

Wood Matters – June 2019

Forestry – A Commercially Viable and Environmentally Beneficial Land Use Alternative



Te Kapunga Dewes
CEO
PF Olsen Ltd

Tena Koutou

Forestry is a commercially viable and environmentally beneficial land use in Aotearoa. Unfortunately, there is a pastoral farming movement gaining airtime that suggests that forestry is negative for our country and that is something I am compelled to address.

PF Olsen's purpose is to provide high quality professional forestry services delivering increased value for our clients. Many of our clients are astute pastoral farmers who recognise the significant benefits of integrating multiple land use onto their farms through improved commercial returns, improved land value, and risk mitigation in both environmental impacts and diversification of commercial outcomes. We see our partnership with farming as critical to delivery of national goals around carbon emission offsets, improving erosion control, improving water quality, and providing employment to a number of industries. To this end, I'm taking the opportunity to address some of the concerns raised with facts interspersed with opinions.

NZ Farmland – 12.6M Hectares. 8.5M Hectares of this is sheep and beef.

NZ Plantation Forestry – 1.7M Hectares. To reach the 1 Billion Trees goal, this will require another 230,000 – 430,000 hectares to be planted, therefore if **all** planting was on farmland, only 3% conversion across 10 years would be needed.

Unfavourable and potentially catastrophic climate change brought about predominantly by carbon emissions is the underlying premise for the worldwide intervention aimed at carbon emission reductions and offset through carbon sequestration (carbon sink). Without defending the science and if this premise is challenged, the reality is successive NZ governments (both Labour and National led) have subscribed to this premise and have made commitments to reducing or offsetting carbon emissions. One of the vehicles created to accomplish this international obligation is the ETS where emitters of carbon can offset the emissions by purchasing units of carbon from sellers. Forests are a way to create carbon units through sequestration. The ETS is a market mechanism to address supply and demand for carbon, based on the national commitment and is not taxpayer funded subsidisation. Some domestic emitters are addressing the offset requirements by planting and buying forests directly. Interestingly approximately 50% of our carbon emissions are from agriculture (methane and nitrous oxide) and 95% of the agriculture industry is exempt from having to buy carbon units meaning the government is compelled to address this either through delay of meeting target reductions, or even direct investment into carbon reduction. The point is afforestation positively affects the global climate through sequestration of carbon.

Forests create improved water quality, they reduce erosion, and even in monocultures like a pine forest, create biodiversity and environments for indigenous flora and fauna to proliferate. Nitrogen entering major water bodies from farming operations, either directly by flow or indirectly through soil leaching is increasing in importance to us environmentally. Utilisation of strategic area afforestation on a small or large scale can improve this. In terms of erosion control, there is no doubt that afforestation has positive effects on the landscape. It is acknowledged that there is a timeframe post forest harvest where debris flows are possible during significant weather events such as what occurred at Tolaga Bay last year. This outcome was not acceptable, and it can and will be mitigated with changes to legislation and practices. However, the damage that is caused when an entire catchment is in a cleared state is more pronounced albeit less visually with thousands of tonnes of earth flowing out to sea. Biodiversity benefits of afforestation are also significant, sometimes to the chagrin of foresters and forest owners. This year PF Olsen has utilised our existing biodiversity management practices that minimise the impact of forestry and protect the North Island Brown Kiwi, the NZ Falcon, Native Lizards, Bats, Koura, and Totara Snails. These were all found in pine forests we manage. The point is afforestation has positive implications for land use and environmental concerns.

There is a suggestion that forestry is the reason for decline of drystock farming in rural communities and reduction in employment. Unfortunately, there doesn't seem to be any data to support this assertion. A relevant case study completed by Lincoln University in Wairoa, McKenzie District, and Victoria found the opposite to be true, that forestry provided more employment on farm, in support services, and in downstream processing. What is true is rural communities are disappearing without forestry as a function of other social issues including urbanisation, centralisation of work, cost focused retail and distribution, and reduction in rural support by government (schools and government agencies centralised). Whilst forestry has become more efficient and reduced requirements for labour, so too has agriculture illustrated by farm amalgamation (increasing farm size) and declining on-farm employment. The point is there are social impacts with forestry, but these are far less than other more influential factors.

