Renewing Canada's Greenest Workforce

A Labour Market Intelligence Report

Forest Products Sector Council

May 2011

Canada's greenest workforce — the story behind the title

Canada's forest products sector is a world leader in environmental stewardship and sustainability. We have virtually zero deforestation and maintain more original, protected and certified forests than any other country in the world.

The industry has an excellent track record in recycling and greenhouse gas emissions reductions. The Canadian industry currently generates 60 percent of its own energy using green, renewable fuels and with the advent of new technologies the potential exists to increase this significantly.

The sector is transforming by embracing innovative technologies which extract more value from wood fibre … leading to less impact on the environment. Part of this is a significant "green" transformation which will lead to new products such as antibiotics and pharmaceuticals, biofuels and bioplastics, glues, enzymes and paints, artificial flavours and fertilizers, all derived from Canadian wood.

Yes, it is bold to state we are "renewing Canada's greenest workforce" but bold moves are exactly what the sector needs now. Canada's first and fully renewable resource is a world leader and its existing workers and those who aspire to work in the sector are truly Canada's greenest workforce.

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Photo credit (above): shutterstock.com

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Executive Summary

The Forest Products Sector Council (FPSC-CSPF)

The FPSC-CSPF was created in 2008 at a critical juncture in the forest products sector's history, a time of enormous challenge and opportunity for the industry and for the sector's workforce.

Since its inception, FPSC-CSPF has worked with industry partners to identify and support the sector's key human resource priorities, develop strategies to ensure the sector has the skilled workforce needed to meet current and future demands, respond to future opportunities and transition issues facing the sector, and adapt to changing social and economic conditions.

For more information on FPSC-CSPF see: fpsc-cspf.ca

A strong workforce is the foundation upon which the Canadian forest products sector has sustained itself through good times and bad. It is the foundation needed to support the future growth potential of the sector too.

However, critical questions are now being raised as to whether the sector has the workforce mix to maintain existing operations while also pursuing a program of innovative new products and expansion into new markets.

The forest products sector has undergone unprecedented change since 2001. From a high of approximately 260,000 workers in 2003, employment in the sector dropped to a little more than 150,000.

A number of external factors including a stronger Canadian dollar; changes in the global economy with new markets emerging; the displacement of print media by electronic forms and the catastrophic collapse of the U.S. housing market and subsequent recession delivered a body blow to the Canadian forest products sector.

The labour market demand projections generated by the Forest Products Sector Council (FPSC-CSPF) suggest the sector has already experienced the worst of the economic downturn and the situation is not likely to deteriorate further.

A Brighter Future

Canada is well positioned to capitalize on a strong global recovery led by the solid wood sector with demand for paper products stabilized, new products successfully introduced and a greater presence in emerging new markets. In the most optimistic of future possibilities, Canadian forest product enterprises will need to hire as many as 120,000 new workers by 2020 to meet demand. In a less optimistic future, the sector's labour force demand will essentially hold its own in the face of continued macro-economic challenges. Even in this situation the industry will require nearly 40,000 new workers to fill demand.

The Challenges Ahead

One challenge for sector employers will be to shift from an emphasis on rationalizing to an aggressive recruitment and retention mode. This is particularly important in light of the magnitude of retirements expected on the part of the sector's large cohort of older workers. Based on current demographics and past retirement and attrition patterns it is estimated more than 50,000 workers will leave the sector. This is significant in that it represents the loss of approximately one third of the sector's current workforce during the next 10 years.

When the numbers of new hires as a result of attrition are coupled with projected recruitment needs due to economic recovery, the forecast requirement for new workers ranges up to as many as 120,000 people over the coming decade. This shortage is already being felt for a number of key occupations; for example, many employers have reported challenges associated with recruiting and retaining tradespeople.

Enrolment in forest products related educational programs is declining at the post-secondary level, meaning fewer professionals and skilled tradespeople available to the sector. Additionally, because much of the sector is located primarily in rural areas, sector employers have a limited pool of talent to draw from due to increased urbanization. The sector will be challenged to attract immigrants into the sector as immigrants generally tend to establish themselves in major urban areas.

Competition from other sectors, such as mining, petroleum and high technology will draw prospective workers away from the forest sector with better wages and working conditions. The competition for professionals and skilled tradespeople will be fierce over the next decade.

Newer technological changes in the sector's production processes will put a premium on increased technical skills, education and essential skills such as literacy and numeracy. And while this might seem to be a draw for youth, the environmental battles of the past have swayed the perspectives of a generation of young people. Despite recent developments, many still see the forest products sector as a dying, sunset industry and a less viable career choice compared to other jobs. This may be a central challenge for the sector going forward.

Research Methodology

This study was prepared by The Conference Board of Canada, with assistance from Informetrica Limited, under the direction of a steering committee composed of industry and labour members of the Board of Directors of the Forest Products Sector Council (FPSC-CSPF). A number of approaches were utilized:

Scenario Planning — FPSC-CSPF gathered forest products sector experts together to identify key economic and social drivers expected to affect employment levels during the next decade.

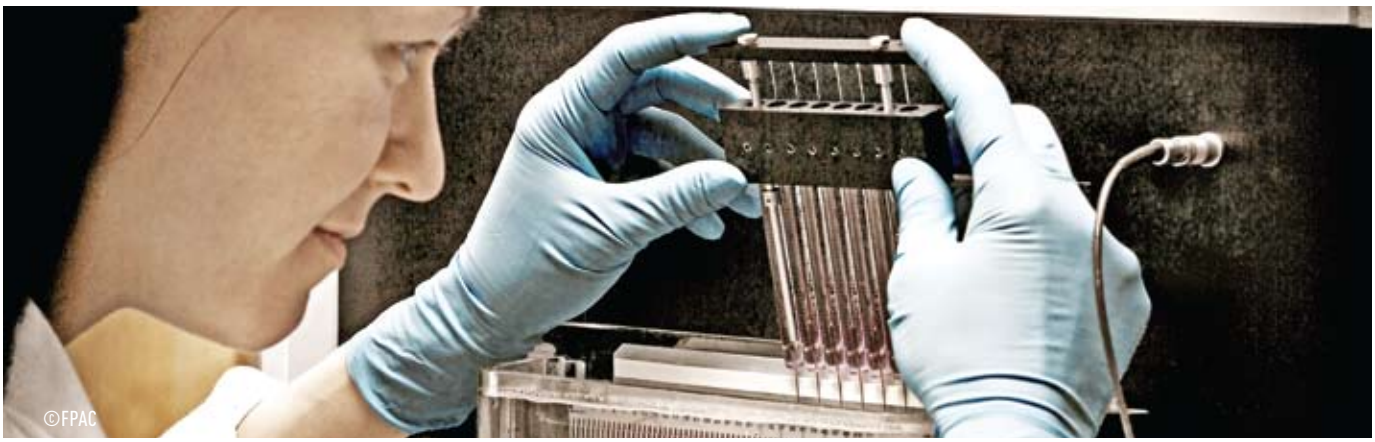
Key Informant Interviews — Interviews were undertaken with 38 key stakeholders across Canada from industry employers and associations, labour organizations, academia, Aboriginal organizations and leaders, governments, forest science and innovation professionals. Quotes from some key informants have been included in this report.

Regional Focus Groups — Six regional focus groups were held in the fall of 2010 in Thunder Bay, Vancouver, Prince George, Edmonton, Fredericton and Quebec City attended by a total of 90 forest products sector stakeholders.

Online Survey — A sector-wide cross-Canada survey was administered between December 2010 and February 2011 targeting forest products employers and employees. A total of 775 responses were received and can be considered accurate to within five percentage points, plus or minus, 19 times out of 20.

Regional validation sessions — In February 2011, FPSC-CSPF returned to six Canadian locations — Halifax, Quebec City, Ottawa, Toronto, Edmonton and Vancouver — and received additional feedback on the findings, conclusions and recommendations from more than 110 industry stakeholders.

In the summer and fall of 2011, the Forest Products Sector Council will be releasing additional detailed data, information and analysis from this multi-year study of the labour market demand in the forest products sector. If you would like to receive these updates please email info@fpsc-cspf.ca and you will be included on FPSC's electronic newsletter.



Possible Opportunities Ahead

The sector already has above average representation of Aboriginal peoples in its workforce. Canada's Aboriginal peoples can continue to be a good source of future workers as their communities grow and Aboriginal interests and skill sets can be linked to the sector.

Women also represent another potential source of labour for the sector. For many years, women have accounted for much of Canada's labour force growth and now account for nearly half of the country's employment. Within the forest products sector, the participation of women lags far behind other industrial sectors. The forest sector's recruitment challenges may be alleviated, in part, through a concerted effort to attract women into forest products operations.

