FINAL REPORT

INDEPENDENT FORESTRY SAFETY REVIEW

An agenda for change in the forestry sector

October 2014

Toki pango, toki whero, ka ora tonu ai i te wao nui a Tāne

When we all pull together we will ensure the safety of our future generations

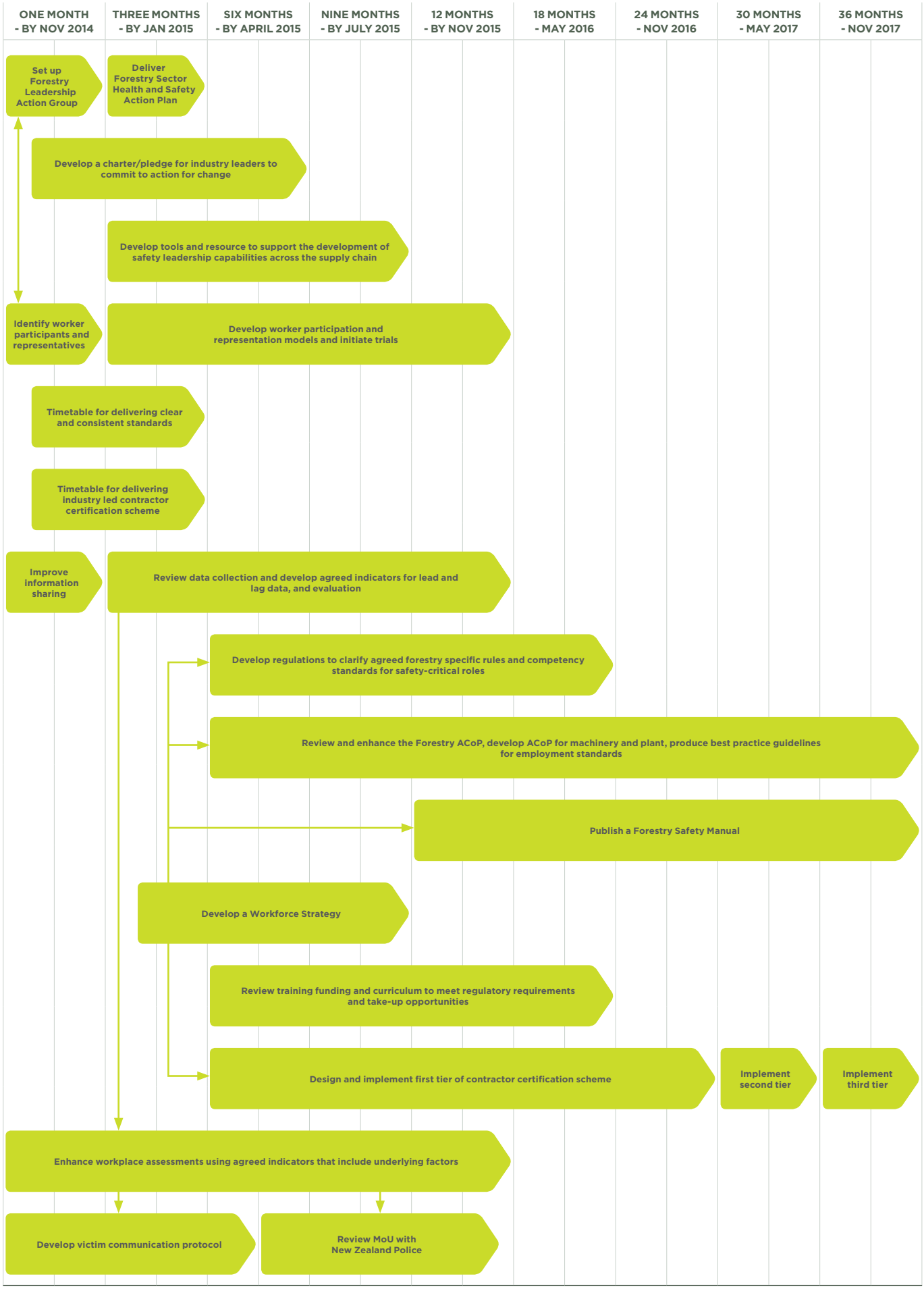
ACKNOWLEDGEMENTS

The Review Panel would like to thank our secretariat: Stephanie Coutts, Tina Robilliard and Jim McNicholas. We would also like to thank the boards and support staff of the Review Sponsors – the Forest Owners Association, the Forest Industry Contractors Association and Farm Forestry Association. Individuals from the following government agencies also provided us with assistance – the Ministry of Business, Innovation and Employment, WorkSafe New Zealand, the Accident Compensation Corporation, New Zealand Police, Te Puni Kōkiri, the Ministries for Primary Industries and Social Development, the Tertiary Education Commission and the New Zealand Qualifications Authority. Competenz provided assistance throughout the Review and helped us with the development of the video we developed to support the release of this final report.

The Council of Trade Unions and First Union provided valuable input as worker representatives. They also provided a contact point for the Review Panel to engage with forestry workers and the family members of those injured and killed in the forest industry. We would like to give a special thanks to the families who shared their personal stories with us.

Our reference groups were a valuable source of insight throughout the course of the Review and we would like to thank all those who gave up their time to read papers and attend meetings. There are also a large number of other organisations and individuals we would like to acknowledge – we will not take the risk of attempting to name you all – but thank you to all the forest owners, managers and marketers and their staff who have provided assistance. And, thank you to all the forestry contractors, crew and workers who gave up their time, as well as all the other stakeholders working across the sector who provided input. In particular, we want to thank all those who contributed case studies and personal stories that have contributed to the richness of this report. Finally, a thank-you to Reynold Hert from British Columbia Forestry Safety Council who offered the Review Panel the benefits of his experience in safety in the forestry sector.

AN AGENDA FOR CHANGE IN THE FORESTRY SECTOR



CONTENTS

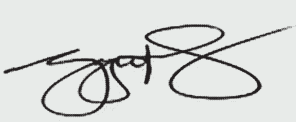
A MESSAGE FROM THE REVIEW PANEL

Our vision is for a safe, sustainable and professional forestry sector by 2017, achieved in partnership by government, industry and workers.

For the past nine months the Independent Forestry Safety Review Panel has engaged in a thorough process of consultation and analysis of the factors impacting health and safety in the forestry sector. This Final Report contains a package of practical recommendations that represent the first steps necessary to bring about long-term, system-wide and integrated changes.

From the outset of this Review, we have been deeply affected by the needless injuries and fatalities in the industry, but also inspired by some of the examples of best practice we have seen. We sincerely believe that with the right motivation and willingness the sector can and indeed, must, do better. People's lives depend upon it.

This Final Report represents our collective views. We each fully endorse the findings and recommendations.



George Adams
Chair

Hazel Armstrong
Panel member

Mike Cosman
Panel member

CHAIR'S FOREWORD

This is a report not only for the sponsors of the Independent Forestry Safety Review but for government, forestry workers and all others working in the forestry sector[1]. This includes forest owners and managers big and small, those who purchase and market logs, those who supply and service machinery, those who transport logs, and the families and communities that support those who work in the industry. This report is aimed broadly at the sector because widespread change is necessary.

Though the structure of the forestry industry has enabled rapid growth, it has led to some of the issues identified in this Review. The multiple layers of ownership and contractual relationships have resulted in a lack of coordinated leadership on safety issues. We found that there is poor communication between government and industry and across the different levels of the industry's supply chain. At the worker level, there is little or no communication between crews or across the supply chain. The result is that the sector does not speak with one voice and some within the industry have no voice.

Competing economic tensions have resulted in a dangerous blame culture and a weak safety culture. This has to change. The industry must take ownership of the issues identified in this Review in partnership with government, workers and their representatives. The opportunity for system-wide change is created by the new Health and Safety Reform Bill (the Reform Bill). It should not be avoided, nor should it be delayed if the Reform Bill is delayed. There are no excuses for doing nothing.

The need for system-wide change may have been a surprise to some when we released our consultation document in June 2014. It may also have disappointed those who hoped that by simply reviewing injury and fatality data we might be able to identify a few individual causes, a "smoking gun" perhaps. But, no single task or single factor is responsible and the data does not tell the full story about what leads to accidents on the forest block. To suggest otherwise would be to over-simplify the issues and lay the blame on workers. It would be an injustice to those injured or killed, to their families, their crew and their communities.

We have found that the current mandatory standards for health and safety are not consistently being met across the sector. And, the "reasonably practicable" approach is being used to avoid establishing workplaces that 21st century New Zealanders would consider to be the minimum. In some areas the mandatory standards require clarification. And there are some gaps in standards that need to be filled. But the sector needs to realise that mandatory standards are just that – mandatory. They are not "nice to haves" in time of profit and prosperity.

Over the course of the Review, we have met contractors and crews across the sector who do the right thing. They are living examples

[1] The Review Sponsors are the Forest Owners Association, Forest Industry Contractors Association and Farm Forestry Association

that it is possible to meet standards and run successful businesses. They demonstrate what is reasonably practicable on the forest block and provide, for example, appropriate personal protective equipment, welfare facilities, fresh water, decent breaks and shelter for their workers. These contractors and crew are rewarded with respect, productivity and loyalty. Their efforts are being undermined by those who don't do these things and who undermine the potential of the industry.

It is important that every stakeholder in this Review understands that health and safety is a cost of doing business, but also that improved safety and productivity go hand in hand. We agree with WorkSafe New Zealand (WorkSafe) that those not doing, or capable of doing, business safely should not be doing it at all. This is a reality. Improving health and safety may mean that some organisations and individuals lose the right to operate and work in the sector. It may also mean that when log prices are low some trees may need to stay in the ground if it is uneconomic to harvest them safely.

Along with meeting standards, the forestry industry needs to take responsibility for the lifelong training and development of its workforce to reflect the high hazard and safety-critical nature of work on the forest block. Too many workers are expected to be productive from day one, and too many are left to their own devices too soon; it is not acceptable to say there is insufficient money or resources to achieve training outcomes. Workers not only need training, they need appropriate supervision and time to build experience and develop judgment. It is also important to recognise, therefore, that training and development needs to focus on communication, team building and leadership for supervisors.

The verification and enforcement of standards is essential. We have heard that the Forestry Industry Contractors Association is keen to explore a certification scheme for

forestry contractors. Such a scheme could provide an opportunity for certified forestry contractors to leverage benefit from the new obligations on persons conducting a business or undertaking in the Reform Bill.

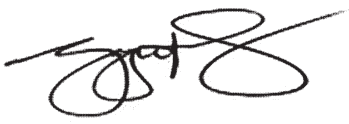
Over the course of the Review, we have seen WorkSafe increase its focus on the forestry industry. This focus must continue and WorkSafe must increase the sophistication of its understanding and analysis of the root causes of harm. It must share the lessons learnt across the sector. Without leadership from the regulator the recommendations of this Review are unlikely to be a success. This will require WorkSafe to act not only as an enforcer, but as an educator. It should not shy away from this dual role.

The Independent Taskforce on Workplace Health and Safety found that New Zealand needed "better law, a stronger regulatory toolkit, a lift in leadership, greater commitment and participation from everyone in the workplace, more robust research and data, more effective incentives, and information and guidance material that are fit for purpose"[2]. Our findings are much the same. The recommendations in this Final Report should not, therefore, be a surprise.

Our recommendations may confront the sector. They will certainly challenge the sector to step up, make and sustain the changes required. Along with presenting this challenge to government, industry and workers, we would like to offer our thanks. We have received a high level of engagement and input while undertaking this Review.

We have had the opportunity to shine a light on the health and safety issues in the forestry industry. This level of engagement bodes well for the future – keep the light on and light the fires of change.

Finally, I wish to take the opportunity to thank the Review Sponsors. They took a courageous step to allow three independent panellists access to their industry. I urge the Review Sponsors, and everyone else involved in the forestry sector, to recall that courage when setting out to implement the recommendations contained in this Final Report. Thank you.



George Adams, Chair, Independent Forestry Safety Review Panel

[2] http://hstaskforce.govt.nz/documents/report-of-the-independent-taskforce-on-workplace-health-safety.pdf, accessed 10 July 2014, page 39

EXECUTIVE SUMMARY

The forestry industry is the most dangerous sector in which to work in New Zealand. The injury rate is double that of other sectors and the fatality rate is 15 times the overall rate for all sectors[3]. This needs to change to prevent further injuries and loss of lives, and for the industry to be sustainable. We heard a strong motivation for change from forestry workers, their supervisors and crew bosses, from forestry contractors, managers and forest owners.

Over the course of the Independent Forestry Safety Review (the Review), we have heard from more than 540 forestry sector stakeholders, we received 111 submissions on our consultation document and more than 330 workers completed the Forestry Worker Survey. There has been strong engagement from across the sector. There has also been widespread agreement with the issues we identified as impacting on health and safety on the forest block. These issues included lack of leadership to drive a safety culture; gaps in the standards to ensure safe work and safe workplaces; and inadequate training and supervision of workers. There has also been widespread support for WorkSafe New Zealand (WorkSafe) stepping up its compliance and enforcement visits. But WorkSafe cannot be on every forest block, every day.

The Review Panel's vision is for a safe, sustainable and professional forestry sector by 2017, achieved in partnership by government, industry and workers. This can be achieved if the forestry industry learns to better manage the health and safety challenges that come from its varied structure. These challenges include the industry's ability to:

- understand the health and safety responsibilities of all those in the supply chain
- ensure contractual arrangements recognise and support health and safety outcomes
- manage the supply chain in a way that enables the forest block to be managed safely
- ensure the safety implications of the choice and design of a forest block are managed
- plan and organise work so it can be carried out safely
- ensure workers and their crew bosses have the skills to work safely
- ensure that workers' employment terms and conditions support safe workplaces.

The challenges can be managed. The Review Panel has seen owners, managers, forestry contractors and crews who have consistently demonstrated the ability to work safely without serious injuries or fatalities on their forest blocks. The challenges are not insurmountable if good contracts are put in place and good relationships are established between parties across the supply chain.

The Review Panel has been told about the size of the forest owners' total holdings affecting health and safety outcomes. We have not been able to validate claims that a disproportionately higher number of serious injuries and fatalities are occurring on the forest blocks of owners

[3] Information released to the Review Panel by WorkSafe and derived from Statistics New Zealand and the Ministry of Business, Innovation and Employment data

with small holdings. Serious injuries and fatalities occur on large and small forest blocks. They occur in forests that are corporately controlled and privately owned. It is our view that these are not defining factors in the provision of safe work and safe workplaces in the forestry industry – culture is.

CHANGING THE "CAN DO" CULTURE TO A "CAN DO SAFELY" CULTURE

There is a strong "can do" culture on the forest block. This needs to become a "can do **safely**" culture. Changing the safety culture across the forestry industry will require a change to the way things are done across the supply chain. The change must be led by forest owners and managers, by marketers, forestry contractors and crew bosses. A first step to changing the safety culture on the forest block is for those in positions of leadership and management to make a commitment to change and to meet mandatory standards for health and safety and employment across the forestry industry. Improving standards will improve the industry for all.

LEADERSHIP AND A FORESTRY SECTOR HEALTH AND SAFETY ACTION PLAN

The Royal Commission on the Pike River Coal Mining Tragedy noted that "in any event, accidents are rarely the result of a single action, failure or factor, but rather a combination of personal-task related, environmental and organisational factors, some long standing"[4]. This was echoed by the Independent Taskforce on Workplace Health and Safety, which found that there "is no single critical factor behind New Zealand's poor workplace health and safety record"[5]. If the forestry industry is to turn around its unacceptable record then good health and safety practice needs to extend across the supply chain.

The results of recent WorkSafe assessments show that health and safety failures are not simply those of the worker, but of the crew boss, the forestry contractor and the forest owner, manager or marketer. The failures extend all the way up the supply chain. This is why a Forestry Leaders Action Group (FLAG) and Forestry Sector Health and Safety Action Plan (the Plan) are necessary to drive long-term, system-wide and integrated improvements across the supply chain. The FLAG and the Plan should be put in place within three months of the delivery of this Final Report. We believe this can be achieved with concerted effort.

The Forestry Sector Health and Safety Action Plan should have a focus on delivering the recommendations from the Review. The recommendations are summarised below.

DEVELOP A CHARTER OR PLEDGE FOR INDUSTRY LEADERS TO COMMIT TO ACTION FOR CHANGE

The Review Panel has heard many forestry industry leaders make statements of commitment and support for change. Within six months of this Final Report, this commitment needs to be specifically detailed in a charter or pledge against which organisations and individuals can be held to account.

[4] http://pikeriver.royalcommission.govt.nz/Volume-Two-Contents, accessed 14 April 2014

[5] http://www.business.govt.nz/worksafe/about/who-we-work-with/action-agenda-action-plans/forestry-sector-action-plan-2010-13/forestry-action-plan.pdf, accessed 14 April 2014

DEVELOP LEADERSHIP CAPABILITIES ACROSS THE SUPPLY CHAIN

After pledging their commitment to change, industry leaders should work to build their health and safety leadership capabilities and to understand the benefits that come from establishing and supporting safe work and safe workplaces. Building health and safety leadership capabilities does not have to start from scratch. There are a number of organisations that have developed health and safety leadership tools which the industry can draw from.

DEVELOP WORKER PARTICIPATION, ENGAGEMENT AND REPRESENTATION FRAMEWORKS

The role that workers can play in improving health and safety outcomes is recognised internationally. It is also recognised in the Health and Safety in Employment Act 1992 and in the Health and Safety Reform Bill (the Reform Bill). Regardless of this, we have found few examples of genuine worker participation schemes. The sector will need to work together to give effect to the requirements of the Reform Bill in a way that works for industry and for the workers themselves.

DELIVER CLEAR AND CONSISTENT STANDARDS TO SUPPORT SAFE WORK AND SAFE WORKPLACES

The recommendations in this Final Report include setting clear and consistent standards for things such as risk identification, assessment and management, and the design, testing, modification and maintenance of equipment and machinery on the forest block. This Final Report also recommends that clear competency standards are put in place for high hazard and safety-critical roles on the forest block, and that the issues associated with training, supervising and assessing competency are addressed. The FLAG can provide advice on how the sector can best support the establishment of mandatory competency standards and those roles that should be covered by the regulations. It can also work with the Tertiary Education Commission, New Zealand Qualifications Authority, Competenz and training institutions to address issues identified with the forestry curriculum and identify opportunities to maximise available funding.

Government should not shy away from forestry specific regulations because of the burden of the current legislative change programme, or because it may set a precedent. Such regulations should be seen as simply a part of the system-wide and integrated suite of changes needed to improve health and safety outcomes in the forestry industry. There is no silver bullet to achieving the goal of reducing New Zealand's workplace injury and death toll by 25 per cent by 2020, as set out in *Working Safer: A blueprint for health and safety at work*[6].

ESTABLISH AN INDUSTRY-LED CONTRACTOR CERTIFICATION SCHEME AND SUPPORTING SYSTEMS

The FLAG should work with the sector to deliver a contractor certification scheme, in stages, over a three-year period from this Final

[6] http://www.mbie.govt.nz/pdf-library/what-we-do/workplace-health-and-safety-reform/Safety-First-blueprint.pdf, accessed 25 August 2014

Report and develop a timeframe for the work required alongside the development of the Forestry Sector Health and Safety Action Plan. It is important that a robust and well considered scheme is delivered.

DEVELOP AN ENHANCED APPROACH TO WORKPLACE ASSESSMENTS AND INVESTIGATIONS

The Review Panel has heard widespread concern about the serious injury and fatality investigations undertaken by the regulator. Some 71 per cent of submitters on the consultation document agreed that an enhanced set of procedures and protocols should be developed for WorkSafe investigations. We believe an enhanced approach is needed to ensure:

- clarity for all parties around responsibilities during incident responses
- a comprehensive underlying cause analysis of the reasons a serious injury or fatality occurred
- effective communication with victims, their families, workers, crew and industry.

As the forest block is often remote and isolated, in the case of a serious injury or fatality it is regularly the New Zealand (Police) or other emergency services that arrive onsite first. Regardless, the multiple roles and interests of the Police and WorkSafe need to be considered in the approach taken to investigations[7]. The Review Panel understands that their working relationship is governed by a memorandum of understanding (MOU) and a schedule to the MOU which is due for renewal. This provides an opportunity for further, detailed agreement and alignment of approach.

The establishment and sharing of good practice and minimum requirements for scene preservation and investigations between the Police and WorkSafe would be a real safeguard for the integrity of investigations. They should include understanding the active and latent failures contributing to an accident to enable the causal factors to be identified and remedied. They should also include an enhanced approach to drug and alcohol testing that includes all parties on the site at the time the accident occurred.

A further issue of concern to the Review Panel is the feedback received about communication with victims, their families, workers, crew and industry when an accident occurs and during the investigation and prosecution phase. The Police and WorkSafe should work together with industry to ensure there is appropriate initial and ongoing communication with all those impacted by a serious injury or fatality. There is also a need to consult with Māori to ensure the guidelines provide for appropriate tikanga.

DEVELOP ENHANCED APPROACH TO DATA COLLECTION, EVALUATION AND INFORMATION SHARING

There is a lack of robust and consistent data about near-misses, injuries and fatalities, and their underlying causes in the forestry industry. The FLAG should consider how government and industry can work together to address the lack of lead data.

[7] Police have responsibilities under the Crimes Act 1961, the Policing Act 2008 and to the Coroner. Where there is an accident, Police general staff may attend. Responsibility for fatality investigations may fall on any one of a number of different groups; for example, the Criminal Investigation Bureau, Commercial Vehicle Investigation Unit and Serious Crash Unit. WorkSafe has responsibilities under health and safety legislation

It is also essential that the sector puts in place an evaluation plan that enables it to determine the success of the recommendations in this Review and other initiatives that are put in place to drive health and safety outcomes in the forestry industry. The FLAG needs to agree on a mechanism for government, industry, workers and their representatives to monitor and evaluate change and to intervene if change is not occurring.

The FLAG can also work to ensure that information about near-misses, serious harms and fatalities is shared in a meaningful and timely way to improve health and safety outcomes. There is no good reason for the current lack of information sharing. The Review Panel has been consistently told that industry access to accident information, in a timely manner, would help ensure continuous improvement and safe work practices.

THE PROCESSES FOLLOWED TO UNDERTAKE THE REVIEW

The processes followed to undertake the Review can be grouped into three stages. These are the:

1. issues identification stage
2. consultation stage
3. final reporting stage.

At each stage, the Review Panel worked so it could demonstrate a fair, independent and open process that would stand up to scrutiny. We have done this. A broad range of views was sought, even where this led to discomfort by the Review Sponsors. They took a courageous step to allow three independent panellists access to their industry. We spoke with organisations and individuals across the forestry industry supply chain. The Review Panel sought out expert advice and analysis. The details of the subject matter expert reference groups are included in this report. We have also included a list of the submitters on the consultation document.

Along with seeking further input and advice from some submitters and stakeholders, the Review Panel made specific data requests to WorkSafe and for Forest Owners Association Incident Reporting and Information System data. Requests were also made to a range of other government and industry stakeholders for information about initiatives that might support the recommendations in this Final Report. The Review Panel was pleased to learn about work being undertaken on the National Environmental Standard by the Ministry for Primary Industries. We wrote to the Minister and Associate Minister of Primary Industries in support of health and safety being considered in the rules being proposed for forestry operations.

Before the release of this Final Report, the Review Sponsors and government agencies that need to implement our recommendations were briefed.

> We are an independent Review Panel but we hope that regardless of this there will be an appropriate response to this Final Report and actions to deliver the recommendations within it. Change is needed across the forestry sector to reduce injuries and save lives.

BACKGROUND

INJURIES AND FATALITIES IN THE FORESTRY INDUSTRY

Since 2008, 32 lives have been lost while working in New Zealand forests. Countless more have been devastated through injury and by the loss of whanau – a father, son, brother, uncle, cousin or friend.

The forestry industry is the most dangerous sector in which to work in New Zealand. This needs to change to prevent further loss and devastation and for the industry to be sustainable. The injury rate is double that of other sectors and the fatality rate is 15 times the overall rate for all sectors[8]. This is disproportionate and unacceptable.

As illustrated in the table below, between 1 January 2008 and 31 December 2013 there were 1,040 notified serious harm incidents in New Zealand forests. The figures exclude serious harm and fatalities on forest roads.

NUMBER OF SERIOUS HARM AND FATALITY NOTIFICATIONS TO WORKSAFE NEW ZEALAND AND NUMBER OF ACTIVE CLAIMS WITH ACCIDENT COMPENSATION CORPORATION, 2008 TO 2013

YEAR	SERIOUS HARM NOTIFICATIONS[a]	FATALITY NOTIFICATIONS	ACTIVE ACC CLAIMS[b]
2008	179	4	n/a
2009	161	5	2,540
2010	170	4	2,675
2011[c]	182	3	2,635
2012	188	6	2,554
2013[d]	160	10	2,517
6 year total	**1,040**	**32**	**12,921**

Source: Information released to the Review Panel by WorkSafe New Zealand and the Accident CompensationCorporation

Notes:

a. The definition of 'serious harm' includes fatalities and any condition that amounts to or results in permanent loss of bodily function, or temporary severe loss of bodily function. See "serious injury" in the Glossary of Terms for list of conditions.

b. Active claims are all claims that generated a payment in the period, regardless of the lodgement or accident date. Active claims also include all new claims in that period. Claims which received only bulk funded hospital services are not included. ACC classification units include: 3010, 3020, 3030, 3021

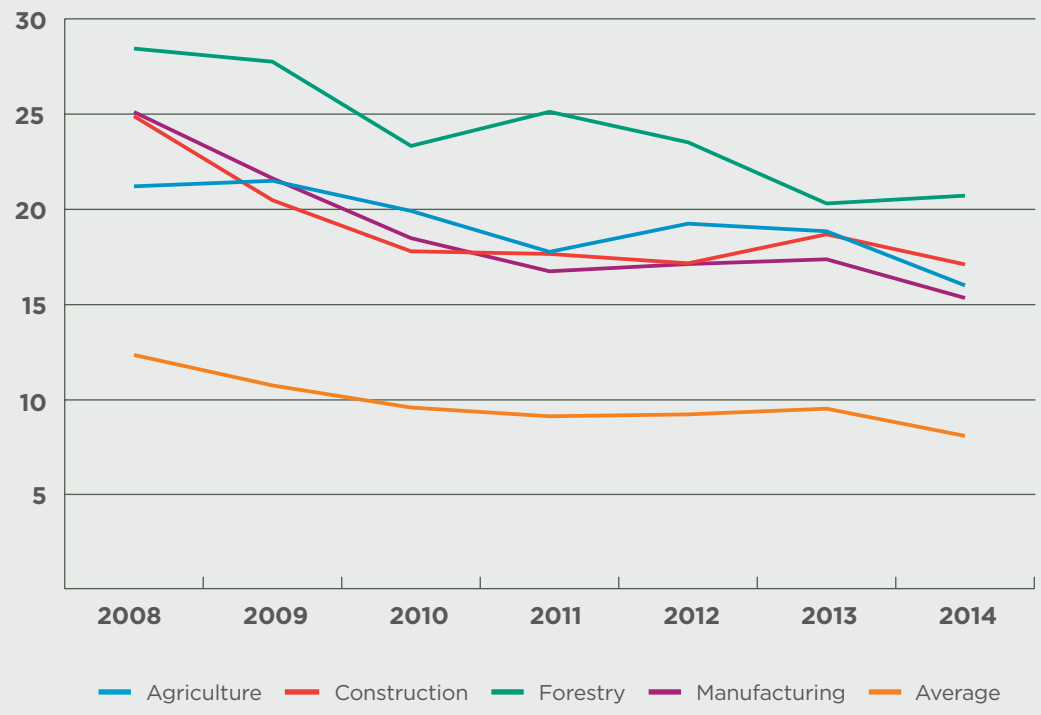
c. In 2011 the industry classifications changed so serious harm data is not directly comparable pre-2011 and post-2011

d. 2013 statistics are provisional as some cases may be under investigation

[8] Information released to the Review Panel by WorkSafe and derived from Statistics New Zealand and the Ministry of Business, Innovation and Employment data. The average rate of fatalities between 2006-2012 for all sectors was 3.2 per 100,000 workers and the rate for forestry was 48.5 per 100,000 workers. This is compared with previous averaged rates between 2003-2008 published in: http://www.business.govt.nz/worksafe/about/who-we-work-with/action-agenda-action-plans/forestry-sector-action-plan-2010-13, accessed 14 April 2014, page 12

Accident Compensation Corporation (ACC) data shows that the cost of active claims for injuries and fatalities in forestry is 2.3 times higher than the average cost of workplace injuries. Active ACC claims for forestry in 2013 totalled 2,517 claims. They cost ACC more than $9,551,180.07[9] and contributed to 50,189 days[10] in lost time from injuries. The statistics show that serious injuries place added cost pressures on the industry as ACC naturally seeks to recover its claims costs.

RATE OF ACC CLAIMS FOR WORK-RELATED INJURY PER 1,000 JOBS, 2008 TO 2013



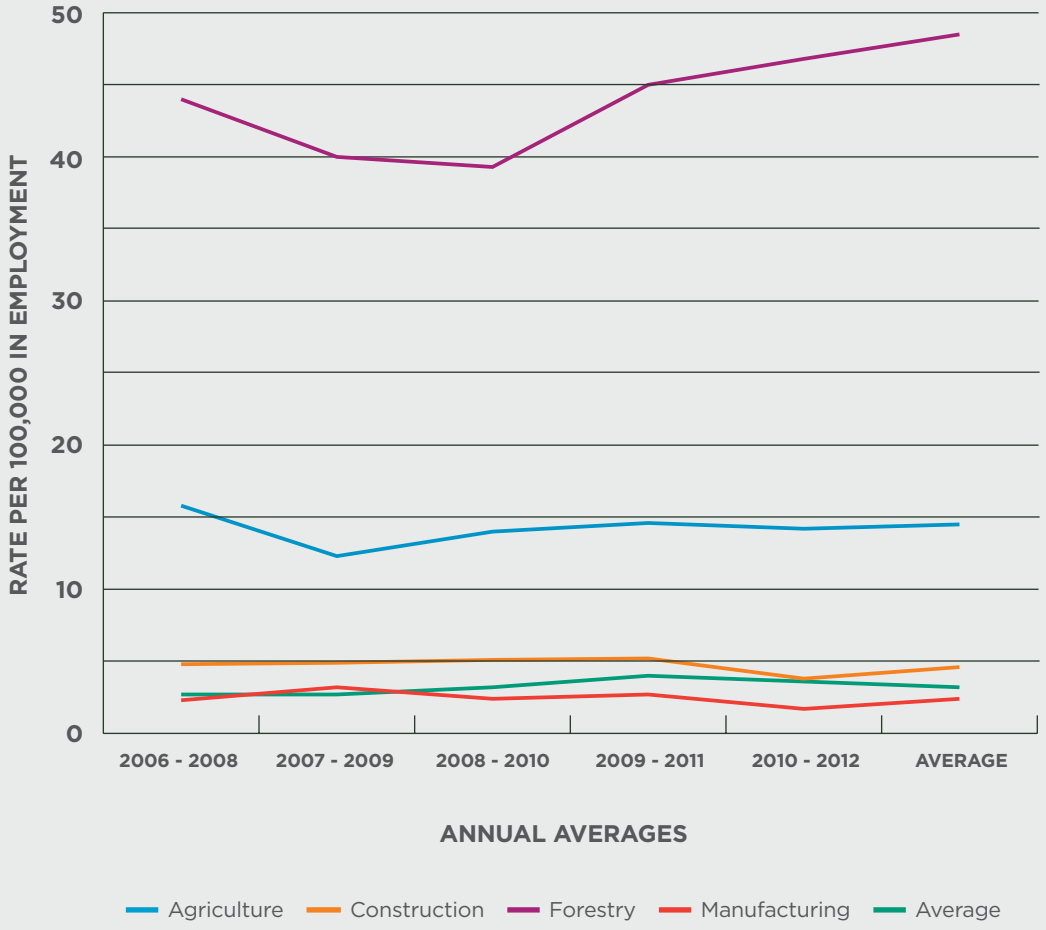
Source: Information released to the Review Panel by WorkSafe New Zealand

Notes:
'Average' represents average rate for all sectors
These rates are for weekly compensation claims

[9] Information released to the Review Panel by ACC and including claim data from the classification units: 3010, 3020 and 3030. This cost data excludes classification unit 3021

[10] Information released to the Review Panel by ACC and based on the number of days of ACC weekly compensation claims. This figure does not include the first seven days covered by the employer or days lost in claims with less than seven days of time lost

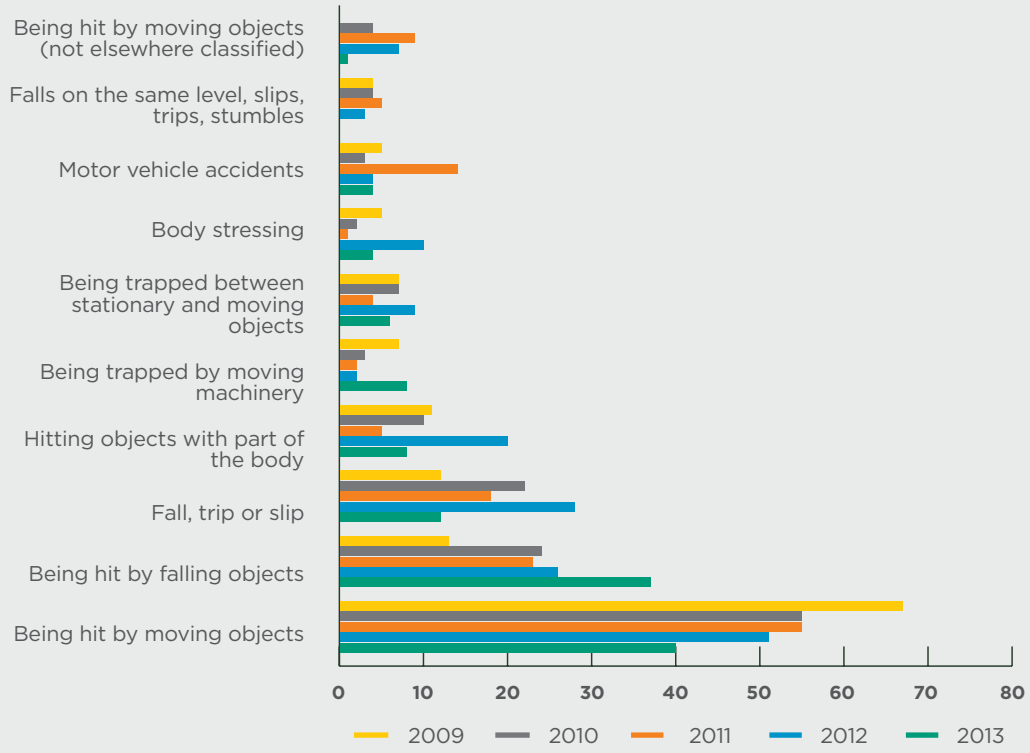
FATALITY RATES PER 100,000 IN EMPLOYMENT, 2006 TO 2012



Source: Information released to the Review Panel by WorkSafe New Zealand

The injuries seen on the forest block are often severe. Their characteristics are illustrated in the graphs below. From this data it is clear that being struck by a moving, falling projectile or rolling material was the most frequently occurring event, followed by fall, slip or trips. A similarly high number of cases involved events where the injured party struck against something or themselves.

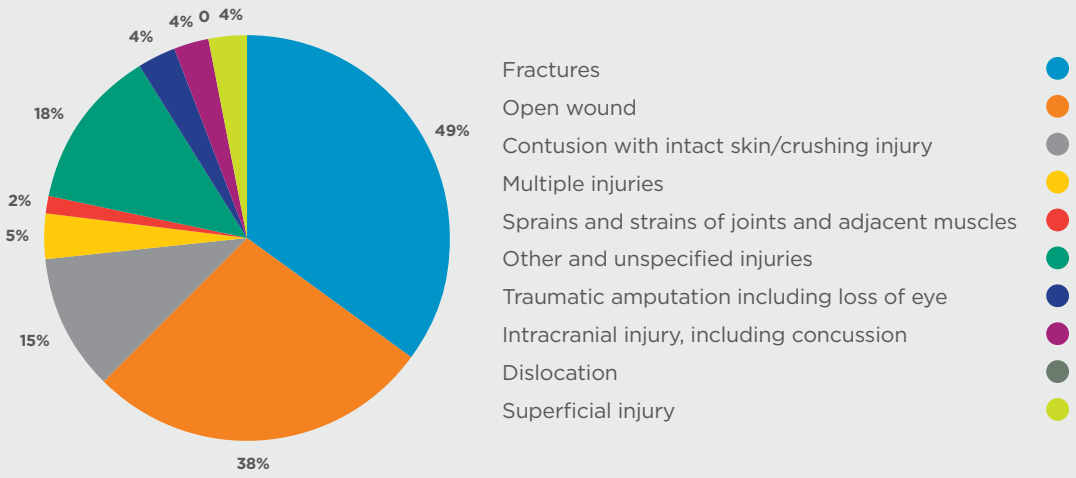
TOP 10 IDENTIFIED MECHANISMS FOR SERIOUS HARM INJURY ON THE FOREST BLOCK, 2010 TO 2013



Source: Information released to the Review Panel by WorkSafe New Zealand

Notes: 2013 statistics are provisional as some cases may be under investigation
The definition of 'serious harm' includes fatalities
The graphs exclude serious harm injuries where no injury type was recorded
These WorkSafe statistics are consistent with ACC and industry data

TYPES OF SERIOUS HARM INJURIES OCCURRING ON THE FOREST BLOCK, 2013



Source: Information released to the Review Panel by WorkSafe New Zealand

Notes: 2013 statistics are provisional as some cases may be under investigation
The definition of 'serious harm' includes fatalities
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THE ECONOMICS OF THE INDUSTRY

Approximately 80 per cent of total roundwood production is exported, either as logs or wood products; equivalent to approximately 24 million cubic metres[11]. The main purchasers are China (currently 42 per cent of export value) and Australia (14 per cent), followed by Korea, Japan, the United States of America and Indonesia. The forestry export value reached $5.2 billion in the year to March 2014, a steady increase of 4.1 per cent per annum over an 11-year period[12]. The industry employed around 6,910 people in forestry and logging[13].

