

Bulletin

Spring 2022

INDUSTRY TRANSFORMATION PLAN - FORESTRY TO ONE DAY LEAD THE PRIMARY SECTOR?

P3



IN THIS ISSUE

P5

Pines v other exotics



P8

Falcon and kiwi protection



P10

Railway to Wairoa



Energy – the new frontier for forestry

The International Energy Agency predicts that by 2026, global renewable electricity will rise more than 60% from 2020 levels. That is equivalent to the global power capacity in 2021 of fossil fuels and nuclear combined.

The IAEA expects renewables to account for almost 95% of the increase in global power capacity through 2026, with solar alone providing more than half.

In the EU, after coal and oil, the new revolution of renewables has been given added impetus by the shock to the European energy system from the Ukraine war.

Given the usual global price of fossil fuels, it is difficult to make a business case for the capital cost of renewables.

Renewables can be vulnerable too. The drought in China has drastically reduced hydro capacity.

The petrochemicals merchants are persistent. Just this month the OECD reported 51 countries almost doubled their support for fossil fuels between 2020 and 2021, from \$US362B to \$US697.2B.

Wind and solar will indeed play a significant role. But this will be insufficient. It isn't always sunny, or windy, and the true transition transmission costs associated with this energy can be significant. Turbines, for example, require large amounts of steel and concrete.

Hence the unprecedented investment interest in forestry for energy.

The World Bank has projected that the global demand for wood fibre will quadruple by 2050, partly as a consequence of strong growth in the wood energy market.

Europe is the world's largest market for wood pellets and it is forecast to grow annually by 9% through to 2026. This will drive tighter raw material markets and require new sources, such as forest residues, recovered wood, and wood energy crops.

In this country, the FOA and the Bioenergy Association of New Zealand have developed a Bioenergy Strategy for New Zealand.

The inexorable trend towards renewables is because other factors are also involved.

Fonterra, now a tree owner and an FOA member, is converting its coal-fired boilers to woody biomass. The dairy factory at Waitoa is the latest announced for conversion following conversions of plant in Te Awamutu and Stirling.

These, and eight other planned conversions, are based on more than today's economics. They are future-proofing investments to take in to account the rising cost of carbon emissions, expectations of customers and border adjustment taxes already announced by the US and the EU.

Energy security, and bioenergy, being storable, are also important reasons for bioenergy investment.

By developing some forestry close to where it will be utilised, Fonterra is also addressing transport costs which are typically the biggest impediment to woody bioenergy investment.

Another example is European power plants establishing their own wood pellet mills in the US close to the source of the wood residues.

Liquid biofuels are harder to produce and the conversion of biomass to biofuels also loses a significant amount of energy. But woody bioenergy holds considerable potential.

There is currently no shortage of interest in securing biomass for energy. The challenge is to determine, at a national level, what is the best use for the in-demand resource.

In the EU, bioenergy is well developed under the cascading principle policy. This holds that to minimise a negative impact on the bioenergy market, woody biomass should be used according to its highest economic and environmental added value in the following order of priorities:



EU members can't support the use of sawlogs, veneer logs, stumps, and roots to produce energy. From 2026 there will also be restrictions on using forest biomass in electricity-only installations.

Achieving significant bioenergy investment in New Zealand will require more than just free market signals. Ultimately more residues for energy requires more processing investment and, with the level of harvest dropping from about 2030, greater utilisation of the low grade logs being exported.

Of the approximately 11.6M tonnes of biomass estimated to be available between 2026 and 2030, about 38% is K grade logs, 15% pulp logs (above and beyond those needed for domestic processing) with a further 22% in forest residues.

As part of the support needed the ITP proposes a "region by region mapping of supply and demand for woody biomass". There is also funding by government to directly establish up to 10,000 hectares of biomass in "targeted areas".

It will also need R&D, government intervention to deliver co-located clusters of resource, processing and energy.

The increased hunger for biomass, for example, raises the vexed question of what its best strategic use is; something the EU has recently developed policy on.

We need a national Energy Strategy too, but unfortunately are not scheduled to get it before 2024.





The Draft Forestry and Wood Industry Transformation Plan

The wider forest industry is in a major processing job – working out what the Draft Industry Transformation Plan really means for us.

The ITP is not a simple economic imperative to add more value to logs. The ITP wording hugely understates its far-reaching ambitions and consequences, both for the nation and the industry. The government expects the industry to both store huge volumes of carbon and provide the materials for the imminent transformation to an environment driven bioeconomy.

The ITP is consistent with and goes beyond the Forestry Roadmap for Aotearoa New Zealand which the industry itself published in 2020. Its scope goes from technology developments, all the way to education on the benefits of forestry to the New Zealand public.

In the forests themselves, the research priorities in the Forest Growers Research work programme already put the industry on track to use robots and electronic data collection to much greater effect than before.

A more controversial aim in the draft plan is to plant more species (see articles on exotics other than radiata pine from page 4 onwards).

So far, we don't have the business case for the scale of transition envisaged and how it might be achieved with minimal risk.

The steps to the bioeconomy envisaged in the draft ITP are extensive and new. But the bioeconomy will emerge just when log production will start to fall because of the faltering of the planting boom in the 1990s.

Large volumes of woody material now left on slopes will have to go to chipping, but other source material will also have to be found.

Māori are acknowledged for their already large stakeholding in the industry and the need to overcome constraints for this to be more reflected in decision making, resourcing and practices.

