



## Wilding conifers: why long-term environmental issues need long-term funding

### Wilding Pine Network Conference 2023: Wildings in the backyard

Queenstown, 20 October 2023

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

I've been following the National Wilding Conifer Control Programme over the years – first more broadly in the context of my Space invaders report;<sup>1</sup> and then somewhat more directly over the last little while.

I'm going to make three points to you today. In doing so I may not tell everyone present what they want to hear. That, however, isn't part of my role.

#### **Key point 1: there is little point in starting jobs you don't intend to finish.**

The National Wilding Conifer Control Programme was established in 2016 following the development of the *New Zealand Wilding Conifer Management Strategy 2015–2030*.<sup>2</sup> The strategy promoted a vision of preventing the spread of wilding conifers and containing or eradicating established areas of wildings by 2030. Some Crown funding was allocated between 2016 and 2020, but to expand control efforts and set the programme on a path towards achieving its longer-term vision, a large increase in sustained funding was required.

For a moment it seemed that that case had been successfully made. In 2020 a boost in the form of \$100 million over four years was provided to the wilding conifer programme. The bulk of the funding was frontloaded into the first three years to support a "go hard, go early" approach that enabled the programme to hit the milestone of at least one round of control across 70% of the known national infestations.

That was a very ambitious goal. But starting something isn't the same as seeing it through. At the very least, continued funding was needed to lock in the gains. This was something officials had made clear from the very beginning when the strategy was developed in 2015. A recently released cost benefit analysis shows that something in the order of \$140 million between 2022 and 2030 would have been needed to maintain control on the sites where work had commenced.<sup>3</sup>

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<sup>1</sup> PCE, 2021. Space invaders: A review of how New Zealand manages weeds that threaten native ecosystems. <https://pce.parliament.nz/publications/space-invaders-managing-weeds-that-threaten-native-ecosystems>.

<sup>2</sup> See <https://www.wildingpines.nz/about-wilding-pines/national-strategy>.

<sup>3</sup> See <https://www.mpi.govt.nz/dmsdocument/58519-2022-Benefits-and-costs-of-additional-investment-in-wilding-conifer-control>.

However, this was not what was provided. In the event, the ongoing funding provided from this year amounts to a mere \$10 million per annum – well short of what would be needed to ‘seal the deal’. The recently announced one-off funding injection of a further \$7 million to be spent this year is obviously welcome and should reduce the impact of this year’s funding drop. Officials should be commended for casting around to see what other funds could be raided. But this is finger in the dyke stuff and no substitute for a sensible and sustainable long-term commitment to getting on top of the problem.

It is clear that the original decision to invest wasn’t the result of a careful analysis on the merits of the case. It was, rather, an opportunistic attempt to kill two birds with one stone. The Jobs for Nature programme was a job creation scheme and job creation schemes are about the short term. Environmental problems are almost always about the long term. If the purpose was to create some employment, the chances of securing that environmental investment in the long term were always slim. I fear we will learn in due course that other Jobs for Nature projects have similar ‘boom and bust’ profiles. Such initiatives rarely produce good outcomes.

In the meantime, taxpayers will no doubt be interested in the analysis officials produced to support a more strategic approach. Their cost benefit analysis shows that if follow-through funding had been at a level consistent with securing the gains of the job that was started – averaging around \$22 million per annum for the next four years and reducing to \$12 million by 2030 – the benefits to primary production, water yields, biodiversity, cultural values and reduced fire risk would have been of the order of \$3.8 billion over 50 years.

By providing, instead, ongoing funding of just \$10 million per year from 2023 onwards, many of the gains made to date are likely to be reversed. The analysis indicates that at this level of funding, (which is just 58% of the funding needed to secure the gains made so far based on present values), the programme will reduce from 49 management units to just 10 over a four-year period. While 42% of the known national infestation would be actively managed, wilding conifers would spread and regrow in the abandoned management units. The \$7 million boost this year will of course change those numbers, but not to a great extent – again, under present values, funding allocated to the programme is still only 63% of the amount needed to maintain the gains made so far. A sustained funding increase is what is required.

The analysis shows that, under a \$10 million baseline, we have opted for a programme that will yield a benefit-to-cost ratio of 20:1 instead of one that promised benefits outweighing costs in the order of 34:1. I leave it to you to figure out the sense of this. It seems incomprehensible to me that, having finally invested sufficient funding to begin to address this decades’ old problem at a national scale, the funding will reduce to such a level that half of the area controlled to date will not receive the follow-up control needed to secure the gains made. Successive governments have failed to tackle the problem in a coherent way. Failure to maintain the investment will again see taxpayers’ money wasted and the problem start to fester again.

