



Space invaders:

Managing weeds that threaten native ecosystems

New Zealand Biosecurity Institute, NETS2022: Changing Landscapes

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As Parliamentary Commissioner for the Environment, my role is to provide Parliament with independent, robust advice about environmental matters.

Last November, I released a report: *Space invaders: A review of how New Zealand manages weeds that threaten native ecosystems*. I don't need to tell you that New Zealand's native ecosystems face a growing weed problem. I chose to investigate native ecosystem weeds because they are a topic dear to my heart.

Our biosecurity system is immensely complex. It is overwhelmingly focused on border and pre-border measures. We appear to have done a lot of thinking about what we don't want to cross our borders and, appropriately, expend very considerable effort defending it.

The Act on which it depends – the Biosecurity Act 1993 – is also complex and strangely abstract. It is about a category of life-forms called 'unwanted organisms'. When it comes to exotic species that have somehow defeated our excellent border defences, the **legislation has little to say about where attention should be focused**. It is silent on the priorities that are to be accorded to any particular weeds or, for that matter, any other pests.

The Biosecurity Act and the National Policy Direction for Pest Management provide a framework under which national pest management plans and national pathway management plans can be prepared. But neither kind of plan has ever been prepared for a terrestrial exotic plant. The risks that weeds pose to our native ecosystems are simply not regarded as a priority. All the while, new weeds are naturalising and silently spreading into the landscape.

New Zealand needs better leadership, coordination and national direction that can be specifically targeted to managing weeds that are currently harming, or could harm, native ecosystems. Ideally, the legislative framework would be reviewed. I have recommended this, but I have little hope that it is anyone's priority. We have to find a practical way of making progress in the meantime. The weeds won't wait.

Currently, **leadership for managing weeds harming native ecosystems is fragmented**. The Department of Conservation (DOC) has a leadership role in protecting biodiversity, but does not have a leadership role in biosecurity. Sixteen regional councils provide regional leadership in their regions. And while the Biosecurity Act states that the Director-General of the Ministry for Primary Industries (MPI) provides "overall leadership in activities that prevent, reduce, or eliminate adverse effects from harmful organisms that are present in New Zealand", there is little visibility of this leadership being exercised with respect to the management of native ecosystem weeds.

While MPI responds to plant incursions that are new to New Zealand, when it comes to plants that are present in the country, the ministry largely leaves their management to others, including DOC, regional councils and landowners – providing only limited oversight.

This emphasis aligns with a longstanding tradition in New Zealand that weeds are the responsibility of landowners. While this may be a reasonable strategy for production weeds where land managers have economic incentives to control them, those incentives are weaker or non-existent when it is native ecosystems that are at stake. If national resources need to be called upon, it is much harder to mount an economic case. This is reflected in the exotic plant initiatives that MPI has taken responsibility for coordinating at the national level.

In my report, I recommended that MPI and DOC and their relevant Ministers provide clear national direction on the priority to be accorded to managing native ecosystem weeds that are already present in New Zealand. They should work closely with regional councils while doing so.

At a minimum, that national policy direction should:

- provide clear direction on national priority weeds by:
 - requiring a group of experts to identify national priority weeds using a robust and transparent prioritisation process by a certain date
 - requiring coordinated management of national priority weeds, once they have been determined
 - providing clear direction on management when conflicting values arise
 - requiring regular, proactive and coordinated surveillance and monitoring of the national priority weeds.
- provide clear direction on the management of emerging weeds, including a requirement for regular, coordinated scanning and surveillance.

None of this will happen without central government being prepared to inject financial resources.

The other recommendations I made were around bringing together individuals and organisations with knowledge and expertise to improve weed information systems and facilitate better coordination at all levels. Two are particularly important.

Firstly, MPI needs to take the lead, working with DOC, the Ministry of Business, Innovation and Employment, regional councils and relevant Crown Research Institutes to develop, administer and maintain a single authoritative and publicly accessible database of all exotic plants in New Zealand.