Old hands in the forest industry – of whom there are many – will readily recall a very similar ambition to that of the draft ITP – the Strategic Action Plan launched by Woodco in 2013.

Many of the positive assumptions about the future of forest products were identical then to those in the ITP today.

A target of \$12 billion in yearly export earnings for 2022 was set against a business-as-usual amount of \$6.1 billion. Business as usual prevailed. Actual exports last year were worth a total of \$6.53 billion.

Some things in this 2013 SAP have been achieved. For instance, mechanical harvesting has become the norm well within the predicted time scale.

But, vitally, the plan stood largely out of government priorities over the past decade. It is only recently that expected progress in, for instance, international certification of the legality of our logging or a Wood First procurement policy, have been brought in.

This time around, the support and urgency of government officials are much more apparent.

The IPT doesn't explicitly dwell on energy security and reducing international trading risk. They are not forest industry issues, but they are critical for the government on behalf of all New Zealand.

That carbon continues to be stored in wooden buildings needs to be recognised by government, as does the fact that the trees in pre-1990 forests store more carbon than they did in 1990.

Deemed out of scope in the ITP, are RMA, ETS and OIA – all hard holes for the government, but which must be addressed. The fact that the Climate Change Commission 380,000 hectares of new exotic planting by 2035 has not been replaced by a new target in the Emissions Reduction Plan is noticeable.

DRAFT FORESTRY AND WOOD INDUSTRY TRANSFORMATION PLAN AUGUST 2022

BY 2030 THE INDUSTRY WILL INCREASE;
LOGS PROCESSED EACH YEAR

↑25%
(UP FROM 14.2 MILLION M³ TODAY)

USE OF TIMBER IN CONSTRUCTION EACH YEAR BY

↑25%
(UP FROM 1.4 MILLION M³ TODAY)

THE SPECIES RANGE BY REDUCING YEARLY PLANTING OF PINUS RADIATA FROM 96% TO

↑80%

BY 2040 THE INDUSTRY WILL INCREASE;
VALUE ADDED YEARLY EXPORTS FROM \$2.5 BILLION TO

↑\$3.1 billion

BY 2050 THE INDUSTRY WILL HAVE PROVIDED;

14 million m³
INNOVATIVE CONSTRUCTION MATERIAL

16.4 million m³
COAL REPLACEMENT MATERIAL

49.3 million m³
OIL FUEL REPLACEMENT MATERIAL



ITP ambitions and trends are shared globally

International investment consultancy Gresham House reported in 2020 that, “Over the past 20 years, global timber consumption has increased by 1.1% per annum. Over the next 30 years, expect timber consumption to rise by 3.1% per annum.”

Gresham further stated; “The vast majority of countries have set significant targets to reduce carbon emissions towards net zero by 2050.

Rising timber consumption is contingent on three core factors; urbanisation, decarbonisation and increased housebuilding.

The dual effect of urbanisation and decarbonisation will be more new homes and cleaner low carbon intensity buildings being built from timber. Wood will increasingly replace carbon intensive steel and concrete.

Forestry ownership and returns continue to be underpinned by the biological growth of the trees. Forests provide protection from inflation and portfolio diversification, with minimal correlation to other asset classes. During the COVID-19 pandemic, forest values have continued to rise, due to assets being valued on a long-term basis.

In times of unprecedented volatility, the defensive nature of forestry ownership is particularly pertinent.”

OVER THE PAST 20 YEARS, GLOBAL TIMBER CONSUMPTION HAS INCREASED BY

1.1% per annum

OVER THE NEXT 30 YEARS, EXPECT TIMBER CONSUMPTION TO RISE BY

3.1% per annum

A recent report from the Potsdam Institute of Climate Research pointed to a massive increase in the global population living in cities over the next 80 years.

In the past they would have come to live in concrete and steel buildings. The construction of these building emits huge quantities of greenhouse gases.

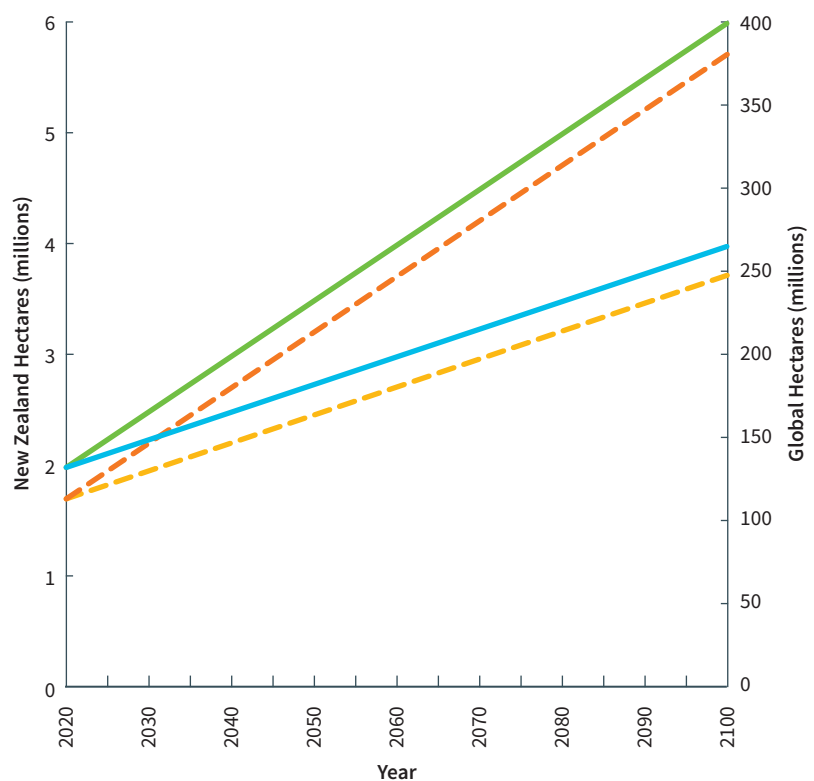
Instead, the research paper suggests, if 90 percent of them lived in medium rise homes made with modern engineered timber, then the world area in plantation forestry would have

to increase by more than 200 percent by the end of this century.