The economics of converting farmland to forestry stack up in some places. Not unlike the wholesale conversion of land from forestry and drystock into dairy a decade ago, the economic returns coupled with previously mentioned factors including carbon trading cashflows, environmental factors, and social benefits, are propelling conversion. The astute landowners have recognised this and are "making hay" through identification of land on farm that is not yielding sustainable returns relative to forestry (alongside other activity like horticulture, viticulture, honey and the like) and are switching land use. In some cases, either selling the farm, or parts of it to investors that recognise this value and are prepared to monetise this early. The concern that some have around increased conversion from farmland is real and no different to any supply and demand driven market situation. Farm owners have increasing options, they understand the value of their properties, they have more buyers who are willing to pay more than they were able to extract a few years ago, and they are not forced to sell, nor are they required to partition out areas ideally suited to afforestation. This is the landowner's choice. Whilst we may suggest that socially this is a problem for whatever reason, it is one created by market forces with support from social and environmental drivers.

At this point it is worth a quick mention regarding the 1Billion Trees grant that is assisting this conversion. Our position on 1BT grants is that in most cases, if cashflow can be supported, these are not recommended for planting radiata forests. The reason is the offset in that entering the ETS (assuming this is possible) must be delayed by 6 years, and most radiata afforestation would have more benefit from entering than not. For other exotic afforestation, the grants will be a help, but not cover the costs and the long-term commercial returns are much lower than radiata. If they are planted for erosion control and water quality improvement this is where the 1BT grants for exotic afforestation are very helpful – as they assist environmental improvement and make it easier for landowners who

might not have established forests in the past. Regarding native tree species where 90% of the 1BT grants are targeted, whilst they seem generous, they cover at best 30% of the establishment costs. This is excellent for landowners who intended to retire land to forests, and where some others may be looking to diversify further into honey and oils. The grants absolutely assist where land is being afforested for the purpose of carbon offset.

In summary, the value of afforestation has increased recently for several reasons although the majority of these are driven by environmental factors (climate change), which has influenced social drivers, that are now manifesting as political policy. At PF Olsen, we are unashamedly strategically aligned to this direction as members of our communities and of our country. We are committed to assisting astute land-owners including the farming community to recognise and extract the value that afforestation has, and we are proud of our slightly different approach in that we actively advocate for conversion where it makes sense from multiple perspectives, not just commercial ones. We accept that the change we are seeing in forestry at the moment has some negative consequence, but overall, there are compelling and very positive outcomes for astute landowners; commercially, environmentally, and socially.

Log Market - June



Scott Downs
Director Sales & Marketing
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Market Summary

The CFR sale prices for New Zealand logs in China has dropped 4-6 USD over the last month, with A grade logs now selling at around 130 USD per JASm³. The weakening of the NZD against the USD through May somewhat buffered the drop for the June At Wharf Gate (AWG) prices offered to log suppliers at NZ ports. The average drop in AWG prices was 5-6 NZD per JASm³. The Chinese Yuan (CNY) has recently stabilised against the USD providing some relief to the Chinese log buyers. The NZD however has recently strengthened against the USD, and if this continues will have an adverse effect on July AWG prices.

The markets for sawntimber produced by New Zealand mills has not changed from last month. The large Clear 1 grade boards are selling well in Europe and parts of the US, but there is too much volume of the smaller Clear2 grade and knotty grades in Asia. Volume is still moving but at much lower prices. The domestic market for sawntimber remains very stable.

Due to the drop in the AWG log prices the PF Olsen Log Price Index for June decreased \$2 to \$128. The index is currently \$1 below the two-year average, \$2 above the three-year average, and \$10 higher than the five-year average.

Domestic Log Market

Log Supply and Pricing

Prices for domestic log sales in June are mostly unchanged from May as we move to the end of Quarter 2. Most mills anticipate some relief in log prices in Quarter 3 due to the lower export log prices. Most mills will start to get more discerning over the quality of log they receive as the economic

