weed-spotters-app>

⁷² Fitzroy Basin Association, submission 40, p 3; Healthy Waterways and Catchments, submission 54, p 2; Queensland Farmers' Federation, submission 29, p 2; Healthy Waterways and Catchments, submission 54, p 2; Invasive Species Council, submission 37, p 7, AgForce, submission 33, p 2, Local Government Association of Queensland, submission 27, p 4.

⁷³ The general biosecurity obligation (GBO), under Queensland's *Biosecurity Act 2014*, establishes that everyone is responsible for managing biosecurity risks that are under their control and that they know about, or should reasonably be expected to know about. Individuals and organisations whose activities pose a biosecurity risk must take all reasonable and practical steps to prevent or minimise each biosecurity risk, minimise the likelihood of causing a 'biosecurity event' and limit the consequences if such an event is caused, and prevent or minimise the harmful effects a risk could have and not do anything that might make any harmful effects worse.

⁷⁴ Submission 27, p 4.

work in collaboration with other stakeholders to scope weed control workshops aimed at produce agency staff and interested land managers.⁷⁵

4.9 Committee comment

Biosecurity Queensland's critical role in the control of weeds was acknowledged during the inquiry. In particular, stakeholders noted the achievements of the WoWW program in improving the management of prickly acacia in western Queensland.

The committee notes that stakeholders highlighted that there was a need to increase public knowledge and awareness of weeds⁷⁶, including:

- educating everyone about their responsibilities under the GBO
- generating awareness amongst landholders of what they can do and who they can contact for advice on best practice management of weeds
- educating garden shops and home gardeners about the risks associated with introduced plants, and
- encouraging potential purchasers of rural properties, particularly hobby farmers without prior farming experience, to check properties for weeds and engage expert advice before purchasing a property.

The committee considers that DAF is the agency best placed to deliver education and outreach programs to explain the GBO and to provide sources of advice and information on weed identification and control in the state.

The committee notes that a significant range of useful information and resources is already available on the DAF website.

⁷⁵ Submission 33, p 9.

⁷⁶ Fitzroy Basin Association, submission 40; Healthy Waterways and Catchments, submission 54; Queensland Farmers' Federation, submission 29; Invasive Species Council, submission 37; AgForce, submission 33; Local Government Association of Queensland, submission 27.

5 Weed control and management by local governments

5.1 Local government responsibilities under *the Land Protection (Pest and Stock Route Management) Act 2002*

Local governments have long-established responsibilities in relation to weed control.

Under the *Land Protection (Pest and Stock Route Management) Act 2002*, one of the functions of a local government was ‘to ensure declared pests are managed within its area in accordance with this Act and the principles of pest management’. The term ‘declared pest’ was defined to include a live animal or plant declared under this Act.⁷⁷

The *Land Protection (Pest and Stock Route Management) Act 2002* enabled local governments to declare ‘local pests’ by local law. Local governments were required to have a pest management plan for declared pests in their area.⁷⁸ in place within two years of the relevant section commencing.⁷⁹ Section 25 of the *Land Protection (Pest and Stock Route Management) Act 2002* commenced on 1 July 2003, meaning local governments had until 1 July 2005 to have pest plans in place. Under s 31 of the *Land Protection (Pest and Stock Route Management) Act 2002*, the local government pest management plans were effective for the period stated in it, but for no more than four years.

Under the *Land Protection (Pest and Stock Route Management) Act 2002*, the local government pest management plans had to be consistent with:

- the principles of pest management
- the state pest management strategies, and
- the guidelines for pest management.⁸⁰

5.2 Local government responsibilities under the *Biosecurity Act 2014*

The Biosecurity Act commenced on 1 July 2016, providing a single risk-based framework for biosecurity in Queensland. It replaced numerous separate pieces of legislation that were previously used to manage biosecurity, including the pest management provisions in the *Land Protection (Pest and Stock Route Management) Act 2002*.

The Biosecurity Act imposes on individuals and organisations a ‘general biosecurity obligation’, so that everyone must take all reasonable and practical steps to prevent or minimise biosecurity risks that are under their control and that they know about, or should reasonably be expected to know about.⁸¹ Local governments, like all other persons, are subject to the GBO.

Section 48 of the Biosecurity Act states that the main function of each local government is to ensure that invasive biosecurity matter for the local government’s area is managed in compliance with the Act. The term ‘invasive biosecurity matter’ is defined to include only invasive plants and animals that are listed as prohibited and restricted matter in Schedules 1 and 2 of the Act. Under s 48(3), local governments may make a local law providing for the management of invasive plants in their local government area, whether or not they are prohibited matter or restricted matter.

⁷⁷ *Land Protection (Pest and Stock Route Management) Act 2002*, Schedule 3.

⁷⁸ *Land Protection (Pest and Stock Route Management) Act 2002*, s 25.

⁷⁹ *Land Protection (Pest and Stock Route Management) Act 2002*, s 25. Note: In 2004, s 25 was amended by the Natural Resources and Other Legislation Amendment Bill 2004 to change the deadline for pest plans from one year to two years (cl 48). The explanatory notes state that many local governments were unable to meet the deadline of 1 July 2004, so the amendment allowed local governments a further 12 months to have plans completed.

⁸⁰ *Land Protection (Pest and Stock Route Management) Act 2002*, s 26.

⁸¹ Biosecurity Act, s 23.

As required under the previous Act, s 53 of the Biosecurity Act requires that each local government must have a biosecurity plan for invasive biosecurity matter for its local government area. The plan may include:

- achievable objectives under the plan
- strategies, activities and responsibilities for achieving the objectives
- strategies to inform the local community about the content of the plan and achievement of its objectives
- monitoring implementation of the plan and evaluating its effectiveness, and
- other matters the local government considers appropriate for management of invasive biosecurity matter for its local government area.⁸²

Two or more local government areas are able to work on a plan and implement the activities jointly.⁸³ Each local government must keep a publicly available copy of its plan (in written or electronic form).⁸⁴

Upon commencement of the Biosecurity Act, a local government pest management plan adopted under the *Land Protection (Pest and Stock Route Management) Act 2002* was taken to be the local government's biosecurity plan for its area for the period stated in the plan.⁸⁵

5.3 Local government biosecurity management plans

Local government biosecurity management plans bring together all sectors of the local community to manage invasive plants and animals. They ensure resources are targeted at the highest priority pest management activities, and those most likely to succeed.⁸⁶ The committee was informed that local government biosecurity plans are the key mechanism to progress coordinated local weed management.⁸⁷

The committee sought clarification as to the number of current biosecurity plans. Mr Martin Hannan-Jones, Senior Policy Officer, Invasive Plants and Animals, Biosecurity Queensland noted:

... there are 77 local governments. A number of those are Aboriginal and local governments that traditionally have not had pest management—or biosecurity plans—but, of the others, 43 local governments currently have biosecurity plans in place. There were transitional arrangements under the Biosecurity Act that allowed the pre-existing local government pest management plans to continue from the previous Act until the end of those previous biosecurity plans. A number of those are coming to the end of their life this year and last year. A number of those local governments are in the early stages of redeveloping their biosecurity plans.⁸⁸

DAF informed the committee that resources to assist local governments to develop and finalise biosecurity management plans were provided to the LGAQ and these can be accessed by LGAQ members on the LGAQ website.⁸⁹

⁸² Biosecurity Act, s 53.

⁸³ Biosecurity Act, ss 53, 55.

⁸⁴ Biosecurity Act, s 54.

⁸⁵ Biosecurity Act, s 126.

⁸⁶ Department of Agriculture and Fisheries, 'Local government biosecurity plans', www.daf.qld.gov.au/business-priorities/biosecurity/information-local-councils/local-government-area-pmps.

⁸⁷ Public briefing transcript, Brisbane, 10 June 2019, p 4.

⁸⁸ Public briefing transcript, Brisbane, 10 June 2019, pp 14-15.

⁸⁹ Department of Agriculture and Fisheries, correspondence dated 28 August 2017.

The committee also heard that DAF provides support to local government officers through training in relation to their obligations under the Biosecurity Act.⁹⁰

5.4 Local governments' approaches to responsibilities under the *Biosecurity Act 2014*

Some submitters acknowledged the benefits of the Biosecurity Act compared to the *Land Protection (Pest and Stock Route Management) Act 2002*.⁹¹ A number of submissions argued that the introduction of the Biosecurity Act had expanded or shifted responsibilities to local governments⁹² and had increased administration, resulting in increased costs and greater workload.⁹³ Other submitters stated the responsibilities of local governments are reasonable,⁹⁴ or reasonable if local governments are adequately resourced and supported by state government agencies.⁹⁵

DAF advised that the responsibilities of local governments under the Biosecurity Act are similar to the previous responsibilities imposed under the *Land Protection (Pest and Stock Route Management) Act 2002*:

[The role of local government] is no different really. The previous Acts have always required local government involvement, and the responsibilities are largely the same. Through the Act they have more flexibility and that might make it seem like they have more responsibility...⁹⁶

Local governments (and their predecessors) have historically had responsibility for ensuring landholders control weeds, prior to the Biosecurity Act, under the *Divisional Boards Act 1887*, *Local Authorities Act 1902*, *Local Government Act 1936*, *Stock Routes and Rural Lands Protection Act 1944*, *Rural Lands Protection Act 1985* and *Land Protection (Pest and Stock Route Management) Act 2002*.⁹⁷

Additionally, DAF advised that the number of species had not significantly increased under the Biosecurity Act:

Under the Land Protection (Pest and Stock Route Management) Act 2002 local government's function was to ensure the management of Class 1, Class 2 and Class 3 declared pests in its area in accordance with the Act. Those Class 1, Class 2 and Class 3 declared pests are the same invasive biosecurity matter listed in the Biosecurity Act.⁹⁸

Submissions outlined some of the actions that local governments are taking to fulfil their responsibilities under the Biosecurity Act.

A number of stakeholders were complementary of the activities of the Flinders Shire Council in implementing a Good Neighbour Program.⁹⁹ The Flinders Shire Council Good Neighbour Program, is aimed at reducing the spread of weeds across property boundaries:

When one neighbour is seemingly doing nothing about their infestation and another is working tirelessly to control and eradicate it, conflict can often erupt. Flinders Shire Council addressed this with the Good Neighbour Program. The idea that as little as a 10-metre buffer zone around property boundary perimeters, each side of access roads and downstream on a watercourse and

⁹⁰ Public briefing transcript, Brisbane, 10 June 2019, p 15.

⁹¹ Charters Towers Regional Council, submission 56, p 1.

⁹² See, for example, Gladstone Regional Council, submission 9, p 1; Rockhampton Regional Council, submission 13; Southern Downs Regional Council, submission 12, p 3.

⁹³ Rockhampton Regional Council, submission 13, p.2.

⁹⁴ Burnett Mary Regional Group for Natural Resource Management, submission 46, p 1.

⁹⁵ Barcoo Shire, submission 52, p 1; Local Government Association of Queensland, submission 27, p 3.

⁹⁶ Public briefing transcript, Brisbane, 10 May 2017, p 4.

⁹⁷ Department of Agriculture and Fisheries, correspondence dated 28 August 2017.

⁹⁸ Department of Agriculture and Fisheries, correspondence dated 28 August 2017.

⁹⁹ See, for example, Southern Gulf NRM, submission 12, p 3; Agforce, submission 33, p 2; public hearing transcript, Hughenden, 19 June 2017, p 9.

250 metres upstream on a watercourse significantly controls and reduces one property's infestation from impeding on another is the principle of the Good Neighbour Program. The Good Neighbour Program is the minimum reasonable action that a landholder should take to control their infestation.

The Flinders Shire Council's War on Western Weeds project, in partnership with Southern Gulf, embarked on a pilot study to investigate if a boundary protection zone approach would work on a broad scale and the feasibility of establishing such buffers. The case study demonstrated that the establishment of property protection zones for pest management is relatively quick and easy with a low to moderate cost.¹⁰⁰

AgForce recommended increased resourcing of local governments to assist them to implement management strategies such as the Good Neighbour Program.¹⁰¹

DAF noted that the Good Neighbour Program was being implemented by a number of local governments with significant outcomes:

The Good Neighbour Program is a really good demonstration of how people can demonstrate their general biosecurity obligation in the sense that if you do not have the resources to do the whole lot of your property at least the bare minimum you could do is protect your neighbours from getting it and making sure you had a fairly good buffer zone, and that is where I think we get a good buy-in.¹⁰²

Additionally, DAF confirmed that there was a role for the department in assisting in the roll-out of a Good Neighbour Program:

We would help out without a doubt. As I say, that was something we kicked off. It is in three different areas. They are all taking it up, particularly after the success up in Flinders. If that can be rolled out in other areas that is fantastic.¹⁰³

Other approaches and activities being undertaken by local governments include:

- Barcoo Shire Council has an aim to eradicate all WoNS within its shire by 2020¹⁰⁴
- Ipswich City Council has recruited a dedicated officer to manage fireweed infestations and has provided free disposal of bagged fireweed at transfer stations¹⁰⁵
- Lockyer Valley Regional Council has spraying equipment which it loans out for free, and a subsidised herbicide program¹⁰⁶
- Noosa Shire Council conducts a monitoring program for specific weeds, which includes property inspections and provision of advice to landholders¹⁰⁷
- a regional group aligned with the Wide Bay Burnett Regional Organisation of Councils has been formed and is in the process of developing a regional strategy¹⁰⁸

¹⁰⁰ Public hearing transcript, Hughenden, 19 June 2017, p 11.

¹⁰¹ Submission 33, p 2.

¹⁰² Public hearing transcript, Barcaldine, 20 June 2017, p 10.

¹⁰³ Public hearing transcript, Barcaldine, 20 June 2017, p 11.

¹⁰⁴ Public hearing transcript, Barcaldine, 20 June 2017, pp 2-3.

¹⁰⁵ Ipswich City Council, submission 58, p 3.

¹⁰⁶ Public hearing transcript, Gatton, 4 May 2017, p 3.

¹⁰⁷ Noosa Shire Council, submission 30, p 1.

¹⁰⁸ Gympie Regional Council, submission 22, p 1.

- local governments in the Gulf Region collaborate with Southern Gulf NRM, Biosecurity Queensland and others in the Gulf Catchments Pest Task Force, to coordinate and share information about pest animal and weed management,¹⁰⁹ and
- the Capricornia Pest Management Group, a group of councils in the Fitzroy catchment area, meets every three months and takes a coordinated approach to weed management.¹¹⁰

In contrast, a number of submissions were critical of specific local governments, or local governments more generally, for their approach to weed management.¹¹¹

The Invasive Species Council (ISC) submitted that local governments' management of weeds was often not strategic and provided examples to illustrate its claim, including:

- *Failing to set risk-based priorities for tackling invasive plants*
- *Failing to take into account the precautionary principle where environmentally invasive plants are concerned*
- *Focussing only on listed weeds and ignoring emerging weed threats that may become the listed weeds of the future*
- *Using ineffective methods of invasive plant management (for example once-off or periodic herbicide use without adequate planning or follow-up)*
- *Eschewing regulation or enforcement due to local socio-political pressures (e.g. where there is perceived to be a lack of support from elected councillors).¹¹²*

In response to comments from the Invasive Species Council that local governments' management of weeds is often not strategic, DAF stated:

Queensland local governments are developing their own tools to determine their own risk-based priorities. Not all local governments may put the same emphasis on environmental considerations ahead of public health, social amenity or economic considerations as does the Invasive Species Council.

The precautionary principle alluded to by the ISC is articulated in section 5 of the Biosecurity Act as "including in risk-based decision making, the principle that lack of full scientific certainty should not be used as a reason to postpone taking action to prevent a biosecurity event or to postpone a response to a biosecurity risk".

Weed management in Queensland has devolved planning and decision making, local governments are empowered to make plans and decisions based on local and regional priorities. A similar approach has been adopted in NSW.¹¹³

5.5 Consistency across Queensland

A number of submitters noted inconsistencies in the approaches taken by local governments to compliance and enforcement. Issues raised included:

- compliance activities are being resolved on an ad hoc basis, and local governments need training to ensure a standard approach¹¹⁴

¹⁰⁹ Southern Gulf NRM, submission 12, p 2.

¹¹⁰ Banana Shire Council, public hearing transcript, Gladstone, 27 April 2017, p 6.

¹¹¹ Biddaddaba Creek Action Group, submission 5, p 1, Gympie & District Landcare Group, submission 32, p 1.

¹¹² Submission 37, pp 3-4.

¹¹³ Department of Agriculture and Fisheries, correspondence dated 28 August 2017.

¹¹⁴ Gympie Regional Council, submission 22, p 1.

- while the Biosecurity Act provides more flexibility to local governments, it 'also creates the potential for inconsistencies to occur across local governments'¹¹⁵
- 'minimum requirements for Councils may be worth investigating to provide consistent expectations (for landholders) across council boundaries in regards to support and enforcement,'¹¹⁶ and
- the need for clearer direction and guiding principles on compliance matters from the state government so as to avoid conflicts between the public and local government agencies and threats to on-ground control actions by landholders because of cross-boundary issues.¹¹⁷

Mr Ken Sherwood, Acting Regional Manager of Land Services, DNRME commented on the lack of consistency across local government plans, stating:

*From the department's point of view, yes, we find that there are different levels of consistency between the councils. They certainly have different expectations of our department ... Some councils make it a high priority; some not so. That is obviously the call of the councils but, from our department's point of view, we are looking to get that consistency so that we can effectively get the most out of every pest dollar that we are spending.*¹¹⁸

The LGAQ requested greater support for local governments, including the development of templates and materials, to ensure consistency in compliance and enforcement across Queensland.¹¹⁹ DAF responded to concerns regarding inconsistent compliance approaches between local governments, stating that:

Each local government is encouraged to work with their neighbouring local governments to identify and address differences in compliance enforcement approach ...

*Regional Biosecurity Plans may be developed for a unified approach between adjoining local governments.*¹²⁰

In response to requests for greater compliance and enforcement support for local governments to ensure consistency, DAF advised that it provided training to local government officers appointed as authorised persons under the Biosecurity Act, and that the training modules are available on the LGAQ website to all local government staff.¹²¹

5.6 Enforcement of biosecurity obligations

The Ipswich City Council stated that there was a lack of clarity and understanding amongst both landholders and local governments about the responsibilities imposed by the Biosecurity Act. The Council noted that this created difficulties for council officers when liaising with landholders as part of enforcement activities.¹²²

Under the Biosecurity Act, landowners are responsible for taking all reasonable and practical steps to minimise the risks associated with invasive plants under their control.