That’s from 132 million hectares of plantation forests worldwide, to something like 425 million hectares.

Here in New Zealand the Draft Industry Transformation Plan projects that if half of our concrete and steel construction were replaced with timber, it would reduce carbon dioxide emissions by 500-thousand tonnes a year and lock up another 500-thousand tonnes of carbon in the wood.

GLOBAL AND NEW ZEALAND PLANTATION FOREST GROWTH PROJECTIONS TO 2100



- NZ – Climate Change Commission new-planting rate of 25,000 ha/yr* (left axis)
- NZ – At a continuing current new-planting rate of ≈50,000 ha/yr (left axis)
- Potsdam Institute of Climate Research Report – Business as usual global plantation growth (right axis)
- Potsdam Institute of Climate Research Report – At 90% MET construction plantation growth (right axis)

*NB the CCC anticipated this rate only to 2035 and policy driven to decline sharply thereafter



The case for pines

When our earliest government forestry professionals realised the dwindling indigenous forest could never supply all New Zealand wood demand, they embarked on a global search for what we should grow in plantations.

They tested hundreds of species. From trial plantings they were able to focus on just a few which appeared to grow well across a range of sites and had good wood properties.

Radiata pine stood out as a muscle tree for many reasons;

It grew rapidly. This matters, not just for fibre production, but for the economic viability of investing in plantation forestry. A forester may see parts of three rotations in their working life.

The tree was apically dominant and had relatively good stem form. It grew well across a wide range of New Zealand latitudes, altitudes and soil types.

But the researchers probably did not appreciate just what a winner they had hit upon and why it remains the dominant species for commercial plantation forestry in Aotearoa.

A wide genetic base of seed was imported to give a wide selection to breed trees with superior form and wood properties.

The pines we plant today are the best of the best of the genetics that was imported from native populations in California. And that improvement is not over yet.

Scion has sequenced the radiata genome and the forest industry knows more about how to get the best out of radiata genetics and management than all the other tree species here combined.




Radiata has been crossed with *Pinus attenuata* for enhanced frost/snow tolerance for higher altitude South Island sites, plus its wilding seeding risk is virtually zero. Otherwise, the possibility to hybridise radiata is yet untapped.

Within the radiata estate there are potentially a billion trees to select from – two hundred times the individual animal selections available to the dairy industry.

Scion is using enhanced LiDAR surveillance to identify trees with drought and disease resistance abilities. Future planting selections will be much more site specific, both boosting production and spreading a genetic risk into effectively different radiata varieties.

Radiata responds well to thinning and pruning treatments – giving farmers and investors many options for what products to target.

96%
PLANTING RATES IN 2021 WERE 96 PERCENT *PINUS RADIATA*



20%
THE ITP PROJECTS THAT BY 2030 SOME 20 PERCENT OF PLANTING WILL BE SPECIES OTHER THAN *PINUS RADIATA*

Radiata forests are largely free of pests and disease, so long as the stands are thinned to allow free air flow and reduce individual tree competition for light and water.

Radiata pine is light, which is a preferred ‘Scandinavian look’ over the traditional darker tropical and European timbers.

The cellular structure of pine makes it exceptionally easy for preservatives to

penetrate and provide durability, including 50-years of ground contact and even marine piles. It also paints, stains and glues well.

Radiata wood is easy to nail and screw without splitting, so drilling nail holes is not necessary. Standard machines can saw, peel, drill, router, plane, sand and even bend heated wood.

The preferred species for acetylation modification (Accoya) is again radiata. This process renders the timber extremely hard, stable and durable for flooring and outdoor cladding, joinery and even bridge building applications. Likewise, Abodo uses radiata for its heat preservative treatment.

Its long tracheid (cell) length and light colour means it is favoured for pulping to produce all sorts of high-grade paper and card, ranging from both brown bags and cardboard cartons to white photocopy papers and tissues. The natural light wood colour uses less bleaching chemicals to produce a whiter pulp than most other species.

The long cell length and light colour also mean that radiata produces the best MDF in the world – attracting a price premium in global markets.

Emerging science and technology is now exploring how extracts from the radiata lignin and other cell building blocks can be converted to high value biochemicals.

Chipping operators prefer radiata wood over Douglas-fir which has a stringier fibre and clogs the cutting blades.

New Zealand building specifications are written around radiata pine. Our log markets are geared to and rely on

the enduring characteristics of our radiata exports.

Economies of scale and reliability of wood properties are important. A wood processor does not want down-time continually reconfiguring their mill. While the timber from alternative species may be high quality, that does not mean there is even a niche market guaranteed for it, let alone large scale.

On the growing side as well, there are risks. Most trees are more site sensitive than radiata, as foresters found out for instance with Tasmanian Blackwood, which was popular to try as an alternative species some decades ago.