The scale of the problem we face today is the direct result of decades of neglect by successive governments. In my Space invaders report I referred to the wilding conifer programme as “a case of belated national coordination and intervention for a problem that had been gathering for decades”. I even described it as a bright spot. Had I known what I know now, I would have described it as “a case of opportunistic intervention made possible by an emergency employment programme”.

Unless a rapid decision is taken to augment the level of ongoing funding beyond what has been cobbled together for this year, it is inevitable that some of the initial investment will be written off because we can't even maintain what we've started let alone deal to the rest of the problem. Without follow-up control to address regeneration and exhaust the seed bank, wildings will bounce back and reinvade. A short-term spending spurt was always going to be at odds with the ongoing nature of the issue. The vision and outcomes in the wilding conifer strategy remain out of reach.

**Key point 2: biosecurity is everyone's responsibility – not just the Government's.**

The control of wilding conifers has never been solely reliant on Crown funding. Private landowners, regional councils, hydro power generators and some forestry companies have at different times and in different places contributed – either through direct funding or in-kind support – to wilding conifer control efforts. While the issue of wilding conifers entered public consciousness in the 1960s, the phenomenon had been apparent since much earlier. Hamish Roxburgh recalls his father, back in 1955, taking to wildings with an axe on their farm downwind of the Hanmer Forest while he, an eight-year-old, boiled the billy for lunch and looked after the horses.<sup>4</sup>

The Biosecurity Act 1993 and the National Policy Direction for Pest Management made under it have a lot to say about costs, benefits, funding and compensation. This has its roots in some of our very first environmental legislation, with provincial statutes passed as early as 1854 to combat exotic plants in various regions. Rather than encouraging any concerted action to control or eradicate exotic plants, these early legislative measures seem to have really been about providing landowners with a way to take action and recover costs from adjoining landowners whose exotic plants were imposing costs on them. In an echo from those times, the current National Policy Direction requires beneficiaries and exacerbators – active and passive – to be identified when determining the appropriate cost allocation for pest management activities.

This is interesting to examine in the case of wilding conifers.

Radiata pine and Douglas fir are widely grown in plantations in New Zealand for their timber. Many other exotic conifer species have been the subject of widespread planting over the years, notably during the large-scale revegetation efforts of the 1960s and 70s. The governments of that era even attempted to manage high-country erosion through the mass aerial spreading of conifer seeds. It was a classic case of governmental action leading to unintended consequences. Not only was the problem misunderstood, but the solution was ineffective and has been harmful to both productive and native ecosystems in ways those involved at the time never imagined.

So, the Crown itself certainly has form as an exacerbator! But so do the companies that plant conifers commercially. If you apply the polluter pays principle, why shouldn't the forestry industry contribute to the cost of controlling wilding conifers through, say, a levy?

The option of a levy as a funding source is not new. According to the media, the Minister for Biosecurity was asked at this conference last year whether the commercial forestry industry shouldn't co-fund wilding control through a levy.<sup>5</sup>

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<sup>4</sup> See <https://www.nzgeo.com/stories/the-march-of-the-pines>.

<sup>5</sup> See <https://www.farmersweekly.co.nz/politics/govt-to-cut-wilding-control-funds>.

While some forestry companies are already actively contributing to controlling wilding conifers in some areas, there are currently no regulations compelling forestry owners to undertake wilding work on neighbouring adjacent areas under different ownership or management, even if the forest is a proven source of wildings.

Clearly today's forestry companies would balk at being required to take responsibility for spread caused by historic plantings – some of which the State has had a big hand in. But where current plantation forests act as a seed source – and for any newly established plantations – a levy seems perfectly justifiable. Someone has to pay, and I suspect a levied industry would be much more successful at maintaining control operations than officials who have to take their chances in spending lotteries like Jobs for Nature.

So much for exacerbators. What about beneficiaries? They aren't in short supply either. Farmers don't want to see productive land invaded, tourism operators don't want so-called 'iconic landscapes' to disappear from bus windows and no one wants to be threatened by an increased risk of wildfires. As I understand it, the Ministry for Primary Industries has been exploring additional funding sources, including contributions from some beneficiaries. The Minister has previously spoken about the role that hydroelectricity generators could play as contributing towards the control of wildings, as the spread of wildings into hydro lake catchments can reduce water yields thereby reducing the generating capacity of hydro dams.

Seeking contributions from beneficiaries makes sense, so I would encourage these conversations to continue. Wildings are a problem we will live with forever. Relying solely on the Government to stump up money is likely to see an ongoing cycle of sporadic investments that are no sooner celebrated than they are forgotten. Those with an enduring interest in maintaining a social licence to grow trees and those with an interest in keeping trees in their place need to come together and agree on a formula that can provide a solid platform from which the Crown – as one of the original exacerbators – can't walk away.