There are a range of options for local governments to promote compliance with the GBO. These include raising awareness and providing educational material to issuing specific biosecurity orders in instances where a person has failed to discharge their GBO. Mr Hannan-Jones from Biosecurity Queensland

¹¹⁵ Ipswich City Council, submission 58, p 2.

¹¹⁶ Fitzroy Basin Association, submission 40, p 1.

¹¹⁷ Gladstone Regional Council, submission 9, p 2.

¹¹⁸ Public briefing transcript, Brisbane, 10 June 2019, p 3.

¹¹⁹ Local Government Association of Queensland, submission 27, pp 3-4.

¹²⁰ Department of Agriculture and Fisheries, correspondence dated 28 August 2017.

¹²¹ Department of Agriculture and Fisheries, correspondence dated 28 August 2017.

¹²² Public hearing transcript, Gatton, 4 May 2017, p 4.

highlighted a number of projects that assists local government in its enforcement of the Biosecurity Act:

Mentioned earlier was the War on Western Weeds. That was a project working with Flinders Shire on what they were referring to as their good neighbour policy. It was around bringing landholders on board through education and creating cooperative relationships with neighbours so that council would not have to use the big stick. That is where we have been assisting local governments in achieving compliance with the Act rather than enforcing particular individual situations.¹²³

5.7 Oversight of local governments' responsibilities

Some submitters argued that the Queensland Government should ensure that local governments are fulfilling their responsibilities under the Biosecurity Act for weed management.

Submitters raised the following issues:

- the state government needs to ensure that local governments maintain their lands and verges so that landowners could feel that the time and money that they spend on weed control is being well spent¹²⁴
- a number of council websites do not refer to the Biosecurity Act, but instead refer to the previous legislation, and this outdated website information indicates that the Queensland Government needed to make more effort to engage with local government¹²⁵
- the Queensland Government could audit the effectiveness of local governments' weed management plans and 'financially reward or penalise performance accordingly',¹²⁶ and
- 'it would be appropriate for the State Government to randomly and independently audit the effectiveness of [local government biosecurity] plans, to ground-truth the efficacy of weed management and identify whether resourcing is adequate or not'.¹²⁷

In response to the recommendation that the state government should ensure that local governments maintain their land, DAF advised:

The Biosecurity Act contains provisions for the event that a local government is not performing its function. These have not been tested.

The former Land Protection (Pest and Stock Route Management) Act 2002 contained similar provisions. Those provisions were never used.¹²⁸

In relation to claims that outdated information on local governments' websites indicated that more state government oversight was required, DAF stated that 'Biosecurity Queensland is aware that many local government websites still make reference to the former legislation and had brought this to the attention of councils'.¹²⁹

In response to calls for audits of local government biosecurity plans, DAF said:

The Biosecurity Act 2014 reduced red tape for the process to make, endorse and implement local government biosecurity plans compared to the process for local government area pest

¹²³ Public briefing transcript, Brisbane, 10 June 2019, p 17.

¹²⁴ Biddaddaba Creek Action Group, submission 5, p 1.

¹²⁵ Submission 35, p 2.

¹²⁶ Submission 23, p 18.

¹²⁷ Queensland Farmers' Federation, submission 29, p 2.

¹²⁸ Department of Agriculture and Fisheries, correspondence dated 28 August 2017.

¹²⁹ Department of Agriculture and Fisheries, correspondence dated 28 August 2017.

management plans under the former Land Protection (Pest and Stock Route Management) Act 2002.

The Biosecurity Act allows for the Minister to ask a local government to provide a written report about any function performed or power exercised, or required to be performed or exercised by the local government under this Act.¹³⁰

5.8 Resources and funding of local government

Resources and funding for weed management by local governments was a consistent theme in submissions and in the evidence given at the hearings. Key issues raised included:

- weed management is an ‘ever-increasing resourcing burden’ on local governments in relation to controlling weeds, without any funding from the state government¹³¹
- more resources in the form of direct funding support, better inter-governmental and community collaboration, and freely available and consistent educational materials are required to deliver better outcomes by councils¹³²
- limited budgets are restricting local governments’ abilities to manage the increasing number of weeds¹³³
- additional funding is needed for local governments to conduct compliance¹³⁴
- a number of local governments lack technical knowledge regarding weed identification and management,¹³⁵ and
- there is a lack of resources and funding to train rural officers.¹³⁶

Gladstone Regional Council raised concerns in regard to a lack of contact with officers from Biosecurity Queensland.¹³⁷ The LGAQ argued that local government would greatly benefit from increased support from Biosecurity Queensland officers to provide ‘control methodology advice; updates on current research; and assistance in engaging with landholders’.¹³⁸

In response to the concern that local governments were not adequately resourced to address their weed management obligations, DAF stated that:

The level of funding required to fulfil each local government’s function under the Act is for each Council to determine during its normal budgeting process. Local governments have the power to levy general rates for services, facilities and activities that are supplied or undertaken for the benefit of the community in general; special rates and charges for services, facilities and activities that have a special association with particular land and separate rates and charges for any other service, facility or activity.

Pest management function is funded from local government’s own revenue streams.¹³⁹

¹³⁰ Department of Agriculture and Fisheries, correspondence dated 28 August 2017.

¹³¹ Council of Mayors (SEQ), submission 21, p 1.

¹³² Healthy Waterways and Catchments, submission 54, p 2.

¹³³ Fitzroy Basin Association, submission 40, p 1.

¹³⁴ Desert Channels Queensland, public hearing transcript, Barcaldine, 20 June 2017, p 7.

¹³⁵ Queensland Farmers’ Federation, submission 29, p 1.

¹³⁶ Banana Shire Council, public hearing transcript, Gladstone, 27 April 2017, p 6.

¹³⁷ Public hearing transcript, Gladstone, 27 April 2017, p 3.

¹³⁸ Local Government Association of Queensland, submission 27, p 5.

¹³⁹ Department of Agriculture and Fisheries, correspondence dated 28 August 2017.

In response to requests that the state government provide local governments with greater compliance and enforcement support, DAF stated:

The Department provided Biosecurity Act related resources (Standard Operating Procedures, forms and document templates) to the Local Government Association Queensland (LGAQ). These resources reside on the LGAQ website for their member's information and use.¹⁴⁰

DAF also noted that many local governments had in-house specialized knowledge, stating, 'individual local government staff members have a range of skills and technical knowledge.'¹⁴¹ DAF does not provide on-the-ground officers to support local governments, but does work in partnership with local governments to build in-house compliance capabilities.¹⁴²

5.9 Land Protection Fund

The Land Protection Fund provides funds for activities that help a local government to manage invasive animals and invasive plants.¹⁴³ In accordance with s 60 of the Biosecurity Act, local governments contribute annual payments to the fund (known as 'precept payments').

Some witnesses highlighted that the current model for calculating a local government's payment to the fund is not appropriate and requested a review of the current funding model.¹⁴⁴

The LGAQ noted that there is a current project to implement a co-investment model, which it considered 'will increase transparency and accountability issues that have been identified by local governments in the past'.¹⁴⁵ It recommended that the state government continue to work with its organisation to improve the framework for precept payments.

In response to concerns about the inadequacies of the Land Protection Fund DAF noted:

Biosecurity Queensland is working with the LGAQ to develop a new model to calculate local government contributions to the Land Protection Fund.

The consultant's report "Land Protection Fund Review: On-Ground & Research Component" has been received and was distributed to all 77 local governments on 9 August 2017 for comment.¹⁴⁶

5.10 Challenges for smaller regional local governments

A number of submissions to the AEC inquiry noted the additional challenges faced by smaller, less well-resourced local governments.¹⁴⁷ The Invasive Species Council noted that this was particularly difficult for regional local governments with smaller populations and larger land areas.¹⁴⁸ Key concerns were that:

- section 48 of the Biosecurity Act fails to recognise the diversity of local governments across Queensland and their differing capacity to undertake their responsibilities¹⁴⁹

¹⁴⁰ Department of Agriculture and Fisheries, correspondence dated 28 August 2017.

¹⁴¹ Department of Agriculture and Fisheries, correspondence dated 28 August 2017.

¹⁴² Public hearing transcript, Barcaldine, 20 June 2017, pp 11-12.

¹⁴³ Biosecurity Act, s 57.

¹⁴⁴ Rockhampton Regional Council, submission 13, p 1; Gladstone Regional Council, submission 9, p 2.

¹⁴⁵ Local Government Association of Queensland, submission 27, p 6.

¹⁴⁶ Department of Agriculture and Fisheries, correspondence dated 28 August 2017.

¹⁴⁷ Southern Gulf NRM, submission 12, p.3, Lockyer Valley Regional Council, Public hearing transcript, Gatton, 4 May 2017, p 6.

¹⁴⁸ Invasive Species Council, submission 37, p.2.

¹⁴⁹ Lockyer Valley Regional Council, submission 41, p.2.

- resources should be increased so that local governments can uniformly meet their obligations under s 48¹⁵⁰
- while the responsibilities in the Biosecurity Act are reasonable for adequately trained and experienced staff, rural and regional communities face difficulties in attracting and retaining qualified staff and also have resource constraints,¹⁵¹ and
- Aboriginal Shire Councils lack resources for biosecurity activities.¹⁵²

A number of submitters and witnesses also highlighted the particular challenges faced by smaller local governments in attempting to enforce the Biosecurity Act:

- enforcement by local governments can be problematic because close ties within small communities results in 'a reluctance and inability to enforce the control of invasive plants'¹⁵³
- 'mates do not want to be tracking down mates or family members'¹⁵⁴
- enforcement would be best performed by a state agency 'more removed from local politics and connections',¹⁵⁵ and
- non-compliance should be referred to officers from Biosecurity Queensland 'with the independence and authority to take action'.¹⁵⁶

The LGAQ recommended that Biosecurity Queensland:

*... provide support to set up regional enforcement groups or external 'sweep' teams to undertake enforcement work in areas where this is sought by local governments constrained geographically and / or by resources.*¹⁵⁷

McKinlay Shire Council, while acknowledging that the Biosecurity Act placed responsibility for enforcement on local governments, noted that it does not have the resources to undertake enforcement, and recommended that the responsibilities of local government in relation to the Biosecurity Act be reviewed to ensure they are manageable considering the size, location, population, rates base and resources available.¹⁵⁸

DAF recognised the difficulties faced by local governments that do not have a large ratepayer base, and highlighted the use of regional bodies to address these issues:

A lot of those western shires really do have trouble. It was mentioned earlier that some of the councils have developed more into regional bodies which has really helped their cause. Local government would be aware that we have gone into a new model for looking at the allocation of funding by the local government precepts and the complementary state government funding. It is called the co-investment model. The major outcome of that is better transparency and joint decision-making in terms of where the priorities lie.

One of the concepts within that is actually forming together in regional groups rather than council by council. That is where you get the regional priorities, the regional action, the regional investment and much better regional coordination. I would like to see that mechanism actually

¹⁵⁰ Lockyer Valley Regional Council, submission 41, p 2.

¹⁵¹ Local Government Association of Queensland, submission 27, p 3.

¹⁵² Far North Queensland Regional Organisation of Councils, submission 36, pp 3-4.

¹⁵³ Desert Channels Queensland, submission 53, p 1.

¹⁵⁴ Southern Gulf NRM, public hearing transcript, Hughenden, 19 June 2017, p 16.

¹⁵⁵ Desert Channels Queensland, submission 53, p 1.

¹⁵⁶ Barcoo Shire Council, submission 52, p 1.

¹⁵⁷ Local Government Association of Queensland, submission 27, p 4.

¹⁵⁸ Public hearing transcript, Hughenden, 19 June 2017, pp 8-9.

*being the way we come together much more and assist each other in what we do. I do think that is probably one of the best approaches we can take.*¹⁵⁹

In response to the proposals from the LGAQ for regional enforcement groups or 'roving' teams of biosecurity officers to assist local governments with enforcement, DAF outlined that this option was available under the Biosecurity Act:

The Act specifically allows that a local government may appoint as an authorised person for enforcement of the Act: an employee of the local government; or an employee of another local government; or another person who has entered into a contract with the local government to perform a function under the Act. This allows smaller regional local governments and groups of local governments flexibility in deciding appropriate staffing for their compliance function.

*DAF will discuss the practicalities of such a proposal with the LGAQ, noting that no new staff are currently available and such a roving team would take existing Biosecurity Officers away from their established centres and existing duties.*¹⁶⁰

5.11 Committee comment

The committee notes the fundamental role played by local government in the control and management of weeds and the range of issues faced by local government in meeting the obligations of the Biosecurity Act.

The committee notes that DAF undertook to perform a review of the Biosecurity Act within three years of its commencement.¹⁶¹

Not all local governments have finalised their biosecurity management plans. The committee considers that local government biosecurity plans are the key mechanism to progress an effective and efficient approach to weed management. The committee encourages all local governments to finalise their biosecurity management plans.

The committee encourages local governments to make their biosecurity management plans available online.

The committee acknowledges the value of regional coordination to meet local government obligations under the Biosecurity Act. This matter is discussed in Chapter 7 of this report.

¹⁵⁹ Public hearing transcript, Gatton, 4 May 2017, p 22.

¹⁶⁰ Department of Agriculture and Fisheries, correspondence dated 28 August 2017.

¹⁶¹ Department of Agriculture and Fisheries, correspondence dated 28 August 2017.

6 Weed control on Crown land

The inquiry considered the effectiveness of weed management programs on Crown land administered by DNRME.¹⁶² Stakeholders also commented on weed management on other Crown land, such as on national parks and state forests, and land managed by TMR and Queensland Rail.

6.1 Obligations to control weeds on Crown land

6.1.1 *Land Act 1994*

The *Land Act 1994* provides for the administration and management of non-freehold land. It establishes the obligations of lessees, licensees and permit holders for land held under a lease, licence or permit. Under Chapter 5, Part 2, Division 1, all leases, licences and permits are issued subject to the following ‘mandatory conditions’ that are relevant to the management of weeds:

- section 199 imposes responsibility for a duty of care for the land on the landholder. If a lease is issued for agricultural, grazing or pastoral purposes, the lessee’s duty of care includes taking all reasonable steps to manage any declared pest, and
- section 200 requires the landholder to keep noxious plants on the land under control. Subsections 2 and 3 empower the Minister, where a person fails to comply with this condition, to bring the noxious plants under control and recover the cost.

Other conditions may be imposed under Chapter 5, Part 2, Division 2. In particular, s 203(b) states that a lease may be subject to a condition ‘about the care, sustainability and protection of the land’.

A lessee must comply with all of the conditions of the lease and a failure to comply may lead to the lease being cancelled or forfeited.¹⁶³ A lessee using land in a way that is not fulfilling the lessee’s duty of care under s 199 may also be subject to a land management agreement.¹⁶⁴ The purpose of a land management agreement includes to improve the condition of the land or establish agreed management outcomes for any weed issue.¹⁶⁵

6.1.2 *Stock Route Management Act 2002 (previously the Land Protection (Pest and Stock Route Management) Act 2002)*

The state and local governments share responsibility for administering the stock route network under the *Stock Route Management Act 2002*. DNRME administers the stock route management provisions, while local governments are responsible for the day-to-day management of local roads and those local roads (and council controlled reserves) declared as stock routes. Pests are managed under local government stock route network management plans and through industry and government funding programs. Relevant sections of the *Stock Route Management Act 2002* include ss 97, 98, 105, 106(4)(e), 116, 118 and 136(2)(b).¹⁶⁶

6.1.3 *Biosecurity Act 2014*

The GBO established through the Biosecurity Act applies to a lessee, licensee or permittee on Crown land, and to users of stock routes. Under the GBO, individuals and organisations whose activities pose a biosecurity risk must:

- take all reasonable and practical steps to prevent or minimise each biosecurity risk

¹⁶² The Department of Natural Resources and Mines (DNRM) was the responsible department for the management of state land during the 55th Parliament. In the 56th Parliament DNRM became the Department of Natural Resources, Mines and Energy (DNRME).

¹⁶³ *Land Act 1994*, s 213.

¹⁶⁴ *Land Act 1994*, s 176U.

¹⁶⁵ *Land Act 1994*, s 176V.

¹⁶⁶ Department of Natural Resources and Mines, correspondence dated 12 February 2017.

- minimise the likelihood of causing a ‘biosecurity event’, and limit the consequences if such an event is caused
- prevent or minimise the harmful effects a risk could have, and not do anything that might make any harmful effects worse.¹⁶⁷

6.2 Department of Natural Resources, Mines and Energy

In 2017, DNRM administered approximately 108.47 million hectares of state land in Queensland, which included:

- 104.60 million hectares under leasehold tenure
- 2.19 million hectares under freeholding leases
- 738 840 hectares of reserves, and
- 944 141 hectares unallocated state land and freehold.

Of the leasehold leases, over 104 million hectares or 99.7 per cent is land leased for the purposes of primary production.¹⁶⁸

Mr Ken Sherwood, Acting Regional Manager Land Services, updated the current responsibilities of DNRME to manage state land within the natural resources division of the department:

*As a whole, the department administers about 106.3 million hectares of land across Queensland. The vast majority of that land is leased land. The department is directly responsible for about 935,000 hectares of land. That is primarily made up of USL—that is, unallocated state land. There is a small component of freehold land that the department owns in its own name. There are also a few reserves that the department is managing where there is no trustee for that particular reserve.*¹⁶⁹

In 2017, DNRM advised that it manages pests on unallocated state land, unmanaged reserves and departmentally held freehold tenure on a priority/risk basis, and that a lessee, licensee or permittee must comply with their obligations under the Biosecurity Act for the management of pests on granted lands.¹⁷⁰ The DNRM confirmed that it does not undertake a formal monitoring program on land held and managed by other parties.

The primary focus of the DNRM’s weed management on state land is to meet obligations under the Biosecurity Act. State Land Management Services (SLMS) units, established in 2006, manage fire and pests on all DNRM managed land including: unallocated state land, DNRM-owned freehold land, and reserves that are in DNRM’s name or without a trustee. SLMS units use a risk management approach to land management to conduct inspection programs.