Even when the trees appear to thrive, at harvest time timber disillusionment can occur at the mill, which has been a frequent experience with eucalyptus.


Markets too are unpredictable. Sitka spruce was planted extensively in Britain for coal mine supports – just before Margaret Thatcher closed the collieries.


Spreading the risk at a commercial scale means spreading the unknowns and guesswork of markets, genetics and management.

Finally, the carbon sequestering ability of radiata pine is phenomenal. A 40-year-old pine will have double the absorbed carbon of a 40-year-old redwood.


Nobody is saying there is no future for any other species of timber producing trees. But a wholesale and precipitate abandoning of our pines is not a lesson we should pass down to the next generations.

REMARKABLE RADIATA


 **RADIATA PINE'S CELLULAR STRUCTURE MAKES IT EASY FOR PRESERVATIVES TO PENETRATE AND PROVIDE DURABILITY**

 **RADIATA'S LONG TRACHEID LENGTH AND LIGHT COLOUR MEANS IT IS FAVOURED FOR PULPING**

 **THE LONG CELL LENGTH AND COLOUR ALSO MEANS RADIATA PRODUCES THE BEST MDF IN THE WORLD**

 **RADIATA WOOD IS EASY TO NAIL AND SCREW WITHOUT SPLITTING, SO DRILLING NAIL HOLES IS NOT NECESSARY**

 **RADIATA FORESTS ARE LARGELY FREE OF PESTS AND DISEASE**

 **A 40-YEAR-OLD PINE WILL HAVE ABSORBED DOUBLE THE CARBON OF A 40-YEAR-OLD REDWOOD**

Other primary industry genetics 'narrow' as well

Plantation forests are not alone in their genetic focus. Other sectors of New Zealand primary industries also have nearly all of their eggs in one species basket.

The dairy industry for instance is dominated by 70 billion litres per year of dairy cow production. Milk from goats is about 70 million litres a year – about 0.3 percent of the cow milk production. The much-publicised sheep milk industry is in turn only one tenth the size of our goat milk industry.

Of the cow breeds, the Holstein Friesian is even more dominant than it was 20 years ago. In 2001, 23 per cent of the national herd was some other breed than a Holstein Friesian or a cross. In 2021 those other breeds had shrunk to 18 percent.

And, all of the cows are predominantly grazed on the same ryegrass and clover pasture which generations of cows ago also fed on.

The entire export kiwifruit industry is based on breeding just one species –

Actinida deliciosa, albeit into three varieties of green, gold and red, with 58 percent of the kiwifruit estate still planted in the green variety and less than one percent so far in red.

When the bacterial disease PSA hit the kiwifruit industry in 2010 a resistant strain of kiwifruit was found in existing vines, not among different species of kiwifruit.

The 30 or so domestic sheep breeds in New Zealand are all of one species of sheep *Ovis aries*.



Diversifying our productive forests to build sector resilience

For the media, one clear message prevails about planting trees and forests: Either plant pines, or plant natives. Apparently, those are the only options. Forest owners have no reason to counter that – growing pine after all is business as usual. One species and one wood, where “wood” and “radiata” are interchangeable terms, serves both the forest and wood processing industries well.

The just released Draft Industry Transformation Plan, on the other hand, is about innovation that leads to a prosperous future industry. Wood is as diverse as the tree species that produce it, and this was identified by the Advisory Group as a clear opportunity which industry should not ignore. Although diversifying into specialty timbers does challenge that “business as usual” model, the opportunity for industry to mitigate both biological and business risk is real and significant.

The other reality is that the forest industry has, rightly or wrongly, earned a negative and highly-charged reputation for being an unsustainable pine monoculture. That reputation will continue to erode the forest industry’s social licence to operate.

Everyone, we are told, knows that pines poison the soil and deplete biodiversity. Just ask any farmer or city dweller. People hear what they want to hear, not necessarily what is fact.

The public, as holders of the forest industry’s social licence, demand genuine narrative and tangible change where they see this is required, so they distrust glossy promotional campaigns because these are perceived to disguise business as usual.

Add to this, was the Climate Change Commission jumping aboard Dame Anne Salmond’s vision of vast areas of New Zealand covered in planted native forests, to counter the villain monoculture pine industry.

Let’s not kid ourselves, the economics of growing native plantations for timber don’t stack up, the Forest Service figured that out early last century.

Before deploying native timber plantations at scale, decades of research and trials would be necessary.

The ITP working group did our best to get this through to a native-indoctrinated Te Uru Rākau.

The industry hasn’t helped by partnering with Te Uru Rākau in their wood promotion campaign that includes promoting “indigenous trees and their timber’s appeal as an alternative to importing tropical hardwoods”.

This sets the stage for “them and us” (heroes and villains), and a lost opportunity of epic proportions, unless industry steers a new path to diversify our productive species mix. The handbrake as I see it is corporate sector motivation for change, and at the scale required for success.

To shed the evil reputation of a “monoculture” industry, serious investment in diverse species for wood production is required, in partnership with government.

The Specialty Wood Products programme has made good progress and the knowledge gaps are being filled. We just need to refocus investment and understand that levies accrued from radiata logs don’t necessarily need to go back into radiata, but instead where strategic industry investment is most needed.

The R&D deck has been stacked against alternatives for 80 years, so no wonder preconceptions abound. Despite this, there are good initiatives being undertaken to commercialise redwoods, cypress and eucalypts. These are fast-growing species not only offering diverse wood products, but also opening the door for continuous cover forestry on steep slopes.

