

Invasive Species Review
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27 October 2023

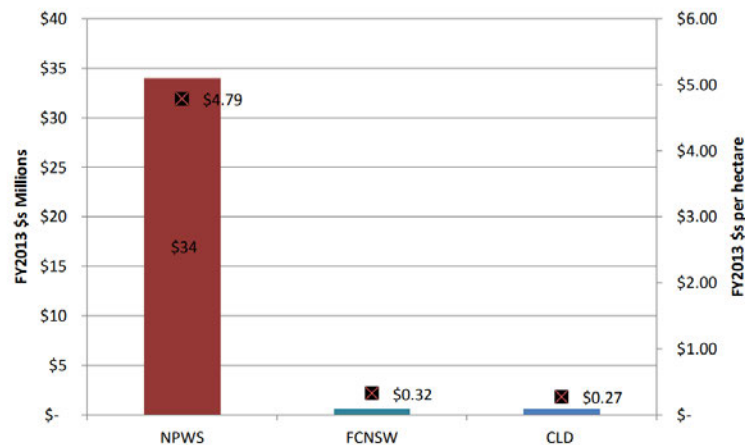
Dear Sir/Madam,

Submission on the NSW Invasive Species Management Review

It is an established truth that invasive species don't respect tenure boundaries and that a tenure neutral approach is the most effective and efficient way to apply control measures.

In NSW robust standards and common approaches to managing invasive species remain elusive.

In 2013 the NSW Forest Industries Taskforce examined and reported upon issues that were common to all public land management agencies and found that major differences in their expenditure and approach, Figure 1.



Source: NPWS – public report; FCNSW & CLD - internal costing data

Figure 1 – Expenditure on invasive pests and weeds by public land management agency – Managing Native Vegetation on Public Land 2014

Since 2013 there have been two statewide reviews, one in 2014 for weeds and the other in 2016 for pests.

On the ground there have no discernible changes arising from these reviews. A tenure and jurisdictional approach to the management and control of invasive species remains a defining feature of the Government’s model with paper boundaries continuing to determine how and where monies are spent.

Ideology and politics drive this approach, underpinned by jurisdictional agendas around how and where public monies are spent, and how and where invasive species are or are not managed. The public remain largely ignorant of these internal machinations and the waste and inefficiencies which are an inevitable attribute of this approach.

In response to the 2014 NSW Weed Review, the NSW Government supported the NRC’s recommendation to create clear accountabilities and to adopt a tenure-neutral approach, Table 1. There is no evidence however to suggest that these commitments were ever acted upon.

Table 1 – NSW Government Response to Recommendation 1 of the 2014 NSW Weeds Review

Recommendation 1

Promote shared responsibility for weed management across the whole community

a.	create clear accountabilities for: - prevention and eradication of weed incursions at the state scale - effective management of widespread weeds at the local and regional scales to reduce impacts	Supported	This recommendation is consistent with current government policy as detailed in the <i>NSW Biosecurity Strategy</i> .
b.	adopt a tenure-neutral approach to integrated weed management requiring both public and private landholders to meet common legislative requirements and regionally agreed obligations	Supported	The government supports the introduction of realistic and consistent weed management obligations across public and private land tenure.

In the 2016 State-wide Review of Pest Animal Management there was an NRC recommendation to hold public land managers accountable. The NSW Government response to this recommendation was ‘supported in principle’, refer Table 2. However, like the Weed Review, this did not lead to any obvious change in the way land managers went about their business.