In 2017, the total budget allocation for SLMS units was \$3.1 million. Additionally, in 2017 under the Natural Resource Management Program, DNRM invested approximately \$12 million in weed control. Funding included activities aimed at capacity building, developing innovation and best practice and on-ground control.¹⁷¹

¹⁶⁷ Department of Agriculture and Fisheries, General biosecurity obligations, <https://www.daf.qld.gov.au/business-priorities/biosecurity/policy-legislation-regulation/biosecurity-act-2014/general-biosecurity-obligation>

¹⁶⁸ Department of Natural Resources and Mines, correspondence dated 12 February 2017.

¹⁶⁹ Public briefing transcript, Brisbane, 10 June 2019, p 1.

¹⁷⁰ Department of Natural Resources and Mines, correspondence dated 12 February 2017.

¹⁷¹ Department of Natural Resources and Mines, correspondence dated 12 February 2017.

DNRM acknowledged that lease conditions have a requirement for the lessee to control weeds, but noted that enforcement is the responsibility of DAF under the Biosecurity Act.¹⁷²

6.3 Department of Environment and Science, Queensland Parks and Wildlife Service

The Queensland Parks and Wildlife Service (QPWS) within DES, manages over 1,000 protected areas and state forests in Queensland, covering 13 million hectares. Mr Owen Earl from QPWS advised the committee that:

The impacts from invasive plant species are one of the biggest threats to our natural values and QPWS ... is committed to being an effective land manager through approaches that are collaborative, sustainable and risk based. We have obligations, as other landholders do, under the Biosecurity Act 2014, but also have complimentary obligations under both the Nature Conservation Act 1992 and the Forestry Act 1959 ...

QPWS has developed and adopted an adaptive management framework that identifies key values and threats and custodial responsibilities on its estate. This framework underpins the delivery of strategic and operational pest management outcomes through the development of pest thematic strategies that are then carried through into funding decisions and action plans at the regional level.¹⁷³

Additionally, Mr Leigh Harris, Acting Executive Director of Park Services, Queensland Parks and Wildlife Services and Partnerships, DES noted:

the strategies that we develop are prioritised according to the value and the threat. We then align those priorities to the resources that we have.¹⁷⁴

In 2010, QPWS developed a 'Good Neighbour Policy' to develop relationships with neighbours and local communities and also support cross-boundary management issues. QPWS advised that as a result of its Good Neighbour Policy it had good working relationships with neighbours and with local councils.¹⁷⁵ Within this policy, QPWS has undertaken to proactively manage its operations to minimise weed seed spread and comply with any related protocols that exist across relevant government agencies.¹⁷⁶ QPWS told the committee:

Being good neighbours is very important to us. We recognise there are always opportunities to continue to build on our working relationships with neighbouring landowners and other partners to enhance on-ground management. That is why we have our good neighbour policy. QPWS recognises that communication and cooperation between local park managers and neighbours is critical to ensure that positive impacts are maximised and that negative impacts are minimised. A cooperative approach is the most effective way of achieving significant pest management objectives, regardless of the different values we are all seeking to protect.¹⁷⁷

6.4 Department of Transport and Main Roads

TMR manages approximately 33,000 kilometres of state controlled roads and a corresponding 453,000 hectares of road reserve. Ms Amanda Yeates, Deputy Director-General, Infrastructure Management and Delivery, TMR advised the committee:

¹⁷² Public hearing transcript, Gladstone, 27 April 2017, p 15.

¹⁷³ Public briefing transcript, Brisbane, 10 June 2019, p 2.

¹⁷⁴ Public briefing transcript, Brisbane, 10 June 2019, p 7.

¹⁷⁵ Public hearing transcript, Gatton, 4 May 2017, p 17.

¹⁷⁶ Department of Environment and Science, Queensland Parks and Wildlife Service, 'Good Neighbour Policy', parks.des.qld.gov.au/policies/pdf/op-pk-crp-good-neighbour-policy.pdf.

¹⁷⁷ Public briefing transcript, Brisbane, 10 June 2019, p 2.

TMR manages containment and eradication of high-risk or mobile biosecurity infestations in the road reserve and the control of biosecurity risks during construction and maintenance works. A major challenge is in third-party and public activities in the road corridor... TMR has a long history of collaborating with Biosecurity Queensland to innovate and trial techniques that control and prevent biosecurity risks. TMR was one of the first organisations to adopt weed seed control and this has been part of construction and maintenance contracts with us for almost 20 years. The use of vendor declarations and weed seed wash down has significantly reduced the spread of weeds to areas of environmental and agricultural significance.

TMR operates a risk-based program, which will spend approximately \$3.5 million in 2019 to support weed control, an annual data collection program and the use of an in-house developed mobile App that is also available to local governments.¹⁷⁸

6.5 Weed control on Crown land

In 2017 a number of submitters gave their opinion that there is a lack of effective weed control action being undertaken on Crown land.¹⁷⁹ There was an impression amongst some submitters that TMR, Department of National Parks, Sport and Racing and Queensland Rail did not effectively manage weeds on their land.

The committee examined how the GBO is enforced in regard to Crown land and were informed that Gladstone Regional Council had served two notices on national parks in relation to control of declared weeds. QPWS stated:

The two warning letters were issued from Gladstone Council for Polmally National Park and Degalgil State Forest. Infestations are also on adjacent freehold land. We have been liaising with the regional council representative and they have also undertaken site inspections. We are actively working with the council to reduce that threat. For Polmally National Park, we are working on doing some extra earth moving to open up an existing management trail. For Degalgil State Forest, we have already undertaken an initial roadside treatment of 22 hectares to prevent further spread via vehicles and additional treatment was applied at another surrounding national park, which was Dawes National Park, of 1.5 hectares. We are working on our neighbouring property as well there.¹⁸⁰

6.6 Communication with Crown land managers

The committee heard evidence in regard to the difficulties local government has in its dealings with departments over weed infestations on Crown land,¹⁸¹ including identifying the correct entities or individuals within government agencies to contact in relation to weed infestations.

Gympie Regional Council told the committee:

In this particular region around Gympie we have lots of state owned land and there are many examples of where some of that state owned land has perhaps some of the worst pest animal

¹⁷⁸ Public briefing transcript, Brisbane, 10 June 2019, pp 10-11.

¹⁷⁹ Gladstone Regional Council, submission 9, p 2; Local Government Association of Queensland, submission 27, p 5; Southern Downs Regional Council, submission 9, p 2; Rockhampton Regional Council, submission 13, p 2; Gympie Regional Council, submission 22, p 2; Toowoomba Regional Council, submission 28, p 1; Lockyer Valley Regional Council, submission 41, p 3; Ipswich City Council, submission 58, p 3; Tablelands Regional Council, submission 39, p 2; Bos Rural Supplies, submission 3, p 1; Sheila Venz, submission 4, p 1; Garry Reed, submission 43, p 3; Fitzroy Basin Association, submission 40, p 2; Queensland Farmers' Federation, submission 29, p 1; Biddaddaba Creek Action Group, submission 5, p 1.

¹⁸⁰ Public briefing transcript, Brisbane, 10 June 2019, p 6.

¹⁸¹ Submission 9, p 2.

*and weed issues and we are getting a lack of agreement with some state government departments to tackle some of those problems.*¹⁸²

The Mary River Catchment Coordination Committee also expressed difficulties in communicating with state government departments and noted that this impedes local action to manage weeds on Crown land:

*... there is one example I can give that relates to unallocated state land in a coastal area where we are having significant weed infestations and a wild dog problem. We have been in negotiations with that state government department for four years to try to get more active and proactive on-ground control works happening.*¹⁸³

In response to concerns regarding challenges with communicating with managers of state government land, DNRM acknowledged that there was room for improvement:

*Certainly where Natural Resources is involved our aim is to work, both in terms of the relative priority that we are expending on a particular weed in an area and also our day-to-day communications, with that local government or with those surrounding landowners. Whether it is a weed management perspective, or a fire management perspective, that is exactly the approach that we take. Having said that though, I also readily accept that there is always room for improvement within those types of arrangements... I would agree that at a state and local perspective we can always do better in that space.*¹⁸⁴

6.7 State Land Pest Management Framework

The State Land Pest Management Framework is an administrative arrangement designed to support state agencies with the management of invasive plants and animals on the lands they directly manage. According to DAF, the framework will help state agencies to coordinate their activities and demonstrate how they are meeting obligations for the management of invasive plants and animals on land under their direct control. The State Land Pest Management Committee (SLPMC) is established by the Director-General of the DAF as an administrative arrangement, whose functions are to:

- *Improve the management of weeds, pest animals and diseases on state-controlled land;*
- *Coordinate, and achieve consistency in, weed, pest animal and disease management activities on state-controlled land;*
- *Oversee the implementation of activities for managing weeds, pest animals and diseases on State-controlled land;*
- *Integrate activities for managing weeds, pest animals and diseases on state-controlled lands into local and regional strategies.*

The committee will:

- *enhance communication networks between State government agencies, local governments and industry groups and other key stakeholders;*
- *identify important management issues, multi-agency initiatives, and resources;*
- *annually review the effectiveness and implementation of actions for managing weeds, pest animals and diseases on state-controlled land in local areas.*¹⁸⁵

¹⁸² Public hearing transcript, Brisbane, 14 June 2017, p 14.

¹⁸³ Public hearing transcript, Brisbane, 14 June 2017, p 14.

¹⁸⁴ Public hearing transcript, Gladstone, 27 April 2017, p 15.

¹⁸⁵ Department of Agriculture and Fisheries, correspondence dated 28 August 2017. Represented on the SLPMC are the Chief Biosecurity Officer or delegate (Chair), each large landholding state government department (Departments of National Parks, Sport and Racing, Natural Resources and Mines, Environment and Heritage Protection, Transport and Main Roads), AgForce, Local Government Association of Queensland, Department of Defence (Australian Government), Queensland Rail, HQ Plantations, and other representatives as supported by the SLPMC and agreed to by the Director-General.

6.8 Committee comment

Many state government landholders have developed good relationships with local governments and neighbouring private landholders. The committee heard that some effective weed control is being undertaken by state government landholders on property borders.

However, the committee notes the concerns of stakeholders in relation to weed control on Crown land.

The SLPMC is an existing arrangement with representation from numerous state government agencies and key stakeholders, including LGAQ. The committee considers that the SLPMC is well placed to actively drive and ensure that the state's GBO on Crown land, and stakeholder concerns, are addressed.

7 Coordination of weed strategies and programs

7.1 Coordination across all levels of government

Evidence to the inquiry highlighted that a coordinated approach was critical for successful weed eradication. The Rockhampton Regional Council submitted that ‘communication between all levels of government for the management of invasive weeds needs to be improved to maximise achievements and have a whole of government approach resulting in consistent policy and on ground action’.¹⁸⁶

The LGAQ noted that local government feedback indicates there is a lack of coordination between existing federal, state and local government programs and that a whole of government approach is needed to appropriately manage issues of biosecurity.¹⁸⁷

Southern Gulf NRM submitted that most pest management programs require ‘a whole of government approach along with engaged land managers and communities’.¹⁸⁸

In its response to the issue of coordination, DAF stated:

*Cooperation between Regional Natural Resource Management groups; local pest management groups and committees; local governments; industry and government agencies to determine regional and local pest management priorities leads to enhanced weed management outcomes.*¹⁸⁹

Similarly DNRME noted:

*It is about that coordination and getting the biggest bang for your buck. Working with your neighbours, whether that is another government agency, a private landowner or the local council, you get economies of scale. Trying to do it individually at a property level just does not work—it is not as effective as doing it on a landscape basis.*¹⁹⁰

7.2 Coordination across Queensland government agencies

Coordination in relation to weed management by agencies within the Queensland Government is achieved through the State Land Pest Management Framework and the SLPMP, an administrative arrangement established by the Director-General of DAF (see section 6.7 of this report).

Mr Owen Earl from QPWS confirmed the value of a coordinated multi-agency approach to address weed control on a landscape scale:

QPWS collaborates through a number of key state and local pest management committees, including the State Lands Pest Management Committee, the Queensland Feral Pest Initiative Oversight Group and the Queensland Invasive Plants and Animals Committee. ...

*I am confident that a coordinated approach at the landscape scale will minimise the impacts of weeds on biodiversity, tourism and production values generally. I am also confident that we are actively contributing to having a whole-of-government approach.*¹⁹¹

DNRME informed the committee that the SLPMP:

... is quite an effective forum. It meets probably twice a year. It is quite good for discussing issues and learning about more information. At the next meeting we are going to have a presentation

¹⁸⁶ Submission 13, p 4.

¹⁸⁷ Submission 27, pp 6-7.

¹⁸⁸ Submission 12, p 5.

¹⁸⁹ Department of Agriculture and Fisheries, correspondence dated 28 August 2017.

¹⁹⁰ Public briefing transcript, Brisbane, 10 June 2019, p 9.

¹⁹¹ Public briefing transcript, Brisbane, 10 June 2019, p 2.

on GRT—what is the latest, where we are at. It is quite an effective mechanism at that higher level.

At the lower level, from our department, our officers have fairly good relationships with councils. We would certainly encourage them to get out there and build stronger relationships ... it is all about that coordination, communication and working collectively. After all, weeds do not recognise boundaries.¹⁹²

TMR provided the committee with an example of the department's coordination with a range of stakeholders in relation to prickly acacia:

While the State controlled road reserve exceeds 400 metres across many areas of the Central West Queensland program area, the Department of Transport and Main Roads wishes to clarify that the success of the Prickly Acacia program has been the collaboration between the Department of Transport and Main Roads, Desert Channels, adjoining landholders and other agencies. The collaboration has ensured that the treatment program of Prickly Acacia by the Department of Transport and Main Roads for State controlled road reserves, including those less than 400 metres, are complemented by landholders treating up to 300 metres of their adjacent land.¹⁹³

TMR also noted that a multi-agency collaborative approach had significantly contributed to the success of the geofencing initiative which demonstrated between 95 and 98 per cent success for effective weed treatment.¹⁹⁴

7.2.1 Committee comment

The committee notes that the SLPAC undertakes an annual review of the effectiveness and implementation of actions for managing weeds, pest animals and diseases on state-controlled lands. The committee considers that this annual review by the SLPAC would be a valuable component of an annual update to the committee by DAF.

7.3 Coordination between the Queensland Government and local governments

Coordination between the Queensland Government and local governments in relation to weed management and control in Queensland is achieved through:

- the Biosecurity Act which defines the respective roles of the state and local governments in relation to weeds, including local governments' enforcement obligations
- local government biosecurity plans required under the Biosecurity Act
- Regional Pest Management Sub-Committees (established as part of the Invasive Plants and Animals Co-Investment Model)
- individual projects such as the War on Western Weeds (WoWW) which concluded in mid-2018, and
- training, support and extension services provided by DAF to assist local governments.

The LGAQ submitted that better regional cooperation would potentially be achieved through the Regional Pest Management Sub-Committees established as part of the Invasive Plants and Animals Co-Investment Model:

The LGAQ and Biosecurity Queensland are working in partnership to deliver the implementation of the Invasive Plants and Animals Co-investment Model. This project focuses on the development of Regional Pest Management Sub-committees across the State that include local

¹⁹² Public briefing transcript, Brisbane, 10 June 2019, p 4.

¹⁹³ Department of Transport and Main Roads, correspondence dated 18 June 2019.

¹⁹⁴ Public briefing transcript, Brisbane, 10 June 2019, p 14.

*governments, Biosecurity Queensland, Natural Resource Management (NRM) groups and in some cases other State Government departments such as Queensland National Parks and Wildlife. The aim of this project is to improve collaboration on a regional scale and to maximise the benefits from existing resources. Whilst the project is still in its early stages, reports on the use of a regional collaborative approach are positive. This project highlights opportunities to achieve a far greater impact in the management of invasive plants through regional investment in local government authorities and regional NRM groups.*¹⁹⁵

Southern Gulf NRM suggested that a previous memorandum of understanding that had identified roles, responsibilities and high priority actions of various parties warranted renewed consideration:

*A memorandum of understanding between Biosecurity Queensland, the Queensland local government Association and the Queensland Regional NRM Groups Collective was established in 2009 to define the roles of the participants, but appears to have fallen into disuse. There may be merit in refreshing this document in the light of the passage of the Biosecurity Act 2014.*¹⁹⁶

The LGAQ also recommended that the memorandum be reviewed.¹⁹⁷

The Fitzroy Basin Association encouraged greater participation by state government in regional bodies:

*The Capricorn Pest Management Group (CPMG) is a great example of a regional body which is seeking to work together to integrate activities and maximise outcomes across borders. Working collaboratively with industry, other regional bodies such as [Fitzroy Basin Association] and its partners has significant potential to extend the reach and outcomes of any program. CPMG invites and has done so in the past, State Government staff from Biosecurity Queensland, Natural Resources and Mines and Environment and Heritage Protection to become active participants in this group.*¹⁹⁸

Several state government departments highlighted that local government biosecurity plans are the key mechanism to enable effective collaboration between state and local government.¹⁹⁹

7.3.1 Committee comment

The inquiry consistently heard of a need for strategic direction and oversight for weed management in Queensland. The committee notes that the LGAQ and other stakeholders saw value in the 2010 Memorandum of Understanding. The committee also notes that the *Queensland invasive plants and animals strategy 2019–2024* (discussed at section 4.3), aims to ‘direct and facilitate strategic and targeted actions to reduce the impacts of invasive species’ and to clarify the roles and responsibilities of participants involved in weed management to support consistency of approach and efficient use of resources.²⁰⁰

7.4 Coordination between local governments

Coordination between local governments in relation to weeds management and control in Queensland is achieved through:

- the work of the LGAQ
- Regional Pest Management Sub-Committees, and

¹⁹⁵ Submission 27, pp 6-7.

¹⁹⁶ Submission 12, p 5.

¹⁹⁷ Submission 27, p 5.

¹⁹⁸ Submission 40, p 4.

¹⁹⁹ Public briefing transcript, Brisbane, 10 June 2019, p 2.

²⁰⁰ Department of Agriculture and Fisheries, *Queensland invasive plants and animals strategy 2019–2024*, 2019, p 2.