If, as the forest industry, we were to seriously invest in exotic species that produce high-value specialty timber, not only would we open new market opportunities while addressing species concentration risk but, done right, we’d also transform our social licence to operate.

If industry doesn’t take that initiative then the politicians will fill the void via native afforestation of pastoral hill country, to satisfy their next century climate response agenda and the public’s thirst for diversity.

Native canopy species are difficult enough to establish successfully in pasture, because their ecology is to emerge through pioneer scrub



Dean Satchell

species. Producing straight stems requires extremely complex silvicultural systems that are currently only being imagined. But politicians don’t always get reality.

Shade tolerant, coppicing species, like redwoods and eucalypts, mitigate landslide risk under a continuous cover regime. So what level of slope is too great for production forestry? Rotation forests have a much lower slope threshold, implying that land deemed unsuitable for clearfell has nil capital value.

Under that scenario, are the higher harvesting costs of single tree extraction justified for high-value timber species? Without knowing the answer to that, forest owners only have assumptions when weighing risk to replant erosion prone orange and red zone land against retirement.

Pastoral land owners consider only two tree planting options for their hills, rotation pine or native retirement, with no species or landslide risk information. Becoming informed would begin the paradigm shift, but that also means progressive thinking. My favourite quote, “Paradigms fall slowly, from the weight of repeated failure”, reflects only the lack of industry imagination.

It’s achievable to provide sustainable wood production and biodiverse, rich outcomes for society by diversifying the productive species mix. But an industry vision and a commitment for action is required to bring government along for the ride, with both parties serious about delivering the goods. The small forest grower is already there.



Saving the eastern brown kiwi - plantation foresters to the rescue

The eastern brown kiwi population is falling by 2 percent a year. There are only some 7,000 birds of the subspecies left in East Coast/Gisborne, eastern Bay of Plenty and northern Hawke's Bay regions. Plantation forests might be the foundation to reverse that decline.

Kiwi can thrive in plantation forests – this is now known for certain – especially in cut-over areas where food is plentiful.

Forest management can help maintain numbers but the essential tool is sustained predator control. Without protection from predators, especially stoats, 95 percent of kiwi chicks never make it to adulthood. Adult birds too are vulnerable to ferrets and dogs.

Predators kill an estimated 143 eastern brown kiwi each year, meaning some 215 adult birds need to be recruited to the population annually for the decline to be reversed.

Predator control is easier in plantation forests, because they have an internal road network. Unfortunately, however, 80 percent of eastern brown kiwi live in rugged terrain in inaccessible areas.

Kiwi conservation initiatives in plantation forests in Northland, Coromandel and the Bay of Plenty have had some really encouraging results. They show conclusively that kiwi management can be integrated into forestry operations without major disruptions. Moreover, evidence is kiwi can attain higher densities in plantation forests than in native forests –



Images: Eastern brown kiwi. (credit – Save the Kiwi)

one pair per five hectares compared with one pair per ten hectares in native forest.

Rayonier-Matariki, Manulife and Summit Forests are amongst the forest owners who have committed significant resources to kiwi conservation in the northern North Island. Their environmental foresters are managing long-term predator control programmes, organising local volunteer conservation groups and working with pig hunters to train dogs in kiwi avoidance.

Save the Kiwi and the FOA/FFA Environment Committee have just signed on to cover 800,000 hectares of plantation forest to do more and fill some conservation gaps for the eastern brown kiwi.

Save the Kiwi's long-term goal for the region is to boost existing populations by introducing new birds from Operation Nest Egg. This successful programme takes

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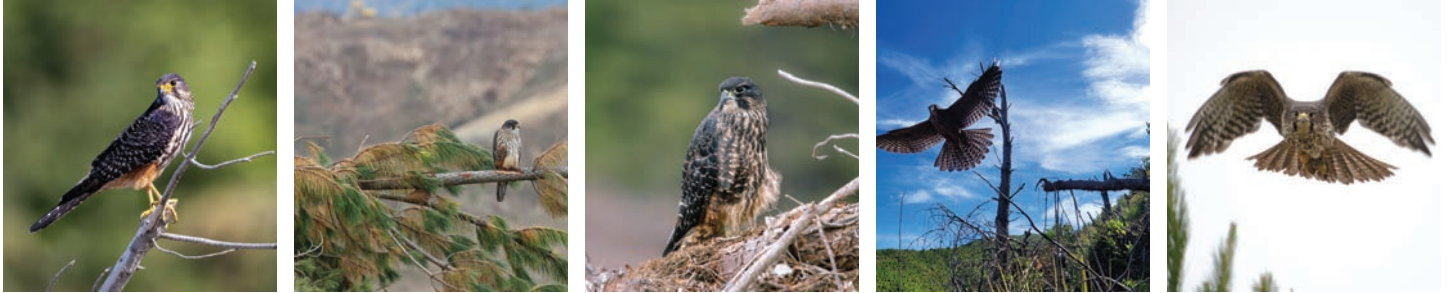
80 percent

OF EASTERN BROWN KIWI LIVE IN RUGGED TERRAIN IN INACCESSIBLE AREAS.”

eggs from nests in the wild and rears the chicks to adulthood before releasing them back into the forest. Re-introductions work only after predator numbers are well under control and there's a long-term commitment from the landowner.



Monitoring kārearea in coastal Otago forests



Foresters working in Otago’s coastal plantations back in 2015 observed that there seemed to be more kārearea (falcon) around than ever before. Wenita and City Forests combined forces with local ecologist, Graham Parker, to begin monitoring kārearea populations, and better understand how to avoid disrupting their nesting.

