



Introduction

ForestWorks welcomes the Senate Standing Committee on Education, Employment and Workplace Relations inquiry into the

capacity of universities and other research and training institutions to meet current and future demand for climate change professionals, and possible measures to assist understanding of climate change in the Asia-Pacific region, including provision of training and skills assistance.

ForestWorks, in its role as an Industry Skills Council (ISC), working with Skills Australia and other ISCs is in a position to convey to the committee the training and skills assistance that would support professionals in the following sectors:

- Forest Growing and Management
- Harvesting and Haulage
- Sawmilling and Processing
- Timber Product Manufacturing
- Timber Merchandising
- Wood Panel/Board production and,
- Pulp and Paper Manufacturing.

ForestWorks is the bi-partite, expert representative of the forest, wood, paper and timber products industry with respect to workforce development, employment, skills, training and assessment.

Industry Contribution to Climate Change

The key message of this submission is that every job in Australia's forest industry is a carbon positive job. A key part of understanding climate change is understanding how carbon and other greenhouse gasses and how a reduction of the production of these gasses, or an increase in storage of these gasses is vital to managing climate change.

International scientists, industry and environmental groups as part of the International Union for Conservation of Nature-endorsed *Forest Dialogue* stated that the largest carbon mitigation benefit from forests is produced by the long term sustainable management of forests for timber, fibre and energy production.

Ref: <http://research.yale.edu/gisf/tfd/>

The Commonwealth Government has acknowledged that the forest industry is a carbon positive industry. In the CPRS Green Paper 2008, page 501 shows the 'forestry and logging' industry sector as:

- -1,493 emissions per unit of revenue (t CO₂-e/\$m revenue)
- -0.5% proportion of national emissions (excluding deforestation).

The emissions intensity of 'forestry and logging' is negative because it includes carbon sequestration in forests.

National Association of Forest Industry (NAFI) predicts 81 million tonnes of CO₂e abatement will be available from forestry by 2020 (50 – plantations, 23 – commercial native forests, 5 – carbon in wood products, 3 – bioenergy from wood waste)

Given the right policy settings, the forestry and forest based industries can deliver:

- \$19 billion of new forest industry investment
- 16,000 new jobs, mainly in regional Australia
- All carbon positive jobs.

Industry Leadership in Education and Learning

ForestWorks is a strong advocate of an industry led system in the development of industry skill standards and qualifications; it adopts the definition of competency as achieved against workplace standards. From this perspective, which is a critical component of the VET national system, ForestWorks argues strongly that strategies must support and be led by industry and be designed to meet the demands of industry, not supplied to meet anticipated demands as determined by learning and training institutions.

This industry leadership is what will deliver the capacity for skill development to meet current and future demand for climate change professionals, similarly in measures to assist understanding of climate change in the Asia-Pacific region, especially the provision of training and skills assistance.

Career Pathways

ForestWorks advocates for the Senate Committee to take into account career pathways, both to and from those supported by VET qualifications, as influential in addressing and achieving a knowledgeable and skilled workforce.

The development of climate change professionals, involves the VET sector through the career pathways of individuals who enter the industry from a range of other positions. It is important to recognise that the pathway in most of the sectors is now not being met through the recruitment of young people directly exiting university courses into the forester or other related professional positions.

The industry is in the early days of discussing the opportunities and pathways that link qualifications such as the Diploma in Forest Operations to the traditional degree required of the position of a forester. The emerging relationships in the industry between sectors such as with mills (sawmills, veneer mills, pulp mills, paper making mills) and the power sector in using biomass to generate power are yet to identify the skills crossover with professionals, paraprofessionals, technicians and operators across the sectors.

The industry has had a long term shortage of professional foresters in Australia and there continues to be a low take-up of university graduates to tertiary forestry programs. Forestry Tasmania in 2008 recruited some twenty foresters from South Africa as these positions could not be filled domestically.

Asia Pacific Region

In tropical nations the impact of forest clearing on climate change is significant. Australia has had and continues to have a major role in promoting sustainable forest management as a 'best practice' to managing forests for climate change, communities and economies over the long term.

Building skills in sustainable forest management to achieve international standards of forest management will take resources, cooperation and focus. Skills standards and training curriculum requires development in many areas of forestry, including forest policy and compliance through to safe chainsaw use. Investing in skill development within forest industry professional, technical and operational level training providers in the Asia Pacific is a key opportunity towards building capacity in sustainable forest management (SFM). Forest and wood products training providers require significant support for; recruiting and retaining staff, developing and assessing learning resources, accessing industry standard facilities, linking with workplaces and the involvement of learners.

ForestWorks as part of the industry has played a strong and proactive role in the Asia Pacific region. In 2008 - 2009 ForestWorks, with funding from the Department of Agriculture, Fisheries and Forestry (DAFF) successfully completed an Asia Pacific Capacity Building Project with Papua New Guinea, Solomon Islands and Indonesia.

In addition, the highly successful Asia Pacific Forest Industries Climate Change Conference was conducted in Sydney in 2008. Here attendees and speakers met for three days to discuss and highlight the role of the industry in the Australian government's policy response to climate change. ForestWorks also provided support for the industry's contribution to the United Nations Framework Convention on Climate Change held in Posnan in December 2008, this included hosting a side event.

A critical success in ForestWorks role in the Asia Pacific has been to maintain links with the training and skill development needs of communities. This has been carried out by working with appropriate and locally driven decision making processes that support sustainable forestry practices and economies.