Into the future, the forest products sector faces many challenges as it seeks to adapt to the realities of change in economic, trade, policy, environmental and technological areas. While emerging countries — such as Brazil — may provide additional competition for the sector these same nations may also represent new export markets for Canadian products.

Technology has already had a significant impact as the emergence of electronic media has impacted demand for paper products; a trend expected to become even more profound in the coming years. Policy changes affecting tenure policy on forested land, especially crown land, and access to raw materials may have a profound effect on the sector's ability to move forward — in fact access to a sustainable fibre supply is a key continuing condition for success and growth.

A Call to Action

The opportunities for Canada's forest products are significant — but a shared ability to realize these opportunities is contingent on many factors, not the least of which is meeting future demands for labour. Without the right people, right skills at the right place and time, the sector will not achieve its potential.

There are huge opportunities in the coming years for those with the skills, knowledge and desire to work in Canada's forest products sector. The Forest Products Sector Council has identified a number of varied and complex realities facing the sector. For its part, FPSC-CSPF will now move to develop plans and projects in response to the issues raised by the research and the next steps identified in this report.

The Canadian Forest Products Sector

The Canadian forest products industry is an essential contributor to the Canadian economy and an iconic Canadian industry. It generates revenues of $57 billion or 1.7 per cent of the national GDP. Canada is the largest exporter of forest products in the world with more than $26 billion of exports yearly.

- Canada's forest products industry is a major generator of employment in both rural and urban Canada directly employing some 153,000 men and women in more than 8,900 enterprises.
- The industry is national in scope and present in 12 of the 13 provinces and territories, predominantly in Quebec, British Columbia, Ontario and Alberta. It is the largest industrial employer in New Brunswick.
- Local forest products operations can be of particular importance to rural Canada as a major source of infrastructure, tax revenue and jobs. Natural Resources Canada has noted forestry accounts for more than half of the employment and income in about 200 communities across Canada.

What is the Forest Products Sector?

For this study, the forest products sector consists of these primary sub-sectors (as defined by Statistics Canada):

- **Forestry and Logging:** timber tract operations, logging, forest nurseries
- **Sawmills and Wood Preservation:** chipping, lumber, shingles and shakes, wood preservation
- **Veneer, Plywood and Engineered Wood Product Manufacturing:** hardwood and softwood veneer and plywood, particle board and fibreboard, waferboard, engineered wood products
- **Pulp, Paper and Paperboard Mills:** pulp, newsprint, printing and writing papers, tissue and sanitary papers, paperboard
- **Support Activities for Forestry:** forest firefighting, forest pest control, reforestation, timber cruising

More than 80 percent of the sector's 8,900 enterprises are concentrated in the logging and support activities sub-sectors. The majority of the enterprises in these two sub-sectors are small business operations employing fewer than 10 employees. **Workers engaged in secondary wood and converted paper manufacturing are not included in this analysis.**

Exports are Critical

The Canadian forest products sector is highly dependent on exports with the majority of products destined for foreign markets. Annual exports, according to the Forest Products Association of Canada, amount to $26 billion including:

- Paper — $10 billion;
- Pulp — $7.3 billion;
- Lumber — $5.2 billion;
- Panels — $1.5 billion; and,
- Other wood products — $2 billion.

The United States remains as the most dominant export market for Canadian products. In 2009, sales to the U.S. accounted for more than two-thirds of Canadian forest product exports. In recent years, China has become an increasingly important export destination and, in 2009, accounted for $1.7 billion in export product. Pulp currently accounts for more than three quarters of sector exports to China but exports of wood products have also been increasing.

In 2010, British Columbia shipped a historic 2.8 billion board feet to China, which supplanted Japan as the province's No. 2 destination.

The Players

The major stakeholders in the forest products sector include the sector's enterprises and their employees; trade unions; all levels of governments (federal, provincial and municipal), First Nations; industry and forestry associations and educational institutions.

Union Participation Rates are High

Union participation in the forest products sector is also above average with 43.5 per cent of employees being union members in 2009. This is much higher than the national average of 31.4 per cent for all industries and 26.7 per cent for manufacturing. Unionization is highest in the pulp, paper and paperboard sub-sector at 59.3 per cent and lowest in the logging sub-sector at 19 per cent.

The two largest unions in the sector are the Communications, Energy and Paperworkers Union and the United Steelworkers. Other unions involved in the sector include the Fédération de l'industrie manufacturière (CSN), Independent Paperworkers of Canada, and the Pulp, Paper and Woodworkers of Canada.

We should think about the big and small companies as an economic system. They depend on each other. We need the woodlot owners, they need the big companies. We need many more small, value-added companies; the niche players, the agile players, and the big world-class heavy hitters. If they are all functioning, everyone prospers. If you take out one piece of the economic ecosystems, the whole ecosystem shakes.
— Avrim Lazar, President, Forest Products Association of Canada, Presentation to the Standing Senate Committee on Agriculture and Forestry, April 23, 2009.

An Aging, Predominantly Male Workforce

In 2009, more than half of the sector's workforce was 45 years or older. Approximately 17 per cent of workers are over the age of 55 and about one third of all forest product workers are between 45 and 54 years old. These two older age cohorts represent a significant share of the sector's workforce. Moreover, the average age of retirement in the sector is lower than the national average.

About 85 per cent of current workers in the sector are male; female participation in the sector is well below the 47 per cent found across the workforce as a whole.

Other Key Workforce Characteristics

- The sector has a below average level of educational attainment, 17.9 per cent of the workforce lacks a high school diploma as compared to 11.7 per cent nationally.
- Aboriginal peoples are well-represented among the sector's workforce accounting for just over 6 per cent of the labour force. The participation of Aboriginal peoples is strongest in silviculture, forestry and logging operations and in the four western provinces. Nationally, participation is well above the 2.8 per cent of Aboriginal presence in the labour force as a whole.
- The sector makes limited use of immigrant workers, only 7.6 per cent as compared to the national average of 21.2 per cent.
- The occupational mix of the forest products sector includes many different types of jobs, skills and educational requirements and varies between the industry's sub-sectors. The main occupations are comprised of different types of labourers, tradespeople, machinery and equipment operators, managers and professionals including engineers.

From Sunset to Sunrise

U.S. Housing Starts Assumptions

A critical factor for the Canadian forest products sector is the numbers of U.S. housing starts. In developing the projections FPSC has assumed the following levels of annual housing starts by 2020 (in millions):

Green: 1.7 **Blue:** 1.6

Brown: 1.5 **Red:** 1.4

The Canadian forest products sector shed more than 100,000 jobs and roughly 400 mills closed between 2003 and 2009. More than 100 of these closures occurred between 2008 and 2009. The economic viability of many rural and remote communities across Canada was profoundly affected by the impact of the downturn.

Possible Futures

Looking forward, the four labour demand projections created for this study are based upon the interaction of seven key factors affecting the future outlook for the sector. They include:

- Outlook for the U.S. economy
- Outlook for U.S. housing starts
- Exports to non-U.S. markets
- Canadian/U.S. dollar exchange rate
- Forest products sector output prices
- The rate of capital formation in the sector
- The rate of labour productivity growth in the sector

Green is the most optimistic forecast and assumes a rapid growth in demand for traditional forest products domestically and in existing, and emerging, export markets. It assumes a strong upsurge in U.S. housing starts. Finally, the forecast assumes the sector is able to aggressively develop and market new products and capitalize on new export growth opportunities.

Blue is generally consistent with consensus forecasts for the Canadian and U.S. economies. It sees a good recovery in U.S. housing starts and a moderate expansion in export markets for Canadian products. Within this forecast, there is continued implementation of new products and processes.

Brown presumes a milder recovery in U.S. housing starts and a much slower pace of economic recovery. There is a slower expansion into existing and emerging export markets and slower introduction of new products and processes.

Red is the most pessimistic, "worst case" projection assuming a very weak economic outlook for the next decade. It assumes a "double dip" with the prospect of another U.S. recession towards the end of the decade. Export markets remain stagnant and introduction of new technologies and processes is negligible.

Given the consensus economic forecasts, the brown and the blue projections are considered to be somewhat more likely, while the red and green projections provide respective bottom and top ranges to the forecast.