Forest Assets Manager of Dunedin-based City Forests, Peter Oliver, says the kārearea data at that time was based on Kaingaroa Forest – a large, contiguous forest in the Central North Island.

But the land-use mosaic of forestry, farmland, and peri-urban land in coastal Otago was more complicated.

“We soon learned we need a more nuanced approach to managing nesting kārearea in and around our forests.”

By the 2021-22 monitoring season seven local forest companies and five private forest owners were contributing both cash and in-kind, with additional funds from the Forest Growers Levy Trust. Many volunteers have also been doing field work.

Breeding, survival, habitat use, and crucially, what happens when kārearea attempt to breed in the vicinity of forestry operations, were monitored.

Over the six years the project has monitored 135 nests during the spring summer breeding season. More recently motion-sensor cameras have been installed at every nest to assess causes of nest failure. One private forest owner, Alan Dunlop, also set up a live-streaming camera which provided 24/7 coverage of a nesting pair in his forest.

“We started with a real paucity of data and are gradually building up our experience,

including of conflicts with forestry operations,” Peter Oliver says.

“The early period is crucial to nesting success. Any mitigation efforts must be prompt – harvesting crews receive training so they know how to identify kārearea in their early phase, and to report sightings. Crews have been very cooperative, even though on occasion they have had to adapt their operations.”

“We have found that birds tend to follow harvesting activity and nest on the edges of clearcut areas. Nests are just a scrape on the ground, but the birds often use the tall trees nearby to roost in and hunt from.”

“Sometimes birds nest during the Christmas break, and then when the harvesting crews come back to work, they have a nesting pair to contend with.”

The monitoring has shown that predators, mainly stoats but also ferrets, cats and even hedgehogs, cause nesting failure as often as forestry conflicts, so increased predator control is another way to enhance nesting success.

“We have looked at protecting individual nests by setting up traps around them, but we think the traps may actually attract predators to the nest. So widespread pest control is probably the better option.”

With more than 30 volunteers in the project this season alone, with local farm foresters also interested, Peter Oliver feels it is a very positive way to interact with local communities as well as enhance local kārearea recovery.

Forest owners have an obligation under environmental regulations to protect the endangered kārearea, and a new set of management guidelines will be produced by the project team following the final year of monitoring over this summer’s breeding season.

EARLY FINDINGS

- **Distance** – no specific distance identified but ‘keeping well away from early-lay nests’ is a priority. Land preparation operations seem especially likely to disturb birds.
- **Timing** – kārearea are more sensitive to disturbance during the early-lay period.
- **Topography** – operations on the other side of a ridge appear to have less impact than those in direct sight of the nest.
- **Vigilance/contractor awareness** – nesting needs to be spotted and reported promptly.

2021/22 RESULTS – COASTAL OTAGO KĀREAREA MONITORING

- 43 pairs identified, 38 in plantation forestry – 32 pairs were followed
- Nesting success – 69% of nests raised chicks to fledgling
- Chicks raised – 1.53 per nest (believed to indicate a healthy/growing population)
- Nest failures – 10
 - 2 caused by nest predators
 - 2 by forestry operations during early lay
 - 2 by stressed parents eating eggs (where stressors may have included forestry operations)
 - 4 unknown causes.

Contributors to the project

City Forests, Wenita Forest Products, Rayonier-Matariki, Calder Stewart, Port Blakely, Venture Forestry, Otago Regional Council, Dunedin City Council, Birds NZ, and the Forest Growers Levy Trust. Thanks also to Alan Dunlop and other private forest owners, and volunteers.

Reference

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Wairoa rail and Gisborne port expansion vital for exporting growing forest volumes

As Tairāwhiti log production increases, the region’s ability to cope is stretched. Both the roads and the ports of Gisborne and Napier are feeling the pressure. The re-opened Napier to Wairoa railway and the Gisborne port expansion are vital for the regional industry’s future.

It’s a classic wall of wood scenario for Tairāwhiti. Gisborne vies with Napier and Whangarei to be New Zealand’s second busiest log port after Tauranga. Gisborne already exports 2.9 million cubic metres of logs a year and much of Napier’s 2.8 million cubic metres of log exports come from north of Napier.

Over the next decade, some scenarios have this East Coast harvest rate to double. More realistically, though, the log volume is likely to more modestly increase by half for the rest of the decade.

The reopened Wairoa to Napier rail line has been vital in easing pressure off the roads in the meantime.

Since October last year, a train has been heading from the log yard at Wairoa to Napier every day of the week.