From 1 January 2014 a levy was imposed on logs harvested from plantation forests in New Zealand. The levy rate is set at 27 cents per tonne of roundwood production and the estimated income for the first year is $6.5 million.

[11] Information released to the Review Panel by MPI

[12] Information released to the Review Panel by MPI

[13] Statistics New Zealand, Business Demography: Annual estimates of the total number of employees in all industries, forestry and logging, forestry-related services by region, 2003-2013. Note this Statistics NZ data excludes self-employed workers and contractors which part up a sizable portion of the forestry workforce

THE LOG LEVY

The log levy is calculated on the basis of the amount of wood produced during the levy year. Forest owners are primarily responsible for paying the levy. However it is paid on behalf of the owner at the mill gate for domestic processing or the port gate for exports.

The Forest Growers Levy Trust (FGLT) administers the levy to fund research, science and technology projects, health and safety education, promotion and advocacy, forest bio-security surveillance and administration. The focus of expenditure is research and development.

The health and safety education component of levy expenditure is currently allocated to projects such as: maintenance of the online Incident Reporting Information System (IRIS)[14], promotion of forestry as a career, updating the sector's drug and alcohol policy and joint injury prevention projects with ACC.

The decision to harvest, plant new forests, replant or deforest are based on a number of market signals. These include current and forecast log prices, the commercial return from forestry products compared with alternative land uses and the price of carbon units. In recent months log prices have been variable. This is expected, given the cyclical nature of the sector.

In terms of future projections, export earnings are forecast to increase dramatically. The Ministry for Primary Industries (MPI) forecasts an increase in the export value of at least 10.3 per cent per annum to 2025[15]. The projected drivers for this change include increasing log availability, an industrial roundwood deficit in Asia and a desire to export more processed products. Current export markets are expected to remain key markets, but China is expected to become an increasingly important market with its projected industrial roundwood deficit of 150 million cubic metres by 2020[16].

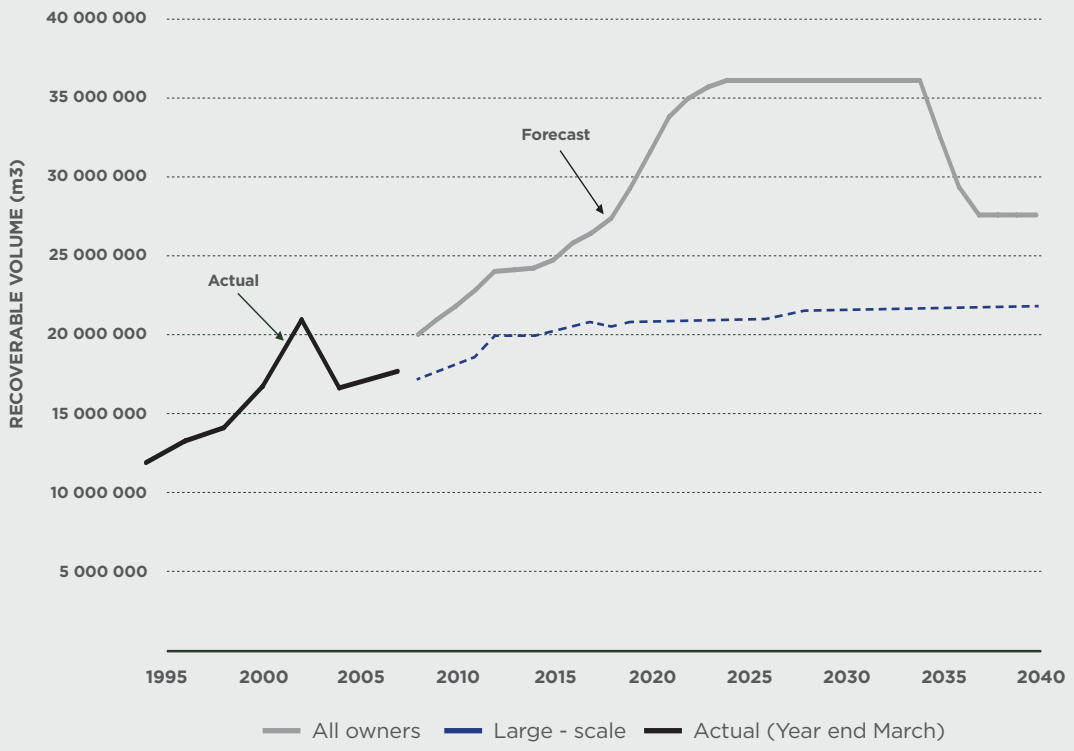
[14] IRIS is a voluntary incident reporting system available to around 30 forest owners and forest management companies

[15] This is the MPI forecast compound annual growth rate (CAGR) giving a constant rate of return to 2025 adjusted for the effects of volatility in return rates and average inflation MPI, (2014), Future capability needs for the primary industries in New Zealand, Wellington, April 2014, page 99

[16] MPI, (2014), Future capability needs for the primary industries in New Zealand, Wellington, April 2014, page 100

MPI's wood availability forecasts to 2040 show that future harvest has the potential to increase by around 240 per cent over current harvest volumes.

PROJECTED GROWTH IN HARVEST (RADIATA PINE ONLY)



Source: Information released to the Review Panel by MPI

Note: The forecast shown in this graph is one of many possible future harvest rotation scenarios. For other scenarios and for a description of forecast methodology and assumptions see: New Zealand Wood Availability Forecasts 2010-2040, March 2010, Ministry of Agriculture and Forestry

THE STRUCTURE OF THE INDUSTRY

The structure and variability of the forestry industry has resulted in challenges for managing health and safety. From the late 1980s, commercial plantation forests in New Zealand changed from being predominately government owned to predominately privately owned. The change resulted in an industry that was no longer largely government controlled and vertically integrated to one where control was in the hands of multiple owners. Forest land and the trees on that land can be owned by different organisations or individuals; for example, some organisations own trees on their own land, as well as on land owned by the Crown, iwi and others[17]. There are forest owners with large forest holdings and there are small and farm forest owners.

Sixteen forest owners each hold net stocked forest areas in excess of 10,000 hectares and account for approximately 62 per cent of total plantation forest. In contrast, there are around 14,000 forest owners who hold less than 100 hectares each but who account for about 20 per cent of the total plantation area[18].

Small-scale growers dominated the ownership of forests planted during the 1990s. These forests will be at the peak of their harvest from approximately 2020 as illustrated in the graph on the next page[19]. This supports the need for an increase in trained and competent forestry workers for the expected increase in harvest.

There has been commentary in some submissions to the Review Panel about the size of the forest owners' total holdings affecting health and safety outcomes. The Review Panel has not been able to validate claims that a disproportionately higher number of serious injuries and fatalities are occurring on the forest blocks of owners with small holdings. This information is not systematically and reliably collected by any stakeholder.

The multiple layers in the forestry industry supply chain mean there are a range of contracting and sub-contracting arrangements, and in some cases a lack of direct contracting arrangements (for example, between harvesting crews and log truck companies) which can all result in challenges for managing health and safety on any forest block. Serious injuries and fatalities occur on large and small forest blocks. They occur in forests under corporate control. It is our view that size is not a defining factor to the provision of safe work and safe workplaces in the forestry industry.

[17] http://www.nzfoa.org.nz/publications-5/facts-and-figures, accessed 14 April 2014

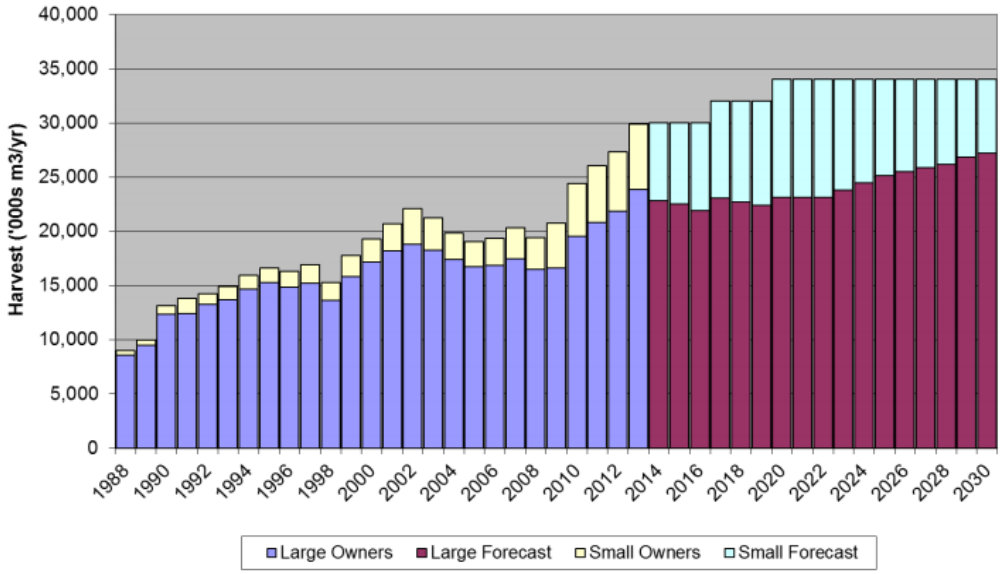
[18] http://www.nzfoa.org.nz/images/stories/pdfs/content/strategies/forest_industry_strategic_study_-_final_-_23_june_2011.pdf, accessed 25 August 2014

[19] http://www.nzfoa.org.nz/images/stories/pdfs/content/strategies/forest_industry_strategic_study_-_final_-_23_june_2011.pdf, accessed 25 August 2014

HARVEST BY FOREST OWNERS WITH SMALL OR LARGE HOLDINGS

Source: Data compiled by Rayonier Matariki Limited from a number of sources – historical figures provided by the Forest Owners Association and forecast figures from National Exotic Forest Description information and Rayonier Matariki Limited. This results in some differences from MPI data.

Note:
'Small owners' equal those with less than 1,000 hectares of forest, and 'Large owners' equal those with forest of 1,000 hectares or more.



The diverse and variable structure of the industry has resulted in challenges for the industry's ability to:

- understand the health and safety responsibilities of all those in the supply chain
- ensure contractual arrangements recognise and support health and safety outcomes
- manage the supply chain in a way that enables the forest block to be managed safely
- ensure that the safety implications of the choice and design of a forest block are managed
- plan and organise work so it can be carried out safely
- ensure workers and their crew bosses have the skills to work safely
- ensure that workers' employment terms and conditions support safe workplaces.

Despite all this, there are owners, managers, forestry contractors and crews who have consistently demonstrated the ability to work safely without serious injuries or fatalities on their forest blocks. The challenge is to transfer their culture and practice to other operators in the industry. The health and safety challenges in the forestry industry are not insurmountable if good contracts and good relationships are established between parties across the supply chain. Other industries with complex supply chains have also demonstrated that it is possible to operate with lower rates of serious injuries and fatalities.

WORKING SAFER: A BLUEPRINT FOR HEALTH AND SAFETY AT WORK

In August 2013, the Government released Working Safer: A blueprint for health and safety at work (the blueprint)[20]. The blueprint is the Government's response to the recommendations of the Independent Taskforce on Workplace Health and Safety (the Independent Taskforce). The blueprint sets a target to reduce New Zealand's workplace injury and death toll by 25 per cent by 2020.

Forestry fatalities accounted for 20 per cent of workplace fatalities in 2013[21]. If the Government is serious about reducing the rate of fatalities in the workplace, then significant effort must be put into reducing serious injuries and fatalities on the forest block.

THE NEW HEALTH AND SAFETY REFORM BILL

The blueprint provided the foundation for the introduction of a new Health and Safety Reform Bill (the Reform Bill). The Reform Bill will have implications for the forestry industry. The imposition of duties on all persons conducting a business or undertaking (PCBU) throughout the supply chain, the new responsibilities for officers and the expanded definition of workers to include both employees and contractors will help clarify health and safety obligations. The Reform Bill will require the sector to understand and manage the underlying factors that create risks to safe workplaces and safe work as well as managing the obvious hazards.

Businesses in the forestry industry, including forest owners, managers, marketers, forestry contractors and other sub-contractors, will be PCBUs under the Reform Bill. In practice, this means that all PCBUs engaging in forest operations will owe duties to the workers they engage to do work and with those whose work they influence or direct.

In addition, any PCBU in a forestry operation that has management or control of a workplace (for example, a forest block) has a duty to ensure that the workplace operates without risks to the health and safety of any person. This PBCU will be required to work closely, for example, with logging truck companies and truck operators to ensure the health and safety risks and hazards associated with log trucks on forest roads and the forest block are well managed.

The Reform Bill has new duties for PCBUs around worker engagement, participation and representation. It requires PCBUs to engage with workers on matters of health and safety and to have effective practices for worker participation and representation. The net effect of these and other new duties in the Reform Bill should be a greater collective focus on what all parties across the supply chain can do to ensure the health and safety of those on the forest block. The requirement for PCBUs with overlapping duties to consult and cooperate may help ensure that things do not "fall between the gaps", which is particularly important for forest operations that involve multiple PCBUs.

[20] http://www.mbie.govt.nz/pdf-library/what-we-do/workplace-health-and-safety-reform/Safety-First-blueprint.pdf, accessed 25 August 2014

[21] http://www.business.govt.nz/worksafe/research/health-and-safety-data/summary-of-fatalities-2007-2013, accessed 4 September 2014

OUR SUPPORT FOR THE HEALTH AND SAFETY REFORM BILL

The Independent Forestry Safety Review Panel supports the Health and Safety Reform Bill. The recommendations in this Final Report are built upon the successful and speedy passage of the legislation and its accompanying regulations. We hope that the Government continues the important change process that it has begun.

The new legislation and regulations will provide an opportunity to increase the forestry industry's knowledge of its legal obligations, create a safer supply chain and improve systems and processes for health and safety for everyone working on the forest block.

Without a high level of engagement and support in the lead-up to the implementation of the Reform Bill, the forestry industry may struggle to understand its new obligations. We have seen some parts of the industry that fail to understand current obligations that have been in place for 20 years. Without a better understanding, the changes in the Reform Bill will have little impact on health and safety outcomes. It is time to start engaging and preparing for the new legislation. The time to begin planning and implementing a new approach to managing forestry operations across the supply chain is now.

THE "CAN DO" CULTURE NEEDS TO BECOME A "CAN DO *SAFELY*" CULTURE

"YOU GET THE SAFETY CULTURE YOU DEMONSTRATE YOU WANT."

Source: Consultation meetings

The challenges confronting forestry workers are often considerable. Many workers have a long drive to work. They often work alone in a challenging and changing workplace with few facilities. They get little respite from the weather and the work itself is physically and mentally demanding and constant.
Few breaks are taken during the day. Yet the work gets done. Statistics show that New Zealand forestry workers are highly productive and are harvesting more wood from our plantation forests than ever before. The harvest is also predicted to grow, especially in small and farm forests.

There is a strong "can do" culture on the forest block. This needs to become a "can do **safely**" culture.

It is often suggested that culture is something intangible and therefore hard to influence or change. We have received feedback that culture cannot be "rolled out"[22]. In considering culture, the Royal Commission on the Pike River Mining Disaster (the Royal Commission) found that culture can be thought of as 'the way we do things around here' and as an individual's 'mindset'[23].

The Royal Commission noted the importance of organisational practices. This is because unless the environment is supportive of change it is unlikely that an individual's mindset or attitudes will change. This is true of the forestry industry.

Changing the safety culture across the forestry industry will require a change in the way things are done across the supply chain. The change must be led by forest owners and managers, by forestry contractors and crew bosses. It is widely accepted that successful safety programmes need to begin with a focus on leadership action and attitudes[24]. Research shows that where a culture involves management complacency, role ambiguity, poor communications and low prioritisation of safety in an environment of production pressure then there is usually a greater likelihood of serious injury and fatalities[25].

A first step to changing the safety culture on the forest block is for those in positions of leadership and management to make a commitment to change. This is discussed in detail in the commentary about *A charter or pledge on page 38.*

[22] WorkSafe submission on the consultation document, page 15

[23] http://pikeriver.royalcommission.govt.nz/vwluResources/Final-Report-Vol2-Part1-only/$file/Report-Vol2-Part1-only.pdf, accessed 16 July 2014, Hopkins, A. (2008), Failure to Learn: The BP Texas City Refinery Disaster, CCH Australia Ltd, pages 141

[24] Clarke, S. (1998), Safety culture on the UK railway network, Work and Stress, 12, pages 285–292

[25] Pauchant, T, and Mitroff, I, (1992), Transforming the crisis prone organization, San Francisco and Jossey Bass and Vaughn, D, (1996) The Challenger launch: risky technology, culture and deviance at NASA, Chicago University Press

The discussion on the safety charter highlights an immediate need to meet mandatory standards for health and safety and employment across the forestry industry. Those in positions of leadership and management must do more to work together to improve health and safety outcomes regardless of any competition for business. Improving outcomes together will improve business for all.

Too often the Independent Forestry Safety Review Panel (the Review Panel) has been told about the challenges of dealing with a “bottom of the barrel” workforce. A significant portion of the industry continues to view its workers from this perspective and consequently absolves itself of its responsibility to do better. We do not share this view. It is damaging and demeaning. We have met many hard working and dedicated crew throughout the Review process. Many were not high achievers in school and may not have always conformed. However, as we heard from one crew “you need tough people to do a tough job”. We have met workers who would be happy to be part of a change process, or indeed act as role models, to improve health and safety on the forest block.

It is important that work and workplaces in the forestry industry change in a way that shows a respect for workers. This should enable workers to then show respect for their work and their workmates. This respect, this mindset, can also be fostered through building a professional culture where forest workers are viewed as skilled tradespeople who are proud to demonstrate the mastery of their craft – harvesting trees safely and productively. Many of those we spoke to want further training to enable them to do their work professionally. The sector must work towards delivering the workforce strategy detailed in *Section Three: Attracting, training and retaining workers on page 69*.

> The way things are done can change. There is already evidence of this and the benefits it brings.

Case study one: Leadership and good business management can create a safety culture

FPS Forestry Limited (FPS Forestry) understands the value to their business of good safety culture. Based out of Whangarei, the company has been in operation for around 10 years and employs between 25 and 40 forestry workers at any one time. Its focus is silviculture and it plants around 2,500 hectares of trees per year, usually working as one big crew. During the summer the crew is available for firefighting duties for rural fire authorities.

Around seven years ago, the Managing Director, Kevin Ihaka, and the Operations Manager, Mike Sullivan ('Sully') were struggling to build the professionalism, work ethic and safety culture of their crew. During an overseas fire deployment they were inspired by the professionalism of American fire crews and a quote from a manager: "What you tolerate is what you accept". Primarily as a business decision, they became determined to turn things around. They instituted the following business practices in an effort to change the way things were done at FPS Forestry:

Reward positive behaviour

FPS Forestry rewards positive behaviour in many ways. Key to its approach is a bonus scheme – a fortnightly payment on top of the market wage is paid to each worker who achieves full attendance, no safety breaches and good production. Kevin sees value in making it attractive for his workers to do the right thing. Awards are also given at the annual family barbeque for achievements such as: 'best rookie', 'most improved', 'best attendance' 'most influential' and 'most productive'. Kevin then likes to explain to partners and families of the workers the hard work and dedication shown by the crew and to celebrate the successes and achievements for the year.

Provide clear rules and consequences

The rules are clearly communicated and there is an effective internal monitoring system involving regular spot checks. As noted by one of workers, "FPS Forestry will always stand you down immediately if you break a safety rule". The business operates a yellow and red card system that everyone understands.

Empower workers to speak up

Safety culture works best when workers feel empowered to speak up for it. Kevin and Sully's genuine respect for their workers, their hands-on management approach and their open communication have been necessary ingredients in their success. Workers feel comfortable to raise any safety concerns with management as well as any other concerns that may be impacting on their work. One worker made the comparison that "here we are listened to and spoken to as if we matter". Kevin also notes that "accidents on the job have just disappeared".

Accept some workers may not fit the culture

As noted by a worker, “in other crews it’s just about putting trees in the ground, but in this crew - sure we have to perform – but we also get looked after, we are part of a team and we have individual training and development plans”. This is a complete mind-shift for workers and some can’t make the change. Despite losing some workers who couldn’t fit with the new policies and boundaries, attendance is high, turnover is low and productivity is good and as Kevin describes, “I don’t need to employ 15 people in the hope that 10 might turn up, as can be the case elsewhere”.

Create sustainable careers for workers

FPS Forestry works closely with its clients to ensure work is planned to provide long-term sustainable work for their crew. “Long-term work means we can focus on the job without worrying about the future”. They can also then customise individual training plans for workers.

Kevin believes, “We have to stop seeing safety as a compliance cost. It just makes good business sense. Having a safe and professional workforce is the best marketing tool you can have”.

1 HOW TO DELIVER THE CHANGE REQUIRED IN THE SECTOR

RECOMMENDATIONS, TIMEFRAME FOR DELIVERY AND MEASURES OF SUCCESS

IT IS RECOMMENDED THAT:	IS DELIVERED WITHIN:	CAN BE CONSIDERED SUCCESSFUL IF:
1. WorkSafe New Zealand convenes a Forestry Leadership Action Group made up of government, industry, workers and their representatives to oversee the delivery of a Forestry Sector Health and Safety Action Plan within three months of this Final Report.	Three months	› Group established with appropriate tripartite representation, a fit-for-purpose terms of reference, a chair, secretariat support, budget and resources identified › Plan developed with key action items identified, clear objectives, actions, owners, and reporting and monitoring mechanisms
2. The proposed Forestry Sector Health and Safety Action Plan has a focus on delivering:	Six months	
a. a charter or pledge for industry leaders to commit to specific actions for change now and into the future		› Forest owners, managers and marketers, forestry contractors and other stakeholders across the industry sign up and commit to action for change, including how they will hold themselves and each other accountable
b. tools and resources to support the development of safety leadership capabilities across the supply chain	Nine months	› Forest owners, managers and marketers, forestry contractors and other stakeholders across the industry evaluate their leadership capabilities and set development goals
c. effective worker participation and representation, engagement and developing network of trained representatives	12 months	› Workers participate, and are represented, in the implementation of the recommendations in this Review › Worker participation and representation systems are being actively trialled in the forestry industry and include training for participants
d. timetable for developing clear and consistent standards to support safe work and safe workplaces, including competency standards	Three months	› A timetable and resources to put regulations, approved codes of practice, guidance and best practice documents in place within three years is developed in conjunction with the Ministry of Business, Innovation and Employment and WorkSafe New Zealand and is delivered with the Forestry Health and Safety Action Plan
e. an enhanced approach to: i. data collection and evaluation, and ii. information sharing.	12 months (staged)	› Data collection and evaluation indicators agreed across government, industry, workers and their representatives › Increased information sharing by government and industry on near-misses, serious injuries and fatalities across entire sector

RATIONALE FOR THE RECOMMENDATIONS

THE NEED FOR A FORESTRY LEADERSHIP ACTION GROUP

The Independent Taskforce on Workplace Health and Safety (the Independent Taskforce) found that better health and safety outcomes for New Zealand "will require strong top-down and bottom-up leadership"[26]. They commented that "all influential stakeholders need to step up and be accountable for workplace health and safety"[27]. This is certainly the case for the forestry sector. It is the rationale for establishing a Forestry Sector Leadership Group (FLAG).

The recommendation that WorkSafe New Zealand (WorkSafe) convene the FLAG is intended to ensure that it is set up with an appropriate Chair and secretariat, a clear set of objectives and the structure, systems and processes needed to drive the changes recommended in this Review. The rate of serious injuries and fatalities in the sector and the recent WorkSafe compliance activity highlights that the current industry-led groups and initiatives have not been able to deliver sustainable change in health and safety outcomes[28].

WORKSAFE NEW ZEALAND INSPECTORATE ACTIVITIES FOR FORESTRY FOR YEAR TO 19 AUGUST 2014

Forestry assessment visits between 19 August 2013 and 19 August 2014

PROJECT	NUMBER OF ASSESSMENTS
Breaking-Out	232
Tree Felling	377
Other	124
Total Assessments	**733**

Notices issued to the forestry industry between 19 August 2013 and 19 August 2014

PROJECT	IMPROVEMENT NOTICE	INFRINGEMENT NOTICE	PROHIBITION NOTICE	WRITTEN WARNING	TOTAL
Breaking-Out	248	1	26	15	290
Tree Felling	396	-	69	35	500
Other	117	0	29	9	155
Total	**761**	**1**	**124**	**59**	**945**

Source: Information provided to the Review Panel by WorkSafe New Zealand

[26] http://hstaskforce.govt.nz/documents/report-of-the-independent-taskforce-on-workplace-health-safety.pdf, accessed 10 April 2014, page 4

[27] http://hstaskforce.govt.nz/documents/report-of-the-independent-taskforce-on-workplace-health-safety.pdf, accessed 10 April 2014, page 25

[28] The exception to this may be the group delivering Accident Compensation Corporation (ACC) Forestry Sector Injury Prevention Programme, although it is too early to comment on this work as it has only recently been initiated

The Forest Owners Association (FOA) represents the interests of owners and forest managers who make up their membership. The Forestry Industry Contractors Association (FICA) represents a part of the forestry contracting sector but does not have full coverage and the Farm Forestry Association (FFA) represents only a small proportion of owners of small and farm forests. The FLAG will need to be accountable to all stakeholders – the government, industry, workers and their representatives – and have a mechanism to report progress to these groups. It needs to be set up quickly – within three months of this Final Report being delivered. This will ensure that the momentum that has begun with the Review is not lost.

WorkSafe noted in its submission on the consultation document that "the reduced level of serious harm notifications and fatalities in the first five months of this year is a heartening outcome, but as noted elsewhere, WorkSafe continues to observe too much non-compliant behaviour at safety-critical points in the sector, and there is no evidence that this change is rooted in a sustainable change in approach"[29].

It is important to ensure that there is appropriate representation from across the forestry sector when the FLAG is set up. It is the view of the Independent Forestry Safety Review Panel (the Review Panel) that it should include representatives from:

- forest owners and managers (but these stakeholders should not outweigh others)
- small and farm forest representatives (including those in the farming sector)
- forestry contractors
- forest marketers
- workers and their representatives
- Māori
- the training industry
- government agencies
- other key stakeholders or experts (that may include experts from outside the industry).

We understand that WorkSafe may be uncomfortable with convening the proposed FLAG. It does not fit neatly with its preference for industry leadership. However, at this time and at this stage of industry maturity, there is a need for a leader that understands the benefits that safe work can bring and is not influenced by the short-term commercial situation, productivity or profit. And the approach would be consistent with WorkSafe's preparedness "to play a catalytic leadership role"[30]. There is also a precedent. In response to the Royal Commission on the Pike River Mining Tragedy (the Royal Commission), the Government set up a leadership group and a dedicated team to provide advice on the implementation of the Royal Commission's recommendations, including:

- establishing an effective regulatory framework for underground coal mining
- developing approved codes of practice to provide direction to the mining sector
- adopting measures to increase worker participation in the sector
- putting in place new obligations for management and worker training and competency[31].

After an approach from the construction industry, the Government also initially led, and is now supporting, work to improve health and outcomes for the Canterbury rebuild and work on the Canterbury Rebuild Safety Charter, which is like an action plan for health and safety in the rebuild. We think there is much that can be learnt from this approach, which recognises that making a real difference to health and safety outcomes requires leadership, intervention and actions that are long-term, system-wide and integrated.

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[29] WorkSafe submission on the consultation document, page 13

[30] WorkSafe submission on the consultation document, page 6

[31] http://www.mbie.govt.nz/what-we-do/pike-river-implementation-plan/pike-river-implementation-plan, accessed 10 July 2014

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Case study two: the Canterbury Rebuild Safety Charter

WorkSafe's Canterbury Rebuild Health and Safety Programme is dedicated to rebuilding Canterbury safely following the 2010/11 earthquakes. The programme has a focus in five areas:

1. Working with industry
2. Operating an effective and visible inspectorate
3. Targeting key harms and high-risk areas
4. Targeting vulnerable workers
5. Occupational health

The Safety Charter

A key part of WorkSafe's working with industry is the role it plays in the Canterbury Rebuild Safety Charter (safetycharter.org.nz). The Charter is an agreement between the government organisations and companies undertaking the rebuild. It includes a vision, 10 aspirational commitments and detailed actions designed to meet those commitments.

Development of the Charter began in mid-2012 when senior business leaders raised concerns with the health and safety group within the Ministry of Business, Innovation and Employment about the likelihood of fatalities and serious harm in the rebuild. MBIE brought together key government, industry and union figures in October 2012. This led to the formation of a Senior Leaders Group led and supported by MBIE.

Within several months, the concept of a Charter was discussed, developed and put into action. By April 2013, 15 organisations were prepared to sign the Charter. When the Charter was launched by the Ministers for the Accident Compensation Corporation and the Labour on 4 July 2013, 33 organisations signed the Charter. Another 18 organisations publicly endorsed the Charter.

In over a year since its launch in July 2013, the Charter has grown from 51 signatories and endorsees to more than 160. They include:

- Project Management Offices
- insurers
- local, regional and central government organisations
- unions
- recruitment companies
- specialist trade organisations
- group/home builders
- other commercial and residential construction companies
- support organisations such as project management companies and architects.

By signing up, leaders agree that their organisations will implement the Charter's ten actions, and support the Charter's vision and aspirational commitments. While signatories do not need to attain 100% compliance on signing, they do need to be working towards it.

Graham Darlow, Chief Executive of Fletcher Construction and Chair of the Charter Steering Group said, "These guys were looking for something practical they could commit to. Something they could use to hold each other to account. They wanted to make it clear that they would still compete with each other for business, but when it came to safety, they would work together to keep people safe. When the rebuild was in full swing and the pressures on time and resources were significant, they wanted to ensure standards on health and safety were maintained across the industry".

Key ingredients for the Charter's development and success have been:

- government and industry working together to understand the problem and develop a solution that they can all commit to
- initial senior leadership from the regulator and then industry taking leadership roles
- the engagement of senior leaders and health and safety expertise within organisations, giving the group the ability to develop proposals and make decisions, committing their organisations to those decisions
- leaders being focused on a pragmatic solution and making an ongoing commitment to make this happen
- funding from a number of sources including WorkSafe, industry and ACC
- secretariat and communications support from Worksafe and ACC

The Charter is run by a Steering Group and three Working Groups focused on the three Charter priorities: Communications, Charter Performance and Leadership. Industry representatives chair all four groups and membership of these groups includes the large construction companies (including those who are acting Project Management Offices for the insurers), Stronger Canterbury Infrastructure Rebuild Team, group/home builders, insurers, unions, recruitment companies, ACC, Canterbury Earthquakes Recovery Authority and WorkSafe.

WorkSafe provides crucial secretariat support and funds a range of Charter initiatives including the Charter's self-awareness tool, guidance for industry on leadership and the development of charter communications materials. WorkSafe also provides communications support to the Safety Charter, including organising quarterly events and funding resources for signatories.

Key Charter developments to date include:

- A Self-Awareness Tool that allows signatories to assess their performance. Results are provided to a risk management company who provide the aggregate results back to Charter organisations. These results are particularly helpful in identifying areas where signatories need more help. This has been funded by WorkSafe.
- Charter communications tools including the Charter website, monthly newsletters, regular events, a Charter video and Toolbox talk as well as posters and Charter booklets.

"There is no reason why this model cannot be used elsewhere, for other large construction projects with multiple organisations involved, or in other industries. It starts from a commitment from the top. The essence to working safely is in top leadership practices and leading by example", says Graham Darlow.

Canterbury Rebuild Safety Charter – 'We compete in business, but we're united on safety.' From left to right: Steve Taw, South Island Regional Manager – Hawkins Construction, Graham Darlow, Chief Executive – Fletchers Construction Group (and Chair of Steering Charter Group) and Mark Hopgood, Chief Executive – Arrow International.

THE NEED FOR A FORESTRY SECTOR HEALTH AND SAFETY ACTION PLAN

The Royal Commission noted that "in any event, accidents are rarely the result of a single action, failure or factor, but rather a combination of personal-task related, environmental and organisational factors, some long standing"[33]. This was echoed by the Independent Taskforce, which found that there "is no single critical factor behind New Zealand's poor workplace health and safety record"[34]. If the forestry industry is to turn around its unacceptable record then good health and safety practice needs to extend across the supply chain.

Since 19 August 2013, WorkSafe inspectors have conducted 232 assessments and issued 290 notices in respect of breaking-out activities. Approximately half of these notices were issued due to inadequate safety management systems, such as inadequate breaking-out processes, or failure to adhere to breaking-out plans[35]. The results of recent WorkSafe assessments show that health and safety failures are not just those of the worker, but also of the crew boss, the forestry contractor and the forest owner, manager or marketer. The failures extend all the way up the supply chain.

During the same time, WorkSafe inspectors conducted 377 tree felling inspections, and issued 500 notices. Approximately one-third of notices were issued due to inadequate safety management systems, such as inadequate hazard management plans in place, and one-third of notices were issued due to inadequate tree-felling practices or technique[36].

Initiatives for change in the forestry sector that rely solely on the worker are flawed. This is why a Forestry Sector Health and Safety Action Plan (the Plan) is necessary to drive for long-term, system-wide and integrated improvements across the supply chain. The Plan should be in place within three months of the delivery of this Final Report. We believe that with concerted effort, this can be achieved. It should then have a focus on delivery.

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[33] http://pikeriver.royalcommission.govt.nz/Volume-Two---Contents, accessed 14 April 2014

[34] http://www.business.govt.nz/worksafe/about/who-we-work-with/action-agenda-action-plans/forestry-sector-action-plan-2010-13/forestry-action-plan.pdf, accessed 14 April 2014

[35] Information provided to the Review Panel by WorkSafe New Zealand

[36] Information provided to the Review Panel by WorkSafe New Zealand

A charter or pledge for industry leaders to commit to action for change

The Review Panel has heard many forestry industry leaders make statements of commitment and support for change. Within six months of this Final Report, this commitment needs to be specifically detailed in a Charter or pledge against which organisations and individuals can be held to account.

There should be a "no excuses" approach taken. And the first pledge should be to meet the mandatory health and safety and employment standards already in place. The Review Panel has been consistently disappointed by the comments and submissions that have sought to minimise or devalue the importance of meeting these standards, such as providing appropriate personal protective equipment (PPE) and basic welfare facilities in the workplace.

A crew boss commented to the Review Panel that he did not like to provide his new workers with chaps "until they've cut themselves a few times and learnt to be careful with them"[37]. We found that 56 per cent of workers who completed the Review Panel's Forestry Worker Survey indicated that they received a PPE allowance. All these things are in direct contravention of current and proposed health and safety legislation.

As well, the challenges of providing welfare facilities on a forest block can be overcome. Temporary welfare facilities are set up across New Zealand on a regular basis, for work in other mobile industries such as construction, and for festivals and events. The provision of fresh water is also a right. Approximately 51 per cent of the workers responding to the Forestry Worker Survey said their boss did not provide fresh drinking water on site. We also visited forest blocks where the only shelter available was the van or the cars in which workers had travelled to work. Considering what is reasonably practicable on the forest block is not solely a budgeting exercise.

The mention of welfare facilities may be viewed by some as trivialising the issues impacting on health and safety on the forest block. They are mentioned, however, as an example of how the failure to meet mandatory standards has an impact on worker wellbeing. Wellbeing and worker health "is made up of a combination of the spiritual, the emotional, the mental and the physical"[38]. A worker's wellbeing and health affects their ability to work safely.

A safety charter or pledge should be a key step for forest owners, forest management companies, forest marketing companies and forestry contractors to demonstrate their commitment to change health and safety outcomes across the supply chain. There is evidence of the power of a safety charter as a lever for change in complex supply chains, as demonstrated in the construction sector in Canterbury. The importance of respecting workers and their wellbeing was also recognised in a major review of health and safety in the construction sector in the United Kingdom.