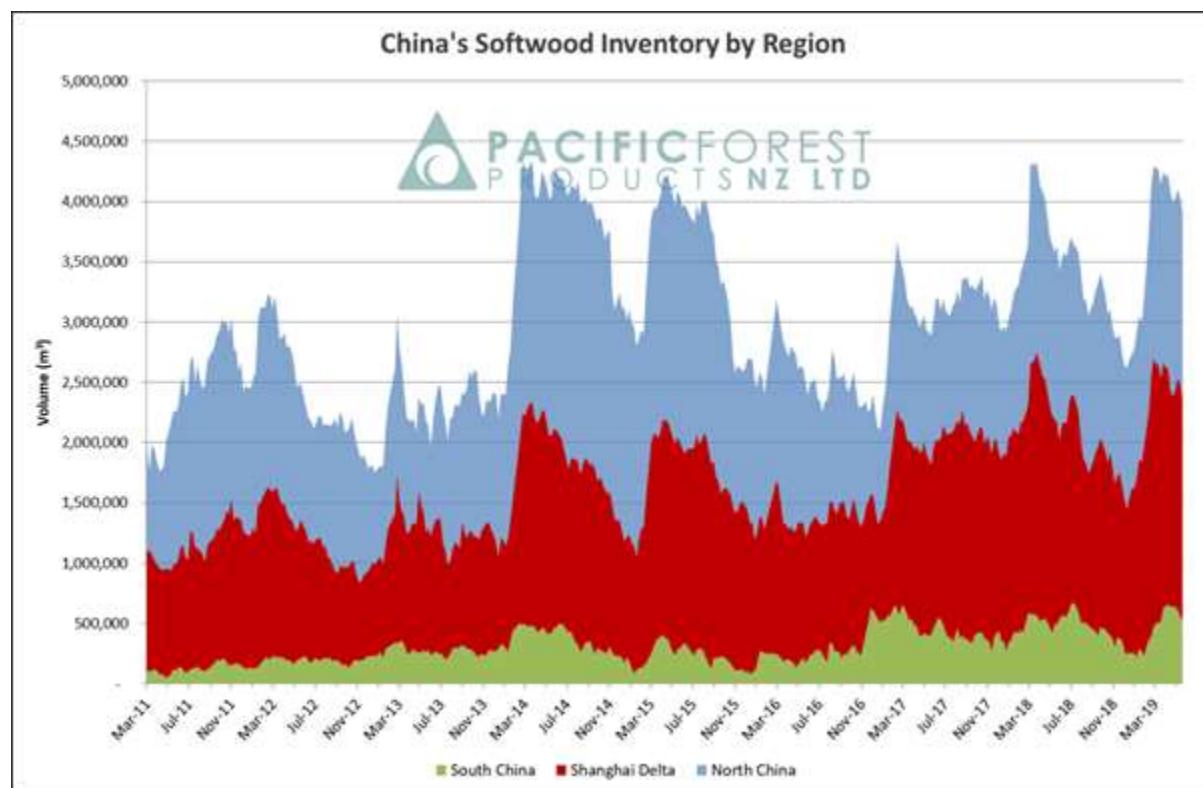
returns between the sawn timber grades is widening. The larger pruned and structural grades are selling well but marketing the rest of the log is a struggle.

The domestic market for sawn timber has remained stable with settled weather through May. The start of the winter season will see demand drop in some sectors. We are seeing more finger joint, mouldings and other remanufactured products being imported from China and this will place pressure on supply.

Export Log Markets

China

Total softwood log stocks across China have reduced slightly from last month to around 3.8 million m³. Daily uplift from the ports is averaging about 78,000 m³ per day so demand is still reasonably healthy. Construction activity in China has started to slow with the start of the hottest months of June and July. Most industry commentators expect the China government to introduce some stimulation spend into the construction market, but it will take a few months before the effect is felt in the log market.



Courtesy: Pacific Forest Products (PFP)

The CFR sale prices for pine logs in China dropped a further 4-6 USD through May and the A grade sale price is now around 130 USD per JASm³.

Supply of softwood logs from other countries continues to reduce. Logs from the US have been hit with further tariffs of up to 25% introduced by China's Ministry of Finance on June 1st within the Harmonized Tariff Schedule (HMS). The Southern Yellow Pine (SYP) from the South East of the US had already significantly reduced and is now just a trickle of container volume. There has been more volume from the Pacific North West, but this is now expected to slow considerably.

Many harvesting operations in South America have stopped and this will also reduce softwood supply into China. Current stocks in China are being heavily discounted in an effort to move this stock before the hot sticky season in China. The smaller sized South American softwood logs are more perishable than the New Zealand pine logs.

India

The Indian market for New Zealand pine logs has held up better and not completely followed the China CFR trend. The CFR price for 'A grade' New Zealand pine logs is 147 to 150 USD per JAS m³. The INR has traded consistently between Rs 69.4 to RS 70.0 for 1 USD. Domestic prices for sawn New Zealand pine are Rs 511/CFT in Kandla and Rs 511/CFT in Tuticorin. Demand is lower in Tuticorin.