- section 55 of the Biosecurity Act which provides that local governments may collaborate with other local governments to adopt the same biosecurity plan.

The Ipswich City Council highlighted the inefficiencies of managing weeds in isolation in local government areas, recommending consistency of approach between neighbouring councils.²⁰¹ Similarly, the Lockyer Valley Regional Council noted ‘the effort to manage weeds across the State of Queensland is disjointed and lacks a cohesive strategy to maximise achievements’ and that ‘there is a strong sense that, while the actors involved in the task of weed management are working hard they are not necessarily pulling in the same direction or at the same time’. The Lockyer Valley Regional Council suggested that coordination issues ‘should be addressed appropriately to maintain the momentum of weed management as anticipated by the Biosecurity Act 2014’.²⁰²

The Fitzroy Basin Association praised the cooperation of local governments occurring through regional pest management groups:

*It is pleasing to see that four out of our six governments continue their regional partnership through membership of and participation in the Capricorn Pest Management Group (CPMG). This group which includes industry and other stakeholders such as FBA [Fitzroy Basin Association], seeks to provide access to training/research, share information, prioritise pests from a regional perspective and are actively seeking to plan broader scale pest control projects. These councils have a keen interest in working together across their boundaries to address pests.*²⁰³

7.4.1 Committee comment

The committee notes that local governments are increasingly working together to develop regional biosecurity plans and to implement activities jointly. The Central West Regional Biosecurity Plan is a good example and recently the Cape York Peninsula Biosecurity Plan and the Torres Strait Regional Biosecurity Plan were prepared jointly by local governments in those regions.

The committee considers that the adoption of a regional landscape approach is necessary for the effective management of weeds and where appropriate encourages more local governments to work collaboratively to develop and adopt regional biosecurity plans. Implementation of regional biosecurity plans has the potential to result in significant improvements to enforcement, efficiencies from the sharing of resources, and better weed management outcomes.

7.5 Coordination with natural resource management and Landcare groups

The inquiry examined the need for coordination between government agencies and NRM groups. QPWS stated that coordination with NRM groups was increasing and offered opportunities for improved weed management:

*What I see happening more—and probably it is a little bit more innovative in this space—is working with natural resource management groups, such as catchment management areas, and working with them in partnership to do work across the landscape, including our protected areas and working with our land and sea ranger program and using them in a whole-of-landscape approach to weed management.*²⁰⁴

A number of submitters commented on the opportunities for better coordination with NRM, Landcare groups and other environmental organisations. Healthy Waterways and Catchments recommended catchment scale coordination and a whole of community approach ‘that empowers government as well as individuals to take appropriate and strategic intervention in a timely manner’.²⁰⁵

²⁰¹ Public hearing transcript, Gatton, 4 May 2017, pp 1-2.

²⁰² Submission 41, p 4.

²⁰³ Submission 40, p 1.

²⁰⁴ Public briefing transcript, Brisbane, 10 June 2019, p 4.

²⁰⁵ Submission 54, pp 2-3.

The Invasive Species Council also advocated for better partnerships with Landcare groups and other community groups:

*To meaningfully involve the community and to create genuine partnerships, early involvement in processes and decision-making coupled with improved transparency are essential. These build trust and confidence in the biosecurity system.*²⁰⁶

Gomaren and Doctors Creek Catchment Landcare Group raised the potential for Landcare groups to assist local governments in the eradication of weeds through a coordinated approach.²⁰⁷

Southern Gulf NRM called for greater support for NRM groups and the establishment of a State NRM Council to provide a coordination role and to develop a Queensland NRM Strategy similar to the approach used in other states.²⁰⁸ Desert Channels Queensland suggested that interaction between NRM groups and local governments could be achieved through communication, an understanding of strategic direction and knowledge of each other's decisions regarding weed management.²⁰⁹

The LGAQ argued that 'there are large inconsistencies in the way the NRM groups interact with local government across the state and as a result regional invasive plant management appears poorly coordinated and inefficient'.²¹⁰ The LGAQ recommended that 'the State Government ensure NRM groups align and coordinate with the work of local government' and 'Biosecurity Queensland investigate the coordination of a regional investment process between NRM groups and local governments to achieve a broader set of biosecurity outcomes'.²¹¹

Since the AEC inquiry in 2017, DAF has established the Better Partnerships Project, aimed at fostering 'regional collaboration by building and implementing shared governance structures for the management of invasive plants and animals at a regional level'.²¹² Data will be collected from two pilot projects, funded over the period 2018-2020 and involving NQ Dry Tropics and Wide Bay Burnett Regional Organisation of Councils, and used to develop a framework for improved regional collaboration between local governments, NRM groups and other interested parties. The intention is for the framework to 'guide organisations in developing strong partnerships, leading to comprehensive and collaborative regional biosecurity governance and planning that pools local resources to provide better biosecurity outcomes at a regional level'.²¹³

7.5.1 Committee comment

While the Queensland Biosecurity Strategy and *Queensland invasive plants and animals strategy 2019–2024* are expected to address issues with collaboration and cooperation raised during the committee's inquiry, further strategic direction for weed management is required at a regional level. Regional biosecurity plans which have been developed in consultation with all stakeholders within a region are more likely to produce clear goals and actions for regions.

The committee notes the establishment of the Better Partnerships Project and considers that the initiative has the potential to greatly enhance the management of invasive weeds at a regional level.

²⁰⁶ Submission 37, p 8.

²⁰⁷ Submission 25, p 2.

²⁰⁸ Submission 12, pp 7-8.

²⁰⁹ Public hearing transcript, Barcaldine, 20 June 2017, p 6.

²¹⁰ Submission 27, p 7.

²¹¹ Submission 27, p 7.

²¹² Department of Agriculture and Fisheries, Better Partnerships Project, <https://www.daf.qld.gov.au/business-priorities/biosecurity/enhancing-capability-capacity/better-partnerships>.

²¹³ Department of Agriculture and Fisheries, Better Partnerships Project, <https://www.daf.qld.gov.au/business-priorities/biosecurity/enhancing-capability-capacity/better-partnerships>.

The committee notes that education about weeds is undertaken by local governments, NRM groups, the Weed Spotter Network and other community groups. A better informed community is important for effective management of weeds.

The committee believes that the management of invasive weeds in Queensland is a challenge which will only be met with a co-ordinated, enforced and whole of landscape approach.

*... continuing building the relationships and taking a whole-of-landscape approach to weed management is the key in terms of getting the best weed management outcomes.*²¹⁴

²¹⁴ Mr Leigh Harris, Queensland Parks and Wildlife Services and Partnerships, Department of Environment and Science, Public briefing transcript, Brisbane, 10 June 2019, p 8.

8 Weed case studies

The inquiry considered three weeds as case studies:

- Prickly acacia (*Vachellia nilotica*)
- Fireweed (*Senecio madagascariensis*), and
- Giant rat's tail grass (*Sporobolus pyramidalis* and *Sporobolus natalensis*).

Prickly acacia and fireweed are both WoNS. GRT was nominated as a WoNS but the nomination did not succeed which means there is no national strategy covering its management.

8.1 Prickly acacia (*Vachellia nilotica*)

Prickly acacia is considered to be one of Australia's worst weeds.²¹⁵ Prickly acacia is a small, thorny spreading tree generally growing to around five metres high, and occasionally to ten metres (see Figure 4). It is native to the tropics and subtropics of Africa through to Pakistan, India and Burma. It has nine highly variable subspecies. The invasive populations found in Australia are of the subspecies *Indica* which originates from India and Pakistan.²¹⁶

Although capable of regenerating from cut stumps, prickly acacia only reproduces by seeds. A medium-sized tree in a well-watered environment can produce as many as 175,000 seeds per year.²¹⁷ Prickly acacia grows best on cracking clay soils that have high water holding capacity, but can also grow on sandy soil in areas of higher rainfall.²¹⁸ It grows best around waterways and on seasonally inundated floodplains receiving 350-1500mm of annual rainfall. Seeds are readily dispersed by stock movements, native animals and flowing water. Characteristic of prickly acacia invasion is the potential for mass establishment events to occur in response to a series of high rainfall years.²¹⁹

Under Schedule 2 of the Biosecurity Act, prickly acacia is listed as Category 3 restricted matter.

Figure 4: Prickly acacia (*Vachellia nilotica*)



Source: Brisbane City Council, *Weed identification tool*, 2019.

²¹⁵ Australian Weeds Committee, *Prickly acacia (Acacia nilotica subsp. Indica (Benth.) Brenan) Strategic Plan 2012-17*, Australian Government Department of Agriculture, Fisheries and Forestry, 2012, p 1.

²¹⁶ Northern Territory Department of Land Resources Management, *Weed Management Plan for Prickly Acacia (Acacia nilotica)*, 2015, p 3.

²¹⁷ Cooperative Research Centre for Australian Weed Management, *Prickly acacia (Acacia nilotica) Weed Management Guide*, 2003, pp 1-2.

²¹⁸ Cooperative Research Centre for Australian Weed Management, *Prickly acacia (Acacia nilotica) Weed Management Guide*, 2003, p 3.

²¹⁹ Cooperative Research Centre for Australian Weed Management, *Prickly acacia (Acacia nilotica) Weed Management Guide*, 2003, p 1.

8.1.1 History in Queensland

DAF prepared a detailed brief for the committee on the history of prickly acacia in Queensland since 1872.²²⁰ Key points and events from the DAF brief include:

- 1872** First record of widespread distribution, with the Queensland Acclimatisation Society offering seeds to graziers via newspaper articles.²²¹
- 1909** First record of problems with prickly acacia infestations in Queensland. Declared a noxious weed under Council by-laws by the Shire of Wangaratta which bordered the township of Bowen.
- 1926** Recommended as a shade and fodder tree for sheep production in an article published by Mr N.A.R Pollack, Northern Instructor in Agriculture. The article recommended use of prickly acacia in western Queensland, but also highlighted problems in coastal areas.
- 1957** Declared a noxious plant under the *Stock Routes and Rural Lands Protection Act 1944*.²²²
- 1999** Declared a WoNS, recognising the need for coordinated effort to reduce its detrimental impacts.²²³

8.1.2 Infestations

Prickly acacia has infested vast arid and semi-arid areas of Queensland, mainly in the Mitchell Grass Downs, though it has the potential to infest vast tracts of grasslands and woodlands throughout Australia.²²⁴ The largest infestations in Queensland are located in the Southern Gulf and Desert Channels NRM regions.²²⁵

The Barcoo Shire Council noted in its submission the area of prickly acacia infestations increased three-fold in 20 years from seven million hectares in 1996 to 22 million hectares in 2016.²²⁶

Figure 5 shows the general location of prickly acacia infestations and areas in the dark band across Australia that are considered to be at risk from future invasions. Modelling indicates that up to 70 per cent of Australia's mainland is at risk of prickly acacia invasion, including 50 million hectares of Australia's Mitchell Grasslands.²²⁷

²²⁰ Department of Agriculture and Fisheries, *Annotated timeline – 150 years of prickly acacia (Vachellia nilotica spp. Indicia) in Queensland*, 2017.

²²¹ Peter Osborne, *Queensland Acclimatisation Society*, Queensland Historical Atlas, 2010. The Queensland society was part of a network of international acclimatisation societies, and was also party to the release of English sparrows and rabbits into Queensland, while its sister organisation, the Victorian Acclimatisation Society, claimed to have released the first rabbits to mainland Australia in 1959.

²²² At the time the general area of distribution in inland areas was Winton, Longreach, Blackall, Ilfracombe, Barcaldine, Aramac, Flinders, Emerald, Peak Downs, Belyando, Bauhinia, Richmond, Cloncurry and Boulia Shires. In coastal areas, prickly acacia was in Rockhampton Town Council, Fitzroy, Livingstone and Wangaratta Shire Councils.

²²³ Australian Weeds Committee, *Prickly acacia (Acacia nilotica subsp. Indica (Benth.) Brenan) Strategic Plan 2012-17*, Australian Government Department of Agriculture, Fisheries and Forestry, 2012, p 1.

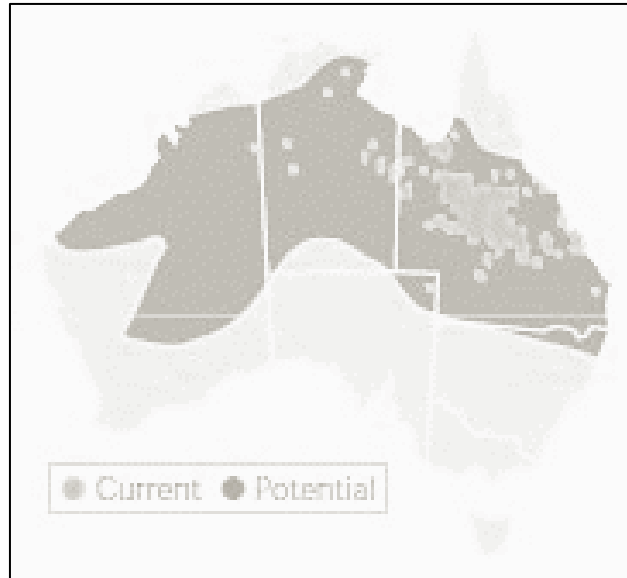
²²⁴ Cooperative Research Centre for Australian Weed Management, *Prickly acacia (Acacia nilotica) Weed Management Guide*, 2003, p 1.

²²⁵ Southern Gulf NRM, submission 12, p 7.

²²⁶ Submission 52, p 2.

²²⁷ Northern Territory Department of Land Resources Management, *Weed Management Plan for Prickly Acacia (Acacia nilotica)*, 2015, p 3.

Figure 5: Prickly acacia infestations and areas at risk of future invasion



Source: Cooperative Research Centre for Australian Weed Management, 2003.

Detailed maps prepared by DAF showing the distribution of prickly acacia within Queensland from the department's annual pest surveys are at Appendix E.

On top of the plant's aggressive growth and the ability of its seeds to survive for long periods of up to 14 years,²²⁸ submitters and others identified four key factors contributing to the spread of prickly acacia in Queensland:

- the lack of controls on livestock movements from infested areas - cattle are a key vector for long-distance seed dispersal.²²⁹ This has been exacerbated by the switch from sheep to cattle, as sheep kept the trees under control, and less seeds pass through sheep than cattle.²³⁰ In relation to seed movements through cattle, DAF advised that the department's research had confirmed that the seeds will survive for approximately eight days²³¹
- infestations spread by water flows – infestations occur along bore drains²³² and following heavy rainfall events²³³
- the failure of landholders to control infestations and the failure by local government to enforce landholder compliance with declared plant control obligations,²³⁴ and
- misconceptions about the plant's impacts – many landholders continue to view prickly acacia as an asset and a valuable fodder tree.²³⁵

In relation to bore drains, the Great Artesian Basin Sustainability Initiative is a joint program between the Australian, NSW, Queensland, South Australian and Northern Territory governments that provides funding to support the capping of bore drains and piping of free flowing bore drains. The program

²²⁸ Southern Gulf NRM, submission 12; Department of Agriculture and Fisheries, public hearing transcript, Hughenden, 19 June 2017, p 10.

²²⁹ Southern Gulf NRM, submission 12; Epple, submission 15; AgForce, submission 33; Douglas, submission 51; Barcoo Shire Council, submission 52.

²³⁰ Gary Parker, submission 1; Barcoo Shire Council, submission 52.

²³¹ Public hearing transcript, Hughenden, 19 June 2017, p 10.

²³² Desert Channels Queensland, public hearing transcript, Barcaldine, 20 June 2017, p 9.

²³³ Southern Gulf NRM, submission 12; Douglas, submission 51.

²³⁴ Barcoo Shire Council, submission 52.

²³⁵ Robert Hacon, submission 10; Desert Channels Queensland, submission 53.

commenced in 1999. Landholders can receive up to 80 per cent of the costs of rehabilitating bores and up to 60 per cent of the costs to replace bore drains with piping and watering points. The program finished on 30 June 2017.²³⁶ The committee heard that despite significant investments by the Australian and Queensland governments, a number of open bore drains in prickly acacia prone areas still require rehabilitation.²³⁷

8.1.3 Impacts

At low densities, prickly acacia may benefit primary production through provision of shade and fodder. However, most landholders view it as undesirable due to its invasive potential and substantial impacts as densities increase.²³⁸

Medium to high density infestations reduce pasture production, change pasture composition to favour less desirable annual species, increase mustering costs, impede stock access to water, increase water losses from bore drains and cause vehicle tyre damage. In addition, prickly acacia trees have been shown to reduce grass production by out-competing fodder crops for water, and to increase the cost and difficulty of bore drain maintenance.²³⁹ The economic and environmental impacts of prickly acacia are particularly significant for the cattle industry²⁴⁰ and include:

- high control costs with small to medium landholders spending over \$100,000 annually²⁴¹
- declines in rural land values for infested blocks, which will result in local governments increasing rates²⁴²
- the erosion of productivity and landholders' profits (a 25 per cent canopy cover of prickly acacia suppresses pasture growth by 50 per cent)²⁴³
- high costs to the grazing industry, exacerbated by the cost of drought assistance,²⁴⁴ and
- negative flow-on effects for towns in grazing areas.²⁴⁵

The Barcoo Shire Council submission noted 2016 figures from Desert Channels Queensland that put annual production losses at \$24 million, and control costs at \$9 million. The Council also noted calculations by PRW Agribusiness in 2017 that the cost of lost production could be as high as \$203 million per year.²⁴⁶

Submitters also noted the following environmental impacts:

- the risk of soil erosion from the bare ground typically found under infestations²⁴⁷
- the destruction of habitat for many native animals, particularly ground dwelling species that inhabit the black soil plains²⁴⁸
- the loss of perennial grasses which cannot compete with prickly acacia for canopy cover²⁴⁹

²³⁶ Department of Natural Resources and Mines, *Great Artesian Basin Sustainability Initiative (GABSI)*, 2017.

²³⁷ Flinders Shire Council, public hearing transcript, Hughenden, 19 June 2017, p 13.

²³⁸ Cooperative Research Centre for Australian Weed Management, *Prickly acacia (Acacia nilotica) Weed Management Guide*, 2003, p 4.