"WE COULD EVEN GO AS FAR AS SAYING SAFETY IS BECOMING 'COOL' NOW. LEADERSHIP IS ABOUT ENGAGING WITH THE RIGHT ATTITUDE AND THE RIGHT ETHICS, AND EMBRACING A CHANGE IN PHILOSOPHY. WE'RE HEARING OF YOUNG GUYS COMING OUT OF THEIR TRAINING AND QUESTIONING THEIR SUPERVISORS, BECAUSE WE'RE ENCOURAGING PEOPLE TO SPEAK UP FOR THEIR OWN WELLBEING".

Rob Sloan, General Manager of Jennian Homes Canterbury and Chair of the Canterbury Rebuild Safety Charter's Leadership Working Group

[37] Consultation feedback

[38] Consultation feedback

RETHINKING CONSTRUCTION IN THE UNITED KINGDOM

The United Kingdom (UK) Rethinking Construction report identified five key drivers of change which need to set the agenda for the construction industry. They were: committed leadership, a focus on the customer, integrated processes and teams, a quality driven agenda and commitment to people.

For this taskforce, a commitment to people meant, "not only decent site conditions, fair wages and care for the health and safety of the work force. It means a commitment to training and development of committed and highly capable managers and supervisors. It also means respect for all participants in the process, involving everyone in sustained improvement and learning, and a no-blame culture based on mutual interdependence and trust".

The Review Panel sees parallels between the findings of the UK taskforce and our finding in the forestry industry. "In the Task Force's view much of construction does not yet recognise that its people are its greatest asset and treat them as such. Too much talent is simply wasted, particularly through failure to recognise the significant contribution that suppliers can make to innovation. We understand the difficulties posed by site conditions and the fragmented structure of the industry but construction cannot afford not to get the best from the people who create value for clients and profits for companies."

Source: http://www.constructingexcellence.org.uk/pdf/rethinking per cent20construction/rethinking_construction_report.pdf, accessed 7 August 2014

"TO GAIN LONGEVITY AND PERMANENT CHANGE IN INJURY AND FATALITY REDUCTION TAKES 'FROM THE HEAD' COMMITMENT. THIS IS WHERE CULTURE CHANGE COMES IN. THE REASON THE BEST COMPANIES IN THE WORLD ARE ABLE TO SUSTAIN THEIR LONG-TERM RESULTS IN LOW INJURY LEVELS IS BECAUSE THEY TRULY BELIEVE THEY GET BETTER BUSINESS RESULTS BY HAVING THE SYSTEMS IN PLACE THAT PREVENT INJURIES. THEIR BUSINESS IS IN BETTER CONTROL, MORE RELIABLE, PRODUCTIVE AND LOWER COST. THIS STRONG 'FROM THE HEAD' BELIEF, COMBINED WITH 'FROM THE HEART' CARING ENABLES THEM TO CONSTANTLY REVIEW THEIR SYSTEMS FOR INJURY PREVENTION, AND CONSTANTLY LOOK FOR NEAR MISS AND FIRST AID INJURY DATA AS EARLY WARNINGS OF PROCESS PROBLEMS".

Reynold Hert, Chief Executive of the British Columbia Forest Safety Council – Personal communication with the Review Panel

Leadership capabilities across the supply chain

After pledging their commitment to change, industry leaders should work to build their health and safety leadership capabilities and to understand the benefits that come from establishing and supporting safe work and safe workplaces. Building 'in the head' health and safety leadership capabilities does not have to start from scratch.

There are a number of organisations that have developed health and safety leadership tools. For example, MBIE and the Institute of Directors have jointly produced "Good Governance Practice Guidelines for Managing Health and Safety", and the Business Leaders Health and Safety Forum (BLH&SF) has developed a range of tools to support senior executives to improve their health and safety leadership and their leadership of contractor health and safety[39,40].

Research by the BLH&SF uncovered 12 key "success factors" shown to support safe contracting chains. Executives can undertake a self-assessment to examine their attitudes and practices in relation to these factors. Using an assessment tool could be a starting point for forestry industry leaders to gain an understanding of their performance and uncover areas for personal and professional development[41]. A self-assessment approach provided a starting point for those participating in the Canterbury Rebuild Safety Charter. It could be a means to initiate change. Regardless of the starting point, industry leaders need to put in place a process for building leadership capabilities within nine months of the delivery of this Final Report.

[39] https://www.iod.org.nz/Governanceresources/Publications/Healthandsafety.aspx, accessed 7 August 2014

[40] http://www.zeroharm.org.nz/leadership/, accessed 11 August 2014

[41] http://www.zeroharm.org.nz/our-work/contractor-safety/, accessed 28 July 2014

Worker participation, engagement and representation across the sector

There has been a lack of meaningful worker participation, engagement and representation in the sector-wide activities that have been undertaken to drive health and safety change in the forestry industry[42]. Workers do not have an effective voice when it comes to planned changes in the way their work and workplace is organised. Yet workers will often be best placed to provide advice on the risk and hazards faced day-to-day on the forest block and the practical implications of proposed changes. They can also offer informed advice on the mechanisms that can be used to eliminate, isolate or manage these hazards and risks.

The role that workers can play in improving health and safety outcomes is recognised in the Health and Safety in Employment Act 1992 (the HSE Act) and in the Health and Safety Reform Bill (the Reform Bill). Regardless of this, we have found few examples of worker participation schemes. The sector will need to work together to give effect to the requirements of the Reform Bill in a way that works for industry and for the workers themselves. This work can be driven by the proposed FLAG and delivered through the proposed Plan.

We understand a generic worker participation, engagement and representation approved code of practice (ACoP) will be developed by WorkSafe to help people understand the new legal requirements. We support this work. Before the forestry sector can effectively provide input into the development of this new ACoP it needs to settle on what will work for the forestry industry. The remote and isolated nature of forestry work and the use of unorganised, fixed-term and short-term labour poses a challenge to developing effective worker participation and representation. Regardless, this work will need to be done quickly and should be an early focus along with the focus on leadership.

We think that models for participation on the forest block should be being trialled within a year of the delivery of this Final Report. Before this, models for participation will be needed to ensure a worker voice feeds into the development of the Forestry Sector Health and Safety Action Plan and the delivery of the recommendations of this Review.

Mechanisms to give workers a voice in the forestry sector will be a challenge that the industry must take on. Supporting worker representatives to receive health and safety training will be a key element of that. The Accident Compensation Corporation (ACC) partially funds training for appointed worker health and safety representatives, including in the forestry sector. However, we did not meet many workers who had the opportunity to attend training. This is a loss for workers, the health and safety representatives and the industry. A trained representative is more effective.

The Review Panel believes the family and whanau culture of many harvesting crews provides both opportunities and challenges to developing informal and formal mechanisms to foster good worker participation, engagement and representation. Pilot programmes are required to test various participation models in the industry. Based on these pilots, forestry-specific guidelines could be developed for inclusion in the planned ACoP or in stand-alone forestry guidance.

[42] The Review Panel acknowledges the positive approach now being taken by WorkSafe. There have been worker focus groups on the Safe Manual Tree Felling best practice guidelines and in relation to the review of section 18 of the Approved Code of Practice for Safety and Health in Forestry Operations. There is also worker representation on the Accident Compensation Corporation's Forestry Sector Injury Prevention programme

A COUNCIL OF TRADE UNIONS MODEL FOR WORKER PARTICIPATION

Models for forestry worker participation need to be innovative. The forestry industry's complex supply chain, the predominance of small contracting organisations and the isolated nature of the forest block suggests the need for a range of formal and informal models. Though this is a challenge, it is not an excuse for failing to engage with workers and their representatives.

Formal models will continue to be a feature of the health and safety legislative framework and could form a basis for a forestry specific system to be trialled. To be effective, any formal system of worker participation will need to ensure:

- all workers present in a work place are covered by the system, including temporary, casual and contract workers
- workers can actively participate in developing, implementing and monitoring health and safety systems in the work place
- elected worker representatives are appropriately trained to understand their role and are skilled to carry it out
- time, facilities and support are provided to worker representatives to ensure they can perform their function independently
- there is effective coverage that matches the structure of the industry and considers the role of all persons conducting a business or undertaking in the workplace, along with workers
- worker participation systems are clearly documented and understood by stakeholders who value them as credible.

A goal should be established that each crew develop an agreed worker participation system and elect at least one worker representative. These representatives should be enrolled in Approved Health and Safety Representative training as early as possible. The representative's employment rights should be clearly explained to them, including how to seek support. Preferably, this training will be held in groups within regions so representatives can meet each other and set up clusters. WorkSafe inspectors should be invited to attend the training, meet the representatives and talk to them about how ongoing support might be provided. The union should also able to provide support.

A regional representative scheme can also be considered by the sector. Such a scheme would involve the election of an agreed number of regional representatives drawn from the worker representatives in different crew. The representatives would be trained to an appropriate level of competence reflecting their remit and the different types of forest owners, managers and marketers and workplaces and issues that they would encounter. These representatives could also support the work of government and industry to encourage compliance with the legal requirements and increase knowledge of best practice across workplaces.

The rotation of workers in regional representative roles could enable the growth of expertise within crews as representatives' move in and out of the role. The roles should be collectively funded through the log levy but also with a contribution from government.

However, to be effective these regional representative roles would need to be operating in a genuine safety culture – one where industry leaders understood and institutionalised the role of independent critical voices within a wider system of health and safety management and best practice.

A timetable for delivering clear and consistent standards to support safe work and safe workplaces

The recommendations in this Final Report include setting clear and consistent standards for things such as risk and hazard identification and management, and the design, testing, modification and maintenance of equipment and machinery on the forest block. These are predicated on the successful passage of the Reform Bill and accompanying regulations[43]. They should fit nicely within the new legislative framework being put in place by government. More detail on the rationale for this work is in Section Two: Clear and consistent standards to support safe work from page 46.

This Final Report also recommends clear competency standards are put in place for high hazard and safety critical roles on the forest block and the issues associated with training, supervising and assessing competency are addressed. The FLAG can provide advice on how the sector can best support the establishment of mandatory competency standards and those roles that should be covered by the regulations. It can also work with the Tertiary Education Commission, New Zealand Qualifications Authority, Competenz and training institutions to address issues identified with the forestry curriculum and identify opportunities to maximise available funding. The recommendations associated with this work stream are detailed in Section Three: Attracting, training and retaining workers from page 69.

The Plan should include a timetable for the staged development and delivery of any regulations, approved code of practice, policies and procedures or best practice guides that are fit-for-purpose for industry and workers. A timetable, developed in conjunction with the MBIE and WorkSafe, and supported by government should be delivered with the Plan. It should see the full suite of regulations and supporting materials delivered within three years of this Final Report.

We note, however, that the industry was able to quickly respond to deliver training for manual fellers and head breaker-outs when the Approved Code of Practice for Safety and Health in Forestry Operations was put in place. Given the importance of competency, training and supervision, we believe there is benefit in this work being given similar priority.

An industry led contractor certification scheme and supporting systems

The FLAG should work with the sector to consider how a contractor certification scheme might be successfully delivered, in stages, over a three year period from this Final Report and develop a timeframe for the work required alongside the development of the Forestry Sector Health and Safety Action Plan. It is most important that a robust and well considered scheme is delivered. This is discussed in more detail in Section Four: Verification and enforcement from page 84.

The FLAG can also give consideration to timetabling work on other initiatives that could be used to establish and verify good practice, such as a commitment to a two-step process for procurement that has a focus on health and safety systems and safe ways of work (for example, leveraging from the advice within A principal's guide to contracting to meet the Health and Safety in Employment Act 1992)[44]. Another piece of work could focus on mechanisms to ensure that direct and indirect costs of ensuring safe work and safe work practices on the forest block can be explicitly factored into contract negotiations included in supply chain contracts.

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[43] Although predicated on the passage of the Reform Bill, the recommendations for regulations, Approved Codes of Practice, policies and procedures, and best practice documents can proceed under the current health and safety legislation

[44] http://www.business.govt.nz/worksafe/information-guidance/all-guidance-items/a-principals-guide-to-contracting-to-meet-the-health-and-safety-in-employment-act-1992-1, accessed 8 September 2014

An enhanced approach to data collection, evaluation and information sharing

There is a lack of robust and consistent data about near-misses, injuries and fatalities, and their underlying causes in the forestry industry. The lead data that does exist is voluntarily entered into the FOA Incident Recording Information System (IRIS) by around 30 forest owners and management companies. There are limitations with this data for this reason. And, there are challenges in accessing and using the data that need to be overcome.

We are concerned with comments that have been made about the sharing of lessons learnt from the IRIS data. It is claimed that this information sharing would see some people have a "free ride". Sharing lessons learnt across industry would be a demonstration of leadership by the FOA. It may also result in more forest owners, managers and contractors wanting to make a contribution to the IRIS database to enhance its richness. This would be of great benefit because both lead and lag data must be captured and shared effectively across the sector to enable hazards and risks to be identified and addressed.

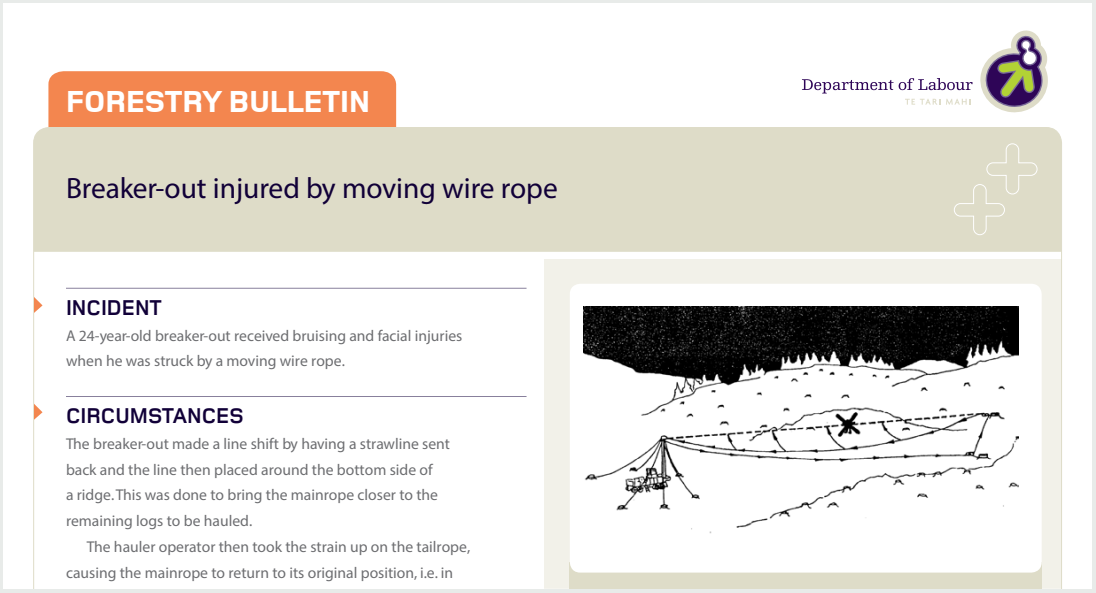
The FLAG should consider how government and industry can work together to address the lack of lead data that might provide insights into future areas of risk. Advice could be sought from human factors researchers in government and industry so that both physical and psychological characteristics of near-misses or accidents can be better recorded in government and industry databases and better analysed by all parties. Having an agreed structure for recording causation factors will enable different data sets to be more readily combined and compared. Advice could also be sought from the Office of the Privacy Commissioner and the WorkSafe legal service team so challenges of privacy and those related to the need to manage data and information during investigation and prosecution processes can be overcome. It is our view that neither of these issues is insurmountable.

It is also essential that the sector puts in place an evaluation plan that enables it to determine the success of the recommendations in this Review and other initiatives that are put in place to drive health and safety outcomes in the forestry industry. The FLAG needs to agree to a mechanism for government, industry, workers and their representatives to monitor and evaluate change and to intervene if change is not occurring. A new approach to data collection and evaluation should be in place within 12 months of this Final Report.

The FLAG can also work with WorkSafe, FOA, FICA and others to ensure that information about near-misses, serious harms and fatalities is shared in a meaningful and timely way to improve health and safety outcomes. There is no good reason for the current lack of information sharing. The Review Panel has been consistently told that industry access to accident information, in a timely manner, would help ensure continuous improvement and safe work practices.

If an injury or fatality occurred on a forest block as a result of particular set of circumstances or factors then workers, crew bosses, forestry contractors and forest management companies want to know about it as soon as possible. They have told us this would help to ensure they were not exposing themselves, crew and workers to the same circumstances on their forest blocks and to provide a more tangible focus for pre-start meetings. They have told us that they believe that WorkSafe is withholding information in order to protect their investigations and prosecutions rather than sharing information to protect lives. The Review Panel does not believe this is the case. We also note that there may be some challenges in WorkSafe gathering information because those involved in serious injuries and fatalities may be concerned about prosecution.

EXAMPLE OF A FORESTY BULLETIN



FORESTRY BULLETIN

Department of Labour
TE TARI MAHI

Breaker-out injured by moving wire rope

INCIDENT

A 24-year-old breaker-out received bruising and facial injuries when he was struck by a moving wire rope.

CIRCUMSTANCES

The breaker-out made a line shift by having a strawline sent back and the line then placed around the bottom side of a ridge. This was done to bring the mainrope closer to the remaining logs to be hauled.

The hauler operator then took the strain up on the tailrope, causing the mainrope to return to its original position, i.e. in

Source: http://www.business.govt.nz/worksafe/information-guidance/guidance-by-industry/forestry/forestry-bulletins/forestry-bulletins, accessed 31 July 2014

In the past, forestry bulletins were produced, circulated and uploaded that provided a short summary of the incident, the circumstances, (initial) investigation findings and the regulator's advice in response[45].

The forestry bulletins are no longer issued but we understand that WorkSafe will soon reinstate a range of instant alerts, trend information and investigation "lesson learnt" advice. In response to the questions at option 14 in the consultation document, WorkSafe advised:

"Yes, WorkSafe would support more information being widely shared about such incidents, as well as near-misses and best practice solutions.

WorkSafe and industry both have access to a range of information which can be usefully shared across the sector. WorkSafe encourages the sector to share information among its members to aid learning from accidents and near-miss events. WorkSafe will be providing targeted messages about health and safety incidents and patterns, learnings from investigations and root-cause analysis and information on the outcomes of prosecutions"[46].

The Review Panel is supportive of this commitment to information provision by WorkSafe. It is our view that sharing information promptly could foster a learning environment in the sector and may also save lives. WorkSafe can lead by example and also encourage the production and dissemination of industry alerts and bulletins; for example, PF Olsen produces a series of safety alerts[47]. These alerts are collated by FOA and made available online; they should be actively distributed. Other forest owners, managers, marketers and forestry contractors should follow WorkSafe and PF Olsen's lead and produce their own alerts for distribution in a systematic way. This work can start now[48].

[45] http://www.business.govt.nz/worksafe/information-guidance/guidance-by-industry/forestry/forestry-bulletins, 10 April 2014

[46] WorkSafe submission on the consultation document, page 37

[47] http://www.pfolsen.com/nz_index.php?sect=news&inc=hands, accessed 10 April 2014

[48] https://nzfoa-iris.com/SafetyAlerts.aspx, accessed 10 April 2014

2 CLEAR AND CONSISTENT STANDARDS TO SUPPORT SAFE WORK

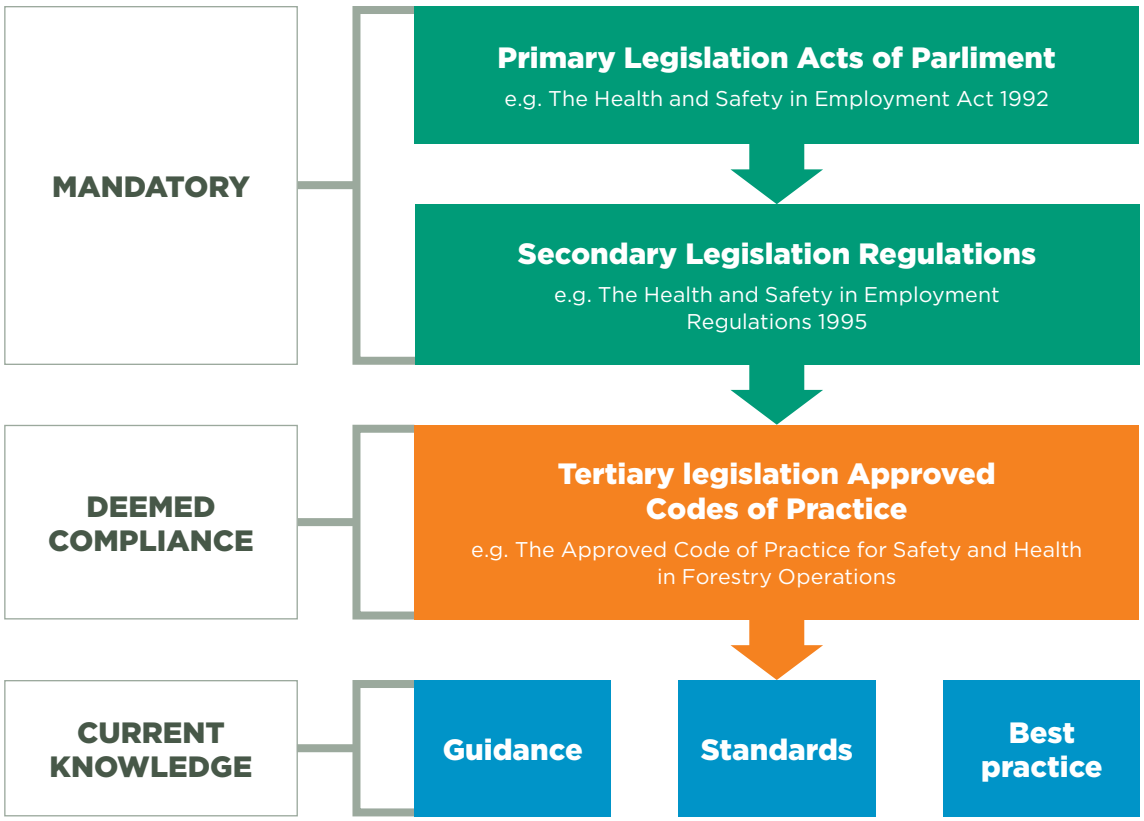
RECOMMENDATIONS, TIMEFRAME FOR DELIVERY AND MEASURES OF SUCCESS

IT IS RECOMMENDED THAT:	IS DELIVERED WITHIN:	CAN BE CONSIDERED SUCCESSFUL IF:
3. the Forestry Leadership Action Group works with the Ministry of Business, Innovation and Employment and key stakeholders to develop regulations to clarify forestry industry specific rules where: a. it is possible to define and measure safe outcomes associated with this work b. there are effective and stable technologies and practices codified in standards c. alternative control measures have been shown to be ineffective d. failure to comply with standards is not accepted by the regulator.	Three years (staged)	› Appropriate regulations are put in place that support clarity and consistency in the delivery of improved standards for health and safety in the forestry industry
4. the Forestry Leadership Action Group supports WorkSafe New Zealand to develop a clear and consistent, free-to-access, suite of supporting approved codes of practice, guidance and best practice documents that include: a. updating the Approved Code of Practice for Safety and Health in Forest Operations to include: i. detail of the health and safety roles and responsibilities of persons conducting a business or undertaking across the supply chain ii. a standard procedure for pre-operation planning, including the safety-critical tasks of risk and hazard identification and management iii. protocols and procedures for designing and constructing forestry infrastructure iv. protocols and procedures for daily risk and hazard identification and management, including how to respond to adverse working conditions caused by the interaction of light, weather extremes, geography and the terrain	Three years (staged)	› A suite of approved codes of practice, guidance and best practice guidelines are developed and support safe work and safe workplaces in the forestry industry › There is clarity about the standards required to effectively identify risks and hazards that impact on safe work and safe workplaces that include the underlying causes of serious injury and harm such as working conditions and impairment

IT IS RECOMMENDED THAT:	IS DELIVERED WITHIN:	CAN BE CONSIDERED SUCCESSFUL IF:
v. protocols and procedures to manage issues of impairment, including, but not restricted to, fatigue vi. protocols for the provision of personal protective equipment, including two-way communication equipment vii. emergency planning protocols and procedures, including training exercises with response agencies viii. protocols related to the provision of facilities consistent with regulated standards and guidance, including welfare facilities, fresh water and shelter for workers and their gear b. an approved code of practice for the design, testing, certification modification and maintenance of mobile plant and equipment in forestry operations and accompanying best practice guides c. best practice guides for employment contracts, including minimum employment standards that must be specified in employment contracts.		
5. the Forestry Leadership Action Group and WorkSafe New Zealand work to draw together the relevant legislation, regulations, approved codes of practice, policies and procedures, and best practice documents into a Forestry Safety Manual with a framework that is accessible and understandable for those working in the forestry sector.	Three years (staged)	› A Forestry Safety Manual provides a useful, one-stop starting point for all relevant legislation, regulations and other tools which support health and safety outcomes in the forestry industry

RATIONALE FOR THE RECOMMENDATIONS

HIERARCHY OF THE LEGISLATIVE INSTRUMENTS



Note: It is important, when considering the above diagram, to recognise that the different components of the legislative framework are interrelated and do not work in isolation.

THE NEED FOR FORESTRY-SPECIFIC RULES AND PROHIBITIONS TO BE IN REGULATIONS

The Health and Safety Reform Bill (the Reform Bill) and supporting regulations are based on the Australian Model Work Health and Safety Act. The Independent Forestry Safety Review Panel (the Review Panel) supports the Reform Bill and hopes that the Government supports its speedy passage through Parliament. It is also important that the regulations are progressed to provide a foundation for improving health and safety outcomes in all New Zealand workplaces.

To support the successful implementation of the new legislative framework, the forestry sector needs to work together to ensure that the general regulations include, or are supplemented by, forestry-specific regulations that are clear and consistent and contain the industry's agreed rules. Placing the industry's own rules in regulation will send a clear message about what is accepted practice. It should also assist to break down the culture of "only following the rules that work for us"[49].

The Review Panel also heard many forestry contractors and crew bosses say "tell us what the rules are, so we know what we have to do". It is our view that the Government needs to be responsive to an industry that is, effectively, asking for better regulation. Of the

[49] The industry's culture of rule breaking was described in this way by forestry stakeholders in workshops sponsored by the Forest Owner Association Health and Safety Committee in 2007 – Personal communication with the Review Panel

76 responses to the consultation document question "do you agree that lack of regulatory oversight and information impacts on health and safety in the forestry sector?", 86 per cent agreed or somewhat agreed. In addition to this support for better regulation, one submitter noted that given the health and safety failings "the industry has lost the right to self regulate".

There are a number of accepted and long-standing rules that ensure highly hazardous work on the forest block is done safely. It is not satisfactory that these rules are specified in the Approved Code of Practice for Safety and Health in Forestry Operations (the Forestry ACoP) which can be read as optional. Regulations are mandatory but following the Forestry ACoP is not. Having rules in the Forestry ACoP creates confusion and implies there are alternatives to those rules when in practice there are not.

The Forestry ACoP's rules have been developed by government and industry over a good period of time. Largely, they reflect the fact that it is possible to achieve safe outcomes by using certain effective and stable technologies and practices. Examples include the safety-critical rules related to mobile plant, road and landing construction and earthworks, breaking-out, work on landings and cable harvesting. They have been put in place where alternative measures have been shown to be largely ineffective based on learnings from serious harm and fatalities over many decades.

SAFETY CRITICAL RULES IN THE FORESTRY ACOP IDENTIFIED BY THE PANEL

FORESTRY ACOP	RULES
Mobile Plant	11
Road and landing construction and earthworks	11
Tree Felling	39
Breaking-out	36
Work on landings	16
Cable harvesting	**46**

Examples of the rules include:

Mobile plant – rules in section 6.25

No person shall:

› get on or off moving mobile plant

› ride on mobile plant not provided with proper seating

› ride on a load carried or towed by a mobile plant.

Road and skid-site construction – rules in section 8.4.2

Over-burden, cast material, rocks or stumps shall not be placed or left where they may create a hazard to subsequent operations.

Tree felling – rules in section 11.12.1

Workers shall not trim or head off at the felling face while standing on a tree which is suspended above the ground by more than 1.5 metres (ground level to the underside of the tree).

Cable Harvesting – rules in 14.9.5

No person shall stand more than one metre off the ground when unhooking stems or logs.

Government should not shy away from forestry-specific regulations because of the burden of the current legislative change programme, or because it may set a precedent. Such regulations should be seen as simply a part of the system wide and integrated suite of changes needed to improve health and safety outcomes in the forestry industry. There is no silver bullet to achieve the goal of reducing New Zealand's workplace injury and death toll by 25 per cent by 2020 as set out in the Working Safer: A blueprint for health and safety at work[50]. The development of the general regulations and forestry-specific regulations, supplemented by the Forestry ACoP, other Approved Codes of Practice (ACoPs), guidance and best practice guides will bring New Zealand into line with comparable international jurisdictions.

[50] http://www.mbie.govt.nz/pdf-library/what-we-do/workplace-health-and-safety-reform/Safety-First-blueprint.pdf, accessed 25 August 2014

THE REGULATION OF THE FORESTRY INDUSTRY INTERNATIONALLY

The regulation of the forestry industry internationally tends to be achieved through a combination of specified outcome requirements or mandatory standards, competency requirements for safety critical roles and notification to the regulator to facilitate inspection processes. It can be generally described that the greater the amount of forestry in a country's economy, the greater the level of detail in regulations and supporting standards.

The most relevant countries for comparative purposes are Canada, especially the major forestry province of British Columbia (BC), and Australia. The coastal logging industry in BC is similar to New Zealand, with a high proportion of the harvest on steep ground relying on hand fellers and yarding operations. BC has a long tradition of industry rule-setting and a suite of forestry-specific regulations. This is also the case in the Australian states of Western Australia and Tasmania, although the nature of their plantation forestry is different to New Zealand.

Regulators in BC have advised the Review Panel that while a safety culture is critical to good outcomes, the high hazard sector needs a certain base level of forestry-specific regulations to set out the minimum of what is accepted practice. They have also advised us that regulations need to be:

- developed with the support of industry groups to ensure they are workable on the ground
- strike a right balance between prescriptive controls and more flexible approaches
- enforced rigorously to ensure the workforce is protected from non-compliant operators.

Sources:
http://www.austlii.edu.au/au/legis/wa/consol_reg/fmr1993290/, assessed 29 July 2014
http://www.fpa.tas.gov.au/forest_practices_system/elements_of_the_forest_practices_system, assessed 29 July 2014
Personal communications with the Review Panel

SUPPORTING CODES OF PRACTICE, POLICIES AND PROCEDURES, AND BEST PRACTICE DOCUMENTS

ACoPs are statements of preferred work practices. Following the practices in an ACoP will be admissible in prosecution proceedings as evidence of whether or not a duty or obligation has been met. The forestry industry needs to strictly follow legislative and regulatory requirements, but should continue to work with the regulator to develop ACoPs, guidance and best practice guides.

The Forestry ACoP needs further development

When the new legislation and regulations are implemented, the current Forestry ACoP and other ACoPs and guidance will require review. WorkSafe New Zealand (WorkSafe) is tasked to lead this work with significant input from industry, workers and their representatives. In our view, the need for review is timely. The Forestry ACoP, while generally supported in terms of technical content, has gaps and provides insufficient guidance to an industry that needs it.

Roles and responsibilities of persons conducting a business or undertaking should be mapped

The Forestry ACoP will need to address the roles and responsibilities of persons conducting a business or undertaking (PCBU) under the provisions of the Reform Bill. It will be important that all those involved in forestry operations, including forest owners, managers and marketers, forestry contractors, log truck companies and operators, designers, planners

and others understand their responsibilities for health and safety and their role in supporting safe work and safe workplaces. Detail can also be provided on how those PCBUs that share duties can work together to meet the requirements of the new legislation.

Risk and hazard identification and management must be detailed

The Forestry ACoP needs to provide more specificity on general risk identification and management, hazard identification and management, and hazard mapping. This should include strategies for pre-operation planning in order to ensure safe work and safe workplaces. The focus on risk in the Reform Bill will require an enhanced approach to planning and the Forestry ACoP can support this. For example, with the increased availability of harvesting machinery, the careful consideration of the safest mechanism of harvesting – motor manual or mechanised, or a mix of both methods – could be detailed as component of pre-harvest planning.

In the consultation document, stakeholders were asked "do you agree that hazard mapping and planning, including planning for adverse working conditions and emergencies, is variable and impacting on health and safety on the forestry block?" There were 49 responses to this question and 80 per cent of them agreed. Of those submitters who agreed and provided further comment, one response noted that standards and plans are inconsistent across the country. Another submitter noted inconsistency between large and small forest owners where "small-scale forests are not an operating environment that optimizes safety". There is now an opportunity for the inconsistency and variability to be addressed.

Protocols and procedures for forestry infrastructure should be detailed

It is clear that for the forest block to be a safe workplace, road, bridge and skid site selection, design and construction needs to be of a high quality and to be considered as part of pre-operation planning. The Reform Bill includes specific and comprehensive duties in respect of plant and structures which should be supported by robust regulations. Further detail is still likely to be required by the forestry industry. Protocols and procedures for forestry infrastructure should be detailed in the Forestry ACoP and supplemented through best practice guides such as the New Zealand Forest Road Engineering Manual (the Manual).

The Manual provides specific guidance on civil engineering for roads, bridges and skid sites for those who design and construct infrastructure. This includes a proper consideration of safety considerations and implications arising from their design and construction. It also provides useful information on resource consenting processes. Resource consent requirements are likely to become standardised across the country with the scheduled implementation of a National Environmental Standard (NES) for plantation forestry.

The Forestry ACoP needs enough detail to guide all PCBUs that share a duty in a forestry operation or on the forest block. It should enable forest owners, managers, marketers and forestry contractors to appropriately plan and manage risks and hazards. Good pre-operation planning has the potential to reduce the number of serious injuries and fatalities on the forest block that result from workers operating in too-close proximity. There is a wealth of information on incidents where operators and others considered themselves to be too close to a hazard. Typically, they included moving ropes, strops or logs[51].

[51] Information released to the Review Panel, Office of the Chief Coroner of New Zealand, Recommendations Recap: A summary of coronial recommendations and comments made between 1 July – 30 September 2012, CSU-2008-PNO-000144, page 13

National Environmental Standard for forestry

The Ministry for Primary Industries (MPI) has advised the Review Panel that increased national consistency in the regulation of plantation forestry has the ability to contribute to improved health and safety outcomes for the forestry sector. We agree with MPI's assessment.

A National Environmental Standard (NES) for the forestry industry could help address some of the underlying problems with forestry planning and infrastructure which contribute to injuries and fatalities on forest roads, bridges and skid sites. It could also ensure there is planning and infrastructure to support emergency responses on the forest block – both related to fire and injury.

We support the work of MPI in engaging with its NES working group to include health and safety matters in the proposed rules in order to maximise the environmental and health and safety benefits. Including such matters could also mitigate potential negative impacts such as poorly drafted or implemented rules which create a potential conflict between environmental and health and safety objectives as operators seek to minimise their footprint in road and skid site construction.

Managing adverse working conditions must be detailed

Of the 61 submitters who responded to the question "do you agree that poor working conditions impact on health and safety on the forestry block?" 80 per cent agreed. As part of work to update the Forestry ACoP, protocols and procedures should be developed on how to appropriately respond to adverse working conditions and the risks and hazards that arise from things such as terrain, working in poor light, strong wind snow, ice and rain.

Analysis of government and industry data on incidents on the forest block between 2007 and 2011 found many incident reports indicating that environmental conditions were involved[52]. Typically these related to inclines of varying steepness, many of which were quite severe. There were also concerns about holes or troughs concealed by slash and that wetness, mud and slipperiness were present at the time of the incident.

Fifty-eight per cent of forestry workers completing our survey indicated that they did not stop work for bad weather. We are concerned that production pressures

and contract payment rates may drive this behaviour. Forest owners, managers and marketers, along with forestry contractors, need specificity on managing adverse working conditions in contracts. Five submitters on the consultation document indicated that larger

[52] Information released to the panel

forestry owner and management organisations were more likely to provide contracts incorporating better working conditions. Conversely, two submitters indicated that smaller companies were less likely to formalise good working conditions in contracts. There is the opportunity to address this variability.

The industry needs to agree on the circumstances where the working conditions are so poor that a change in the approach to work will not be satisfactory and that work needs to stop. We acknowledge that stop-work rules may not be popular, and we agree with the two submitters who commented that poorly worded stop work rules can have negative consequences. There may, however, be some cases where stopping work is the only way to ensure the safety of those on the forest block.

"WE ARE WORKED HARD REGARDLESS OF WHAT THE WEATHER IS DOING, RAIN, HAIL, STORMING, SUNSHINE. THE ONLY REASON WE WILL BE SHUT DOWN FOR THE DAY IS IF WE HAVE NO ROAD TO GET TO WORK".

"WE STOP ONLY WHEN THE ROAD IS CLOSED. OR, IF THE BOSS MAN CAN MOVE THE SIGNS, HE MAKES US GO IN".

"WE DON'T STOP".