### **Key point 3: conifers are not our only priority.**

I have referred to a recent cost-benefit analysis that clearly shows the benefits of controlling wilding conifers. But there are many other weeds that don't get much focus – and some of them might become the wilding conifers of tomorrow.

As I mentioned in Space invaders, Māori brought a dozen or so plants with them. Europeans brought more than 25,000. The ecological upheaval that followed is still underway with introduced plants escaping from where they've been planted and spreading uncontrolled across the landscape with unintended impacts in new settings. Over two centuries, 1,800 introductions have naturalised, meaning they have escaped cultivation and can sustain wild populations. The pool of potential garden escapees is vast and, at current rates, around 20 exotic plants establish in the wild every year.

Given the sheer numbers of unwanted nasties already in New Zealand, there's a need to prioritise based on the risks they pose.

While the National Wilding Conifer Control Programme is a welcome acknowledgement that some weed problems are of a scale that requires national coordination, it immediately raises the question of how many other weeds would benefit from nationwide coordination and the extent to which they are being neglected because scarce resources have been diverted to wilding conifers.

In the absence of a robust and transparent prioritisation process, we have no way of knowing whether tackling wilding conifers at a national level (a problem many decades in the making) offers greater benefits than seeking to eradicate many more plants that may become the wilding conifers issue of tomorrow. It would be a pity if the case for prioritisation today is predetermined by the scale of yesterday's neglect.

The pool of weeds – or where they are found – does not remain static. Land uses change, opening new invasion pathways. And climate change itself is enabling 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. We should not lose sight of the weeds that are emerging on the horizon – and for that I have previously recommended establishing an expert team to scan for emerging risks from new exotic plants that may be tomorrow's weeds.

While what's emerging on the horizon depends on how hard and far you look, let me give you a couple of examples of weeds that, while still localised, are causing problems and could become widespread.

One such example is Chilean mayten (*Maytenus boaria*). It's been called a ticking time-bomb by some. This is also a prime example of human actions enabling successful reproduction where it was previously inhibited. Until the mid-1980s, only male plants were sold in New Zealand, so plants could only reproduce via suckers. However, that all changed when seed-grown plants appeared on the market, some of which were female. This enabled planted individuals to reproduce via seed as well as suckers. Further, birds love to eat the fleshy seed-containing arils so Chilean mayten has literally gained wings in New Zealand. This has allowed the species to disperse well beyond the original (all-male) plantings and to colonise new areas.

Another example is climbing asparagus (*Asparagus scandens*). It can grow throughout the understory of native forest, halting regeneration of native plants and scrambling up the trunks of trees and shrubs. When it has overwhelmed the canopy, it completely transforms the forest. It reproduces both sexually through seeds and can resprout from small fragments of plant, making it a very successful invader. You can see the damage it can do in Northland where it dominates forests.

Don't get me wrong, I'm not opposed to dealing to wilding conifers. But we'll never make good decisions about priorities if we haven't gathered good information about the state of the environment, about the pressures it's under, the trends we're on, and whether we're making a difference. I see little evidence that those who manage our biosecurity system really understand the importance of this – at least when it comes to plant pests already here in New Zealand.

We need to have clear outcomes in mind and be ready to commit over the long term. We need to have a plan for what comes next. Removing weeds may be the easy bit. As the Irish ecologist, Yvonne Buckley put it so brilliantly, removing weeds simply creates "weed-shaped holes". This is what stop-start interventions like the latest wilding control programme leave in their wake. Without a clear idea

of what comes next, an empty space can become fertile ground for other weeds to move in – particularly if there are infestations nearby.

Let me sum up my three points very succinctly: (1) if the Government does not find the funding to follow through on the wilding control investments it has made over the last three years, taxpayers' money will be wasted as wildings reinvade some of the weed-shaped holes that have been created. (2) Responsibility for wilding control should not rest solely with taxpayers. There are industries both contributing to the problem and benefiting from containing it. The Government is entitled to ask them to contribute – but it won't get far if its own commitment is shaky. (3) The Government needs to get wilding control funded on a long-term sustainable basis because there are scores of other plant pests just getting going on the invasion curve.

If the Government is using all its resources grappling with the legacy of past neglect, our ability to head off emerging pests will be doomed. The management of invasive species is something we will have to live with forever. It is a liability we will pass to future generations. At least farmers and hydro-operators have a commercial interest to defend. Our native forests and wetlands can only rely on taxpayers and if scarce taxes are being spent tackling problems that others could reasonably be asked to shoulder, I don't like our chances of defending them.