²³⁹ Australian Weeds Committee, *Prickly acacia (Acacia nilotica subsp. Indica (Benth.) Brenan) Strategic Plan 2012 -17*, Australian Government Department of Agriculture, Fisheries and Forestry, 2012, pp 4-5.

²⁴⁰ Southern Gulf NRM, submission 12.

²⁴¹ Rob Katter MP, submission 47.

²⁴² Submission 52.

²⁴³ Barcoo Shire Council, submission 52.

²⁴⁴ Peter Douglas, submission 51.

²⁴⁵ Rob Katter MP, submission 47.

²⁴⁶ Barcoo Shire Council, submission 52.

²⁴⁷ Southern Gulf NRM, submission 12.

²⁴⁸ Southern Gulf NRM, submission 12.

²⁴⁹ Peter Douglas, submission 51.

- the loss of biodiversity through the depletion of ground cover, erosion and increased sediment runoff, and the provision of refuge for declared pest animals.²⁵⁰

8.1.4 Prickly acacia strategies

The management of prickly acacia is covered by national and state strategies.

8.1.4.1 *Weeds of National Significance Prickly Acacia Strategic Plan*

In 2009, the NRM Ministerial Council endorsed a three-phased approach to the national management of prickly acacia as a WoNS.²⁵¹ The *Weeds of National Significance Prickly Acacia Strategic Plan 2012-17* was developed to provide a framework for coordinated management of prickly acacia across the country. The plan was designed to eradicate infestations outside of Queensland, contain core infestations within Queensland and minimise impacts for all those affected by prickly acacia.²⁵² The plan's three strategic goals and related strategic actions are set out in Figure 6.

A total of 63 specific actions were to be undertaken from 2012-17, prioritised on a scale from 1 to 3, with 1 being critical to the success of the plan and 3 being beneficial.

The plan provides no timeframe for undertaking the actions, however it does list the 'responsible partner' or partners. In Queensland, DAF is assigned responsibility for almost all of the actions (61 of 63), including 14 as the lead agency.

**Figure 6: *Weeds of National Significance Prickly Acacia Strategic Plan 2012-17*
- strategic goals and actions**

| |
|---|
| Protect clean areas and eradicate outlier infestations |
| <ul style="list-style-type: none"> • Facilitate the control of high seed services • Minimise long and short-distance movements of seed by stock • Develop and maintain early detection and eradication mechanisms • Progress eradication objectives |
| Minimise impacts of prickly acacia on productivity and natural assets |
| <ul style="list-style-type: none"> • Protect and restore high value environmental and cultural sites • Promote local and regional-scale control within active management zones • Develop regional and local containment plans • Promote the integration of prickly acacia management • Identify economic impacts, incentives and disincentives • Adopt best-practice management • Improve integrated management practices • Introduce and improve the impact of biocontrol agents |
| Maintain and enhance national commitment to manage prickly acacia |
| <ul style="list-style-type: none"> • Manage implementation of the plan • Monitor and evaluate implementation of the strategy • Coordinate communication about the strategy • Seek support and resources for strategy delivery • Increase education and awareness of the prickly acacia situation in Australia • Maintain an appropriate legislative framework for prickly acacia management • Develop maps of prickly acacia distribution and management zones |

Source: Australian Weeds Committee, 2012.

²⁵⁰ Barcoo Shire Council, submission 52.

²⁵¹ Australian Government, Department of Agriculture and Water Resources, *The Australian Weeds Strategy 2017 to 2027*, 2017, p 33.

²⁵² Australian Weeds Committee, *Prickly acacia (Acacia nilotica subsp. Indica (Benth.) Brenan) Strategic Plan 2012 - 17*, Australian Government Department of Agriculture, Fisheries and Forestry, 2012, p 1.

Monitoring and evaluating the management of national priority weeds such as prickly acacia was the responsibility of the Australian Weeds Committee. The Australian Weeds Committee no longer exists, and its functions were transferred to IPAC. DAF advised that neither the Australian Weeds Committee nor IPAC had reported on the plan’s progress. The department further advised that it is unaware of any work to update the current national prickly acacia plan.²⁵³

The department provided the committee with a summary of its work in relation to the actions in the plan for which it had responsibility.²⁵⁴ According to the summary, the department has completed, or is continuing to work on, the vast majority of the actions for which it was assigned responsibility. Actions in the plan that were not completed relate to evaluation and economic impact data, and a small number of national actions that DAF was not involved in.

8.1.4.2 Draft Queensland Weed and Pest Animal Strategy 2016-20

In Queensland, DAF’s *Draft Queensland Weed and Pest Animal Strategy 2016-20* proposed a state-wide planning framework for addressing and managing weeds, including prickly acacia. The approach in the draft strategy to manage prickly acacia is outlined in Figure 7.²⁵⁵

Figure 7: Approach to managing prickly acacia according to information in the *Draft Queensland Weed and Pest Animal Strategy 2016-20*

| Outcomes | | Area actions | Applicable local government areas |
|--|--|--|---|
| Containment Prevent spread to pest-free areas and minimise the impact on particular assets: may include maintaining a pest-free status in some areas or regions and returning others to a pest-free status | | Area A <ul style="list-style-type: none"> Remove every plant Prevent the spread of reproductive material Prevent reintroduction Remove from trade | Remaining areas of Queensland not designated in Area B |
| | | Area B <ul style="list-style-type: none"> Reduce the number of plants Prevent the spread of reproductive material to Area A Minimise the spread of reproductive material into uninfested parts of Area B Minimise the spread of reproductive material into uninfested areas of into areas under active control Remove from trade | Townsville City Barcaldine Regional Boulia Shire Burdekin Shire Burke Shire Carpentaria Shire Cloncurry Shire Flinders Shire Livingstone Shire Longreach Regional McKinlay Shire Richmond Shire Rockhampton Regional Whitsunday Regional Winton Shire |

Source: Department of Agriculture and Fisheries, 2016.

In the draft strategy Area A covers the rest of the state where it is not established. Area B covers the local government areas where prickly acacia is well established. As noted in the draft strategy, prevention and early intervention is generally the most cost-effective management strategy. Once a

²⁵³ Department of Agriculture and Fisheries, correspondence dated 28 September 2017.

²⁵⁴ Department of Agriculture and Fisheries, correspondence dated 28 September 2017.

²⁵⁵ Department of Agriculture and Fisheries, *Draft Queensland Weed and Pest Animal Strategy 2016-20*, 2016, p 30.

pest species is introduced and becomes established, it is often very difficult or even impossible to eradicate, and costly to control.

Under the draft strategy QIPAC would be responsible for coordinating and monitoring the implementation of the Queensland strategy.

8.2 Fireweed (*Senecio madagascariensis*)

Native to southern Africa, *Senecio madagascariensis*, commonly known as fireweed, is an annual or short-lived perennial, daisy-like herb with the ‘ability to spread like wildfire’²⁵⁶ (see Figure 8). Its size and shape varies depending on conditions. Plants are less than 200mm tall in dry, harsh conditions, and up to 500mm tall with multiple branches in ideal conditions. Fireweed is thought to have arrived in the ballast of ships trading between Australia and Europe via Capetown, or as a private garden plant.²⁵⁷

Fireweed can be easily mistaken for closely related native species, particularly coast groundsel and *Senecio bristolowensis*. Fireweed can be hidden within fields of native fireweed,²⁵⁸ and its identification from the native species requires close examination of leaf and stem structure and the number of petals on flowers.²⁵⁹ The committee heard that nine yellow flowering plant species inhabit areas where fireweed is found, which can make the correct identification of fireweed plants difficult.

Fireweed seeds are small (2-3mm long) and cylindrical, and are spread by wind and stock, in pasture seed, hay, turf and mulch, and with stock transport. Fireweed reproduces prolifically.²⁶⁰ Each seed has rows of very fine, short hairs and a silky pappus (parachute) which is readily spread by wind and other means.²⁶¹ Flowers and seeds are produced continuously during the growing season. An average plant can produce over 10,000 seeds during a season. Light infestations can produce a million seeds per hectare.

Figure 8: Fireweed (*Senecio madagascariensis*)



Source: Department of Agriculture and Fisheries, Fireweed fact sheet, 2017.

²⁵⁶ B Sindel 2009, *Fireweed in Australia – Directions for Future Research*, Report for the Bega Valley Fireweed Association, p.11.

²⁵⁷ Department of Agriculture and Fisheries, <https://www.business.qld.gov.au/industries/farms-fishing-forestry/agriculture/land-management/health-pests-weeds-diseases/weeds-diseases/invasive-plants/restricted/fireweed>.

²⁵⁸ Toowoomba Regional Council, submission 28, pp 2-3.

²⁵⁹ Michael O’Donoghue, submission 23, p 2.

²⁶⁰ B Sindel, *Fireweed in Australia – Directions for Future Research*, Report for the Bega Valley Fireweed Association, 2009, p 23.

²⁶¹ Jean Hawkins, submission 7, p 1.

8.2.1 History in Queensland

DAF prepared a detailed brief for the committee on the history of fireweed in Australia over the past 98 years.²⁶² Key points and events from the DAF history brief include:

- 1919** Introduction to Australia with the earliest herbarium specimen collected at Raymond Terrace in the Lower Hunter Valley, NSW.
- 1946** First declared a noxious weed in Lismore under the *Local Government Act 1919* (NSW).
- 1986** First community concerns in Queensland about fireweed – raised with the Rural Lands Protection Board from Beaudesert Shire Council.
- 1990** Declared under the *Rural Lands Protection Act 1985*.
- 1990** Flowering fireweed is found along the Gateway Arterial Road in Brisbane.
- 2003** Declared as a Class 2 declared pest plant under the *Land Protection (Pest and Stock Route Management) Act 2002*. A Class 2 declaration recognised that the pest has already spread over substantial areas of Queensland but its impact is so serious that efforts need to be made to try and control it and avoid further spread.
- 2007** Detected at Milla Milla and Wondecla in the Tablelands Regional Council area.
- 2012** Recognised as a WoNS. Release of the *Fireweed (Senecio madagascariensis) Strategic Plan 2012-2017*.

8.2.2 Infestations

Fireweed is a weed of beef and dairy pasture east of the Great Dividing Range, and is currently established along the entire NSW coast and north to Brisbane. Isolated infestations have also been found near Caboolture, Cooroy, Belli Park, Maleny, Yandina, Pelican Waters and as far north as Gympie. Submitters noted the presence of fireweed infestations in the following locations:

- Grandchester and neighbouring districts²⁶³
- on the roadside near the RAAF base at Amberley²⁶⁴
- Southern Downs Regional Council areas²⁶⁵
- Toowoomba region, though most outbreaks were of the native variety²⁶⁶
- Scenic Rim Council areas²⁶⁷
- Gympie area²⁶⁸
- southern parts of the Burnett Regional Council area²⁶⁹
- generally in south-east Queensland²⁷⁰

²⁶² Department of Agriculture and Fisheries, *Annotated timeline – 100 years of fireweed (Senecio madagascariensis) in Australia*, 2017.

²⁶³ O’Donoghue, submission 23.

²⁶⁴ J and M Barrow, submission 35.

²⁶⁵ Southern Downs Regional Council, submission 11.

²⁶⁶ Toowoomba Regional Council, submission 28.

²⁶⁷ Sheila Venz, submission 4; John Pocock, submission 14; Errol Steinhardt, submission 17.

²⁶⁸ Gympie Regional Council, submission 22; Burnett Mary Regional Group for Natural Resource Management, submission 46.

²⁶⁹ Burnett Mary Regional Group for Natural Resource Management, submission 46.

²⁷⁰ Jean Hawkins, submission 7.

- Mary Valley and Maleny²⁷¹
- the Tablelands and other areas of North Queensland²⁷²
- Tamborine Mountain,²⁷³ and
- in small isolated pockets of the Noosa Council area at Noosaville, Cooroy and Federal.²⁷⁴

Submitters noted that weather conditions in 2016 were ideal for fireweed – late winter, early spring rains at regular intervals which, combined with often well-grazed paddocks, led to a greater amount of fireweed than in previous years, resulting in a seed bank in the soil for later years.²⁷⁵ AgForce commented that fireweed is particularly abundant after dry summers followed by winter rains, as occurred in 2016.²⁷⁶

A prediction based on climate and land use suggests that fireweed has the potential to be a serious pest as far north as Rockhampton. Given the difficulty of identifying fireweed correctly, AgForce proposed that a faster and easier method for identifying fireweed in the field is needed:

Because of the difficulty in trying to implement control in one species versus the other, we really need some better methods for understanding or being able to identify the two weeds. Often it takes microscopic identification by technical expertise, or herbaria. They are underresourced as well. Councils are underresourced. Everyone is underresourced. Because you have only that narrow window to be able to control fireweed—about six weeks before the plant flowers and reaches maturity—you really need that rapid turnaround.²⁷⁷

Other factors which submitters attributed to the weed's spread included:

- the distribution of seed in contaminated hay and fodder²⁷⁸ and turf (Noosa and Moreton Bay council areas)²⁷⁹
- the application of mulch contaminated with fireweed seed in the Atherton area,²⁸⁰ and
- the failure by the Queensland community to be alert and vigilant to the weed.²⁸¹

The committee also heard:

- fireweed can flower all year round if conditions are right, contrary to available information,²⁸² and can continue to thrive despite spraying and other measures to control it²⁸³
- the rapid lifecycle and subsequent control window means enforcing provisions of the Biosecurity Act is challenging at best. Plants are only readily visible once flowering has occurred and seed set occurs shortly after flowering²⁸⁴

²⁷¹ Mary River Catchment Coordinating Committee, submission 50.

²⁷² John Pocock, submission 14; Tablelands Regional Council, submission 39.

²⁷³ Dianne Schluter, submission 24.

²⁷⁴ Noosa Shire Council, submission 30.

²⁷⁵ Southern Downs Regional Council, submission 11; T and M Weatherhead, submission 45.

²⁷⁶ Submission 33.

²⁷⁷ Public hearing transcript, Gatton, 4 May 2017, p 13.

²⁷⁸ Michael O'Donoghue, submission 23.

²⁷⁹ Noosa Shire Council, submission 30; Moreton Bay Regional Council, submission 34.

²⁸⁰ Queensland Farmers' Federation, submission 29.

²⁸¹ Michael O'Donoghue, submission 23.

²⁸² Noosa Shire Council, submission 30.

²⁸³ Sheila Venz, submission 4.

²⁸⁴ Southern Downs Regional Council, submission 11.

- the efficacy of herbicides diminish once plants have matured to the stage of flowering²⁸⁵
- fireweed is affecting properties in south-east Queensland where population density is high and properties tend to be smaller, and this is testing the coordination of control measures between agencies and landholders
- weed awareness is problematic in areas where traditional farming is being replaced by smaller lifestyle blocks, and the new owners lack land management skills. Properties are being purchased by buyers unaware of the weed infestations present and their ongoing control costs
- buyers should undertake checks for weeds on properties like pest and building checks,²⁸⁶ and
- infestations on public lands, such as roadside verges, are a likely source of infestations on private lands.²⁸⁷

8.2.3 Impacts

Fireweed competes with pasture species for light, moisture and soil nutrients, and spreads where ground cover has been lost due to overgrazing, fire, drought or slashing.

The plant contains pyrrolizidine alkaloids which are toxic to livestock and it causes illness, slow growth, poor conditioning and death. Sheep and goats are less susceptible than cattle. AgForce noted that the toxin (pyrrolizidine alkaloids) in fireweed is a cumulative toxin present in both green and dry material, and that the symptoms of poisoning may take weeks or months to appear.²⁸⁸

Submitters questioned whether fireweed presents a health risk to humans who consume foodstuffs (e.g. honey, milk, grains) contaminated with fireweed toxin.²⁸⁹ One submitter suggested it causes irreversible liver damage, and questioned whether landholders should be encouraged to wear gloves when handling fireweed material.²⁹⁰

Even low densities of fireweed impact on crop yields and grazing. A density of 40 plants per square metre may reduce pasture yield by over 70 per cent and reduce grazing area by as much as 60 per cent.²⁹¹ A 2008 study in NSW estimated fireweed has the capacity to reduce outputs from that state's broadacre, low input grazing systems by 20 per cent.²⁹²

The Gomaren and Doctors Creek Land Care Group stated that producers are equally concerned about native fireweed (*Senecio Brigalowensis*) which is also toxic to livestock, invasive and impacts on costs and productivity. This group also noted the difficulties of identifying livestock deaths due to autopsy requirements for the diagnosis, and suggested that deaths are likely to increase in number.²⁹³

8.2.4 Fireweed strategies

8.2.4.1 Weeds of National Significance Fireweed (*Senecio madagascariensis*) Strategic Plan 2012-2017

The management of fireweed is covered by national and state strategies. In 2012, fireweed was endorsed by the NRM Ministerial Council as a WoNS because of its invasiveness, potential to spread,

²⁸⁵ Southern Downs Regional Council, submission 11.

²⁸⁶ Lockyer Valley Regional Council, public hearing transcript, Gatton, 4 May 2017, p 6.

²⁸⁷ T and M Weatherhead, submission 45.

²⁸⁸ Submission 33.

²⁸⁹ J and M Barrow, submission 35.

²⁹⁰ Michael O'Donoghue, submission 23.

²⁹¹ B Sindel, *Competition between fireweed *Senecio madagascariensis* and oats *Avena strigose**, Proceedings of the 8th Australian Weed Conference, 1987, pp 171-4.

²⁹² Hassall & Associates Pty Ltd, *A Socio-economic Assessment of the Impacts Fireweed*, Report prepared for the Bega Valley Fireweed Association, 2008.

²⁹³ Submission 25.

impact on the grazing industry (including toxicity to livestock) and its environmental and socio-economic costs.

The *Weeds of National Significance Fireweed (Senecio madagascariensis) Strategic Plan 2012-2017*, released in 2012, provides a framework for coordinated management across Australia. The plan's three strategic goals and actions are presented in Figure 9.