Source: Forestry Worker Survey

Protocol and procedures for managing impairment must be detailed

Protocols and procedures should be developed to address issues of impairment. This includes impairment from fatigue and from the use or abuse of drugs and alcohol. The Forestry ACoP includes requirements to manage fatigue yet it does not provide any advice on practical ways to do so, such as through fatigue management plans.

Despite the hard physical nature of manual tree felling and breaking out and the mentally taxing nature of machine operation, long hours are common across the industry. We have heard about the impact of delivery times to mills and ports contributing to earlier and earlier start hours on the forest block, especially for loaders. We have also heard about a lack of licensed drivers, and driving not being counted as work time for the driver, creating tired drivers who may inadvertently put multiple lives at risk.

It is well known that fatigue affects a worker's health, increases the chance of workplace injuries occurring and reduces performance and productivity[53]. The main causes of fatigue on the forest block arise from:

- the physical and mental demands of the work
- work scheduling, including a lack of breaks and the long commute to the forest block
- poor hydration and nutrition
- long work days, including at times when workers are biologically programmed to sleep
- the often harsh or uncomfortable environment and weather conditions which tire workers.

[53] Lilley, R., Feyer, A., Kirk, P. and Gander, P. (2002). A survey of forest workers in New Zealand: Do hours of work, rest and recovery play a role in accidents and injury? Journal of Safety Research, 33, pages 53 – 71

All of the contributing factors to fatigue can be compounded if the quality of sleep is poor, for example, due to domestic or social issues. This speaks to the need for a crew culture where workers, foremen, supervisors and crew bosses have relationships that enable them to identify and respond to circumstances where issues outside the workplace may have an impact on safe work on the forest block.

There is no doubt that worker fatigue is a contributing factor to the sector's poor safety record. Forty eight submitters to the consultation document responded to the question "do you agree that the issue of impairment (through fatigue, inadequate nutrition or hydration, and the presence of drugs and alcohol) is impacting on health and safety on the forest block?". Eighty-three per cent agreed. Of those who gave further comment, three submitters commented on the danger of fatigue and referred to fatigue as a symptom of overwork that needs to be managed. One submitter commented on the need to give clear, scientifically based guidance to employers about managing worker fatigue.

Over the course of the Review, we have heard examples of forestry workers working hard at the start of the day to get the production done and finish early. We also heard about few breaks being taken. This was backed up by 50 per cent of workers who completed the Forestry Worker Survey indicating that they only took one break during their working day. Information provided to the Review Panel also suggests that fatigue often appears over a few, long working days on the forest block. This lines up with the cluster of serious injuries and fatalities in forestry occurring in the morning and with New Zealand and international research about the effects of fatigue over the course of the work week[54].

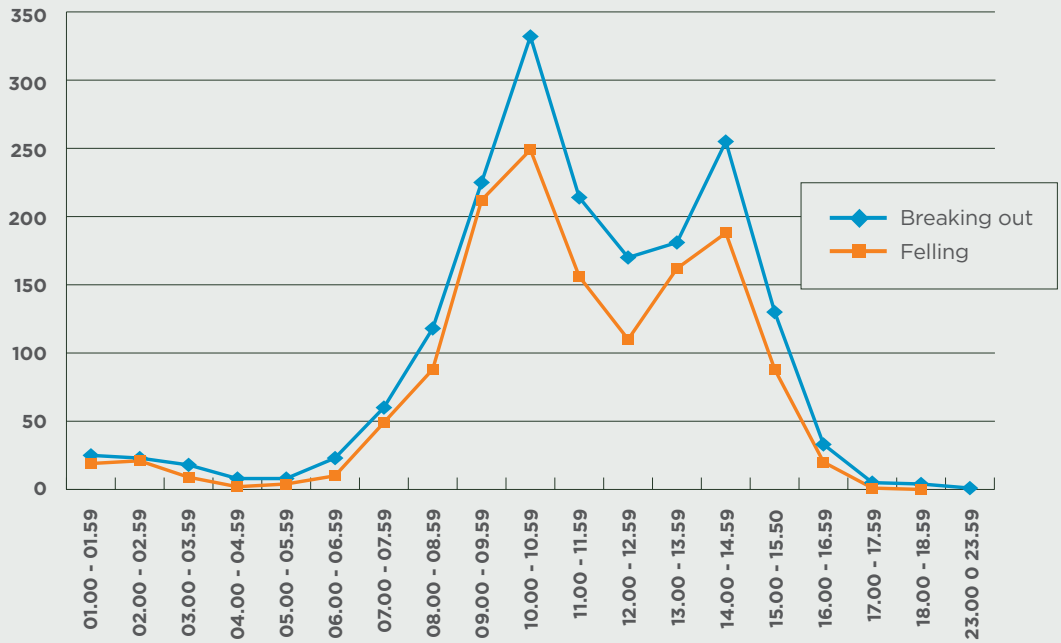
The graph on the next page illustrates research that incident rates on the forest block rise sharply from 9:00am and peak between 10:00am and 10:59am. The incident rate then drops off until a second peak in the early afternoon between 2:00pm and 2:59pm. The same peaks in incident rates were evident in industry data released to the Review Panel for the period between 2009 and 2013. As noted in the research, these clear peaks in mid-morning and mid-afternoon suggest the onset of fatigue between breaks. The International Labour Organisation Safety and Health in Forest provides guidance around managing fatigue and notes, "Operators should preferably not work with a chain-saw under load for more than five hours per day"[55].

There is a wealth of knowledge and information on managing impairment. This information should be utilised, along with insights from other sectors where the management of impairment is critical to safety outcomes. For example, the sector can look at how road logging operators have developed schemes to manage fatigue. Aviation is another sector that the forestry sector could study in order to understand the latest practices.

[54] Based on analysis of Coroners' findings into forestry fatalities since 2006

[55] http://www.ilo.org/wcmsp5/groups/public/---ed_protect/---protrav/---safework/documents/normativeinstrument/wcms_107793.pdf, accessed 3 August 2014

INCIDENTS BY TIME OF DAY



Source: Information released to the Review Panel

Note:
This analysis is based on incidents on the forest block between 2007 and 2011 during breaking out and tree felling activities. Incidents include: Lost Time Injury (LTI), Medical Treatment Injury (MTI), Minor Injury (MI), Contact, Near Hits and Property Damage. See the Glossary of Terms for definitions.

Incidents reported as occurring late at night may suggest errors in recording

LOG TRANSPORT SAFETY COUNCIL

CASE STUDY THREE: IMPROVING THE HEALTH AND WELLBEING OF LOG TRUCK DRIVERS

For some time, driver wellbeing has been identified as an important issue by the Log Transport Safety Council (LTSC). When your job involves sitting in a truck, it can be a struggle at times to get the recommended 30 minutes of physical activity on most days of the week. Equally difficult is eating healthily at work or on the go, particularly in remote areas. So, with most log truck drivers spending 70 hours a week at work, it made sense for the LTSC to develop a programme that supports healthy lifestyles.

In 2008, the LTSC commissioned research company TERNZ to evaluate the health and fitness of log-truck drivers and to provide recommendations for action. This and subsequent studies have also investigated such things as driver sleep patterns and the physical demands of load securing. Some of the key findings from this work are that log truck drivers often:

- are an older and aging demographic
- suffer from poor health, obesity, work/life balance issues and family problems
- get less sleep than is optimal, leading to tiredness and sleepiness while working
- experience repetitive strain injuries through increased load securing requirements.

In order to improve the lives of log truck drivers, the LTSC, with assistance from the Accident Compensation Corporation, implemented a log truck driver health and wellness programme called “Fit for the Road”. This programme is about log truck drivers making a commitment to a healthy lifestyle, and requires the efforts of truck drivers, log truck company owners, and industry experts in health and wellbeing to make it work. Achieving a healthier lifestyle is done by providing information, resources and support to the log truck drivers that help them to make healthy choices.

The programme focuses on the following areas: exercise and physical activity, healthy eating, smoking cessation, and improving work/life balance. Since its inception, the Fit for The Road programme has demonstrated positive outcomes for drivers in these key areas and continues to have a positive impact on overall driver health and wellbeing.

Other operator and LTSC driven initiatives to improve the management of driver fatigue include flexible and improved shift patterns and an increased focus on sleep apnoea diagnosis and treatment. Proactive operators also monitor such things as driver fatigue, medical conditions and energy levels, and manage driver working hours accordingly.

Data collected by the LTSC showed that truck rollovers are more likely on Mondays and Tuesdays. This information has been used by the industry to promote an awareness of this issue, with some operators adopting flexible start times on Mondays, with meetings and truck checks as ways to transition drivers from the weekend to the working week.

FIT for the ROAD

Work is also being done to support safe workplaces and work practices in the Canterbury rebuild. The Canterbury Rebuild Safety Charter includes action to develop a fatigue management plan which will:

- recognise fatigue as a possible hazard that should be discussed with all parties on site
- identify possible work design risks such as long hours that may cause fatigue
- identify where fatigue-related impairment may cause safety risks (referencing driving)
- provide information such as posters, toolbox handouts to staff on fatigue management
- ensure appropriate counselling services are available for staff[56].

Consultation feedback has suggested that the industry's drug and alcohol testing regime can easily be rorted or circumvented. The Plantation Forestry Code of Practice: Eliminating Drugs and Alcohol from the Workplace needs to be reviewed to address this problem and to consider the management of psychoactive substances that may also lead to impairment on the forest block. The Review Panel is pleased to see that this is on the work programme to be delivered by way of funding from the Forest Growers Levy[57].

The forestry industry could look in detail at adopting regular saliva testing or other mechanisms that might provide cheap and easy mechanisms for indicative testing for recent consumption of drugs. Breath testing machines are also available on the market and could be used on the forest block. We are concerned that it is possible to be over the accepted drink-driving limit the morning after alcohol has been consumed the night before. Someone with a hangover who is still over the limit is a danger. This is one reason for our comments in the section on The need for enhanced procedures and processes for investigations – that post-incident drug and alcohol testing needs to be expanded. We think all crew on the forest block should be tested where an incident has taken place.

"BREATH TESTING SHOULD BE DONE DAILY".

Source: Consultation meetings

Standards for personal protective equipment and communication equipment need to be improved

The Forestry ACoP's detailing of standards of personal protective equipment (PPE) and communication technologies contains many gaps. It needs to specify best practice in relation to:

- the selection and safe use of PPE and clothing
- the need for worker participation in the selection of PPE and clothing
- the facilities needed to store PPE and clothing
- the impact of poor PPE when working in adverse conditions
- the use of two-way radios and their ongoing maintenance
- the consistent deployment of radio frequency identification and global positioning system (GPS).

The Forestry ACoP's approach is to largely cross-reference New Zealand Standards for various types of equipment. This does not provide sufficient clarity and consistency on how to ensure PPE, clothing and communication technologies are fit for purpose, appropriate to the needs of individual workers, well stored, maintained and renewed when needed. As noted in our consultation document, the Review Panel has concerns about the Forestry ACoP referencing New Zealand Standards which must be purchased to be used. Standards cited in the Forestry ACoP should be free-to-access on the WorkSafe website.

[56] http://safetycharter.org.nz/the-charter/charter-actions/#nine, accessed 8 August 2014

[57] Information released to the Review Panel on the Forest Grower Levy Funded Work Programme 2014, 20 February 2014

The Review Panel has been disappointed to learn about the lack of two-way communication tools on some forest blocks. We have been advised that some radios are ineffective because signals are inaudible and that radios are not always quickly replaced or repaired when they are broken or when batteries go flat. This is consistent with research carried out on the role of communication in incidents[58]. We have also heard of work occurring without two-way communication channels being in place. Yarder hooters that do not allow two-way communication can result in communication errors and are not good practice. Incident reports include many cases of accidental hooter operation and it is our view that hooters are not an "effective communication system" as required by the Forestry ACoP[59].

Communication equipment is key safety equipment. It is essential for both internal communication between crews and for external communications in case of emergencies. Workers' line of sight is often obscured; for example, by weather, undergrowth and topography. The Review Panel saw at first hand the difficulty of immediately addressing poor feller performance when there is no direct line of communication with the crew boss.

Injury may be prevented or lives saved by the use of better communication equipment such as radio frequency identification. Analysis of industry data on incidents on the forest block between 2007 and 2011 found that the most frequently reported errors contributing to incidents were communication errors – visual, verbal, auditory and signal detection. Common visual communication issues included: confusion among breaker-outs about tree length that they hooked up (and subsequent impact on underfoot movement once the drag starts); impact of fog and terrain on the ability to see hazards; hauler operator's inability to see hang-ups or other hazards on the slopes. Signalling communication issues included: radios being lost or broken; absence of signal to hauler drivers regarding hazardous drag types; interference from signals provided by haulers on other nearby sites.

The Review Panel considers that GPS comes into its own during emergencies, particularly for crews working in isolated areas and individuals working alone. Despite the routine use of radio and GPS devices, the Forestry ACoP rarely specifies their use for tasks on the forest block.

Standards for emergency planning and equipment need to be improved

New regulations to support the Reform Bill should require that PCBUs prepare, maintain and implement an emergency plan for their workplace. It is proposed these regulations will be based on the Australian model, and as such, will be reasonably specific. We think this specificity is important and will be useful for all sectors. The Forestry ACoP will need to be reviewed to remain consistent with the level of specificity in the new regulations and will also need to provide specific guidance to the sector. The input of emergency services should be sought to improve the standards for emergency planning and equipment in the Forestry ACoP to reflect current best practice.

There should be greater clarity in the Forestry ACoP about the requirements in remote and isolated workplaces, with particular attention given to what is needed to enable emergency responses. Due to the isolated nature of forestry work, crews need to have plans, training and equipment so they can go to the aid of workers who have suffered a serious injury. The time available to apply critical first aid and rescue a worker may be short. Knowing GPS coordinates is critical and should be a requirement on the forest block.

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[58] Information released to the Review Panel

[59] See section 11.9.1 of the forestry ACoP

We are also concerned that emergency facilities and equipment may not be consistently fit-for-purpose. For example, the use of communication technologies such as satellite phones can enable speedy helicopter evacuations. Ensuring that emergency plans detail the use of the latest equipment available is important, including the use of electronic early warning systems, personal locator systems and navigation aids.

Planning, and having equipment on the forest block, is not in itself sufficient. Testing emergency plans is critical. Regular exercises will be required by the regulations and this will allow emergency plans and equipment to be tested, along with the understanding of workers and responders. This in turn provides opportunities to learn and improve systems. The requirement for PCBUs to maintain the emergency plan so that it remains effective is critical.

Welfare facilities on the forest block must be provided

There is a general lack of adequate welfare facilities on many forest blocks. Though the provision of facilities will look different to those in many other workplaces, it is still a primary duty to provide adequate, clean and accessible facilities to ensure the welfare of workers. There is a clear link between welfare facilities and safety. Workers need facilities that support them to carry out safe work in safe workplaces.

The Forestry ACoP should set out protocols for the provision of facilities consistent with regulated standards and guidance, including fresh water and shelter for workers. The need for the provision of facilities in forestry is nothing new. The Department of Labour published its Guidelines for The Provision of Facilities and General Safety and Health in Forestry Work in 1995 (the Guidelines)[60].

These provide comprehensive advice in a format that is both specific to forestry and easy to understand. The content was drafted with reference to the Health and Safety in Employment Act 1992 (the HSE Act) and Health and Safety Regulations 1995 (the HSE regulations). The Guidelines need to be updated to work effectively in combination with the Forestry ACoP. They then need to be implemented across the forestry industry. Doing this will show how leadership can challenge long-standing poor practice and ensure facilities on the forestry block are in keeping with wider societal standards.

[60] http://www.business.govt.nz/worksafe/information-guidance/all-guidance-items/forestry-work-guidelines-for-the-provision-of-facilities-and-general-safety-and-health-in/forest-g.pdf, accessed 1 August 2014

Case study four: Moutere Logging Limited use machines to improve productivity and safety

Nelson-based Moutere Logging Limited is one forest contracting business whose investment in new technology has resulted in a step change in productivity and safety performance. Its annual rate of incidents for breaking out, tree felling and skid work dropped from over 50 per annum in 2003 to less than 10 per annum by March 2014.

Director Dale Ewers' admitted that in the past the company's operating systems, culture and safety record was not up to standard: "people were getting hurt; too many of them". There was also a fatality in one of Dale's teams.

Realising the business was operating in an unsustainable manner; the company developed a clear vision to transform its productivity and safety performance by investing in technology that removed people off the ground and took hands off the saw.

This resulted in a series of long-term investments in new technologies, in-house training and related safety systems. Key milestones in this business transformation process were:

2004 Appointing two company trainers

2006 Mechanised processors on skid sites

2007 Improved communication systems

2009 New safety processes

2011 First falcon forestry claw

2011 First mechanised falling machine

2012 Falcon forestry claw operational in all crews

2013 Tethered winch assisted machines

By 2013, Moutere Logging had achieved its goal of largely replacing the highly hazardous manual motor tree felling and breaker-out roles with machine-powered waratahs and / or fully automated grapple cable systems.

According to Dale, the transformation was much more than simply investing in technology – "We had to overcome our own organisational culture which was resistant to change. Management had to set clear targets and put the company's reporting systems in order. Crews had to learn to report bad practice and help each other more."

Another key obstacle to overcome was a shortage of trainers – "There weren't enough trainers in the industry so we had to make the decision to put our own in-house team in place", says Dale.

AN APPROVED CODE OF PRACTICE FOR MACHINERY AND EQUIPMENT

The Review Panel would like to see a reduction in the injuries and fatalities associated with machinery and equipment so that their full potential, for example in steep-slope harvesting and breaking-out, can be realised. The new law and regulations place strict duties on PBCUs in respect to the design of plant and structures, including machinery and equipment. The Review Panel is concerned that there is insufficient guidance to the forestry sector on how to meet these legal responsibilities and ensure the safe trialling and adoption of new and modified machinery and other equipment that has the potential to offer significant safety gains.

Mobile plant is addressed in the Forestry ACoP – but not comprehensively. Rather, it references the Approved Code of Practice for Operator Protective Structures on Self-Propelled Mechanical Mobile Plant (the machinery and equipment ACoP) which was issued in 1999 and is now out of date. We understand that the machinery and equipment ACoP is now under review. This is the opportunity for a forestry-specific ACoP for machinery and plant to be developed or for the current machinery and plant ACoP to be much enhanced. Either way, it should provide tailored protocols and procedures for all forestry machinery and equipment, including machines used for steep slopes. It should support the forestry industry to design and implement innovative technologies in a safe and effective way.

Implementation planning needs to include detail on the safe operation of machinery and plant and be supported by robust standard operating procedures. Analysis of government and industry data on incidents on the forest block between 2007 and 2011 found many reports indicating machinery items were involved, particularly haulers, diggers, loaders and tractors[61]. Unintentional machinery operation involving haulers, loaders and tractors were also reported. In the case of hauler operation, this typically concerned the controls: their breaking; their being used mistakenly or accidentally knocked; use of incorrect gearing; not being able to provide the fine-tuning needed by breaker-outs some distance away (resulting in abrupt and sometimes dangerous speed, risk or drop of ropes).

Machinery involvement in incidents is evident in WorkSafe's serious harm data where there is high level of reporting of events where seriously injured workers were struck by an uncontrolled moving item, typically machinery, rigging, ropes or logs, that are otherwise expected to move in a more predictable or controlled manner[62]. Malfunction of equipment (breakdown or loss of traction or grip) were also a precursor to machinery overturning incidents.

CORONER'S FINDINGS CASE NUMBERS CSU-2010-HAM-000074 AND CSU-2010-HAM-00048

During the removal of a wind-thrown tree the deceased operated a bulldozer to remove the tree stump and was catapulted out of his seat, over the engine compartment and onto the left track of the bulldozer. As the bulldozer was slowly moving forward, he was dragged under the track and crushed. He was not wearing a seatbelt.

The deceased leaned out the window cavity of the loader in order to pass a torch to his colleague. [They were working in the dark.] The window had been previously removed. At this time he inadvertently leaned against the main boom control lever, which lowered the boom. He was crushed between the lift ram of the boom and the safety frame of the cab, killing him instantly.

Source: Office of the Chief Coroner of New Zealand, Recommendations Recap - A summary of coronial recommendations and comments made between 1 July-30 September 2012, pages 9 to 10

[61] Information released to the Review Panel

[62] Information released to the Review Panel

The new or revised ACoP should not been seen as a document that supplants the role of manufacturers' specifications and guidance. Rather, it should reflect the importance of authoritative and approved practices to manage the specific risks associated with machinery design, modification, maintenance and operational use. This may include the acceptance in New Zealand of international and national safety and quality certifications, such as the Directive 2006/42/EC of the European Parliament concerning machinery and certain parts of machinery[63], or the Institute of Professional Engineers New Zealand practice notes that are available.
The Review Panel has heard of examples where new machinery produced to international standards has had to be deconstructed and rebuilt and certified by a New Zealand engineer. We question why. Greater consistency of standards, providing they do not compromise safety, can reduce the costs of introducing new technology.

INTERNATIONAL EXAMPLES... SCOTTISH FORESTRY INDUSTRY SAFETY ACCORD

In Scotland, the Forestry Industry Safety Accord (FISA) has published the Steep Slope Working in Forestry (FISA Safety Guide 705). The FISA Safety Guide 705 provides generic advice on the following best practice related to risk assessment, planning and organisation, the site, machine selection and operator selection.

The FISA Safety Guide 705 provides a good beginning point for Scottish forestry operators when developing their own tailored risk management and safe work practices. It also notes that it needs to be read in conjunction with other FISA guidance material (which is specified) and material provided by manufacturers to help identify the controls that need to be put in place when operating machinery on steep or difficult ground in the forest. It is an example of what can be achieved for the New Zealand forestry industry..

Source: http://www.ukfisa.com/safety-information/safety-library/fisa-safety-guides/fisa-steep-slope-working-in-forestry.html, accessed 12 August 2014

[63] http://ec.europa.eu/enterprise/sectors/mechanical/documents/legislation/machinery/index_en.htm, accessed 27 August 2014

Case study five: A vision for innovative harvesting technologies in New Zealand

"No worker on the slope, no hand on the chainsaw" is the vision of Future Forests Research, an organisation that is co-investing with the Ministry for Primary Industries (MPI) to develop innovative harvesting technologies that will improve productivity and worker safety in steepland harvesting in New Zealand.

Started in November 2010, the Steepland Harvesting Programme (SHP) is a $6 million shared investment between the government and Future Forests Research Ltd, an alliance of research providers, forest owners, and tree harvest engineering and machinery companies. Funding is being provided through the Primary Growth Partnership (PGP).

Improved safety and productivity are core objectives of the programme. Safer steepland harvesting operations are being achieved through mechanisation, remote control and automation of harvesting techniques. This is a significant benefit that flows from not only the new technology for forestry harvesting, but also new systems of operation.

To date the SHP has assisted the development of a steep slope feller buncher which can operate safely and efficiently on slopes of 45 degrees without endangering workers. Four machines have been built and are now in commercial operation, with a fifth under construction. Alongside this machine, the SHP recently completed a successful trial of remote controlled tree felling operations.

It has also developed a new camera system called CutoverCam, using wireless camera technology to provide clear views of operations for hauler operators who no longer need to rely on radio messages and sound signals from ground crews. In addition, a new HarvestNav on-board navigation system provides important information on harvest area boundaries, restricted areas and terrain hazards.

What is clear from the initial outputs of the SHP is that productivity improvements and improved worker safety are objectives that can be delivered successfully together.

The PGP aims to boost the productivity and profitability of our primary sector through investment between government and industry. It provides an essential springboard to enable New Zealand to stay at the forefront of primary sector innovation through long-term

programmes. The success of the PGP is dependent on industry groups coming up with ideas and being willing to back them with co-funding.

PGP investments cover education and skills development, research and development, product development, commercialisation, commercial development and technology transfer. The benefit of a programme must be anchored in New Zealand, and must be additional to existing initiatives and work programmes – that is, beyond business as usual. In the case of the SHP, the clear focus on innovation alongside the direct economic benefits of improved productivity and huge potential to improve worker safety in steepland harvesting made it an ideal partnership for the sector and government.

MINIMUM EMPLOYMENT CONDITIONS HAVE TO BE MET ACROSS THE INDUSTRY

Break entitlements

Employees are legally entitled to:

- one 10-minute paid rest break when they work between two and four hours
- one 10-minute paid rest break and one unpaid 30-minute meal break when they work more than four and up to six hours
- two 10-minute paid rest breaks and one unpaid 30-minute meal break when they work more than six and up to eight hours.

These requirements begin over again if an employee works more than eight hours.

Source: http://www.dol.govt.nz/er/minimumrights/breaks.asp, accessed 7 August 2014

As noted earlier, contributing to the problem of fatigue is a lack of understanding or respect for statutory minimum employment conditions and entitlements. Taking only one short break to "accommodate" finishing work, or getting home a little earlier is a poor excuse for failing to comply with employment standards.

Breaks are mandated to assist with managing fatigue and worker wellbeing. There is a link between compliance with employment standards and health and safety standards. Compliance with both sets of standards provides the foundation for a safe and healthy workplace and safe and healthy workers. Where standards are not met workers may:

- feel pressured into working longer hours and not taking statutory breaks
- lack awareness of their right to breaks and to paid time off work
- feel pressured into doing unsafe work due to the negative consequences of saying no.

The forestry industry needs best practice guidance and advice on minimum employment conditions and entitlements as defined in employment law. Government should also target forestry workers to improve awareness of their obligations, entitlements and processes for making complaints related to employment and health and safety standards. A joint campaign could be undertaken by MBIE and WorkSafe. We think that labour inspectors and health and safety inspectors should distribute information to employers and workers on all workplace visits.

[64] The forestry ACoP section 2.3.6 appears to be inconsistent with the requirements in the current Health and Safety in Employment Regulations 1995 (regulation 54 and 58B) for employers and contractors to ensure that no one under the age of 15 years old works in any area at a place of work at any time when any logging operation or tree-felling operation is being carried out in that area. The draft section 18.2.1 of a revised section also implies that workers are required to notify WorkSafe of hazardous work when in fact only employers are required to do so

THE NEED TO TAILOR INFORMATION FOR THE INDUSTRY IN A FORESTRY SAFETY MANUAL

It is clear that the information to support safe work and safe workplace in the forestry industry, including the Forestry ACoPs, needs to improve. This also provides an opportunity to:

- ensure that all ACoPs are fully consistent with regulated mandatory standards[64]
- ensure that all ACoPs do not imply there are alternatives to regulated requirements[65]
- keep to a strict minimum the amount of cross referencing to other documents.

We recommend that a Forestry Safety Manual is produced to draw together the relevant legislation, regulations, approved codes of practice, guidance and best practice documents into a framework that is accessible and understandable for those working in the forestry sector. A range of formats are needed to ensure information is useable and accessible for the entire forestry sector. For example, the hierarchy of compliance and guidance documents may need to be detailed and presented in a visual format. Summaries of where laws, regulations and rules sit at each level of the legislative hierarchy may also be necessary.

In our consultation document we identified concerns about the accessibility of information and guidance associated with the legislative framework. We suggested that research should be undertaken to better understand the type of health and safety guidance materials that will be most effective for the forestry sector. This should include engagement with workers. One of best ways to do so is to simply visit forest blocks.

Research to understand the information needs of the industry would not have to be limited to health and safety and could provide insights on how to best produce materials that meet the needs of vulnerable and/or isolated workers. Following on from this research, an education and information plan should be developed by WorkSafe in conjunction with other stakeholders to ensure all materials are fit for purpose, well received and used effectively.

[65] See for example the second sentence, section 18.1.1–2 of the forestry ACoP

3 ATTRACTING, TRAINING AND RETAINING WORKERS

RECOMMENDATIONS, TIMEFRAME FOR DELIVERY AND MEASURES OF SUCCESS

IT IS RECOMMENDED THAT:	IS DELIVERED WITHIN:	CAN BE CONSIDERED SUCCESSFUL IF:
6. the Forestry Leadership Action Group works with, among others, the forestry industry, workers and their representatives, the Ministries of Business, Innovation and Employment, Education, Primary Industries and Social Development to develop a workforce strategy to: a. assess workforce needs and then attract, train and retain the right people for forestry work in roles across the supply chain, from forest managers through to forestry contractors and forestry workers b. develop and embed a training culture within the industry aimed at improving safety, efficiency and productivity and recognising training and development as an investment, not a cost.	Nine months	› The workforce strategy is launched with key action items identified, clear objectives, actions and owners, and reporting and monitoring mechanisms
7. the Forestry Leaders Action Group works with the Ministry of Business, Innovation and Employment and stakeholders to develop regulations that specify: a. mandatory competency standards for safety-critical forestry roles spanning forest management, forestry contractor, supervisor and trainer and specific worker roles on the forest block b. procedures for the independent assessment and periodic reassessment of competency with five years and procedures for dealing with non-competency c. ensure inexperienced trainee forestry workers on the forest block are carefully transitioned into high-hazard work and supported with appropriate training and supervision.	Three years (staged)	› Regulations are put in place that cover: › key safety-critical roles, including supervisory and trainer roles › criteria for independent competency assessments and periodic reassessment › transition provisions to support a successful move into new regime › Untrained forestry workers are not put to work on the forest block in roles that exceed their capabilities and competency
8. the Forestry Leadership Action Group works with the Ministries of Business, Innovation and Employment and Education, the Tertiary Education Commission, New Zealand Qualifications Authority, Competenz and training institutions, to ensure that the: a. forestry industry understands its responsibilities for providing training and supervision, and the opportunities available to fund training and assessment b. forestry curriculum supports the proposed competency standards and enables a balance between foundation skills training and safety-critical task training at the right time for workers.	Three years (staged)	› The forestry industry takes up opportunities for effective training and assessment, and funding because the framework is better understood › Forestry industry training supports the regulations, provides better options for industry and enables better uptake and completion

RATIONALE FOR THE RECOMMENDATIONS

"ANY TRAINING IS GOOD, TOO MANY CONTRACTORS DON'T LIKE TRAINING BECAUSE THE WORKER WILL WANT TO BE PAID MORE AND MIGHT LEAVE BECAUSE THEY CAN THEN DO ANY FORESTRY JOB".

"ANYTHING TO UPSKILL".

"UPSKILL SO NOT STUCK IN THE SAME JOB FOR YEARS".

"UPSKILL AND MACHINES".

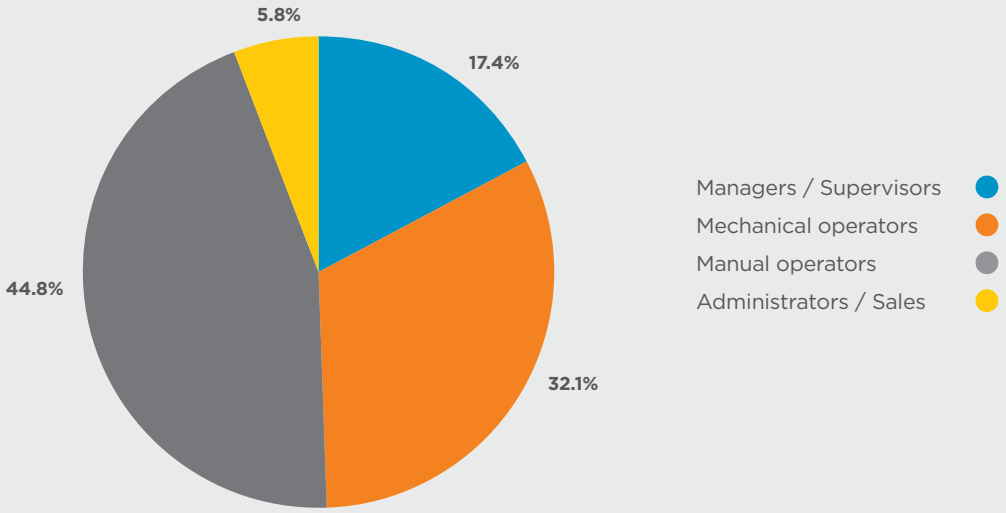
"JUST TO BE ABLE TO GET OFF THE GROUND AND INTO A MACHINE. BEEN WAITING FOR SIX YEARS".

Sixty per cent of workers completing the Forestry Worker Survey stated that more training would make them safer at work. Of those who wanted more training, 30 said they'd take anything and everything. Twenty-three asked for hands-on, practical, task-specific, on-the-job training. There was a strong interest in training for mechanisation.

Source: Forestry Worker Survey

THE FORESTRY WORKFORCE AT A GLANCE

- There are around 6,910 workers in New Zealand's forestry workforce
- 94.3 per cent of workers are male
- 21.5 per cent of workers are aged 15-24, compared with 15.9 per cent of the total New Zealand workforce
- 8 per cent of workers are over the age of 55, compared with 18.4 per cent of the total New Zealand workforce
- 38.5 per cent of workers are Maori – more than three times the portion in the total workforce (11.3 per cent)
- 60.7 per cent of workers have no formal post-school qualification
- 42.8 per cent of workers are in training
- 62 per cent of workers are employed by a small to medium enterprise (< than 20 employees)
- Around 45 per cent of workers change jobs within 12 months
- Around 3000 people start a new job in the forest and wood manufacturing annually
- Worker roles are broken down as follows:



Sources:
Information released to the Review Panel by WorkSafe New Zealand and the Ministry of Business, Innovation and Employment
Statistics New Zealand, Business Demography data 2003-2013
http://troq.competenz.org.nz/assets/TROQ/Documents/Forestry/Needs-Analysis-Report-Forestry-22112012-final.pdf, accessed 22 August 2014

THE NEED FOR A WORKFORCE STRATEGY

The forestry industry is struggling to attract, train and retain the workforce it needs. Even with the forecast increase in harvest, the overall size of the workforce is predicted to remain largely static. However, work undertaken by the Ministry for Primary Industries (MPI) suggests there will be a need to replace approximately 19,000 "Farm, Forestry and Garden Workers" between 2012 and 2025[66]. MPI comments on the future need for a greater skilled workforce, for example, design engineers, those with maintenance and diagnostic skills, harvesting technology and equipment manufacturing experience[67].

Hauler yarder operator and break-outs are currently on the Immediate Skills Shortage Lists[68]. Other forestry workers will be required; forest scientists are on the Long Term Skills Shortage list[69]. During the consultation phase, the Independent Forestry Safety Review Panel (the Review Panel) consistently heard concern expressed about older and experienced forestry workers retiring and the workforce capability and capacity gap that would result. We also noted that there are very few women working in the forestry industry. Opportunities are being lost by the failure to demonstrate to women that forestry can provide a viable career.

The Forest Owners Association (FOA), utilising funding derived from the Forest Grower Levy, is working with Competenz to promote forestry as a career option. This work provides a good foundation for a more ambitious workforce strategy which recognises that current shortages cannot be explained simply by "recent poor industry press"[70]. To be attracted to an industry and to remain working within it, potential workers need to understand the work, working conditions and the career pathways that are available to them. Their pathways should include training and development opportunities.

To stimulate a good supply of workers and reduce the high rate of turnover, a workforce strategy is needed that includes:

- information about the skills and capabilities the forestry industry needs to be a success
- targeted marketing campaigns to raise the profile of the industry with a range of job seekers
- options to develop the worker pipeline from schools and other training institutions
- job matching and screening to ensure people with the right attributes are attracted to the industry
- a commitment to remunerating experience and skills and providing decent working conditions
- career pathways, including for trainers and supervisors
- clear provision for employer-paid training and continuing professional development opportunities
- a plan to ensure support and supervision on the job for trainee forestry workers on the forest block.

The workforce strategy should recognise the need for industry to take responsibility and address the issues that have arisen from a failure to invest in people. This includes recognition of the need to transition trainee workers purposefully and safely into production crews through the provision of offsite foundation and onsite safety-critical training and supervision. The industry must address the current ability for new forestry workers to be put into dangerous frontline roles beyond their level of competency.