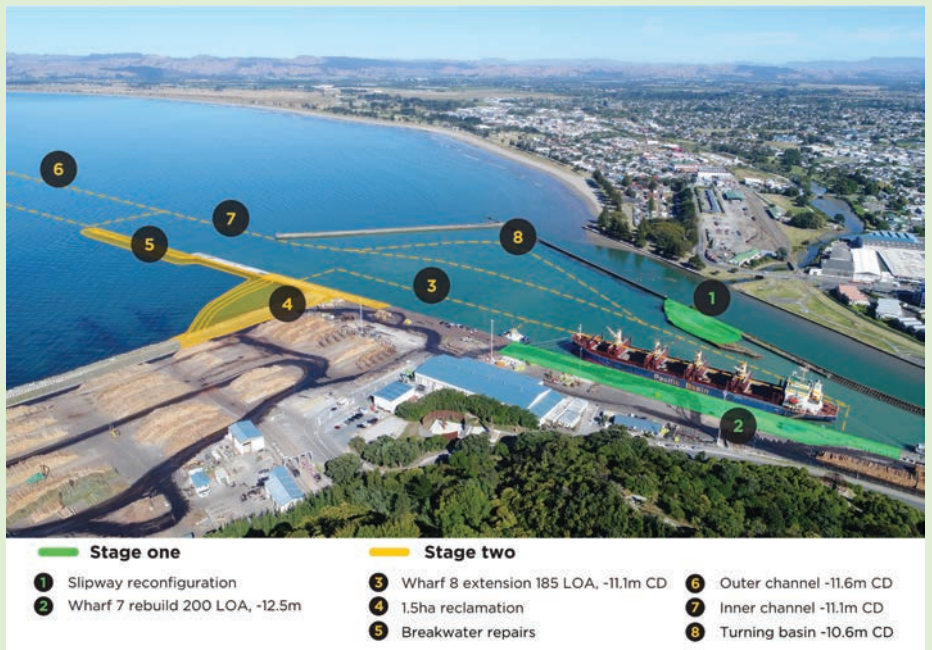
According to KiwiRail the rail service means 4746 fewer log-truck trips per year. The fuel saving is 230,000 litres and there are 614 tonnes of carbon emission savings.

KiwiRail is to complete some log yard work to be able to extend the number of wagons per trip from 18 to 23.

Line users, Forest Management New Zealand and Juken New Zealand, would like to rail more logs.

But a second trip per day is some way off. There are operating constraints with the hours of operation at Wairoa and KiwiRail doesn’t have enough of the light-axle locomotives required for the route.

Extending the line as far as Nuhaka is a possibility, but as the years go on the cost of a full restoration of the rail line all the way to Gisborne makes it more unrealistic.



At the moment, if the Wairoa yard is full, then trucks have to take the load all the way on the road to either Gisborne or Napier and trust the log yard capacity at or near these ports is not full either.

Gisborne has operational restrictions on berthing log ships because of the harbour’s exposure to swells from the south. When loading demand is high and delays frequent, the risk of consequential massive demurrage delay charges can reduce the returns an exporter can get from the logs at Gisborne compared with Napier.

At Gisborne, Stage One of the construction of a modern two-berth harbour has just begun and a new Wharf 8 directly across the basin is planned to be operational by early 2024 with an expanded 1.5 hectares of log yard.

The two berths will allow two vessels of up to 200 metres long to be loaded at the same time.



GISBORNE EXPORTS

2.9 MILLION M³ OF LOGS A YEAR



THE LOG VOLUME IS LIKELY TO INCREASE BY

50%↑ FOR THE REST OF THE DECADE



THE RAIL SERVICE MEANS

4746 FEWER LOG-TRUCK TRIPS PER YEAR

TWO BERTHS WILL ALLOW TWO VESSELS OF UP TO

200 METRES LONG TO BE LOADED AT THE SAME TIME



Working to make sure timber is legally harvested

The Forest (Legal Harvest Assurance) Amendment Bill is a significant step to a Legal Harvest System in New Zealand. The aim is to reduce the risk of timber products being illegally harvested both here and overseas.

The proposed system is designed to prevent the import of illegally harvested timber and to enhance market access for exporters. Under the proposed system, large- and small-scale forest owners, forest management companies, or their representatives will complete Legal Harvest Statements when the harvest gets underway.

The statements will be provided to log buyers with details about the harvest and a signed declaration affirming the legal owners of the timber. If circumstances change during the harvest, meaning the statement is no longer accurate, the forest owner will need to notify the buyer of the change and the information updated.

Log traders, primary processors, exporters and importers operating in New Zealand (and above certain thresholds) will need to register with the Ministry for Primary Industries (MPI) under the system. The registered person will undertake due diligence on the timber they are dealing with, using the Legal Harvest Statement and systems approved by MPI, and assessed by independent assessors. Registered importers will also need to do due diligence on the timber products they import.



LOG TRADERS, PRIMARY PROCESSORS, EXPORTERS AND IMPORTERS OPERATING IN NEW ZEALAND (AND ABOVE CERTAIN THRESHOLDS) WILL NEED TO REGISTER WITH THE MINISTRY FOR PRIMARY INDUSTRIES UNDER THE SYSTEM.

This Bill will not only cover logs but also other products such as sawn timber, paper, panel products and wooden furniture. The products covered will be stipulated in regulations and for importers and exporters will be identified through their HS codes.

The Bill makes provision for the notification of laws which are relevant to harvest both in New Zealand and in countries we import from. These include laws affecting the harvest that relate to land and resource use, and property rights or interests in what is harvested.

Under the Bill registered exporters will be able to apply to MPI for an “exporter statement” to help with market access.

