

One billion trees

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The new government has announced a target of planting one billion trees over the next 10 years. This ambitious target implies that approximately 100,000 ha would need to be planted every year. While, in round figures, half of that land would be existing forest that is being harvested and replanted, this is no less ambitious. The planting boom of the early 1990s was carried out by the small-scale forest owner and these stands will be available for harvest in the next decade. Whether they are replanted will depend on whether the landowner feels that the return on investment from trees on their land was satisfactory. Unlike the large-scale owner, if log prices are not sufficient, risible net returns will mean that the landowner will most likely not bother to replant.

About 50,000 ha per year of new land planting will be needed for the other half of the target. High log prices are also the key to meeting this target once the initial enthusiasm from the government wears off. The 1990s planting boom was the result of the spike in log prices and demonstrates that if log prices are high, new planting will boom.

Currently, New Zealand is the developed country with the highest percentage of its forest harvest exported unprocessed. The major market for New Zealand logs is formwork for the Chinese construction industry. In the last issue of the Journal, Li and Evison suggested that steel formwork will gradually replace wood. New Zealand is a price-taker and the export logs are relatively low value per tonne. An objective of the newly-proposed forestry service must be to convert lower value to higher value logs, processed domestically.

The first paper of this issue of the Journal is a construction overview of what is currently the world's tallest wood building: the 53 m, 18 storey, hybrid mass-timber Brock Commons Tallwood House completed at the University of British Columbia in 2017. The superstructure is made from high-value prefabricated cross-laminated timber (CLT) panel floor assemblies supported on glue-laminated timber (GLT) and parallel strand lumber (PSL) columns with steel connections. A major advantage of using mass-timber is the opportunity for prefabrication, increasing productivity. The building is one of the demonstration projects supported by the 2013 Natural Resources Canada and Canada Wood Council competition and provided a learning experience for researchers and local construction firms. To overcome the financial barriers caused by the development of an innovative structural system, funds were provided by government to defray costs that would not be part of a building in the future. The building was completed on time, within budget.

At the NZ Institute of Forestry conference in September 2017, Marty Verry of Red Stag Timber

suggested that wood will become the norm for mid-rise buildings. To do so in New Zealand will require industry and government cooperation to answer questions on costs, speed, supply and expertise, amongst other issues. Publicly-available information on designs and costings is required – measure, document and promote. The government has a role to play in encouragement, in quality assurance, and in ensuring that local councils will have the confidence and ability to sign off plans for what at first are unusual buildings.

The Brock Commons building in Vancouver used spruce, pine and Douglas-fir. There is no reason that engineered wood from radiata pine could not be manufactured domestically to more than an adequate standard, greatly increasing unit value and log prices.

As in Canada, New Zealand needs government assistance to 'kick-start' the process. In addition to searching for landowners willing to plant up a small paddock in the back-blocks, would not the encouragement to use wood for mid- and tall-rise buildings be a worthwhile activity for the proposed forestry service? If log prices are seen to rise, levels of afforestation will rise, and planting one billion trees would follow almost automatically.

Not every tree planted must be a radiata pine, although currently the economics of planting anything else other than some Douglas-fir in the South are against species diversification. This issue contains four papers on species for specialty woods. The first paper sets out the research strategy for the New Zealand Dryland Forests Initiative, concentrating on eucalypts for high-value timber. A second paper describes current research on the genetic improvement of Douglas-fir. There are two papers on redwoods, indicating its bright future.

A paper on safety updates progress. Sadly, forestry in 2017 had the highest number of fatalities (seven) since 2013. The industry's safety problems still remain and much still needs to be done to make forestry a safe industry. Another paper on automation and robotics illustrates that these should increase the safety of the workforce while increasing productivity and reducing costs.

In 1913, the Royal Commission on Forestry took only three months to produce its report, including travelling 7000 miles to assess the country's needs, in the days before cars and planes. In the next issue of the Journal, August 2018, Michael Roche will describe how World War I influenced New Zealand State Forestry where a mere five technically trained staff (Ellis, Smith, Foster, Hansson and Steele), energetic and committed, emphatically changed New Zealand forest management. Those early years have set a standard for the new forestry service today.

The **POWER** of **COLLABORATION** in the forestry industry

9–11 July 2018
Rutherford Hotel Nelson



CPD workshops on Monday 9th July – to be announced

Conference Speakers Tuesday 10th July

Hon Shane Jones will open the conference
'The Power of Collaboration in the forestry industry'.

Other speaker topics are:

- Forestry Safety – working together as an industry to prevent anyone slipping through the cracks.
- Design and development of tethered harvesters and their launch onto the world stage.
- Utilisation of forest residues.
- Advantages of better vertical integration for both forest owners and processors.
- International perspective on forest collaboration.
- Efficiency gains through combining resources and sharing space.
- Forest Fire research.



Field Trip Wednesday 11th July

The aim of the field trip is to showcase the progression from standing timber to finished commercial timber construction:

- Nelson Pine Industries: the site visit will give a guided tour of the Laminated Veneer Lumber (LVL) production line.
- Woods Contracting will showcase the latest in mechanised harvesting technology on the foothills around Nelson.
- XLAM will show what can be done when combining locally produced LVL with Douglas-fir timber to create Cross Laminated Timber (CLT).
- A visit to the new Nelson Airport terminal building which will showcase what can be produced when utilising these mass timber options with the vision of Studio Pacific Architects.



Quiz Night

Monday 9th July, after the Post AGM drinks – the official launch event for the Future Foresters. All ages & experience levels welcome.

Registration for the conference will open mid-April on the NZIF website: www.nzif.org.nz