The National Picture

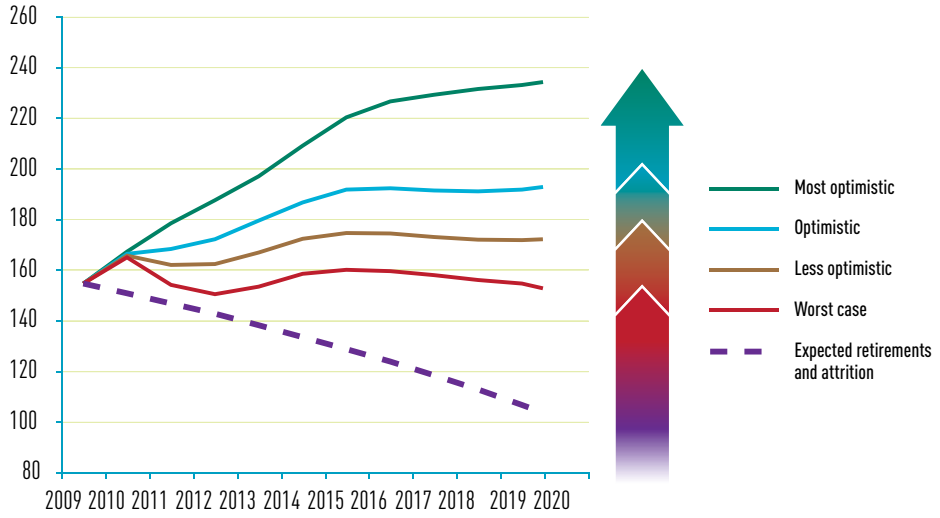
When examining projected labour demand to 2020 a number of things become apparent.

Recovery in employment demand from the 2009 low is expected in three of the four projections. The range of employment outcomes for the sector in 2020 is between a high of 235,000 in the green and a low of 149,000 in the red. The brown and blue forecasts result in employment demand rising to 172,000 and 193,000 respectively.

There is the potential for significant gains in sector employment in the coming years. In the green projection, sector employment rises considerably driven by new product development, the rapid expansion of exports into newer markets, and a strong economic recovery. However, even in the case of the red forecast and another U.S. recession, sector employment remains little changed in 2020, compared to 2009, down only 3.4 per cent.

Sector employment is not expected to return to its previous peak, even in the most optimistic forecast. The decline in sector employment which has occurred during the past five years was very steep and associated with an unusually deep recession in the United States. As well, structural changes, such as the decline in newsprint usage and the cyclical rationalization of the industry over the last few years will continue to limit job growth. However, even in an environment characterized by a very weak economic recovery and little to no development of new markets and products for the sector, some job creation will occur in the coming decade.

National Employment Demand: Canadian Forest Products Sector
(000s of workers)



The Wake-up Call

The forest products workforce is aging and as we move into the next decade, there will be growing competitive demand for labour from other industry sectors. In the forest products sector, the challenge is even greater because the workforce is older, individuals tend to retire earlier, and there is an "image" deficit.

An estimated total of 53,000 workers — at least one third of the current workforce — will leave the workforce in the coming decade (as represented by the purple line on the labour demand projections).

The combination of these factors means the forest products sector will require an accelerated response in order to meet an accelerated replacement demand compared to the overall labour force.

The industry will need to hire between 40,000 and 120,000 workers to meet projected growth forecasts.

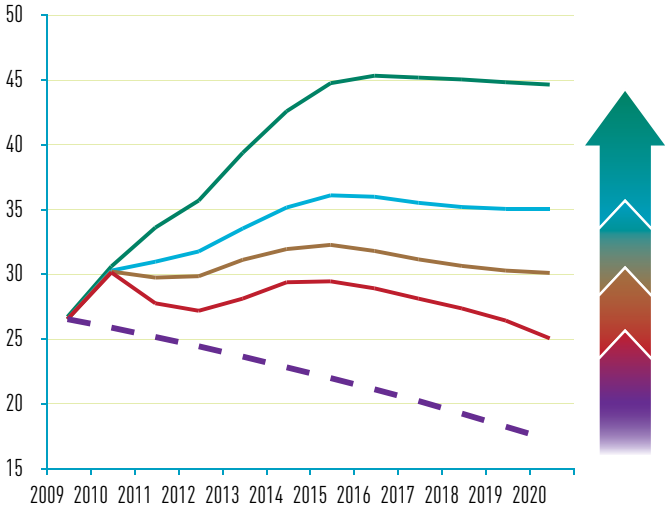
Sub-sector Snapshots

Forestry and Logging

The outlook for employment growth in the logging sub-sector is below the average for the entire forest products sector. Some of the strongest productivity growth in the sector has been in the logging sub-sector over the past 20 years and the trend is expected to continue, limiting employment growth. For example, in the blue projection, employment in 2020 will rise to 35,000, less than two thirds of where it stood at its most recent peak in 2003.

Other factors influencing the outlook for logging employment over the forecast period include changes in annual allowable cuts, insect predation, as well as potential reforms in provincial tenure systems.

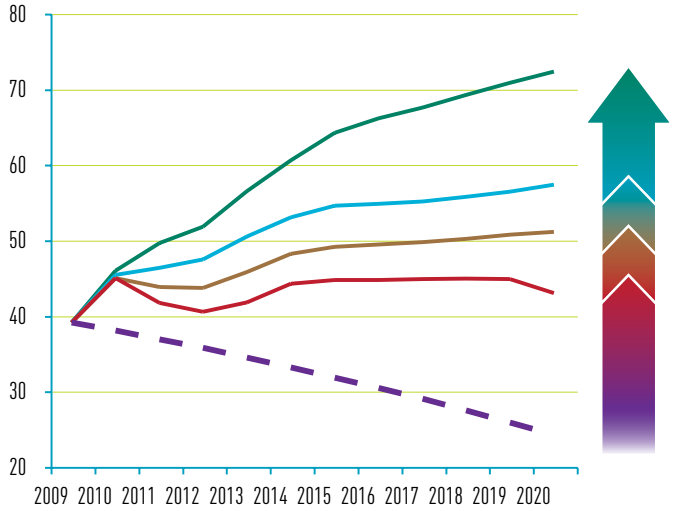
National Employment Demand: Forestry and Logging
(000s of workers)



Sawmills and Wood Preservation

Residential construction activity in North America is the primary factor driving production and employment in the sawmills sub-sector. The timing and strength of the recovery in the U.S. housing market is the key factor affecting the outlook for this sub-sector. Even with the green forecast assuming a stronger growth in non-traditional markets such as China, sawmills employment is not expected to return to its previous peak before 2020.

National Employment Demand: Sawmills and Wood Preservation
(000s of workers)



"...the sawmills will be starting up again. We will have to repopulate the workforce with brand new workers. In one sawmill they will be going from 'zero to sixty' in two seconds. A few of the original workers may come back but many tradespeople, operators, and those in administration have left for other careers in Alberta, in mining, for example. One closed mill that employs 170 people expects that it will need as many as 120 new people."

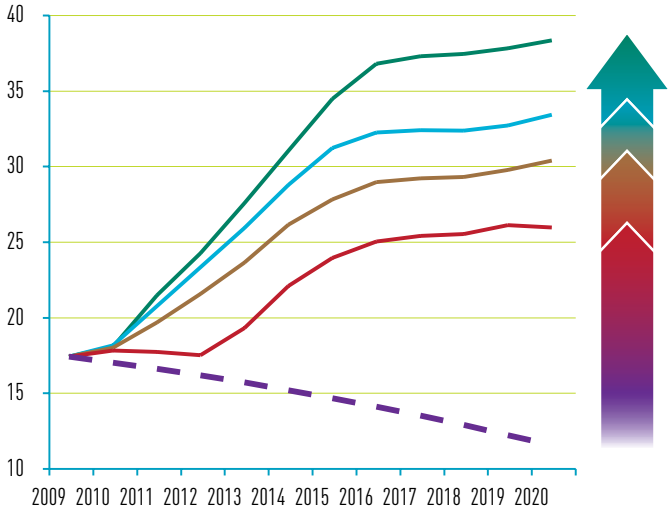
Veneer, Plywood and Engineered Wood Products

The fundamental factors driving the outlook for employment in the veneer and plywood sub-sector are similar to those for sawmills. Most important is the timing and size of the recovery of the U.S. housing market. In fact, the sub-sector is even more dependent on the U.S. than are sawmills, with U.S. exports equivalent to 46 per cent of sales in 2009 versus 40 per cent for the sawmills sub-sector. As well, exports of veneer and plywood products to markets other than the U.S. remain small. Despite this high degree of reliance on the U.S. market, the employment outlook for the veneer and plywood sub-sector is the strongest within the forest products sector.