The currently fragmented nature of information resources is unacceptable. There are gaps in weed data and taxonomic issues undermining information flow. Any effort to unite the existing resources does not necessarily require brand-new construction from the bottom up. It may simply take the form of an information system that joins up the existing elements we have.

Bringing this information together is about more than just improving accessibility. Any such database needs to be maintained in real time and at a minimum provide us with:

- An agreed taxonomy (established by experts) that can cope with inevitable species name changes and multiple names (i.e. synonyms).
- An up-to-date, authoritative list of plant species present in New Zealand and include as much available information as feasible (including spatial data) on plant status, distribution, rate of spread, impacts, methods of spread, and management and control around the country.

These requirements are based on several international examples of good information systems that my team have examined.

As I understand it, regional council staff have nominated this recommendation as the most important of all. From what I have heard, researchers are keen to provide their expertise to make progress on this. Ironically, it seems to be the recommendation about which officials in Wellington have expressed the greatest doubts. In a recent joint meeting of the Environment and Primary Production select committees called to examine my report, officials told the committees that they are yet to form a view about this recommendation and need to understand the clear need or purpose of such a database.

They need to go no further than people trying to manage weeds in the regions to understand that clear need and purpose. Biosecurity officers are being left to cope with an immense challenge. Only central government can provide the leadership and underwrite the sort of information infrastructure that is needed.

Secondly, there is a need to improve the **monitoring and surveillance of weeds**. The pool of native ecosystem weeds does not remain static. Land use change (driven by climate policies in some cases) and climate change itself are likely to enable a range of weeds to progress along the invasion curve and permit more of them to survive, thrive and spread in parts of New Zealand where they are not found today. This is not good news when we know that monitoring is currently patchy, and a largely passive surveillance system is too often dependent on serendipitous sightings. New populations of weeds are often only spotted and reported once they are beyond the point where they might have been easily eradicated.

So, to bring more focus to emerging weeds, I have recommended establishing an expert team to scan for emerging risks from new exotic plants that may be tomorrow's weeds.

Ideally, legislative reform would be a catalyst for determined national leadership. The review of the Biosecurity Act has been going on for three years and appears to be on the backburner. One suspects that Ministers can point to this as proof that the matter is in hand. It isn't. Unless they insist on giving this some priority, things will just muddle on.

If the problem is getting time in an over-loaded legislative programme (and I do understand that problem), then MPI needs to find a way of making practical progress on the ground in the meantime. There is nothing to stop them launching an overhaul of information systems or upgrading surveillance. There is nothing to stop them agreeing on lists of priority national weeds that need to be consistently managed and emerging ones that need to be headed off.

I acknowledge that funding and resourcing is a bottleneck. While I can't provide any funding directly, I am prepared to help in other ways. My team made a significant investment in talking with people across sector to understand what's needed. I would be more than happy to work with biosecurity experts in the regions and the research community to convene some of the necessary conversations so that MPI and DOC don't have to start from scratch. It's important to ensure that considerations and discussions do not go round in circles.

The Ministry needs to be presented with the minimum viable case for a proper information base to make everyone's jobs – including their own – more tractable.

A collaborative effort should also be initiated to settle on an interim list of national priority weeds that central and regional government commit to manage in a consistent way across the country. I suspect that many of the experts who could contribute to any such weed prioritisation process are in the room here today. Getting together and building momentum from the ground-up could lead to concerted action. A robust and transparent process needs to be established.

But we mustn't let the perfect be the enemy of the good. We turned the other way as wilding conifers started to take off and we now face hundreds of millions of dollars of expenditure just to get the problem back to a manageable size.

We will never get rid of all the weeds in New Zealand. There are simply too many. But we need to be smarter about our investment – that's why prioritisation is key. It is not just an environmental priority but a fiscal priority to avoid the next wilding conifer problem.

I do not intend to let this report gather dust. I am keen to work with you to see that the urgency of the case for national leadership and funding is recognised.

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