Low inventories due to low volume of shipment from New Zealand to India has kept the market price relatively firm. In March, April and May only three break bulk vessels per month were shipped. The arrival of a vessel with Uruguay pine is expected around mid-June, and there is a bit of anxiety around penalty on fumigation on arrival and the quality of the cargo.

South African pine is consistently supplied at 10,000 m³ per month in containers between Kandla, Tuticorin and Calcutta. It is priced at 135 USD per tonne for P40 (pruned with a 40 cm small end diameter) and 135 USD per tonne for A Grade. Due to problems of fungus and log quality it does not have a significant impact on the New Zealand pine log market.

SYP from the US is holding at 123 USD for 12" minimum and 118 USD for 10" minimum.

The previous government was re-elected with a resounding majority and that significantly reduced any potential for market volatility. It should augur well for the construction sector as many of the projects and initiatives of the government can continue unabated. The Indian Government is also expected to announce initiatives to lure Foreign Institutional Investors (FIIs) into real estate and the construction sector to boost the economy.

The only macroeconomic negative is that the recent Indian GDP growth figures of 5.8% are much lower than the expected 6.5%. The banking industry corrections with tougher rules around availability of bank funding for business has had an impact. One of the major log exporters of New Zealand pine to India, Aubade New Zealand Ltd, believe that the correction phase is almost completed, and the coming year should see better business prospects. The Indian Reserve Bank is reducing the key policy rate to spur domestic growth and private investment and the results will be visible in the second half of this year. They predict public sector banks will adopt a more conservative less helpful approach whereas private banks will step-up to lend to businesses.

Exchange rates

The New Zealand Dollar (NZD) weakened against the United States Dollar (USD) through May and this partially buffered New Zealand forest owners from the falling CFR log prices in China. The NZD has recently strengthened against the USD. As stated last month and worth reiterating, how the NZD and the CNY fare against the USD over the next couple of months will have a significant impact on AWG prices at New Zealand ports.

NZD:USD



CNY:USD



Ocean Freight

Ocean freight rates from New Zealand to China have increased 2-3 USD for vessels on shorter term charter. Congestion at New Zealand ports is adding costs of up to 2-3 USD per JASm³ at times. There is often 6-8 log vessels waiting at Tauranga Port for a berth. Freight rates to India have been relatively stable with rates holding at 34-36 USD per JAS m³.

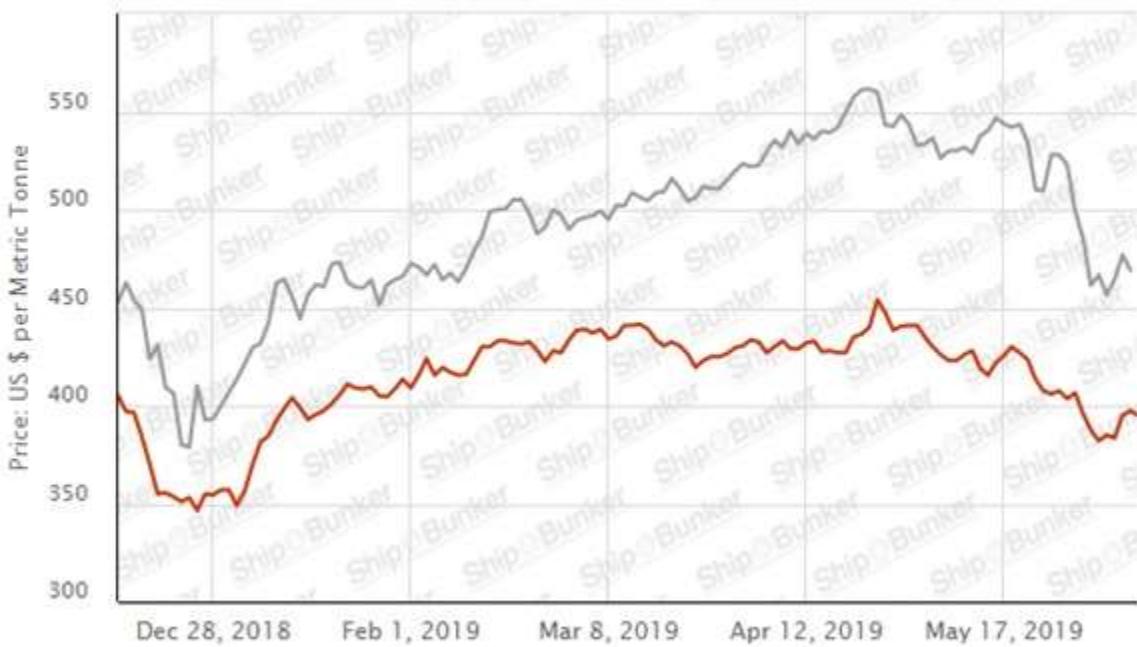
Baltic Handysize **414.00** +3.00 (+0.73%)



