

Forestry mythbusting – myths, misperceptions, impacts and solutions

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Figure 1: West Coast green gecko *Powelliphanta sp. Nautinus tuberculatus*

Abstract

In the presentation I gave at the 2021 New Zealand Institute of Forestry conference in Masterton I addressed the common ‘myths’ or misperceptions about New Zealand plantation forestry, what their impacts might be, and what approaches can be taken to counter or dispel the myths. While forestry is generally recognised for its benefit to New Zealand, there are pockets of concern about environmental impacts and also the effect on communities. These are underpinned by recurring ‘myths’ that are often based on an imperfect understanding of forestry. Myths can be longstanding (for instance, the perceived negative impact of pines on soil) and these perceptions are hard to change. The impacts of these misperceptions have not been quantified, but it is likely that the greatest one is on the regulatory environment, with resulting increased regulation and potential costs of compliance.

The forestry sector’s license to operate is being challenged as a result of these environmental and social concerns, regardless of how real the perceptions are. Evidence-based responses are needed to help address these challenges. There is considerable information available on the performance of the New Zealand forestry sector, but this is not always readily accessible or in a form suitable for a non-forestry audience. An ongoing campaign to inform and educate non-foresters on aspects of concern to them is needed. This should

span multiple media communication channels and include laying the foundations within the broader education system. Fact-based information on topics of concern should be concise, clear and targeted to the audience. The approach needs to endure over time to raise the overall understanding of forestry in New Zealand’s communities and our international markets.

Introduction

Plantation forests cover 7% of New Zealand’s land area and the sector makes a very significant contribution to the economy, approximately 1.6% of GDP, and is the third largest export sector at nearly \$6 billion per annum. Although these forests are an integral part of New Zealand’s productive sector, they are not always seen in a positive light. Campaigns against plantation forestry are not new, nor are they confined to this country.

Globally, concerns about monocultures, environmental impacts and effects on communities are common. These concerns have led to the development of global independent forest certification systems (e.g. the Forest Stewardship Council (FSC), the Programme for Endorsement of Forest Certification (PEFC), and programmes such as WWF’s New Generation Plantations). These schemes seek to both improve forest management approaches and provide transparent systems to demonstrate forests are well managed and sustainable.

New Zealand's forest sector has embraced certification systems and all large companies are regularly audited and the results are publicly available. The total area certified is just under 1.2 million ha or about 67% of plantations. The sector has also developed the Forest Accord and the subsequent Forest Climate Change Accord, a range of Codes of Practice and manuals, and most recently the National Environmental Standards for Plantation Forestry (NES-PF) (MPI, 2017). However it seems, as Michael Caine might say, 'not a lot of people know that.' There is ongoing pressure on the forestry sector from a number of sources. Most recently this has included:

- The 50 Shades of Green (50SOG) campaign against blanket planting of pines on farmland
- The Environmental Defence Society (EDS) advocating for less exotic plantings and more native species
- A recent initiative by two North Island mayors to develop a pan-council voice to government to express their collective views on forestry.

Myths and misperceptions

Broad, sweeping statements are sometimes made by groups opposed to forestry, or any sector. These are then picked up and widely disseminated, especially in the new age of social media. The issue with the sweeping statements is that often they are based on partial facts, incorrect facts, or even no facts at all. They then become general perceptions and 'truths' or 'myths'. Ultimately, they can have a material impact on the sector.

The problem is how might we challenge these myths and therefore reduce impacts. Provision of the facts is only one component of a response and can often be seen as defensive. What we need is to improve overall communication about forestry in general more widely outside the sector to our forest neighbours and the wider public. I propose we do this on a number of fronts and on an ongoing coordinated basis.

The 50SOG group are most concerned about social issues – the effect of blanket planting of pines, especially 'plant and leave' carbon forests on rural communities through the loss of productive farmland. They are not opposed to trees per se, supporting integrated tree planting on farms, especially natives. The myth that threads through the narrative, however, is that there has been or will be further massive land use change underway.

The EDS is also concerned about widespread afforestation: 'Vast swathes of the countryside are being bought up by foreign companies for conversion to large-scale pine plantations,' and 'Pine forests provide poor habitat, are a biosecurity and fire risk, produce massive slugs of sediment that pollute rivers, streams and estuaries at harvest, and degrade landscape values at an industrial scale' (EDS, 2021).

Both 50SOG and EDS messaging has received a high profile in the New Zealand media, and while there are grains of truth the facts would dial back these

statements significantly. Picking a couple of example points, the 'vast swathes' referred to are only a very small percentage of productive land in New Zealand. For instance, the Climate Change Commission's recommendation of 380,000 ha of new exotic plantings would be less than 4% of the current hill country farm estate. Similarly, there is a lack of recognition of the major biodiversity values contained in pine forests (Pawson & Brockerhoff, 2005), both in the understorey and in protected areas of natural vegetation, such as wetlands within the plantations.

To explore perceptions more widely, I surveyed NZIF members to identify the most common myths or misperceptions that came up when they discussed forestry with people outside the sector. A number of common topics emerged, but none were unexpected from my experience of discussions over the years. The main topics were:

- The negative effects of pines on soil quality
- Pines sour the soil and stop anything growing underneath
- Plantations are biological deserts
- Monocultures are bad
- Plantations take our water
- Forestry is bad for the community and local employment
- Foreign owners export all the logs with little or no local processing
- You cannot grow pines past age 30 to 35
- Plantations lock up the land permanently.

There is also some other limited information available on perceptions of plantation forestry in New Zealand. Nicholls (2015) explored public perceptions of forestry and concluded that the sector had community support, albeit based on limited knowledge. However, the risks of loss of that support are real and the sector needs to be proactive in working with stakeholders to increase their level of understanding of the sector. The major concern at that time was safety, but he also highlighted concerns around slash movement, visually sensitive site management, genetic modification, chemical use and exotic monocultures.