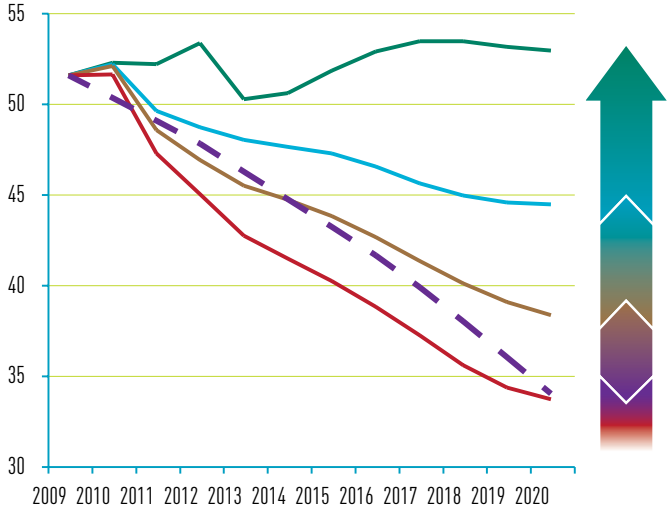
Pulp, Paper and Paperboard Products

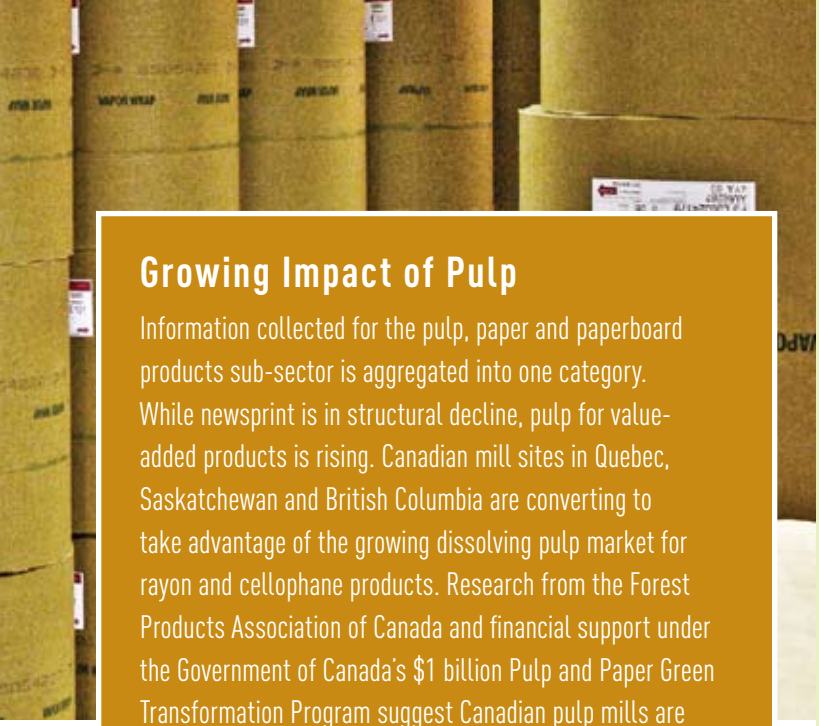
The pulp, paper and paperboard sub-sector has the weakest employment outlook within the forest products sector. Employment is expected to decline further in most of the projections. The key factor driving further employment declines in the sub-sector will be continued weakness in demand for communication papers in general and newsprint in particular. Newsprint still accounts for about a quarter of sub-sector sales but declining circulation, readership and ad spending in North American newspapers will continue to detract from newsprint demand and sub-sector employment over the next decade.

National Employment Demand: Veneer, Plywood and Engineered Wood Products
(000s of workers)



National Employment Demand: Pulp, Paper and Paperboard Products
(000s of workers)





Growing Impact of Pulp

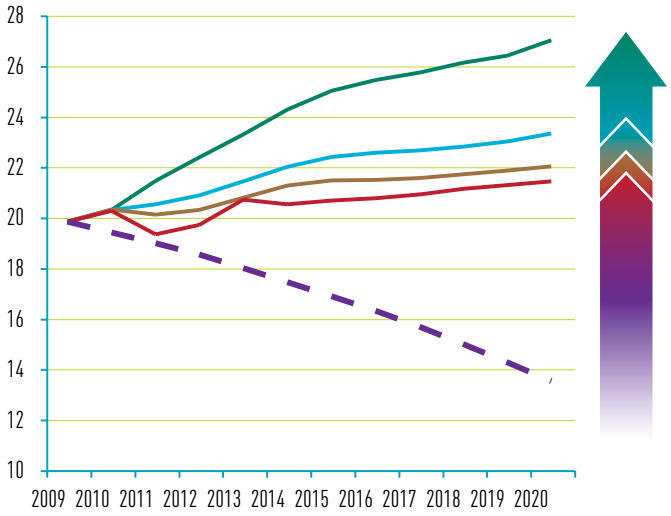
Information collected for the pulp, paper and paperboard products sub-sector is aggregated into one category. While newsprint is in structural decline, pulp for value-added products is rising. Canadian mill sites in Quebec, Saskatchewan and British Columbia are converting to take advantage of the growing dissolving pulp market for rayon and cellophane products. Research from the Forest Products Association of Canada and financial support under the Government of Canada's $1 billion Pulp and Paper Green Transformation Program suggest Canadian pulp mills are well-positioned to take advantage of a growing market for new bio-products. In future labour market studies, newsprint, paper grades and pulp will need to be tracked separately.

Support Activities for Forestry

The support activities sub-sector has experienced fairly stable employment over the past decade and its relative strength is expected to continue in the coming years. In all of the scenarios, employment in this sub-sector will expand at a slow but steady rate.

National Employment Demand: Support Activities for Forestry

(000s of workers)



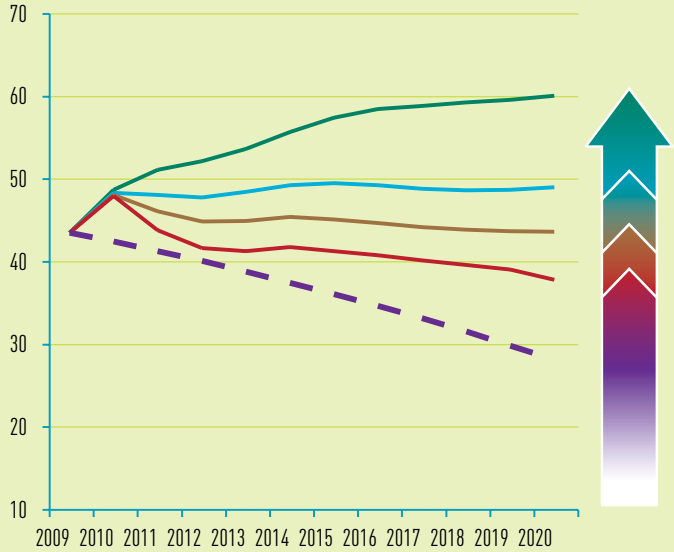
Regional Snapshots

Regionally, the different sub-sectors generally experience similar performances with some exceptions.

One key regional difference can be attributed to the mountain pine beetle infestations in the interior of British Columbia and Alberta. In particular, logging and manufacturing activity is restricted in British Columbia over the next 10 years as the value of standing timber killed by the beetles deteriorates and British Columbia reduces allowable cuts in response. At the same time, harvesting and production activity in Alberta is expected to experience a larger than average increase, as Alberta acts to extract value from timber it has already killed.

British Columbia Employment Demand

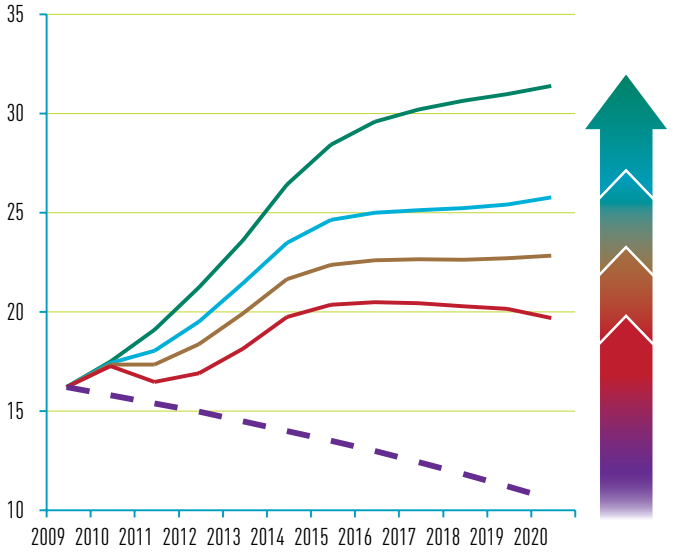
(000s of workers)