Figure 9: Weeds of National Significance Fireweed (*Senecio madagascariensis*) Strategic Plan 2012-2017- strategic goals and objectives

| |
|--|
| New fireweed infestations are prevented from establishing |
| <ul style="list-style-type: none"> • Invasion vectors, sources and pathways are identified and managed to prevent or reduce spread. • Surveillance and response mechanisms are ensuring timely detection of infestations (both new and previously detected). • Spread from the core is reduced and priority outlier infestations are contained or eradicated. |
| Established fireweed infestations are under strategic management |
| <ul style="list-style-type: none"> • Priority assets are benefitting from long-term strategic weed control programs. • Integrated weed and land management practices are improving sustainable production and community wellbeing. |
| Greater capability and commitment to manage fireweed |
| <ul style="list-style-type: none"> • Infestations are mapped to national standards and to a level which is sufficient to inform decision making. • Best practice management delivers efficient, effective and long-term control. • Capability and motivation to manage are enhanced by education and awareness. • Research priorities are identified, promoted, addressed and informing prevention and management (Goal 1 and 2). • Local to national planning incorporates strategic priorities for WoNS. • Stakeholders are committed and able to effectively deliver the strategic plan. • Appropriate policies, codes of conduct, legislation and enforcement are supporting strategic management objectives. • The national strategic plan is relevant and effective. |

Source: Australian Weeds Committee, 2012.

The plan lists 57 specific actions under its three goals and 13 objectives, to be undertaken over the five years. As with the prickly acacia plan, the fireweed plan provides no timeframes for undertaking the actions within the five year period, but does list the 'responsible partners' for each action.

In evidence at the Gatton public hearings, AgForce noted the lack of updates to the national plan, as well as to the best practice manual.²⁹⁴ In advice, DAF told the committee that neither the Australian Weeds Committee nor IPAC had reported on the plan's progress, and that the department is unaware of any work on a new national plan to replace the current plan.²⁹⁵

As the Queensland department primarily responsible for weed management, DAF is listed as a responsible partner for 44 of the 57 actions listed in the plan. The department provided the committee with a summary of its work in relation to the actions in the plan for which it had responsibility.²⁹⁶

²⁹⁴ Public hearing transcript, Gatton, 4 May 2017, p 14.

²⁹⁵ Department of Agriculture and Fisheries, correspondence dated 28 September 2017.

²⁹⁶ Department of Agriculture and Fisheries, correspondence dated 16 October 2017.

8.2.4.2 *Draft Queensland Weed and Pest Animal Strategy 2016-20*

In Queensland, DAF’s *Draft Queensland Weed and Pest Animal Strategy 2016-20*, proposed a state-wide planning framework for addressing and managing weeds, including fireweed. The approach in the draft strategy to manage fireweed is outlined in Figure 10.²⁹⁷

Figure 10: Approach to managing fireweed according to information in the *Draft Queensland Weed and Pest Animal Strategy 2016-2020*

| Outcomes | Area actions | Applicable local government areas |
|--|--|--|
| Containment Prevent spread to pest-free areas and minimise the impact on particular assets: may include maintaining a pest-free status in some areas or regions and returning others to a pest-free status | Area A <ul style="list-style-type: none"> Remove every plant Prevent the spread of reproductive material Prevent reintroduction Remove from trade | Remaining areas of Queensland not designated in Area B |
| | Area B <ul style="list-style-type: none"> Reduce the number of plants Prevent the spread of reproductive material to Area A Minimise the spread of reproductive material into uninfested parts of Area B Minimise the spread of reproductive material into uninfested areas of into areas under active control Remove from trade | Brisbane City Council Gold Coast City Council Ipswich City Council Logan City Council Moreton Bay Regional Council Noosa Shire Council Redland City Council Scenic Rim Regional Council Sunshine Coast Regional Council Southern Downs regional Council |

Source: Department of Agriculture and Fisheries, 2016.

In the draft strategy Area B covers local government areas in south-east Queensland where fireweed is well established. Area A covers the rest of the state.

Under the draft strategy QIPAC would be responsible for coordinating and monitoring the implementation of the Queensland strategy.

8.3 Giant rat’s tail grass (*Sporobolus pyramidalis* and *Sporobolus natalensis*)

GRT is an upright grass 0.6-1.7m tall with long, narrow leaf blades 20-50cm long and 2-4mm wide (see Figure 11). GRT was originally introduced as a contaminant in pasture seed and it has now adapted well to large areas of eastern Australia.²⁹⁸

Seed heads are up to 450mm long, 30mm wide, and change shape from 'rat's tail' when young to an elongated pyramid shape when mature. Plants can produce up to 85,000 seeds per square metre annually, with initial seed viability of about 90 per cent. A significant proportion of seed remains viable for up to 10 years.²⁹⁹

GRT is difficult to distinguish before maturity from native *sporobolus* and other pasture grasses.

²⁹⁷ Department of Agriculture and Fisheries, *Draft Queensland Weed and Pest Animal Strategy 2016-20*, 2016, p 30.

²⁹⁸ Department of Agriculture and Fisheries, *Rat’s tail grasses Sporobolus Pyramidalis, S. natalensis, S. jacquemontii and S. fertilis*, 2016, p 1.

²⁹⁹ Department of Agriculture and Fisheries 2016, ‘Rat’s tail grasses *Sporobolus Pyramidalis, S. natalensis, S. jacquemontii and S. fertilis*’, p 3.

Seeds have a sticky coating,³⁰⁰ and are easily spread by people on clothes and footwear, in the manure and on fur and hooves of feral and native animals, by vehicles and machinery (especially slashers and earthmoving equipment), in hay and untested pasture seed, and by fast-flowing water (heavy rain and floods).

Figure 11: Giant rat's tail grass (*Sporobolus pyramidalis* and *Sporobolus natalensis*)



Source: Agriculture and Environment Committee, 2017.

8.3.1 History in Queensland

DAF prepared for the committee a detailed Queensland history of GRT over the past 48 years.³⁰¹ Key points and events from the DAF history include:

- 1969** First Queensland record of GRT (*Sporobolus natalensis*) collected at North Deep Creek via Gympie.
- 1979** First Queensland record of GRT (*Sporobolus pyramidalis*) collected at Catheys Creek, near Crediton.
- 1991** Declared under the *Rural Lands Protection Act 1985* in Category P4. Declaration in Category P4 meant that the weed was to be prevented from spreading.
- 1994** Declaration changed to Category P3 in all east coast catchments with the exception of the shires of Dalrymple, Belyando, Jericho, Peak Downs, Emerald, Bauhinia, Taroom and the northern sections of Bungil and Chinchilla, and Category P2 in the remainder of the state. Category P3 meant that the infestation was to be reduced and Category P2 meant that the plant must be destroyed.
- 1998** Nominated as a WoNS by the Queensland Government, but was not endorsed by the Australian Weeds Committee as a WoNS.
- 2001** National strategy (*Weedy Sporobolus Grasses Strategy 2001-2006*) launched by the Deputy Prime Minister following its endorsement by the Australian Weeds Committee.
- 2016** Listed under the Biosecurity Act as Category 3 restricted matter.

³⁰⁰ Agforce, submission 33, p 3.

³⁰¹ Department of Agriculture and Fisheries, *Annotated timeline - 50 years of giant rat's tail grass (*Sporobolus natalensis* and *Sporobolus pyramidalis*) in Queensland*, 2017.

8.3.2 Infestations

GRT infestations extend along the east coast of Queensland from Coolangatta north to Cooktown. Detailed maps showing the distribution of GRT within Queensland, prepared by DAF, are provided in Appendix E.

Ecoclimatic modelling suggests GRT is suited to conditions present in 30 per cent of Australia (223 million hectares) and 60 per cent of Queensland (108 million hectares), including areas receiving as little as 500mm average annual rainfall.³⁰² The Gympie Regional Council described GRT as the greatest pest facing landholders in the eastern half of Queensland.³⁰³

8.3.3 Impacts

GRT is a significant agricultural and environmental weed in Queensland and northern NSW. While cattle may graze on young GRT plants, the leaves of mature plants are tough and unpalatable. GRT quickly dominates pastures, particularly pastures that are in poor condition where there has been a loss of ground cover and/or over-grazing. The loss of native and other pasture grasses has a direct impact on the land's stock carrying capacity and productivity with up to 80 per cent reductions noted.

GRT quickly invades native grasslands, open woodlands, conservation reserves and wetland areas. When fully established in an area, it can form a grass monoculture, excluding native plants and reducing biodiversity of native groundcover species. This can also have an impact on native herbivores, which find the plants unpalatable. GRT is ranked among the top 25 environmental weeds in south-east Queensland. It is also thought to pose a significant threat to rangeland biodiversity in central and northern Queensland, and heavy infestations may also increase fire intensity in sensitive environmental areas.

8.3.4 Giant rat's tail grass strategies

In Queensland, DAF's *Draft Queensland Weed and Pest Animal Strategy 2016-20*, proposed a state-wide planning framework for addressing and managing weeds, including GRT. DAF proposed a two-speed approach involving a range of containment actions until 2020 in areas of the state designated as either 'A' or 'B' (Figure 12).³⁰⁴ In the draft strategy Area B covers local government areas in south-east Queensland where GRT is well established. Area A covers the rest of the state where it is not established.

³⁰² Department of Agriculture and Fisheries, *Rat's tail grass Sporobolus pyramidalis, S. natalensis, S. jacquemontii and S. fertilis*, 2016, p 2.

³⁰³ Submission 22, p 3.

³⁰⁴ Department of Agriculture and Fisheries, *Draft Queensland Weed and Pest Animal Strategy 2016-20*, 2016, p 30.

Figure 12: Approach to managing GRT according to information in the *Draft Queensland Weed and Pest Animal Strategy 2016-2020*

| Outcomes | Area actions | Applicable local government areas |
|--|--|--|
| Containment Prevent spread to pest-free areas and minimise the impact on particular assets: may include maintaining a pest-free status in some areas or regions and returning others to a pest-free status | Area A <ul style="list-style-type: none"> Remove every plant Prevent the spread of reproductive material Prevent reintroduction Remove from trade | Remaining areas of Queensland not designated in Area B |
| | Area B <ul style="list-style-type: none"> Reduce the number of plants Prevent the spread of reproductive material to Area A Minimise the spread of reproductive material into uninfested parts of Area B Minimise the spread of reproductive material into uninfested areas of into areas under active control Remove from trade | Brisbane City Council Gold Coast City Council Ipswich City Council Logan City Council Moreton Bay Regional Council Noosa Shire Council Redland City Council Scenic Rim Regional Council Sunshine Coast Regional Council Southern Downs Regional Council |

Source: Department of Agriculture and Fisheries, 2016.

Under the draft strategy QIPAC would be responsible for coordinating and monitoring the implementation of the Queensland strategy.

Submitters commented extensively on the programs operated by local governments. Submitters called for more action by some councils³⁰⁵ and noted the inconsistent approaches to compliance adopted by neighbouring councils.

AgForce commented on the value of property buffers, noting that Gympie Regional Council is increasing buffer widths annually depending on property size, and that Livingstone Shire Council has undertaken to increase roadside buffers through unfenced roads across properties that are heavily infested with GRT.³⁰⁶

8.3.5 Control techniques

The Southern Downs Regional Council noted that efforts to control GRT may be confounded by terrain.³⁰⁷

Submitters praised the effectiveness of herbicides, including:

- spot-spraying and wick wiping with glyphosate, and broadcasting of granular flupropanate,³⁰⁸ and
- pre-emergent herbicides.³⁰⁹

Some submitters raised concerns about the use of herbicides to control GRT, citing concerns that:

³⁰⁵ Submission 18.

³⁰⁶ Submission 33.

³⁰⁷ Submission 11.

³⁰⁸ Noosa Shire Council, submission 30.

³⁰⁹ Tablelands Regional Council, submission 39.

- chemical control is a constant expense as reinfestation is almost inevitable with weeds constantly being spread by water, native animals and wind³¹⁰
- glyphosate used in conjunction with flupropanate creates an area for GRT and other weeds to proliferate without competition,³¹¹ and
- residual herbicides containing flupropanate have limited effectiveness due to leaching from the roots of GRT plants by high rainfall, particularly during warmer months. This leads to glyphosate being used which is non-selective, non-residual and requires frequent retreatments.³¹²

Submitters reported success managing GRT infestations by other means, such as using fertiliser and better grazing practices, and through grubbing and bagging the weeds. The following comments were made:

- good outcomes have been achieved using fertiliser on pastures to assist good grasses better compete with GRT³¹³
- trials are being conducted using fertiliser along power utility corridors in the Cardwell district,³¹⁴ and
- GRT is an indicator species for low silica levels and improving soil through better grazing techniques or some other means is the best way to properly lessen infestation levels.³¹⁵

Other suggestions for minimising the spread of GRT included vehicular wash down facilities, possibly provided on a user-pays basis.³¹⁶

8.3.6 Biological controls and other research

Gympie Regional Council noted that biological controls seem to be the only way to prevent the spread as current controls are not working sufficiently well, and there are too many vectors for GRT given the resilience of the seeds.³¹⁷ Similarly, the NSW Department of Primary Industries noted that the prospect of sustained control using biological controls offers the most cost-effective long-term solution to the impacts of GRT.³¹⁸

Other submitters made similar comments regarding the need for research to identify effective biological controls.³¹⁹ Comments by submitters about biological controls included:

- GRT is a difficult target for biological controls because it is closely related to native species³²⁰

³¹⁰ Errol Steinhardt, submission 17.

³¹¹ Bos Rural Supplies, submission 3.

³¹² Noosa Shire Council, submission 30.

³¹³ Farogan Valley Droughtmasters, submission 26; Mary River Catchment Coordinating Committee, submission 50.

³¹⁴ Agforce, submission 33.

³¹⁵ Bos Rural Supplies, submission 3.

³¹⁶ R and R Jensen, submission 6.

³¹⁷ Submission 22.

³¹⁸ Submission 55.

³¹⁹ Errol Steinhardt, Submission 17; Agforce, submission 33.

³²⁰ Invasive Species Council, submission 37.

- the crown rot fungus (*Nigrospora oryzae* available commercially as ‘Parra Trooper’) is being trialled again in Queensland,³²¹ and the state government should fund more research though it may not be an effective biocontrol,³²² particularly on its own³²³
- extensive integrated management trials are underway to improve efficacy of granular flupropanate herbicide and residual control of seedlings,³²⁴ and
- the need for research into grazing withholding periods for herbicides.³²⁵

AgForce noted new research into biocontrol agents that have been previously examined, including a stem gall wasp from Africa and other diseases and fungus attacking some of the native *Sporobolus* grasses that are closely related to GRT. AgForce also noted integrated trials conducted near Gladstone by the Gladstone Regional Council, Economic Development Queensland and Biosecurity Queensland to improve control options.³²⁶

The Invasive Species Council submitted that community groups may need funding to support their work to propagate biological controls.³²⁷ Other areas for research highlighted by submitters included:

- integrated management using crash grazing, herbicide and fertiliser regimes across a range of soil types and rainfalls³²⁸
- control methods for dam catchments, irrigation channels, grazed utility corridors and other areas where herbicides cannot be used³²⁹
- cost-effective fertiliser rates for managing GRT³³⁰
- the GRT invasion of natural areas, and links to fire management practices,³³¹ and
- the need to look at using beneficial grass species to compete with GRT.³³²

8.3.7 Education

AgForce noted its work with Weedspotters Network Queensland to raise awareness about the risks that GRT may be spread through the movement of drought fodder.³³³

A number of submitters commented on the extent and currency of information and advice provided by DAF and others:

- DAF’s *Weedy Sporobolus Grass Best Management Practice* fact sheet has been available for 10 years, has been widely used and is updated regularly³³⁴
- the existing best practice manual for weedy *Sporobolus* grass should be urgently revised, with the last revision in 2007.³³⁵

³²¹ Agforce, submission 33.

³²² Submission 18.

³²³ Burnett Mary Regional Group for Natural Resource Management, submission 46.

³²⁴ Agforce, submission 33.

³²⁵ Agforce, submission 33.

³²⁶ Submission 33.

³²⁷ Submission 37.

³²⁸ Agforce, submission 33.

³²⁹ Agforce, submission 33.

³³⁰ Agforce, submission 33; Southern Downs Regional Council, submission 11.

³³¹ Burnett Mary Regional Group for Natural Resource Management, submission 46.

³³² Bos Rural Supplies, submission 3.

³³³ Submission 33.

³³⁴ AgForce, submission 33.

³³⁵ AgForce, submission 33.

Submitters made the following suggestions regarding providing new or better information:

- road signage with information on how to prevent the spread of GRT³³⁶
- develop and circulate a pictorial guide and key to identify the weedy Sporobolus grass³³⁷
- more awareness and weed control days across affected areas³³⁸
- best practice protocols for contractors and machinery operators (for recognising weeds and taking appropriate control measures), backed by training and licensing,³³⁹ and
- DAF to send quarterly email updates to property holders using property identification codes and registered biosecurity entities to advise about weeds of concern and diseases, who to contact for advice and what basic steps can be taken for their control.³⁴⁰

8.4 Committee comment

A number of suggestions to enhance weed management practices generally in Queensland were made by submitters through the examination of the three case studies.

8.4.1 Enhancing transparency and accountability in the implementation of national and state strategies

The committee notes that prickly acacia and fireweed are the subject of dedicated WoNS national plans. The committee encourages the publishing of regular progress reports by DAF on the implementation of key actions.

8.4.2 Targeting eradication at the paddock, property and district scale within the containment areas

DAF's draft pest and weed strategy proposed a two-speed approach to managing prickly acacia and fireweed involving a range of containment actions until 2020. In areas of the state where these weeds are well established (Area B), the approach proposed to focus on containing the spread of the weed rather than eradication. While eradication of prickly acacia from the state may be unrealistic, regional and local eradication programs run by Desert Channels Queensland and Southern Gulf NRM appear to be successful. These programs have received significant government support, and attract high-levels of commitment and effort from landholders and lessees. The committee notes that the inquiry did not identify fireweed eradication programs in Queensland with the same levels of success.

8.4.3 Enhancing controls on livestock movements

The committee heard from submitters that livestock, particularly cattle, are a key vector for long-distance seed dispersal for weeds. Seeds that are eaten by livestock or which become imbedded in their hooves, are easily spread to trucks and then to other properties. During the inquiry, the committee heard of a number of possible solutions and related issues, including:

- the need for producers to quarantine stock prior to transport, though this is difficult to enforce and increases costs to producers
- the benefits of wider use of vendor declaration forms by producers selling or moving stock from prickly acacia infested areas. DAF have advised that vendor declaration forms are used by a small to moderate proportion of landholders (34 per cent of landholders in a 2010 survey)

³³⁶ Jensen, submission 6.