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[66] MPI, (2014), Future capability needs study for the primary industries in New Zealand, Wellington, April 2014

[67] MPI, (2014), Future capability needs study for the primary industries in New Zealand, Wellington, April 2014

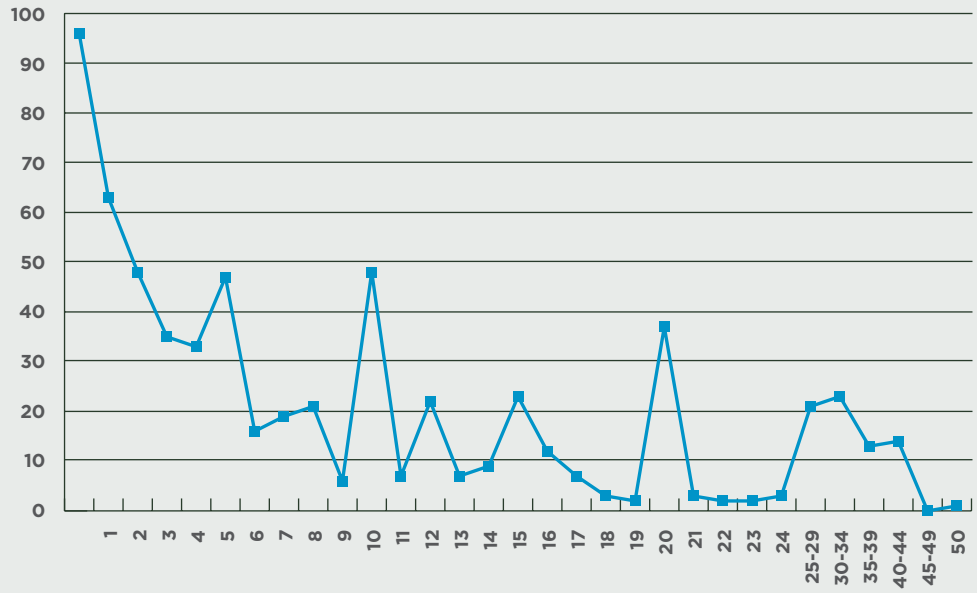
[68] http://skillshortages.immigration.govt.nz/assets/uploads/immediate-skill-shortage-list-2014-03-24-.pdf, accessed 18 July 2014

[69] http://skillshortages.immigration.govt.nz/assets/uploads/long-term-skill-shortage-list-2014-03-24-.pdf, accessed 18 July 2014

[70] Information released to the Review Panel on the Forest Grower Levy Funded Work Programme 2014, 20 February 2014

The following graph shows serious injuries and fatalities on the forest block by workers' years of industry experience. It shows that one third of all injuries and fatalities on the forest block occur in the first two years of working in forestry. One half of all serious injuries and fatalities occur in the first five years. This is consistent with government and industry data showing that among breaker-out activities incident reports were higher for those with industry experience of three years or less[71].

INCIDENTS BY YEARS OF INDUSTRY EXPERIENCE



Source: Information released to the Review Panel by Forest Owners Association based on Incident Recording Information System data, 13 August 2014
Note: This analysis is based on industry data of serious injuries and fatalities on the forest block between 2009 and 2013. It is based on a sample size of 643 incidents where industry experience was recorded. Incidents include: Lost Time Injury and Medical Treatment Injury only. Peaks at five or 10-year intervals thereafter may suggest recall bias at the time of reporting

"I'D LIKE TO SEE ALL CONTRACTORS AND BOSSES, LOADER OPERATORS TRAINED IN MANAGEMENT AND LEADERSHIP MOTIVATIONAL COURSES".

Source: Forestry Worker Survey

Workers not only need training, they need appropriate supervision and time to build experience and develop judgment. It is also important to recognise, therefore, that training and development also needs to focus on communication, team building and leadership for forest managers, forestry contractors and supervisors.

As part of the strategy, industry needs to develop a clear career pathway for trainers and supervisors. The Review Panel is concerned about the reported shortage of quality third-party trainers that have the accreditation needed to provide vocational training. We have heard that trainers may be engaged on an ad hoc basis and how travel for work impacts on their pay. This has resulted in trainers re-joining a crew where they can be assured of a reliable income and working week.

[71] Information released to the Review Panel

"GIVE US A SPECIALIST TRAINER".

Source: Forestry Worker Survey

We are also concerned about the quality of onsite supervision. Industry needs to demonstrate that it takes training and supervision seriously and that people who do this work are highly valued with pay and conditions commensurate to the importance of their roles. Without competent trainers and supervisors, the industry will be unable to adequately train and supervise workers and ensure their ongoing professional development.

How the workforce strategy is developed and implemented is critical to the industry's long-term success. There are many entry-points for people into the forestry industry and many stakeholders, such as parents, community leaders, school career advisors and Work and Income New Zealand work brokers who can play important roles in facilitating people into forestry work. The industry, supported by government, will need to develop long-term relationships with such stakeholders to successfully progress and implement the strategy. With concerted effort, the strategy could be delivered quickly to inform other work related to the Review. We would like to see it in place within nine months of the delivery of this final report.

Case study six: Construction Industry Workforce Plan

The Construction Sector Workforce Plan (the Workforce Plan) provides an example of industry taking ownership and responding to current and anticipated workforce challenges. It articulates the immediate, short and long-term workforce needs of the construction sector in Christchurch and identifies what is required to accelerate the recovery of the sector and drive economic growth.

Launched in June 2013, the Workforce Plan was a collaborative effort. It was developed for and by companies in the Christchurch construction sector (horizontal and vertical) along with the support of the Canterbury Earthquake Recovery Authority (CERA) and the Ministry of Business, Innovation and Employment (MBIE). The Workforce Plan details the actions that the sector's Construction Strategy Leaders Group will take to address workforce challenges, working constructively with government and other agencies as necessary.

The workforce issues in the Christchurch rebuild are significant. The Workforce Plan has been developed to respond to challenges, including skill and labour shortages, uncertain workflows, workforce quality, safety performance, sector standards and practices, and creating a sustainable skilled workforce.

The Workforce Plan includes 39 recommendations. Initiatives include:

- working with government to address concerns related to immigration, training or labour supply
- a Good Corporate Citizen and Employer Charter
- new approaches to procurement and training.

Bruce Kohn, Chief Executive of the Building Industry Federation and an advisor to the Construction Sector Leaders Group, says "work is well under way and the Workforce Plan is seen as a living document that sets a benchmark for best practice going forward. It also sets

a base which industry and government can draw on when facing a range of challenges that involve employment, social and community considerations".

Immigration, training and labour supply

As with forestry, the boom and bust economic cycles in the construction industry have left a shortage of specialist tradespeople. Construction companies are bringing in skilled labour from offshore but the first priority for new work is upskilling Canterbury people, followed by other New Zealanders and then immigrants. Canterbury educational institutions are now geared up for an upturn in demand for training.

Good Corporate Citizen and Employer Charter

The key intention of the Good Corporate Citizen and Employer Charter is to help attract, develop and retain construction workers by influencing the culture through the supply chain and setting minimum standards to which all employers will sign up to, including: health and safety; employment conditions; training; good migrant settlement; robust business and employment relations practices.

New approaches to procurement and training

A challenge is ensuring the numbers of skilled tradespeople needed become available. This will require extensive recruitment, cooperation between agencies and a sense of urgency. There were concerns about maintaining the quality of the workforce during massive growth and the greater need for supervision. "While we need to get new entrants on the build site as quick as we can, we also need to ensure they are aware of the hazards they may encounter and are well versed in how to work safely" says Bruce Kohn. The Workforce Plan recommends supervisor training, working with training organisations to establish good leadership training, a strategy to attract and upskill labour and prepare them for safe work and group training models.

"The Construction Sector Workforce Plan is aspirational, but aspiration and a sense of "can do" is needed if we are to achieve the solutions outlined in the Workforce Plan" says Bruce Kohn.

Source: Interview with Bruce Kohn, Chief Executive of the Building Industry Federation and http://www.constructionstrategygroup.org.nz/downloads/Construction_Sector_Plan_-_FINAL.pdf, accessed 9 August 2014

THE NEED FOR MANDATORY COMPETENCY STANDARDS

Section 30(3)(f) of the Health and Safety Reform Bill requires the provision of any information, training, instruction, or supervision that is necessary to protect all persons from risks to their health and safety arising from work carried out as part of the conduct of the business or undertaking.

Source: http://www.legislation.govt.nz/bill/government/2014/0192/latest/whole.html?search=sw_096be8ed80d81bfc_training_25_se&p=1#DLM5976895, accessed 7 August 2014

Some definition of what information, training, instruction and supervision is required by the Health and Safety Reform Bill (the Reform Bill) will be provided in the new regulations. The Review Panel understands they will outline the considerations that should be taken into account by persons conducting a business or undertaking to ensure that information, training, instruction, and supervision is 'adequate'. These considerations are expected to include:

- the nature of the work to be carried out by the worker
- the nature of the risks associated with the work
- the control measures implemented to deal with these risks[72].

The Review Panel also understands that the new regulations will clarify that any information, training and instruction must be provided in a way that is readily understandable by any person it is provided to. However, overall the changes being made as a part of the legislative reform process are, in MBIE's view, "minimal"[73]. They may, therefore, not drive the change needed in the forestry industry.

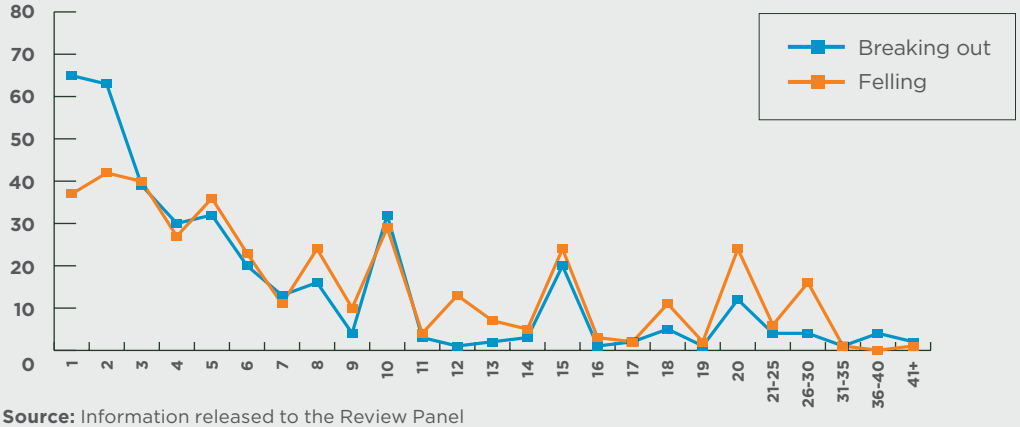
"I AM 56 YEARS OLD, MY TRAINERS WERE VERY GOOD... NOWADAYS IF YOU CAN FALL A FEW TREES YOU GET YOUR TICKET".

Source: Forestry Worker Survey

The lack of clarity about competency standards required for safety-critical roles must be addressed

The lack of legislative and regulatory specificity about training and supervision has proven inadequate for the forestry industry to date. The industry has been left to determine what competency looks like and what training and supervision is required for forestry workers. As a result, the barriers to working on the forest block are very low with no formal evidence of competency required prior to undertaking often dangerous and difficult work. The graph below illustrates the higher number of incidents occurring in the early years of task experience for the two most demanding tasks on the forest block – breaking-out and tree felling. These tasks require considerable physicality and technical skill from workers operating where terrain and working conditions are often difficult.

INCIDENTS BY YEARS OF TASK EXPERIENCE



Source: Information released to the Review Panel
Note: This analysis is based on incidents on the forest block between 2007 and 2011 during breaking out and tree felling activities. Incidents include: Lost Time Injury, Medical Treatment Injury, Minor Injury, Contact, Near Hits and Property Damage

[72] http://www.mbie.govt.nz/about-us/consultation/pdf-documents-for-health-and-safety-consultation/May_2014_HSW_Regulations_DD_Chapter_2.pdf, accessed 18 July 2014

[73] http://www.mbie.govt.nz/about-us/consultation/pdf-documents-for-health-and-safety-consultation/May_2014_HSW_Regulations_DD_Chapter_2.pdf, accessed 18 July 2014

There is no issue with the fact that the deceased was competent with normal tree felling but he did not have the level of experience and knowledge to properly cope with the environment in which he died. The coroner commented that it is hoped that the recommendations made by the court will act as a reminder to employers of the need for daily checking of the work to be carried out by forestry workers with a view to identifying and dealing safely with hazards they may meet during the day's work.

Source: Office of the Chief Coroner of New Zealand, Recommendations Recap: A summary of coronial recommendations and comments made between 1 July–30 September 2012, Issue 4, Wellington, 2013, CSU-2008-WGN-000347, page 8

Problems with competency, training and supervision feature in coronial findings and data sets provided to the Review Panel[74]. Although information on competency, training and supervision available from serious harm and fatality data sets is limited, the government and industry data available indicates:

- inexperienced fellers tend to rework cuts
- inexperienced fellers more frequently overcut back cuts
- inexperienced fellers are more likely to drive trees
- some workers injured in breaking-out work were untrained
- higher incident reporting levels occur among breaker-outs within their first three years on the job
- a low level of awareness of the training received by breaker-outs
- inadequate supervision of breaker-outs[75].

A suitably trained workforce is one of the first lines of defence against accidents[76]. There are not enough barriers to prevent inexperienced workers being deployed on tasks beyond their level of competency. Mandatory competency standards set in regulations are required to drive health and safety outcomes in the forestry industry. The standards must set the competency level required for safety-critical roles, outline procedures for the independent assessment and periodic reassessment of competency and the procedures for dealing with non-competency. At minimum, the following roles require competency standards:

- plantation and harvest planner
- site supervisor/foreman
- tree feller
- mechanised tree feller
- breaker-out
- head breaker-out
- yarder operator
- hauler operator
- loader operator.

Further roles that should be regulated may be identified by the Forestry Leadership Action Group (FLAG), by government, industry, workers and their representatives during the policy and legislative process required to implement the recommended regulations. We are not opposed to regulating more roles if it is considered by others to have potential benefits.

The Accident Compensation Corporation (ACC) Forest Sector Injury Prevention Programme includes a work stream to address the lack of ongoing workforce competency assessments. Initially focusing on breaking-out and tree falling competencies, the work stream is supported by the FOA and will include crews on non-FOA member forests. The Injury Prevention Programme work, and that of Nelson Forests and Blakely Pacific to put in place certification for certain roles on their forest blocks, may provide useful insights on how to develop, assess and reassess the proposed role-based competencies.

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[74] Office of the Chief Coroner of New Zealand, Recommendations Recap: A summary of coronial recommendations and comments made between 1 July–30 September 2012, Issue 4, Wellington, 2013, CSU-2008-WGN-000347, page 8; CSU-2010-CCH-000043, page 12; CSU-2012-HAS-000144, page 13

[75] Information released to the Review Panel

[76] SafetyWise Solutions Pty Ltd, Incident Investigation Reference Guide, Issue 4, October 2010, section 7, p.5., cited in Royal Commission on the Pike River Coal Mine Tragedy, 2012, page 338

Do-it-yourself work

Do-it-yourself work is often carried out by owners on private property. This situation is not covered by health and safety legislation and would not be covered by the proposed regulations. This does not diminish the need for all people thinking of pruning, thinning or felling even one tree to understand the skill needed and the risks involved. They also need to understand that the moment they hire someone to assist them, their property becomes a workplace and all the associated legislation and regulations apply.

Competency needs include appropriate onsite training, supervision and assessment

A balance between onsite and offsite training for forestry workers needs to be found and supervision and assessment requirements for those working towards competency need to be detailed. Presently there is a presumption that possession of specific unit standards or national certificates demonstrates competency. This is not necessarily the case. Standards and certificates are merely a starting point to demonstrating practical competence on the forest block. Forestry contractors have told the Review Panel that it can take up to three years before a worker has sufficient situational awareness to be considered competent and no longer in need of supervision[77]. There is clearly a need for trainee workers to:

- do a lot of practical work before they have the necessary experience to demonstrate competency
- gain experience in anticipating hazards and adjusting work to suit changing or poor conditions
- be aware of issues related to impairment, for example, stopping when fatigued.

The mandatory competency standards may need to specify minimum timeframes of work to enable the full extent of hazards on the forest block to be experienced. The forestry industry, via the proposed Forestry Leadership Action Group and through engagement with workers and their representatives, foremen, crew bosses, trainers and supervisors and Competenz, should be well-positioned to advise on the new regime and determine any timeframe after which competency assessments may be undertaken and reassessments will be required.

Work to determine competency standards, assessment and reassessment should also ensure that there is clear separation between trainers and assessors. Presently, training and assessment can be provided by the same person. This feature of the training system fails to recognise the important role independent assessment plays in upholding standards of safe work. There are inherent conflicts where training and assessment is provided by the same person. Combining these roles enhances efficiency but is poor practice that needs improvement if training, supervision and assessment standards are to improve.

"MORE IN-DEPTH TRAINING, NOT JUST A BRUSH OVER ON THE BASICS".

Source: Forestry Worker Survey

[77] Consultation feedback

"I WOULD LIKE TO SEE A CHANGE IN TRAINING, BECAUSE TRAINING ASSESSORS ARE A JOKE, THERE IS NO REAL TRAINING PROGRAM FOR FORESTRY WORKERS ONLY AN ASSESSING PROGRAM".

Source: Forestry Worker Survey

Competency assessments must be refreshed

There is very little refresher training occurring for forestry workers. This is not consistent with the need for continuing professional development in the workforce. Refresher training helps forestry workers reinvest in both the theory and practical elements of the job and helps prevent workers becoming complacent and falling into bad habits. Industry data shows that workers suffering a serious injury have an average of 10 years' industry experience, indicating that although the greatest portion of injuries occur in the first few years of work, injuries can occur at any point during their working life[78].

"I'M TICKETED IN ALL FORESTRY TICKETS BUT I WOULD LIKE TO SEE [US] GETTING AUDITED IN THE TICKETS WE HAVE".

Source: Forestry Worker Survey

Refresher training is also very important because the increasing use of mechanised harvesting technologies has changed the nature of work. Workers must be trained to use new technologies safely. This is also very important for workers returning to the forest block. Refresher training will enable them to quickly get up to speed with the new theory and practical elements of the job arising from new technology.

Periodic re-certification is common for other safety-critical roles in other lines of work, for example, forklift operators. There is no compelling reason why safety-critical roles in the forestry industry should not receive the same level of competency re-assessment. We believe that a timeframe for re-assessment of no longer than five years must be agreed by all stakeholders.

"THERE NEEDS TO BE MORE TRAINING ACROSS THE BOARD. THE MORE EXPERIENCED NEED REFRESHER COURSES TO KNOCK THE BAD HABITS OUT AND MAINTAIN A STANDARD".

Source: Forestry Worker Survey

USE CURRICULUM AND FUNDING OPPORTUNITIES TO SUPPORT IMPROVEMENTS

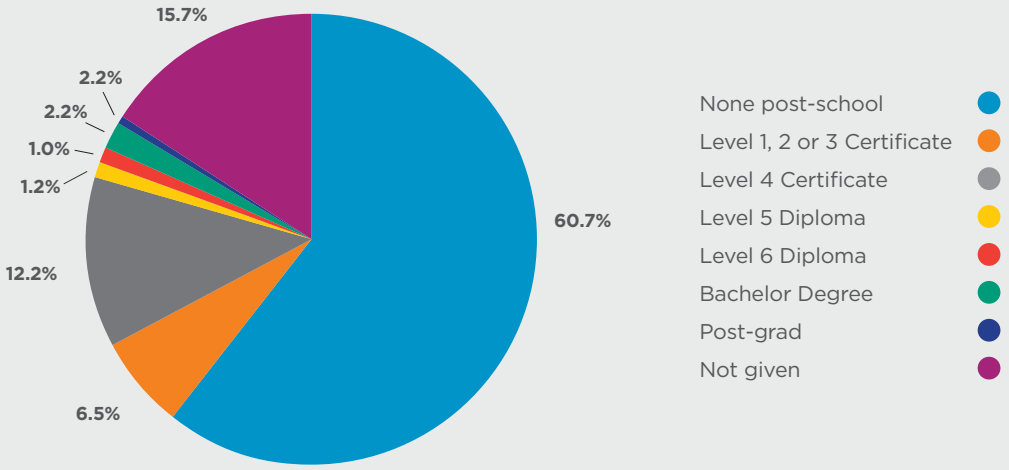
Throughout the Review process, the Review Panel has heard feedback that the offsite training available for forestry workers is inadequate, that onsite training and assessment is insufficient, challenging and expensive to arrange, and that government should fund more industry training. Some detail of this feedback is provided in the section *What we learnt from the consultation process* from page 97.

It is clear that there is a need for central government employment and education agencies and the forestry industry to overcome long-standing tensions regarding the suitability of the industry training framework, curricula, the delivery of training and assessment, and related funding rules. It is our view that misunderstanding is contributing to the low level of completion rates of structured training and the lack of appropriate onsite training and supervision.

[78] Information released to the Review Panel. This figure is the average of industry experience recorded by all workers involved in a Lost Time Injury (LTI) or Medical Treatment Injury (MTI) between 2009 and 2013 for all Forest Owners Association (FOA) Incident Recording Information System (IRIS) contributing forestry companies

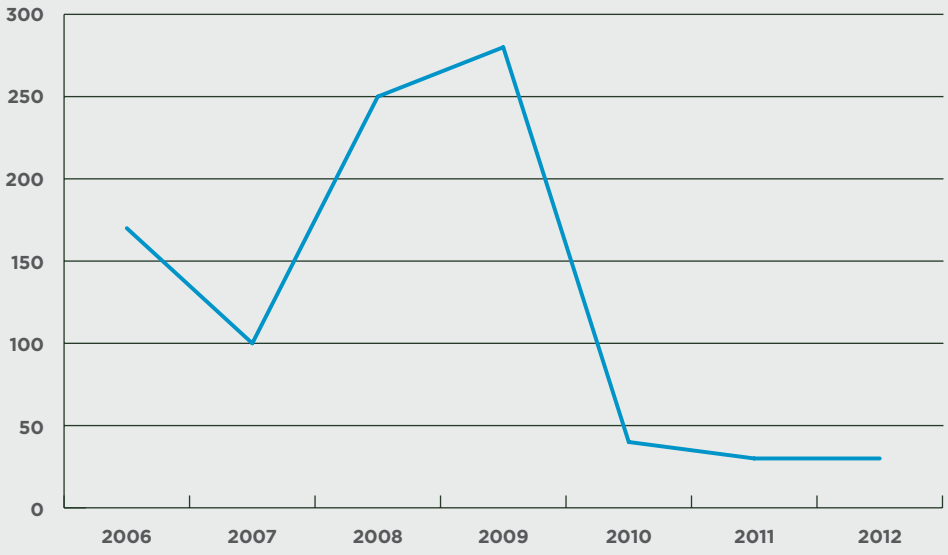
QUALIFICATIONS OF FORESTRY WORKFORCE

The graph below illustrates the qualification levels of all those identifying themselves as forestry or logging workers in the 2013 Census. It shows that 60.7 per cent of forestry workers have no formal post-school qualification. For those who do have a qualification, a level 4 Certificate is the most common.



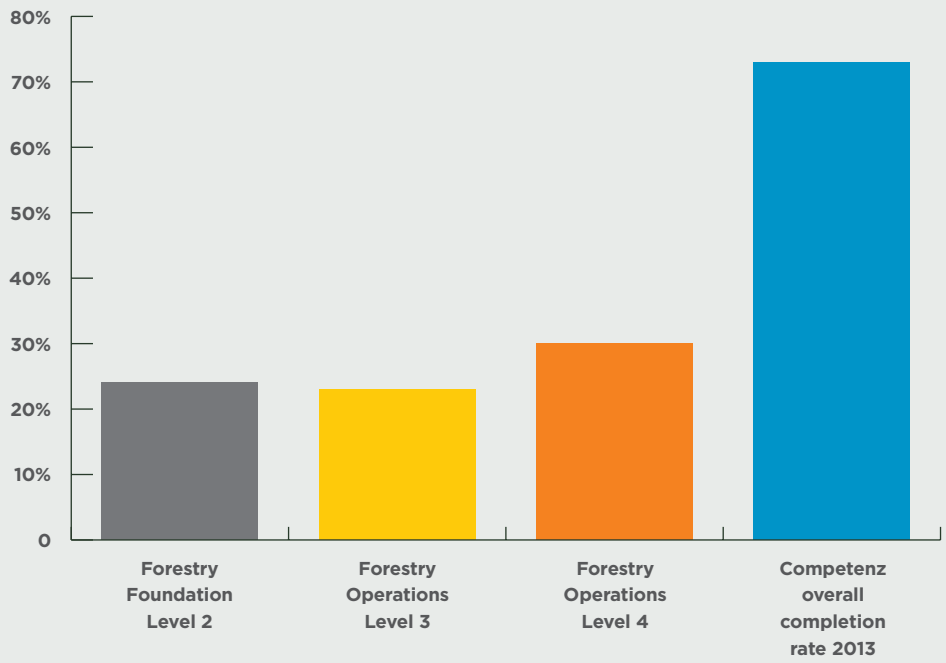
Source: Information released to the Review Panel by the Ministry of Business, Innovation and Employment; taken from 2013 Census data.
Note: Numbers are based on the New Zealand Census occupation unit group: 8413 Forestry and Logging Worker.

Below are completion numbers between 2006 and 2012 for the most common qualification studied by forestry workers – Level 4 Certificate in Forestry Studies. Reported completion numbers have dropped by around 80% over this period.



Source: Information released to the Review Panel by the Ministry of Business, Innovation and Employment; taken from Ministry of Education data.

Below are Competenz completion rates for those enrolled in New Zealand Qualification Authority (NZQA) forestry training and those enrolled in all NZQA training.



Source: Information released to the Review Panel by Competenz, May 2014 http://troq.competenz.org.nz/assets/TROQ/Documents/Forestry/Needs-Analysis-Report-Forestry-22112012-final.pdf, accessed 22 August 2014

Note: These completion rates are for the 37 Forestry and Wood Manufacturing National Qualifications as developed by the former standard-setting body Forestry Industries Training and Education Council of New Zealand and 22 local and provider-based qualifications developed by Telford Rural Polytechnic, North Tec, Waiariki, Nelson Technical Institute, Aoraki Taratahi Agricultural Training Centre and Turangu Ararau.

"FREE FOR THE CONTRACTOR, OTHERWISE IT WOULDN'T HAPPEN ENOUGH".

Source: Forestry Worker Survey

It must be recognised that you cannot successfully train for forestry by being primarily based in the classroom. This means the delivery of successful training programmes must include suitable work experience under supervision. Training also needs to provide experiences that capture the variable nature of work on the forest block, such as work in adverse conditions where lighting, weather extremes, geography and the terrain can impact on safe work.

There is a lack of industry awareness that government provides funding that is focused on recognising industry training organisations (ITOs) that then work with industry to develop and maintain skills standards and administer the delivery of training[79]. The health and safety legislation makes it clear that it is a person conducting a business or undertaking that has the responsibility for the provision of "any information, training, instruction, or supervision required to protect all persons"[80].

The forestry industry must understand that it is primarily responsible for training its own workforce. The entire supply chain must acknowledge this and ensure that sufficient allowances for the costs of training and supervision are accommodated in the lifecycle of the forest. The mandatory competency standards and re-assessment processes recommended earlier should help to clarify this. They should also provide a stimulus for more in-house and third-party trainers and supervisors, and address some of the challenges being confronted by training institutions that are currently struggling to attract trainees.

Competenz and the other ITOs will need to prepare for an increased demand for trainers, supervisors and assessors. More collaboration and pooling of quality trainers and assessors may be needed in order to meet the industry's needs.

The Review Panel has also learned from consultation that the industry is not satisfied with the quality of graduates from public and private training providers. The introduction of mandatory competency standards and reassessment will also drive a need to ensure that all curricula and forestry training provision is consistent and addresses the competency requirements set in regulation. This includes addressing the need for balance between foundation skills training and safety-critical task training at the right time for workers.

The ITO and the leading forestry training organisations should work with government, industry, workers and worker representative to get this balance right. Some of the funding set aside in the Forest Grower Levy Funded Work Programme 2014 for career promotion in forestry could be used to support this work as an alternative to supporting individual training organisations[81].

[79] Industry Training and Apprenticeship Act 1992, http://legislation.govt.nz/act/public/1992/0055/latest/DLM266246.html, accessed 23 July 2014

[80] See clause 30(3)(f) of the Health and Safety Reform Bill: http://legislation.govt.nz/bill/government/2014/0192/latest/DLM5976660.html?src=qs, accessed 23 July 2014

[81] Information released to the Review Panel on the Forest Grower Levy Funded Work Programme 2014, 20 February 2014

4 VERIFICATION AND ENFORCEMENT OF STANDARDS

RECOMMENDATIONS, TIMEFRAME FOR DELIVERY AND MEASURES OF SUCCESS

IT IS RECOMMENDED THAT:	IS DELIVERED WITHIN:	CAN BE CONSIDERED SUCCESSFUL IF:
9. the Forestry Leadership Action Group works with the sector to implement an industry-led forestry contractor certification scheme that: a. initially, provides a mechanism to identify forestry contractors who meet the current requirements of health and safety and employment legislation (along with those who do not) b. then, leverages off the obligations in the Health and Safety Reform Bill to support industry to meet its obligations under the new legislative framework, and c. finally, creates a higher tier of certification for contractors who meet health and safety, employment and environmental requirements and demonstrate best practice in their field of expertise.	Three years (staged)	› A tiered contractor certification scheme is implemented in manageable stages and delivers outcomes beyond the meeting of mandatory standards for health and safety and employment › The scheme has broad uptake by forestry contractors and is supported by forest owners, manager, marketers and forestry workers choosing certified contractors by preference
10. WorkSafe New Zealand develops an enhanced and comprehensive set of key indicators for workplace visits that are communicated, along with assessment results, across the forestry industry and include: a. the appropriateness of contractual arrangements for health and safety management b. adequacy of risk and hazard management and safe systems of work c. the appropriateness of site design, infrastructure, machinery, plant and equipment d. management and supervision on site, along with training levels of the foremen and workers e. management of impairment considering fatigue, weather, terrain travel and work times f. access to facilities such as welfare facilities, fresh drinking water and shelter g. worker health and safety participation and representation.	12 months	› An enhanced and comprehensive set of key indicators for workplace visits is agreed, published and implemented by WorkSafe New Zealand › The indicators contribute to the lead and lag data identified as needing improving
11. WorkSafe New Zealand develops an enhanced and comprehensive set of procedures and process for investigations that ensure: a. clarity for all parties around responsibilities during incident responses b. a comprehensive underlying cause analysis of the reasons a serious injury or fatality occurred c. effective communication with victims, their families, workers, crew and industry.	12 months	› The Memorandum of Understanding and associated schedules between the New Zealand Police and WorkSafe New Zealand are revised and enhanced › Best practice procedures and processes for forestry investigations between the New Zealand Police and WorkSafe New Zealand are agreed and implemented › A communication procedure and protocol for victims, their families, workers, crew and industry is implemented by WorkSafe New Zealand

RATIONALE FOR THE RECOMMENDATIONS

THE NEED FOR AN INDUSTRY-LED FORESTRY CONTRACTOR CERTIFICATION SCHEME

The forest industry supply chain includes a range of contracting and sub-contracting arrangements. Over the course of the Independent Forestry Safety Review (the Review) we have found that this has led to variability in how forestry contractors, crew bosses, foremen and supervisors meet health and safety standards required on the forest block. Examples of this include the variable approach to the supply and maintenance of personal protective equipment (PPE) and the management of adverse working conditions and impairment, as discussed in Section Two: Clear and consistent standards to support safe work on page 46.

The recommendations in this Final Report are practical measures that should improve safety standards and reduce the rate of serious injuries and fatalities in the forestry industry. The recommendations should support the development of clear and consistent standards for forestry operations and, as a result, the ongoing professionalism of the forestry industry.

The Independent Forestry Safety Review Panel (the Review Panel) also believes that the recommendations in this Final Report need to level the playing field for those forestry contractors, marketers, managers and owners who do the right thing and meet the requirements of the law. The recommendations should then see the standards raised. This can be achieved through an industry-led contractor certification scheme, implemented in manageable steps, that:

- initially, provides a mechanism to identify forestry contractors who meet the current requirements of health and safety and employment legislation (along with those who do not)
- then, leverages from the obligations in the Health and Safety Reform Bill (the Reform Bill) to support industry to meet its obligations under the new legislative framework, and
- finally, creates a higher tier of certification for contractors that meet health and safety, employment and environmental requirements and demonstrate best practice in their field of expertise.

The Forestry Leaders Action Group (FLAG) and the sector should undertake work to include a timeframe for the scheme's staged development and implementation in the proposed Forestry Sector Health and Safety Action Plan. We would like to see the scheme fully functional within three years of the release of this Final Report. This may appear to be a long time, but it is important that the scheme is delivered to a high standard to ensure broad uptake by forestry contractors and broad support by forest owners, managers, marketers, workers and other industry stakeholders. The timeframe is balanced by an awareness that there are excellent examples of "certification" that already exist in the industry which means work does not have to start from scratch.

Case study seven: Nelson Forests Limited Breaking-Out and Tree Felling Certification Programmes

Nelson Forests Limited (NFL) has been leading the way in internal certification programmes for the roles of tree feller (since 2004) and breaker-out (since 2007). With a workforce of approximately 600, NFL manages 78,000 hectares of plantations around Nelson and Marlborough and owns the Kaituna Sawmill.

The NFL Breaking-Out Certification Programme (now also operating at Blakely Pacific Limited in Timaru) involves initial business planning, followed by onsite assessments of breaker-outs and crews, and then the development of an action plan with the forest contractor to achieve certification. The action plan includes a review of actions three months after initial assessment and a date for the certification assessment to occur. Once certification is achieved, monitoring occurs to ensure certification requirements and behaviours are maintained and to plan for annual re-certification.

The certification programme is aimed at not only evaluating the competence, behaviour and compliance of breaker-outs, but also at evaluating the appropriateness of the systems of work in which breaking out occurs. These include assessing the records of the harvest plan, the breaking out plan, training and individual responsibilities.

One of the reasons that NFL was determined to establish certification programmes for the roles of tree feller and breaker-out was that, as NFL Health and Safety Facilitator Les Bak describes it, "we were finding that the 'rules' in the [forestry] ACoP and the assessments to achieve the unit standards worked when conditions on the forest block were perfect, but were very difficult to apply when the conditions were not perfect". This was opening their crews up to safety risks. NFL wanted their contractors to be competent to work safely when presented with challenges with terrain, weather, time constraints, staff turnover or machinery breakdowns. The certification programme supports breaker-outs to look beyond mere compliance with the rules and to continually assess and manage the risks involved in their role.

The NFL certification programmes are producing good results. They have:

- resulted in breaker-out's being recognised as professionals
- created an innovative environment and influenced the development of tethered felling machines, advanced grapple swing yarders and even towers with grapples
- resulted in higher skills and personal accountability in the workforce
- improved productivity – 35 per cent fewer hours to produce more volume
- improved planning and interactions between NFL and contractors
- most notably, improved safety results with evidence of a marked reduction in injury rates.

"Certified breaker-outs have become professionals through this process and they engage and perform at a higher level", Les Bak says. He also notes four critical pre-requisites for a successful certification programme: "1) good injury reporting systems, 2) strong leadership involvement, 3) effective internal assessment and audit processes and 4) a programme to develop safety culture and the courage to intervene if they see unsafe work. We have never had to motivate our workers to do a full day's work, but we do have to motivate them to have the courage to decide to stop work when conditions are no longer safe to operate in."

Through the development of the certification programmes, NFL has also demonstrated models of effective worker engagement and responsiveness, and the ability to distil information down to clear and simple messages. For example, this Safe Zone checklist:

S elect the log before going in zone
A ssess the potential hazards
F acilitate the hook-up
E veryone communicate
Z ero movements until everyone is in the safe zone
O bserve drag until it is clear
N ever turn your back on a drag
E nsure your mates are always safe

The need to meet the current requirements

The first step in a contractor certification scheme should be to certify those contractors who meet their current health and safety and employment legislative responsibilities and who have been independently verified and audited. Those who were certified could show a compliance mark and use this in their engagements with forest owners, managers, marketers and other industry stakeholders – particularly those in the small and farm forest sector who may struggle to make good choices when seeking to have their trees planted, maintained or harvested. By default, a compliance mark would enable these stakeholders to also identify those contractors who do not comply or who may be operating on the fringes of the industry and are not party to the scheme.

Throughout this report we have emphasised how important it is that the current legislative requirements for health and safety and employment are met in the forestry industry. There is no excuse for non-compliance with the law. Forestry contractors who do meet the requirements are currently being disadvantaged. They are being disadvantaged by forest owners, managers, marketers, contractors and other industry stakeholders who do not:

- require compliance and detail what that means in their contracts
- acknowledge the cost of compliance in their contractor costing models
- effectively monitor compliance through reporting and auditing processes.

A forest marketing company told the Review Panel that they knew one of their contractors was not up to scratch but then commented that "we have to work with them anyway"[82]. This is not the case. There is a choice to be made. The correct choice is a compliant contractor and the forestry industry needs to start making this choice for itself, otherwise, it is our view that the government needs to step in.

The opportunity to leverage from the obligations in the Health and Safety Reform Bill

The recommendations in this Final Report provide an opportunity for the industry to improve, among other things, procurement processes, contracts, pre-operation and daily planning, the management and maintenance of infrastructure, and machinery and equipment on the forest block. This opportunity is supported by the Reform Bill which will clarify the requirement for all forestry contractors, and all those with whom they share a duty, do what is reasonably practicable, given the extent of their control and influence.

All persons conducting a business or undertaking (PCBU) in the forestry industry who share a duty will have to work together to ensure the health and safety of workers. This may include forest owners, managers, marketers, logging truck companies and log truck operators. It may include working with those designing, manufacturing and maintaining forestry infrastructure, machinery and equipment.

The forestry industry will need to consider how best to meet PCBU obligations across the supply chain. This could be more efficient if supported by the recommended contractor certification scheme. The scheme could provide a mechanism of prequalifying forestry contractors before they were granted contracts for work. To enable this, this phase of the scheme's development would have to be robust so choosing a certified contractor effectively enables industry stakeholders to meet the "so far as is reasonably practicable" test set out in the Reform Bill. Achieving this will require the support of government. It will be essential that the Ministry of Business, Innovation and Employment (MBIE) and WorkSafe New Zealand (WorkSafe) are party to the scheme's development.