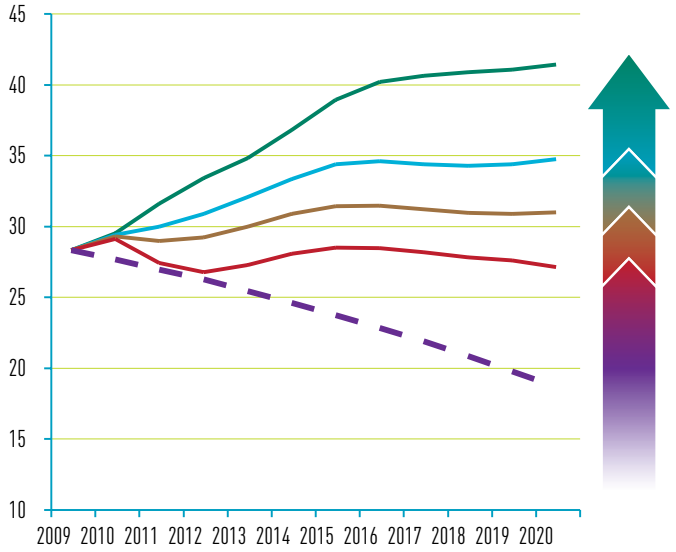
Interior and Coastal British Columbia

While, for statistical and reporting reasons, British Columbia is analyzed as a province, a significant difference exists between the interior of the province and the coast. While many human resource factors remain constant between the two, the single fact that the pine beetle infestation has not affected coastal tree species suggests a potential impact on labour demand during the next 10 years. Coastal harvesting and mill operations may be better situated and equipped to capitalize on new and existing markets and increase capacity and employment demand.

Prairies Employment Demand
(000s of workers)



Ontario Employment Demand
(000s of workers)



Another difference is the performance of the pulp, paper and paperboard sub-sector in Quebec. Among the three major producer provinces, the decline in sub-sector employment will be the most significant in Quebec because newsprint, which is the product with the weakest outlook, accounts for a larger than average share of production. As a result, employment growth in the province will be even weaker than average. However, employment in the wood products sub-sectors in Quebec will experience above average growth because of the mix of products within those sub-sectors that are produced in the province.

British Columbia, Quebec and Ontario will continue to be the major locations for forest products sector employment in the coming years. However, while forest sector employment will rise in each of these provinces, all three will see their share of sector employment decline modestly. Employment growth in Alberta will be even stronger during this period.

What are the Jobs Most in Demand?

In the next decade, a number of key occupations are expected to be in high demand in the Canadian forest products industry. This assessment is based on a detailed analysis of demand projections and on the insight and experiences of industry employers.

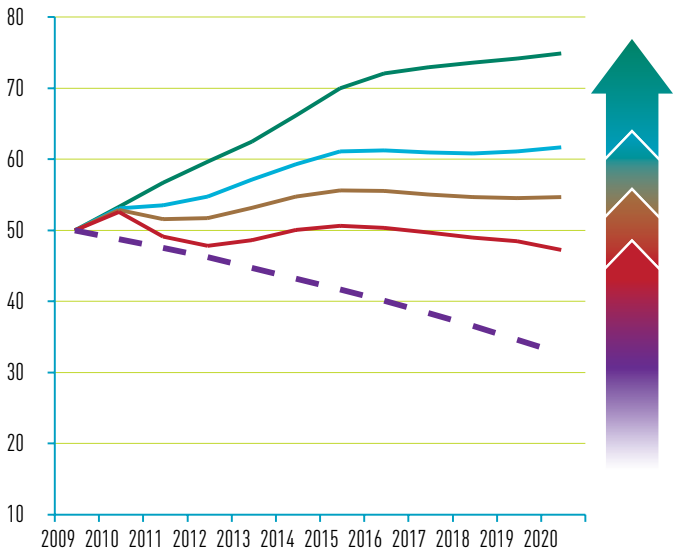
In some cases, employers may already be facing difficulties in hiring workers in certain occupations — for these and other occupations, potential skills shortages — and career opportunities — will increase through to the end of the decade.

The affected occupations range from entry level positions — requiring lower levels of formal education and training — to highly skilled careers requiring post-secondary education (including apprenticeship training) and certification.

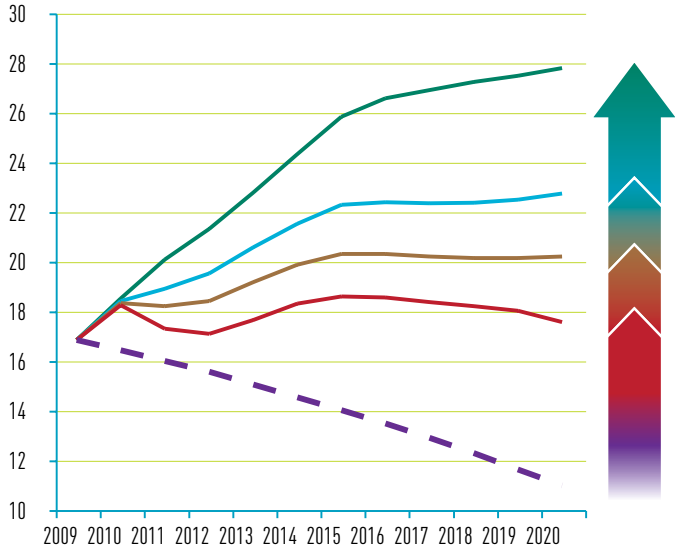
Some of the key "in demand" occupations include:

- Process operators — including those working in sawmills and pulp/paper mills
- Harvesting and logging machinery operators
- Skilled tradespeople including:
  - Millwrights
  - Stationary engineers
  - Sawfilers
  - Electricians
- Professional foresters and engineers
- Technologists and technicians
- Supervisors and managers
- Silviculture and forestry workers

Quebec Employment Demand
(000s of workers)



Atlantic Employment Demand
(000s of workers)



Occupational Trends

One of the major trends influencing these results is the changing sub-sector mix, with paper products accounting for a steadily shrinking share of employment in the total forest products sector.

Another trend driving occupational changes within the sector is an increase in the skill requirements required to operate the machinery used in the sector. For example, the pulp, paper and paperboard sub-sector is employing fewer machinery operators and more control operators. Control operators generally require college education or apprenticeship training compared to the machinery operators that may require secondary school and/or occupation specific training.

In the logging sub-sector, a similar transition from chain-saw operators to logging machinery operators is apparent. Once again, the shift in occupational demands results in a need for higher levels of knowledge and skills — with a premium on computer skills.

Even in situations where the occupational mix may not be changing, literacy and numeracy skills requirements are expected to increase. The type of work which will be done within the sector in the coming years will be similar to what is currently done; however, training requirements and the type of equipment used will continue to evolve.

Key HR Issues and Trends

Difficult to hire occupations: Almost three-fifths of employers surveyed indicated the shortage of qualified workers is a key challenge facing their operations today.

Employers are having the most difficulty hiring the following occupations due to the migration of workers to other sectors:

- skilled tradespeople (saw filers, electricians; power engineers; pipe fitters; millwrights, instrument technicians);
- machine operators, loggers and logging contractors;
- foresters, engineers and senior technicians;
- managers in sawmills and pulp mills.

Employers are also suggesting these same occupations will remain difficult to hire over the next five years.

The forest products sector workforce will face challenges meeting future labour demand due to past rationalization and downsizing of its workforce, the migration of workers to careers in other sectors, and the loss of at least one third of the workforce over the coming decade.

Evidence suggests sector employers are already having difficulties:

- retaining workers;
- attracting youth and recruiting new workers;
- supporting industry training at appropriate levels; and,
- maintaining educational and training programs.

Retention and Recruitment

Due to the loss of at least one third of the sector's workforce in the next decade, the sector's ability to retain current members of the workforce and its ability to recruit and retain new workers in coming years, is more critical than ever.

Retention

Retention is already a key priority for employers today and can be expected to become an even greater one in the future. Historically, workers in the forest products sector have retired earlier than the average Canadian worker. The combination of an older workforce and earlier retirement will contribute to and accelerate the rate of replacement demand the sector is going to face in the coming years. As well, factors such as industry image, wage competitiveness (particularly with other resource based sectors) and the rural and remote nature of the sector's operations make this reality more acute.

Of the employees who responded to the survey 58 per cent say they plan to leave the forest products sector in the next 15 years.

While a majority of employers surveyed say their operations were taking some steps to retain workers — such as improving wages, benefits, and working conditions — it is clear more will need to be done.

Why Workers Leave

Half of the employers surveyed for the study have experienced skills shortages in specific occupations due to workers leaving to take jobs in other industry sectors. The experiences of employers align with the perspectives of workers who expect to leave for work in the oil and gas, mining, construction, or government sectors. Workers surveyed say they are leaving the forest products sector for better wages and benefits, job security and advancement opportunities.