Table 2 - NSW Government Response to Recommendation 3 of the 2016 NSW Pest Management Review

NRC RECOMMENDATION	GOVERNMENT RESPONSE
STRENGTHENED GOVERNANCE AND PLANNING	
3. Hold public land managers accountable.	Supported in-principle
<p>The NSW Government should:</p> <ul style="list-style-type: none"> i. Commit to the provision of independent and external oversight of public authorities' invasive species management performance. ii. Consider the options available for providing independent and external oversight, and implement the most appropriate mechanism to provide public confidence and ensure effective implementation of the NSW <i>Biosecurity Act 2015</i>. 	<p>The pest animal management planning framework allows for public and private land manager performance to be measured.</p> <p>Public land managers, as part of their Government agency roles, are responsible and accountable to their respective portfolio Ministers, and are subject to the General Biosecurity Duty. The Biosecurity Act provides two tiers of offences for failing to discharge a General Biosecurity Duty and it is anticipated that an enforceable General Biosecurity Duty will raise awareness through education, advisory material and attain long term outcomes.</p> <p>The General Biosecurity Duty exists regardless of whether the risk, or actions to prevent, eliminate or minimise risk are specifically addressed elsewhere in the Act, regulations or other subordinate instruments.</p> <p>LLS is also a major land manager and subject to regular audits under the Local Land Services Act. The State and Local Strategic Plans are to be independently audited within five and three years (respectively) of approval to ensure accountability and delivery against priorities.</p> <p>These arrangements provide for adequate and effective oversight.</p>

Public accountability for expenditure on invasive pests and weeds in 2023 is arguably at the lowest level that it has ever been. There is no visibility around what is being spent where and no system for monitoring and evaluating the effectiveness of that spend.

Individual land management agencies like the National Parks and Wildlife Service, who use to report publicly on their expenditure, have now been grouped into large cluster departments (e.g. Department of Planning and Environment (DPE) & Regional NSW), removing any requirement to provide detail about their operational activities. Without this detail it is not possible to obtain a holistic view of the situation and no way to evaluate whether the level of resourcing they received is appropriate.

A recent GIPA application by Timber NSW to gain information about expenditure on National Parks and Reserves proved fruitless with DPE claiming that the expenditure data could not be separated out. The response given to Timber NSW was very similar to the one given to the NSW Parliament back in 2020, refer Box 1.

Questions

- (1) Can the Minister provide expenditure on weeds eradication for the 2018/2019 and 2019/2020 budgets?
- (2) Can the Minister provide expenditure on pest eradication for the 2018/2019 and 2019/2020 budgets?

Answer

The Environment, Energy and Science Group (EES) of the Department of Planning, Industry and Environment is not able to provide an overall figure for expenditure on pest and weed management as these activities generally form part of broader work programs and expenditure cannot be specifically apportioned to them.

Note being able to answer these simple questions highlights a high level of ineptitude and incompetence and reveals that the government does not have control of its agencies and the public money they are spending. The admissions are also inconsistent with the [core values](#)¹ of the NSW public sector, particularly accountability, refer Box 2.

Box 2 – Accountability and the principles that guide its implementation in the NSW Public Service

Accountability

- *Recruit and promote employees on merit*
- *Take responsibility for decisions and actions*
- *Provide transparency to enable public scrutiny*
- *Observe standards for safety*
- *Be fiscally responsible and focus on efficient, effective and prudent use of resources.*

What the government is good at is producing glossy [plans and reports](#). These plans are typically high level and avoid any firm commitments or clear pathways for quantifying and addressing invasive species impacts.

The government's approach to the management and control of Lantana, a weed of national significance, provides a good example of the gaps which exist between plans and coordinated action on the ground, refer Box 3.

¹ Integrity, Trust, Service and Accountability.

Box 3 – Siloed approach to the management and control of Lantana

The 2021 DPI Weeds Action Report 2015-2020 states *Lantana costs the Australian grazing industry \$121 million each year in production losses and control costs and infests over 4 million hectares*. What the report doesn't do is quantify the impacts of the weed on the environment or other sectors like forestry.

To find out about the impacts of Lantana on the environment one must look to the NSW DPE website. It lists the species as a key threatening process that threatens forty Listed native plant species. It also states *The Office of Environment and Heritage and Biosecurity Queensland in conjunction with the National Lantana Management Group has developed a National Plan to Protect Environmental Assets from Lantana*. A google search however for the Plan and Group reveals nothing.

