

30 October 2023

Invasive Species Review,  
GPO Box 5341,  
Sydney, NSW 2001  
By email: nrc@nrc.nsw.gov.au

Dear NRC Commissioners

**Submission in response to the NSW NRC independent review of the risks and impacts of invasive species in NSW, including the effectiveness of current management strategies**

This short response is based on my ongoing interest in, and concerns about, the ongoing impacts of invasive species on the environment, our native species and ecological communities, agricultural production and human health.

My professional training includes both science and environment/natural resource management. At various times in my career I have had a direct involvement with invasive species management through positions as a full-time consultant to a former Federal Environment Minister, the part-time manager of R&D in the 'Defeating the Weed Menace' run by the former Land & Water Australia R&D Corporation, and more recently a NSW Nature Conservation Council on a Regional Weeds Committee and its Weeds Action Program Steering Committee, and as an active volunteer in my local community bushland.

I have watched with growing concern, the failure of funded programs to gain real traction in reducing the enormous impacts of invasive species (both plant and animal) on agriculture and on our biodiversity. As a trained environmental scientist, my greatest concern is the significant impacts that invasive species have on threatened species and ecological communities. That more than 70% of threatened species and endangered ecological communities in NSW are impacted by invasive species is a serious indicator that current invasive species management is simply not effective.

The intention of the NSW Biosecurity Act 2015 to ensure that management of invasive species is a "shared responsibility" in which "Government, industry and the people of NSW working together to protect the economy, environment and community from the negative impacts of animal and plant pests, diseases and weeds for the benefit of the people of NSW" is not merely commendable, but also critical to successful prevention, control and management of these species.

However, limited progress is being made in effectively managing invasive species. That the impacts and spread of invasive species is generally getting worse, despite current efforts, highlights the need for this review and for implementation of its outcomes.

The barriers to improved prevention, control and management of invasive species are numerous. The opportunities to improve outcomes of invasive species management include the following:

- **Greater focus on prevention and early elimination of invasive species**

As recognised in the widely-adopted invasion curve, the greatest return on effort and investment is achieved through prevention of entry by a species likely to be invasive in the local environment, or its early elimination. However, success in the area depends on:

- landholder/manager alert to 'new arrivals' and readily available expert advice as to identification of the newly arrived species, its risk profile and its elimination;

- prioritising early action to prevent or remove movement of high risk species (such as plants, reptiles, birds and freshwater fish) sold through local market stalls or online.

- **Increased resourcing for frontline staff**

This is particularly necessary to support Local Control Authorities within Local Government, to ensure that these services are an ongoing priority for each organisation, and that staff in a resource-stressed organisation/agency are not required to share their time across invasive species and other duties. Too often, resource constraints in one LGA see weeds or other invasive species spread to a point where they impact adversely on neighbouring areas – a challenge that also occurs from time-to-time in National Parks. Of particular concern in this regard, is the extent to which resourcing is politically driven, rather than being driven by science-based risk assessment and on-ground need. All aspects of action across the invasion curve (Prevention-Eradication-Containment) are vulnerable to these fluctuations in resourcing and when management is intermittent, gains made during times of sound investment are lost when resourcing disappears.

- **Building capacity to address invasive spread after major disturbances**

As the impacts of climate change become more apparent (as seen in the 2019/2020 Black Summer bushfires and 2022 floods in north-eastern NSW, the Hawkesbury and elsewhere) and more frequent, the spread of invasive species will require a greater awareness and investment in rapid and extensive responses to these disturbances. Much of the work done to eliminate aquatic weeds is undone in these circumstances (and when drought is followed by significant rain) and must be addressed promptly if a situation worse than before the major disturbance is to be avoided.

- **Encouraging & supporting collaborative management of invasive species**

The 'General Biosecurity Duty' introduced in the NSW Biosecurity Act 2015 is intended to encourage greater collaboration between government, industry and the community. However, the extent to which this actually occurs is very variable. Greater understanding across all sectors, of the factors that foster the required collaboration, is critical to increased success in eradicating and managing invasive species. The Communication Strategy developed by each Local Land Services led Regional Weeds Committee, events organised by the Local Governments' Sydney Weeds Committee, and information provided by community sector organisations such as the Invasive Species Council make useful contributions to building the necessary shared expectations and understanding. However, a greater investment in building community participation from a 'bottom up' perspective is also necessary.

One important element of this is in building greater understanding and increased acceptance of the importance of managing the whole landscape, regardless of ownership of the land. The gains lost when an adjoining land owner or manager fails to participate in effective management of invasive species is particularly demoralising for bush regeneration volunteers and other community members who invest effort in eradication of these species.

A specific element in encouraging collaborative effort lies in ensuring that online systems are user-friendly to all who need to use them. Whether in identification of invasive species (for which the NSW WeedWise app is a useful tool for those who are comfortable with IT and have the necessary electronic connectivity) or in uploading of necessary invasive management information, account should be taken of the broad range of IT proficiency that exists among land owners and managers and others who might need to be involved in shared management of invasives. Wherever possible paper-based alternatives should still be available.

- **Improving compliance and enforcement of invasive species management requirements**

The significant negative impacts of failure to comply with management requirements has immense impacts on invasive spread, and on the efforts of those who are 'doing the right thing'. Too often absentee landholders and others who disengage with general responsibilities impact adversely on the efforts of others. Local Control Authorities need the resourcing and support of their managers, and those in other agencies to effectively prosecute where persuasive efforts have failed and the penalties incurred must be sufficient to act as deterrents to those who do not meet their obligations to the greater good.

At a time when climate change is driving the frequency and intensity of extreme weather events, a well-resourced science-based program of invasive species management in which government agencies at all levels work closely with industry, private landholders and those with a demonstrated interest in conservation outcomes across the landscape, is essential. Commitment to ongoing resourcing and meaningful engagement with the diversity of people across all sectors is required to achieve improved outcomes.

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