Why Workers Stay

Almost two thirds of workers surveyed say they remain in the sector because of the enjoyment and satisfaction they take from their work, the wages and benefits they receive and the reasonable work hours. Few workers say they remain because of the job security or career advancement opportunities. Very few workers said they continue working in the sector because it is the only work in their community.

"In Alberta, they call it the 'great black sucking sound' coming from the middle of the province" [referring to the wage competitiveness of the oil and gas sector].

— Edmonton validation session participant

Recruitment

The forest products sector's ability to recruit new workers is crucial to the sector's ability to meet replacement and expansion demand over the next decade.

Employers reported a number of barriers to recruiting — not enough qualified workers, negative perceptions of industry, a declining rural population and lack of essential skills — that make it difficult for employers to recruit sufficient numbers of suitable new workers. The sector's historical reliance on local labour, the declining size of the local labour pool, and difficulties attracting talent to live and work in rural and remote areas combine to produce growing recruitment challenges for the sector.

"Over the next three years we know that we are going to need to recruit literally hundreds of new employees annually just to replace the workers that will retire or leave to go to other work. And that number is just for our current operations — if we want to increase capacity or add shifts at mills the need to hire more workers is even greater." — Employer key informant local labour supply

Local Labour Supply

In the past, mills and harvesting operations relied on local labour supply. However, it is now more difficult to attract workers, old and young, in local communities to enter careers in the sector. The urbanization of Canada's population presents a particular challenge for the sector. Many youth simply don't want to be 200 kilometres away from the jobs and social prospects larger urban centres offer.

As well, the forest products sector, like other resource sectors, has historically faced difficulties in recruiting workers from outside local communities to live and work in rural and remote locations even when good wage incentives have been offered.

Attracting Youth

The sector's share of workers aged 15 to 24 is at a historical low compared to the overall labour force. One key informant suggested this is due to limited employer demand and the lack of availability of entry level positions and apprenticeship opportunities. However, most also cite the sector's lingering public perception and image problems as a key challenge going forward.

> For young people in Campbell River, I encourage you to look at the forest industry very closely as it holds promise of being a Sunrise Industry. With the wave of baby boomer retirements sweeping through as we speak, you have endless opportunities to join the greenest and most environmentally friendly major resource industry on the planet, right here on the coast of British Columbia.
>
> — Otto Schulte
> VP Coastal Woodlands, Interfor
> March 2011

Attracting and recruiting younger workers is a priority for one quarter of employers surveyed. About a third of employers say they are making significant efforts to target youth for recruitment into the sector.

The high tech and computerized nature of the work in the forest products sector would likely be something youth would find attractive if they were better informed about it. Most stakeholders are adamant that misinformation about the sector and about work in the sector is undermining their recruitment efforts.

Skills Development and Knowledge Transfer

The skills and knowledge of the sector's workforce are maintained through a mix of formal education and training, on-the-job and pre-employment training, and specific skills training and upgrading. Qualified and skilled workers who retire will need to be replaced by workers with sufficient formal education and on-the-job training to maintain operations at current levels of safety and efficiency. Essential skills, technology training and knowledge transfer from older to younger workers are of increasing importance — for health and safety benefits, increased efficiency and longevity for equipment, and productivity gains.

Skills Development

The majority of employers surveyed reported their operations are making at least some efforts to support skills development. Efforts by employers to support skills development were most frequent in the following areas:

- training for skills certification;
- training related to regulatory changes;
- cross-training to equip workers with skills in multiple roles in an operation; and,
- training to respond to technological changes.

Skills Needed Most

Employers were asked to identify the skills most needed by their forest products sector operations (in no particular order):

- **Managerial skills:** in all subsectors and most often by employers in harvesting; support activities; and pulp, paper, and paperboard operations.
- **Equipment maintenance skills:** needed most in forestry and logging; sawmills and wood preservation operations; and pulp, paper and paperboard operations.
- **Forest management and regulation:** needed for employers in harvesting and support activities operations.
- **Skills related to optimal use of wood fibre:** needed most by employers in the three manufacturing sub-sectors.
- **Sub-sector specific technical skills:** all sub-sectors.
- **Technical skills requiring certification:** needed particularly in sawmills and pulp and paper operations.

"Skills are needed on the harvesting side, like how to select each tree for best use. Then if the harvesters have selected for best use, the sawmill also has to get best use. Right now we have three streams – good sawlogs, pulp wood, and energy wood. But within that, there may, for example, be another 20 to 25 per cent good resource that is suitable for another purpose, such as cabinet stock lumber." — Key informant

On-the-job Training

All survey respondents marked on-the-job training as the top priority because it will be needed in the short-term to meet post-recession start-up labour demand and during the next decade to meet replacement demand due to retirements. In both cases, the sector will need to provide on-the-job training on a scale likely to exceed what has been provided in recent years.

Apprenticeship

There is limited support for apprenticeship training among employers, according to study respondents. Currently, some provincial jurisdictions have forest product sector specific apprenticeable occupations. For example Quebec has 13 apprenticeable trades specific to the forest products industry. Other provinces and territories such as British Columbia, Alberta, Ontario and Yukon have less. In addition, the industry relies heavily on skilled tradespeople — including millwrights, industrial electricians and others — that are active in other sectors, including petroleum, mining and construction.

Stakeholder opinion in the sector varies on whether to increase the number of apprenticeable occupations in the sector. A number of benefits and drawbacks associated with apprenticeship were also identified:

- **Benefits:** higher quality work, safety, higher productivity and increased employee satisfaction.
- **Drawbacks:** cost of training, time required, lost work time, travel for training and threat of poaching by other sectors.

Barriers to Training

The most frequently reported barrier to education and training is cost. Often, the company cannot afford the training and, when funds are available, they can be difficult to access.

The need to travel for training is a common barrier for the forest products sector workforce, since much of the workforce lives and works in rural or remote communities. Limited online training is available and could be developed further.

Some participants identified a lack of mechanisms for skills recognition as a significant barrier to training. Credit and/or recognition for learning can shorten the time required to complete training programs leading to certifications (e.g., apprenticeship or certified training programs). In some cases, this can make training, or retraining, more achievable.

Essential Skills Needed

The educational requirements needed to work in the forest products sector have increased in the past 20 years. A high school diploma is now required in jobs which once did not require one. Yet, the sector's current workforce has a lower than average rate of high school completion. Higher literacy, document and computer use skills are now a prerequisite for new workers entering the sector.

Many younger workers who aspire to jobs in the sector frequently lack the essential skills needed to perform successfully. Many stakeholders suggest Canada's secondary school system is focused primarily on preparing youth for entry into university and not for entry to skilled occupations in industry.

"Profitability is tied to the productivity of the labour force and productivity is tied to the education of the labour force. Literacy helps companies be more successful by supporting their bottom line. If all repairs take 10 per cent longer, that's a competitive disadvantage." — Key informant

The sector needs to ensure the existing workforce has sufficient essential skills to support the introduction of new technologies and continuing mechanization and computerization of mill and harvesting sites. As well, existing workers with seniority, in line for soon-to-be-vacated positions, may also lack the skills and credentials needed to qualify for occupational training and education.

Employers strongly recognize the need to increase essential skills in their workforce and more than half say they are taking at least some steps to address the essential skills needs of their workforce. However, only 6 per cent of employers say their workforce developed essential skills through training which took place during the last year.

More must be done to bridge the gap between essential skills needs and current levels of essential skills development.

Knowledge Transfer

There is an immediate need to accelerate knowledge transfer practices, such as mentoring and cross-training, to ensure vital skills on which the sector depends are preserved and passed along. About one third of employers surveyed reported their operations have a formal succession planning strategy in place with the most common practices being:

- Mentoring;
- Training to replace retiring workers;
- Cross-training.

Large- and medium-sized operations were more likely to have more succession planning practices in place than small-size companies.

Succession planning and knowledge transfer practices were more likely in operations in the three manufacturing sub-sectors (sawmills and wood preservation, veneer, plywood and engineered wood products, and pulp, paper and paperboard mills) and least likely in the logging and forestry, and support activities sub-sectors, where companies tend to be smaller in size.

Perceptions of the Industry

An overwhelming majority of employers report the perception of the forest products sector as an "industry in decline" is a barrier to recruitment.

This perception is held by youth, parents, educators, and employment and guidance counsellors. For those working in the sector the lingering economic uncertainty, in some locations, is also contributing to this perception.

The public does not have accurate information about the emerging nature of work in the forest products sector. Perceptions are often rooted in outdated notions of work — and of its products.