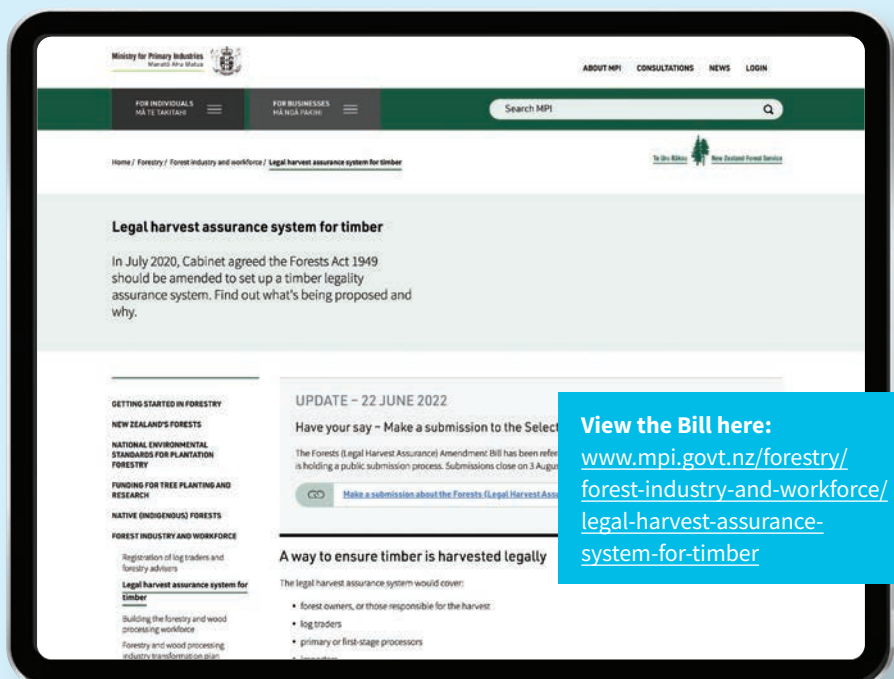
If the Bill passes into law, the Legal Harvest System will commence up to three years after enactment with full enforcement up to 12 months later. This will give time for MPI to work with people and businesses in the sector, so they are familiar with the new requirements



IF THE BILL PASSES INTO LAW, THE LEGAL HARVEST SYSTEM WILL COMMENCE UP TO THREE YEARS AFTER ENACTMENT WITH FULL ENFORCEMENT UP TO 12 MONTHS LATER.

and understand their obligations. MPI will also consult on and finalise the regulations, rules, and practice standards for the system during this period.

The Bill was introduced in June and is now with the Primary Production Select Committee; www.mpi.govt.nz/forestry/forest-industry-and-workforce/legal-harvest-assurance-system-for-timber



View the Bill here:
www.mpi.govt.nz/forestry/forest-industry-and-workforce/legal-harvest-assurance-system-for-timber

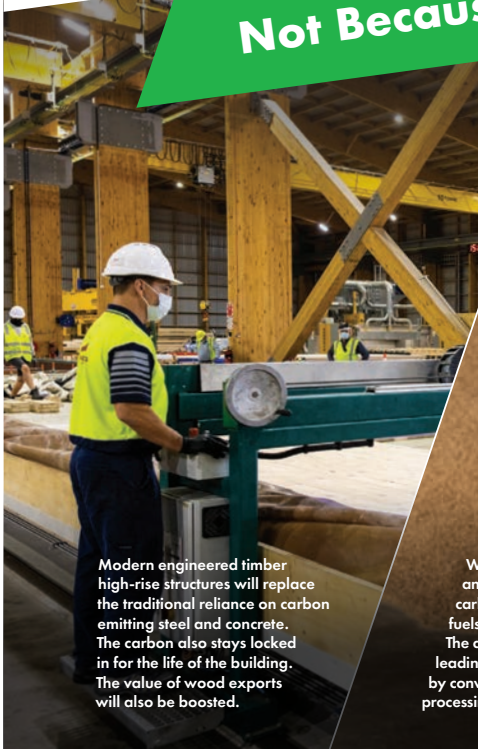
Our plantation forests sequester a huge volume of carbon from the atmosphere. To get Aotearoa New Zealand anywhere near Carbon Zero by 2050 this area and volume has to increase.

We are about to transform our forest and wood processing industries. Our environment will gain vital benefits from more trees and wood products. Our export and local economies will grow with more jobs.

LOVE OUR FORESTS

Not Because We Can – But Because We Must

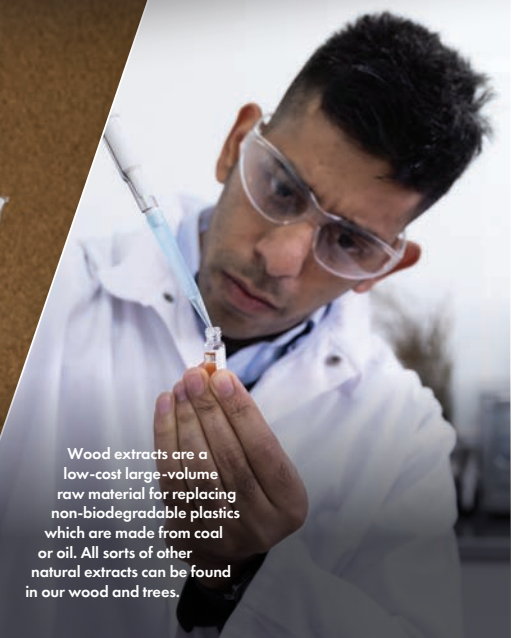
  @LOVEOURFORESTS



Modern engineered timber high-rise structures will replace the traditional reliance on carbon emitting steel and concrete. The carbon also stays locked in for the life of the building. The value of wood exports will also be boosted.



Wood will be the chips and pellets to replace carbon releasing fossil fuels such as coal. The dairy industry is leading this change by converting its milk processing driers to wood.



Wood extracts are a low-cost large-volume raw material for replacing non-biodegradable plastics which are made from coal or oil. All sorts of other natural extracts can be found in our wood and trees.



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