³³⁷ Agforce, submission 33.

³³⁸ Agforce, submission 33.

³³⁹ Vivien Butler, submission 42.

³⁴⁰ Vivien Butler, submission 42.

- the need for more vehicle wash down areas where livestock transporters can safely clean their vehicles. A network of wash down facilities continues to operate within and around core infestation areas such as Julia Creek, McKinlay, Muttaborra and Ilfracombe. The Cloncurry facility is currently closed because of high maintenance costs. The committee also heard of a lack of suitable wash down areas near abattoirs
- a need for additional appropriate, en route effluent dump facilities (distinct from wash down facilities), and
- the need for a credible enforcement presence to encourage producers, livestock transporters, saleyards and meatworks to fulfil their GBO in relation to livestock contaminated with weed seeds.

While a number of local governments manage clean-down facilities and there are some private companies that have private facilities that may be available to the public, it was suggested there is an unmet demand for further publicly-accessible livestock truck wash down and livestock effluent dump facilities in Queensland.

8.4.4 The need to cap and pipe open bore drains

The proliferation of prickly acacia along open bore drains is well documented and the effectiveness of capping bores and replacing open bore drains with piping as a control strategy for the weeds is also well known. The committee notes the evidence that bores in prickly acacia country are still to be rehabilitated.

8.4.5 Improving the management of weeds by landholders and lessees

A lack of attention to the problem of weeds by landholders and lessees can result in added costs for neighbouring and downstream properties. Ignoring a weed problem is not a fair option. The committee considers there are benefits in expanded targeted education initiatives (as discussed below) and the roll out of good neighbour programs to more local government areas.

8.4.6 Enhancing targeted education for land managers

The committee considers that education initiatives targeted at landowners increase awareness of weed management responsibilities including the identification and control of weeds.

The fireweed and GRT case studies highlighted particular challenges with weed control in areas where properties are purchased primarily for hobby farms. Such owners are generally not professional land managers and may have little experience in identifying and controlling weeds. The committee heard of instances in which people had purchased a rural property in belief that it had grass suitable for grazing of livestock, only to discover that the grass was actually a weed poisonous to livestock.

8.4.7 Supporting research and innovation in weed management

The committee acknowledges the evidence provided by stakeholders that research is important to identifying biological controls for significant weed pests, such as prickly acacia, fireweed and GRT. Further research may also be useful in relation to:

- improving the efficacy of, and understanding how best to use, herbicides and mechanical controls
- the sustainability of the broad scale use of generic systemic herbicides, particularly near watercourses, and for prickly acacia, and
- the viability of using weed matter collected as part of a control program for use as a biofuel feedstock or in other commercial applications.

Appendix A – Witnesses at public briefings and public hearings of the Agriculture and Environment Committee

Gladstone public hearing

27 April 2017

Bundaberg Regional Council

- Mr Nick Maclean
- Mr Eric Dyke

Gladstone Regional Council

- Mr Josh Dyke, Pest Management Coordinator

Banana Shire Council

- Mr Pat Brennan, Councillor
- Mr Gordon Twinner, Rural Services Coordinator

Fitzroy Basin Association

- Ms Rebecca French

Department of Natural Resources and Mines

- Mr Darren Moor, Executive Director, Central Region

Economic Development Queensland

- Mr John White, Projects Director Industrial

Department of Agriculture and Fisheries

- Dr John Robertson, General Manager, Invasive Plants and Animals, Biosecurity Queensland

Private capacity

- Mr Jim Elliot

Gatton public hearing

4 May 2017

Lockyer Valley Regional Council

- Mr Richard Collins, Coordinator, Environmental Planning
- Mr Jim McDonald, Councillor

Ipswich City Council

- Mr Sean Madigan, Chief Operating Officer, Health, Security and Regulatory Services
- Mr Hayden Taylor, Principal Officer, Animal Management

Toowoomba Regional Council

- Mr Mark Ready, Principal, Conservation and Pest Management

University of Queensland

- Dr Vic Galea, Associate Professor, Plant Pathology, School of Agriculture and Food Sciences

AgForce

- Ms Marie Vitelli, Policy Officer

Department of National Parks, Sport and Racing

- Dr Geoff Lundie-Jenkins, Fire and Pests, Queensland Parks and Wildlife Service

Department of Agriculture and Fisheries

- Dr John Robertson, General Manager, Invasive Plants and Animals, Biosecurity Queensland

Brisbane public briefing

10 May 2017

Department of Agriculture and Fisheries

- Dr John Robertson, General Manager, Invasive Plants and Animals, Biosecurity Queensland

Brisbane public hearing

14 June 2017

Real Estate Institute of Queensland

- Mr Sean Roberts, Legal Counsel

Livestock and Rural Transporters Association of Queensland Inc.

- Mrs Fiona Wild

Gympie Regional Council

- Mr Ben Curley, Lands Protection Manager

Gympie and District Landcare Group

- Mr Ernest James Rider, President

Greater Mary Association

- Mr Ross Smith, Treasurer

Mary River Catchment Coordination Committee

- Mrs Margaret Thompson, Treasurer

Queensland Regional NRM Groups Collective

- Mr Andrew Drysdale, Chief Executive Officer

CSIRO

- Dr Raghu Sathyamurthy, Senior Research Scientist
- Dr Rieks van Klinken, Senior Research Scientist

Hughenden public hearing

19 June 2017

Private capacity

- Mr Robert Hacon
- Mr Scott Harrington
- Mr Brett Epple

McKinlay Shire Council

- Mr Andrew Boardman, Director, Environment and Regulatory Services
- Mr Colin Malone, Shire Ranger
- Mr Neil Walker, Councillor

Flinders Shire Council

- Mr Bill Bode, Councillor
- Mr Kim (Clancy) Middleton, Councillor
- Ms Robyn Young, Rural Services Manager, Good Neighbour Program

Southern Gulf NRM

- Mr Charles Curry, Project Coordinator

Barcaldine public hearing

20 June 2017

Barcoo Shire Council

- Mr Michael Pratt, Deputy Mayor

Desert Channels Queensland

- Mr Dominic Burden, Chairman
- Ms Leanne Kohler, Chief Executive Officer
- Mr Simon Wiggins, Acting Operations Manager

Department of Agriculture and Fisheries

- Dr John Robertson, General Manager, Invasive Plants and Animals, Biosecurity Queensland

Brisbane public hearing

25 October 2017

Department of Agriculture and Fisheries

- Dr John Robertson, General Manager, Invasive Plants and Animals, Biosecurity Queensland
- Mr Martin Hannan-Jones, Senior Biosecurity Officer, Invasive Plants and Animals, Biosecurity Queensland

Appendix B – Submitters

| Sub # | Submitter |
|-------|---|
| 001 | Gary Parker |
| 002 | Wendy and Brian Harris |
| 003 | Bos Rural Supplies |
| 004 | Sheila Venz |
| 005 | Biddadaba Creek Action Group |
| 006 | Robert and Ruth Jensen |
| 007 | Jean Hawkins |
| 008 | Bill Tait |
| 009 | Gladstone Regional Council |
| 010 | Robert Hacon |
| 011 | Southern Downs Regional Council |
| 012 | Southern Gulf NRM |
| 013 | Rockhampton Regional Council |
| 014 | John Pocock |
| 015 | Astonvale Station |
| 016 | Bioenergy Australia Manager |
| 017 | Errol Steinhardt |
| 018 | Leon and Gaye Blank |
| 019 | <i>Confidential</i> |
| 020 | Torres Strait Island Regional Council |
| 021 | Council of Mayors SEQ |
| 022 | Gympie Regional Council |
| 023 | Michael O'Donoghue |
| 024 | Dianne Schluter |
| 025 | Gomaren and Doctors Creek Land Care Group |
| 026 | Farogan Valley Droughtmasters |

- 027 Local Government Association of Queensland
- 028 Toowoomba Regional Council
- 029 Queensland Farmers' Federation
- 030 Noosa Shire Council
- 031 Whitsunday AG Services Pty Ltd
- 032 Gympie and District Land Care Group
- 033 Agforce
- 034 Moreton Bay Regional Council
- 035 J and M Barrow
- 036 Far North Queensland Regional Organisation of Councils
- 037 Invasive Species Council
- 038 Jan Cotham
- 039 Tablelands Regional Council
- 040 Fitzroy Basin Association
- 041 Lockyer Valley Regional Council
- 042 Vivien Butler
- 043 Garry Reed
- 044 Douglas Silke
- 045 Trevor and Marion Weatherhead
- 046 Burnett Mary Regional Group for Natural Resource Management
- 047 Rob Katter MP, Member for Mount Isa
- 048 CSIRO
- 049 Cloncurry Shire Council
- 050 Murray River Catchment Coordinating Committee
- 051 Peter Douglas
- 052 Barcoo Shire Council
- 053 Desert Channels Queensland
- 054 Healthy Waterways and Catchments

- 055 Department of Primary Industries NSW
- 056 Charters Towers Regional Council
- 057 Department of Agriculture and Water Resources (Cwth)
- 058 Ipswich City Council
- 059 David Pahlke
- 060 Jim Elliot

Appendix C – Witnesses at public briefing

Brisbane public briefing

10 June 2019

Department of Natural Resources, Mines and Energy

- Mr Ken Sherwood, Acting Regional manager, Land Services

Department of Environment and Science

- Mr Leigh Harris, Acting Executive Director, Park Services, Queensland Parks and Wildlife Services and Partnerships
- Mr Owen Earl, Acting Director, Park Services, Queensland Parks and Wildlife Services and Partnerships

Department of Transport and Main Roads

- Ms Amanda Yeates, Deputy Director-General, Infrastructure Management and Delivery
- Mr Ramses Zietek, Director, Environment and Cultural Heritage

Department of Agriculture and Fisheries

- Dr John Robertson, General Manager, Invasive Plants and Animals, Biosecurity Queensland
- Mr Martin Hannan-Jones, Senior Policy Officer, Invasive Plants and Animals, Biosecurity Queensland

Appendix D – Schedule 1 and 2 weeds under the *Biosecurity Act 2014*

Schedule 1 Prohibited matter

Part 3 Invasive biosecurity matter

- acacias non-indigenous to Australia (*Acaciella* spp., *Mariosousa* spp., *Senegalia* spp. and *Vachellia* spp. other than *Vachellia nilotica*, *Vachellia farnesiana*)
- anchored water hyacinth (*Eichhornia azurea*)
- annual thunbergia (*Thunbergia annua*)
- bitterweed (*Helenium amarum*)
- candleberry myrtle (*Morella faya*)
- cholla cactus (*Cylindropuntia* spp. and hybrids other than *C. fulgida*, *C. imbricata*, *C. prolifera*, *C. rosea*, *C. spinosior* and *C. tunicata*)
- Christ's thorn (*Ziziphus spina-christi*)
- Eurasian water milfoil (*Myriophyllum spicatum*)
- fanworts (*Cabomba* spp. other than *C. caroliniana*)
- floating water chestnuts (*Trapa* spp.)
- harrisia cactus (*Harrisia* spp. syn. *Eriocereus* spp. other than *H. martinii*, *H. tortuosa* and *H. pomanensis* syn. *Cereus pomanensis*)
- honey locust (*Gleditsia* spp. other than *G. triacanthos*)
- horsetails (*Equisetum* spp.)
- kochia (*Bassia scoparia* syn. *Kochia scoparia*)
- lagarosiphon (*Lagarosiphon major*)
- mesquites (all *Prosopis* spp. and hybrids other than *P. glandulosa*, *P. pallida* and *P. velutina*)
- Mexican bean tree (all *Cecropia* spp. other than *C. pachystachya*, *C. palmata* and *C. peltata*)
- miconia (*Miconia* spp. other than *M. calvescens*, *M. cionotricha*, *M. nervosa* and *M. racemosa*)
- mikania (*Mikania* spp. other than *M. micrantha*)
- Peruvian primrose bush (*Ludwigia peruviana*)
- prickly pear (*Opuntia* spp. other than *O. aurantiaca*, *O. elata*, *O. ficus-indica*, *O. microdasys*, *O. monacantha*, *O. stricta*, *O. streptacantha* and *O. tomentosa*)
- red sesbania (*Sesbania punicea*)
- salvinias (*Salvinia* spp. other than *S. molesta*)
- serrated tussock (*Nassella trichotoma*)
- Siam weed (*Chromolaena* spp. other than *C. odorata* and *C. squalida*)
- spiked pepper (*Piper aduncum*)
- tropical soda apple (*Solanum viarum*)
- water soldiers (*Stratiotes aloides*)
- witch weeds (*Striga* spp. other than native species)

Part 5 Marine plants

- Asian seaweed (*Sargassum muticum*)
- green macroalga (*Codium fragile* ssp. *tomentosoides*)
- Japanese seaweed (*Undaria pinnatifida*)
- red macroalga (*Grateloupia turuturu* (syn *Grateloupia doryphora*))

Schedule 2 Restricted matter

Part 2 Restricted matter – invasive biosecurity matter

| Restricted matter – Invasive Plants | Category Numbers ³⁴¹ |
|--|---------------------------------|
| African boxthorn (<i>Lycium ferocissimum</i>) | 3 |
| African fountain grass (<i>Cenchrus setaceum</i>) | 3 |
| African tulip tree (<i>Spathodea campanulata</i>) | 3 |
| alligator weed (<i>Alternanthera philoxeroides</i>) | 3 |
| annual ragweed (<i>Ambrosia artemisiifolia</i>) | 3 |
| asparagus fern (<i>Asparagus aethiopicus</i> , <i>A. africanus</i> and <i>A. plumosus</i>) | 3 |
| asparagus fern (<i>Asparagus scandens</i>) | 3 |
| athel pine (<i>Tamarix aphylla</i>) | 3 |
| badhara bush (<i>Gmelina elliptica</i>) | 3 |
| balloon vine (<i>Cardiospermum grandiflorum</i>) | 3 |
| belly-ache bush (<i>Jatropha gossypifolia</i> and hybrids) | 3 |
| bitou bush (<i>Chrysanthemoides monilifera</i> ssp. <i>rotundifolia</i>) | 2,3,4,5 |
| blackberry (<i>Rubus anglocandicans</i> , <i>Rubus fruticosus</i> aggregate) | 3 |
| boneseed (<i>Chrysanthemoides monilifera</i> ssp. <i>monilifera</i>) | 2,3,4,5 |
| bridal creeper (<i>Asparagus asparagoides</i>) | 2,3,4,5 |
| bridal veil (<i>Asparagus declinatus</i>) | 3 |
| broad-leaved pepper tree (<i>Schinus terebinthifolius</i>) | 3 |
| cabomba (<i>Cabomba caroliniana</i>) | 3 |
| camphor laurel (<i>Cinnamomum camphora</i>) | 3 |
| candyleaf (<i>Stevia ovata</i>) | 3 |
| cane cactus (<i>Austrocylindropuntia cylindrica</i>) | 3 |
| cat's claw creeper (<i>Dolichandra unguis-cati</i>) | 3 |
| Chilean needle grass (<i>Nassella neesiana</i>) | 3 |
| chinee apple (<i>Ziziphus mauritiana</i>) | 3 |
| Chinese celtis (<i>Celtis sinensis</i>) | 3 |
| cholla cacti with the following names— | |
| • coral cactus (<i>Cylindropuntia fulgida</i>) | 3 |
| • devil's rope pear (<i>C. imbricata</i>) | 3 |
| • Hudson pear (<i>Cylindropuntia rosea</i> and <i>C. tunicata</i>) | 2,3,4,5 |
| • jumping cholla (<i>C. prolifera</i>) | 2,3,4,5 |
| • snake cactus (<i>C. spinosior</i>) | 3 |
| Dutchman's pipe (<i>Aristolochia</i> spp. other than native species) | 3 |
| elephant ear vine (<i>Argyrea nervosa</i>) | 3 |
| Eve's pin cactus (<i>Austrocylindropuntia subulata</i>) | 3 |
| fireweed (<i>Senecio madagascariensis</i>) | 3 |
| flax-leaf broom (<i>Genista linifolia</i>) | 3 |
| gamba grass (<i>Andropogon gayanus</i>) | 3 |
| giant sensitive plant (<i>Mimosa diplotricha</i> var. <i>diplotricha</i>) | 3 |
| gorse (<i>Ulex europaeus</i>) | 3 |
| groundsel bush (<i>Baccharis halimifolia</i>) | 3 |
| harrisia cactus (<i>Harrisia martinii</i> , <i>H. tortuosa</i> and <i>H. pomanensis</i> syn. <i>Cereus pomanensis</i>) | 3 |

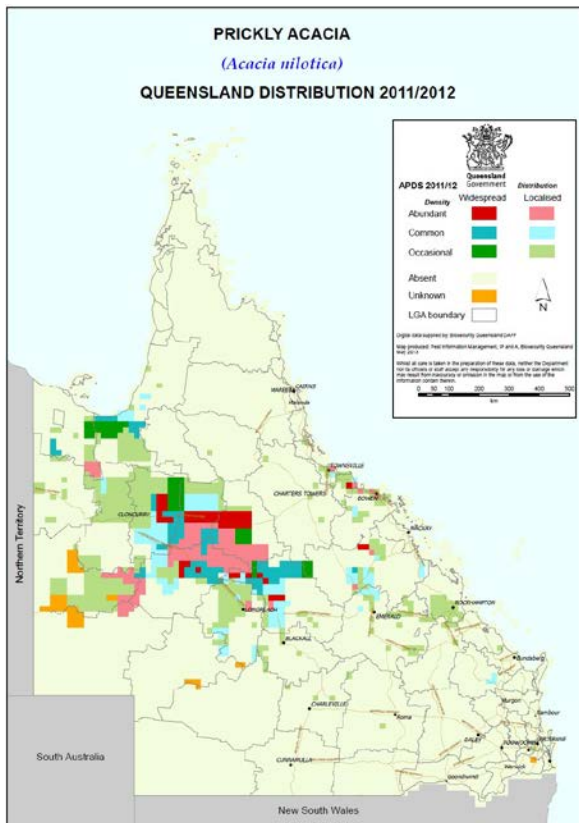
³⁴¹ **Category 2** - a person must report the invasive plant within 24 hours to Biosecurity Queensland; **Category 3** - a person must not distribute the invasive plant either by sale or gift, or distribute into the environment; **Category 4** - a person must not move the invasive plant; **Category 5** - a person must not keep the invasive plant.