Source: *Investing.com*

The bunker prices have also peaked and show a downward trend, with a slight recent increase.

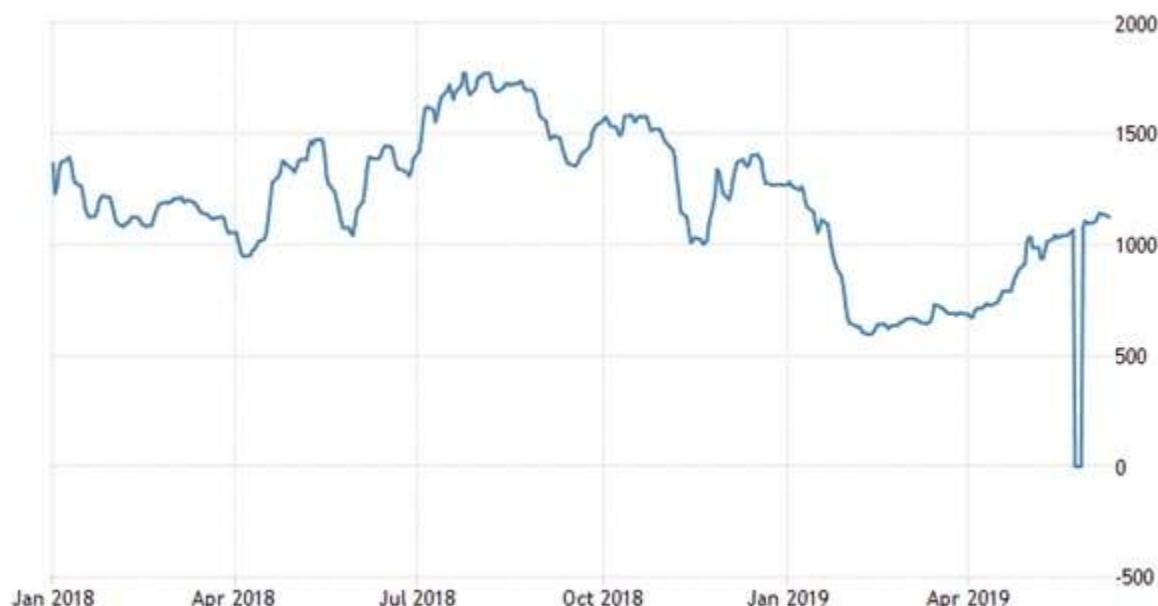
Singapore Bunker Price (IFO380) (red line) versus Brent Oil Price (grey line)



Source: *Ship & Bunker*

The Baltic Dry Index (BDI) is a composite of three sub-indices, each covering a different carrier size: Capesize (40%), Panamax (30%), and Supramax (30%). It displays an index of the daily USD hire rates across 20 ocean shipping routes. Whilst most of the NZ log trade is shipped in handy size vessels, this segment is strongly influenced by the BDI.

The graph of the BDI over the last year below shows the recent increase in the BDI. (The handysize is about 35% of the global shipping fleet). As mentioned in Wood Matter last month this increase in the BDI is an indication raw materials are growing in demand around the world, but not in the handysize vessels that are predominantly used to cart logs.



Source: [TradingEconomics.com](#)

PF Olsen Log Price Index - June 2019

Due to the drop in the AWG log prices the PF Olsen Log Price Index for June decreased \$2 to \$128. The index is currently \$1 below the two-year average, \$2 above the three-year average, and \$10 higher than the five-year average.



Basis of Index: This Index is based on prices in the table below weighted in proportions that represent a broad average of log grades produced from a typical pruned forest with an approximate mix of 40% domestic and 60% export supply.