Create a higher tier of certification for contractors that demonstrate best practice

The contractor certification scheme should provide a higher tier of certification for those contractors that not only meet health and safety requirements but demonstrate best practice. These contractors could receive a quality mark (as opposed to a compliance mark). The higher tier could be used to verify compliance with other legislative and regulatory requirements that might apply in the forestry industry such as those related to resource consent or environmental standards.

Creating a second tier could have benefits for multiple stakeholders. Overall, it will increase the professionalism of the industry. This should result in the ability of industry stakeholders who chose a quality mark contractor to have confidence that their forest block would be planted, maintained and harvested by experts who could meet all relevant legislative requirement and rules. It would diminish their need to develop expertise or seek independent advice. The quality mark may, in time, prove useful for insurance companies and banks as an indicator of risk. It should provide an indicator to WorkSafe and help with the targeting of workplace assessments.

A higher tier of certification could also be a potential solution to the issue of "phoenixing" where forestry contractors register as a new limited liability company, in order to allow them to tender as an "injury or fatality-free company", effectively closing the door on any historical issues that have occurred within their crew. We have heard concern expressed about phoenixing during the Review. Those receiving a quality mark could be required to show a history of compliance and improvement.

[82] Consultation feedback

Clause 17 of the Reform Bill provides the **meaning of reasonably practicable**

17 In this Act, unless the context otherwise requires, reasonably practicable, in relation to a duty to ensure health and safety, means that which is, or was, at a particular time, reasonably able to be done in relation to ensuring health and safety, taking into account and weighing up all relevant matters, including—

(a) the likelihood of the hazard or the risk concerned occurring; and

(b) the degree of harm that might result from the hazard or risk; and

(c) what the person concerned knows, or ought reasonably to know, about—

  (i) the hazard or risk; and

  (ii) ways of eliminating or minimising the risk; and

(d) the availability and suitability of ways to eliminate or minimise the risk; and

(e) after assessing the extent of the risk and the available ways of eliminating or minimising the risk, the cost associated with available ways of eliminating or minimising the risk, including whether the cost is grossly disproportionate to the risk.

Source: http://legislation.govt.nz/bill/government/2014/0192/latest/DLM5976866html?search=sw_096be8ed80d81bfc_so+far+as+is+reasonably+practicable_25_se&p=1&sr=18, accessed 30 July 2014

"I KNOW WHO KILLED MY SON. HE HAD HISTORY – OTHER ACCIDENTS – BUT NO ONE WAS MONITORING HIM EVEN WITH THAT. XX'S BOSS KNEW WHAT HE WAS DOING BUT HE KNEW HE WOULD GET AWAY WITH IT".

Source: Consultation feedback – names have been withheld to protect privacy

The Review Panel is cognisant of the work being undertaking towards a Safety Star Rating Scheme (SSRS) to make the health and safety practices and record of businesses more transparent[83]. There may be some possibility of leveraging from work on the SSRS, especially in the development of the second tier of the scheme. For example, the sector could work with MBIE to trial the implementation of the SSRS. It could be the first to build upon the foundation of the SRSS in developing industry-specific assessment criteria for assessments and audits. The SSRS may then offer more benefits to the forest industry than other Accident Compensation Corporation (ACC) discount schemes which largely appear to have a low uptake.

"HIS EMPLOYER SHUT HIMSELF DOWN AFTER THE ACCIDENT AND THEN OPENED A NEW COMPANY AND LOOKED CLEAN, LIKE THEY HAD HAD NO ACCIDENTS PREVIOUSLY".

Source: Consultation feedback

[83] http://www.beehive.govt.nz/release/new-star-rating-system-builds-safer-businesses, accessed 29 August 2014

A mechanism that might support the success of the scheme, and the use of certified forestry contractors, could be forest owner agreement to set two different log levies under the Commodities Levy Act 1990 – a lower levy for logs harvested by certified forestry contractor and a higher levy for logs harvested outside the certification scheme. Such an approach would recognise that price drives decision-making processes in the forestry industry. It is a mechanism that we think should be explored to encourage uptake of the scheme and will require the consent of forest owners to implement.

ACCIDENT COMPENSATION CORPORATION INCENTIVE PRODUCT RANGE

Workplace Safety Discount (WSD)

The WSD is aimed at self-employed or small businesses (those with 10 or fewer employees). It starts with a self-assessment and application process, which includes providing documents as evidence of health and safety practices, followed by an audit of these by an ACC-approved auditor. If the auditor concludes that the health and safety systems and practices meet the WSD audit standards, the business will receive a 10 per cent work cover levy reduction for three years, with declarations required at the end of the first and second years to confirm the business is still eligible and meets the required standards.

In advice provided to the Review Panel, as at 31 March 2014 there were 29 forestry industry businesses participating in the WSD.

Workplace Safety Management Practices (WSMP)

WSMP are aimed at businesses with 20 employees or more. They start with a self-assessment and an official application process. This is followed by a visit to the workplace(s) from an ACC-approved auditor – either appointed and funded by ACC or chosen by the business at its own cost.

If the auditor concludes that the health and safety practices of the business meet the WSMP audit standards, the business will receive a work cover levy reduction. This will apply for 24 months from the first of the month following the audit completion date. Outlined below are the reduction details based on the three performance levels:

Level	The business demonstrates…	Reduction
Primary	a minimum standard of workplace health and safety performance standards	10 %
Secondary	a good standard of workplace health and safety practice	15 %
Tertiary	best practice and a commitment to continuous improvement in health and safety	20 %

As at 28 February 2014 there were 109 forestry industry businesses participating in the WSMP scheme. There were no forestry industry businesses that were affected by the ACC Experience Rating and none participating in the Accredited Employer Programme.

Source: Information released to the Review Panel by ACC

THE NEED FOR AN ENHANCED APPROACH AND INDICATORS FOR WORKPLACE ASSESSMENTS

Concern has been expressed to the Review Panel about the consistency of WorkSafe's approach to workplace assessments. In the consultation document, stakeholders were asked "do you agree that lack of regulatory oversight and information impacts on health and safety in the forestry sector?" There were 76 responses to this question and 87 per cent agreed. Those who agreed commonly referred to deficiencies in enforcement with too few inspectors, inspectors lacking knowledge, and regional inconsistency in inspectors' practice. As a new organisation going through its forming stage and recruiting and training new staff this does not come as a surprise. We understand that improving consistency is a focus for WorkSafe. The organisation is rolling out a number of tools to support greater consistency in workplace assessments and enforcement decision-making.

Along with improving consistency, WorkSafe will need to adjust its workplace assessment procedures and processes to take account of the Reform Bill and the lessons learnt in this Review. The new legislation shifts to a risk and hazard identification and management model.

We agree, in part, with WorkSafe's view that their assessment tools are "evidence-based and targeted on key risks"[84]. However, an ongoing focus on tree felling and breaking-out activities in workplace assessments will not be enough to determine whether forestry contractors and crew bosses are meeting the requirements of the new legislation. Nor will it address the underlying factors that are contributing to serious injuries and fatalities on the forest block. The Review Panel has heard that a further phase of WorkSafe's enhanced approach to forestry will include the development of indicators that can be used to identify underlying factors.

They should include:

- the appropriateness of contractual arrangements for health and safety management
- the appropriateness of site design, infrastructure, machinery, plant and equipment
- quality of management and supervision onsite, along with training levels of the foremen and workers
- working conditions caused by the interaction of lighting, weather extremes, geography and the terrain
- impairment such as fatigue and drugs and alcohol
- access to facilities such as welfare facilities, fresh drinking water and shelter
- effectiveness of worker health and safety participation and representation.

The development of a comprehensive set of indicators for workplace assessments that looks at both risk and hazard management on the forest block would have multiple benefits. They would support the work being undertaken by WorkSafe to move from a reactive model that is focused on hazards, to a more proactive and targeted model focused on underlying causes[85]. The indicators could also contribute lead data to the sector. They could be used to identify industry-wide poor practice and areas where industry-wide change is necessary.

As was noted in Section one: How to deliver the change required in the sector, having an agreed structure for recording causation factors will enable different data sets to be more readily combined and compared.

Using a more comprehensive set of indicators will require WorkSafe forestry inspectors to be well trained. They will also need the time and tools to undertake robust and comprehensive workplace visits. Online tools and templates could be developed for use with tablets and smart phones. This would enable information

[84] WorkSafe submission on the consultation document, page 33

[85] WorkSafe submission on the consultation document, page 22

to be collected in a standard and systematic way and entered directly into a database from the forest block. Tools such as these are already available and have been drawn to the attention of the Review Panel throughout the Review.

Although an off-the-shelf product may not be fit for purpose, they do show that it is possible to leverage from technology. The use of technology during workplace assessments could also enable information to be shared with the PBCU being assessed in a timely manner. We have heard concern about the time it takes for inspectors to share information about their assessments and the impact that has on forestry contractors, crew bosses and crew initiating change.

THE NEED FOR ENHANCED PROCEDURES AND PROCESSES FOR INVESTIGATIONS

The Review Panel has heard widespread concern about the robustness of serious injury and fatality investigations undertaken by the regulator. This concern has been expressed by the industry and by other stakeholders such as unions. Seventy-one per cent of submitters on the consultation document agreed that an enhanced set of procedures and protocols should be developed for WorkSafe investigations. We believe that an enhanced approach is needed to ensure:

- clarity for all parties around responsibilities during incident responses
- a comprehensive underlying cause analysis of the reasons a serious injury or fatality occurred
- effective communication with victims, their families, workers, crew and industry.

Clarity for all parties around responsibilities during incident responses, including joint responses

The WorkSafe website provides high-level information about what to do when a serious injury or fatality occurs. It provides a number for emergency services and advises also to contact WorkSafe. It also notes:

"It is a legal requirement not to disturb an accident scene until clearance is authorised by a health and safety inspector except in certain situations, including when persons or property are at risk, as provided for by section 26 of the Health and Safety in Employment Act 1992. If you require scene clearance or other immediate assistance from a health and safety inspector, please call 0800 030 040"[86].

There is no guidance in the Approved Code of Practice for Safety and Health in Forestry Operations (the Forestry ACoP) about managing a site where a person has been seriously harmed at work. The Review Panel has heard anecdotal feedback that suggests forestry contractors and crew bosses do not understand their responsibilities in relation to site preservation. Interference with the site can impact on an investigation and should be a matter dealt with in the prosecution decision-making process.

It was drawn to the Review Panel's attention that the site could be a crime scene. It may be that the serious injury or fatality is not just a matter to be dealt with under health and safety legislation. It may also be a matter to be dealt with under the Crimes Act 1961 or other legislation managed by the Police. In a case where a fatality is caused by an omission without lawful excuse to perform or observe any legal duty, for example, the Police may need to investigate and consider the possibility of manslaughter charges.

[86] http://www.business.govt.nz/worksafe/notifications-forms/accident-serious-harm, accessed 30 July 2014

As the forest block is often remote and isolated, in the case of a serious injury or fatality it is regularly the Police or other emergency services that arrive onsite first. Regardless, the multiple roles and interests of the Police and WorkSafe need to be considered in the approach taken to investigations[87]. The Review Panel understands that their working relationship is governed by a memorandum of understanding (MOU) and a schedule to the MOU.

The schedule to the MOU is due for renewal. This provides an opportunity for further, detailed agreement and alignment of approach between the various groups within the Police and WorkSafe. There should be an agreement that no matter which agency is the first responder when an accident occurs, the site and the investigation must be managed in a way that would enable both agencies to progress their investigations to prosecution where appropriate.

The establishment and sharing of good practice and minimum requirements for scene preservation and investigations between the Police and WorkSafe would be a real safeguard to the integrity of investigation and prosecution processes for both parties. It is our view that there is not enough detail in the current MOU or schedule. We also believe that greater clarification is needed about who is responsible for dealing with vehicle incidents on forestry roads. As a Review Panel we received multiple and conflicting responses on this matter.

Work-related deaths: A protocol for liaison

The United Kingdom introduced a detailed protocol in 1998 to emphasise the importance of working together to investigate thoroughly and to prosecute appropriately those responsible for work-related deaths. The signatories to the protocol now include the:

- the Crown Prosecution Service
- the police through their professional body, the Association of Chief Police Officers
- the Health and Safety Executive
- local authorities through their representative bodies
- the British Transport Police
- the Office of Rail Regulation
- the Maritime and Coastguard Agency
- the Fire and Rescue Services through their professional body, the Chief Fire Officers Association.

"Since its introduction in 1998, the protocol has become a tried and tested approach to effective liaison between the signatory organisations when investigating a work-related death. All eight signatory organisations recognise the need for investigating and prosecuting authorities to engage with each other and to share information and best practice. We appreciate that the public want to be confident that we are doing all that we can to co-ordinate our activities, and to cooperate with each other in the best interests of public safety and of those affected by work-related deaths".

Source: http://www.hse.gov.uk/pubns/wrdp1.pdf, accessed 5 September 2014

[87] Police have responsibilities under the Crimes Act 1961, the Policing Act 2008 and to the Coroner. Where there is an accident, Police general staff may attend. Responsibility for fatality investigations may fall on any one of a number of different groups, for example, the Criminal Investigation Bureau, Commercial Vehicle Investigation Unit and Serious Crash Unit. WorkSafe has responsibilities under health and safety legislation

Investigations must include an underlying cause analysis

Research conducted by WorkSafe and provided to the Review Panel notes that many incident reports during a period from 2007 to 2011 contained "no usable description of activity, initiating event or agents involved" and "few reports provided detail about the work process or operation at the time of the adverse event". With other reports, given the terminology used, it was not clear what process was being undertaken (for example, pruning undertaken as either a silviculture activity or arboriculture activity).

The good practice and minimum requirements that should be established between Police and WorkSafe should include the recording of enough details about an accident to support an underlying cause analysis of underlying factors that may have contributed to the injury or fatality. They should also include an enhanced approach to drug and alcohol testing that includes all parties on the site at the time the accident occurred.

It is not good enough to simply drug and alcohol test an injured or deceased worker. It may be that the worker was drugs free but that the foreman, the supervisor or crew members were under the influence of drugs and alcohol and this contributed to the accident. There is no place for drugs and alcohol on the forest block and the Police and WorkSafe can take a strong stance in this area. We believe that the Police and WorkSafe should work with the forestry industry to agree on a protocol for administrating non-invasive drug and alcohol tests on all parties where an accident occurs.

Enhanced investigation processes and underlying cause analysis should support investigations that span the supply chain. Investigations need to consider not just the role of the worker, crew and crew boss. They need to consider whether the forestry contractor, marketer, manager or owner met the "reasonably practicable" test in fulfilling their obligations to ensure safe workplaces and safe work. We do acknowledge, however, that there may be some challenges in taking an enhanced approach. Investigations and underlying cause analysis require the participation of all parties where an accident occurs.

Effective communication is essential

A further issue of concern to the Review Panel is the feedback received about communication with victims, their families, workers, crew and industry when an accident occurs and during the investigation and prosecution phase. We were saddened to hear that the wife of a deceased worker heard about his accident on Facebook. Access to smartphones and other communication devices on the forest block means that word travels fast. The Police and WorkSafe should work together with industry to ensure that there is appropriate initial and ongoing communication with all those impacted by a serious injury or fatality. There is also a need to consult with Māori to ensure the guidelines provide for appropriate tikanga. This is important to showing respect for the deceased and their whanau and communities.

We have heard WorkSafe described as a "black hole" and we have heard concerns from victims about the lack of communication from WorkSafe during their investigation and prosecution phases. We have been provided with examples of where victims have been forced into making Official Information Act 1992 requests to WorkSafe for information about their cases. There is no reason for this to occur.

Providing support for victims and their families was identified as an issue by the Independent Taskforce on Workplace Health and Safety (the Independent Taskforce). We share the concerns of the Independent Taskforce and would like to see their recommendation addressed. They noted:

"The Taskforce heard from a number of families affected by workplace deaths who felt poorly supported during exceptionally difficult periods in their lives. In particular, they often did not understand the roles of the different agencies involved, were not always kept informed of significant developments, and were left for protracted periods with no contact.

"Victim Support provides excellent services to victims of trauma, including emotional and practical support to some of those affected by workplace deaths and serious injuries.

"The Taskforce firmly believes that the new agency should work with Victim Support and other similar bodies to identify best practice for providing information and support to victims and their families, and to embed this into their practice. Consideration should also be given to cultural practices"[88].

The Review Panel is not aware that this recommendation of the Independent Taskforce has been implemented. We think it needs to be and should be progressed in response to this Review.

[88] http://hstaskforce.govt.nz/documents/report-of-the-independent-taskforce-on-workplace-health-safety.pdf, accessed 8 August 2014

WHAT WE LEARNT FROM THE CONSULTATION PROCESS

This section details what was learnt from the consultation process, including submissions on the consultation document, consultation meetings and the Forestry Worker Survey.

It is focused on the information that is relevant to the recommendations in this Final Report and is presented in sections and under headings in the same order as the discussion in Sections One through Four. Further information about the process followed in the Independent Forestry Safety Review (the Review), including the consultation process, is detailed below in the section entitled *The processes followed to undertake the Review* on page 114.

SECTION ONE: HOW TO DELIVER THE CHANGE REQUIRED IN THE SECTOR

RELEVANT FEEDBACK FROM THE CONSULTATION PROCESS

The feedback detailed below includes that received on the need for an advisory group and an intervention plan for the forestry sector. This feedback is directly relevant to Recommendations One and Two. Feedback relevant to the suggested action areas in the proposed Forestry Sector Health and Safety Action Plan is also detailed. It includes the feedback received on leadership and culture in the forestry industry, worker participation and representation, and data and information sharing.

The need for a Forestry Leadership Action Group

Forty-seven of the 58 submitters who commented on the option to establish an advisory group supported it. This included the Ministry of Business, Innovation and Employment (MBIE), the Council of Trade Unions (CTU) and First Union, along with approximately 15 forestry industry organisations and 19 private individuals. The organisations and stakeholders that were suggested as participants on the group included WorkSafe New Zealand (WorkSafe), the Forest Owners Association (FOA), Forest Industry Contractors Association (FICA), the Farm Forestry Association (FFA), Competenz (or trainer representatives) and worker representatives. Six submitters commented that the industry already operates groups for health, safety and training, and the FOA commented that the group should be industry-led.

The need for a Forestry Health and Safety Action Plan

There were 60 submitters that commented on the consultation document option that WorkSafe develop a forestry sector intervention strategy. All but six agreed with the option. One submitter noted that the Forestry Sector Action Plan 2010-2013 was out of date and needed replacing. Seven submitters mentioned that training should be an important component of any strategy. These submitters included the CTU, FFA, Competenz and three private individuals. The FOA commented that resources would be needed to support the strategy.

Safety leadership and culture

The consultation document asked stakeholders, "Do you agree that the lack of safety culture is a factor that contributes to serious injuries and fatalities on the forest block?" There were 56 responses to this question. Of these responses:

- 87 per cent (49 submitters) agreed or somewhat agreed with this question[89]
- nine per cent (5 submitters) disagreed
- four per cent (two submitters) did not know or did not state a preference.

Three submitters, including MBIE and WorkSafe, called for a reconsideration of the approach to industry leadership. WorkSafe and one forest management organisation called for greater safety leadership from the forestry industry. One submitter noted "there is not a lot that can replace good leadership and supervision backed up by sound health and safety systems. People management is learned skill; there is no unit standard for this".

Good safety culture was described in written submissions on the consultation document as being driven by, and part of, having good systems and processes, encouraging workers to speak out about unsafe behaviours and using safe equipment and machinery. Three submitters viewed good safety culture as being a responsibility that should be shared by owners, management and workers.

Concerns with the industry's attitude and approach to safety were evident in the consultation meetings held by the Review Panel. For example, a rule-breaking "she'll be right" culture was raised as a notable safety issue during the Rotorua, Gisborne and Nelson meetings. During these meetings culture was referenced at least 11 times on worksheets completed by stakeholders.

The consultation meetings also identified the need for safety culture to be promoted from the top down. Over 34 references were recorded on the critical role leadership plays in developing a safety culture. Reflecting the level of importance attached to safety leadership by stakeholders, the most frequent solution identified to address poor safety culture was for principals and crew bosses to lead by example and to support teams. This was mentioned in every consultation meeting, with 21 references being recorded.

The Review Panel's Forestry Worker Survey asked "How seriously do you think your boss takes health and safety at work?" Of the 293 respondents to the question, 209 stated very seriously (71 per cent). A further 67 respondents answered seriously (23 per cent).

Worker participation, engagement and representation

The consultation document asked "do you agree that a lack of worker participation and representation is an issue that is impacting on health and safety on the forestry block?" There were 50 responses to this question. Of these responses:

- 72 per cent (36 submitters) agreed or somewhat agreed with this question
- 20 per cent (10 submitters) disagreed
- eight per cent (four submitters) did not know or did not respond.

Of those who agreed with the question and provided further comment, two submitters indicated an absence of worker representation in management-level safety meetings and forums. By contrast, two submitters commented that there were, in fact, high levels of worker participation.

A lack of worker engagement and participation in health and safety management systems was raised in consultation meetings. Twelve references were recorded on the worksheets completed during the meetings. For example, in Gisborne concern was expressed about worker representatives not being properly trained or understanding the nature of

[89] Please note that where percentages are quoted some rounding may have occurred

their role. A concern raised at least twice by stakeholders was that worker representatives might also be accused by crews of "narking" should they report health and safety issues.

Five submitters on the consultation document commented that worker participation is critical to any successful efforts to improve the sector's poor safety record. These submitters included a group of workers who made a shared submission on the document. Three submitters on the consultation document noted that some good examples of worker representation exist, particularly where crew have designated representatives at management level.

First Union commented that the structure of the forestry industry and the geographical isolation of crews make it difficult to develop worker participation and representation models. Solutions to poor worker participation presented in the consultation meetings included: crews to participate collectively in safety matters; regional health and safety forums for workers; financial incentives for participation in health and safety initiatives; and appointing health and safety champions. Twenty-two references to these solutions were recorded on worksheets.

An enhanced approach to data collection and evaluation and information sharing

Forty-three of the 58 submitters who commented on Option 8 – Invest in research and information about the forestry sector – supported it. The consultation document's Option 14 – Share information about forestry sector serious injuries and fatalities in a timely manner – was also strongly supported. Over 90 per cent of submissions that commented on this option supported it. The level of support was well spread across the sector, including forest owners and managers through to private individuals. Two submitters who strongly agreed with the option noted that they currently struggle to obtain information about forestry incidents. Five submitters viewed the reporting of incidents as necessary to avoid repeating the same mistakes. Three submitters indicated that information should be thorough, including trend analysis and findings from court cases.

Although most written submitters thought Worksafe should produce and disseminate accident information, two submissions noted concern about WorkSafe's resourcing and capability to do the job. The FOA commented that "WorkSafe currently do not have the skill or resources and in some regions the understanding to produce this material". One submission also noted that some individuals working in forestry may be fearful of sharing information in case it is used in a prosecution against them.

There was similar industry feedback on information sharing recorded from the consultation meetings. Stakeholders noted that information gathered during accident investigations fell into a black hole and was not promptly disseminated across the industry to encourage learning. A lack of readily available information was referenced at least nine times. Solutions that made reference to WorkSafe providing more and better information, feedback, or communications were referenced by stakeholders at least 47 times.

SECTION TWO: CLEAR AND CONSISTENT STANDARDS TO SUPPORT SAFE WORK

RELEVANT FEEDBACK FROM THE CONSULTATION PROCESS

The feedback detailed below includes that received on options in the consultation paper that are relevant to the regulatory framework for forestry, including the Approved Code of Practice for Safety and Health in Forest Operations (the Forestry ACoP), and other best-practice materials. It also draws from the consultation meetings and the Forestry Worker Survey. A wealth of feedback was received and is presented in the same order of discussion as Section Two of this Final Report. It is relevant to Recommendations Three, Four and Five.

The need for forestry specific rules and prohibitions to be in regulations

Questions and options in the consultation document about the regulatory environment received the highest rate of response. There were 72 responses (65 per cent of all 111 submissions) to the consultation document's question "do you agree that the forestry sector could struggle to understand and implement the new legislation and regulations?" The level of agreement was largely proportionate across forest stakeholders from forest owners and managers through to forestry contractors, other organisations and private individuals. Of the 72 responses:

- 80 per cent (58 submitters) agreed or somewhat agreed with this question
- 17 per cent (12 submitters) disagreed
- three per cent (two submitters) did not state a preference.

Nine options were presented in the consultation document to address issues associated with regulatory reform or guidance. The highest levels of agreement were for options where regulatory reform or guidance could bring clarity and consistent practice. For example, the need for the government to engage the industry in the regulatory reform process (Option 1) received a high level of agreement – over 90 per cent. Options 2 and 3, for industry associations to encourage awareness of the proposed regulations and support persons conducting a business or undertaking (PCBUs) to collaborate and co-operate successfully, also received majority support – 70 and 90 per cent respectively.

Concerns with the regulatory framework for health and safety also featured during consultation meetings. During the meetings, issues related to the Health and Safety Reform Bill (the Reform Bill) were raised at least 38 times. A theme to emerge in these discussions was that the industry does not fully understand the implications of the Reform Bill's concept of PCBU (raised nine times). Concerns about awareness of the new legislation, particularly among small and farm forest owners, were raised 15 times.

Stakeholders also identified solutions to fix problems with the regulatory framework during the consultation meetings. For example, providing greater clarity on the PCBU concept and information and education programmes to support the Reform Bill's implementation were identified at least 23 times.

Supporting codes of practice, policies and procedures, and best-practice documents

The Forestry ACoP

The consultation document's Option 12, to review and update the Forestry ACoP, received majority support – 60 per cent. Submitters, including Future Forests Research and Ribbonwood New Zealand Limited, commented that the Forestry ACoP needs to outline good health and safety practice and include more information about new machinery and equipment such as winch-assisted and remote-controlled equipment.

At consultation meetings, discussions on the Forestry ACoP were similar to the feedback received on written submissions. On at least 22 occasions issues were identified with its limited scope and low level of specificity. Comments were also made about it being difficult to use. In contrast, the Forestry ACoP's quality was defended at least three times on worksheets completed by stakeholders.

During the discussions at consultation meetings a high number of stakeholders identified the need for the Forestry ACoP to provide greater clarity and certainty. A number of ways to do this were identified. They included clarifying directors' responsibilities, providing more information on the legislation and regulations, providing more specific 'how to' information, and more use of illustrations (diagrams/flow charts/sketches). Such solutions were identified at least 15 times on the worksheets completed by stakeholders. The need to review the Forestry ACoP with the help of forestry experts was stated at least five times.

Health and safety roles and responsibilities of persons conducting a business or undertaking

Option 19 of the consultation document sought feedback on mapping the forestry industry's supply chain to understand responsibility, risk and points of influence. Thirty-five submitters supported the option, including government agencies, forest owners and managers, the CTU, First Union and a range of other submitters. Eighteen private individuals supported the proposal. There were 11 submissions against the option. Three commented that the supply chain was already well understood. One commented that there was no evidence that the supply chain was contributing to the poor health and safety outcomes on the forest block.

Of those submitters who agreed with the option, one commented on the potential benefit of also mapping the legislative duties at each point in the supply chain. Another commented on the need look at risk mitigation through improvements to the supply chain process.

Supply chain responsibilities were also specifically raised 10 times in the consultation meetings and 12 further references were made to the need to specify responsibilities at all levels. The supply change was also discussed in meetings in association with issues around contracts in the industry. The need for contracts to detail joint planning responsibilities and health and safety responsibilities was recorded at least 10 times on the worksheets completed by participants. Thirteen references were made to the development of a standard contract. Forty-one written submissions were received in support of Option 20 in the consultation document – Develop a template contract with mandatory health and safety standards.

Risk and hazard identification and management

Seventy-nine per cent of submissions agreed that planning and hazard mapping is variable and impacting on health and safety, and there was a high level of support for the consultation document's Option 36 – Improve safety management systems for work on the forest block. Of the 53 submitters who responded to this question 80 per cent agreed. The level of agreement was proportionate across submitter types. One forest management organisation noted current variability in planning practices highlighting the need for consistent hazard mapping practice and zero tolerance for poor practice.

The importance of planning, issues associated with planning and recommended solutions featured in discussions at consultation meetings. They were specifically raised at least 58 times. As with the written submissions, there was concern expressed that planning,

including pre-operation hazard mapping, was not consistent. Daily hazard mapping was also specifically identified as an area needing improvement. Related concerns were also raised about a lack of skilled staff to do the mapping, the quality of daily tail-gate meetings, and a lack of communication between crew bosses and workers.

Stakeholders identified at least 74 times a range of ways to improve pre-operation hazard mapping. Two prominent and closely related solutions identified were to ensure stakeholder input and communication, and increase awareness of complete supply chain responsibilities. These solutions were identified at least 14 and 10 times respectively. Another prominent solution identified at least 10 times was for a standardised mapping tool to encourage greater consistency in practice.

Stakeholders also identified a range of ways to improve the quality of daily hazard mapping at least 46 times. The importance of good leadership and the need to document and communicate hazards were raised at least eight times each.

Forestry infrastructure

Of the 47 responses to the question "do you think poor infrastructure planning, design and construction is impacting on health and safety on the forest block", 70 per cent agreed or somewhat agreed. There was a common view expressed in written submissions that improved planning, design and construction of infrastructure, in combination with appropriate and well-maintained equipment and machinery, would help manage the significant health and safety risks associated with harvesting on steep terrain.

Concerns over the quality of roads, bridges and skid sites were raised at least 42 times during consultation meetings. Over half of these references (24) noted infrastructure as being not fit for purpose and/or being not constructed with enough lead time. Concerns with the lack of regulatory oversight with respect to infrastructure were raised at least five times.

The consultation document proposed three options to improve the quality of forestry infrastructure. All of these options proposed a tightening of regulatory control and oversight in the planning phase. The option most supported by forestry stakeholders was Option 33 – Setting mandatory standards for key infrastructure on the forestry block. Of the 48 submissions received on this option, 29 agreed (60 per cent). The FOA and FFA opposed options to tighten regulatory control and oversight. These stakeholders argued that an adequate set of standards and practices were already in place. Submissions both in support and opposed to Option 33 noted the practical difficulties of regulating standards for infrastructure due to variable geography on the forestry block.

A range of solutions to fix infrastructure issues were raised by stakeholders in the consultation meetings. Solutions were recorded on worksheets at least 42 times. Solutions making reference to planning and plans were raised at least 21 times. The need for owners, principals and contractors to plan collaboratively and in close liaison with consenting authorities was raised at least five times. As with the written submissions, a good number of references were made for industry to simply follow its own guidance: the New Zealand Forest Road Engineering Manual (the Manual). The need to follow the Manual was noted by stakeholders at least 12 times on the worksheets completed during these meetings.

Adverse working conditions

Eighty per cent of written submissions received agreed adverse working conditions impact on health and safety, although in responses to the Forestry Worker Survey, a reasonably high percentage of respondents (42 per cent) indicated that they did not stop for adverse weather conditions.

The response to the consultation document was proportionate across all submitter types. Submitters' descriptions of poor working conditions included: inadequate provision of training; low pay; pressure to reach targets; inadequate break time; long hours; one to two hours' travel to return to and from work; heat levels; heat exhaustion; lack of access to hydration; no toilets or hand-washing facilities; lack of shelter. Six submitters described poor working conditions as demeaning workers' sense of how they are valued as an employee.

A minority of submitters, including the FOA, disputed or caveated the prevalence of adverse working conditions. They argued that the majority of forest blocks do not have poor working conditions or disputed an employers' ability to control terrain and environmental conditions. They also referenced workers' out-of-work environments as contributing factors to accidents.

The issue of adverse working conditions, including a failure to stop or modify work in response to changing environmental conditions, was identified in the consultation meetings held by the Review Panel. Poor working conditions were raised at least 82 times in total in these stakeholder meetings. Along with stopping work when conditions are bad, the physical conditions on the forest block were discussed.

Solutions to adverse working conditions were identified at the consultation meetings. Solutions raised at least a total of 110 times by stakeholders included to:

- develop industry-accepted protocols for stopping work when conditions are bad
- better manage the impact of long hours
- improve the quality of employment agreements.

A theme to emerge with respect to working conditions was the need to use the Forestry ACoP to provide best practice guidance about how a range of adverse conditions, in particular weather conditions, should be managed. For example, the need for clear rules, guidelines and processes to decide when to stop work was identified at least 16 times.

Impairment

There was a high level of agreement (83 per cent) in written submissions that impairment such as fatigue, inadequate nutrition or hydration, and the presence of drugs and alcohol contributed to the industry's poor safety record. There were 48 responses to this question. Of the responses:

- 83 per cent (40 submitters) agreed with this question
- eight per cent (four submitters) disagreed
- eight per cent (four submitters) did not know or did not respond.

Three responses from the CTU, First Union and a forest management organisation commented on the danger of fatigue. The CTU and First Union commented on the need to separate the issue of fatigue from worker-induced impairment such as drug and alcohol use. Fatigue was indicated by these submitters as being caused by overwork, and they indicated that working time needed to be managed. One response from a contractor organisation noted that there should be no tolerance for drug and alcohol abuse. This was a comment that was frequently made to the Review Panel during the course of the Review.

Of those submitters who disagreed with this question, none gave any further comment.

Thirty-nine of 43 submitters on the consultation document supported Option 41 – Introduce mandatory standards for managing the risk of impairment. These submitters were from all the stakeholder groups, including government, forest owners and managers, forestry contractors, workers and worker representatives and others, including private individuals. There was support for a mandatory drug and alcohol testing regime.

Issues associated with impairment were also raised in discussions during the consultation meetings held by the Review Panel. Impairment, including fatigue from long hours of work, was raised at least 46 times on the worksheets completed by stakeholders. The impact of drug and alcohol dependency on worker impairment and crew culture was noted by stakeholders at least 10 times. On at least three occasions the scope to manipulate current industry drug testing regimes was recorded on the worksheets completed by consultation meeting participants. Solutions to issues of impairment often overlapped with solutions identified for addressing poor and adverse working conditions (detailed above).

In private meetings with forestry contractors and workers, the Review Panel was advised that workers who failed drug tests could continue to find work in the industry. Seventy respondents (24 per cent) to the Review Panel's Forestry Worker Survey reported that they knew people who came to work having taken drugs and alcohol.

Welfare facilities on the forest block

There was a high level of agreement from submitters that poor working conditions (including facilities) impacted on health and safety. The Review Panel's Forestry Worker Survey asked "Does your boss provide fresh drinking water on site at work?" One hundred and fifty-six survey responders (51 per cent) responded in the negative. The survey also asked whether workers "have shelter on site at work?" Seventy-seven per cent responded in the affirmative yet a large number of responses – 71 workers (23 per cent) – responded in the negative.

WorkSafe New Zealand's submission stated that "Working conditions for forest workers are often harsh, but sometimes unnecessarily so – it cannot be appropriate in 2014 for any workplace not to have a toilet!" The lack of such facilities on site was not a major feature of the discussions at public stakeholder meetings. When the lack of such facilities was raised by the Review Panel directly with workers a common response was there were other more important safety issues to address. Nevertheless, in response to the Forestry Worker Survey question "Would…use a portable toilet if one was provided close to where you work?" 144 workers (47 per cent) responded yes.

Machinery and equipment, including personal protective equipment and communication equipment

The consultation document asked "do you agree that the varying approaches to design and maintenance of machinery, personal protective equipment (PPE) and other equipment is impacting on health and safety on the forest block?" There were 48 responses to this question; 43 per cent of all 111 submissions. Of these 48 responses:

- 63 per cent (30 submitters) agreed with this question
- 27 per cent (13 submitters) disagreed
- 10 per cent (five submitters) did not know.

Although a clear majority of submitters agreed with this question, of all the consultation document's questions this one had the lowest level of support. Nevertheless, there was still a majority of stakeholders concerned with the design, modification, maintenance and use of new and existing machines, plant and equipment. In particular, submissions noted that mechanised harvesting in steep country was particularly dangerous and needed to be done with care and attention as to the selection and use of the machinery and the proper training of machine operators.

Submitters commented that in future the Forestry ACoP needed to outline good health and safety practice and include more information about new machinery and equipment, for example, winch-assisted and remote-controlled equipment.

Option 37 in the consultation document – Establish an industry work programme to support new technologies, including new PPE, and maintenance of equipment – was supported by 70 per cent of submitters. Thirty-two submitters noted the benefits to be gained through new technology and the role industry bodies and research organisations such as the FOA, FICA and SCION have in facilitating uptake of technology.

Opportunities and risks associated with machinery and equipment, and the quality of PPE, also featured in discussions during consultation meetings held by the Review Panel. These issues were specifically raised at least 41 times. Stakeholders told the Review Panel that mechanisation is significantly reducing the need for hazardous manual tree felling and breaking-out tasks. They also expressed some concern that the skill of felling and breaking-out in difficult terrain might be lost with increased mechanisation.