| | |
|---|---------|
| harungana (<i>Harungana madagascariensis</i>) | 3 |
| honey locust (<i>Gleditsia triacanthos</i> including cultivars and varieties) | 3 |
| hygrophila (<i>Hygrophila costata</i>) | 3 |
| hymenachne or olive hymenachne (<i>Hymenachne amplexicaulis</i> and hybrids) | 3 |
| Koster's curse (<i>Clidemia hirta</i>) | 2,3,4,5 |
| kudzu (<i>Pueraria montana</i> var. <i>lobata</i> syn. <i>P. lobata</i> , <i>P. triloba</i> other than in the Torres Strait Islands) | 3 |
| lantanas— | |
| • creeping lantana (<i>Lantana montevidensis</i>) | 3 |
| • lantana, common lantana (<i>Lantana camara</i>) | 3 |
| limnocharis, yellow burrhead (<i>Limnocharis flava</i>) | 2,3,4,5 |
| Madeira vine (<i>Anredera cordifolia</i>) | 3 |
| Madras thorn (<i>Pithecellobium dulce</i>) | 2,3,4,5 |
| mesquites— | |
| • honey mesquite (<i>Prosopis glandulosa</i>) | 3 |
| • mesquite or algarroba (<i>Prosopis pallida</i>) | 3 |
| • Quilpie mesquite (<i>Prosopis velutina</i>) | 3 |
| Mexican bean tree (<i>Cecropia pachystachya</i> , <i>C. palmata</i> and <i>C. peltata</i>) | 2,3,4,5 |
| Mexican feather grass (<i>Nassella tenuissima</i>) | 2,3,4,5 |
| miconia with the following names— | |
| • <i>Miconia calvescens</i> | 2,3,4,5 |
| • <i>M. cionotricha</i> | 2,3,4,5 |
| • <i>M. nervosa</i> | 2,3,4,5 |
| • <i>M. racemosa</i> | 2,3,4,5 |
| mikania vine (<i>Mikania micrantha</i>) | 2,3,4,5 |
| mimosa pigra (<i>Mimosa pigra</i>) | 2,3,4,5 |
| Montpellier broom (<i>Genista monspessulana</i>) | 3 |
| mother of millions (<i>Bryophyllum delagoense</i> syn. <i>B. tubiflorum</i> , <i>Kalanchoe delagoensis</i>) | 3 |
| mother of millions hybrid (<i>Bryophyllum x houghtonii</i>) | 3 |
| ornamental gingers— | |
| • Kahili ginger (<i>Hedychium gardnerianum</i>) | 3 |
| • white ginger (<i>H. coronarium</i>) | 3 |
| • yellow ginger (<i>H. flavescens</i>) | 3 |
| parkinsonia (<i>Parkinsonia aculeata</i>) | 3 |
| parthenium (<i>Parthenium hysterophorus</i>) | 3 |
| pond apple (<i>Annona glabra</i>) | 3 |
| prickly acacia (<i>Vachellia nilotica</i>) | 3 |
| prickly pears— | |
| • bunny ears (<i>Opuntia microdasys</i>) | 2,3,4,5 |
| • common pest pear, spiny pest pear (<i>O. stricta</i> syn. <i>O. inermis</i>) | 3 |
| • drooping tree pear (<i>O. monacantha</i> syn. <i>O. vulgaris</i>) | 3 |
| • prickly pear (<i>O. elata</i>) | 2,3,4,5 |
| • tiger pear (<i>O. aurantiaca</i>) | 3 |
| • velvety tree pear (<i>O. tomentosa</i>) | 3 |
| • Westwood pear (<i>O. streptacantha</i>) | 3 |
| privets— | |
| • broad-leaf privet, tree privet (<i>Ligustrum lucidum</i>) | 3 |
| • small-leaf privet, Chinese privet (<i>L. sinense</i>) | 3 |
| rat's tail grasses— | |

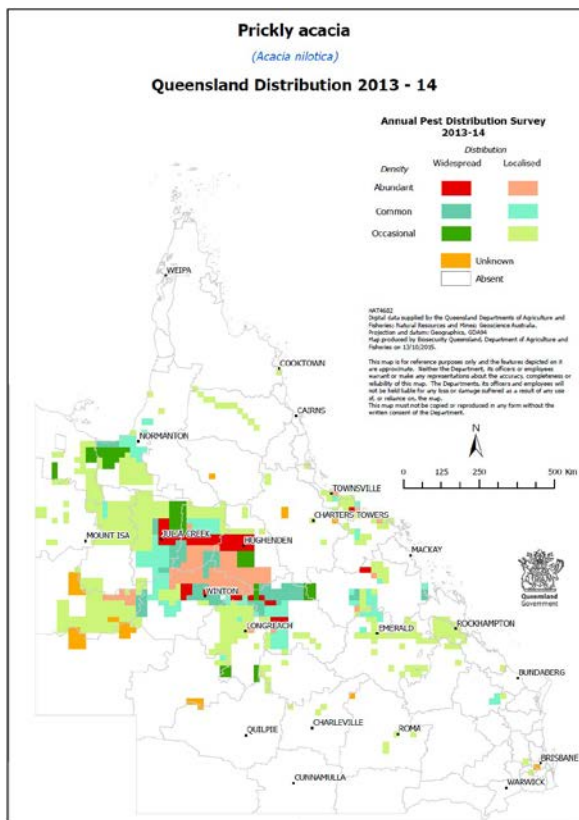
| | |
|---|---------|
| <ul style="list-style-type: none"> American rat's tail grass (<i>Sporobolus jacquemontii</i>) | 3 |
| <ul style="list-style-type: none"> giant Parramatta grass (<i>S. fertilis</i>) | 3 |
| <ul style="list-style-type: none"> giant rat's tail grass (<i>S. pyramidalis</i> and <i>S. natalensis</i>) | 3 |
| rubber vines— | |
| <ul style="list-style-type: none"> ornamental rubber vine (<i>Cryptostegia madagascariensis</i>) | 3 |
| <ul style="list-style-type: none"> rubber vine (<i>C. grandiflora</i>) | 3 |
| sagittaria (<i>Sagittaria platyphylla</i>) | 3 |
| salvinia (<i>Salvinia molesta</i>) | 3 |
| Scotch broom (<i>Cytisus scoparius</i>) | 3 |
| Senegal tea (<i>Gymnocoronis spilanthoides</i>) | 3 |
| Siam weed with the following names— | |
| <ul style="list-style-type: none"> <i>Chromolaena odorata</i> | 3 |
| <ul style="list-style-type: none"> <i>C. squalida</i> | 3 |
| sicklepods— | |
| <ul style="list-style-type: none"> foetid cassia (<i>Senna tora</i>) | 3 |
| <ul style="list-style-type: none"> hairy cassia (<i>S. hirsuta</i>) | 3 |
| <ul style="list-style-type: none"> sicklepod (<i>S. obtusifolia</i>) | 3 |
| silver-leaf nightshade (<i>Solanum elaeagnifolium</i>) | 3 |
| Singapore daisy (<i>Sphagneticola trilobata</i> syn. <i>Wedelia trilobata</i>) | 3 |
| telegraph weed (<i>Heterotheca grandiflora</i>) | 3 |
| thunbergia (<i>Thunbergia grandiflora</i> syn. <i>T. laurifolia</i>) | 3 |
| tobacco weed (<i>Elephantopus mollis</i>) | 3 |
| water hyacinth (<i>Eichhornia crassipes</i>) | 3 |
| water lettuce (<i>Pistia stratiotes</i>) | 3 |
| water mimosa (<i>Neptunia oleracea</i> and <i>N. Plena</i>) | 2,3,4,5 |
| willows (all <i>Salix</i> spp. other than <i>S. babylonica</i> , <i>S. x calodendron</i> and <i>S. x reichardtii</i>) | 3 |
| yellow bells (<i>Tecoma stans</i>) | 3 |
| yellow oleander, Captain Cook tree (<i>Cascabela thevetia</i> syn. <i>Thevetia peruviana</i>) | 3 |

Appendix E – Infestation maps for case study weeds

Prickly acacia distribution maps

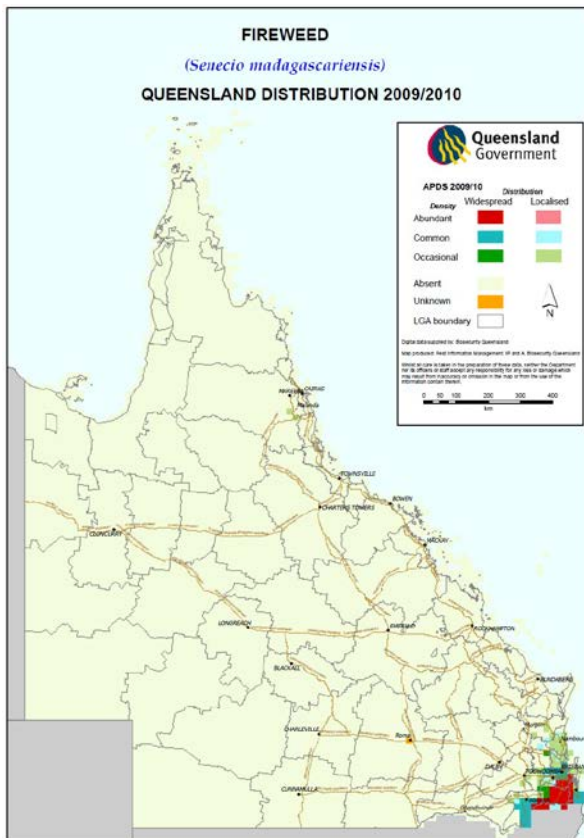


Source: Department of Agriculture and Fisheries, 2016.

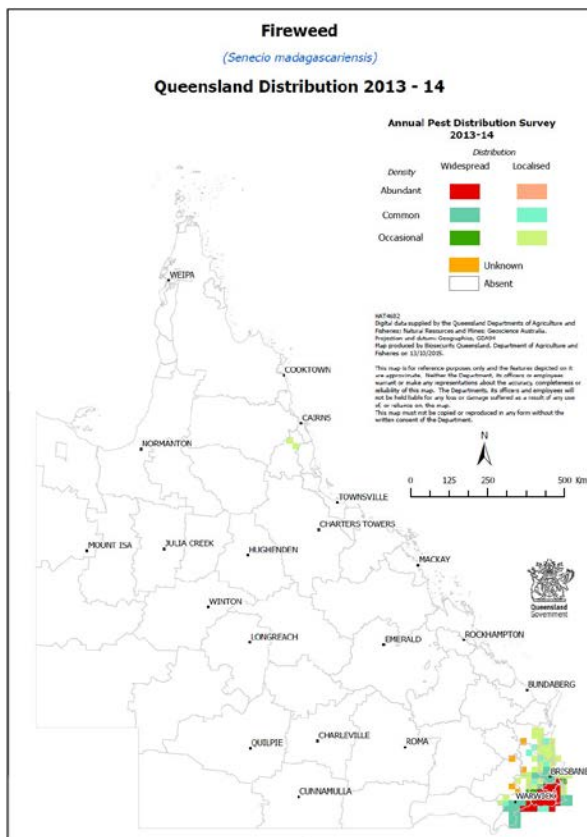


Source: Department of Agriculture and Fisheries, 2016.

Fireweed distribution maps

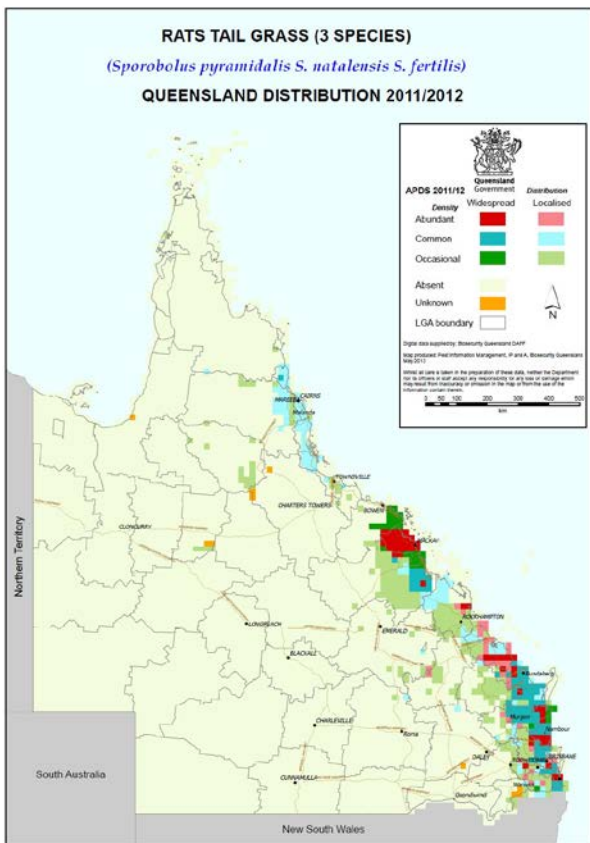


Source: Department of Agriculture and Fisheries, 2016.

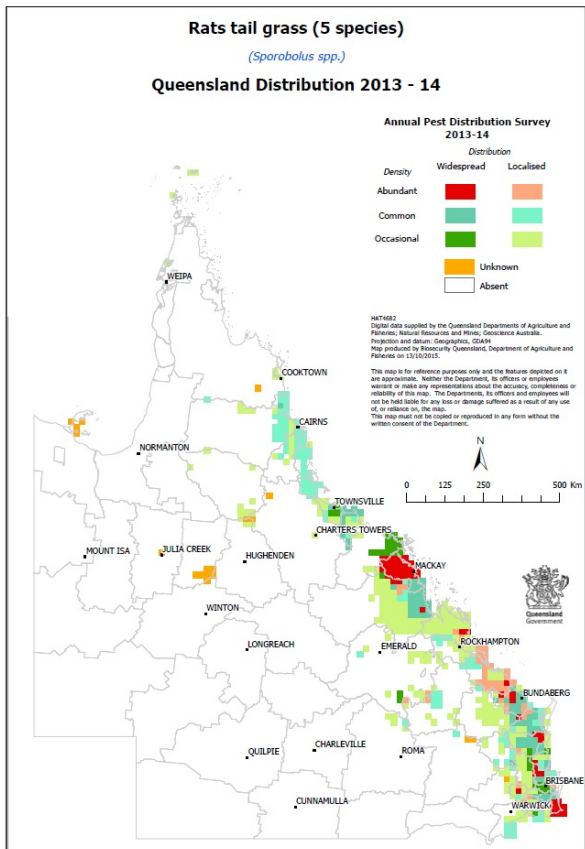


Source: Department of Agriculture and Fisheries, 2016.

Giant rat's tail grass distribution maps



Source: Department of Agriculture and Fisheries, 2016.



Source: Department of Agriculture and Fisheries, 2016.

Liberal National Party Dissenting Report

Inquiry into the impact of invasive (weeds) and their control in Queensland

Firstly, the Liberal National Party members of the State Development, Natural Resources and Agricultural Development Committee express their extreme disappointment that the report which commenced in November 2016 has taken three years to be released.

Every rural and regional Queenslander knows weeds are a major problem across the state and all agricultural lobby groups, Local Government Councils, and NRM groups reinforced this message during the course of this inquiry. These representative groups have been waiting to see the committee recommendations from this report.

Queenslanders concerned about how our land is being managed have had to wait three years for a report that makes no other recommendations other than to note the report.

One can only imagine the reaction of all those Queenslanders who engaged in the parliamentary committee inquiry, by making submissions, and participating in the process for such a disappointing result. It is indeed insulting to the sixty individuals and organisations, the majority of which were farmers, who made submissions into the inquiry urging action from this Labor Government on weeds. Likewise, the forty-nine individuals who appeared at the seven public hearings throughout Queensland.

Queenslanders were told this was their opportunity to have their say and make a difference, but after three years and thousands of combined hours of effort and goodwill, the Liberal National Party believes that Labor has completely disregarded the spirit of the original inquiry.

It would be hard for Queensland landholders not to be cynical as to the whole process and question whether there was ever any intent to make any meaningful recommendations or rather leave the control of weeds in the 'too hard basket'. Farmers and all regional Queensland would not be overly surprised at this outcome.

A report with actual and proper recommendations would have called on Labor Agriculture Minister Mark Furner to actually take action on the management of weeds in this state, something we believe he is unable and unwilling to do.

This is the same Minister who committed \$5 million of state funding to match the federal government's commitment to tackle the spread of prickly acacia, and then did not provide the funding following the federal election.³⁴²

Invasive weeds may not be a big problem in Brisbane, and in some of the committee members' and the Agriculture Minister's electorates, but out in regional Queensland they are damaging agriculture – our most important industry.

The Liberal National Party considers that there is something deeply unsettling about the Palaszczuk Labor Government's apparent failure to uphold its obligations to the management of the state's pests, weeds and biosecurity.

For example, the state's principal third party advisory group to inform the government on such matters, the Biosecurity Queensland Ministerial Advisory Council (BQMAC), has remained dormant for more than 20 months. There has been no BQMAC meeting in this time, or public information on the review of the *Biosecurity Act 2014* and regulations. It must be easy to get good marks on the way

³⁴² Hon M L Furner, Minister for Agricultural Industry Development and Fisheries, Queensland Parliament, Record of Proceedings, Estimates, 24 July 2019, pp 71-72.

the laws have been working when you do not have any industry or third-party scrutiny through the biosecurity advisory committee.

We believe there has been a significant decrease in funding to many natural resource management groups over the past five years.

When it comes to issues affecting rural and regional Queensland, Labor continues to be a government from Brisbane for Brisbane.

While Queensland loses the battle against weeds in this state, Minister Furner and Labor continue to play politics with rural and regional Queensland from their inner-city Brisbane seats.

The LNP members of the committee firmly believe the report handed down by the committee is a disgrace and is a complete injustice to the important issues it this inquiry was meant to investigate.



Pat Weir MP
Member for Condamine
Deputy Chair of the SDNRAIDC



Brent Mickelberg MP
Member for Buderim



David Batt MP
Member for Bundaberg