Indicative Average Current Log Prices – June 2019

Log Grade	\$/tonne at mill	\$/JAS m3 at wharf
Pruned (P40)	175-190	178-183
Structural (S30)	132	
Structural (S20)	115	
Export A		140
Export K		132
Export KI		123
Export KIS		116
Pulp	51	

Note: Actual prices will vary according to regional supply/demand balances, varying cost structures and grade variation. These prices should be used as a guide only and specific advice sought for individual forests.

Forestry and the Emissions Trading Scheme



Mike Duckett

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PF Olsen Ltd

NZ ETS Decisions – Tranche Two

The Government has recently announced the second tranche of decisions on improvements to the NZ ETS. The decisions announced on 16 May 2019 are to:

- improve rates of compliance within the ETS through restructured penalties for late surrender or errors in reporting emissions
- increase transparency through publication of emissions and removals data at the participant level
- Prepare for robust and transparent auctioning by enabling independent oversight of the auctioning process
- Remove the fixed price option (FPO) by no later than 31 December 2022
- Enable a potential price floor in the future if desired, through an auction reserve price
- Establish a separate market governance work programme.

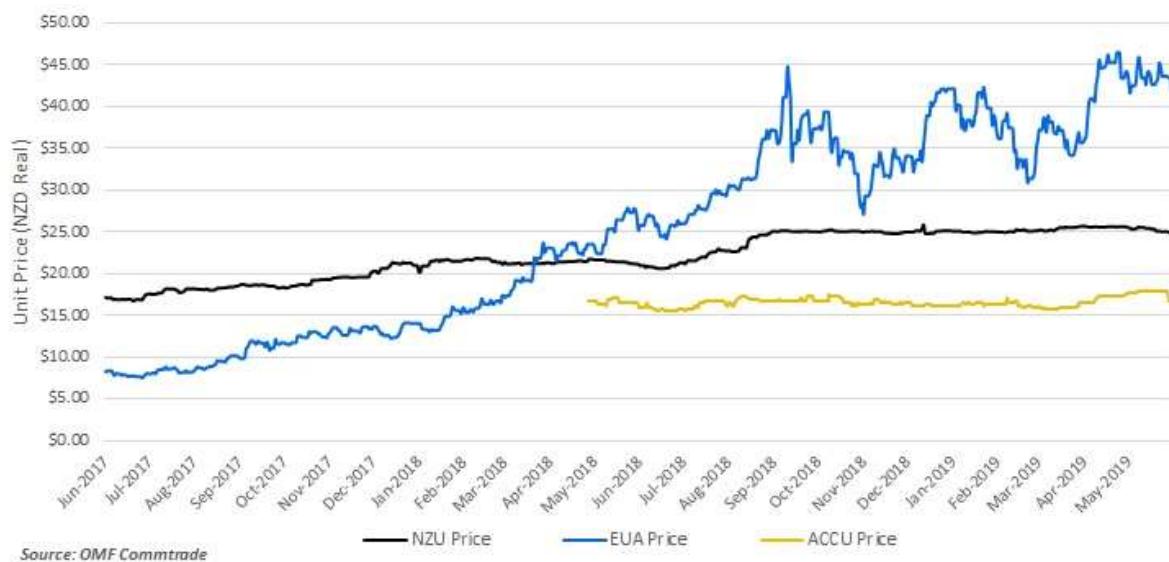
More information on the decisions can be found [here](#).

Price update

NZU prices shed \$1.00 during May for several reasons. Many emitters had already procured and surrendered ahead of the 31 May deadline, while others utilised the \$25.00 FPO. The announcement of Tranche 2 ETS decisions mid-month provided a little more certainty to emitters for the near term which further eased prices offered. NZU pricing is currently (as at 4 June) around \$24.50.

The Australian election result came as quite a surprise to market commentators, and ACCU prices have felt the weight of the Coalition Government's somewhat less ambitious climate change policy than that campaigned by Labour. ACCUs last traded around A\$15.75 (NZ\$16.70) as at 4 June, down \$0.90 since election night.

EUAs traded as high as €26.80 (NZ\$45.86) during May but closed the month at €24.30 (NZ\$41.71).