When it comes to forestry there is no government information on the impacts of Lantana which are well known to be impacting forest health and productivity and increasing operating costs.

The point is that, despite Lantana being a weed of national significance, the NSW government is not acting holistically to address its impacts. Were it to do so it would have a tenure blind business case that would most likely provide a case for more investment in research and other direct action. Instead, it is leaving it up to individual agencies and sectors to deal with the problem without the tools and resources that are needed.

Evidence of the failure of the government's current approach to invasive pest and weeds may be readily observed in the field with abundant displays of weeds and feral animals nearly everywhere that one looks, Figure 2.



Figure 2 - Feral fallow deer observed grazing uninvited on improved rye pasture – 30 Sep 2023

The Government's own data also reveals that the approach to controlling invasive pests and weeds is not working. DPE identifies invasive pests and weeds as a primary

threat to most of the plants and animals that are [listed](#) as threatened in NSW. The 2021 NSW State of the Environment Report shows that the number of native species under threat has been escalating for the last 25 years to the point that there are now around 1,100 species formally identified as threatened (Figure 3).


If we accept the Report's claim that the situation is 'poor' and 'getting worse', then it must also be accepted that the current approach to control and management of invasive species is ineffective. Put another way, if control measures were working the number of listed species should arguably be stable or in decline.



Figure 3 – Total listings of threatened species 1995-2020 and government rating status (DPE 2021 NSW State of the Environment Report)

The protection of threatened species does not want for public expenditure with over \$42 million invested through the "Saving our Species' program in 2021-22 alone, Figure 4.

Investments overview in 2021-22



SoS operating ¹	\$8,943,816
SoS labour ²	\$5,528,294
EHG ^{3,4} cash	\$3,585,372
EHG ^{3,5} in-kind	\$4,521,561
Other NSW Government cash ⁶	\$2,560,878
Other NSW Government in-kind ⁶	\$4,882,250
External cash (includes program partnerships and communication external cash) ⁶	\$3,964,444
External in-kind ⁶	\$5,343,328
Complementary EHG programs ⁷ (AIS, FPFA, contributing sites) cash	\$1,627,221
Complementary EHG programs ⁷ (AIS, FPFA, contributing sites) in-kind	\$1,428,924
Total	\$42,386,088

Figure 4 – Public investment in the [Saving our Species Program in FY2022](#)

The State of NSW also boasts one of the most comprehensive, representative, and adequate conservation reserve systems in the world with over 8.7 million hectares of public land officially protected and managed for biodiversity conservation, Figure 5.

Every year over a billion dollars is spent on protection of the NSW environment. The obvious question is where is all the money going and why are we not seeing better results in the State of the Environment Report? The obvious answer is that the government continues to support a siloed approach that is not working.