Many do not have any idea harvesting requires operators to be dexterous and focused and work controls which are akin to playing computer games. In the same vein, the highly advanced systems found in modern sawmills, panel and board production facilities and pulp and paper mills are not generally known. As just one example, advanced infrared measurement technology is used in Canadian pulp mills monitor and control key chemical processes. Skilled workers are needed to install and maintain these types of technology and to understand how it works to optimize production.

The public is unaware of how many day-to-day products, such as ketchup, medical gel caps, textiles contain wood fibre or the new and value-added uses of manufactured wood products. For example, Montreal subway cars are equipped with wooden brake pads.

Top Skills Needs for Innovation

The top skills necessary to support the development and production of new products include:

- research and development;
- market development and marketing expertise;
- skills related to selling and servicing products;
- entrepreneurial and business skills — risk-taking, development of valued added products;
- new engineering and chemistry skills;
- blended skills — business skills blended with science or engineering skills; and
- innovative leadership and skills.

Managers and executives will require specific skill sets to support innovation: skills and knowledge in entrepreneurship, market assessment, partnership building, change management and commercialization of new "green economy" technologies.

"We are close to a fundamental break between the industry and its workforce. The attachment of families to industry is broken." — Employee key informant

Enrolment in forest products education and training programs has also been affected by negative perceptions of the forest products sector. Students are more likely to enrol in undergraduate environmental sciences or natural resources management programs than forestry programs, despite the fact a forestry degree leads to a professional designation and increased employment opportunities. In fact, the oldest forestry school in Canada, at the University of Toronto, may be shuttering its doors shortly.

Today's youth are not following in the footsteps of generations of family members who worked in the mill or the forest.

And perhaps the gravest aspect of the perceptual challenge facing the sector is the fact the sector's own workers would not recommend a career in forest products. Only half of employers surveyed said they would strongly recommend work in the sector and half of employees and self-employed workers surveyed said they would definitely not recommend work in the sector to others.

Innovation for Future Success

The development of valued-added new products and processes in bioenergy, biofuels, new engineered wood products, biotechnology, textile production and nanotechnology are vital to future growth in Canada's forest products sector. Many of these new developments have been, or will be, added onto existing forest products sector operations.

While new products and process development are in the early stages of implementation, 30–40 per cent of companies surveyed say they expect to bring new product processes such as bioenergy, new engineered wood products, biorefining and wood chemicals online within the next five years.

The timeline for most companies expecting to develop biotechnology or nanotechnology products is at least six years or longer.

Future innovation will also require the development of new education and training programs to prepare workers to support the development of new products and processes. Industry and education providers will need to work closely to ensure the development of new skills and programs which keep pace with, and respond to, the development of new products.

Alberta has embarked on an ambitious exercise to look at opportunities in the province's wood products, bioenergy and pulp and paper sectors. The objective is to create an overarching forestry industry sector strategy and action plan to 2020 that, among other things, will:

- support individual companies in their strategic planning;
- assist in identifying and supporting partnership opportunities with other sectors;
- assist government in aligning the research and development agenda with the strategic needs of the sector; and
- identify education and training needs.

A Call to Action

Canada is well positioned to capitalize on a strong global recovery led by the solid wood sector with demand for paper products stabilized, new products successfully introduced and a greater presence in emerging new markets.

In the most optimistic of future possibilities, Canadian forest product enterprises will need to hire as many as 120,000 new workers by 2020 to meet demand.

In a less optimistic future, the sector's labour force demand will essentially hold its own in the face of continued macro-economic challenges. Even in this situation the industry will require nearly 40,000 new workers to fill demand.

There are three key conclusions the Canadian Forest Products Sector Council has drawn from this analysis:

- After difficult years of jobs losses and industry contraction, net labour force demand in the sector will increase over the next decade in every likely projection. Driven by market expansion, new products, attrition and an aging work force, and competition for skilled workers from other industries, the sector will need to hire tens of thousands of new workers by 2020.
- The magnitude of demand and the continuing transformation of the sector will place a premium on the transfer of skills and experience to new workers, upgrading of basic and essential skills across the sector and the need for higher levels of technical and educational competencies for new and existing workers.
- Swift, concerted and sustained actions are needed now to recruit the future workforce, retain experienced and skilled workers, and improve human resource planning across the sector.

Meeting these labour demands will be one of the most serious challenges that the sector will face to ensure economic recovery and to be a competitive, productive global industry.

The Competition for Labour is Growing and will Intensify

Competition for certain occupations will grow and intensify as skilled workers, including tradespeople and professionals, will be in high demand from other sectors.

The labour force projections have been prepared in the context of an increasingly competitive labour market. Skilled individuals required by the forest products sector will also be in high demand within other resource-based sectors — oil and gas, mining, hydro and construction.

Study participants identified serious underlying factors affecting the sector's ability to recruit and retain workers. Specifically:

- the negative perception of the sector in the minds of potential workers and others;
- lingering concerns about the future of the sector — and the potential impact on job security — in the minds of existing and potential workers; and
- a reduction in the sector's "wage premium" — in comparison to other sectors, particularly the oil and gas and mining industries.

Next Steps:

- Provide tools and resources to employers and others to improve recruitment and retention efforts.
- Develop better linkages — including regional strategies and approaches — within the industry and with similar industrial sectors, to facilitate recruitment of workers and enhance worker mobility and flexibility.
- Develop programming to enhance the cross-skilling of employees as a benefit for employers and for workers.

Labour Force Projections will Continue to Provide Value

The projections show an overall labour force demand growing over the course of the next 10 years. Growing demand, coupled with retirements and other attrition factors, mean the Canadian forest products sector will need to recruit at least 40,000 to as many as 120,000 people by the end of the decade. The projections also show a need for action in the short term, as much of the projected growth in demand will occur within the next five years.

Given the extent and pace of employment demand growth and shortages, the sector would benefit from insight and perspective gathered by a dynamic and focused labour market information platform. To meet the needs of the sector moving forward, a labour market information platform should:

- provide labour demand data at different levels (national, regional, community) and specific to distinct sub-sectors and occupations within the industry
- provide insight into "supply side" issues such as cross sectoral occupations or skills needs; and
- inform strategic human resource planning around skills, training, recruitment and retention, and succession planning.

Next Step:

- Develop and implement a scalable, flexible and timely labour market intelligence (LMI) platform for forecasting future labour force demand on a continuing basis.

Knowledge Transfer Practices Should be Improved

There is an immediate need to improve knowledge transfer practices such as mentoring and cross-training to preserve vital knowledge and skills within the sector. As more workers exit the sector there will be fewer experienced workers who can provide mentorship and training to newer or less experienced workers. Without action in this area, the sector faces the risk of a loss of knowledge and skills — with a resultant and negative impact on industry productivity.

Next Step:

- Develop and disseminate tools and techniques to improve knowledge transfer practices and succession planning — from older workers to newer entrants and across organizations.

Training Programs must Evolve

In addition to needing more workers, the research suggests new skills will have to be developed to support and grow industry transformation into new products and processes. Key skills gaps exist and will increase during the next 10 years unless action is taken. The need for advanced literacy, numeracy and computer skills is expected to continue and the development of essential skills programs for new entrants and existing workers will be integral to supporting future growth and expansion.

The Forest Products Sector Council is currently undertaking a study of Apprenticeship and Regulated Occupations in the sector. The project will develop strategies to expand and increase the participation of industry employers and workers in formal training and certification systems. Enhancing the participation in apprenticeship and regulated occupations will benefit a number of labour market stakeholders including employers, individual workers, educational institutions and the industry at large. The report is expected to be released in the fall 2011.