Source: OMF Comtrade



Sarah Orton
Environmental Forester
PF Olsen Limited

Finding the Best Trees in Our Forests

The Rainforest Alliance is one of the founding members of the Forest Stewardship Council® (FSC®), the largest sustainable forestry standard setter in the world. Products that bear the FSC mark and the Rainforest Alliance Certified seal are sourced from forests that:

- Protect endangered species and forest areas of high conservation value
- Set aside a portion of land as forest reserve
- Provide workers with decent wages and protect their ability to organize
- Follow FSC guidelines that determine how, when, and where timber and non-timber forest products are harvested
- Respect the rights of local communities and indigenous people

Today, the PF Olsen Group Scheme continues to go from strength to strength, consisting of approximately 38,600 ha across 59 forests ranging in location from Northland down to St Arnaud. Access to markets continues to be the main driver of membership, along with an increased awareness by forest owners to contribute to the protection for the environment and society within which their forests exist.



This milestone is a great achievement, a tribute to all of the hard work carried out by PF Olsen staff, contractors and forest owners. It also represents ongoing engagement with councils, environmental NGO's and other stakeholders to ensure that the Group Scheme forests are managed in an environmentally and socially sustainable manner to the best of our abilities. In particular, PF Olsen has worked hard to ensure that native species are protected and managed and have initiated several wetland restoration projects.

Parties wishing to know more about certification under the Group Scheme should visit [PF Olsen's website](#) or contact the Environment Manager, Kit Richards at kit.richards@pfolsen.com.

Quick Six – June

Research and development changing slash management



The devastation caused by the Tolaga Bay storm event and subsequent flooding highlighted the need for changes within the forest industry. In particular, the need to better manage slash so as to protect downstream infrastructure, properties and people, was seen as a key area for improvement.

In late 2018, a NZFOA sponsored R&D project aimed at changing the way slash is managed in and around waterways was initiated by PF Olsen. The Heli-Hawk Grapple is a purpose-built slash grapple designed, & successfully tested, to clear slash from areas previously left due to safety concerns and harvest system capability issues.

The Heli-Hawk Grapple will be demonstrated at an industry open day, currently scheduled for July, in a PF Olsen managed forest outside Rotorua. Further details to follow in Wood Matters next month.

How did forestry fare in the recent NZ budget?

Some key points relating to forestry from yesterday's "Wellbeing Budget" announced by the New Zealand Government includes;

Over NZ\$49 million has been allocated to help transform the forestry sector. Combined with existing funding, this equates to an investment of NZ\$58 million in Te Uru Rākau (Forestry New Zealand).

The funding will allow Te Uru Rākau to increase its regional presence to ensure foresters and landowners have the support they need and will also see the agency focus on the Government's goal of developing a sustainable, domestic forestry workforce," Forestry Minister Shane Jones says.

"A key part to achieving our vision for the sector will be delivering in the regions and we will see new premises built in Rotorua – the heart of the forestry sector – showcasing the use of wood in construction and accommodating Te Uru Rākau's growth."

A NZ\$1 billion funding boost to support a long overdue redevelopment of KiwiRail. This includes NZ\$375 million for new wagons and locomotives, NZ\$331 million to invest in track and other supporting infrastructure and NZ\$35 million to begin the process of replacing current ferries that are nearing the end of their lives. This funding package includes NZ\$300 million from the Provincial Growth Fund allocated for investment in regional rail initiatives.

A NZ \$229 million Sustainable Land Use Package that will invest in projects to protect and restore at-risk waterways and wetlands and provide support for farmers and growers to use their land more sustainably.

NZ\$107 million to ensure the economic transition required to deliver the country's greenhouse gas emission reductions. The Budget also includes funding to implement an Emissions Trading Scheme (ETS) auctioning platform.

A new NZ\$300 million fund to help fill the 'capital gap' for New Zealand firms that expand beyond the early start-up phase.

NZ\$20m over four years the fund strategic research to combat kauri dieback.

Full details on the budget itself can be found on the treasury.govt.nz website.

Source:Friday Offcuts

Nature's first aid kit: A fungus growing on the sides of birch trees

Sometimes called birch bracket, and known to scientists as *Fomitopsis betulina*, the polypore is a parasite that slowly kills the birch before feasting on the dead tree until there is nothing left.



With recorded applications ranging from pain relief, wound dressing, antiseptic and even [cancer treatment](#), birch polypore has been used as a broad spectrum therapy for various health problems. But is there a true medical basis behind the anecdotal folklore?

Numerous studies have revealed that birch polypore does indeed produce compounds with antibiotic, [antifungal](#), [anti-inflammatory](#), antioxidant, and anticancer properties. [Piptamine](#), polyporenic acids and triterpenoids are all compounds produced as part of the [fungus'](#) self-defence mechanism against bacteria, explaining its observed antibiotic value. When tested on dogs and mice suffering from cancer, as well as [cancerous cells](#) grown in the lab, birch polypore extracts had a range of [anticancer effects](#) such as reducing tumour size and [cell growth](#).