The need to use the latest technology and support its safe uptake across the industry via the development or update of codes of practice or standards, or best practice guidelines, was specifically raised at least 19 times in consultation meetings. Stakeholders also suggested that guidance on machinery and equipment needs to provide best practice advice on risk assessment, planning and organisation, and the training needs of operators. The need to ensure machinery, including modified machinery, is fit for purpose was raised at least 12 times as important.

Related to this topic, the need to ensure the workforce's training system continues to respond to changing technology was raised in consultation meetings. For example, the need for machine operator training was raised at least 16 times. One solution recorded was to establish a machine training facility that workers from across the country could access for short periods of intensive practical training. This was raised at least three times.

Concern about the quality of PPE was raised at least 15 times and spanned problems related to its effective selection and use, affordability, quality and maintenance. The need for effective PPE for workers is recognised by the industry. The solution most supported was to establish an industry standard for PPE and clothing. This was recorded at least six times.

The need for good emergency planning, training and regular drills was also identified by stakeholders in consultation meetings at least 32 times. The use of two-way radios, the deployment of radio frequency identification, emergency locator beacons and GPS technology were all identified by stakeholders as important safety and communication technologies. The need for these technologies was identified at least 10 times in discussions on emergency response planning.

Minimum employment conditions

The consultation document stated that employment agreements and contracts in the forestry industry are unclear and sometimes absent. It also stated that many agreement and contracts provided no detail on accounting for travel time and stopping work in adverse conditions. Responses to the survey suggest variability across sector in managing stop-work provisions. Of the 306 workers who answered the question "Do you stop work for bad weather?" 176 (58 per cent) answered no. When asked, "Do you get paid when work stops for bad weather?" 160 workers (51 per cent) answered yes. One hundred and twenty-five (40 per cent) answered no and 28 (9 per cent) answered I don't know.

The consultation document stated that a lack of understanding of minimum statutory entitlements impacts on health and safety. The survey asked "How many breaks do you usually take during the day at work?" Of the 315 responses to this question, 261 (83 per cent) answered two breaks or less. The survey also asked "How much time in total you take for breaks during the day?" Of the 316 workers

who responded to this question 178 responded (56 per cent) up to 30 minutes or less.

Three options were presented in the consultation document to address issues associated with working conditions. The highest level of agreement (over 80 per cent) was with Option 30 – Improve employment agreements and contracts and ensure all forestry workers have them. There was very little written input, therefore only limited analysis of responses to the three questions under the option is possible. Four submitters suggested that a model employment contract template should be developed by the regulator with advice and leadership from the industry. The most common comment made by seven submitters was that having an employment agreement or contract is a legal right.

The need to improve the quality of employment agreements was also a theme to emerge during discussions at consultation meetings. The need was raised by stakeholders at least 38 times. A range of ways this could be done was noted on worksheets completed by participants. The most recorded option was for FICA to lead the development of standard industry employment contract. This option was identified at least seven times.

Tailor information for the industry in a Forestry Safety Manual

Stakeholders were asked "do you agree that the guidance about safe work practices in forestry safety needs improvement if it is to ensure health and safety in the forestry sector?" There were 65 responses to this question, 59 per cent of all 111 submissions. Of these responses: 88 per cent (57 submitters) agreed with this question

- nine per cent (six submitters) disagreed
- three per cent (two submitters) did not know or did not state a preference.

Overall, the level of agreement was proportionate across forestry stakeholders. However, in comparison with other questions, private individuals agreed the most with this question. Private individuals commented on the need for current guidance to be brought into one place in an easy-to-read format. For example, one individual stated: "MBIE needs to create supporting resources – written material, website, webinars, e-learning, social media etc. which explain, in plain language, the new legislation to the forestry sector stakeholders. This must be designed to meet the learning styles and educational level of the respective target audiences." The FOA, FFA and SCION also called for forestry guidance to be brought together into a simple format.

The options presented in the consultation document to improve the quality of information available to the sector received clear majority support. Option 11 – Develop an online forestry sector information portal – was supported by 70 per cent of submitters. A high level of support for good and timely information from the regulator was also a feature of discussions at consultation meetings. For example, solutions that made reference to information provision, feedback, or communications from WorkSafe were referenced on completed worksheets at least 47 times.

SECTION THREE: ATTRACTING, TRAINING AND RETAINING WORKERS

RELEVANT FEEDBACK FROM THE CONSULTATION PROCESS

The feedback detailed below is relevant to attracting, training and retaining workers in the forestry industry and to Recommendations six, seven and eight. The key question put to stakeholders in the consultation document asked "Do you agree that the forestry sector's training, qualifications and competency framework is not fit for purpose?" There were 61 responses to this question, 54 per cent of all 111 submissions. Of the responses:

- 66 per cent (40 submitters) agreed or somewhat agreed with this question
- 26 per cent (16 submitters) disagreed or somewhat disagreed
- eight per cent (5 submitters) did not know or did not state a preference.

Of those submitters who agreed and made further comment, six referred to the need for consistent, comprehensive, up-to-date and fit-for-purpose training. They included WorkSafe, FOA and the Iwi Leadership Group. A forest owner/forest management company commented that "Training is ineffective: The industry suffers from ineffective training resources. Job applicants and entry-level workers who have recently completed training programs lack the skills to perform their jobs safely and effectively".

The two education sector organisations that made written submissions disagreed with the question in the consultation document. Competenz expressed unhappiness with the combining of the three points – training, qualifications and competency – in the question. It noted that the forestry industry qualifications have recently been reviewed and improvements made based on input from the sector.

Issues associated with training were raised 175 times in the consultation meetings, with 191 references made to solutions to address the issues. In total this makes 366 recorded references.

The need for a workforce strategy

The forestry industry's failure to attract and retain workers was noted in the consultation meetings held by the Review Panel. There were discussions in Christchurch, Rotorua, Whangarei and Gisborne on raising the profile of the industry, providing better education and training, and better pay to encourage workers to join the industry. Eleven references were recorded on the worksheets completed by participants.

Turnover of workers was raised at least four times in the consultation meetings. Submitters on the consultation document, representing a range of stakeholder groups, indicated that they saw smaller companies as less likely to be able to give workers a sense of job security because they are more impacted by downturns in the industry. A related issue of casual and transient workers impacting on health and safety outcomes was discussed at all of the consultation meetings. It was referenced as an issue at least 18 times in worksheets completed by participants and was a particular focus of discussions during the Gisborne consultation meeting. A common solution discussed was to simply ensure casual workers were either competent or in training. However, concern was also expressed about the value of investing in training for workers who are likely to move on.

Concerns about access to trainers were raised in all of the consultation meetings, with at least 32 references recorded. A number of submitters on the consultation document indicated that training should be delivered by experienced, knowledgeable trainers. Two submitters noted that such trainers are difficult to find and some forest companies employ their own.

Feedback from the consultation meetings also highlighted the need for the industry to provide a viable career for trainers and to ensure that they were paid appropriately. These issues were noted at least 21 times on the worksheets collected from stakeholders. Feedback from the consultation meetings in Gisborne and Nelson suggested that forest management companies could provide a pool of trainers. This was mentioned at least four times. Similarly, discussion at the Nelson meeting focused on the specialised training needed in the forestry industry. This need was recorded 15 times on worksheets.

The need for mandatory competency standards

Fifty-six written submissions were received on Option 15 – Prescribe competency standards for safety critical roles and tasks. Forty-six submitters (82 per cent) agreed with the option. They represented stakeholders from across the forestry sector. Three submitters, including Competenz, disagreed and pointed to the existing voluntary unit standards and national certificates.

Seven submitters on the consultation document commented that training has to have a strong grounding in practical experience. Three written submissions viewed on-the-job training as essential because they felt training providers do not currently train students to a sufficient level of competency to enter the workforce. It was noted that competency should be skills-based and not a bureaucratic exercise.

The consultation meetings saw 191 references made to solutions to address the issues with the training system. Of these, the need for some form or element of mandatory or compulsory training was raised at least 25 times. Significant concerns with the type, amount and quality of training for forestry workers was a key feature of feedback. It was specifically raised at least 83 times. In particular, there was concern expressed about the practicality of training – "too much theoretical crap". This was raised at least 30 times. As noted in Section Three, a desire for more job specific training was also expressed by workers in the Forestry Worker Survey.

Reflecting the high level of concern with the industry's training system, the greatest amount of feedback focused on changes to the curricula and the amount and quality of training provided. In some feedback, training was described as "a unit-gathering exercise - units are irrelevant". This sentiment was echoed at least five times on the worksheets completed by meeting participants. Solutions identified by stakeholders included the need for a greater focus on training for task with workers being supervised until they were competent.

Feedback also highlighted the need for specialised trainers, training and training simulators, along with mentors for workers under supervision. At least 26 references were made on worksheets to these ideas. Similar feedback was referenced in five written submissions.

The need for better and more regular assessments of competency

The issue of the quality of assessments was raised at least 36 times during the consultation meetings. Concern was expressed about the availability of assessors and the consistency of their approach. The Review Panel also heard concerns about trainers also being assessors and assessing their own trainees. A solution referenced eight times in consultation meetings was to ensure better moderation of assessors.

Written submissions did not address the issue of assessments in any detail. The WorkSafe submission noted that employers have a duty to monitor employees' work practices to ensure skills are maintained and safe work practices are consistently used. The MBIE submission made a similar point. One submitter commented that if there is evidence of poor assessment then Competenz should be provided with information about this and take action.

The concept of reassessment of competency was raised in all of the Review Panel's consultation meetings except Balclutha. The need to reassess and/or recertify previously trained workers on a regular basis was raised at least eight times in these meetings. Three written submissions commented that reassessments are needed to ensure that skills are retained and updated. This included the FOA's submission, which suggested that reassessment should not be required for basic tasks and should be implemented only for specific safety-sensitive jobs. This sentiment was echoed by two other submitters. A group of workers making a shared submission commented that recertification should not be mandatory, but that workers should receive updates whenever a change is made.

Use curriculum and funding opportunities to support improvements

Forty-seven written submissions were received on Option 18 Initiate a regulator-led curriculum and funding policy review. Thirty-seven (79 per cent) of submissions were in agreement. Those in agreement included forest owners, managers, forestry contractors, workers and others. The Competenz submission noted the need to deal with curricula and funding issues separately. Four of the written submissions identified a specific need to focus on funding.

The option in the consultation document with the highest level of agreement under the topic of training was Option 16 – Ensure that safety-critical training and development is paid work time. Fifteen submitters, including two forestry workers, commented that training should occur in paid work time, whether during the week or a paid weekend. One private individual commented that "workers won't participate if not being paid". A contractor organisation commented that "this is critical and is a fundamental change we desperately need". In the consultation meetings there were seven references to more flexible forms of training, including e-learning, Saturday classes, block courses and providing free access to training materials.

Thirteen submitters were of the view that forest owners and managers should take the cost of training into account in the rates that they pay forestry contractors and crews. Views on whether or not this is currently the case were mixed. Six submitters commented that it already was the case. However, feedback from the consultation meetings included 13 references to the need for contracts to specifically reference training costs. Smaller companies were seen as less able to provide adequate training and meet compliance requirements because the pressure to make money means harvesting is prioritised over other activities.

Public funding was frequently raised as a concern in the consultation meetings. There are five references to the industry training funding model incentivising assessors passing trainee workers rather than maintaining quality standards. There are also six instances where variability in the approach to funding training and assessment was raised. The need for a funding model review was called for at least six times. When considering the question of who pays for training, the meeting records include six references to industry taking a lead with government support. There are also nine references recorded about using the Forest Growers Log Levy for training and not just research.

SECTION FOUR: VERIFICATION AND ENFORCEMENT OF STANDARDS

RELEVANT FEEDBACK FROM THE CONSULTATION PROCESS

This section details consultation feedback relevant to Recommendations nine, 10 and 11, and includes feedback on the options for a contractor certification scheme.

The need to consider an contractor certification scheme

Option 22 of the consultation document asked stakeholders a number of questions about an industry-wide certification scheme. The key question was about whether the forestry industry needed such a scheme. Forty-six of the 56 submitters who responded to this question were supportive. The submitters included four industry bodies, at least eight forest owners and/or managers, two forestry contractors, a research organisation and 20 private individuals. The WorkSafe submission noted that, "A formalised accreditation process could help identify best practice skills and competency development. WorkSafe could support the sector to explore the role that accreditation could play in driving health and safety improvement".

Seventeen submitters on the consultation document were of the view that a certification scheme should be regulator-led. These submitters included Hikurangi Forest Farms, Ernslaw One and Ribbonwood New Zealand Limited along with the New Zealand Institute of Forestry and SCION. Twelve submitters suggested the scheme should be industry-led. Only two submitters suggested that an independent body would be needed to run the scheme. This included the FOA, which expressed concern that WorkSafe would not have the resources required.

When asked about the application of the certification scheme, submitters on the consultation document were most supportive of a contractor scheme (12 submissions). Some of the other options presented were for forest managers and log transporters to be certified. The need to certify safety-critical roles also came up in submitter feedback on this option, including from the FOA and Competenz.

With the exception of FICA's submission, the written submissions did not include detailed feedback on what would make an effective certification scheme. The option of a certification scheme was not supported in Federated Farmers' submission, which suggested it would come at a cost but may not add value. A similar view was also expressed by MBIE. Another submitter commented that it should be left to forest owners and managers to check the experience of contractors.

The idea of a certification scheme was also discussed in the consultation meetings in Christchurch, Rotorua and Gisborne. Reference to it was recorded five times on the worksheets completed by participants.

The need for better regulatory oversight

The consultation document specifically asked: "Do you agree that lack of regulatory oversight and information impacts on health and safety in the forestry sector?" There were 76 responses to this question; 68 per cent of all 111 submissions included a response. Of these 76 responses:

- 87 per cent (66 submitters) agreed or somewhat agreed with this question
- eight per cent (six submitters) disagreed
- five per cent (four submitters) did not know or did not state a preference.

Those who agreed with the question commonly referred to deficiencies in enforcement with too few inspectors, inspectors lacking knowledge, and regional inconsistency in inspectors' practice. In their written submission, Blakely Pacific Limited commented that it has "been left up to the industry to self-regulate", while Tapuika Iwi commented that due to the high rate of

injuries and fatalities "the industry has lost the right to self-regulate". Of the submitters who disagreed with the question, two commented that the lack of safety culture, not regulation, had the biggest impact on health and safety.

Concerns over the lack of regulatory oversight were also a topic of discussion at the consultation meetings held by the Review Panel. Improving the performance of the regulator was viewed as more important than work to improve the quality of the legislative framework for health and safety. Of the 199 references to solutions with respect to the law and WorkSafe, 160 (80 per cent) focused on proposals to improve the performance of the regulator. Of these the most referenced proposals were:

- provide more inspectors with forestry experience and expertise – 27 references
- be proactive by undertaking educational and enforcement inspections – 20 references
- be consistent – 17 references
- make hazard alerts more available – 14 references
- provide information about compliance, best-practice guidelines and codes of practice – 11 references.

The need for an enhanced approach to workplace assessments

Fifty-seven submitters commented on Option 9 in the consultation document. Fifty-four of them supported this option's call for a comprehensive set of indicators to support workplace assessments. They included industry organisations, forest owners, managers, forestry contractors, unions, workers and private individuals. Only three submitters did not support the option.

There was a range of views expressed on the possible indicators that could be used. First Union and two other submitters agreed with the list presented in the consultation document. Six submitters suggested that levels of training should be assessed. Other suggestions included assessing work practices, communication processes and technology and hazard identification. A concern expressed by one submitter was that assessments may become tick-box exercises. Stakeholders at the Balclutha and Rotorua meetings described WorkSafe's existing paperwork as "aggravating".

The need for an enhanced approach to workplace investigations

There was unanimous support for the consultation document Option 10 – Develop enhanced procedures and protocols for investigations. The 40 submitters in support of this option included the FOA, FFA, forest owners, managers, forestry contractors, unions and a large number of private individuals. Submitters referenced the need for root-cause investigations by trained inspectors and investigators.

Stakeholders raised many issues around the consistency of WorkSafe's approach to assessments and investigations during the consultation meetings. These issues were recorded approximately 34 times on the worksheets completed by participants. Related concerns recorded included not enough inspectors (21 references recorded) and not enough visits (4 references recorded). The need for more visibility on the forest block from WorkSafe was recorded eight times.

Effective communication is essential

In their submissions, the CTU and First Union called for the regulator, industry and other relevant stakeholders to develop clear protocols on communications and information provision to the next of kin of seriously injured and deceased workers. The First Union submission noted the additional hurt for grieving families and friends caused by culturally insensitive treatment of the dead, bodies being returned to families in very bad conditions, and a lack of communication and information from the industry and authorities regarding families' rights in subsequent accident investigations and Coroner's hearings.

SCOPE OF THE INDEPENDENT FORESTRY SAFETY REVIEW

PURPOSE OF THE INDEPENDENT FORESTRY SAFETY REVIEW

The purpose of the Independent Forestry Safety Review (the Review) was to identify the likely causes of and contributing factors to the high rate of serious injuries and fatalities in the New Zealand forestry industry and recommend a package of practical measures to improve safety performance.

The terms of reference (ToR) are appended to this Final Report. They are broad. They provided a mandate to look across the forestry sector and its supply chains. They enabled a multi-layered approach to be taken to deliver the recommendations detailed in this Final Report. The Independent Forestry Safety Review Panel (the Review Panel) is satisfied that we have met the ToR to the best of our abilities, considering the balance of our timeframe and resources against the need to proceed with some haste. The rate of injuries and fatalities has decreased this year – that is fortunate – but it does not mean than change is not required across the sector and it does not mean that change should not start now.

As noted elsewhere, the Review has been about more than understanding the immediate causes of injuries and fatalities. The sector knows the immediate causes of harm. This is why there has been such a focus on tree felling and breaking-out in both Government and industry initiatives to address injuries and fatalities. If we focused just on tree feeling and breaking-out we would have simplified the issues impacting on health and safety on the forest block. Regardless, given the broad ToR and the range of issues identified, it was necessary for us to prioritise our areas of inquiry and limit the scope of the Review.

The result of the prioritisation process is that not every issue identified during the course of this Review has been addressed in this Final Report to the fullest extent. It would not have been useful to the sector – to government, industry, workers or their representatives – for our Final Report to contain 40, 60 or 100 recommendations. This does not mean that the options for change we identified in our consultation document were not viable, or would not make a difference. It does mean that we think the sector should focus its energies on putting in place the systems, processes, standards and guidance that will drive long-term, system-wide and integrated changes.

THE ISSUES BEST ADDRESSED BY OTHERS

As noted in our consultation document, we also identified a range of health and safety issues in the forestry sector that may be best addressed by others. They include:

- helicopter logging, which is an area of responsibility for the Civil Aviation Authority and an area in which the Review Panel has not identified recent serious injuries or fatalities
- transportation of logs on public roads, which is the focus of the Ministry of Transport, New Zealand Transport Agency, New Zealand Police, and Log Transport Safety Council
- safe storage and transport of logs at ports, which is the responsibility of WorkSafe New Zealand (WorkSafe), Maritime

New Zealand and the various port authorities across New Zealand

- long-term occupational health issues that may affect forest workers as a result of the nature of their work – WorkSafe is responsible for considering occupational health and safety
- rehabilitation and return to work of injured workers, which is a responsibility of the Accident Compensation Corporation (ACC).

The Review Panel encourages those working in these areas to continue with their valuable contributions to prevent serious injuries and fatalities in our forests and within the forestry industry.

THE RECOMMENDATIONS MUST BE FIT FOR IN NEW ZEALAND

The Review Panel was asked to make comparisons with other countries and other safety-critical sectors (such as mining). Information was gathered about international best practice in the forestry sector and, in particular, the work of the British Columbia Forestry Safety Council (the BC Safety Council)[90]. The BC Safety Council's approach of "Unsafe is Unacceptable" is echoed throughout this Final Report and many of the recommendations for change have parallels to those outlined by the Forestry Safety Task Force[91].

It is important to remember, however, that while coastal forestry operations in British Columbia might involve similar terrain to New Zealand, the ownership structure of the sector is very different. New Zealand's plantation terrain and ownership structure also differs to that found in many European forestry sectors. This has necessitated an approach that is focused on recommendations that are fit for purpose for New Zealand. That approach includes a focus on leadership and culture for those engaged in the sector. This draws on the experience of the Canterbury rebuild and, for example, the Business Leaders Health and Safety Forum.

The recommendations related to regulations and to setting standards in approved codes of practice draws from the legislative framework set out in the new Health and Safety Reform Bill (the Reform Bill). The Reform Bill is based on the Australian model health and safety law. It has a focus on both risk and hazard management. This will require a new approach from the forestry sector and provides a great opportunity for positive change to be implemented alongside the new legislation. The approach also draws from the work of the Royal Commission into the Pike River Mining Disaster (the Royal Commission) which recommended better regulation of the mining sector.

Section Four of our report contains recommendations to explore a forestry contractor certification scheme and for WorkSafe New Zealand's workplace assessments and investigations. These recommendations are focused on what needs to change in the New Zealand context. The supply chains in the forestry industry in New Zealand are more complex than any other we identified. It is clear that the approach taken to implement the contractor certification scheme will need to take account of that fact. It should also seek to learn from work being undertaken by the BC Safety Council to review its certification scheme.

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[90] http://www.bcforestsafe.org, accessed 7 June 2014

[91] http://www.bcforestsafe.org/files/council-04-01-01_task_force_report.pdf, accessed 7 June

THE PROCESSES FOLLOWED TO UNDERTAKE THE REVIEW

The processes followed to undertake the Independent Forestry Safety Review (the Review) can be grouped into three stages. These are the:

1. issues identification stage
2. consultation stage
3. final reporting stage.

At each stage, the Independent Forestry Safety Review Panel (the Review Panel) worked to be able to demonstrate a fair, independent and open process that would stand up to scrutiny. We have done this. A broad range of views was sought, even where this led to discomfort by the Review Sponsors. We spoke with organisations and individuals across the forestry industry supply chain. The Review Panel sought out expert advice and analysis. The high level details of subject matter expert reference group participants that we engaged with are included in this report. We have also included a list of the submitters on the consultation document.

The Review Panel was also able to make submissions on the Health and Safety Reform Bill and the General Regulations to support the new legislation[92]. We made a submission on Playing By the Rules, a Ministry of Business, Innovation and Employment (MBIE) consultation on compliance with employment standards. We also submitted on the WorkSafe New Zealand (WorkSafe) review of the Approved Code of Practice for Safety and Health in Forestry Operations.

The submission processes enable to us to make recommendations to Government outside this Final Report. In all instances we have agreed that our submissions could be made public. Not all had been published at the time of writing this Final Report but they should be available online in the future.

THE ISSUES IDENTIFICATION STAGE

THE ESTABLISHMENT OF KEY THEMES TO PROVIDE DIRECTION AND FOCUS

The Independent Taskforce on Workplace Health and Safety (the Independent Taskforce) formed a view that there were three key features which "combine together within a workplace to determine the workplace's safety culture and collectively impact on the health and safety outcomes for the workplace"[93]. In summary, these features relate to:

- work organisation
- the workplace
- people in a workplace.

The Review Panel used the Independent Taskforce's framework to create work streams for the issues identification stage of the Review. In our consideration of the issues we also recognised that the legislative and regulatory environment and role of the regulator were essential to any investigation of health and safety. This provided a fourth theme for the Review Panel to explore.

[92] http://www.parliament.nz/resource/en-nz/50SCTIR_EVI_00DBHOH_BILL13016_1_A389354/a84fcc7a4934c48f72cdec5fd488ec7968aced02, accessed 25 July 2014

[93] http://hstaskforce.govt.nz/documents/Consultation_document.pdf, accessed 27 February 2014

ENGAGEMENT WITH STAKEHOLDERS AND SUBJECT MATTER EXPERTS

The Review Panel used the four key themes in a stakeholder workshop in Rotorua. The workshop was held to build contacts and relationships. We sought advice from those in the room about who should be involved in the Review and built an ever-increasing stakeholder list. At the time of delivering this Final Report, we have around 1,000 contacts and have personally engaged with approximately 8% of the forestry industry.

The Rotorua workshop also helped the Review Panel to form an early view on the factors which had an impact on health and safety in the forestry sector. Our initial understanding of the issues was built upon in meetings with workers and their representatives, industry, government agencies, ministers, members of Parliament and other stakeholders. Meeting with a range of organisations and individuals helped to provide direction for the issues identification stage of the Review.

The use of reference groups

A series of reference groups were set up to support the Review. They were made up of representatives from the Review Sponsors, government agencies, worker representatives and other subject-matter experts. They provided input into a series of issues papers both via email and in one or more meetings. The groups commented on the options that were developed for the consultation document. They were used to test the Review Panel's understanding of the issues.

The Review Panel found it hard to engage directly with workers during the issues identification stage. This was due to the remote and isolated nature of their work. Worker engagement was made a focus for the consultation phase.

The Review Panel was also privileged to meet some families of deceased workers during the issues identification stage of the Review. This provided a very personal reminder about the importance of the Review – to save lives. The feedback provided by the families informed the issues and options for change in the consultation document and the recommendations in this Final Report.

GATHERING AND REVIEWING A WEALTH OF INFORMATION

Our stakeholders and subject-matter experts provided us with a wealth of information to consider during the issues identification stage (and following stages of the Review). Data was also provided by the Review Sponsors and by WorkSafe, the Accident Compensation Corporation (ACC) and Statistics New Zealand. We thank all these agencies for their input. Regardless, the Review Panel was surprised to see how little data was systematically captured on the underlying issues causing serious injuries and fatalities, and on where in the industry they were occurring – in corporate controlled forests or small and farm forests. We have not focused on distinguishing between these segments of the industry for this reason.

Along with data, the Review Panel reviewed research reports and PhD theses. WorkSafe provided us with a number of studies of accident investigation report findings. We also considered the findings and recommendations of Coroners' inquests into fatal accidents.

With the support of officials in MBIE, WorkSafe and from the Review Sponsors we also studied international experiences of health and safety in the forestry industry. Where appropriate we have made comparisons with other legislative and regulatory frameworks and best practices in this Final Report.

THE CONSULTATION STAGE

THE CONSULTATION DOCUMENT

The Review Panel produced a lengthy consultation document to provide a mechanism to feed into the Review. It was broken down into nine key sections that included:

- the issues, each accompanied by a single key question for response by submitters
- options for change
- questions on the options.

The first issues addressed were those resulting from the changing legislative environment. The last issues were those related to impairment: fatigue, inadequate nutrition and hydration, and drug and alcohol use. The system-wide approach to the consultation document was consistent with the Review Panel's belief that change has to occur right across the supply chain to improve health and safety outcomes on the forest block. A list of the questions in the consultation document is at Options and questions included in the consultation document on page 120.

THE PROCESS USED FOR GATHERING PUBLIC FEEDBACK

The consultation document was sent to all stakeholders on the Review's contact list and all media contacts to ensure widespread distribution and reporting of the consultation phase. The document and a summary document were made available to download from the www.ifsr.co.nz website. The summary was replicated online to enable submitters to use an online form to make a submission to the Review. Microsoft Word submissions were requested to enable easy analysis but submissions were welcomed in any form.

The consultation document was lengthy and contained 43 options for comment. Because it was important that people at all levels of the forestry sector were able contribute without reading the document, the Review Panel held targeted stakeholder meetings in key regions across New Zealand. They included:

- Balclutha on Thursday 12 June
- Christchurch on Friday 13 June
- Rotorua on Wednesday 18 June
- Whangarei on Friday 20 June
- Gisborne on Monday 23 June
- Nelson on Wednesday 25 June.

The meetings were held to ensure there was face-to-face engagement with stakeholders. To further enable this, the Review Panel up specific meetings with contractors and workers in the regions. It was important that the worker voice was heard; it is largely absent at a government and industry level.

The Review Panel was clear that it was interested in the views of stakeholders on the options and wanted answers to the questions posed. One hundred and eleven written submissions on the consultation document were received. The Review Panel also received 335 submissions on a simple survey designed to collect information from forestry workers to feed into the Review.

WHAT WAS LEARNT FROM THE CONSULTATION

The different consultation methods used enabled the Review Panel to gather many perspectives and a wealth of information on health and safety issues and possible solutions. All of the feedback gathered via the written submissions on the consultation document, Forestry Worker Survey and our consultation meetings has been critical to developing the recommendations in this Final Report.

A robust consultation process should not be confused with a process for ensuring consensus. The Review Panel is independent, as are all our stakeholders. This means that the recommendations in this Final Report may not be supported unanimously across the forestry sector. We are, however, confident that our recommendations for change are practicable and will be supported by a clear majority. This confidence is based on the high level of engagement in the review process and the high level of stakeholder agreement on the issues and solutions contained in the consultation document.

A high level of stakeholder engagement

From the start of the Review we have been privileged to experience a high level of engagement by the Review Sponsors, from government agencies and ministers and members of Parliament. We also benefited from engagement with a range of industry stakeholders: forestry contractors, workers and their representatives, training providers, researchers and research organisations. Alongside the 111 written submissions, attendance at the public and private contractor and worker consultation meetings exceeded the Review Panel's expectations. In the course of these meeting we met approximately 544 stakeholders from across the forestry industry supply chain. We had face-to-face contact with approximately 8 per cent of the people employed in forestry and logging.

A high level of stakeholder agreement

The high level of stakeholder agreement with the issues identified in the consultation document was evident in both the written submissions and during the discussions at consultation meetings. There were no issues identified that stakeholders did not, by majority, agree were contributing to poor health and safety outcomes on the forestry block. For example:

- a lack of safety culture contributing to poor outcomes – 87 per cent support
- a lack of regulatory oversight and information contributing to poor outcomes – 86 per cent support
- impairment impacting on safety – 83 per cent support
- adverse working conditions impacting on safety – 80 per cent support
- concerns with understanding the new legislation and regulation – 80 per cent support
- variable planning and hazard mapping – 79 per cent support
- a lack of worker participation and representation – 72 per cent support
- variable infrastructure – 70 per cent support
- a training system that is not fit for purpose – 65 per cent support
- varying approaches to the design and maintenance of equipment/machinery/PPE – 62 per cent support.

Based on the written feedback, and a similar level of agreement in discussions recorded at the consultation meetings, the Review Panel is confident that we have identified the key underlying factors and issues influencing health and safety in the forestry industry – as understood by the industry itself. Supporting this assessment is the level of agreement on these underlying factors across the forestry supply chain; from forest owners and forest management companies through to forestry contractors, workers and their representatives.

There were, of course, differences of opinion about the issues. However, it is important to note that analysis of submissions showed no significant divergence of views on the main issues by submitter type. In other words, there was no major difference of opinion between forest owners, managers, forest contactors or workers and their representatives. Where differences were expressed they have been noted in the What we learnt from the consultation process section.

The consultation document identified 43 options for change in the forestry sector. Feedback on the options was provided in written submissions. Stakeholders who attended the consultation meetings also commented on these options. For example, issues associated with training alone were raised at least 175 times in the consultation meetings, with 191 references made to solutions to address the issues. In total this makes 366 recorded references related to training made in the consultation meetings.

This example illustrates the high level of stakeholder engagement in the consultation process. It also demonstrates the wealth of information available to the Review Panel in determining the recommendations in this Final Report.

A high level of stakeholder agreement with the options identified in the consultation document was the further theme to emerge from the consultation process. Again this was evident in both the written submissions and during the discussions at meetings. All of the recommendations we are making received clear majority support. The level agreement with key options is summarised below:

- the need for a leadership/advisory group – 81 per cent
- the need for a forestry sector intervention strategy – 90 per cent
- investment in research and information about the forestry sector – 74 per cent
- sharing information about forestry accidents in a timely manner – over 90 per cent
- regulatory reform or guidance to bring greater clarity and consistency[94]– over 70 per cent
- reviewing and updating the Approved Code of Practice – 60 per cent
- improve safety management systems – 80 per cent
- setting regulated standards for key infrastructure – 60 per cent
- improve the clarity of employment contracts and ensure all workers have them – 80 per cent
- regulated competency standards for safety critical roles – 82 per cent
- a review of curricula and funding policy – 79 per cent
- implement an industry-wide certification scheme – 82 per cent
- the need for better regulatory oversight from the regulator – 86 per cent
- the development of a comprehensive set of indicators to support workplace assessments – 94 per cent
- develop enhanced procedures and protocols for accident investigations – 100 per cent.

In addition to the high level of support for the options identified by the Review Panel, a number of other themes were identified in the analysis of submissions. The importance of planning at all stages of forestry operation was one of these; the importance of planning was central to discussions regarding infrastructure (roads, bridges, and skid sites) and was also seen as key to developing consistently safe systems of work. With respect to the latter, good pre-operations planning and hazard identification and mapping were emphasised by stakeholders as safety-critical tasks that must be done and done to a high professional standard.

Differing resources and capabilities of corporate-controlled and small and farm forests was an issue often commented upon by stakeholders. However, as noted elsewhere, the Review Panel has not found any conclusive evidence that highlights either segment of the industry as a key concern due to the rates of serious injuries or fatalities; injuries and fatalities are occurring in both corporate controlled and small and farm forests. All of the industry needs to be party to the change process and to support the implementation of the recommendations in this Final Report. It is the Review Panel's view that the small size of forestry contractors may be a more significant factor impacting on health and safety.

Another key theme to emerge in the submissions and consultation meetings was the increased risk to health and safety when working on steep terrain. The combination of terrain and changing environmental conditions (for example, wind, rain and/or snow) can make tree felling and breaking-out tasks

[94] Options 1, 2 and 3 in the consultation document

particularly hazardous. This theme has alerted the Review Panel to the need for not only good daily risk and hazard identification and management but also the importance of good workforce training and supervision.

The need for the sector to have a clear and consistent legislative and regulatory framework backed up by good codes of practice and best practice guidance was made clear to the Review Panel as a result of the consultation phase. The industry was very supportive of the Approved Code of Practice for Safety and Health in Forestry Operations (the Forestry ACoP). But, it also acknowledged gaps in the Forestry ACoP. The Review Panel consistently heard the feedback "tell us what the rules are, so we know what we have to comply with".

THE FINAL REPORTING PHASE

The final reporting phase was undertaken once the consultation phase had been completed and all the submissions had been received and analysed. The consultation phase and the submissions provided food for thought and direction to the Review Panel in developing the recommendations for change in this Final Report. We went back to some submitters to ask further questions and seek clarification of their views. This included engagement with the Review Sponsors, MBIE and WorkSafe. Engagement was sought with the Forest Owners Association (FOA) Health and Safety Committee and with forestry marketing companies.

Along with seeking further input and advice from some submitters and stakeholders, the Review Panel made specific data requests to WorkSafe and for FOA Incident Reporting and Information System (IRIS) data. Requests were also made to a range of other government and industry stakeholders for information about initiatives that might support the recommendations in this Final Report. The Review Panel was pleased to learn about work being undertaken on the National Environmental Standard by the Ministry for Primary Industries, and wrote to the Minister and Associate Minister for Primary Industries in support of health and safety being considered in the rules being proposed for forestry operations.

The Review Panel set up a further reference group to support the final reporting phase. The group was made up of government representatives, representatives from forest owning and managing organisations, forestry contractors, workers and their representatives. The group was able to provide further insights on the sector and the way long-term, system-wide changes could be actioned.

Before the release of this Final Report, the Review Sponsors and government agencies that need to implement our recommendations were briefed. We are an independent Review Panel but we hope that regardless of this there will be an appropriate response to this Final Report and actions to deliver the recommendations within it.

OPTIONS AND QUESTIONS INCLUDED IN THE CONSULTATION DOCUMENT

THE REGULATORY ENVIRONMENT

Do you agree that the forestry sector could struggle to understand and implement the new legislation and regulations?

Do you agree that lack of regulatory oversight and information impacts on health and safety in the forestry sector?

Do you agree that the guidance about safe work practices in forestry safety needs improvement if it is to ensure health and safety in the forestry sector?

OPTION 1: ENGAGE THE FORESTRY SECTOR IN THE REGULATORY REFORM PROCESS

- Do you agree that the Ministry of Business, Innovation and Employment (MBIE) should engage directly with the forestry sector in the development of the regulations to support the new legislation?
- What else do you think MBIE should do to support the forestry sector to engage in the regulatory reform process and understand the changing legislative environment?

OPTION 2: FORESTRY SECTOR INDUSTRY ASSOCIATIONS TO ENCOURAGE AWARENESS OF NEW LEGISLATION

- Do you agree that the Forest Owners Association (FOA), the Forest Industry Contractors Association (FICA), the Farm Forestry Association (FFA) and the Council of Trade Unions (CTU) should actively encourage members to engage in the regulatory reform process and hold a sector wide symposium?
- What else do you think FOA, FICA, FFA and CTU could do to support the forestry sector to engage in the legislative and regulatory reform process and understand the changing legislative environment?

