

MOTIVATING INNOVATION: HOW NEW ZEALAND HAS IMPROVED THEIR SAFETY RECORD

By David Elstone



This completed New Zealand cutblock's steepest slope was 120 per cent.

At the recent Interior Logging Association (ILA) convention and trade show, John Stulen, the Executive Director of the Forest Industry Contractors Association (FICA) in New Zealand spoke about workplace safety law reform in his country. In many respects, the process underway in New Zealand mirrors that of the BC forest industry in 2003 when public concerns over industry fatalities sparked action.

Through 2012 and 2013, growing demand for New Zealand logs sharply increased harvesting activity that resulted in many "forest farm producers" to enter the logging business. Unfortunately, this led to a significant spike in injuries and fatalities as increased numbers of workers, not necessarily trained in forest operations, took to the saws. From Stulen's perspective, "the cache of being

a professional logger was lost as a result of the bad safety record. In 2012/13, fatalities in farm forestry accounted for 50 per cent of all forestry workplace fatalities in New Zealand despite that source of logs being 20 per cent of the annual production.

Different from BC, however, New Zealand undertook a pan-industry review of safety processes across all industries, the forest industry being just one of many at the same time. "This overall review allowed for a clearer focus on forestry relative to all other industries which was helpful," said Stulen.

September of 2013 saw the start of an independent joint review of forest safety that was shared between FICA and the forest land owners. At the time, the forest industry was considered the most dangerous sector to work in in New

Zealand with an injury rate that was unjustifiably higher than the overall rate for all sectors.

The review process concluded in October of 2014 with 11 recommendations, and now the difficult task of implementing recommendations is underway. As indicated by Stulen, "There was significant contractor support for the review as they did not feel the industry was as bad as it was portrayed. That said, contractor and worker focus on safe practices was important to those who made logging and trucking a career.

Key industry statistics, much like in BC, were fatalities in the falling and breaking out (hooktending) phases of logging. Underlying issues identified through the review included the lack of a safety culture, perpetuated by a "can-do" attitude among forest workers that



Photo: Georgetown, T. M. Industries

led to a risk tolerant workforce, gaps in standards, inadequate training and supervision and, surprisingly, a low level of worker participation in safety.

And like in BC, the review has led to a new framework for worker participation in safety, the development of safety standards and an industry led certification scheme. “Workers all have a ‘can-do’ attitude, but we now have to make it a ‘can-do-safely’ culture going forward,” said Stulen.

On the government side, a new Health and Safety Reform Bill (the Reform Bill) was introduced to engrain the recommendations of the review into law. In addition, many changes were made to WorkSafe New Zealand to allow for more inspectors and safety support personnel. A new Crown agency was also established to drive improvement in the

safety performance of the industry as a whole.

Industry has developed the Forest Industry Safety Council which mirrors the BC Forest Safety Council (BCFSC) in many ways. This was no surprise to many as the BCFSC has become the global standard for forest industry safety—something the New Zealanders have been following for some time. In addition, Stulen was particularly proud of the new website, www.safetree.nz. Its development involved collaboration between the industry, WorkSafe NZ and the forest owners. It has been designed to provide forestry workers with how-to resources on doing jobs safely and features workers talking to workers. Every forest worker in BC should visit the site and watch the introductory video as the New Zealand messages apply equally to BC’s industry.

The overarching message on the website is that safety is everyone’s responsibility, something that has become engrained in New Zealand law. There is now a clear connection between the forest owners, management and workers, to on the ground safety.

The Reform Bill imposed new duties on all persons conducting a business or undertaking throughout the supply chain, new responsibilities for officers and an expanded definition of workers to include both employees and contractors helps clarify health and safety obligations. In essence, “the owners (investors) and company executives from the Chairman of the Board and the CEO on down, would be held equally responsible in the event of a fatality”, noted Stulen. When the new law is finalized in early 2016 it is expected to result in

real change.

Since the review, Stulen noted, “over 50 new steep slope harvesters were purchased by New Zealand companies where 2-3 per year had been the norm. At the same time, a significant review of contractor contracts with owners has begun as it is now recognized that contractors were being pushed contractually to produce wood at the expense of safety. With responsibility now being shared across the supply chain, this is now changing.

When asked how the changing focus on safety has affected logging innovation, Stulen was quick to note that “there is a new focus on getting people off the hill and into machines. Eliminate or isolate is the new mantra when it comes to logging. We are still in early days, but many people are working on equipment design changes and innovation aimed squarely at worker safety.”

George Lambert of T-Mar Industries in Campbell River saw this first hand when he visited New Zealand earlier this year. “When I watched how the con-

tractors were logging on the steep New Zealand slopes, I saw the future for BC,” explains Lambert. “With the pressure to eliminate or isolate people from harm’s way following the forestry safety review, people started thinking differently about machines and logging methods.”

Lambert saw an example of this change on the ground. “I observed movement away from using chokers and a ground crew to support a yarder towards much more use of grapples. This change, how-

nessed mechanical falling taking place on 100 per cent slopes,” said Lambert. “The immediate benefit is, of course, improved safety by putting the faller in a protective cab. The secondary benefit is that mechanical falling and bunching of logs greatly improves yarder productivity and allows the contractor more flexibility in how they log a setting.”

Although this system has been used for a decade in some locations, it has not been widely applied until the increased

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ever, did create some problems with visibility of logs in the New Zealand settings, so the solution was to develop a camera system.”

A more significant development was the adoption of winch or tether assisted mechanical falling and log bunching. “Using these new innovations, I wit-

nessed mechanical falling taking place on 100 per cent slopes,” said Lambert. “The immediate benefit is, of course, improved safety by putting the faller in a protective cab. The secondary benefit is that mechanical falling and bunching of logs greatly improves yarder productivity and allows the contractor more flexibility in how they log a setting.”

There are several hurdles to overcome in developing this type of system such as terrain, ground conditions (including rock), controllability of the machine and, of course, who is going to pay for the research and testing required to develop the additional equipment. Will logging rates be impacted by all of this is yet another unanswered question. However, Lambert sees these changes as the way of the future: “I believe this is going to change the way we work on steep slopes as fundamentally as the development of the hoe chucker and the grapple yarder.”

As a leader in steep slope logging machine development here in BC, T-Mar has also seen a significant increase in requests to develop new steep slope logging technology for applications south of the border as well. While there is no specific safety review driving the United States need for innovation, Tyson Lambert of T-Mar has been told that the disparity in worker compensation rates between workers on the hill and workers protected in a machine in places like Washington and Oregon is also driving the need to eliminate or isolate like in



JACQUI BEBAN VP Logging

C 250.951.1410 **F** 778.441.1191
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Here a machine is harvesting a New Zealand cutblock with a steepest slope of 110 per cent.

New Zealand. "As quickly as we figure out a system that addresses the needs, orders for machine development have followed," said Tyson Lambert. These innovations may inevitably support improvements in the BC industry as well.

We all have a goal of improving our safety record. That is not ever in question. It took a significant law reform in New Zealand to move the process along. With the subsequent development of innovative logging techniques and steep slope equipment going on there, BC may be the eventual beneficiary.

Who can and who should pay for the research and who will ultimately benefit as a result is still unclear. But if worker safety is the ultimate outcome, we all have a stake in the game. New Zealand's story highlights that the goal posts are shifting. Where we once believed that safety measures detracted from productivity, safety is now inspiring innovations that address both safety and production together. 🌲

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