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Global SuperTanker to fight wild fires

The Global SuperTanker, the world's largest firefighting aircraft, is ready for the upcoming wildfire season in the U.S. The Arizona Republic reports that the Boeing 747-400 series passenger jet converted

for firefighting recently underwent maintenance at Pinal Airpark outside Tucson. The retrofitted aircraft has been used to fight wildfires in California, Chile, Israel and elsewhere.

The plane can dump up to 72,678 litres of water or retardant in just six seconds and fly as low as 61 metres above the ground to do its work. It can be refilled in just 13 minutes. The SuperTanker proved indispensable in 2018 helping battle some of the most devastating wildfires in California history.

"It's a force multiplier," chief pilot Cliff Hale said. "When you need to build containment lines fast, having that very large capacity can really help the guys out on the ground." Hale was a captain with now defunct Evergreen Airlines when he came up with the idea to turn a 747 into a tanker. An early version of the SuperTanker was first used during a 2009 fire in Alaska that burned more than 202,347 hectares.

That first SuperTanker was destroyed for salvage after Evergreen went bankrupt. Scott Olson, now vice president of maintenance for Global SuperTanker, later found a new plane. Olson and his team added four outlets to the belly of the plane that could dump 34,825 litres of liquid, along with a sprayer tank system.

Hale calls the pressurized tank system the "world's largest and fastest squirt gun." The SuperTanker was deployed in Israel in 2016 and in Chile in 2017. It currently has contracts in California, Oregon and Colorado. Costs can run as much as US\$250,000 a day.

This clip was filmed outside of Stirling City, CA as the converted Boeing 747 drops fire retardant as a defensive line in the Camp Fire that devastated the city of Paradise, California last year.

[READ MORE](#)

Source:Friday Offcuts

Taranaki farmers plant over 5 million native trees

Taranaki farmers will add 500,000 native shrubs and trees to riparian planting schemes along stream and river-banks. The new planting is on top of 5.1 million natives already planted to protect 15,000km of stream banks on the ring plain and coastal terraces, according to Taranaki Regional Council's Don Shearman.

"Everyone's well aware of the need to get their streamside fencing and planting completed by 2020 or near after." Farmers have been given clear notice the council intends making the current voluntary riparian protection schemes mandatory, he said. The Government is also considering a similar move. TRC had worked with farmers under the RMS to prepare individual property plans, mapping the fencing and planting required, and setting out suitable plant varieties and a timeline for implementation.

Source:AgBrief

Sonae Arauco launches Three-Dimensional Fiberboard

3DF – Three-Dimensional Fiberboard – is a moldable formaldehyde free wood-based composite solution from Sonae Arauco that under the action of temperature and pressure (compression moulding process) can be shaped into endless formats, allowing deep structures and high radius capabilities on a very fast and productive way. This technology allows the replacement of historical processes such as CNC (computer assisted cutting process) and / or plywood applications, bringing outstanding improvements in terms of productivity, design possibilities and environmental impact.



Whether it's applied in furniture fronts, doors, seats, wall panelling or in other applications such as construction or even in the automotive sector, 3DF is the best option for turning the most demanding designs in reality with maximum flexibility and minimum effort. On top, the achieved product surface is perfect for lacquering and powder coating and can also be surfaced with 3D foil or CPL directly at the moulding process.

Adelaide Alves, Product Development

Director at Sonae Arauco, says "The 3DF breakthrough technology is a perfect fit to our strategy by bringing new innovative solutions to the market through strategic industrial partnerships and by taking wood further. Additionally, 3DF also responds to the new requirements of the furniture industry, bringing an improved environmental impact."

The 3DF materials have been developed in collaboration with the world's leading chemical company BASF. In its manufacture, under the action of temperature and pressure can be shaped in endless formats, allowing deep structures and high radius capabilities on a very fast and productive way. On top, the surface achieved is perfect for lacquering and powder coating and can also be surfaced with 3D foil or CPL directly at the moulding process. Whether it's applied in furniture fronts, doors, seats, wall panelling or in other applications such as construction or even in the automotive sector, 3DF is highly capable of bringing demanding designs into reality with maximum flexibility.

Source: Wood Week