Knowledge and Innovation

The industry is very much a key player in renewable energy, carbon storage and bioenergy innovations. ForestWorks recognises the importance of university and research centres, such as the Co-operative Research Centres, to undertake predictive and research based knowledge development to support the demands of new directions, partnerships, products and resources in the industry. Biosecurity is another example of where investment in research is required to ensure the forest, wood, paper and timber products industry can have a dynamic impact on Australia's solution to climate change.

Conclusion

In conclusion:

- ForestWorks would welcome the opportunity to address the Senate Committee if required to further expand the ideas and advice outlined in this submission
- A fully inclusive educational approach to building skills and capacity in sustainable forest management is central to meeting challenges in climate change
- Asia Pacific capacity building projects focus on working with communities and land owners; focus on sustainable jobs as part of the solution to deforestation; focus on achieving sustainable forest management
- ForestWorks proposes that required knowledge and skills are critically integrated into skill development and recognition via industry direction. This direction and leadership ensures skill acquisition is timely, applicable and regionally relevant to what the enterprise, the sector and industry are demanding.

Attachment A:

Environmental Sustainability

Industry Skills Council paper –ForestWorks excerpt May 2009, sourced from the ForestWorks Industry Environmental Scan February 2009.

Industry Profile

ForestWorks is responsible for the following two Training Packages:

- FPI05 Forest and Forest Products Training Package (which includes 6 discrete industry sectors)
- FPP01 Pulp and Paper Manufacturing Industries Training Package

The forestry industry is in a unique position in the environmental sustainability debate in that it is one of the only industries that reduce the amount of carbon that Australia produces via the storage of carbon in growing wood.

The government's commitment to reducing Australia's carbon footprint and its proposed Carbon Pollution Reduction Scheme engender a level of optimism for the industry as it works to ensure that forestry is part of the economic solution to a sustainable economy. Growing trees, the planet's natural carbon processors, is after all forestry's core business.

Australia has a total forested area of around 150 million hectares - covering around 21% of the continent. Approximately 1.903 million hectares are plantation forests. Forest products are derived from renewable plant material, and grown and managed with sustainable natural resource management outcomes. The manufacture of wood products requires less energy to produce than aluminium, steel and concrete, with the valuable carbon resource embedded into the final product.

However this industry still faces many challenges presented by climate change and environmental sustainability agendas. Recent bush fires in Victoria illustrate its vulnerability in a warming climate predicted to see increased ferocity and regularity in bush fires unless the industry is allowed to carry out fuel reduction strategies to reduce fire risk. The Victorian fires saw mills lost, native forest and plantation timbers lost, timber workers lose their homes and for many, their community, friends and family. The capacity of the industry to implement sound forest management practices will be critical in protecting these resources and communities. The ongoing drought in many areas continues to impact on tree growth, and in northern Australia, with the predicted increase in cyclone activity and severe weather, there may also be an increase in the amount of timber that will be felled via timber salvage as a result of these events.

Industry practices are highly regulated with work practices continually evolving to improve environmental outcomes. New methods in logging and haulage aim to increase recovery and reduce waste, while harvesting operations are being assessed to design techniques that further reduce the impact of logging on the environment. The impact of changes in the use of different timber species, biofuels and biomass will greatly impact on sawmilling and processing. Timber preservation practices have been changed to eliminate the use of Copper Chromium Arsenate (CCA). The call for energy efficiency in home design will drive the development of new types of engineered timber products.

The pulp and paper sector is a significant user of energy, particularly in mechanical pulping processes. It is also a major producer of renewable energy by processing waste such as black liquor from chemical pulping. This energy is often used on site or supplied to the electricity supply grid. Wood wastes also generate a considerable part of the energy used for the kiln drying of timber.

Key drivers for the Industry

Key drivers for an increased focus on environmental sustainability include harnessing the opportunities available to support carbon reduction strategies and the efficient management of resources.

1. Carbon reduction strategies.

The forest, wood, paper and timber products sectors are in a strong position to provide a range of strategies for industry, communities and Australia to reduce the impact of carbon emissions. Wood by-products of timber harvesting, processing and recycling offer 'one of the largest sources of biomass in Australia' potentially making this industry a significant contributor to achieving Australia's mandatory renewable energy targets while still leaving sufficient residues in the forest to maintain biodiversity and sustain nutrient replacement. The National Association of Forest Industries (NAFI) predicts that by 2020 forest industries will contribute an estimated 81 million tonnes of carbon abatement each year. These strategies will require additional investment into resources and skills in order to fully capitalise on these opportunities.

2. Forest management and protection.

The efficient management of forest resources is essential to maintaining their ongoing availability. This will include a continual improvement of practices to ensure resources are protected as much as possible from the impacts of climate change and that they meet an increasingly regulated environment.

Sustainability in ForestWorks Training Packages

Environmental sustainability has long been incorporated as a central skill and practice within ForestWorks Training Packages. This reflects the reality that viability of the industry relies on a productive and well managed environment. ForestWorks Training Packages and qualifications incorporate two units which have been made generic for application in all sectors. These units need to be customised to ensure that the specific requirements of sectors are targeted. For example hazards of one sector will differ from another and need to be addressed in the unit delivery.

These units are:

FPICOR2203A Follow environmental care procedures

FPICOR3201A Implement SHE policies and procedures (SHE: safety, health and environment)

Examples of other stand alone units that support environmental sustainability include:

FPIFGM4205A Monitor regeneration rates

FPIFGM5206A Develop a native forest regeneration plan

FPICOT5201A Implement sustainable forestry practices

FPICOR3203A Evaluate fire potential and prevention

FPICOR4201A Monitor SHE policies and procedures

FPICOR4202A Monitor and review forestry operations

FPIFGM4201A Implement a forest establishment plan

FPIFGM5202A Manage tending operations in a native forest

FPIHAR4204A Plan and coordinate fire salvage