An ongoing series of studies by Hughey et al. (2019) on public perceptions of New Zealand's environment give some insights into perceptions of forestry. Forestry is seen as having negative impacts on: freshwater and soils; native land, freshwater plants and animals; native forest and bush; wetlands; and national parks. However, in no cases was forestry seen as a dominant cause of impact. Perceived impacts on native forest and bush, native lands and national parks is puzzling as forest operations do not impinge on these land uses, and there is no further exploration. But potentially the impact could relate to pests and weeds (e.g. wilding encroachment).

The Key report (2021) commissioned by the Forest Growers Levy Trust explores a wide range of perceptions of forestry through a survey of 1,001 respondents from the general public. It sought views on a range of prompted statements, and the results from the survey give some context to the NZIF members' views and a broader objective view. There were some very strong positive perceptions of the sector, as nearly 70% of respondents recognised forestry in New Zealand as 'very' or 'extremely important'. Just under half of the respondents agreed that forestry had a positive effect on the environment. Exploring this in a bit more detail showed a positive perspective on wood as a desirable building material, the benefits of wide-scale tree planting on climate mitigation, the benefits of planting on land stabilisation, and the creation of economic benefits and a significant number of jobs. Plus, a view that native tree species have wildlife benefits and plantations should be managed to protect biodiversity. However, a minority did have a negative perception of forestry. Of those, environmental impacts (slips, floods, fire) were the dominant concern.

All of these concerns are real and need to be addressed if the sector is to maintain its social license to operate and build trust in the community (Edwards et. al, 2018).

Impacts of myths

There are no studies on the overall impact of these myths and misperceptions on the New Zealand forestry sector, which does not mean that there is no impact. Impacts identified through the NZIF survey suggest that the dominant effect is on the regulatory environment and the cost of compliance for forest operations. The recent letter from two North Island mayors to other mayors suggesting a single voice to government on issues of concern around forestry highlights how they may have an impact. They highlighted a perceived need for increased regulation of forest plantings on higher quality agricultural land, land use rating models, impacts on communities, environmental impacts, the need for differential road rating for forestry users, overseas investors and carbon forests.

This initiative by these mayors could lead to new constraints on the sector. It is clear that for an informed debate on these topics, solid evidential foundations are needed to ensure that outcomes are robust and defensible. This is one example where a proactive stance by the sector can help in the debate, by providing information that can be used rather than taking up a defensive position. Forestry has massive benefits which are often unrecognised.

Solutions

Summarising the myths and misperceptions identifies those topics that we need to explain better: the effect of pines on soils and of plantations on water quality and supply, biodiversity in plantations, onshore versus offshore processing, onshore versus offshore ownership balance of our plantations, the pros and cons of native and exotic species, the permanence of plantation forests, employment levels in forestry, impacts of plantation forestry on roads, the economic returns from forestry, environmental impacts of forestry, environmental regulation requirements and forest safety. Overall, a much better understanding of the forest sector and its national and regional contribution (environmental, social and economic) is needed.

There is a wealth of information that could be available to improve this understanding, but these resources are in a range of formats and locations making access difficult. Piers Maclaren's 1996 publication *Environmental Effects of Planted Forests In New Zealand* (Maclaren, 1996) covered some topics but is long out of print and date, and the information and messaging may not be ideal for today's fast-paced information environment.

Today's environment requires shorter 'bite-sized' information resources, tailored for its audience who have little or no forestry knowledge. This information must be supported by the evidence base – clearly referenceable and seen as independent. For instance:

- The Institute's Handbook (NZIF, 2005), currently being updated, would be another example of supporting knowledge
- Also helpful is the series of environmental fact sheets and mythbusting cards developed by Scion (2021a&b)



Figure 2: Two forestry myths

- Another source of information is teaching material developed for tertiary courses, such as Toi Ohomai's *Introduction to the New Zealand Forestry Sector* (Toi Ohomai, 2021)
- *Forestry Facts and Figures 2020–2021* (NZFOA, 2021) is also a very useful source of facts
- Te Uru Rākau – New Zealand Forest Service has also launched Canopy, a forestry knowledge hub (TUR, 2021)
- More recently the sector has begun to make more use of social media, such as Facebook (e.g. Southern North Island Wood Council, Forest Industries Contractors Association) and Instagram (Future Foresters NZ), and other vehicles, such as YouTube (e.g. Scion, 2021c).

So, there is plenty of information available – the challenge is how to bring it to bear (Harnett, 2019, Harnett & Payn, 2020). Having a very sound and accessible 'one stop shop' evidence base allows the facts to be used in various ways as required.

Ongoing communication and education across society is needed. Such a 'one stop shop' on these key issues will need to be developed. The recent Key study (2021) suggested that a TV campaign was the preferred approach to getting messages across. I would argue that we need to use all possible approaches, from individual conversations to social media and other print and TV media, all underpinned by getting the information into the wider education system.

An example of an effective integrated campaign is DairyNZ's (2021) 'The Vision is Clear' that spans multiple communication platforms (e.g. print media, social media and TV) and aims to inspire Kiwis to improve water quality and demonstrate progress by the dairy sector. This campaign was launched in 2018 and has built a continued national presence.

In summary, we must develop an enduring and integrated campaign to put the facts in front of non-foresters, with a clear goal of showing a balanced view of the sector and how it contributes to New Zealanders' wellbeing. A solid evidence-based approach, addressing all the positives and negatives of the sector on topics of concern, and not a public relations campaign.

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