OPTION 3: SUPPORT FOR PERSONS CONDUCTING A BUSINESS OF UNDERTAKING (PCBUS) TO COLLABORATE AND COOPERATE SUCCESSFULLY

- Do you agree that guidance is needed before the new Health and Safety Reform Bill is enacted to support the forestry sector to implement and manage their health and safety responsibilities?
- Do you agree that MBIE and WorkSafe New Zealand (WorkSafe) should lead the development of the package of materials supported by key industry stakeholders?

OPTION 4: CARRY OVER THE REGULATORY REQUIREMENT TO NOTIFY WORKSAFE ABOUT LOGGING OPERATIONS

- Do you agree that the regulatory obligation to notify WorkSafe about any logging operation or tree felling operation undertaken for commercial purposes is continued and given greater emphasis in the new regulations?
- What do you think the best mechanism is for government to identify and engage with owners and harvest contractors in the small block and farm-forestry sector?

OPTION 5: REQUIRE PCBUS TO INFORM OTHERS WHEN IMPROVEMENT NOTICES HAVE BEEN ISSUED

- Do you agree that PCBUs should be required to notify those organisations or people with whom they share a duty of any provisional improvement or improvement notices and any prohibition notices received?
- Do you agree that the notification requirement should be in regulations or that the sector should develop a standard contract clause for voluntary use?

OPTION 6: DEVELOP A FORESTRY SECTOR INTERVENTION STRATEGY

- Do you agree that WorkSafe should develop a forestry sector intervention strategy to target education, guidance and compliance and enforcement activities?

OPTION 7: CONVENE A FORESTRY SECTOR EXPERT ADVISORY GROUP

- Do you agree that WorkSafe should convene a forestry sector expert advisory group?
- What organisations do you think should be represented on a forestry sector expert advisory group?

OPTION 8: INVEST IN RESEARCH AND INFORMATION ABOUT THE FORESTRY SECTOR

- Do you agree that WorkSafe should develop a research and evaluation plan for the forestry sector?

OPTION 9: DEVELOP A COMPREHENSIVE SET OF INDICATORS FOR WORKPLACE ASSESSMENTS

- Do you agree that a set of key indicators for inspectors to record and report on during workplace visits should be developed?
- Do you agree that the proposed expert advisory group should be involved in the development of the workplace inspection indicators?
- What do you think are the key indicators that should be assessed, recorded and reported on during workplace inspections?

OPTION 10: DEVELOP ENHANCED PROCEDURES AND PROTOCOLS FOR INVESTIGATIONS

- Do you agree that an enhanced set of procedures and protocols for serious injury and fatality investigations should be developed?
- What do you think needs to be addressed in the procedures and protocols to ensure that investigations are robust and appropriate?

OPTION 11: DEVELOP AN ONLINE FORESTRY SECTOR INFORMATION PORTAL

- Do you agree that WorkSafe should develop and maintain an information portal which includes all relevant health and safety legislative, regulatory, guidance and best practice material that will support the forestry sector?
- What information do you think could be included on the portal and would be useful for the forestry sector to have access to?

OPTION 12: ADDRESS THE ISSUES IDENTIFIED WITH THE APPROVED CODE OF PRACTICE FOR SAFETY AND HEALTH IN FORESTRY OPERATIONS (THE FORESTRY ACOP)

- Do you agree that the Forestry ACoP requires review?
- What needs to be included in the Forestry ACoP that is not there now?
- What needs to be reviewed in the current Forestry ACoP?

OPTION 13: ENSURE FORESTRY SECTOR GUIDANCE AND INFORMATION IS FIT FOR ITS AUDIENCE

- Do you agree that research should be undertaken to understand the type of

health and safety guidance materials that will be most effective for the forestry sector?

- What type of health and safety materials do you think would be useful for:
  - contract harvesters?
  - crew bosses?
  - forestry workers?

OPTION 14: SHARE INFORMATION ABOUT FORESTRY SECTOR SERIOUS INJURIES AND FATALITIES IN A TIMELY MANNER

- Do you agree that information about incidents of serious injury and fatalities in the forestry sector needs to be disseminated in a timely way?
- Do you think that WorkSafe should produce and disseminate information?

TRAINING, QUALIFICATIONS AND COMPETENCE

Do you agree that the forestry sector's training, qualifications and competency framework is not fit for purpose?

OPTION 15: PRESCRIBE COMPETENCY STANDARDS FOR SAFETY CRITICAL ROLES AND TASKS

- Do you agree that regulations should prescribe competency standards for safety-critical roles and tasks?
- How long do you think any transition period into a new regime should last?
- Do you believe that a recertification process, say every three or five years, should be mandatory to ensure that skills are retained and updated?
- Do you agree that regulation should require a period of practical experience to demonstrate competency?

OPTION 16: ENSURE THAT SAFETY-CRITICAL TRAINING AND DEVELOPMENT IS PAID WORK TIME

- Do you agree that training and development for safety critical roles and tasks should be paid work time?
- Do you agree that forest owners and managers should take account of the cost of training in the rates that they pay contract harvesters and crews?

OPTION 17: ESTABLISH A NEW INDUSTRY-LED TRIPARTITE ADVISORY BOARD

- Do you agree that new institutional and administrative arrangements are required to oversee forestry qualifications?

OPTION 18: INITIATE A REGULATOR-LED CURRICULUM AND FUNDING POLICY REVIEW

- Do you agree that the curriculum and funding policy for forestry-sector training requires review and update?
- Who do you think should lead this work?

SUPPLY CHAIN AND SAFETY CULTURE

Do you agree that contracting arrangements have an impact on health and safety in the forestry sector?

Do you agree that the lack of safety culture is a factor that contributes to serious injuries and fatalities on the forest block?

OPTION 19: MAP THE SUPPLY CHAIN TO UNDERSTAND RESPONSIBILITY, RISK AND POINTS OF INFLUENCE

- Do you agree that FOA, FICA, and FFA should initiate a project that, taking account of the new Bill, clearly details:
  - the forestry sector supply chain so that the complexity is documented and understood?
  - the health and safety risk, controls or mitigations at each level in the supply chain?

OPTION 20: DEVELOP A TEMPLATE CONTRACT WITH MANDATORY HEALTH AND SAFETY STANDARDS

- Do you agree that FOA, FICA, FFA and CTU should initiate a project that establishes the mandatory health and safety standards to be addressed, monitored and evaluated in forestry sector contracts, and develops model contract clauses for use across the sector?
- What do you think are critical health and safety factors that should be addressed in forestry-sector contracts to ensure mandatory standards are met?

OPTION 21: ADOPT A PRE-QUALIFICATION APPROACH TO CONTRACTING ACROSS THE FORESTRY SECTOR

- Do you think the forestry sector should institute a two-step process to procurement with the first step being to demonstrate how health and safety standards would be met?

OPTION 22: SET UP AN INDUSTRY-WIDE CERTIFICATION SCHEME

- Do you think the forestry sector needs a certification scheme?
- Do you think the scheme should be regulator-led or industry-led?
- Does the issue of those registering as a new company after injuries or fatalities need examining?
- If a certification scheme were to be adopted, which parts of the sector should be certified?
- What would make for an effective certification scheme?

OPTION 23: SET UP A PHONE LINE TO REPORT POOR HEALTH AND SAFETY PRACTICE

- Do you agree there should be a phone line to enable poor health and safety practices in the forestry sector to be anonymously reported?
- Who do you think would be best placed to manage any forestry sector phone line?

OPTION 24: PROVIDE BUSINESS SUPPORT TO CONTRACT HARVESTERS TO SUPPORT SAFE WORK PRACTICES

- Do you agree that work needs to be done to understand the business support needs of contract harvesters to support safe work practices in the forestry sector?
- Who do you think should do this work to understand the business support needs of contract harvesters?
- Do you agree that any templates and tools developed to support contract harvesters to undertake better business planning to support safe work practices should be made available without charge across the sector?
- Do you agree that the proposed business support be made available before the new Bill is enacted as law?

OPTION 25: EVALUATE SAFETY-CULTURE INITIATIVES

- Do you agree with the proposal to carry out a stocktake and evaluation of the effectiveness of current safety-culture initiatives?

OPTION 26: ROLL OUT SUCCESSFUL SAFETY-CULTURE INITIATIVES ACROSS NEW ZEALAND

- Do you agree that successful safety-culture initiatives should be rolled out across the forestry sector?
- Do you think ACC should fund culture initiatives through their injury prevention programme? If not, who should provide the funding?

OPTION 27: IDENTIFY AND ADDRESS CONTRIBUTING FACTORS TO SAFETY CULTURE

- Do you agree with the need for more research on how best to address factors and drivers that sustain existing safety attitudes and practices in the forestry sector?
- Who do you think should lead the research programme on safety culture?
- What other approaches could government, industry and workers take to improve safety culture on the forest block?

WORKER PARTICIPATION AND REPRESENTATION

Do you agree that a lack of worker participation and representation is an issue that is impacting on health and safety on the forest block?

OPTION 28: DEVELOP A GREATER UNDERSTANDING OF WORKER PARTICIPATION AND REPRESENTATION

- Do you agree that there is need to better understand worker participation and representation in the forestry workforce and what works?
- Option 29: Examine ways to encourage worker participation and representation across the sector
- Do you agree that the forestry sector and CTU should examine ways to effectively implement worker participation and representation models across the sector?
- Who else do you think should be involved in considering ways to ensure that workers participate in health and safety initiatives and are represented in the forest workplace?
- What do you think is the best way to ensure that workers participate in government and industry-led initiatives to improve health and safety?

WORKING CONDITIONS

Do you agree that poor working conditions impact on health and safety on the forestry block?

OPTION 30: IMPROVE EMPLOYMENT AGREEMENTS AND CONTRACTS AND ENSURE ALL FORESTRY WORKERS HAVE THEM

- Do you agree it is important that all forestry workers have an employment agreement or contract that meets minimum standards and entitlements?
- Do you agree that WorkSafe, the labour inspectorate and industry are best placed to lead work to improve the understanding and quality of employment agreements and contracts?
- What other ways can the sector ensure the widespread use of written agreements or contracts?

OPTION 31: ENFORCE MINIMUM EMPLOYMENT STANDARDS AND CONDITIONS ON THE FOREST BLOCK

- Do you agree the labour inspectorate should prioritise compliance and enforcement of minimum labour laws in the forestry sector?
- Do you think a greater enforcement of minimum employment standards has a positive knock-on effect for safety?
- Do you think a focus on employment standards would have unintended consequences for workers?

OPTION 32: INTRODUCE MANDATORY STANDARDS FOR WORKING CONDITIONS ON THE FOREST BLOCK

- Are mandatory stop-work rules necessary for unsafe working conditions?
- Who do you think should be engaged in developing any stop-work rules?

› Do you think stop-work rules would have unintended and negative consequences for contract harvesters and crew?

INFRASTRUCTURE ON THE FOREST BLOCK

Do you think poor infrastructure planning, design and construction is impacting on health and safety on the forest block?

OPTION 33: SET MANDATORY STANDARDS FOR KEY INFRASTRUCTURE ON THE FOREST BLOCK

› Do you agree on the need for mandatory standards for skid sites, roading and bridges on the forest block?

› Do you agree that the Forest Road Manual provides a good basis for work to set mandatory standards for forest block infrastructure? Any further comment?

OPTION 34: SET MANDATORY COMPETENCY REQUIREMENTS FOR INFRASTRUCTURE DESIGNERS AND OPERATORS

› Do you think there should be mandatory competency standards for the design and construction of skids sites, roads and bridges for forestry operations?

› Do you think the design and construction of roads, bridges and skid sites should be undertaken and/or supervised or signed off by a registered professional engineer?

› Do you think there should be mandatory competency standards for those operating and managing skid sites during harvesting? Any further comment?

OPTION 35: RESTART WORK ON THE NATIONAL ENVIRONMENT STANDARD (NES) FOR PLANTATION FORESTRY

› Do you agree that health and safety benefits can be achieved from a NES for plantation forestry?

› What other mechanisms can be used to ensure consistent standards for infrastructure on the forest block?

SAFE SYSTEMS OF WORK

Do you agree that hazard mapping and planning, including planning for adverse working conditions and emergencies, is variable and impacting on health and safety on the forestry block?

OPTION 36: IMPROVE SAFETY MANAGEMENT SYSTEMS FOR WORK ON THE FOREST BLOCK

› Do you agree that work needs to be done to improve safety management systems for work on the forest block?

› What do you think are the key components of pre-harvest hazard mapping?

› What do you think are the key components of daily hazard mapping?

› Do you think that daily hazard mapping and the improved management of dangerous trees will help reduce injuries and fatalities on the forest block?

› How do you think crews can be successfully encouraged to undertake effective daily hazard mapping?

EQUIPMENT, INCLUDING PERSONAL PROTECTIVE EQUIPMENT

Do you agree that the varying approaches to design and maintenance of machinery, personal protective equipment (PPE) and other equipment is impacting on health and safety on the forest block?

OPTION 37: ESTABLISH AN INDUSTRY WORK PROGRAMME TO SUPPORT NEW TECHNOLOGIES AND MAINTENANCE OF EQUIPMENT

- Do you agree that a systematic approach to approval of new technologies and better management and maintenance of all machinery and equipment is required for the forestry sector?
- What do you think are the key hazards that need to be addressed before new technologies are rolled out for use on the forest block?
- Do you agree that FOA, FICA and FFA should show greater leadership in supporting the research and development of the PPE and equipment need for workers to be safe?

OPTION 38: REVIEW THE SUITABILITY OF HIGH VISIBILITY COLOURS AND DESIGN

- Do agree that high-visibility materials and design for safety garments needs review? Any further comment?

OPTION 39: CONSIDER THE MERITS OF MANDATORY STANDARDS FOR EMERGENCY EQUIPMENT

- Do you think there is need for greater clarity about the emergency equipment needed on the forest block?
- Do you think mandatory standards for emergency equipment should be developed?

MANAGING IMPAIRMENT

Do you agree that the issue of impairment (through fatigue, inadequate nutrition or hydration, and the presence of drugs and alcohol) is impacting on health and safety on the forest block?

OPTION 40: INTRODUCE NEW INJURY PREVENTION INITIATIVES FOR MANAGING RISK FROM IMPAIRMENT

- Do you agree that ACC and WorkSafe should look at how to introduce new injury prevention initiatives that address and incentivise managing risk from impairment in forestry work?

OPTION 41: INTRODUCE MANDATORY STANDARDS FOR MANAGING THE RISK OF IMPAIRMENT

- Do you agree that mandatory standards are required for managing impairment on the forest block?
- What role should the regulator play in monitoring impairment in this workforce?

OPTION 42: REVIEW THE REGULATOR'S APPROACH TO THE USE OF DRUGS AND ALCOHOL IN HIGH-RISK SECTORS

- Do you agree that it would be appropriate for WorkSafe to put in place a mandatory standard for drug testing on any site where there is a serious injury or fatality?
- Do you agree that it would be useful for WorkSafe to provide guidance on how to best manage the use of drug and alcohol in high-risk sectors?

OPTION 43: REVIEW THE DRUG AND ALCOHOL CODE OF PRACTICE

- Do you agree it is time to review the Drug and Alcohol Code of Practice?

LIST OF SUBMITTERS ON THE CONSULTATION DOCUMENT

SUBMITTER NAME	SUBMITTER TYPE
Manaia Safety Systems Limited	Other (Supplier)
Farm Forestry Association	Industry body
Rayonier-Matariki Forests	Forest owner/forest management organisation
Future Forests Research	Other (Research organisation)
Anonymous	Contractor organisation
PF Olsen	Forest management organisation
Taipuka Iwi	Iwi
Mark Johnson	Private individual
Dave and Pauline Adams	Private individual
Blackwoods Protectors	Other (Supplier)
Merv Johns	Private individual
Anne Tuffrin	Forestry worker
Waikato Forestry Services Limited	Contractor organisation
Tony Dick	Forest owner
Beech Communications Limited	Other (Supplier)
Anonymous	Private individual
Anonymous	Contract organisation
Keith Raymond	Other (Research organisation)
Blakely Pacific Limited	Forest owner/forest management organisation
Anonymous	Other (Engineer)
New Zealand School of Forestry	Training organisation
Ribbonwood New Zealand Limited	Contractor organisation
Henderson Logging Limited	Contractor organisation
Lightknight International Limited	Other (Supplier)
Barry Coles	Private individual
The Council of Trade Unions	Other (Union)
Anonymous	Private individual
Tom Harrison & Sons Ltd	Contractor organisation

SUBMITTER NAME	SUBMITTER TYPE
Say So	Other (Supplier)
Success Formula	Other (Supplier)
Anonymous	Forest management organisation – employee
Forest Industry Contractor Association	Industry body
First Union	Other (union)
Hikurangi Forest Farms	Forest owner/forest management organisation
New Zealand Forest Managers Limited	Forest management organisation
The New Zealand Institute of Forestry	Industry body
Anonymous	Private individual
SCION	Other (Research organisation)
Northland Wood Council	Forest owner/forest management organisation
Electrical Engineers Association	Industry body
Raywood Contracting Limited	Other organisation
Wood Marketing Services	Other organisation
Brightwater Engineers Limited	Other (Supplier organisation)
Storm Logging Limited	Contractor organisation
Ernslaw One Limited	Forest owner/forest management organisation
Federated Farmers	Industry body
Tord Kjellstrom	Private individual
Anonymous	Forest management organisation
Matene Blandford	Other (engineer)
Iwi Leadership Group	Iwi
Rowan Struthers	Private individual
Timberlands Limited	Forest owner/forest management organisation
Anonymous	Forest owner organisation
Accident Compensation Corporation	Government agency
Competenz	Training organisation
Forest Owners Association	Industry body

SUBMITTER NAME	SUBMITTER TYPE
Ministry of Business, Innovation and Employment	Government agency
WorkSafe New Zealand	Government agency
Wood Contracting Nelson Limited	Contractor organisation
Hauraki Logging Limited	Contractor organisation
Rob Prebble	Private individual
Jason Osborn	Private individual
Anonymous	Private individual
Mid North Farm Forestry Association	Industry body
Anonymous	Private individual
Anonymous	Contractor organisation
Anonymous	Forest owner
Jeremy Patterson-Green	Forest management organisation
Anonymous	Forest owner organisation
Barry Foster	Private individual
Anonymous	Contractor organisation
Cutover Systems Limited	Contractor organisation
Anonymous	Forest owner organisation
Anonymous	Forest worker
Anonymous	Anonymous
John Jamieson	Forest management organisation
Pan Pac Forest Products Limited	Forest owner organisation
David Janette	Forest management organisation
Blackwoods Protectors	Other (Supplier)
Damian Byrne	Forest management organisation
Anonymous	Private individual
Anonymous	Anonymous
Xmen Logging Limited	Contractor organisation
Anonymous	Anonymous

SUBMITTER NAME	SUBMITTER TYPE
Anonymous	Private individual
Anonymous	Private individual
Anonymous	Private individual
Eddie Te Kahika	Private individual
Andrew Sorley	Private individual
Ogle Consulting Limited	Other (Supplier)
Anonymous	Private individual
Rob van Rossen Consulting Limited	Other (Supplier)
Anonymous	Private individual
Anonymous	Anonymous
Kirk and Associates Limited	Contractor organisation
D Anderson Contractors Limited	Contractor organisation
Anonymous	Anonymous
Anonymous	Private individual
Anonymous	Private individual
Anonymous	Private individual
FPS Forestry Limited	Contractor organisation
Anonymous	Anonymous
Anonymous	Contractor organisation
Anonymous	Private individual
Kea Ridge Forest Limited	Forest owner
Anonymous	Anonymous
Dr Simon Smelt	Private individual
Charles George	Private individual
Karl Mapp	Private individual
Anonymous	Private individual
Peter Wilks	Private individual

SUBJECT MATTER EXPERT REFERENCE GROUPS

REFERENCE GROUPS USED FOR THE ISSUES IDENTIFICATION PHASE

WORKPLACE	PEOPLE IN WORK	TRAINING	WORK ORGANISATION
Forest Owners Association (FOA) Senior Policy Analyst	PF Olsen Ltd Health and Safety Manager	Tertiary Education Commission Principal Advisor	Juken New Zealand Ltd General Manager – Forests
Olsen Logging Ltd Managing Director	Forest Protection Services Limited Managing Director	New Zealand Qualifications Authority Sector Relationship Manager	Forest Industry Contractors Association Chief Executive
WorkSafe New Zealand (WorkSafe) Principal Advisor	Ministry of Business, Innovation and Employment (MBIE) Senior Adviser	MBIE Manager – Health and Safety Strategy	MBIE Principal Adviser
Worksafe Health and Safety Inspector	WorkSafe Programme Manager – Forestry	Competenz Programme Manager – Forestry	Council of Trade Unions Director of Policy
Farm Forest Owner Registered Forest Consultant (MNZIF) Private Individual	Accident Compensation Corporation Manager Business Injury Insurance	Waiariki Institute of Technology Head of Department Forestry and Resource	Worksafe General Manager Health and Safety Operations
MBIE Principal Adviser	First Union Strategic Adviser	Nelson Forest Ltd Health and Safety Facilitator	Business Leaders Health and Safety Forum Executive Director
Asset Forestry Logistics Operations Manager	Tuakiri 4 Identity Director	Brand Logging Ltd Health and Safety Coordinator	Nelson Forests Chief Executive
		FOA Senior Policy Analyst	RAD Logging Managing Director
		Workbase Chief Executive	
		Worker representative Private individual	

REFERENCE GROUP USED FOR THE FINAL REPORTING PHASE

GOVERNMENT	INDUSTRY – FOREST OWNERS	INDUSTRY – FORESTRY CONTRACTORS	WORKER REPRESENTATIVES[95]
Ministry of Business, Innovation and Employment General Manager Labour and Commercial Environment	Managing Director, Hancock Forest Management Chair, Wood Council Member, Executive Council, Forest Owners Association (FOA) Board member, Forest Growers Levy Trust Board	Manager Director, Forest Protection Services Ltd Board Member, Executive Council, Forest Industry Contractors Association (FICA)	President Council of Trade Unions (CTU)
WorkSafe New Zealand General Manager Regulatory Support and Design	Manager, Environment and Corporate Support, Ernslaw One Chair, Environment Committee, FOA Member, Executive Board, FOA Councillor, Wood Council	Managing Director, Olsen Logging Board Member, FICA	General Counsel CTU
	President, Farm Forest Association Member, Executive Council, FOA		Private Individual Foreman
	Nelson Forests Health and Safety Manager		Private Individual Health and Safety Manager

[95] Due to poor weather, the two workers who were part of the reference group were unable to attend the reference group meeting in Wellington

GLOSSARY OF TERMS

TERM	DESCRIPTION
best-practice guides	Publications that set out what industry recognises as operational good practice. The best-practice guides will give guidance on how to meet the requirements of an approved code of practice.
breaking-out	Breaking-out involves hooking steel cables or a mechanical grapple around trees so they can be pulled by hauler machines to a skid site. The trees are de-limbed using either a chainsaw or mechanised processor; this can occur where they are felled or on a skid site.
competency	A measure of a person's ability to consistently demonstrate the skill required to carry out a job. Competency shall be supported by detailed documented evidence showing: › the task being carried out › the situation the task was being carried out in › the person who deemed the worker competent and their qualifications and/or experience › how long the competency assessment took and when it was carried out › what visual demonstrations were observed › the process of assessment used to deem the person competent.
contact [injury]	An incident that results in contact with an object or energy source where first aid treatment was not sought. The contact may have resulted in minor bruising and/or abrasions, or personal protective equipment has prevented more serious injury.
forest block	Land used for plantation forest operations, including land used for trees, private forest roads, bridges and skid sites.
forestry contractor	A person engaged by a person (other than as an employee) to do any work for gain or reward.
hung-up tree	A cut tree caught in or lodged against another which prevents it falling to the ground.
impairment	A reduction of a person's ability to think or act as the result of such things as physical or mental fatigue, drug or alcohol use, inadequate nutrition and hydration.

TERM	DESCRIPTION
inspector	A health and safety inspector appointed under Section 29(1) of the Act.
loading zone	The area around truck and/or trailer and mobile plant on a skid site.
Lost-time injury	An incident that results in injury to an employee to the extent that they do not return to work at the start of the next regularly scheduled work day or any other subsequently scheduled shift. Includes fatalities.
machinery	An engine, motor or other appliance that provides mechanical power derived from an energy source.
medical treatment injury	An incident that results in injury to an employee requiring treatment by a health professional, irrespective of treatment sought. Includes loss of consciousness, abrasions, bruises, cuts, fractures, sprains.
minor injury	An incident that results in an injury that may or may not require first aid treatment.
mobile plant	Any machine designed to move under its own power.
national qualifications	Unit standards registered with the New Zealand Qualifications Authority where assessment has been carried out and competence verified.
near hit	An event that given similar circumstances could have resulted in injury or property damage. A near hit may be a warning that control measures may not be working as intended or management of a hazard is absent.
personal protective equipment (PPE)	Anything used or worn by a person to minimise risk to the person's health and safety.
person conducting a business or undertaking (PCBU)	A person conducting a business or undertaking, whether alone or with others and whether or not for profit. A PCBU does not include a person employed or engaged solely as a worker or officer of the business or undertaking.
principal	As defined by Health and Safety in Employment Act 1992, a person who engages any person (other than an employee) to do any work for gain or reward.
roundwood	Wood in its natural state following felling and before milling (includes sawlogs and veneer logs and pulpwood).
standard	A New Zealand or international standard approved by the Standards Association of New Zealand or an equivalent international standard-setting authority.
safe area	A pre-designated area on the skid site that is free of machinery and mobile plant and other hazards.

TERM	DESCRIPTION
safe system of work	A safety management system characterized by positive visual identification of workers on site. Safe systems of work often include visual confirmation of position and other communication protocols, safe operating procedures for all machinery and equipment, related training and supervision and emergency planning and preparedness.
safe retreat distance	The distance from any rope, rigging or attached stems to which a breaker-out shall retreat during inhaul, outhall or breaking-out phases of an extraction operation.
safety culture	The set of beliefs and perceptions that people hold about their workplace and the way they should behave in relation to risk.
serious harm	Any of the following conditions that amounts to or results in permanent loss of bodily function, or temporary severe loss of bodily function: respiratory disease, noise induced hearing loss, neurological disease, cancer, dermatological disease, communicable disease, musculoskeletal disease, illness caused by exposure to infected material, decompression sickness, poisoning, vision impairment, chemical or hot metal burn of eye, penetrating wound of eye, bone fracture, laceration, crushing. Amputation of body part. Burns requiring referral to a specialist medical practitioner or specialist outpatient clinic. Loss of consciousness from lack of oxygen. Loss of consciousness, or acute illness requiring treatment by a medical practitioner, from absorption, inhalation, or ingestion, of any substance. Any harm that causes the person harmed to be hospitalised for a period of 48 hours or more commencing within 7 days of the harm's occurrence.
skid site	A selected or prepared area to which logs are extracted and where they may be processed, sorted, stockpiled and/or loaded.
stanchions	An upright bar, post, or support (as for a tractor's trailer).
supply chain	The multiple layers of ownership, management and worker interest in plantation forest operations. This chain includes forest owners, managers, marketing companies, contract harvesters, log trucking companies and log truck owners and drivers, crews and workers.
swing yarder	A swing yarder is a mobile piece of heavy duty forestry equipment used for pulling logs from the woods to a logging road with cables. The swing yarder is also known as a grapple yarder.
the regulator	WorkSafe New Zealand
wind throw	Trees that have been blown down by the wind. They may have the stem snapped off or the root plate may still be attached.
worker participation	Workers involved in a meaningful way in health and safety matters.
worker representation	A formal practice to achieve worker participation, for example, a health and safety representative or a health and safety committee.

LIST OF ABBREVIATIONS

ABBREVIATION	IN FULL
ACC	Accident Compensation Corporation
ACoP	Approved Code of Practice
BLH&SF	Business Leaders Health and Safety Forum
CAA	Civil Aviation Authority
CTU	The New Zealand Council of Trade Unions
FFA	Farm Forestry Association
FGLT	The Forest Growers Levy Trust
FICA	Forest Industry Contractors Association
FITEC	Forestry Industries Training and Education Council of New Zealand
FOA	Forest Owners Association
FSC	Forest Stewardship Council
GPS	global positioning system
ILO	International Labour Organisation
Independent Taskforce	Independent Taskforce on Workplace Health and Safety
IP	injury prevention
IRIS	Incident Recording Information System
ITO	industry training organisation
LTI	lost time injury
MBIE	Ministry of Business, Innovation and Employment
MfE	Ministry for the Environment
MI	minor injury
MTI	medical treatment injury
NES	National Environmental Standard

ABBREVIATION	IN FULL
NZQA	New Zealand Qualifications Authority
PCBUs	Person conducting a business or undertaking
Police	New Zealand Police
PPE	Personal protective equipment
RFID	Radio frequency identification
SME	Small and medium sized enterprises
TEC	Tertiary Education Commission
the Bill	Health and Safety Reform Bill
the blueprint	Working Safer: A blueprint for health and safety and work
the Drug and Alcohol CoP	Plantation Forestry Code of Practice for Eliminating Drugs and Alcohol from the Workplace
the Forestry ACoP	Approved Code of Practice for Safety and Health in Forest Operations 2012
the ILO forestry code	International Labour Organisation: Code of practice for safety and health in forestry work
the Manual	New Zealand Forest Road Engineering Manual
the HSE Act	Health and Safety in Employment Act 1992
the HSE regulations	Health and Safety in Employment Regulations 1995
the principal's guide	A principal's guide to contracting to meet the Health and Safety in Employment Act 1992
the Review	Independent Forestry Safety Review
the Review Panel	Independent Forestry Safety Review Panel
the Royal Commission	Royal Commission on the Pike River Coal Mine Tragedy
ToR	Terms of reference
WorkSafe	WorkSafe New Zealand

TERMS OF REFERENCE FOR THE INDEPENDENT FORESTRY SAFETY REVIEW

PURPOSE

1. The purpose of the Review is to identify the likely causes of and contributing factors to the high rate of serious injuries and fatalities in the New Zealand forestry sector and recommend a package of practical measures that will improve safety performance.

RATIONALE/CONTEXT

2. The Forest Industry Contractors Association (FICA), the Forest Owners Association (FOA) and the Farm Forestry Association (FFA) (the Review sponsors) share a view that the forestry sector can contribute materially to the growth of the New Zealand economy. This can occur through the creation of new jobs and an increase in export earnings. The plantation forests already established can support a significant increase in annual harvest volumes and provide the platform to support this growth.
3. The Review sponsors also know that the frequency of serious injuries and fatalities in the forestry sector is unacceptably high. The sector will not be sustainable in the future unless New Zealand forests become safe places in which to work.
4. The Independent Taskforce on Workplace Health and Safety (the Independent Taskforce) concluded that the "Government's target to achieve a 25 per cent reduction by 2020 in workplace injuries and fatalities is realistic, but far from what we should aspire to. It would still mean that too many workers are killed and seriously injured." The Review sponsors support this observation and believe that a more ambitious target is both justified and achievable.

OBJECTIVES OF THE REVIEW

5. The Review Panel is to undertake this review to identify the factors that lead to injury and fatalities in the forestry sector.

SCOPE OF ISSUES TO BE CONSIDERED IN THE REVIEW

6. The Review Panel will:
   a. examine and describe the health and safety structure and culture of the forestry sector as it pertains to workers, employers, forest owners, commercial forest farmers, contractors, forest managers, harvesting and marketing service suppliers and transport operators
   b. provide an assessment of the current performance of workplace health and safety systems in the forestry sector and, to the extent practicable, compare New Zealand's safety performance with international benchmarks
   c. review the quality and accessibility of leadership, worker and health and safety representative education and training.
7. In developing the package of practical measures the Review Panel will examine the forestry sector from a number of perspectives including (but not limited to):
   a. how workers are involved and engaged in workplace health and safety in the sector and what can be done to encourage and support worker participation in workplace health and safety

b. how access to advisory services, investment in training can be encouraged and in-service training and certification programmes, including those aimed at improving the quality of worker supervision, can be made uniformly available and consistently implemented, especially to SMEs which may have less capacity than larger companies

c. how culture change initiatives can be utilised throughout the sector including specific focus on the small and medium sized enterprises (SMEs) which perform the most dangerous work in the forestry sector

d. how an environment can be created to enable workers, employers, forest owners, commercial forest farmers, contractors, forest managers, harvesting and marketing service suppliers and transport operators to identify and effectively address issues that lead to human error before they impact on safety (for example, issues of fatigue, dehydration, inadequate mental and physical conditioning, stress, production pressure, use of drugs and alcohol, remuneration and remuneration practices)

e. whether and how supply chains might be better used to influence workplace health and safety outcomes (for example, the widespread use of contractors and sub-contractors in the forestry sector including procurement practices, contract terms, equipment purchasing decisions, hours worked, target setting and forward planning)

f. whether and how economic and other incentives can better influence workplace health and safety outcomes in the forestry sector

g. how the activities of the Ministry of Business, Innovation and Employment (MBIE), the workplace health and safety regulator (WorkSafe New Zealand) and the Accident Compensation Corporation (ACC) can contribute to improving safety outcomes in forestry including through the development and enforcement of workplace standards

h. how workplace health and safety is managed elsewhere and whether the forestry sector and regulatory health and safety practices adopted in other countries can improve health and safety in the New Zealand forestry sector.

PROCESS

8. Appointments to the Panel have been made by FOA, FICA and FFA following consultation with all appropriate stakeholders. Appointments to the Panel of three were based on skills, experience and the ability to contribute to the purpose of the Review. Panel members were drawn from people with experience and knowledge in:

   › worker representation

   › business

   › health and safety expertise.

9. Appointees to the Panel are expected to take an independent, broad and fresh approach rather than representing any organisation's current or previous position.

10. The Review Panel will proceed as it thinks fit to obtain relevant information to assist it to examine issues covered by the Review. It is expected that the Panel will:
    a. be able to demonstrate fair, independent and an open process that stands up to scrutiny
    b. seek out a broad range of views
    c. speak to individuals and groups and industry associations involved in the forestry sector
    d. speak to the families of those seriously and fatally injured in the forestry sector
    e. seek expert advice and analysis
    f. commission reports or research as required
    g. produce, to the extent possible, evidence-based reports.
11. The Review Panel will address the scope of issues and:
    a. consider the levers of "accountability, motivating and knowledge" that Government can pull to influence behaviour by workers, "persons conducting business undertakings" (PCBUs) and other participants in workplaces identified by the Independent Taskforce on Workplace Health and Safety
    b. review WorkSafe (and its predecessor's) accident investigation report findings and recommendations to determine the effectiveness of WorkSafe (and its predecessor's) investigations and how the findings of investigations can be used to improve health and safety
    c. consider how findings and recommendations of Coroners' inquests into fatal accidents can be implemented to minimise the risk of serious injuries and fatalities
    d. consider leadership capabilities and attributes that are needed to improve health and safety in the forestry sector
    e. review the effectiveness of the recent work done and work programmes currently planned (for example, the Approved Code of Practice (ACoP), the Safer Forestry Harvesting project, government response to the Independent Taskforce on Workplace Health and Safety Report, the Accident Compensation Commission support for FOA, FICA and FFA initiatives)
    f. consult and engage with the Review sponsors throughout the course of the Review.
12. The Review Panel is expected to make recommendations to the Review sponsors by consensus. If this is not possible, the Panel's report may include minority recommendations. Regardless, the final report including its recommendations will be made publicly available.
13. The Review Panel will be provided with administrative and secretariat support.

DELIVERABLES

14. The specific deliverables are for the Panel to determine but should include a package of practical measures that would be expected to result in a significant reduction in the rate of serious injuries and fatalities in the next 5 years.

BIOGRAPHIES OF REVIEW PANEL MEMBERS

GEORGE ADAMS (CHAIR)

George is a Chartered Accountant and a business leader and has over 20 years' experience in consumer goods and telecommunications in New Zealand, Europe and Africa. He was Chairman of the New Zealand Food and Grocery Council. He is currently an independent company director.

George is a member of the Business Leaders Health and Safety Forum and Chairs the Leadership Development Programme Working Group. At the 2013 Safeguard New Zealand Workplace Health and Safety Awards he was awarded the Business Leaders Health and Safety Forum Leader of the Year.

HAZEL ARMSTRONG

Hazel is the principal of Hazel Armstrong Law, a firm which specialises in health and safety, accident compensation and employment law. Her specialty is occupational illness and injury. She works with the New Zealand Council of Trade Unions in providing professional advice for their health and safety representative training, and represents unions on health and safety matters.

Hazel has published two books: "Blood on the coal – the origins and future of New Zealand's Accident Compensation Scheme" and "Your life for the job: New Zealand rail safety 1974-2000". In May 2014, she received the Lifetime Achievement Award at the annual Safeguard New Zealand Workplace Health and Safety Awards.

MIKE COSMAN

Mike Cosman is a health and safety specialist with over 35 years' experience in the United Kingdom, New Zealand and internationally. He comes from a regulatory background and has worked for the past seven years as a consultant. In this role he has advised a wide range of public and private sector clients on safety leadership issues.

Mike was a member of the Independent Ministerial Taskforce on Workplace Health and Safety set up in the aftermath of the Pike River mine disaster.

Notes

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