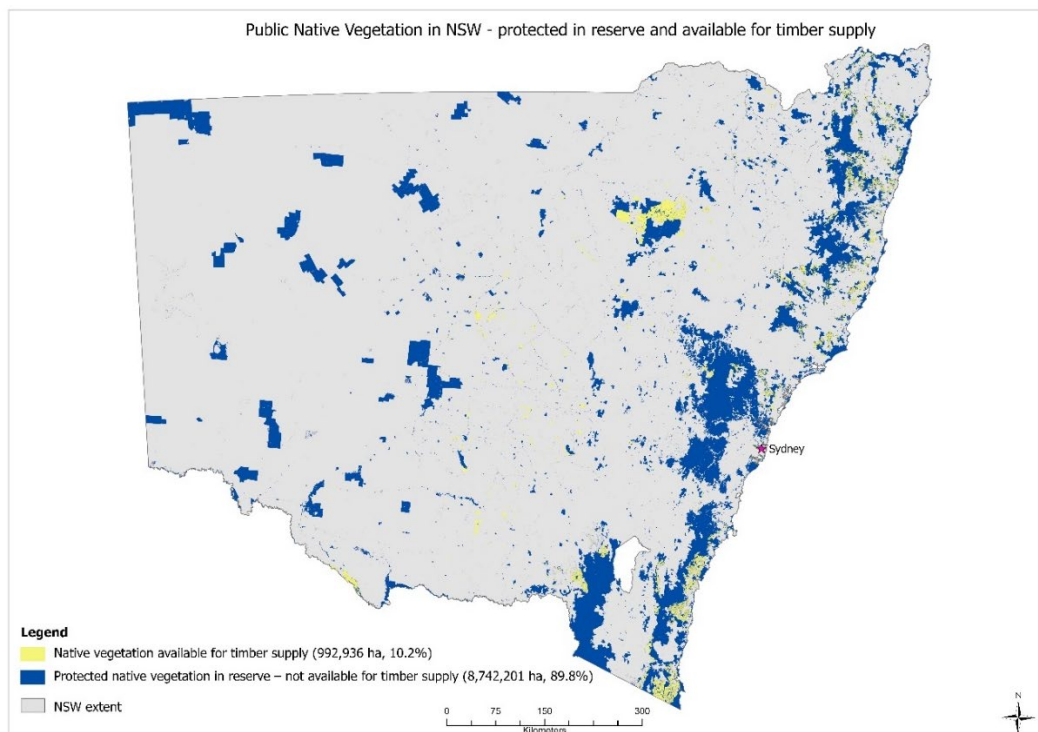


Figure 5 – Public native vegetation protected in reserve and available for timber supply.

With such large amounts of public money being expended one might reasonably expect that the State would have a system for monitoring, evaluating, and reporting upon the efficiency and effectiveness of that spend. No such system exists which prompts the adage - 'if you don't measure it, you can't manage it!'.

The former State Government demonstrated a willingness to invest in forest monitoring, with ~ \$10 million allocated to a 4-year pilot program called the Forest Monitoring and Improvement Program (FMIP). Regrettably the current Government discontinued the program before a scientific monitoring system could be established.

State forest is the only tenure where proper scientific monitoring is occurring with up to \$1 million over 20 years recently committed to the NRC. Unfortunately, the scope of this program is limited to the effects of native timber harvesting and only covers the 10% of the public estate where harvesting occurs (Figure 6). Under this program there are no plans for monitoring invasive species.

Excuses for not monitoring often come down to cost however technology has greatly enhanced the ability to monitor invasive species in a way that is repeatable and affordable. Box 4 describes techniques that can be used to monitor invasive pests.

Box 4 – Quotes taken from B. Law (19 Oct 2023): Landscape monitoring in forests: a wildlife ecologist's perspective, Australian Forestry, DOI: 10.1080/00049158.2023.2265103

New survey methods, especially passive acoustics, show great promise for cost-effective detections of vocal species when combined with convolutional neural networks for the automated detection of calls from recordings (Law et al. 2018; Ruff et al. 2021)

Simulations have demonstrated sufficient power for acoustic sampling to detect small changes in populations at landscape scales (Wood et al. 2019). When acoustic monitoring is paired with other cost-effective techniques, such as camera trapping and bat ultrasonics, a wide range of taxa can be sampled cost effectively, and the list will only grow as artificial intelligence (AI) develops (Figure 1; Buxton et al. 2018; Gibb et al. 2019).

Conclusion

The NSW Government's plans and reports for the control and management of invasive species suggest that its approach is well organised and well-coordinated. However, when some basic questions are asked about what is being spent where, and what are the outcomes, it quickly becomes apparent that there is no master plan and no foundation underpinning its approach. Put simply, the government is not in control of the money that it is spending. Until this changes the state of the natural environment and those who rely upon will continue to suffer the impacts.

Yours faithfully

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