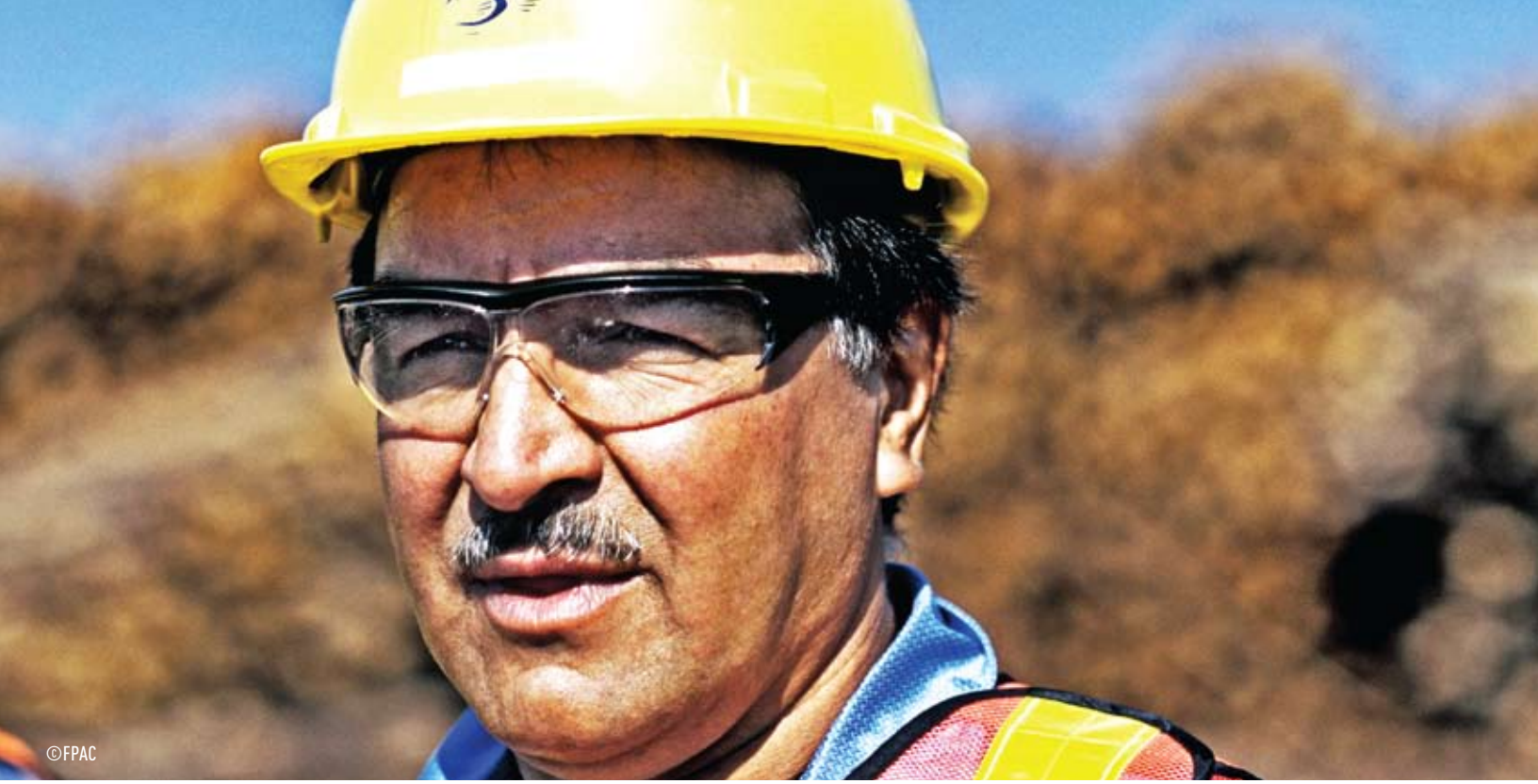
The linkages between industry, unions, and education and training institutions (including provisions for enhanced apprenticeship programs) need to be more closely aligned and strengthened to ensure the sector meets its future labour needs.

The development of competency profiles for in-demand occupations in the sector would provide an additional foundation in this area.

Competency profiles can assist in identifying the skills required in a particular occupation or role. They can be useful to recruit and train workers, to assess knowledge transfer needs, to recognize workers' skills, and to support transitions between roles or occupations. Competency profiles are used widely in apprenticeship and professional occupations as they define the skills and knowledge required for a particular occupation or discipline.

Next Steps:

- Develop essential skills profiles, competency maps and training curriculum for in-demand occupations to allow new entrants and existing workers to better meet demands of the future labour market, to facilitate recruitment of workers to the sector and to enhance worker mobility.
- Develop initiatives to better align training programs of training and education providers and systems with the specific requirements of in-demand occupations.
- Develop tools and strategies to increase sector participation in apprenticeship — in part, by improving the linkages between the sector and the apprenticeship systems across the country.



Advancing Aboriginal Inclusion

During 2010 FPSC-CSPF held seven Aboriginal engagement sessions across the country that brought together Aboriginal leaders and communities with industry, union, education and government stakeholders to talk about ways to advance and optimize the employment of Aboriginal peoples across the full scope of the forest products sector. The full report will be released in summer 2011.

Recruiting and Retaining a Diverse Workforce is Key

The sector will increasingly need to draw from the growing pool of candidates from Aboriginal communities across Canada and from non-traditional demographic sources such as women and immigrants.

The research clearly supports the notion that industry cannot continue to rely solely on its traditional sources to meet predicted shortages in future labour demand.

The increasing urbanization of the Canadian population and out-migration of younger workers to urban areas is a major concern.

Canada's growing Aboriginal population represents one of the sector's best hopes for a future labour supply. As an industry, the sector is the largest employer of Aboriginal people and there is an historical connection between Aboriginal people and the forest products sector. Aboriginal peoples are interested in increasing their participation in the sector and there can be long-term economic benefits for Aboriginal communities situated close to sector activities. Effective, local models of partnership based on mutual cooperation and respect can do much to support these efforts.

Women and immigrants also represent potential sources of labour for the sector. For many years, women have accounted for much of Canada's labour force growth and now account for nearly half of the country's employment. In the same vein, immigrants now make up over 20 per cent of Canada's overall workforce. Within the forest products sector, the participation of women and immigrants lags far behind other industrial sectors. The forest sector's recruitment challenges may be alleviated, in part, through a concerted effort to attract women and immigrants into the workforce.

Next Step:

- Develop tools and strategies to assist employers in their efforts to recruit, train and retain:
  - Aboriginal peoples
  - Workers from "non-traditional" backgrounds (including women and immigrants)

"Image" Problems Present Challenges

The current image and perception is impacting efforts to recruit and retain workers and will, if not addressed, impair the sector's ability to meet labour force demand.

Current perceptions of the sector are adversely impacting recruitment efforts. Young people, and those that influence their career decisions, do not see the sector as a "first choice" option. This reality is particularly acute for many of the "in-demand" occupations — such as trades and professions — also required by many other resource sectors.

Business, labour, governments and education all have a role to play in building awareness and improving the perceptions of the sector. Coordination of partnership and network building activities among key stakeholders at the national, regional and community levels is imperative.

Next Step:

- Develop the recruitment and public education strategies and tools to improve the image and attractiveness of the sector to young workers, sought after skilled workers, professionals and technicians, Aboriginal workers, women and new Canadians.

The Role for FPSC-CSPF

The Canadian forest products sector has emerged from an extended slowdown which has impacted the industry significantly. Despite this, the potential prospects for Canada's forest products sector are promising.

The realities facing the sector — in terms of meeting its future HR needs — are varied and complex. Taken together, they present challenges and opportunities which must be addressed, if the sector is to achieve the promise of its future.

> Focusing on the Thurso mill in Quebec, we have returned 300 people to work — as of yesterday, I believe it was 295. Our intention is to increase staff to around 310 or 315 people working directly at the mill. A study by government indicated that the indirect job creation from restarting that mill was 2,900 additional jobs.
>
> We went through five or six different sets of negotiations with the unions. We put everything on the table; we were open and transparent. We view the unions as a critical piece in this transformation.
>
> As you mentioned, there will be a lot of training needed and a learning curve to go through. We brought in several new senior-level managers with dissolving pulp and transformation experience of this nature.
>
> It is a great time to grow businesses in the forestry sector.
>
> – Chadwick Wasilenkoff, Chief Executive Officer, Fortress Paper Ltd. Presentation to Standing Senate Committee on Agriculture and Forestry, June 10, 2010.

FPSC-CSPF recognizes its role as a source of information, data and perspective and, in some cases, as a catalyst for change. For its part, FPSC-CSPF will now move to develop plans and projects in response to the issues raised by the research, and the next steps identified in this report.

While FPSC-CSPF will take on some of this work given the complexity and magnitude of the challenges it is clear no one group or single set of initiatives can be expected to affect sustained change on all of the issues impacting the industry.

While FPSC-CSPF is poised to take a leadership role in advancing this work, it recognizes success depends on collaboration with other organizations and groups who are focused on HR and labour market issues.

The Way Forward

Canada's forest products sector faces the prospect of a much brighter future as demand increases for traditional products and new and emerging products and markets take hold.

Realizing the future promise is contingent on a great many factors — including access to markets and fibre and an ability to innovate and adapt in the face of global competition. Equally critical, and not to be forgotten, is the continuing and critical need for an appropriately skilled workforce.

Expressed another way, having the right people, with the right skills at the right place and time is critical to the future success of the Canadian forest products industry.

Photo credit: shutterstock.com

Notes

This report is available online and in French at www.fpsc-cspf.ca/sectorstudy

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